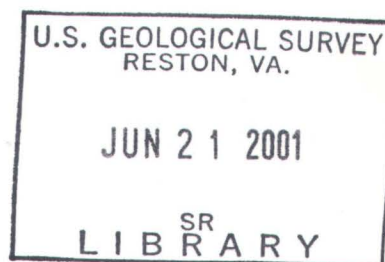
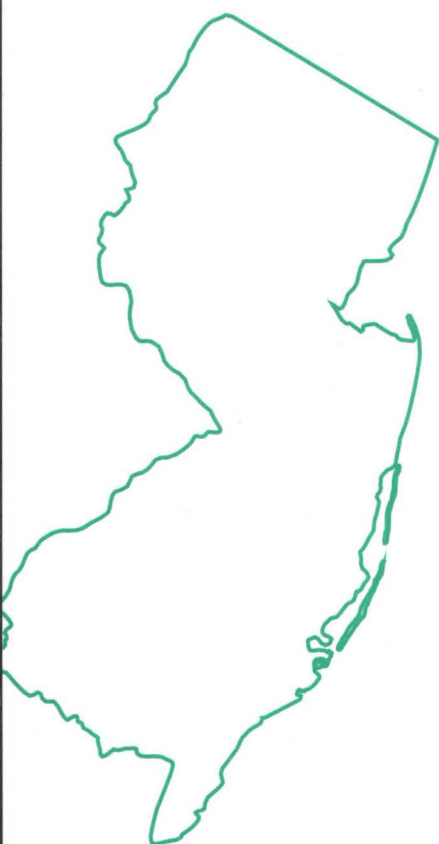


(200)
Ga3
New Jersey
2000
v. 1
c.1

Water Resources Data New Jersey Water Year 2000

Volume 1. Surface-Water Data

Water-Data Report NJ-00-1



U.S. Department of the Interior
U.S. Geological Survey



Prepared in cooperation with the New
Jersey Department of Environmental
Protection and with other agencies

CALENDAR FOR WATER YEAR 2000

1999

OCTOBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

NOVEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

2000

JANUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29				

MARCH

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

APRIL

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

MAY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JUNE

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

JULY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

AUGUST

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
Water Resources Division
Mountain View Office Park
810 Bear Tavern Road, Suite 206
West Trenton, New Jersey 08628

I am pleased to announce the release of our Annual report "Water Resources Data for New Jersey, Water Year 2000". This report was prepared by the U.S. Geological Survey, in cooperation with the State of New Jersey as well as many local and federal government agencies.

This report is again being published in three volumes:

Volume 1.--Surface-water streamflow data.

Volume 2.--Ground-water level data.

Volume 3 --Water-quality data.

This volume contains surface-water data, such as stream discharge, elevations of lakes and reservoirs, major surface-water diversions and tidal elevations. Special sections are devoted to low-flow and crest-stage data as well as to summaries of tidal-crest elevations in the New Jersey estuaries and intracoastal waterways.

Streamflow data again are presented in the format that was introduced in the 1988 report. The format includes extensive tabular presentations of streamflow statistics. Also, station numbers are included in the table of contents, and tables of discontinued surface-water stations are presented.

The New Jersey District of the U.S. Geological Survey has made a home page available on the world wide web. Real-time data for more than 30 stream-gaging stations around the State, peak-flow files for many gaging stations, ground-water level data, water-quality data, monthly hydrologic conditions and links to other sites of interest may be accessed. This information is available at:

<http://nj.usgs.gov/>

Copies of this report in paper or microfiche are for sale through the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161. Data can also be provided by file transfer (ftp), or on floppy disk. When ordering, refer to U.S. Geological Survey Water-Data Report NJ-00-1 (for Volume 1), NJ-00-2 (for Volume 2), or NJ-00-3 (for Volume 3). For further information on this report, or to change or remove your address from our mailing list, please contact me at the above address, telephone (609) 771-3980, or send e-mail to wbauers@usgs.gov.

Sincerely,

William R. Bauersfeld, Chief
Hydrologic Data Assessment Program

Water Resources Data New Jersey Water Year 2000

Volume 1. Surface-Water Data

By T.J. Reed, G.L. Centinaro, J.F. Dudek, V. Corcino, and G.C. Steckroat

Water-Data Report NJ-00-1



Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies



UNITED STATES DEPARTMENT OF THE INTERIOR

GALE A. NORTON, *Secretary*

U.S. GEOLOGICAL SURVEY

Charles G. Groat, *Director*

For information on the water program in New Jersey write to

District Chief, Water Resources Division
U.S. Geological Survey
Mountain View Office Park
810 Bear Tavern Road, Suite 206
West Trenton, New Jersey 08628-1099

or access the USGS on the world wide web:

<http://nj.usgs.gov>, <http://water.usgs.gov>, or <http://www.usgs.gov>

PREFACE

This volume of the annual hydrologic data report of New Jersey is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by state, local, and federal agencies, and the private sector for developing and managing our Nation's land and water resources.

Hydrologic data for New Jersey are contained in 3 volumes:

Volume 1. Surface-Water Data

Volume 2. Ground-Water Data

Volume 3. Water-Quality Data

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policy and established guidelines. The following individual contributed significantly to the completion of the report.

Robert D. Schopp

M.D. Morgan word processed the text of the report. G.L. Simpson, W.H. Ellis and D.K. Sun drafted the illustrations.

The data were collected, computed, and processed by the following personnel:

G.A. Brown	R.W. Edwards	D.S. Kauffman	A.R. Protz	J.J. Scudder
H.L. Burns	J. Gibbs	G.L. Mattes	J.A. Rauth	A.B. Spehar
G.M. Bosonetto	B. Gray	J.E. Marlow	R.G. Reiser	F.J. Spitz
G.B. Carelton	K.L. Hibbs	J.P. Nawyn	M.L. Riskin	A.M. Thomas
M.J. Deluca	G.K. Holzer	R.L. Owre	J.A. Robertson	
H.A. Doyle	W.D. Jones	E.A. Pritchett	K. Romanok	

This report was prepared in cooperation with the State of New Jersey and with other agencies under the supervision of William R. Bauersfeld, Chief of the Hydrologic Data Assessment Program; under the general supervision of David A. Stedfast, Associate District Chief; Eric Evenson, District Chief, New Jersey; and William J. Carswell, Jr., Regional Hydrologist, Northeastern Region.

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE May 2001	3. REPORT TYPE AND DATES COVERED Annual--October 1, 1999 to September 30, 2000	
4. TITLE AND SUBTITLE Water Resources Data - New Jersey, Water Year 2000, Volume 1 Surface-Water Data			5. FUNDING NUMBERS	
6. AUTHOR(S) T.J. Reed, G.L. Centinaro, J.F. Dudek, V. Corcino, and G.C. Steckroat				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division Mountain View Office Park 810 Bear Tavern Road, Suite 206 West Trenton, NJ 08628-1099			8. PERFORMING ORGANIZATION REPORT NUMBER USGS-WDR-NJ-00-1	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division Mountain View Office Park 810 Bear Tavern Road, Suite 206 West Trenton, NJ 08628-1099			10. SPONSORING / MONITORING AGENCY REPORT NUMBER USGS-WDR-NJ-00-1	
11. SUPPLEMENTARY NOTES Prepared in cooperation with the New Jersey Department of Environmental Protection and with other agencies.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT No restriction on distribution. This report can be purchased from National Technical Information Services, Springfield, Virginia 22161			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) Water-resources data for the 2000 Water Year for New Jersey are presented in three volumes, and consists of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of ground water. Volume 1 contains discharge records for 92 gaging stations; tide summaries at 17 gaging stations; and stage and contents at 38 lakes and reservoirs. Also included are stage and discharge for 110 crest-stage partial-record stations and stage-only at 32 tidal crest-stage gages. Locations of these sites are shown in figures 6 and 7. Additional water data were collected at various sites that are not part of the systematic data-collection program. Discharge measurements were made at 58 low-flow partial-record stations and 120 miscellaneous sites.				
14. SUBJECT TERMS *New Jersey, *hydrologic data, *surface water, *streamflow, flow rate, gaging stations, lakes, reservoirs, water temperatures.			15. NUMBER OF PAGES 328	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT Unclassified	

CONTENTS

Page

Preface.....	iii
List of surface-water stations, in downstream order, for which records are published.....	vii
List of discontinued surface-water discharge stations.....	x
List of discontinued crest-stage partial-record stations.....	xiii
List of discontinued low-flow stations.....	xv
List of discontinued tidal crest-stage and tidal gaging stations.....	xxii
Introduction.....	1
Cooperation.....	1
Summary of hydrologic conditions.....	2
Precipitation and reservoir contents.....	2
Streamflow.....	2
Special networks and programs.....	5
Explanation of records.....	10
Station identification numbers.....	10
Downstream order system.....	10
Latitude-longitude system.....	10
Records of stage and water discharge.....	11
Data collection and computation.....	11
Data presentation.....	12
Station manuscript.....	12
Data table of daily mean values.....	13
Statistics of monthly mean values.....	13
Summary statistics.....	13
Identifying estimated daily discharge.....	14
Accuracy of the records.....	14
Other records available.....	15
Water temperature.....	15
Current water-resources projects in New Jersey.....	15
Water-related reports for New Jersey completed in recent years.....	16
Water-related articles for New Jersey completed in recent years.....	18
Water-related factsheets for New Jersey completed in recent years.....	19
Access to USGS water data.....	19
Definition of terms.....	20
Selected references.....	22
Publications on Techniques of Water-Resources Investigations.....	23
Station records, surface water.....	34
Discharge at partial-record stations and miscellaneous sites.....	259
Crest-stage partial-record stations.....	259
Low-flow partial-record stations.....	275
Miscellaneous sites.....	281
Tidal crest-stage stations.....	292
Index.....	295

ILLUSTRATIONS

Figure 1.	Monthly precipitation at three National Weather Service locations	3
2.	Combined usable storage in 13 major water-supply reservoirs	4
3.	Monthly mean discharge at index gaging stations	6
4.	Annual mean discharge at index gaging stations	7
5.	System for numbering wells and miscellaneous sites	10
6.	Map showing location of gaging stations and surface-water quality stations	28
7.	Map showing location of low-flow and crest-stage partial-record stations	30
8.	Map showing counties in New Jersey	32
9.	Map showing hydrologic cataloging units and codes in New Jersey	33

TABLES

Table 1.	Annual mean discharges for water year 2000 and mean annual discharge for the period of record at continuous gaging stations with 40 years or more of records).....	8
2.	Historical flood peaks and flood peaks during August 12-14, 2000, at U.S. Geological Survey gaging stations in northeastern New Jersey that experienced a greater than 2-year recurrence interval).....	9

SURFACE WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

Note.--Data for partial-record stations and miscellaneous sites for surface-water discharge are published in separate sections of the data report. See references at the end of this list for page numbers for these sections.

[Letter after station name designates type of data: (d) discharge, (e) elevation, gage height or contents]

	Station number	Page
<u>HACKENSACK RIVER BASIN</u>		
Hackensack River at West Nyack, NY (d).....	01376800	34
Hackensack River at Rivervale (d)	01377000	36
Pascack Brook at Westwood (d)	01377500	38
Hackensack River at New Milford (d).....	01378500	40
Reservoirs in Hackensack River basin (e)		42
Diversions in Hackensack River basin		43
<u>PASSAIC RIVER BASIN</u>		
Passaic River near Millington (d)	01379000	44
Passaic River near Chatham (d).....	01379500	46
Rockaway River:		
Green Pond Brook at Picatinny Arsenal (d)	01379773	48
Green Pond Brook below Picatinny Lake, at Picatinny Arsenal (d)	01379780	50
Green Pond Brook at Wharton (d).....	01379790	52
Rockaway River above reservoir, at Boonton (d).....	01380500	54
Rockaway River below reservoir, at Boonton (d).....	01381000	56
Whippany River near Morristown (d)	01381400	58
Whippany River at Morristown (d)	01381500	60
Whippany River near Pine Brook (d)	01381800	62
Passaic River at Pine Brook (d)	01381900	64
Pompton River:		
Pequannock River (head of Pompton River) at Macopin Intake Dam (d).....	01382500	66
Wanaque River at Awosting (d)	01383500	68
Ringwood Creek near Wanaque (d).....	01384500	70
Wanaque River at Wanaque (d)	01387000	72
Ramapo River at Sloatsbury, NJ (d)	01387250	74
Ramapo River at Suffern, NY (d).....	01387420	78
Ramapo River near Mahwah (d).....	01387500	80
Ramapo River downstream from Pond Brook at Oakland (d).....	01387890	82
Ramapo River at Pompton Lakes (d).....	01388000	86
Pompton River at Pompton Plains (d)	01388500	88
Passaic River at Little Falls (d).....	01389500	90
Saddle River at Ridgewood (d).....	01390500	92
Saddle River at Lodi (d).....	01391500	94
Passaic River at Newark (e).....	01392590	96
Reservoirs in Passaic River basin (e).....		97
Diversions in Passaic River basin		100
<u>ELIZABETH RIVER BASIN</u>		
Elizabeth River at Ursino Lake, at Elizabeth (d)	01393450	102
<u>RAHWAY RIVER BASIN</u>		
Rahway River near Springfield (d)	01394500	104
Rahway River at Rahway (d).....	01395000	106
<u>RARITAN RIVER BASIN</u>		
Four Bridges, South Branch Raritan River at	01396190	108
South Branch Raritan River near High Bridge (d)	01396500	110
Spruce Run at Glen Gardner (d)	01396580	112
Mulhockaway Creek at Van Syckel (d)	01396660	114
Spruce Run at Clinton (d)	01396800	116
South Branch Raritan River at Stanton (d)	01397000	118
Neshanic River at Reaville (d).....	01398000	120
North Branch Raritan River near Far Hills (d)	01398500	122
Lamington (Black) River near Pottersville (d)	01399500	124

SURFACE WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

	Station number	Page
<u>RARITAN RIVER BASIN--Continued</u>		
Rockaway Creek:		
South Branch Rockaway Creek at Whitehouse Station (d)	01399670	126
North Branch Raritan River near Raritan (d)	01400000	128
Raritan River at Manville (d)	01400500	130
Millstone River:		
Stony Brook at Princeton (d)	01401000	132
Beden Brook:		
Pike Run at Belle Mead (d)	01401650	134
Millstone River at Blackwells Mills (d)	01402000	136
Raritan River below Calco Dam, at Bound Brook (d)	01403060	138
Middle Brook:		
West Branch Middle Brook near Martinsville (d)	01403150	140
Bound Brook:		
Green Brook at Seeley Mills (d)	01403400	142
Stony Brook:		
East Branch Stony Brook at Best Lake, at Watchung (d)	01403535	144
Stony Brook at Watchung (d)	01403540	146
Lawrence Brook at Westons Mills (d)	01405030	148
South River:		
Matchaponix Brook:		
Manalapan Brook at Spotswood (d)	01405400	150
Raritan River at South Amboy (e)	01406710	152
Reservoirs in Raritan River basin (e)		153
Diversions in Raritan River basin		154
Waackaack Creek Basin:		
Waackaack Creek at Keansburg (e)	01407080	155
<u>SHREWSBURY RIVER BASIN</u>		
Navesink River:		
Swimming River (head of Navesink River) near Red Bank (d)	01407500	156
Shrewsbury River at Sea Bright (e)	01407600	158
<u>SHARK RIVER BASIN</u>		
Shark River near Neptune City (d)	01407705	159
Jumping Brook near Neptune City (d)	01407760	161
<u>MANASQUAN RIVER BASIN</u>		
Manasquan River at Squankum (d)	01408000	163
Manasquan River near Allenwood (d)	01408029	165
<u>METEDECONK RIVER BASIN</u>		
North Branch Metedeconk River near Lakewood (d)	01408120	167
Atlantic Coastal Basins		
Reservoirs in Atlantic Coastal Basins		169
Diversions in Atlantic Coastal Basins		170
<u>BARNEGAT BAY</u>		
Barnegat Bay at Mantoloking (e)	01408168	171
Barnegat Bay at Bay Shore (e)	01408200	172
<u>TOMS RIVER BASIN</u>		
Toms River near Toms River (d)	01408500	173
<u>BARNEGAT BAY</u>		
Barnegat Bay at Seaside Heights (e)	01408750	175
Barnegat Bay at Waretown (e)	01409110	176
Barnegat Bay at Loveladies (e)	01409135	177
<u>MULLICA RIVER BASIN</u>		
Mullica River near Batsto (d)	01409400	178
Batsto River at Batsto (d)	01409500	180
Batsto River at Pleasant Mills (e)	01409510	182
Wading River:		
Oswego River at Harrisville (d)	01410000	183
East Branch Bass River near New Gretna (d)	01410150	185

**SURFACE WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH
RECORDS ARE PUBLISHED IN THIS VOLUME**

	Station number	Page
<u>GREAT EGG HARBOR RIVER BASIN</u>		
Great Egg Harbor River at Folsom (d)	01411000	187
<u>TUCKAHOE RIVER BASIN</u>		
Tuckahoe River at Head of River (d)	01411300	189
<u>BEACH THOROFARE BASIN</u>		
Beach Thorofare at Margate (e)	01411330	191
<u>LUDLAM THOROFARE BASIN</u>		
Ludlam Thorofare at Sea Isle City (e)	01411350	192
<u>GREAT CHANNEL BASIN</u>		
Great Channel at Stone Harbor (e)	01411360	193
<u>GRASSY SOUND CHANNEL BASIN</u>		
Grassy Sound Channel at Wildwood (e)	01411382	194
<u>DENNIS CREEK BASIN</u>		
Sluice Creek near South Dennis (e)	01411435	195
<u>MAURICE RIVER BASIN</u>		
Maurice River:		
Little Ease Run near Clayton (d)	01411456	196
Maurice River at Norma (d)	01411500	198
Maurice River at Bivalve (e)	01412150	200
<u>DELAWARE RIVER BASIN</u>		
Delaware River at Port Jervis, NY (d)	01434000	201
Neversink River at Godeffroy, NY (d)	01437500	203
Delaware River at Montague (d)	01438500	205
Flat Brook near Flatbrookville (d)	01440000	207
Paulins Kill:		
East Branch Paulins Kill near Lafayette (d)	01443280	209
Paulins Kill at Blairstown (d)	01443500	211
Yards Creek near Blairstown (d)	01443900	213
Pequest River at Pequest (d)	01445500	215
Delaware River at Belvidere (d)	01446500	217
Lehigh River at Glendon, PA (d)	01454700	219
Musconetcong River near Bloomsbury (d)	01457000	221
Delaware and Raritan Canal at Port Mercer (d)	01460440	223
Delaware River at Trenton (d)	01463500	225
Assunpink Creek near Clarksville (d)	01463620	227
Assunpink Creek at Trenton (d)	01464000	229
Crosswicks Creek at Extonville (d)	01464500	231
Delaware River at Burlington (e)	01464598	233
South Branch Rancocas Creek at Vincentown (d)	01465850	234
North Branch Rancocas Creek:		
Greenwood Branch:		
McDonalds Branch in Lebanon State Forest (d)	01466500	236
Greenwood Branch at New Lisbon (d)	01466900	238
North Branch Rancocas Creek at Pemberton (d)	01467000	240
Pennsauken Creek:		
South Branch Pennsauken Creek at Cherry Hill (d)	01467081	242
Cooper River at Haddonfield (d)	01467150	244
Schuylkill River at Philadelphia, PA (d)	01474500	246
Raccoon Creek near Swedesboro (d)	01477120	248
Reservoirs in Delaware River basin (e)		250
Diversions and withdrawals in Delaware River basin		256
Discharge at partial-record stations and miscellaneous sites		259
Crest-stage partial-record stations		259
Low-flow partial-record stations		275
Miscellaneous sites		281
Elevation at tidal crest-stage partial-record stations		292

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record surface-water discharge stations in New Jersey have been discontinued. Daily streamflow records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as crest-stage partial-record stations. Discontinued project stations with less than 1 year of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

Discontinued Surface-Water Discharge Stations			
Station name	Station number	Drainage area (mi ²)	Period of record
Wallkill River near Unionville, NY	01368000	140	1938-81
Auxiliary outlet of Upper Greenwood Lake at Moe, NJ	01368720	----	1968-80a
Passaic River near Bernardsville, NJ	01378690*	8.83	1968-77
Passaic River at Hanover Neck, NJ	01379580	132	1993-97b
Russia Brook tributary at Milton, NJ	01379630	1.64	1969-71
Rockaway River at Berkshire Valley, NJ	01379700	24.4	1985-96
Beaver Brook at Splitrock Reservoir, NJ	01380000	5.50	1925-46, 1976-88a
Passaic River at Towaco, NJ	01381950	355	1993-97b
Pequannock River at Riverdale, NJ	01382800	83.9	1994-97
Wanaque River at Monks, NJ	01384000	40.4	1935-85
Cupsaw Brook near Wanaque, NJ	01385000	4.37	1935-58
Erskine Brook near Wanaque, NJ	01385500	1.14	1934-38
West Brook near Wanaque, NJ	01386000	11.8	1935-78
Blue Mine Brook near Wanaque, NJ	01386500	1.01	1935-58
Pompton River at Mountain View, NJ	01388910	371	1993-97b
Deepavaal Brook near Fairfield, NJ	01389130	1.37	1993-97b
Passaic River at Paterson, NJ	01389800	785	1897-1955
Hohokus Brook at Ho-Ho-Kus, NJ	01391000*	16.4	1954-73, 1977-96
Weasel Brook at Clifton, NJ	01392000	4.45	1937-62
Third River at Passaic, NJ	01392210	11.8	1977-97
Second River at Belleville, NJ	01392500	11.6	1938-64
Elizabeth River at Irvington, NJ	01393000	2.90	1931-38
Elizabeth River at Elizabeth, NJ	01393500	20.2	1922-73
East Fork East Branch Rahway River at West Orange, NJ	01393800	.83	1972-74
West Branch Rahway River at Millburn, NJ	01394000	7.10	1940-50
Robinsons Branch at Goodmans, NJ	01395500	12.7	1921-24
Robinsons Branch at Rahway, NJ	01396000	21.6	1939-96
Walnut Brook near Flemington, NJ	01397500*	2.24	1936-61
Back Brook tributary near Ringoes, NJ	01398045*	1.98	1977-88
Holland Brook at Readington, NJ	01398107	9.00	1978-95
North Branch Raritan River at Pluckemin, NJ	01399000	52.0	1903-06
Lamington (Black) River at Succasunna, NJ	01399190	7.37	1976-87
Lamington (Black) River near Ironia, NJ	01399200	10.9	1975-87
Upper Cold Brook near Pottersville, NJ	01399510	2.18	1972-96
Axle Brook near Pottersville, NJ	01399525*	1.22	1977-88
South Branch Rockaway Creek at Whitehouse, NJ	01399690	13.2	1977-86
Rockaway Creek at Whitehouse, NJ	01399700	37.1	1977-84
North Branch Raritan River at North Branch, NJ	01399830*	174	1977-81
Peters Brook near Raritan, NJ	01400300	4.19	1978-95
Macs Brook at Somerville, NJ	01400350	.77	1982-95
Millstone River at Plainsboro, NJ	01400730*	65.8	1964-75, 1987-89
Baldwins Creek at Baldwin Lake, near Pennington, NJ	01400932	2.52	1963-70
Honey Branch near Pennington, NJ	01400953	.70	1967-75
Millstone River at Carnegie Lake, at Princeton, NJ	01401301*	159	1972-74, 1987-89
Millstone River near Kingston, NJ	01401500	171	1934-49

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
Royce Brook tributary at Frankfort, NJ	01402590	.29	1969-74
Royce Brook tributary near Belle Mead, NJ	01402600	1.20	1966-74, 1980-95
Raritan River at Bound Brook, NJ	01403000	779	1903-09, 1945-66
West Branch Middle Brook near Somerville, NJ	01403160	3.83	1983-86
Green Brook at Plainfield, NJ	01403500*	9.75	1938-84
Bound Brook at Middlesex, NJ	01403900*	48.4	1972-77, 1997-98
Bound Brook at Bound Brook, NJ	01404000	49.0	1923-30
Lawrence Brook at Patricks Corner, NJ	01404500	29.0	1922-26
Lawrence Brook at Farrington Dam, NJ	01405000	34.4	1927-90
Matchaponix Brook at Spotswood, NJ	01405300	43.9	1957-67
South River at Old Bridge, NJ	01405500	94.6	1939-88
Deep Run near Browntown, NJ	01406000	8.07	1932-40
Tennent Brook near Browntown, NJ	01406500	5.25	1932-41
Matawan Creek at Matawan, NJ	01407000	6.11	1932-55
South Branch Metedeconk River at Lakewood, NJ	01408140	26.0	1973-76
South Branch Metedeconk River near Lakewood, NJ	01408150	27.5	1992-99
Cedar Creek at Lanoka Harbor, NJ	01409000	55.3	1933-58, 1971
Oyster Creek near Brookville, NJ	01409095	7.43	1965-84
Westecunk Creek at Stafford Forge, NJ	01409280	15.8	1974-88
West Branch Wading River near Jenkins, NJ	01409810	84.1	1974-96
Absecon Creek at Absecon, NJ	01410500	17.9	1946-85
Great Egg Harbor River at Sicklerville, NJ	01410784	15.1	1996-98
Great Egg Harbor River tributary at Sicklerville, NJ	01410787	1.64	1972-79
Fourmile Branch at New Brooklyn, NJ	01410810	7.74	1973-79
Great Egg Harbor River near Blue Anchor, NJ	01410820	37.3	1972-79
Maurice River at Brotmanville, NJ	01411485	88.1	1992-94
Blackwater Branch at Norma, NJ	01411495	12.5	1992-94
Maurice River near Millville, NJ	01411800	191 (revised)	1992-94
Maurice River at Union Lake Dam at Millville, NJ	01411878	216	1993-94
Menantico Creek near Millville, NJ	01412000	23.2	1931-57, 1978-85
West Branch Cohansey River at Seeley, NJ	01412500*	2.58	1951-67
Cohansey River at Seeley, NJ	01412800	28.0	1978-88
Loper Run near Bridgeton, NJ	01413000	2.34	1937-59
Delaware River near Delaware Water Gap, PA	01440200	3,850	1964-96
Paulins Kill at Columbia, NJ	01444000	179	1908-09
Pequest River at Huntsville, NJ	01445000	31.0	1940-62
Pequest River at Townsburys, NJ	01445430	92.5	1977-80
Beaver Brook near Belvidere, NJ	01446000	36.7	1923-61
Brass Castle Creek near Washington, NJ	01455160	2.34	1970-83a
Pohatcong Creek at New Village, NJ	01455200	33.3	1960-69
Beaver Brook near Weldon, NJ	01455355	1.72	1969-71
Musconetcong River at outlet of Lake Hopatcong, NJ	01455500	25.3	1928-75
Musconetcong River near Hackettstown, NJ	01456000	68.9	1922-73
Delaware River at Riegelsville, NJ	01457500*	6,328	1906-71
Delaware and Raritan Canal at Carnegie Lake, NJ	01460490	---	1951-99ab
Delaware and Raritan Canal at Kingston, NJ	01460500	---	1947-91
Delaware River at Lambertville, NJ	01462000	6,680	1898-1906
New Sharon Run at Carsons Mills, NJ	01463587	6.63	1976-77
Shipetaukin Creek tributary at Lawrenceville, NJ	01463657	.78	1976-77
Little Shabakunk Creek at Bakersville, NJ	01463690	3.98	1976-77

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
Thorton Creek at Bordentown, NJ	01464525*	.84	1976-77
Middle Branch Mount Misery Brook in Lebanon State Forest, NJ	01466000	2.82	1953-65, 1977
Mill Creek near Willingboro, NJ	01467019	4.12	1975-78
Mill Creek at Levitt Parkway, at Willingboro, NJ	01467021	9.12	1975-77
Mantua Creek at Pitman, NJ	01475000	6.05	1940-76
Still Run near Mickleton, NJ	01476600	3.98	1957-66
Oldmans Creek near Woodstown, NJ	01477500	18.5	1932-40
Salem River at Woodstown, NJ	01482500	14.6	1940-85, 1989
Alloway Creek at Alloway, NJ	01483000	20.3	1953-72

a Not published, on file at U.S. Geological Survey, West Trenton, NJ.

b Stage only.

* Currently operated as crest-stage partial-record station.

DISCONTINUED CREST-STAGE PARTIAL-RECORD STATIONS

The following crest-stage partial-record stations in New Jersey have been discontinued. Annual maximum gage height and discharge measurements were made for the period of record shown for each station

Station name	Station number	Drainage area (mi ²)	Period of Record (water years)
Musquapsink Brook near Westwood, NJ	01377475	2.12	1965-86
Tenakill Brook at Cresskill, NJ	01378350	3.01	1965-78
Wolf Creek at Ridgefield, NJ	01378615	1.18	1965-86
Rockaway River at Warren Street, at Dover, NJ	01379845	52.1	1981-97
Pequannock River at Riverdale, NJ	01382800	83.9	1981, 1984, 1994-97*
Fleischer Brook at East Paterson, NJ	01389905	1.78	1965-66
Saddle River at Paramus, NJ	01391110	45.0	1965-78
Sprout Brook at Rochelle Park, NJ	01391485	5.56	1965-78
Weasel Brook at Clifton, NJ	01392000	4.45	1938-62*, 1963-78, 1989-90
Second River at Belleville, NJ	01392500	11.6	1937-64*, 1963-95
East Fork East Branch Rahway River, at Orange, NJ	01393810	.83	1972-78
South Branch Raritan River near Bartley, NJ	01396117	11.7	1970
Lamington River near Whitehouse, NJ	01399550	57.3	1978-79
South Branch Rockaway Creek at Whitehouse Station, NJ	01399690	13.2	1977-86*, 1987-88
Rockaway Creek at Whitehouse, NJ	01399700	37.1	1978-84*, 1985-95
Lamington River at Lamington Road, near North Branch, NJ	01399760	97.6	1978-79
Millstone River at Southfield Road near Grovers Mill, NJ	01400630	41.0	1971, 1975, 1979-99
Millstone River at Plainsboro, NJ	01400730	65.8	1965-75, 1976-87, 1987-89, 1990-99
Bear Brook at Route 535 near Locust Cove, NJ	01400775	6.69	1971, 1975, 1979-99
Bear Brook at Route 571 near Grovers Mill, NJ	01400795	9.28	1986-99
Little Bear Brook at Penns Neck, NJ	01400822	1.84	1971, 1975, 1979-95
Woodsville Brook at Woodsville, NJ	01400850	1.78	1957-58, 1964-80
Stony Brook at Glenmoore, NJ	01400900	17.0	1957-95
Stony Brook at Pennington, NJ	01400947	26.5	1965-78
Honey Branch near Pennington, NJ	01400953	.70	1966, 1967-74*
Honey Branch near Mount Rose, NJ	01400960	1.28	1969-78
Honey Branch near Rosedale, NJ	01400970	3.83	1967-78
Duck Pond Run near Princeton Junction, NJ	01401160	1.81	1980-99
Duck Pond Run at Clarksville, NJ	01401200	5.21	1965-85
Beden Brook near Hopewell, NJ	01401520	6.67	1967-85
East Branch Middle Brook at Warrenville, NJ	01403080	2.71	1994-95
Green Brook at North Plainfield, NJ	01403470	8.01	1972-78
Green Brook at Dunellen, NJ	01403700	20.7	1972-77
Bound Brook at South Bound Brook, NJ	01404080	65.0	1972-77
Lawrence Brook at Farrington Dam, NJ	01405000	34.3	1927-90*, 1991-95
Manasquan River near Georgia, NJ	01407830	10.6	1969-95
Manasquan River at Allenwood, NJ	01408030	63.9	1969-95
Cedar Creek at Lanoka Harbor, NJ	01409000	53.3	1933-58*, 1971*, 1979-84, 1993
Oyster Creek near Brookville, NJ	01409095	7.43	1966-85*, 1991
Westecunk Creek at Stafford Forge, NJ	01409280	15.8	1973-88*, 1991
Mullica River near Atco, NJ	01409375	3.22	1975-87
Hays Mill Creek near Chesilhurst, NJ	01409402	7.13	1975-78
Wildcat Branch at Chesilhurst, NJ	01409403	1.03	1975-87
Pump Branch near Blue Anchor, NJ	01409407	6.20	1975-77
Blue Anchor Brook near Blue Anchor, NJ	01409409	3.01	1975-87

DISCONTINUED CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
Great Egg Harbor River at Berlin, NJ	01410775	1.88	1964-71
Fourmile Branch at New Brooklyn, NJ	01410810	7.74	1972-79*, 1980-91
Menantico Creek near Millville, NJ	01412000	23.2	1931-57*, 1978-84*, 1985-95
Cohansey River at Seeley, NJ	01412800	28.0	1978-88*, 1989-95
Pequest River at Huntsville, NJ	01445000	31.0	1940-62*, 1963-95
Pequest River at Townsburly, NJ	01445430	92.5	1978-80*, 1981-93
Furnace Brook at Oxford, NJ	01445490	4.29	1966-78
Beaver Brook near Belvidere, NJ	01446000	36.7	1923-61*, 1962-95
Pohatcong Creek at New Village, NJ	01455200	33.3	1960-69*, 1970-95
Musconetcong River at outlet of Lake Hopatcong, NJ	01455500	25.3	1929-75*, 1976-95
Musconetcong River near Hackettstown, NJ	01456000	68.9	1922-73*, 1974-95
Crosswicks Creek at New Egypt, NJ	01464400	41.2	1968-94
Crosswicks Creek at Groveville, NJ	01464505	98.2	1968-74
Doctors Creek at Allentown, NJ	01464515	17.4	1968-95
Doctors Creek at Groveville, NJ	01464520	25.3	1968-79
Blacks Creek at Mansfield Square, NJ	01464530	19.7	1978-95
Assiscunk Creek near Columbus, NJ	01464582	10.9	1978-95
Southwest Branch Rancocas Creek at Medford, NJ	01465880	47.2	1983-95
Southwest Branch Rancocas Creek at Route 70, at Medford, NJ	01465882	47.9	1978-82
Middle Branch Mount Misery Brook in Lebanon State Forest, NJ	01466000	2.82	1953-65*, 1967-78
Parkers Creek near Mount Laurel, NJ	01467010	2.68	1967-71
North Branch Pennsauken Creek near Moorestown, NJ	01467069	12.8	1975-88
South Branch Pennsauken Creek at Maple Shade, NJ	01467080	8.10	1964-68
Cooper River at Kirkwood, NJ	01467130	5.10	1964-80
Cooper River at Lawnside, NJ	01467140	12.7	1964-68
North Branch Cooper River near Marlton, NJ	01467160	5.34	1964-88
North Branch Cooper River at Ellisburg, NJ	01467180	10.5	1964-75
Cooper River at Camden, NJ	01467190	35.2	1967-73, 1994
Newton Creek at West Collingswood, NJ	01467312	4.51	1964-68
South Branch Big Timber Creek at Blackwood, NJ	01467330	20.9	1964-84
North Branch Big Timber Creek at Laurel Springs, NJ	01467350	6.55	1964-68
Mantua Creek at Pitman, NJ	01475000	6.05	1940-76*, 1977-94
Raccoon Creek at Mullica Hill, NJ	01477110	15.6	1940, 1978-95
Oldmans Creek near Harrisonville, NJ	01477480	13.8	1975-95
Salem River at Woodstown, NJ	01482500	14.6	1940*, 1942-84*, 1985-88, 1989-90*, 1991-95

* Operated as a continuous-record gaging station.

DISCONTINUED LOW-FLOW STATIONS

The following low-flow partial-record stations in New Jersey have been discontinued. Stream flow measurements were made during periods of base-flow, for the period of record shown for each station. These measurements, when correlated with the simultaneous discharge at nearby continuous-record sites, will give a picture of the low-flow potentiality of a stream.

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Wallkill River at outlet of Lake Mohawk, at Sparta, NJ	01367620	4.38	1979-86
Wallkill River at Franklin, NJ	01367700	29.4	1959-64, 1982-83, 1985, 1987-90
Beaver Run near Hamburg, NJ	01367750	5.59	1966-72
Papakating Creek at Pelletstown, NJ	01367800	15.8	1959-64
West Branch Papakating Creek at McCoys Corner, NJ	01367850	11.0	1967-72
Clove Brook above Clove Acre Lake, at Sussex, NJ	01367890	19.2	1967-72
Clove Brook at Sussex, NJ	01367900	19.7	1959-64
Black Creek near Vernon, NJ	01368950	17.3	
Musquapsink Brook near Westwood, NJ	01377475	2.12	1964-72, 1975, 1978, 1981-86
Tenakill Brook at Cresskill, NJ	01378350	3.01	1964-73, 1975
Dwars Kill at Norwood, NJ	01378410	4.23	1973-80
Norwood Brook at Norwood, NJ	01378430	2.03	1973-80
Hirshfeld Brook at New Milford, NJ	01378520	4.54	1965-72
French Brook at New Bridge, NJ	01378530	.46	1965-72
Coles Brook at Hackensack, NJ	01378560	7.00	1965-72
Wolf Creek at Ridgewood, NJ	01378615	1.18	1964-72
Passaic River at outlet Osborn Pond, at Osborn Mill, NJ	01378700	10.1	1961-68
Great Brook at Green Village, NJ	01378750	7.92	1961-65
Primrose Brook near New Vernon, NJ	01378800	4.68	1961-65
Great Brook near Basking Ridge, NJ	01378850	23.1	1961-65
Black Brook near Meyersville, NJ	01378900	11.7	1959-63
Harrisons Brook at Liberty Corner, NJ	01379150	3.74	1964-67
Dead River near Millington, NJ	01379200	20.8	1961-67, 1973-75, 1986-89
Passaic River at Stirling, NJ	01379300	84.1	1968-70, 1972-73, 1983-84
Passaic River at Lower Chatham Bridge, near Chatham, NJ	01379550	116.0	1964, 1984, 1988-89
Passaic River at Hanover, NJ	01379570	128.0	1963-66, 1973, 1987-89
Rockaway River at Dover, NJ	01379750	30.8	1963-66, 1983-86
Hibernia Brook at outlet of Lake Telemark, NJ	01380050	2.53	1966-72
Stony Brook near Rockaway Valley, NJ	01380300	8.43	1963-67, 1985-86
Crooked Brook near Boonton, NJ	01381150	7.86	1963-66
Whippany River near Morristown, NJ	01381400	14.0	1964-72
Jacquis Brook at Greystone Park State Hospital, NJ	01381470	1.39	1967-73
Watnong Brook at Morris Plains NJ	01381490	7.77	1966-72, 1995
Whippany River near Whippany, NJ	01381600	48.5	1963-66, 1973
Troy Brook at Troy Hills, NJ	01381700	10.1	1961-66, 1972-73
West Brook at Troy Hills, NJ	01381750	1.32	1961-66
Passaic River at Two Bridges, NJ	01382000	361	1963-68, 1983-99
Pequannock River near Stockholm, NJ	01382050	5.39	1959-64
Kanouse Brook at Newfoundland, NJ	01382360	3.87	1963-67
Macopin River at Macopin Reservoir, NJ	01382450	5.25	1970-73
Belcher Creek at Stowaway Road, at West Milford, NJ	01382870	5.44 (revised)	1973-77
Belcher Creek tributary at West Milford, NJ	01382880	.61	1973-77
Belcher Creek at West Milford, NJ	01382890	7.27	1973-77, 1995
Morsetown Brook at West Milford, NJ	01382910	1.31	1973-77
Green Brook near West Milford, NJ	01382960	1.47	1973-77

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Cooley Brook near West Milford, NJ	01382990	1.34	1973-77
Stag Brook near Mahwah, NJ	01387520	1.35	1963-70,1972
Darlington Brook at Darlington, NJ	01387600	3.38	1963-67
Ramapo River near Darlington, NJ	01387670	131	1963-66,1982-83
Bear Swamp Brook near Oakland, NJ	01387700	3.25	1963-67
Ramapo River tributary No. 5 at Oakland, NJ	01387930	.86	1963-67
Acid Brook at Pompton Lakes, NJ	01387950	1.79	1963-67
Haycock Brook at Pompton Lakes, NJ	01387980	4.18	1963-64,1973-77
Pompton River at Two Bridges, NJ	01389000	372	1963-68,1984,1986-88
Goffle Brook at Hawthorne, NJ	01389850	8.77	1963-67
Hohokus Brook at Wyckoff, NJ	01390700	5.31	1963-67
Valentine Brook at Allendale, NJ	01390800	2.48	1963-67
Saddle River at Paramus, NJ	01391110	45.0	1964-69,1971-72
Sprout Brook at Rochelle Park, NJ	01391485	5.56	1964-72
Third River at Nutley, NJ	01392200	11.4	1963-73
Elizabeth River below Chancellor Avenue, at Irvington, NJ	01393200	5.14	1955,1961-62,1966
West Branch Elizabeth River near Union, NJ	01393350	2.53	1989-98
South Branch Rahway River at Colonia, NJ	01396030	9.41	1979-86
South Branch Raritan River tributary 7 at Budd Lake, NJ	01396080	.21	1973-1977
South Branch Raritan River at outlet of Budd Lake, NJ	01396090	5.03	1964,1973-77,1980-83
South Branch Raritan River at Bartley, NJ	01396120	12.5	1964-73,1990
Drakes Brook at Reger Road at Flanders, NJ	01396160	11.6	1965,1990
Drakes Brook at Bartley, NJ	01396180	16.6	1964-73,1975-76,1988-90
Stony Brook at Naughtright, NJ	01396220	3.34	1964-67,1973,1990-98
South Branch Raritan River at Middle Valley, NJ	01396280	47.7	1963-67,1973,1975,1982-92
South Branch Raritan River at Califon, NJ	01396350	58.5	1975-76,1989-90
Spruce Run near High Bridge, NJ	01396590	15.5	1973-77
Spruce Run near Clinton, NJ	01396600	18.1	1959-64
Mulhockaway Creek tributary at Van Syckel, NJ	01396670	2.76	1973-77
Mulhockaway Creek near Clinton, NJ	01396700	20.5	1959-64
Capoolong Creek at Lansdowne, NJ	01396900	14.1	1959-65
Prescott Brook at Round Valley, NJ	01397100	4.61	1958-63
Assiscong Creek at Bartles Corners, NJ	01397290	2.98	1981-89
Neshanic River near Flemington, NJ	01397800	11.4	1981-89
Third Neshanic River near Ringoes, NJ	01397900	9.24	1981-89
Back Brook near Reaville, NJ	01398052	11.4	1981-89
Pleasant Run at Centerville, NJ	01398075	8.11	1982-89
India Brook near Mendham, NJ	01398220	4.36	1964-67
North Branch Raritan River near Chester, NJ	01398260	7.57	1964-67,1980-92
Dawsons Brook near Ironia, NJ	01398300	1.04	1964-67
Burnett Brook near Chester, NJ	01398360	6.64	1964-67
Peapack Brook at Gladstone, NJ	01398700	4.23	1964-67
Peapack Brook at Far Hills, NJ	01398850	11.7	1964-67,1973-76
Mine Brook at Far Hills, NJ	01398950	7.78	1964-67,1973-76
Middle Brook at Burnt Mills, NJ	01399100	6.67	1964-67,1976

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Lamington River near Chester, NJ	01399280	17.3	1963-64,1973,1990
Cold Brook at Oldwick, NJ	01399540	5.32	1973-76
Rockaway Creek at McCrea Mills, NJ	01399570	17.0	1961-65
South Branch Rockaway Creek tributary at Lebanon, NJ	01399600	1.02	1958,1960-64
Rockaway Creek at Whitehouse, NJ	01399700	37.1	1959-62,1964-65,1973
Chambers Brook near North Branch, NJ	01399820	4.71	1964-72
Chambers Brook at North Branch Depot, NJ	01399900	10.2	1959-64,1976
Millstone River at Applegarth, NJ	01400560	15.0	1960-64,1971-72
Millstone River at Hightstown, NJ	01400580	19.7	1960-64,1969-74
Rocky Brook at Hightstown, NJ	01400593	9.58	1965-72
Peddie Brook at Hightstown, NJ	01400596	3.07	1965-72
Millstone River at Locust Corner, NJ	01400600	37.5	1959-64,1971-72
Cranbury Brook at Old Church, NJ	01400670	3.69	1960-64
Cranbury Brook at Cranbury Station, NJ	01400700	9.56	1959-64,1971-72
Bear Brook near Hickory Corner, NJ	01400750	3.46	1960-65
Little Bear Brook at Hickory Corner, NJ	01400770	1.88	1960-64
Bear Brook near Grovers Mill, NJ	01400800	9.52	1959-64
Bear Brook at Princeton Junction, NJ	01400810	12.4	1962-67,1971-72
Millstone River at Princeton Junction, NJ	01400820	78.5	1960-61
Woodsville Brook at Woodsville, NJ	01400850	1.78	1957-59,1965-73
Stony Brook at Pennington, NJ	01400947	26.7	1965-72
Honey Branch near Rosedale, NJ	01400970	3.83	1957-59,1971-72
Stony Brook at Clarksville, NJ	01401100	46.5	1959-64
Duck Pond Run at Clarksville, NJ	01401200	3.74 (revised)	1954-55,1960-67
Beden Brook near Hopewell, NJ	01401520	6.67	1965-72
Rock Brook at Blawenburg, NJ	01401590	8.02	1962-67,1971-72
Pike Run near Rocky Hill, NJ	01401700	22.2	1959-63,1971-72
Ten Mile Run near Blackwells Mills, NJ	01401800	4.36	1960-64,1971-72
Six Mile Run at Blackwells Mills, NJ	01401900	16.1	1960-67,1971-72
Royce Brook at Manville, NJ	01402700	11.7	1960-64
East Branch Middle Brook at Martinsville, NJ	01403100	8.45	1959-64
Bound Brook at South Plainfield, NJ	01403330	9.55	1979-86
Cedar Brook at South Plainfield, NJ	01403350	7.10	1979-86
Ambrose Brook at Middlesex, NJ	01404060	13.9	1979-91
Mill Brook at Highland Park, NJ	01404180	1.41	1979-86
Lawrence Brook at outlet of Davidsons Mill Pond, NJ	01404300	12.2	1973-77
Oakeys Brook near Patricks Corner, NJ	01404400	4.75	1973-77
Beaverdam Brook near Patricks Corner, NJ	01404700	1.51	1973-77
Milford Brook at Englishtown, NJ	01405170	4.86	1982,1984-91
McGellairds Brook at Englishtown, NJ	01405180	14.9	1982,1984-91
Pine Brook at Clarks Mills, NJ	01405210	4.66	1982,1984-91
Matchaponix Brook near Englishtown, NJ	01405240	29.1	1978-88
Barclay Brook near Englishtown, NJ	01405285	4.94	1977-88
Manalapan Brook near Manalapan, NJ	01405335	16.0	1979-88
Manalapan Brook at Bridge Street, at Spotswood, NJ	01405440	43.9	1973-76

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Iresick Brook at East Spotswood, NJ	01405470	2.29	1973-77
East Creek at North Centerville, NJ01407055	1.33 (revised)	1969,1986-93	
Waackaack Creek at Middle Road, near Keansburg, NJ	01407070	4.30	1987-93
Town Brook at Church Street, at New Monmouth, NJ	01407102	3.35	1987-93
Hop Brook at Holmdel, NJ	01407200	5.72	1969-74,1989
Willow Brook at Holmdel, NJ	01407250	6.88	1969-74,1989
Big Brook at Vanderburg, NJ	01407300	8.41	1969-74,1989
Yellow Brook at Colts Neck, NJ	01407400	9.71	1969-74,1989
Mine Brook at Colts Neck, NJ	01407450	5.48	1969-74,1989
Pine Brook at Tinton Falls, NJ	01407520	12.1	1969-74,1989
Poricy Brook at Red Bank, NJ	01407532	2.54	1987-93
Whale Pond Brook near Oakhurst, NJ	01407618	6.20	1989-98
Poplar Brook near Deal, NJ	01407628	2.49	1989-98
Harvey (Hog Swamp) Brook at West Allenhurst, NJ	01407636	1.99	1989-98
Shark River at Glendola, NJ	01407700	9.14	1956-63,1966
Wreck Pond Brook near Spring Lake, NJ	01407800	7.00	1956-63,1966
Debois Creek at Adelphia, NJ	01407860	7.21	1966,1969-74
Yellow Brook at West Farms, NJ	01407890	3.57	1966,1969-74
Manasquan River at West Farms, NJ	01407900	33.5	1959-66,1973
Timber Swamp Creek near Farmingdale, NJ	01407970	3.38	1964-72
Mingamahone Brook at Squankum, NJ	01408020	10.7	1966,1969-74
North Branch Metedeconk River at Lakewood, NJ	01408100	19.4	1959-63,1966
Toms River at Whitesville, NJ	01408300	45.2	1959-63,1966
Union Branch at Lakehurst, NJ	01408440	19.0	1960-64
Manapaqua Brook at Lakehurst, NJ	01408460	6.32	1960-64
Ridgeway Branch near Lakehurst, NJ	01408490	28.2	1959-63
Webbs Mill Branch near Whiting, NJ	01408800	2.92	1973-77
Webbs Mill Branch tributary near Whiting, NJ	01408810	.53	1973-77
North Branch Forked River near Forked River, NJ	01409050	13.4	1961-65
South Branch Forked River near Forked River, NJ	01409080	1.28	1968-74
Oyster Creek near Waretown, NJ	01409100	9.95	1961-65
Mill Creek near Manahawkin, NJ	01409150	10.4	1961-67
Fourmile Branch near Manahawkin, NJ	01409200	5.24	1961-67
Cedar Run near Manahawkin, NJ	01409250	3.34	1961-67
Mill Branch near Tuckerton, NJ	01409300	4.89	1961-67
Mullica River at outlet Atsion Lake, at Atsion, NJ	01409387	26.7	1980-81,1985-89
Mullica River tributary near Atsion, NJ	01409395	4.10	1975-77
Wildcat Branch at Chesilhurst, NJ	01409403	1.03	1974-77
Sleeper Branch near Atsion, NJ	01409404	18.2	1975-77
Clark Branch near Atsion, NJ	01409405	7.12	1975-77
Sleeper Branch at Batsto, NJ	01409406	36.1	1975-77
Pump Branch near Blue Anchor, NJ	01409407	6.20	1974-77
Blue Anchor Brook near Blue Anchor, NJ	01409409	3.01	1974-77
Albertson Brook near Hammonton, NJ	01409410	19.3	1975-77
Nescochague Creek at Pleasant Mills, NJ	01409411	43.8	1975-77

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Springers Brook near Indian Mills, NJ	01409450	12.6	1959-63,1977
Springers Brook near Atsion, NJ01409460	21.2	1975-77	
Landing Creek at Philadelphia Avenue, at Egg Harbor City, NJ	01409575	4.86	1974-77
West Branch Wading River near Chatsworth, NJ	01409730	44.8	1975-77
Tulpehocken Creek near Jenkins, NJ	01409780	21.9	1975-77
West Branch Wading River near Harrisville, NJ	01409800	83.9	1957-63
Oswego River at Oswego Lake, NJ	01409970	61.4	1975-77
West Branch Bass River near New Gretna, NJ	01410200	6.54	1969-74
Clarks Mill Stream at Port Republic, NJ	01410215	8.61	1986-93
Morses Mill Stream at Port Republic, NJ	01410225	8.25	1986-93
Great Egg Harbor River at Berlin, NJ	01410775	1.88	1964-74
Great Egg Harbor River near Sicklerville, NJ	01410784	15.1	1971-77
Fourmile Branch near Williamstown, NJ	01410800	5.34	1959-64,1971
Fourmile Branch at Winslow Crossing, NJ	01410803	6.22	1972-80, 1989-96
Squankum Branch at Malaga Road near Williamstown, NJ	01410865	3.02	1974,1990-96
Penny Pot Stream near Folsom, NJ	01411020	5.35	1968-72
Hospitality Branch at Blue Bell Road near Cecil, NJ	01411035	4.51	1990-96
Hospitality Branch near Cecil, NJ	01411040	8.30	1990-92
Whitehall Branch near Cecil, NJ	01411042	2.21	1990-92
Whitehall Branch below Victory Lakes near Cecil, NJ	01411047	4.60	1990-96
Hospitality Branch at Berryland, NJ	01411053	20.0	1976-86
Deep Run at Weymouth, NJ	01411140	20.0	1976-86
Babcock Creek at Mays Landing, NJ	01411200	20.0	1959-63
English Creek near Scullville, NJ	01411250	3.80	1986-93
Tarkiln Brook near Head of River, NJ	01411299	7.40	1990-92
Mill Creek near Steelmantown, NJ	01411302	3.82	1990-91
Mill Branch near Northfield, NJ	01411305	7.47	1986-93
Mill Creek at outlet Magnolia Lake, at Ocean View, NJ	01411351	2.28	1991-92
Mill Creek at Cold Spring, NJ	01411388	1.34	1991-92
Fishing Creek at Rio Grande, NJ	01411400	2.29	1965-72,1990-92
Green Creek at Green Creek, NJ	01411404	2.49	1965-72
Dias Creek near Cape May Court House, NJ	01411408	1.27	1965-73,1991-92
Bidwell Creek trib. No. 1 near Cape May Court House, NJ	01411410	.41	1967-73,1990-92
Bidwell Creek trib. No. 2 near Cape May Court House, NJ	01411412	.19	1967-72
Goshen Creek at Goshen, NJ	01411418	.33	1967-72,1990-92
Dennis Creek tributary No. 2 at Dennisville, NJ	01411428	4.00	1990-92
Sluice Creek at Clermont, NJ	01411430	.67	1967-72,1990-91
Sluice Creek near South Dennis, NJ	01411434	8.47	1991-92
Dennis Creek tributary near Dennisville, NJ	01411438	2.74	1990-92
East Creek near Eldora, NJ	01411442	8.10	1990-92
West Creek at outlet Pickle Factory Pond, near Eldora, NJ	01411445	11.9	1990-92
Still Run at Aura, NJ	01411450	3.21	1976-90
Scotland Run near Williamstown, NJ	01411460	3.96	1966,1990-92
Scotland Run at Fries Mill, NJ	01411461	9.25	1990-92
Scotland Run at Franklinville, NJ	01411462	14.8	1976-90

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Muddy Run at Centerton, NJ	01411700	37.7	1976-84
Maurice River near Millville, NJ	01411800	191.0	1966-72
Mill Creek near Millville, NJ	01411850	15.1	1973-79,1993,1995-98
Buckshutem Creek near Laurel Lake, NJ	01411950	16.1	1976-84
Manumuskin River near Manumuskin, NJ	01412100	32.1	1964-71,1994-96,1998
Muskee River near Port Elizabeth, NJ	01412120	13.1	1969,1976-84
Cohansey River near Beals Mill, NJ	01412405	9.44	1976-84
Barrett Run near Bridgeton, NJ	01413010	7.02	1966,1976-84
Indian Fields Branch at Bridgeton, NJ	01413020	4.64	1976-84
Stow Creek at Jericho, NJ	01413050	8.00	1966-74
Canton Ditch near Canton, NJ	01413060	2.50	1959-63
Raccoon Ditch at Davis Mill, NJ	01413080	3.19	1976-84
Shimers Brook near Montague, NJ	01438400	7.07	1958-64,1966
Big Flat Brook near Hainesville, NJ	01439800	22.6	1959-64,1966
Big Flat Brook at Tuttle's Corner, NJ	01439830	28.2	1963,1970-73
Little Flat Brook at Hainesville, NJ	01439900	7.73	1959-64
Vancampens Brook near Millbrook, NJ	01440100	7.27	1958-68
Stony Brook near Columbia, NJ	01442800	3.51	1958-68
East Branch Paulins Kill trib. No. 2 near Woodruffs, NJ	01443260	2.81	1992-97
East Branch Paulins Kill trib. No. 1 near Lafayette, NJ	01443275	1.81	1992-97
Paulins Kill at Lafayette, NJ	01443300	33.0	1959-64,1966
Culvers Creek at Branchville, NJ	01443400	11.2	1959-64
Paulins Kill near Newton, NJ	01443450	69.0	1973-77
Paulins Kill at Paulins Kill, NJ	01443460	72.9	1973-77
Trout Brook near Middleville, NJ	01443475	24.0	1979-89
Honey Run near Ramseysburg, NJ	01445800	2.21	1982-90
Honey Run near Hope, NJ	01445900	10.3	1966-72
Pohatcong Creek at Carpentersville, NJ	01455300	57.1	1932,1952-64
Weldon Brook near Woodport, NJ	01455350	3.27	1965-69,1971-72
Beaver Brook near Woodport, NJ	01455360	2.79	1966-72
Weldon Brook at Hurdstown, NJ	01455370	8.10	1973-77
Musconetcong River at Stanhope, NJ	01455550	29.7	1973-76
Lubbers Run at Lockwood, NJ	01455780	16.3	1982-90, 1995
Hatchery Brook at Hackettstown, NJ	01456100	1.81	1966-72
Hakihokake Creek at Milford, NJ	01458100	17.2	1944,1958-64
Harihokake Creek near Frenchtown, NJ	01458400	9.75	1944,1958-65
Nishisakawick Creek at Frenchtown, NJ	01458600	11.0	1958-64
Little Nishisakawick Creek at Frenchtown, NJ	01458700	3.50	1958-65
Lockatong Creek near Raven Rock, NJ	01460900	23.2	1944,1958-64
Alexauken Creek near Lambertville, NJ	01461900	14.9	1944,1958-64
Moore Creek near Titusville, NJ	01462200	10.2	1958-64
Jacobs Creek at Somerset, NJ	01462800	13.3	1957-64
Shipetaukin Creek at Lawrenceville, NJ	01463650	4.47	1963-67
Shipetaukin Creek at Bakersville, NJ	01463670	8.97	1963-67
Shabakunk Creek at Ewingville, NJ	01463750	5.00	1963-67

DISCONTINUED LOW-FLOW STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
West Branch Shabakunk Creek near Ewingville, NJ	01463790	4.56	1963-72
Miry Run at Robbinsville, NJ	01463830	4.02	1963-67
Miry Run at Mercerville, NJ	01463860	12.4	1963-67
Pond Run at Trenton, NJ	01463980	8.94	1963-69, 1971-72
Crosswicks Creek near Cookstown, NJ	01464300	24.9	1966, 1969-74
North Run at Cookstown, NJ	01464380	7.28	1966, 1969-74
Lahaway Creek near Hornerstown, NJ	01464460	21.4	1966, 1969-74
Miry Run at Holmes Mills, NJ	01464480	3.15	1966, 1969-74
Doctors Creek at Allentown, NJ	01464515	17.4	1966, 1968-72, 1991-92
Blacks Creek at Mansfield Square, NJ	01464530	19.7	1966-72
Crafts Creek at Hedding, NJ	01464540	10.6	1959-63
Assiscunk Creek at Columbus, NJ	01464580	8.28	1959-63
Assiscunk Creek near Burlington, NJ	01464590	37.4	1966-74
Southwest Branch Rancocas Creek at Medford, NJ	01465880	47.2	1961-66, 1973
Sharps Run at Medford, NJ	01465884	4.41	1982-90
Little Creek near Lumberton, NJ	01465898	19.2	1982-90
Parkers Creek near Mount Laurel, NJ	01467010	2.66	1964-72
Mill Creek at Willingboro, NJ	01467020	7.77	1959-64, 1976
Pompeston Creek at Cinnaminson, NJ	01467057	5.74	1964-72
North Branch Pennsauken Creek at Maple Shade, NJ	01467070	13.0	1959-63
South Branch Pennsauken Creek at Maple Shade, NJ	01467080	8.13	1964-67
Cooper River at Kirkwood, NJ	01467130	5.10	1964-72, 1988-98
Cooper River at Lawnside, NJ	01467140	12.7	1964-72, 1979-81, 1985-98
North Branch Cooper River near Marlton, NJ	01467160	5.34	1964-69, 1971-72, 1977-78, 1982-86, 1988-98
North Branch Cooper River at Ellisburg, NJ	01467180	10.5	1964-72, 1988-97
Newton Creek at Collingswood, NJ	01467305	1.32	1964-72
Newton Creek at West Collingswood, NJ	01467312	3.48	1964-72
South Branch Newton Creek at Glover Ave., at Haddon Heights, NJ	01467315	.52	1968-74
South Branch Newton Creek at Haddon Heights, NJ	01467317	.63	1964-67
North Branch Big Timber Creek at Laurel Springs, NJ	01467350	6.55	1959-71
Mantua Creek at Glassboro, NJ	01474950	1.20	1965-66, 1974-77
Mantua Creek at Greentree Road, at Glassboro, NJ	01474970	2.78	1965-66, 1974-77
Raccoon Creek near Mullica Hill, NJ	01477100	10.1	1959-63
South Branch Raccoon Creek near Mullica Hill, NJ	01477118	8.30	1966-72
Salem River at Sharptown, NJ	01482520	27.3	1966-72, 1974-75
Major Run at Sharptown, NJ	01482530	3.04	1966-72, 1974-75
Deep Run near Alloway, NJ	01483010	5.30	1977-84

DISCONTINUED TIDAL CREST-STAGE AND TIDAL GAGING STATIONS

Station name	Station number	Period of Record (water years)	
		Tidal Crest- Stage Gage	Tidal Gaging Station
South River below Duheral Dam, at Old Bridge, NJ	01405700		Aug 1967-Sept 1970
Raritan River at Old Raritan Arsenal, at Metuchen, NJ	01406680		Jan 1966-Sept 1969 ^a Oct 1969-Sept 1974
Cedar Creek at Lanoka Harbor, NJ	01409000	1932-58*, 1971*, 1979-85	
Barnegat Bay at Barnegat Light, NJ	01409125	1965-80	
Tuckerton Cove near Tuckerton, NJ	01409290	1965-80	July 1971-Sept 1973
Tuckerton Creek at Tuckerton, NJ	01409310		July 1971-Sept 1971
Head of Big Thorofare near Tuckerton, NJ	01409315		July 1971-June 1972
Big Thorofare at Mouth near Tuckerton, NJ	01409317		July 1971-Sept 1971
Marshelder Channel at Story Island, near Tuckerton, NJ	01409323		July 1971-Sept 1971
Big Sheepshead Creek at Great Bay Boulevard, near Tuckerton, NJ	01409326		July 1971-Sept 1971
East Entrance Big Sheepshead Creek near Tuckerton, NJ	01409329		July 1971-Sept 1971
Little Sheepshead Creek at Great Bay Boulevard, near Tuckerton, NJ	01409332		July 1971-Sept 1971
Little Egg Inlet at Old Coast Guard Station, near Tuckerton, NJ	01409335		July 1971-Sept 1975
Newmans Thorofare at Fish Factory, near Tuckerton, NJ	01409340		July 1971-Sept 1971
Great Bay at Cape Horn Marina, near Tuckerton, NJ	01409345		July 1971-Feb 1972
Big Creek at Radio Road, near Tuckerton, NJ	01409360		July 1971-July 1973
Great Bay at Great Bay Marina, near Tuckerton, NJ	01409370		July 1971-Sept 1974
Ballangers Creek below Polly Ditch, near Tuckerton, NJ	01410300		July 1971-Sept 1971
Ballangers Creek Entrance near Tuckerton, NJ	01410305		July 1971-Sept 1971
Crook Horn at Ocean City, NJ	01411318	1979-85	June 1974-Sept 1976
Whale Creek near Strathmere, NJ	01411340		Mar 1976-Feb 1977
Townsend Channel at Townsends Inlet, NJ	01411353	1978*	Oct 1976-Apr 1978
Ingram Thorofare at Avalon, NJ	01411355	1978*, 1979-81	Oct 1977-May 1978
Great Channel at Stone Harbor	01411360	1965-99	
Grassy Sound at West Wildwood, NJ	01411380	1965-81	Oct 1977-Apr 1978
Cape May Harbor at Cape May, NJ	01411390	1965-85	
Cape May Canal at North Cape May, NJ	01411395	1965-85	
Delaware River at Florence, NJ	01464560		Apr 1964-Feb 1970
Rancocas Creek at Rancocas, NJ	01467009		Oct 1976-Apr 1977
Delaware River at Torresdale Intake, Philadelphia, PA	01467030		Oct 1963-Sept 1970
Delaware River at Palmyra, NJ	01467060		Dec 1962-Sept 1974
Delaware River at Delair, NJ	01467090		Dec 1962-Aug 1969
Delaware River below Christina River at Wilmington, DE	01481602		Dec 1982-Sept 1991
Delaware River at Delaware Memorial Bridge, at Wilmington, DE	01482100		July 1967-May 1983
Salem River at Winslow Farms Dock, near Pennsville, NJ	01482620		July 1971-Dec 1971
Delaware River at Oakwood Beach, NJ	01482705	1965-74	

* Operated as a continuous-record gaging station.

^a Revised.

WATER RESOURCES DATA - NEW JERSEY, 2000

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey (USGS), in cooperation with Federal, State, and local agencies, collects a large amount of data pertaining to the water resources of New Jersey each water year. These data, accumulated over many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the USGS, the data are published annually in this report series, titled "Water Resources Data-New Jersey." This data is also available on the world wide web at <http://nj.usgs.gov> (historical data along with provisional-real-time data).

This report series includes records of stage, discharge, and water quality in streams; stage and contents, and water quality in lakes and reservoirs; and water levels and water quality in ground-water wells. This volume contains records of water discharge at 92 gaging stations; tide summaries at 17 gaging stations; and stage and contents at 38 lakes and reservoirs. Also included are stage and discharge for 110 crest-stage partial-record stations and stage-only at 32 tidal crest-stage gages. Locations of these sites are shown in figures 6 and 7. Additional water data were collected at various sites that are not part of the systematic data-collection program. These include discharge measurements made at 58 low-flow partial-record stations and 120 miscellaneous sites. The data in this report represent that part of the National Water Information System (NWIS) data collected by the USGS and cooperating Federal, State, and local agencies in New Jersey.

This series of annual reports for New Jersey began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning in 1975, surface-water, water-quality, and ground-water data were combined in one volume. Beginning with the 1977 water year, these data were published in two volumes based on drainage basins. Beginning with the 1990 water year, the format was changed to include all surface-water discharge and surface-water quality records in Volume 1 and all ground-water level and ground-water quality records in Volume 2. Beginning with the 1998 water year, the format has changed to include surface-water discharge records in Volume 1, ground-water level records in Volume 2, and surface-water and ground-water quality records in Volume 3.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for New Jersey were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Part 1B." For water years 1961 through 1970, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for water years 1941 through 1970 were published annually under the title "Quality of Surface Waters of the United States," and water levels for water years 1935 through 1974 were published under the title "Ground-Water Levels in the United States." The above-mentioned Water-Supply Papers can be consulted in the libraries of the principal cities of the United States and can be purchased from U.S. Geological

Survey, Branch of Information Services, Box 25286, Denver, CO 80225-0286, (303) 202-4610.

Publications similar to this report are produced annually by the USGS for all States. These reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NJ-00-1." For archiving and general distribution purposes, the reports for water years 1971 through 1974 also are identified as water-data reports. Water-data reports are available for purchase in paper copy or in microfiche from the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports can be obtained from the District Chief, USGS, New Jersey District, at the address given on the back of the title page of this report or by telephone ((609) 771-3900).

The U.S. Geological Survey, New Jersey District, maintains a World Wide Web site which has water-resource related information for New Jersey and information on New Jersey District activities. Links to other USGS and Federal web sites are also available. We invite you to visit us at:

<http://nj.usgs.gov>

COOPERATION

The U.S. Geological Survey and agencies of the State of New Jersey have had joint-funding agreements for the collection of water-resource records since 1921. Organizations that assisted in collecting the data in this report through joint-funding agreements with the USGS are--

New Jersey Department of Environmental Protection,
Robert C. Shinn, Jr., Commissioner

New Jersey Department of Transportation, James Weinstein,
Commissioner

New Jersey Water Supply Authority, Thomas G. Baxter,
Executive Director

North Jersey District Water Supply Commission, Jerry
Notte, General Manager

Passaic Valley Water Commission, Joseph A. Bella,
Executive Director

City of New Brunswick, Shawn Maloney, Director, Water
Utility Department

County of Bergen, Anthony V. Scolpino, Director of Public
Works

County of Essex, Rajashekar Ravilla, County Engineer

County of Gloucester, Charles E. Romick, Director of
Planning

County of Mercer, Steven J. Dixon, Executive Director,
Mercer County Improvement Authority

County of Morris, Glen Schweizer, Executive Director,
Morris County Municipal Utilities Authority

County of Somerset, Michael J. Amorosa, Director of Public
Works

Pinelands Commission, Annette M. Barbaccia,

Executive Director
 Brick Township Municipal Utilities Authority, Kevin F. Donald, Executive Director
 Township of West Windsor, Helen Rancan, Chairman of Environmental Commission
 Borough of Westwood, Donald F. Rainey, Borough Administrator
 Delaware River Basin Commission, Carol R. Collier, Executive Director
 Ocean County Soil Conservation District, David B. Friedman, Director

Funding assistance was provided by the U.S. Army Corps of Engineers, for the collection of records at 4 surface-water stations, by the Fort Dix Directorate of Public Works for collection of records at 1 surface-water station, and by the U.S. Army Armament Research and Development Center for the collection of records at 3 surface-water stations. In addition, several stations were operated fully or partially with funds appropriated directly to the USGS. Funding also was supplied by the following Federal Energy Regulatory Commission licensees: GPU Generation Corporation, Passaic Valley Water Commission, and Great Falls Hydroelectric Company. Assistance was provided by the National Weather Service and the National Ocean Service.

The following organizations aided in collecting records:

New Jersey Department of Environmental Protection; Municipalities of Jersey City, Newark, New Brunswick, and Spotswood; Elizabethtown Water Company; Ewing-Lawrence Sewerage Authority; United Water New Jersey; New Jersey-American Water Company; Rockaway Valley Regional Sewerage Authority; and GPU Generation Corporation.

Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Precipitation and Reservoir Contents

Hydrologically, water year 2000 was a relatively uneventful year for most of New Jersey, especially when compared to the droughts and flooding that occurred during the previous year. Monthly precipitation (spatially weighted average throughout New Jersey) was above normal for October, below normal for November through February, much above normal for March, below normal for April and May, then above normal June through September when compared to normal monthly precipitation from 1961-90. Statewide, total average precipitation was approximately 1 inch above normal for water year 2000 and approximately 2 inches more than that recorded the previous year. The winter months were the 24th driest and the 21st warmest of the 106 years of monthly precipitation and monthly mean temperatures recorded for New Jersey. Snow covered parts of northern and central New Jersey from January 13 to February 22. (David Robinson, New Jersey State Climatologist, Rutgers University, oral commun., 2001). Rainfall was well distributed throughout the summer months (about 1 inch above normal for June through September) with one exception, an unusual

thunderstorm that stalled over northwestern New Jersey from August 11-14.

The August 11-14 storm produced various intensities of rainfall in areas of northwestern New Jersey. Rainfall totals were highest in southeastern Sussex County and northwestern sections of Morris County. The heaviest rain fell during a 6-hour period on August 12. During August 11-14, privately owned rain gages in Jefferson Township and on Sparta Mountain (Sussex and Morris Counties, respectively) recorded 18.65 inches and 14.11 inches, respectively. The rain gages are operated by Sussex County Weather Network, LLC. Rain gages within a 10-mile radius of Sparta Township recorded the most rainfall in the State. In some locations, record flooding resulted. Four dams failed completely, and 26 others were damaged. Some bridges were washed away and more than 100 rescues were made.

Three National Weather Service (NWS) precipitation stations in Newark, Trenton, and Atlantic City have been selected as index sites for precipitation. During water year 2000, precipitation totals were above normal at the Newark and Atlantic City NWS index stations and below normal at the Trenton NWS index station. The Newark station recorded 44.63 inches, which is 102 percent of the 30-year reference-period (1961-90) mean. The Atlantic City station recorded 47.63 inches, which is 118 percent of the 30-year mean. The Trenton station recorded 36.41 inches, which is 83.2 percent of the 30-year mean. Monthly precipitation at the three NWS stations, along with the 30-year mean is shown in figure 1.

Monthly mean temperatures were below normal for October, above normal for November through June, and below normal for July through September when compared to New Jersey mean monthly temperatures for 1961-90. The July 2000 monthly mean temperature equaled the coolest mean temperature in 106 years of record, which occurred in July 1914.

Combined usable contents of the 13 major water-supply reservoirs in New Jersey were 64.7 billion gallons at the end of September 1999, which is 123 percent of the 30-year mean (normal) contents for the end of September and 80.5 percent of capacity. Reservoirs were replenished as a result of the heavy rainfall from Tropical Storm Floyd on September 15-17, 1999, and thus recovered from a deficit due to drought conditions. Combined usable contents increased to a maximum of 80.4 billion gallons by the end of March 2000, which is 115 percent of normal contents for the end of March and 100 percent of capacity. Reservoir levels declined during the summer because of an increased demand for water supplies. By September 30, 2000, combined usable contents totalled 69.9 billion gallons, which is 132 percent of normal contents for the end of September and 86.9 percent of capacity (fig. 2). The term "usable contents" is used here as a measure of the total volume of water that can be removed from a reservoir without pumping, and does not account for the volume of water below the bottom of the lowest outlet or pipe (sometimes referred to as dead storage).

Streamflow

Three gaging stations, located in north, south, and central New Jersey, are considered index stations for statewide

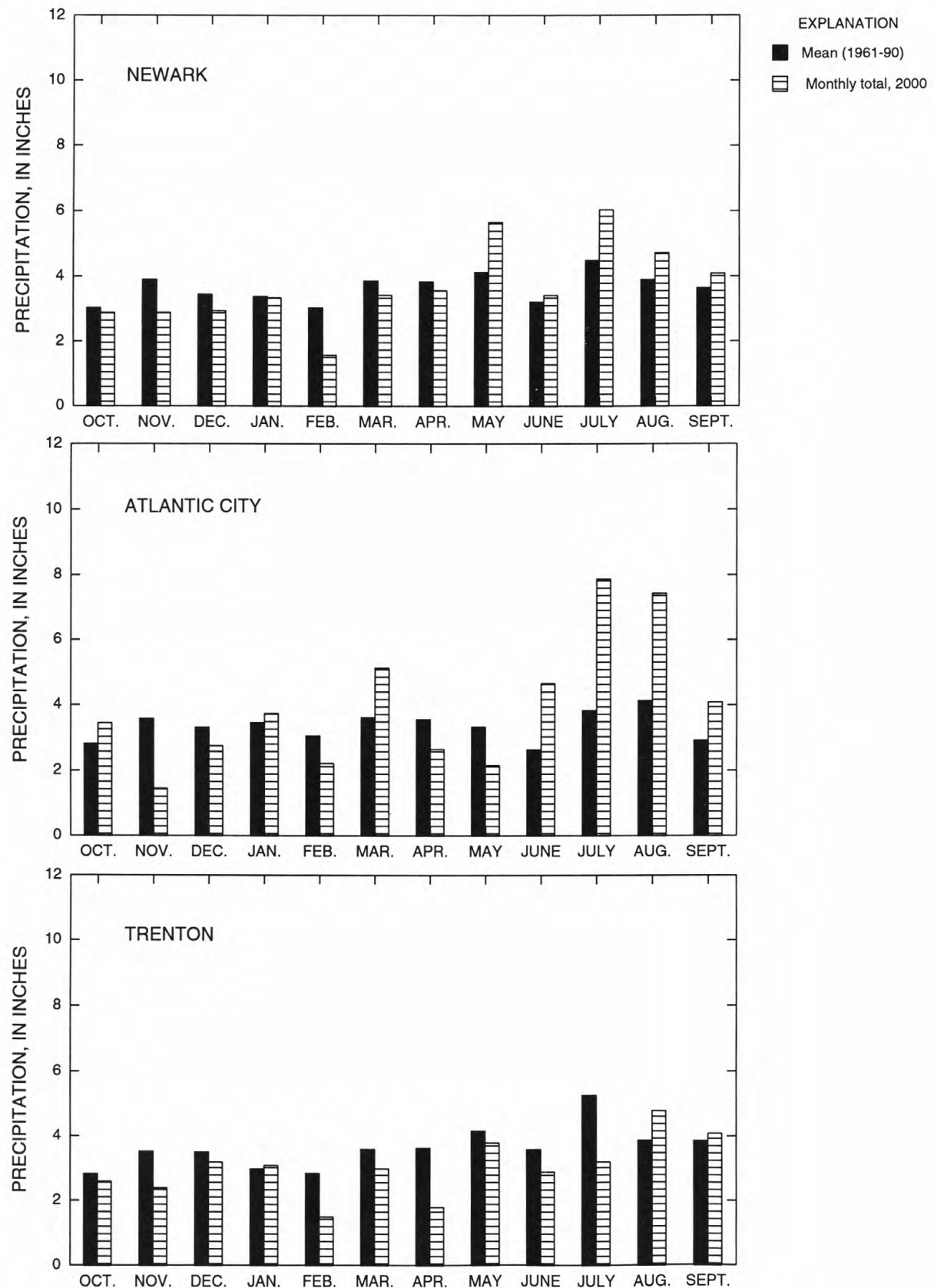
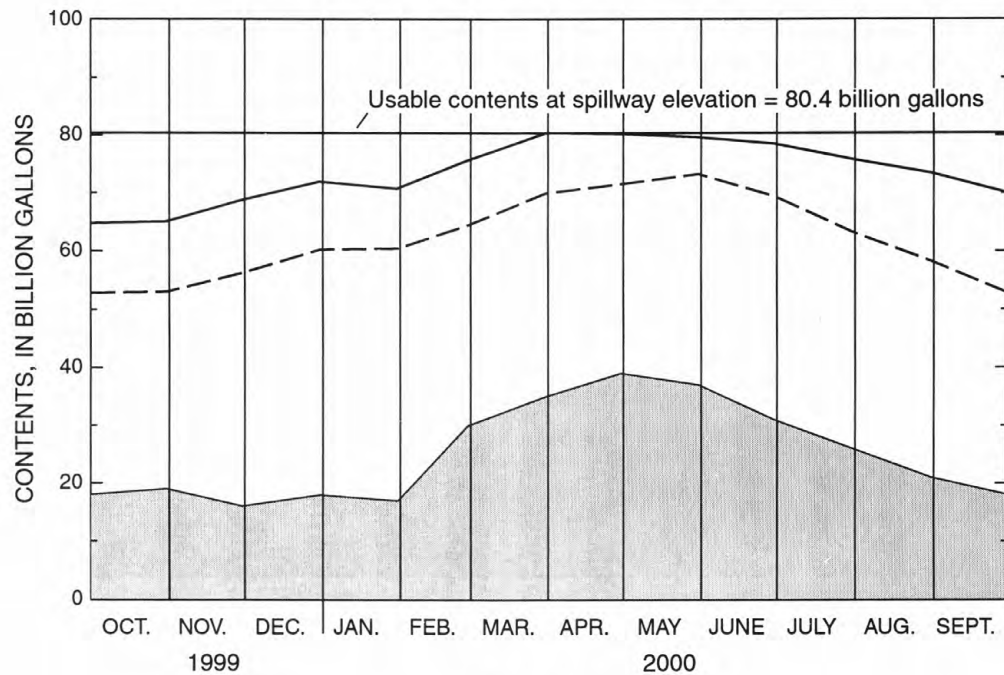





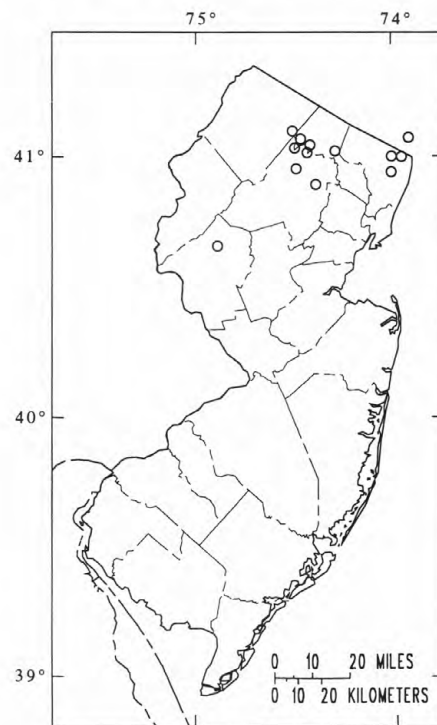
Figure 1. Monthly precipitation at three National Weather Service stations.

WATER RESOURCES DATA-NEW JERSEY, 2000



EXPLANATION

-  Shaded area indicates lowest monthly usable contents for reference period
-  Mean usable contents, 1961-90
-  Month-end usable contents, 2000 water year



Map showing locations of reservoirs

Figure 2. Combined usable contents of 13 major water-supply reservoirs.

streamflow conditions. Streamflow at the index station in northern New Jersey (South Branch Raritan River near High Bridge) averaged 112 ft³/s for the water year, which is 91.1 percent of the 1919-2000 average. Streamflow at the index station in southern New Jersey (Great Egg Harbor River at Folsom) averaged 73.8 ft³/s, which is 86.2 percent of the 1926-2000 average. The observed annual mean discharge for the Delaware River at Trenton was 12,340 ft³/s, which is 106 percent of the 1913-2000 average. The Delaware River is highly regulated by reservoirs and diversions. Monthly mean discharge at each of these index gaging stations during the current water year and the long-term normal monthly discharge are shown in figure 3. Annual mean discharge at each of these index gaging stations and the mean annual discharge for the period of record are shown in figure 4.

Annual mean discharges at 46 gaging stations that had 40 years or more of continuous records and mean annual discharge for the period of record at each gaging station are shown in table 1. The difference is listed as percent difference. Discharge at 36 of the 46 gaging stations was below normal for water year 2000. Eight of the ten gaging stations with above-normal flow recorded flow that was less than 10 percent above normal. Several gaging stations that monitor heavily regulated rivers were not included in this comparison because of large artificial deficits related to regulation. The criterion of assessing gaging stations with 40 years or more of record was used in order to encompass at least one of the 30-year drought cycles that New Jersey has experienced.

The first notable flooding of water year 2000 was in Gloucester and Salem Counties and was the result of nearly 5 inches of rain that fell on March 21. Monmouth County experienced flooding after approximately 5 inches of rain fell on July 26. Areas of Atlantic County flooded on August 4 after an intensive rainfall. The most notable flooding for water year 2000 occurred in Sussex and Morris Counties on August 11-14.

Floods occurred after thunderstorms deposited as much as 18 inches of rain on areas of northwestern New Jersey during August 11-14. The heaviest rainfall was at the headwaters of the Wallkill, Musconetcong, and Rockaway River basins. Flood peaks at gaging stations on Lake Hopatcong, Musconetcong River, Green Pond Brook, Rockaway River and Russia Brook tributary were the highest ever recorded (table 2). Table 2 includes peak flow and stage at 14 gaging stations in northern New Jersey that experienced greater than a 2-year flood event during the period August 12-15. The gaging stations with peaks of record are in close proximity because the rainfall was localized. The peak flow attenuated downstream from these gaging stations, thus the recurrence intervals were low.

Following the storms in Sussex and Morris Counties, the New Jersey Department of Environmental Protection, Dam Safety Section, inspected more than 50 dams. They found complete failure at 4 dams (Seneca Lake Dam, Tomahawk Dam, Furnace Dam, and Edison Damo, all in Sussex County) and damage to another 26 dams throughout Sussex and Morris Counties (NJDEP, 2000, <http://www.state.nj.us/dep/nhr/engineering/damsafety>).

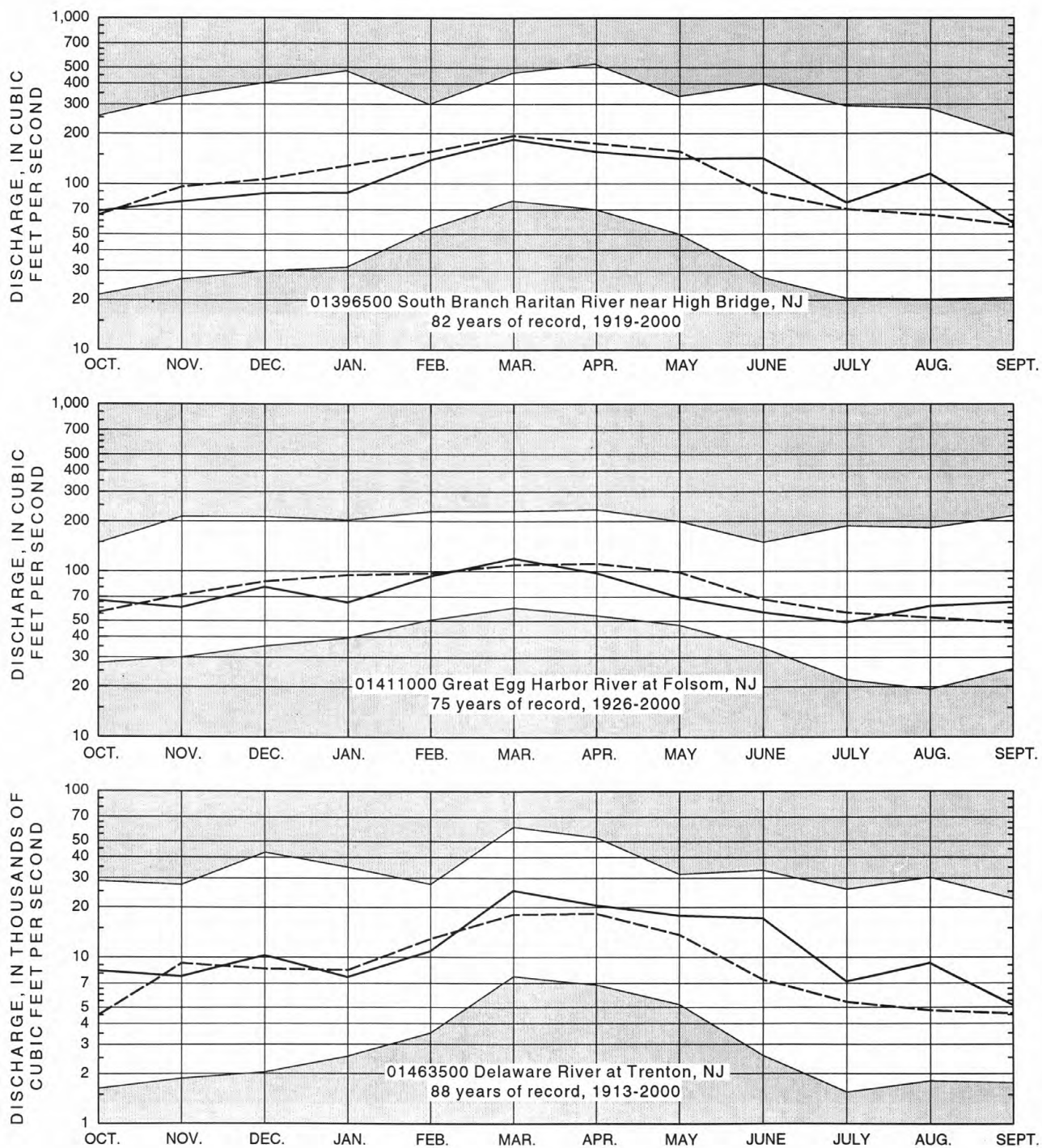
SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the affects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program can be found at <http://water.usgs.gov/hbn/>.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations were operated in the Mississippi, Columbia, Colorado, and Rio Grande. From 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at <http://water.usgs.gov/nasqan/>.

The National Atmospheric Deposition Program/ National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 225 precipitation chemistry monitoring sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as all data from the individual sites, can be found at <http://bqs.usgs.gov/acidrain/>.

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human



EXPLANATION

UNSHADED AREA--Indicates range between highest and lowest mean discharge recorded for the month, prior to 2000 water year

BROKEN LINE--Indicates normal discharge (median of the monthly means) for the standard reference period, 1961-90

SOLID LINE--Indicates observed monthly mean discharge for the 2000 water year

Figure 3. Monthly mean discharge at index gaging stations.

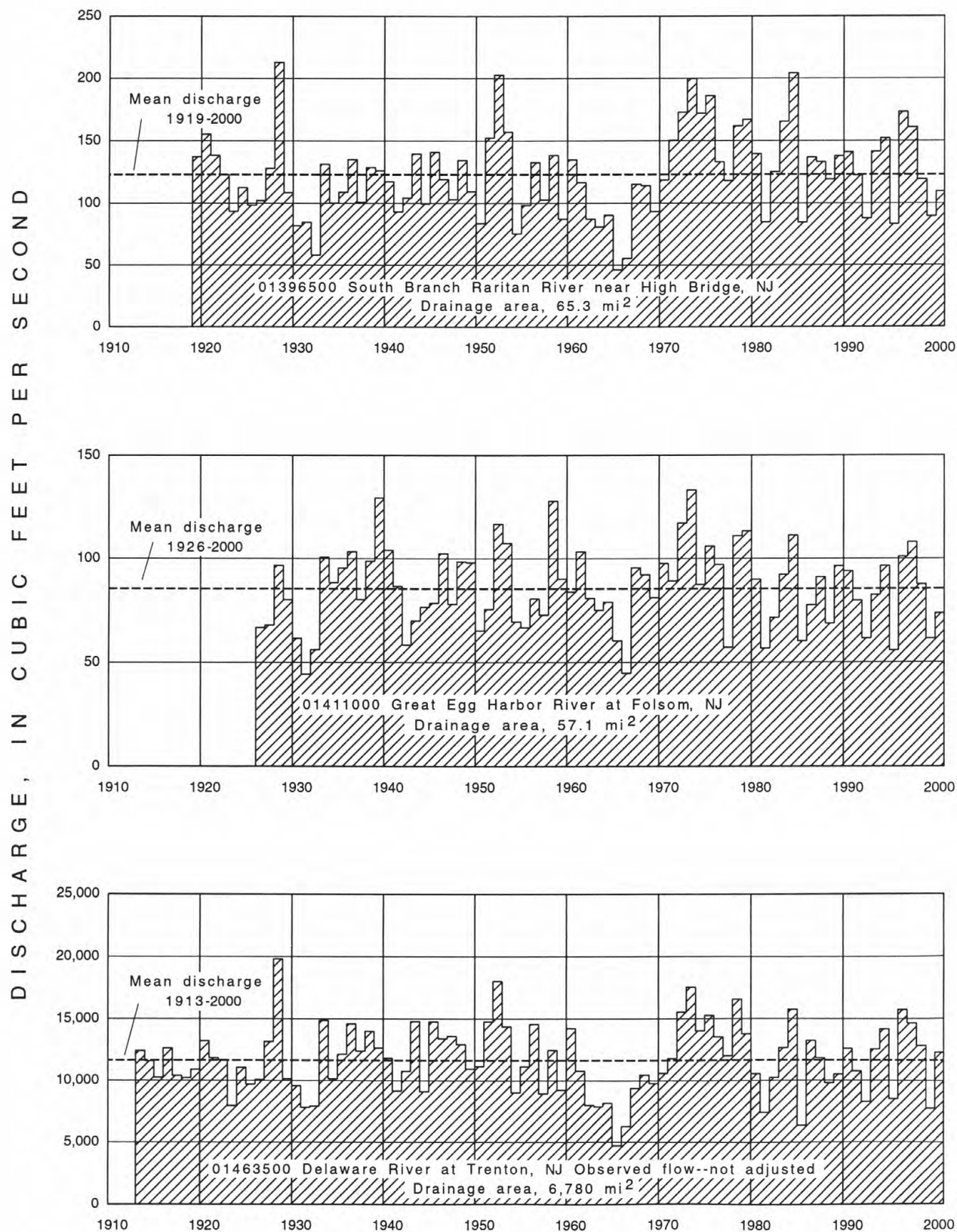


Figure 4. Annual mean discharge at index gaging stations.

Table 1. Annual mean discharges for water year 2000 and mean annual discharge for the period of record at continuous gaging stations with 40 years or more of records[ft³/s, cubic feet per second; mi², square miles]

Station number	Station name	Drainage area (mi ²)	Number of years of record	Annual mean discharge for 2000 water year (ft ³ /s)	Mean annual discharge for period of record (ft ³ /s)	Percent difference
01377000	Hackensack River at Rivervale, NJ	58.0	59	69.9	87.2	-19.8
01377500	Pascack Brook at Westwood, NJ	29.6	66	48.5	54.1	-10.4
01379000	Passaic River near Millington, NJ	55.4	79	70.5	91.4	-22.9
01379500	Passaic River near Chatham, NJ	100	72	144	172	-16.3
01380500	Rockaway River above reservoir, at Boonton, NJ	116	63	222	231	-3.9
01381500	Whippany River at Morristown, NJ	29.4	79	49.7	54.5	-8.8
01382500	Pequannock River at Macopin Intake Dam, NJ	63.7	77	36.4	47.0	-22.6
01383500	Wanaque River at Awosting, NJ	27.1	81	54.1	54.4	-0.6
01384500	Ringwood Creek near Wanaque, NJ	19.1	59	31.7	33.3	-4.8
01387500	Ramapo River near Mahwah, NJ	120	82	223	229	-2.6
01388000	Ramapo River at Pompton Lakes, NJ	160	79	315	287	9.8
01388500	Pompton River at Pompton Plains, NJ	355	61	561	491	14.3
01389500	Passaic River at Little Falls, NJ	762	102	950	1140	-16.7
01390500	Saddle River at Ridgewood, NJ	21.6	43	27.5	33.9	-18.9
01391500	Saddle River at Lodi, NJ	54.6	78	103	99.9	3.1
01393450	Elizabeth River at Ursino Lake, at Elizabeth, NJ	16.9	79	24.9	25.9	-3.9
01394500	Rahway River near Springfield, NJ	25.5	63	33.5	30.3	10.6
01395000	Rahway River at Rahway, NJ	40.9	79	47.3	49.0	-3.5
01396500	South Branch Raritan River near High Bridge, NJ	65.3	82	112	123	-8.9
01396800	Spruce Run at Clinton, NJ	41.3	41	50.4	65.2	-22.7
01397000	South Branch Raritan River at Stanton, NJ	147	84	188	248	-24.2
01398000	Neshanic River at Reaville, NJ	25.7	70	28.9	37.9	-23.7
01398500	North Branch Raritan River near Far Hills, NJ	26.2	77	39.3	48.2	-18.5
01399500	Lamington (Black) River near Pottersville, NJ	32.8	79	48.5	55.9	-13.2
01400000	North Branch Raritan River near Raritan, NJ	190	77	259	311	-16.7
01400500	Raritan River at Manville, NJ	490	83	610	776	-21.4
01401000	Stony Brook at Princeton, NJ	44.5	47	60.4	66.6	-9.3
01402000	Millstone River at Blackwells Mills, NJ	258	79	303	383	-20.9
01403060	Raritan River below Calco Dam, at Bound Brook, NJ	785	62	854	1198	-28.7
01405400	Manalapan Brook at Spotswood, NJ	40.7	43	39.5	62.0	-36.3
01408000	Manasquan River at Squankum, NJ	44.0	69	54.5	74.1	-26.5
01408500	Toms River near Toms River, NJ	123	72	180	212	-15.1
01409400	Mullica River near Batsto, NJ	46.7	43	87.8	106	-17.2
01409500	Batsto River at Batsto, NJ	67.8	73	96.6	121	-20.2
01410000	Oswego River at Harrisville, NJ	72.5	70	73.1	86.7	-15.7
01411000	Great Egg Harbor River at Folsom, NJ	57.1	75	73.8	85.6	-13.8
01411500	Maurice River at Norma, NJ	112	68	144	164	-12.2
01440000	Flat Brook near Flatbrookville, NJ	64.0	77	116	111	4.5
01443500	Paulins Kill at Blairstown, NJ	126	78	198	197	0.5
01445500	Pequest River at Pequest, NJ	106	79	162	157	3.2
01457000	Musconetcong River near Bloomsbury, NJ	141	83	255	239	6.7
01463500	Delaware River at Trenton, NJ	6780	88	12340	11670	5.7
01464000	Assunpink Creek at Trenton, NJ	90.6	77	139	134	3.7
01464500	Crosswicks Creek at Extonville, NJ	81.5	59	119	135	-11.9
01466500	McDonalds Branch in Lebanon State Forest, NJ	2.35	47	1.54	2.16	-28.7
01467000	North Branch Rancocas Creek at Pemberton, NJ	118	79	152	170	-10.6

Table 2. Historical flood peaks and flood peaks during August 12-14, 2000, at U.S. Geological Survey gaging stations in northwestern New Jersey that experienced a greater than 2-year recurrence interval[NA, not available; mi², square miles; ft³/s, cubic feet per second per square mile; ft³/s/mi², cubic feet per second per square mile]

U.S. Geological Survey Stream-- gaging station number	Site name	Drainage area (mi ²)	Remarks	Date	Peak Discharge (ft ³ /s)	Peak Discharge (ft ³ /s/mi ²)	Gage height	Time	Recur- rence interval (years)	Years of record
01367633	Glen Brook near Sparta, N.J.	3.68	Peak of record	8/12/2000	2,520	685	NA	NA	NA	1
01368000	Wallkill River near Unionville, N.Y.	140	Peak of record	8/19/1955	6,880	49.1	13.35	NA	>100	44
			Thunderstorm	8/14/2000	1,800	12.9	8.89	NA	3	
01379630	Russia Brook tributary at Milton, N.J.	1.64	Previous peak of record	8/28/1971	144	87.8	4.23	NA	NA	4
			New peak of record	8/12/2000	650	342	6.00	NA	NA	
01379700	Rockaway River at Berkshire Valley, N.J.	24.4	Previous peak of record	4/5/1984	1,290	52.9	9.05	NA	NA	13
			New peak of record	8/13/2000	2,500	102	10.86	NA	40	
01379773	Green Pond Brook at Picatinny Arsenal, N.J.	7.65	Peak of record	4/5/1984	333	43.5	3.51	NA	NA	17
			Thunderstorm	8/12/2000	180	23.5	2.96	1845	3	
01379780	Green Pond Brook below Picatinny Lake, at Picatinny Arsenal, N.J.	9.16	Previous peak of record	9/13/1987	243	26.5	3.70	NA	NA	15
			New peak of record	8/12/2000	284	31.0	3.83	2145	NA	
01379790	Green Pond Brook at Wharton, N.J.	12.6	Peak of record	4/5/1984	572	45.4	5.11	NA	NA	17
			Thunderstorm	8/13/2000	446	35.4	4.56	0245	6	
01380500	Rockaway River above reservoir, at Boonton, N.J.	116	Peak of record	4/5/1984	5,590	48.2	7.23	NA	40	61
			Thunderstorm	8/13/2000	2,310	19.9	5.04	2400	3	
01399190	Lamington River at Succasunna, N.J.	7.37	Peak of record	1/24/1979	176	23.9	5.20	NA	20	12
			Thunderstorm	8/12/1999	150	20.4	4.91	NA	12	
01399200	Lamington River at Ironia, N.J.	10.9	Peak of record	7/7/1984	389	35.7	5.15	NA	20	14
			Thunderstorm	8/12/1999	228	20.9	4.86	NA	4	
01455400	Lake Hopatcong at Landing, N.J.	25.3	Previous peak of record	8/19/1955	NA	NA	10.55	NA	NA	114
			New peak of record	8/13/2000	NA	NA	11.80	0600	>100	
01455500	Musconetcong River at outlet of Lake Hopatcong, N.J.	25.3	Previous peak of record	8/20/1955	795	31.4	3.85	NA	NA	69
			New peak of record	8/13/2000	1,900	75.1	10.74	NA	>100	
01456000	Musconetcong River near Hackettstown, N.J.	68.9	Peak of record	8/19/1955	2,170	31.5	3.97	NA	60	75
			Thunderstorm	8/14/2000	1,670	24.2	3.50	NA	20	
01457000	Musconetcong River near Bloomsbury, N.J.	141	Peak of record	1/25/1979	7,200	51.1	8.50	NA	70	81
			Thunderstorm	8/15/2000	2,320	16.5	5.28	0400	3	

factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program can be found at

http://water.usgs.gov/nawqa/nawqa_home.html.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 2000 water year that began October 1, 1999, and ended September 30, 2000. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs. The locations of the stations where the data were collected are shown in figures 6 and 7. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. Generally the "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary enter-

ing upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 01396500, which appears just to the left of the station name, includes the two-digit Part number "01" plus the 6-digit downstream-order number "396500". The Part number designates the major drainage basin; for example, Part "01" covers the North Atlantic slope basins. In some areas where all 8-digit numbers are used up, 10-digit station numbers are assigned between the 8-digit numbers.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description (fig. 5).

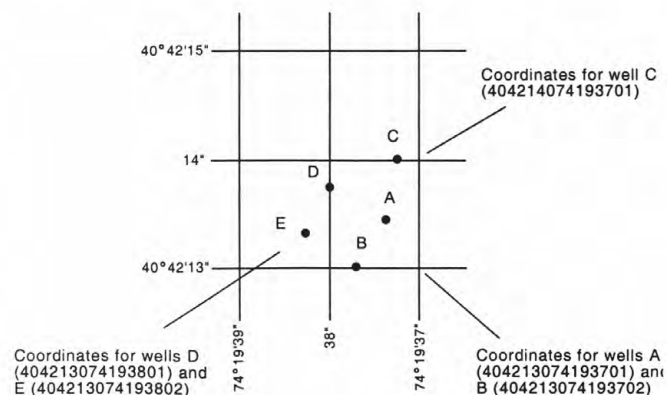


Figure 5.--System for numbering wells and miscellaneous sites (latitude and longitude)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records. Location of all gaging stations and partial-record stations for which data are given in this report are shown in figures 6 and 7.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-capacity curves or tables to compute lake storage.

Continuous records of stage are obtained at a gaging station with one or more of the following instruments:

- analog recorders that trace continuous graphs of stage on graphic charts,
- digital recorders that punch stage values on paper tapes at selected time intervals,
- electronic data loggers that electronically record stage values at selected time intervals, and
- data collection platforms (DCP) that electronically record and then transmit the data via satellite to ground receiving stations.

At some gaging stations, acoustic velocity meter (AVM) systems are used to compute discharges. The AVM system measures the stream's velocity at one or more paths in the cross section. Coefficients are developed to relate this path velocity to the mean velocity in the cross section. Because the AVM sensors are fixed in position, the adjustment coeffi-

cients generally vary with stage. Cross-sectional area curves are developed to relate stage, recorded as noted above, to cross section area. Discharge is computed by multiplying path velocity by the appropriate stage related coefficient and area. Measurements of discharge are made with current meters using methods adopted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in U.S. Geological Survey Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the unit mean stages (gage heights) to the stage-discharge curves or tables and averaging the results. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, peri-

odic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as the lapsed time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each continuous-record surface-water discharge station (gaging station) consist of five parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; and a graphical representation of the daily mean values of discharge for the current water year.

Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that flow at it can reasonably be considered equivalent to flow at the present station.

REVISED RECORDS.--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to sea level (see Definition of Terms), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir station, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of

the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

PEAK DISCHARGES FOR CURRENT YEAR.--For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. All peaks greater than the base discharge are listed with the maximum for the year footnoted by an asterisk (*). Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man or at locations where the instantaneous peak discharge does not exceed the mean daily discharge by 10 percent. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Data table of daily mean values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"); or in inches (line headed "IN."); or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS ____-____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station records within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be con-

secutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year, but also for the previous calendar year and for the designated period, as appropriate. The designated period selected, "WATER YEARS ____-____," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (See line headings below.), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations, the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date for the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Secondary instantaneous peak discharges above a selected base discharge are given in the station manuscript under the heading "PEAK DISCHARGES FOR CURRENT YEAR."

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites. Following the listings of measurements at miscellaneous sites is a table of maximum elevations at tidal crest-stage stations.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated" or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir con-

tents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the New Jersey District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the offices whose addresses are given on the back of the title page of this report.

Water Temperature

Water temperatures are usually taken at time of discharge measurements for water-discharge stations. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

CURRENT WATER RESOURCES PROJECTS IN NEW JERSEY

The Geological Survey is currently involved in a number of hydrologic investigations in the State of New Jersey. The following is a list of these investigations. Results are published at the conclusion of short-term projects or periodically in the case of long-term projects. Hydrologic data from these projects are entered into the NWIS data base.

A Watershed-Based Method for Relating Water Quality to Flow Characteristics

Barneget Bay Non-Point Source

Compositional Modeling of Organic Transport and Biodegradation of Organic Compounds in the Unsaturated Zone and Ground Water

Distribution and Sources of Arsenic in Soils near the Imperial Oil Site, Monmouth County, New Jersey

EPA Technical Assistance Program

Flood Characteristics of New Jersey Streams

Geohydrology of the Naval Air Warfare Center, West Trenton, New Jersey

Ground-Water Contamination with Chlorinated Volatile Organic Compounds at Picatinny Arsenal, Morris County, New Jersey

Ground-Water Data Collection Network

Ground-Water Levels and Chloride Concentrations in Major Aquifers of the Coastal Plain

High-Flow Water Quality Management Objectives

Hydrologic Controls on Well-Contributing Areas in New Jersey

Hydrology of Surficial Aquifer Systems

Hydrogeologic Support to Fort Dix, Burlington County, New Jersey

Hydrogeologic Support to McGuire A.F.B., Burlington County, New Jersey

Hydrogeologic Support to Picatinny Arsenal, Morris County, New Jersey

Investigation of Contaminant Transport in a Fractured Rock Aquifer, Rutgers University, Busch Campus

Investigation of Water Quality in the Wanaque South Diversion Area, Morris and Passaic Counties, New Jersey

Lake Herbicides

Low Flow Characteristics of New Jersey Streams

Modeling and Experimental Investigation of Hydrocarbon Transport and Biodegradation in the Unsaturated Zone

Movement of Chromium in the Ground Water of Pennsauken Township, Camden County

Multispecies Transport in Ground Water

New Jersey-Long Island National Water Quality Assessment

New Jersey Tide Telemetry System

Pascack Brook Flood Warning System

Passaic Flood Warning System

Program to Maintain and Update Ground-Water Models to Evaluate Continued Water-Supply Development

Quality of Water Data Collection Network

Radium and Trace Metal Leaching in the Kirkwood-Cohansey Aquifer System

Rahway Flood Warning System

Reconstruction of Natural Streamflow Records, Passaic and Hackensack River Basins

Relations Between Streamflow, Salinity, and Water Quality in Estuaries of the Toms and Metedeconk Rivers, New Jersey

Removal of Volatile Ground-Water Contaminants by Inducing Air-Phase Transport

Review of Remedial Investigation for the Vineland Chemical Superfund Site

Small-Scale Watershed Delineation for GIS (14-Digit Hydrologic Unit Codes)

Small Watershed Flood Data Collection

Somerset County Flood-Information System

Strategic Environmental Research Development Program,
Biodegradation, Picatinny Arsenal

Surface Water Data Collection Network

Surfactant Sorption to Soil and its Effect on the Distribution
of Anthropogenic Organic Compounds

Trends in the Water Quality of Streams in New Jersey

Vulnerability Assessment of the Kirkwood-Cohansey
Aquifer System to Radium, Mercury, and Trace Metals

Vulnerability of Community Water-Supply Wells in New
Jersey to Contamination by Volatile Organic
Compounds and Disinfection By-Products

Water-Supply Availability in Salem and Gloucester
Counties, New Jersey

WATER-RELATED REPORTS FOR NEW JERSEY COMPLETED BY THE U.S. GEOLOGICAL SURVEY IN RECENT YEARS

Ator, S.W., and Ferrari, M.J., 1997, Nitrate and selected pesticides in ground water of the Mid-Atlantic Region: U.S. Geological Survey Water-Resources Investigations Report 97-4139, unpaginated.

Baehr, A.L., and Zapecza, O.S., 1998, Methyl tert-butyl ether (MTBE) and other volatile organic compounds in lakes in Byram Township, Sussex County, New Jersey, summer 1998: U.S. Geological Survey Water-Resources Investigations Report 98-4264, unpaginated.

Barringer, J.L., 1998, Arsenic and metals in soils in the vicinity of the Imperial Oil Superfund site, Marlboro Township, New Jersey: U.S. Geological Survey Water Resources Investigations Report 98-4016, 251 p.

Barringer, J.L., MacLeod, C.L., and Gallagher, R.A., 1997, Mercury in ground water, soils, and sediments of the Kirkwood-Cohansey aquifer system in the New Jersey Coastal Plain: U.S. Geological Survey Open-File Report 95-475, 260 p.

Barringer, J.L., Szabo, Zoltan, and Barringer, T.H., 1998, Arsenic and metals in soils in the vicinity of the Imperial Oil Company Superfund site, Marlboro Township, Monmouth County, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 98-4016, 268 p.

Barringer, T.H., Reiser, R.G., and Price, C.V., 2000, Use of low-flow trend and transfer-function models to determine relation of low flows to regional urbanization and precipitation, Rahway River Basin, New Jersey, 1940-91: U.S. Geological Survey Open-File Report 99-257, 24 p.

Buxton, D.E., Hunchak-Kariouk, Kathryn, Hickman, R.E., 1998, Relations of surface-water quality to stream flow in the Hackensack, Passaic, Elizabeth, and Rahway River Basins, New Jersey, water years 1976-93: U.S.

Geological Survey Water-Resources Investigations Report 98-4049, 102 p.

Buxton, D.E., Hunchak-Kariouk, Kathryn, and Hickman, R.E., 1999, Relations of surface-water quality to stream flow in the Raritan River Basin, New Jersey, water years 1976-93: U.S. Geological Survey Water-Resources Investigations Report 99-4045, 109 p.

Buxton, D.E., Hunchak-Kariouk, Kathryn, and Hickman, R.E., 1999, Relations of surface-water quality to stream flow in the Wallkill and upper Delaware River Basins, New Jersey and vicinity, water years 1976-93: U.S. Geological Survey Water-Resources Investigations Report 99-4016, 98 p.

Carleton, G.B., Welty, Claire, and Buxton, H.T., 1999, Design and analysis of tracer tests to determine effective porosity and dispersivity in fractured sedimentary rocks, Newark Basin, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 98-4126A, 80 p.

Cauller, S.J., Carleton, G.B., and Storck, M.J., 1999, Hydrogeology of water withdrawal from, and water levels and chloride concentrations in the major Coastal Plain aquifers of Gloucester and Salem Counties, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 98-4136, 123 p., 6 pl.

Clawges, R.M., Oden, T.D., and Vowinkel, E.F., 1998, Water-quality data for 90 community water supply wells in New Jersey, 1994-95: U.S. Geological Survey Open-File Report 97-625, 31 p.

DeLuca, M.J., Romanok, K.M., Riskin, M.L., Mattes, G.L., Thomas, A.M., and Gray, B.J., 2000, Water-resources data for New Jersey - water year 1999, Volume 3, Water-quality data: U.S. Geological Survey Water-Data Report NJ-99-3, 517 p.

Gibs, Jacob, 1998, Literature review of the environmental fate of four herbicides applied to surface-water bodies in New Jersey: U.S. Geological Survey Open-File Report 98-573, 55 p.

Hickman, R.E., 1997, Stream flow, tidal-water-level, and water-quality data for the tidal embayments of the Metedeconk and Toms Rivers, New Jersey, water years 1993-94: U.S. Geological Survey Open-File Report 96-368, 277 p.

Hickman, R.E., and Barringer, T.H., 1999, Trends in water quality of New Jersey streams, water years 1986-95: U.S. Geological Survey Water-Resources Investigations Report 98-4204, 174 p.

Hunchak-Kariouk, Kathryn, 1999, Relation of water quality to land use in the drainage basins of four tributaries to the Toms River, New Jersey, 1994-95: U.S. Geological Survey Water-Resources Investigations Report 99-4001, 120 p.

WATER-RELATED REPORTS FOR NEW JERSEY COMPLETED BY THE U.S. GEOLOGICAL SURVEY IN RECENT YEARS--Continued

- Hunchak-Kariouk, Kathryn, Buxton, D.E., and Hickman, R.E., 1999, Relations of surface-water quality to stream flow in the Atlantic Coastal, lower Delaware River, and Delaware Bay Basins, New Jersey, water years 1976-93: U.S. Geological Survey Water-Resources Investigations Report 98-4244, 158 p.
- Jacobsen, Eric, 2000, Ground-water quality, water levels, and precipitation at the biosolids study site, Lakehurst Naval Air Engineering Station, New Jersey, 1995-97: U.S. Geological Survey Open-File Report 00-197, 61 p.
- Johnson, M.L., and Charles, E.G., 1997, Hydrology of the unconfined aquifer system, Salem River area: Salem River and Raccoon, Oldmans, Alloway, and Stow Creek Basins, New Jersey, 1993-94: U.S. Geological Survey Water-Resources Investigations Report 96-4195, 5 sheets.
- Jones, W.D. and DeLuca, M.J., 1998, Water resources data for New Jersey - water year 1997, volume 2, Ground-water data: U.S. Geological Survey Water-Data Report NJ-97-2, 226 p.
- Jones, W.D., 2000, Water-resources data for New Jersey - water year 1999, Volume 2. Ground-water data: U.S. Geological Survey Water-Data Report NJ-99-2, 233 p.
- Jones, W.D., 1999, Water resources data for New Jersey - water year 1998, volume 2, Ground-water data: U.S. Geological Survey Water-Data Report NJ-98-2, 211 p.
- Jones, W.D., 1998, Water resources data for New Jersey - water year 1997, volume 2, Ground-water data: U.S. Geological Survey Water-Data Report NJ-97-2, 226 p.
- Jones, W.D. and DeLuca, M.J., 1997, Water resources data for New Jersey - water year 1996, volume 2, Ground-water data: U.S. Geological Survey Water-Data Report NJ-96-2, 207 p.
- Lacombe, P.J., 2000, Hydrogeologic framework, water levels, and trichloroethylene contamination, Naval Air Warfare Center, West Trenton, New Jersey, 1993-97: U.S. Geological Survey Water-Resources Investigations Report 98-4167, 139 p.
- Lacombe, Pierre J., and Rosman, Robert, 1997, Water levels in, extent of freshwater in, and water withdrawal from eight major confined aquifers, New Jersey Coastal Plain: U.S. Geological Survey Water-Resources Investigations Report 96-4206, 8 sheets.
- Lahvis, M.A., and Baehr, A.L., 1997, Documentation of R-UNSAT, a computer model for the simulation of reactive, multispecies transport in the unsaturated zone: U.S. Geological Survey Open-File Report 97-630, 104 p.
- Lewis-Brown, J.C., dePaul, Vincent, 2000, Ground-water flow and distribution of volatile organic compounds, Rutgers University Busch Campus and vicinity, Piscataway Township, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 99-4256, 72 p.
- Long, G.R., Chang, Ming, Kennen, J.G., 2000, Trace elements and organochlorine compounds in bed sediment and fish tissue at selected sites in New Jersey streams--Sources and effects: U.S. Geological Survey Water-Resources Investigations Report 99-4235, 29 p.
- Modica, Edward, 1998, Analytical methods, numerical modeling and monitoring strategies for evaluating the effects of ground-water withdrawals on unconfined aquifers in the New Jersey Coastal Plain: U.S. Geological Survey Water-Resources Investigations Report 98-4003, 66 p.
- Nawyn, J.P., 1997, Water use in Camden County, New Jersey, 1991: U.S. Geological Survey Open-File Report 97-12, 39 p.
- Nawyn, J.P., 1998, Withdrawals of ground water and surface water in New Jersey, 1991-92: U.S. Geological Survey Open-File Report 98-282, 57 p.
- Nicholson, R.S., and Watt, M.K., 1997, Simulation of ground-water flow in the unconfined aquifer system of the Toms River, Metedeconk River, and Kettle Creek Basins, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 97-4066, 100 p.
- Nicholson, R.S., and Watt, M.K., 1998, Simulation of ground-water-flow patterns and areas contributing recharge to streams and water-supply wells in a valley-fill and carbonate-rock aquifer system, southwestern Morris County, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 97-4216, 40 p.
- Pope, D.A., and Gordon, A.D., 1999, Simulation of ground-water flow and movement of the freshwater-saltwater interface in the New Jersey Coastal Plain: U.S. Geological Survey Water-Resources Investigations Report 98-4216, 159 p.
- Pucci, A.A., Jr., Barton, Cynthia, Buxton, H.T., 1997, Hydrogeology and simulated ground-water flow in the area of Greenwich Township, Gloucester County, New Jersey: U.S. Geological Survey Open-File Report 95-716, 63 p.
- Reed, T.J., Centinaro, G.L., DeLuca, M.J., Hutchinson, J.T. and Scudder, J., 1997, Water resources data for New Jersey - water year 1996, volume 1, Surface-water data: U.S. Geological Survey Water-Data Report NJ-96-1, 562 p.

WATER-RELATED REPORTS FOR NEW JERSEY COMPLETED BY THE GEOLOGICAL SURVEY IN RECENT YEARS--Continued

- Reed, T.J., Centinaro, G.L., DeLuca, M.J., and Oden, J.H., 1998, Water resources data for New Jersey - water year 1997, volume 1, Surface-water data: U.S. Geological Survey Water-Data Report NJ-97-1, 608 p.
- Reed, T.J., Centinaro, G.L., Dudek, J.F., Corcino, V., Steckrodt, G.C., and McTigue, R.C., 1999, Water resources data for New Jersey - water year 1998, volume 1, Surface-water data: U.S. Geological Survey Water-Data Report NJ-98-1, 303 p.
- Reed, T.J., Centinaro, G.L., Dudek, J.F., Corcino, V., and Steckrodt, G.C., 2000, Water-resources data for New Jersey - water year 1999, Volume 1. Surface-water data: U.S. Geological Survey Water-Data Report NJ-99-1, 293 p.
- Reiser, R.G., and O'Brien, A.K., 1998, Occurrence and seasonal variability of volatile organic compounds in seven New Jersey streams: U.S. Geological Survey Water-Resources Investigations Report 98-4074, unpaginated.
- Reiser, R.G., 1999, Relation of pesticide concentrations to season, streamflow, and land use in seven New Jersey streams: U.S. Geological Survey Water-Resources Investigations Report 99-4154, unpaginated
- Reiser, R.G., and O'Brien, A.K., 1999, Pesticides in streams in New Jersey and Long Island, New York, and relation to land use: U.S. Geological Survey Water-Resources Investigations Report 98-4261, unpaginated.
- Rice, D.E., and Voronin, L.M., 1997, Analysis of ground-water flowpaths near water-supply wells, Picatinny Arsenal, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 96-4228, 26 p.
- Rice, D.E., and Szabo, Zoltan, 1997, Relation of ground-water flowpaths and travel time to the distribution of radium and nitrate in current and former agricultural areas of the Kirkwood-Cohansey aquifer system, New Jersey Coastal Plain: U.S. Geological Survey Water-Resources Investigations Report 96-4165B, 41 p.
- Rosman, Robert, 1997, Potentiometric surfaces of the Potomac-Raritan-Magothy aquifer system near National Park, New Jersey, 1996: U.S. Geological Survey Water-Resources Investigations Report 97-4112, 4 sheets.
- Spitz, F.J., 1998, Analysis of ground-water flow and saltwater encroachment in the shallow aquifer system of Cape May County, New Jersey: U.S. Geological Survey Water-Supply Paper 2490, 51 p.
- Stackelberg, P.E., Hopple, J.A., and Kauffman, L.J., 1997, Occurrence of nitrate, pesticides, and volatile organic compounds in the Kirkwood-Cohansey aquifer system, southern New Jersey: U.S. Geological Survey Water-Resources Investigations Report 97-4241, 8 p.
- Stackelberg, P.E., Kauffman, L.J., Baehr, A.L., and Ayers, M.A., 2000, Comparison of nitrate, pesticides, and volatile organic compounds in samples from monitoring and public-supply wells, Kirkwood-Cohansey aquifer system, southern New Jersey: U.S. Geological Survey Water-Resources Investigations Report 00-4123, 78 p.
- Storck, D.A., Isaacs, K.N., and Vowinkel, E.F., 1997, Development of a data base of community water-supply wells in New Jersey and a method to evaluate their sensitivity to contamination: U.S. Geological Survey Water-Resources Investigations Report 96-4132, 59 p.
- Suro, T.P., 1998, December 11-12, 1992, in New Jersey, in Perry, C.A., and Combs, L.J., eds., Summary of floods in the United States, January 1992 through September 1993: U.S. Geological Survey Water-Supply Paper 2499, p. 165-171.
- Szabo, Zoltan, Rice, D.E., MacLeod, C.L., and Barringer, T.H., 1997, Relation of distribution of radium, nitrate, and pesticides to agricultural land use and depth, Kirkwood-Cohansey aquifer system, New Jersey Coastal Plain, 1990-91: U.S. Geological Survey Water-Resources Investigations Report 96-4165A, 119 p.
- Szabo, Zoltan, Taylor, T.A., Payne, D.F., and Ivahnenko, Tamara, 1997, Relation of hydrogeologic characteristics to distribution of radioactivity in ground water, Newark Basin, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 95-4136, 134 p., 6 pl.

WATER-RELATED ARTICLES FOR NEW JERSEY COMPLETED BY THE GEOLOGICAL SURVEY IN RECENT YEARS

- Baehr, A.L., 1999, Evaluation of the atmosphere as a source of volatile organic compounds in shallow groundwater: Water Resources Research, v. 35, no. 1, p. 127-136.
- Baehr, A.L., 1999, Occurrence of methyl-tert butyl ether (MTBE) throughout the hydrologic cycle in New Jersey: AGU 1999 Fall Meeting, December 13-17, 1999, San Francisco, Calif. p. F421.
- Lacombe, P.J., 1999, Three types of saltwater intrusion in aquifers of the New Jersey Coastal Plain and resulting water management plans: AGU 1999 Fall Meeting, December 13-17, 1999, San Francisco, Calif. p. F371.
- Lahvis, M.A., Rehmann, L.C., Baehr, A.L., Baker, R.J., 1999, Effects of unsaturated-zone processes on ground-water contamination at gasoline-spill sites: AGU Fall Meeting, December 13-17, 1999, San Francisco, Calif. p. F469.

WATER-RELATED ARTICLES FOR NEW JERSEY COMPLETED BY THE GEOLOGICAL SURVEY IN RECENT YEARS--Continued

- Mast, M.A., and Turk, J.T., 1999, Environmental characteristics and water quality of hydrologic benchmark network stations--McDonalds Branch in Lebanon State Forest, New Jersey, *in* Environmental characteristics and water quality of hydrologic benchmark network stations in the eastern United States, 1963-95: U.S. Geological Survey Circular 1173-A, p. 63-71.
- Pucci, A.A., Szabo, Zoltan, Owens, J.P., 1997, Variations in pore-water quality, mineralogy, and sedimentary texture of clay-silts in the lower Miocene Kirkwood Formation, Atlantic City, New Jersey, *in* Miller, K.G., and Snyder, S.W., eds., Proceedings of the Ocean Drilling Program, Scientific Results, v. 150x, p. 317-340.
- Szabo, Zoltan, Pucci, A.A., Jr., Feigenson, M.D., 1997, Sr-isotopic evidence for leakage of pore water from clay-silt confining units to the Atlantic City 800-foot sand, Atlantic City, New Jersey, *in* Miller K.G., and Snyder, S.W., eds., Proceedings of the Ocean Drilling Program, Scientific Results, v. 150x, p. 343-354.
- Vowinkel, E.F., 1998, Use of a numerical rating model to determine the vulnerability of community water-supply wells in New Jersey to contamination by pesticides, *in* Monitoring: Critical foundations to protect our waters: Proceedings of the NWQMC National Conference, Reno, Nevada, July 7-9, 1998, p. III 539 - III 546.
- WATER-RELATED FACT SHEETS FOR NEW JERSEY COMPLETED BY THE GEOLOGICAL SURVEY IN RECENT YEARS**
- Fischer, J.M., 1999, National Water-Quality Assessment Program, Delaware River Basin: U.S. Geological Survey Fact Sheet FS-056-99.
- Jacobsen, Eric, 1997, Effects of land application of composted biosolids on ground water and native vegetation in the New Jersey Pinelands: U.S. Geological Survey Fact Sheet FS-035-97.
- Kennen, J.G., 1998, Relation of benthic macro invertebrate community impairment to basin characteristics in New Jersey streams: U.S. Geological Survey Fact Sheet FS-057-98.
- Lahvis, M.A. and Baehr, A.L., 1998, Simulating transport of volatile organic compounds in the unsaturated zone using the computer model R-UNSAT: U.S. Geological Survey Fact Sheet FS-019-98.
- Modica, Edward, 1999, Source and age of ground-water seepage to streams: U.S. Geological Survey Fact Sheet FS-063-99, unpaginated.
- Nawyn, J.P., 1997, Withdrawals of ground water and surface water in New Jersey, 1993: U.S. Geological Survey Fact Sheet FS-119-97.
- Nawyn, J.P., 1997, Withdrawals of ground water and surface water in New Jersey, 1994: U.S. Geological Survey Fact Sheet FS-120-97.
- O'Brien, A. K., 1997, Presence and distribution of trace elements in streambed sediments, New Jersey: U.S. Geological Survey Fact Sheet FS-049-97.
- O'Brien, A.K., Reiser, R.G., and Gylling, Helle, 1998, Spatial variability of volatile organic compounds in streams on Long Island, New York, and in New Jersey: U.S. Geological Survey Fact Sheet FS-194-97.
- Summer, W.M., 1998, New Jersey Tide Telemetry System: U.S. Geological Survey Fact Sheet FS-091-98.
- Summer, W.M., 1998, Passaic Flood Warning System: U.S. Geological Survey Fact Sheet FS-092-98.
- Summer, W.M., 1998, Somerset County Flood Information System: U.S. Geological Survey Fact Sheet FS-090-98.
- Szabo, Zoltan, and dePaul, Vincent, 1998, Radium-226 and radium-228 in shallow ground water, southern New Jersey: U.S. Geological Survey Fact Sheet FS-062-98.
- Terracciano, S. A., and O'Brien, A. K., 1997, Occurrence of volatile organic compounds in streams on Long Island, New York, and New Jersey: U.S. Geological Survey Fact Sheet FS-063-97.
- U.S. Geological Survey, 1997, The U.S. Geological Survey Drinking Water Initiative: U.S. Geological Survey Fact Sheet FS-047-97.

ACCESS TO USGS WATER DATA

The U.S. Geological Survey provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

<http://water.usgs.gov>.

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (see address on the back of the title page).

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters.

Annual runoff is the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Cubic foot per second per square mile [CFSM, $(\text{ft}^3/\text{s})/\text{mi}^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.

Inch (IN., in.) as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it.

Base flow is flow in a channel sustained by ground-water discharge in the absence of direct runoff.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Continuous-record station is a site that meets either of the following conditions:

1. Stage or streamflow are recorded at some interval on a continuous basis. The recording interval is usually 15 minutes, but may be less or more frequent.
2. Water-quality, sediment, or other hydrologic measurements are recorded at least daily.

Control designates a feature in the channel downstream from a gaging station that physically influences the water-surface elevation and thereby determines the stage-discharge relation at the station. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

Cubic foot per second-day (CFS-DAY, Cfs-day, $[(\text{ft}^3/\text{s})/\text{d}]$) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.9835 acre-feet, 646,317 gallons, or 2,447 cubic meters.

Daily record is a summary of streamflow, sediment, or water-quality values computed from data collected with sufficient frequency to obtain reliable estimates of daily mean values.

Daily record station is a site for which daily records of streamflow, sediment, or water-quality values are computed.

Datum, as used in this report, is an elevation above mean sea level to which all gage height readings are referenced.

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or flow, is the volume of water (or more broadly, volume of fluid including solid- and dissolved-phase material), that passes a given point in a given period of time.

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days in a year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

Instantaneous discharge is the discharge at a particular instant of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Drainage area of a site on a stream is that area, measured in a horizontal plane, that has a common outlet at the site for its surface runoff. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth's surface that is occupied by a drainage system with a common outlet for its surface runoff (see "Drainage area").

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is the elevation of the zero point of the reference gage from which gage height is determined as compared to sea level (see "Datum"). This elevation is established by a system of levels from known benchmarks,

by approximation from topographic maps, or by geographical positioning system.

Gage height (G.H.) is the water-surface elevation referenced to the gage datum. Gage height is often used interchangeably with the more general term “stage,” although gage height is more appropriate when used with a reading on a gage.

Gaging station is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. *See NOAA web site:*

<http://www.co-ops.nos.noaa.gov/tideglos.html>

Hydrologic benchmark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a benchmark station may be used to separate effects of natural from human-induced changes in other basins that have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped benchmark basin.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the U.S. Geological Survey. Each hydrologic unit is identified by an 8-digit number.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA web site:*

<http://www.co-ops.nos.noaa.gov/tideglos.html>

Miscellaneous site, or miscellaneous station, is a site where streamflow, sediment, and/or water-quality data are collected once, or more often on a random or discontinuous basis.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of the United States and Canada. It was formerly called “Sea Level Datum of 1929” or “mean sea level” in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place. *See NOAA web site:* <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88>

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Periodic station is a site where stage, discharge, sediment, chemical, or other hydrologic measurements are made one or more times during a year, but at a frequency insufficient to develop a daily record.

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or non-exceedance of a specified low flow). The terms “return period” and “recurrence interval” do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the non-exceedances of the $7Q_{10}$ occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous non-exceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

River mile is the distance of a point on a river measured in miles from the river’s mouth along the low-water channel.

River mileage is the linear distance along the meandering path of a stream channel determined in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council.

Runoff in inches (IN., in.) is the depth, in inches, to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sea level refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of

1929. See: http://www.co-ops.nos.noaa.gov/glossary/gloss_n.html#NGVD

Seven-day 10-year low flow ($7Q_{10}$, $7Q_{10}$) is the minimum flow averaged over 7 consecutive days that is expected to occur on average, once in any 10-year period. The $7Q_{10}$ has a 10-percent chance of occurring in any given year.

Stage: See "Gage height."

Stage-discharge relation is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Surface area of a lake or impoundment is that area encompassed by the boundary of the lake or impoundment as shown on USGS topographic maps, or on other available maps or photographs. The computed surface areas reflect the water levels of the lakes or impoundments at the times when the information for the maps or photographs was obtained.

Synoptic Studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Water level is the water-surface elevation or stage of the free surface of a body of water above or below any datum (see "Gage height"), or the surface of water standing in a well, usually indicative of the position of the water table or other potentiometric surface.

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1999, is called the "1999 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976.)

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and

dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports

SELECTED REFERENCES

- Anderson, P.W., and George, J.R., 1966, Water-quality characteristics of New Jersey streams: U.S. Geological Survey Water-Supply Paper 1819-G, 48 p.
- Ayers, M.A., and Pustay, E.A., 1988, New Jersey ground-water quality: in National Water Summary 1986, U.S. Geological Survey Water Supply Paper 2325, p. 369-376.
- Bauersfeld, W.R., and Schopp, R.D., 1991, New Jersey floods and droughts: in National Water Summary, 1988-89--Floods and droughts: U.S. Geological Survey Water-Supply Paper 2375, p. 401-405.
- Fusillo, T.V., Hochreiter, J.J., Jr., and Lord, D.G., 1984, Water-quality data for the Potomac-Raritan-Magothy aquifer system in southwestern New Jersey, 1923-83: U.S. Geological Survey Open-File Report 84-737, 127 p, 1 plate.
- Gillespie, B.D., and Schopp, R.D., 1982, Low-flow characteristics and flow duration of New Jersey streams: U.S. Geological Survey Open-File Report 81-1110, 164 p.
- Heath, R.C., 1983, Basic ground-water hydrology: U.S. Geological Survey Water-Supply Paper 2220, 84 p.
- Hem, J.D., 1985, Study and interpretation of the chemical characteristics of natural water, 3d ed.: U.S. Geological Survey Water-Supply Paper 2254, 263 p.
- Langbein, W.B., and Iseri, K.T., 1960, General introduction of hydrologic definitions: U.S. Geological Survey Water-Supply Paper 1541-A, 29 p.
- Lohman, S.W., and others, 1972, Definitions of selected ground-water terms-revisions and conceptual refinements: U.S. Geological Survey Water-Supply Paper 1988, 21 p.
- Luzier, J.E., 1980, Digital-simulation and projection of head changes in the Potomac-Raritan-Magothy aquifer system, Coastal Plain, New Jersey: U.S. Geological Survey Water-Resources Investigations 80-11, 72 p.
- Rantz, S.E., and others, 1982, Measurement and computation of streamflow; Volume 1. Measurement of stage and discharge, Volume 2. Computation of Discharge: U.S. Geological Survey Water-Supply Paper 2175, 631 p.

SELECTED REFERENCES--Continued

- Rooney, J.G., 1971, Ground-water resources, Cumberland County, New Jersey: New Jersey Department of Environmental Protection Special Report 34, 83 p.
- Schaefer, F.L., 1983, Distribution of chloride concentrations in the principal aquifers of the New Jersey Coastal Plain, 1977-81: U.S. Geological Survey Water-Resources Investigations Report 83-4061, 56 p.
- 1987, Selected literature on the water resources of New Jersey by the U.S. Geological Survey, through 1986: U.S. Geological Survey Open-File Report 87-767, 45 p.
- Schopp, R.D., and Bauersfeld, W.R., 1986, New Jersey surface-water resources: in National Water Summary 1985 - Hydrologic events and surface-water resources, U.S. Geological Survey Water-Supply Paper 2300, p. 335-340.
- Seaber, P.R., 1963, Chloride concentrations of water from wells in the Atlantic Coastal Plain of New Jersey, 1923-61: New Jersey Division of Water Policy and Supply, Special Report 22, 250 p.
- Seaber, P.R., Kapinos, F.P., and Knapp, G.L., 1987, Hydrologic unit maps: U.S. Geological Survey Water-Supply Paper 2294, 63 p.
- U.S. Geological Survey, 1976, Surface-water supply of the United States, 1966-70, Part 1. North Atlantic Slope basins, Volume 2. Basins from New York to Delaware: U.S. Geological Survey Water-Supply Paper 2102, 985 p., (final volume).
- 1977, Ground-water levels in the United States, 1973-74, Northeastern States: U.S. Geological Survey Water-Supply Paper 2164, 126 p., (final volume).
- Vickers, A.A., and McCall, J.E., 1968, Surface water supply of New Jersey, streamflow records 1961-65: New Jersey Division of Water Policy and Supply, Special Report 31, 351 p., (most recent volume).
- Vowinkel, E.F., 1984, Ground-water withdrawals from the Coastal Plain of New Jersey, 1956-80: U.S. Geological Survey Open-File Report 84-226, 32 p.
- Walker, R.L., 1983, Evaluation of water levels in major aquifers of the New Jersey Coastal Plain, 1978: U.S. Geological Survey Water-Resources Investigations 82-4077, 56 p.
- U.S. Environmental Protection Agency, 1996, Drinking water regulations and health advisories: Office of Water, Washington, D.C., EPA 822-R-96-001, 16 p.

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The U.S.G.S. publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further

divided into sections and chapters. For example, section A of book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S.G.S., Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be made in the form of a check or money order payable to the "U.S. Geological Survey." Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations."

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

- 1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J.F. Ficke, and G. F. Smoot: USGS-TWRI book 1, chap. D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS-TWRI book 1, chap. D2. 1976. 24 pages.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A. R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS-TWRI book 2, chap. D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS-TWRI book 2, chap. D2. 1988. 86 pages.

Section E. Subsurface Geophysical Methods

- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS-TWRI book 2, chap. E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS-TWRI book 2, chap. E2. 1990. 150 pages.

Section F. Drilling and Sampling Methods

- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS-TWRI book 2, chap. F1. 1989. 97 pages.

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY--Continued

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS-TWRI book 3, chap. A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS-TWRI book 3, chap. A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS-TWRI book 3, chap. A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS-TWRI book 3, chap. A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS-TWRI book 3, chap. A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS-TWRI book 3, chap. A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS-TWRI book 3, chap. A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 3, chap. A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS-TWRI book 3, chap. A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI book 3, chap. A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS-TWRI book 3, chap. A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI book 3, chap. A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI book 3, chap. A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI book 3, chap. A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS-TWRI book 3, chap. A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS-TWRI book 3, chap. A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS-TWRI book 3, chap. A21. 1995. 56 pages.

Section B. Ground-Water Techniques

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI book 3, chap. B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS-TWRI book 3, chap. B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI book 3, chap. B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS-TWRI book 3, chap. B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS-TWRI book 3, chap. B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS-TWRI book 3, chap. B5. 1987. 15 pages.

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY--Continued

3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS-TWRI book 3, chap. B6. 1987. 28 pages.

3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS-TWRI book 3, chap. B7. 1992. 190 pages.

3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS-TWRI book 3, chap. B8. 2001. 29 pages.

Section C. Sedimentation and Erosion Techniques

3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI book 3, chap. C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS-TWRI book 3, chap. C2. 1999. 89 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI book 3, chap. C3. 1972. 66 pages.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS-TWRI book 4, chap. A1. 1968. 39 pages.

4-A2. *Frequency curves*, by H.C. Riggs: USGS-TWRI book 4, chap. A2. 1968. 15 pages.

Section B. Surface Water

4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI book 4, chap. B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS-TWRI book 4, chap. B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS-TWRI book 4, chap. B3. 1973. 15 pages.

Section D. Interrelated Phases of the Hydrologic Cycle

4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS-TWRI book 4, chap. D1. 1970. 17 pages.

Book 5. Laboratory Analysis

Section A. Water Analysis

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS-TWRI book 5, chap. A1. 1989. 545 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS-TWRI book 5, chap. A2. 1971. 31 pages.

5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS-TWRI book 5, chap. A3. 1987. 80 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS-TWRI book 5, chap. A4. 1989. 363 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS-TWRI book 5, chap. A5. 1977. 95 pages.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS-TWRI book 5, chap. A6. 1982. 181 pages.

Section C. Sediment Analysis

5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS-TWRI book 5, chap. C1. 1969. 58 pages.

Book 6. Modeling Techniques

Section A. Ground Water

6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS-TWRI book 6, chap. A1. 1988. 586 pages.

6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS-TWRI book 6, chap. A2. 1991. 68 pages.

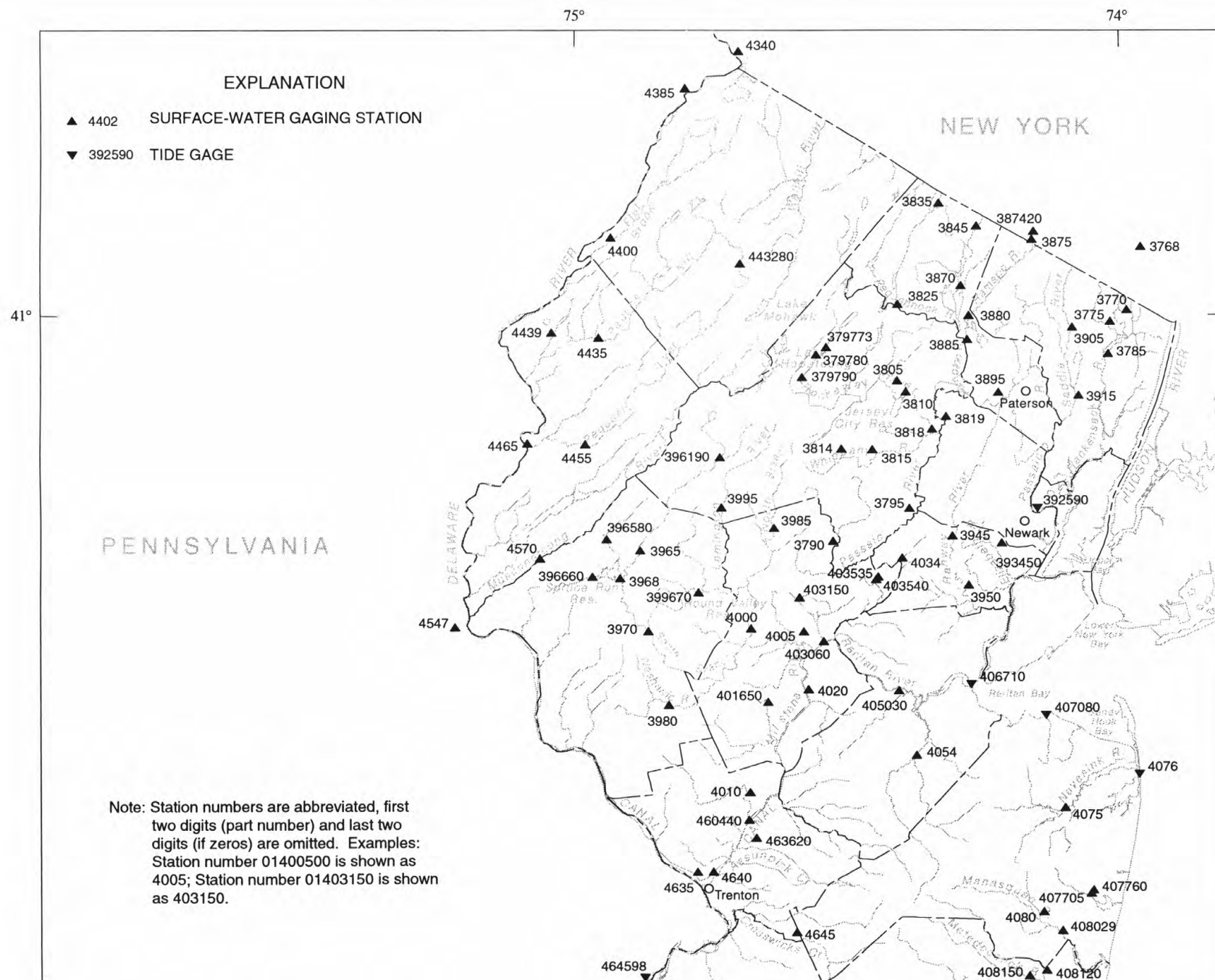
6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS-TWRI book 6, chap. A3. 1993. 136 pages.

6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS-TWRI book 6, chap. A4. 1992. 108 pages.

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY--Continued

- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS-TWRI book 6, chap. A5, 1993. 243 pages.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS-TWRI book 6, chap. A5, 1996. 125 pages.
- Book 7. Automated Data Processing and Computations**
- Section C. Computer Programs**
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS-TWRI book 7, chap. C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS-TWRI book 7, chap. C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS-TWRI book 7, chap. C3. 1981. 110 pages.
- Book 8. Instrumentation**
- Section A. Instruments for Measurement of Water Level**
- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS-TWRI book 8, chap. A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS-TWRI book 8, chap. A2. 1983. 57 pages.
- Section B. Instruments for Measurement of Discharge**
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 8, chap. B2. 1968. 15 pages.
- Book 9. Handbooks for Water-Resources Investigations**
- Section A. National Field Manual for the Collection of Water-Quality Data**
- 9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A1. 1998. 47 p.
- 9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A2. 1998. 94 p.
- 9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A3. 1998. 75 p.
- 9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A4. 1999. 156 p.
- 9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A5. 1999. 149 p.
- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS-TWRI book 9, chap. A6. 1998. Variously paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, edited by D.N. Myers and F.D. Wilde: USGS-TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS-TWRI book 9, chap. A8. 1998. 48 pages.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS-TWRI book 9, chap. A9. 1998. 60 pages.

28



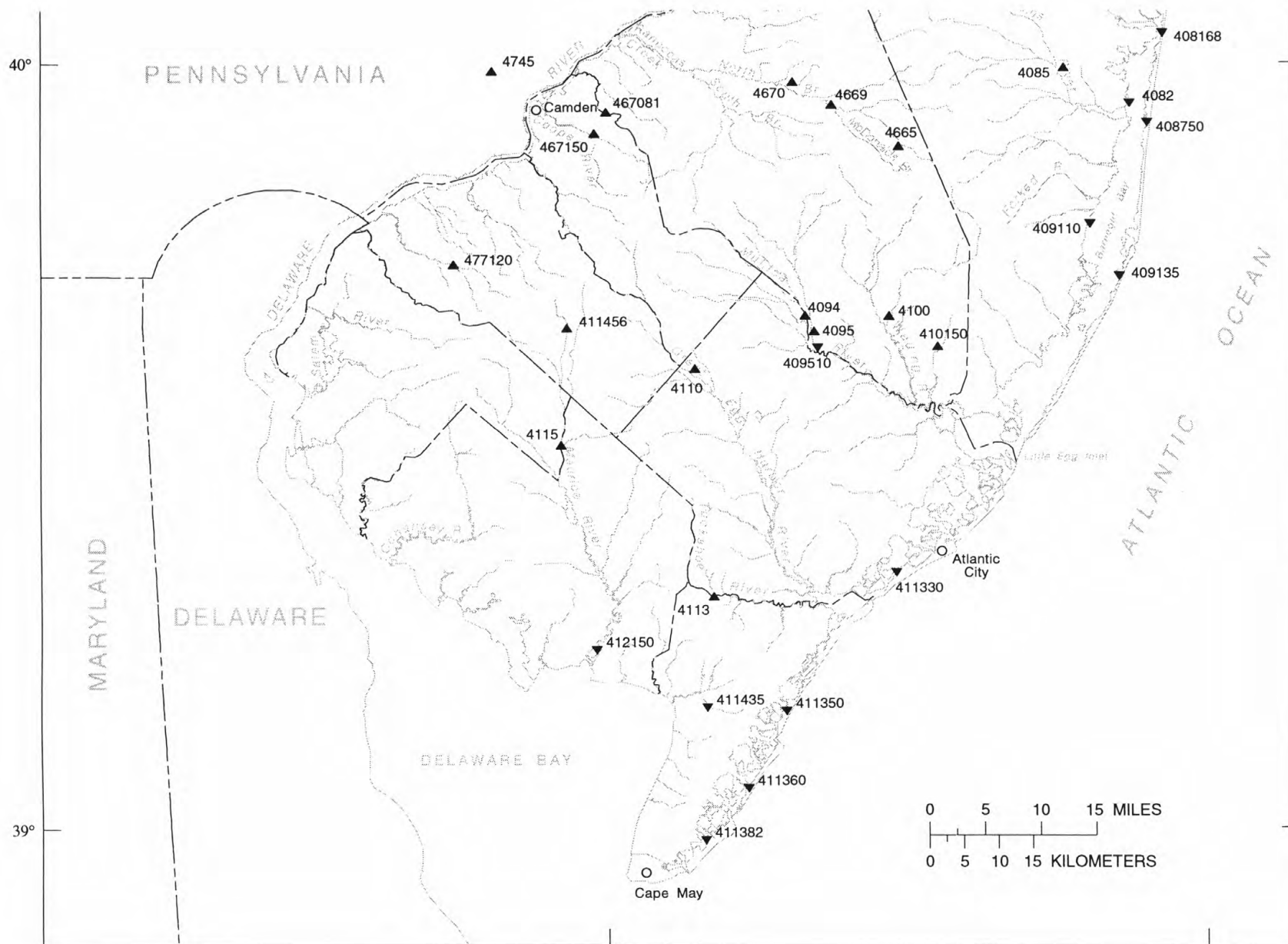


Figure 6. Map showing location of surface-water gaging stations.





Figure 7. Map showing location of low-flow and crest-stage partial-record stations.

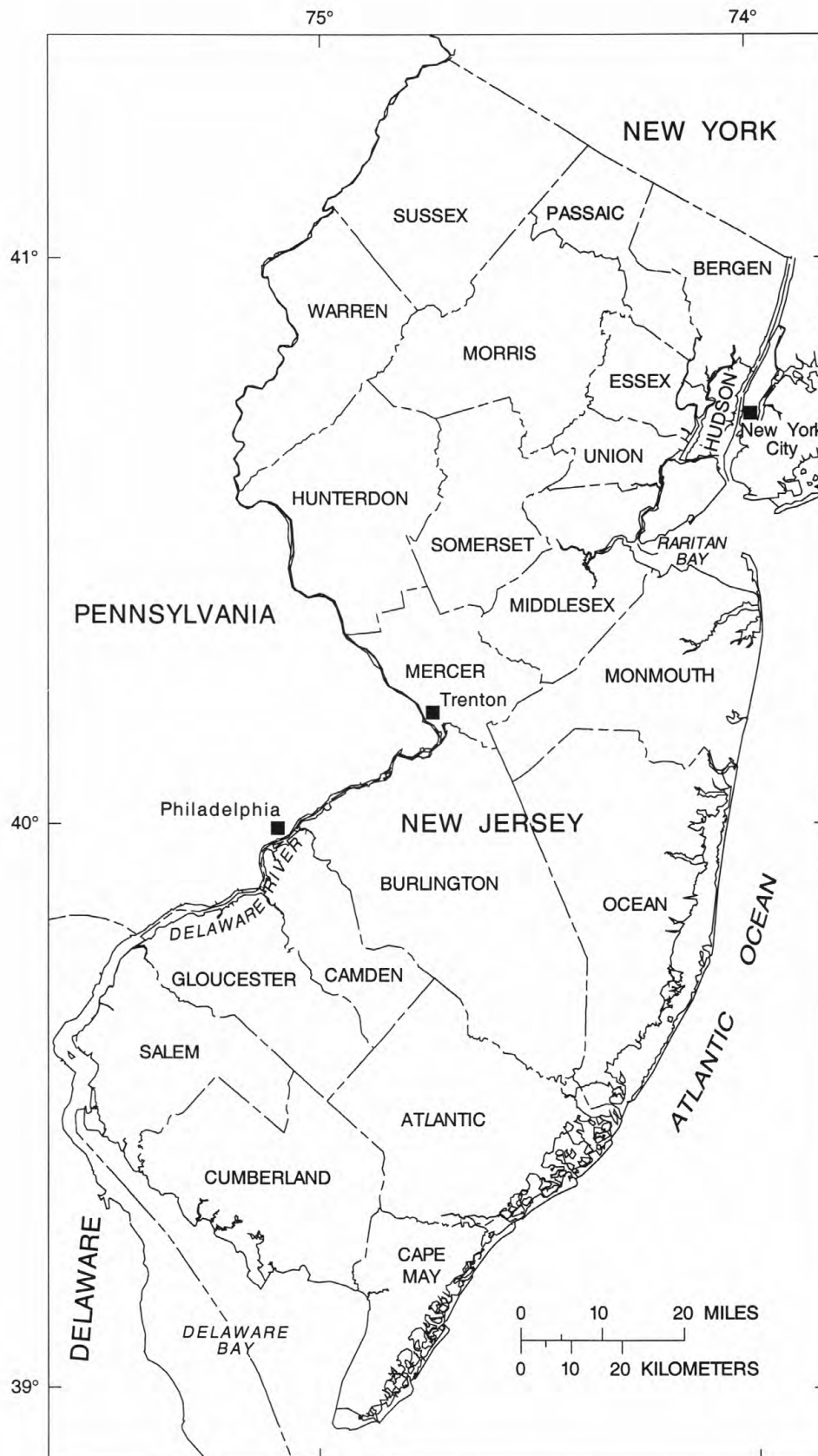


Figure 8. Map showing counties in New Jersey.

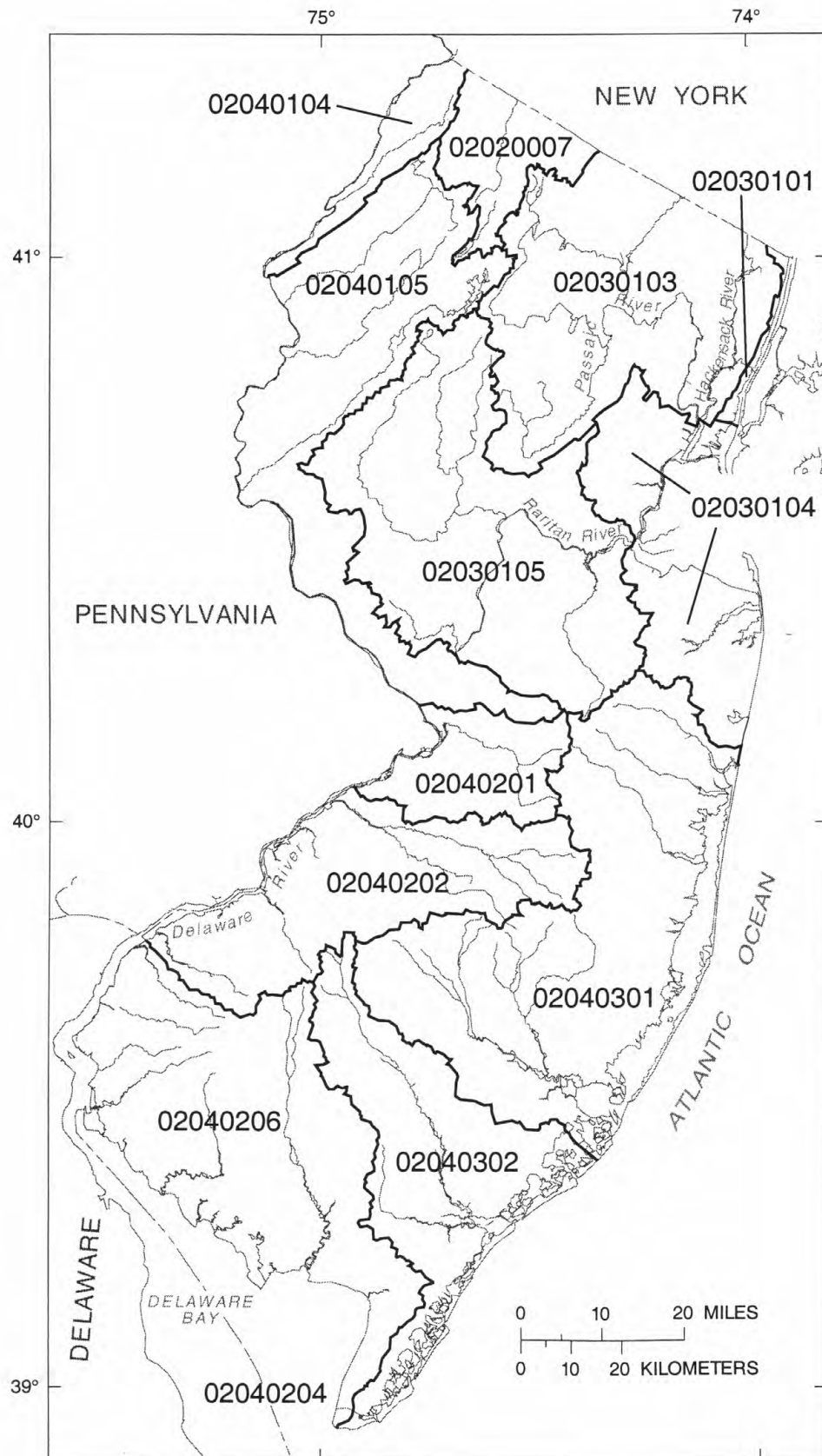


Figure 9. Map showing hydrologic cataloging units and codes in New Jersey. (Modified from Seaber and others, 1987)

HACKENSACK RIVER BASIN

01376800 HACKENSACK RIVER AT WEST NYACK, NY

LOCATION.--Lat 41°05'44", long 73°57'52", Rockland County, NY, Hydrologic Unit 02030103, on right bank 20 ft downstream from Penn Central Transportation Co. railroad bridge at West Nyack, 1,000 ft upstream from State Highway 59, and 1.0 mi downstream from DeForest Lake.

DRAINAGE AREA.--30.7 mi².

PERIOD OF RECORD.--December 1958 to current year.

REVISIONS.--WDR NY-90-1: Drainage area.

GAGE.--Water-stage recorder, stop-log control, and crest-stage gage. Datum of gage is 53.50 ft above sea level (levels by Hackensack Water Co.).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by DeForest Lake (see Reservoirs in Hackensack River Basin). Diversion from gaging station pool for municipal supply for village of Nyack (see Diversions in Hackensack River Basin). Discharge given for this station represents the flow of Hackensack River downstream from this diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft³/s, Sept. 16, 1999, gage height, 11.21 ft, from floodmarks in gage house, from rating curve extended above 840 ft³/s; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 343 ft³/s, June 7, gage height, 5.56 ft; minimum, 4.5 ft³/s, Nov. 21, 22, 23, gage height, 2.33 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	16	36	19	18	49	36	23	15	20	20	16
2	50	32	15	17	18	43	29	25	15	20	17	e20
3	40	96	14	16	17	37	26	20	16	18	18	e50
4	68	64	15	19	18	30	45	16	10	20	19	25
5	109	45	14	32	18	26	48	15	8.4	19	15	24
6	58	34	16	20	18	22	40	14	50	19	14	22
7	43	29	21	18	18	19	33	13	266	21	16	20
8	31	19	17	16	18	17	26	13	92	21	15	21
9	24	16	15	14	19	17	36	13	47	22	16	25
10	31	14	15	30	21	21	34	14	37	21	18	23
11	39	22	19	e34	21	44	29	19	31	17	23	21
12	29	11	15	e28	15	151	28	15	42	12	18	18
13	22	12	13	e25	15	96	21	14	39	14	15	22
14	25	12	34	e22	38	55	17	78	31	16	17	18
15	18	14	67	e20	32	46	16	56	26	19	16	30
16	14	14	57	e17	39	39	21	36	23	9.6	20	20
17	14	13	46	e15	40	114	26	24	21	19	16	18
18	48	10	37	13	40	78	45	20	22	21	15	20
19	26	9.9	29	10	46	48	42	39	20	16	15	45
20	28	9.5	32	10	39	42	30	44	19	15	14	27
21	28	7.4	69	15	33	38	52	43	18	14	14	20
22	24	6.9	61	14	30	38	194	36	25	14	14	18
23	26	9.9	48	12	32	31	108	30	22	15	15	19
24	23	17	40	12	38	26	105	74	17	15	15	24
25	18	16	30	18	51	22	66	71	20	15	14	21
26	15	22	23	18	60	25	54	48	24	21	14	23
27	16	62	22	16	57	21	46	32	22	37	17	22
28	14	59	19	15	63	123	41	22	19	16	17	19
29	15	44	16	15	59	95	35	15	19	15	14	19
30	23	36	18	17	---	57	33	13	18	20	15	19
31	13	---	21	19	---	46	---	18	---	14	16	---
TOTAL	1025	772.6	894	566	931	1516	1362	913	1034.4	555.6	502	689
MEAN	33.1	25.8	28.8	18.3	32.1	48.9	45.4	29.5	34.5	17.9	16.2	23.0
MAX	109	96	69	34	63	151	194	78	266	37	23	50
MIN	13	6.9	13	10	15	17	16	13	8.4	9.6	14	16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2000, BY WATER YEAR (WY)

	MEAN	30.9	30.6	37.6	42.1	48.2	68.2	71.4	51.2	34.3	32.6	27.4	34.8
MAX	84.2	88.6	135	125	152	151	204	162	162	127	83.3	105	
(WY)	1990	1976	1997	1978	1973	1961	1983	1989	1972	1984	1966	1999	
MIN	7.27	7.59	5.63	8.95	10.3	6.95	9.61	7.04	12.7	10.1	12.3	9.34	
(WY)	1967	1967	1967	1967	1967	1981	1966	1965	1981	1999	1981	1962	

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

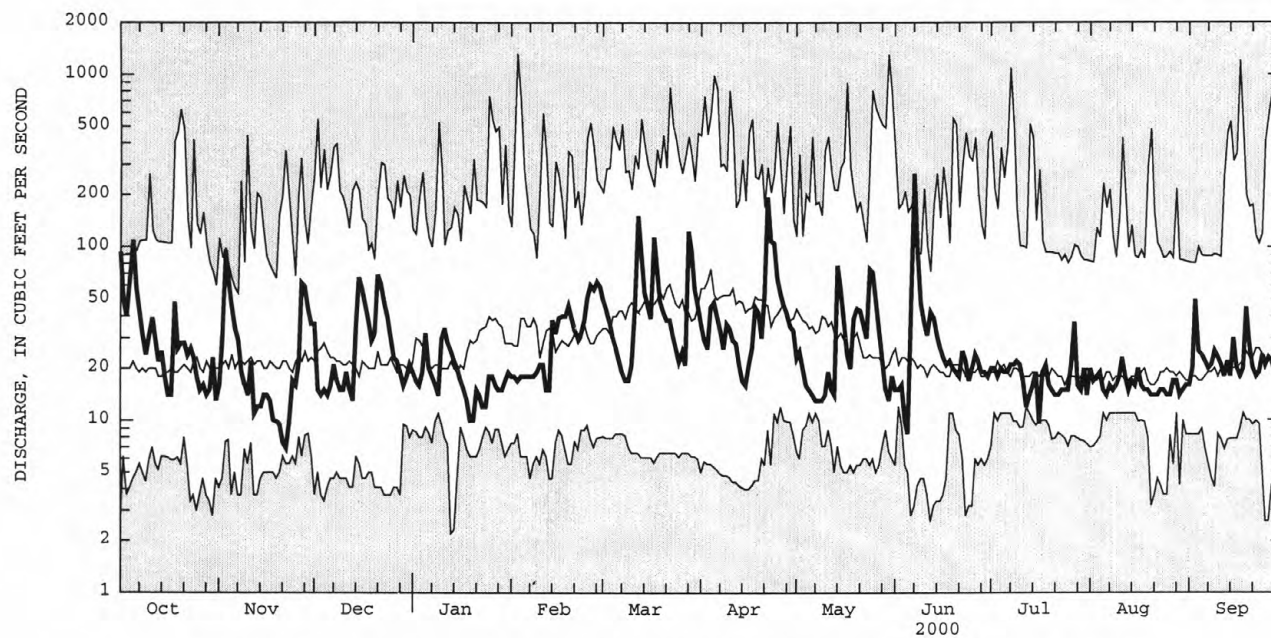
FOR 2000 WATER YEAR

WATER YEARS 1959 - 2000

ANNUAL TOTAL	9313.4	10760.6	
ANNUAL MEAN	25.5	29.4	42.6
HIGHEST ANNUAL MEAN			74.1
LOWEST ANNUAL MEAN			13.4
HIGHEST DAILY MEAN	1200	266	1320
LOWEST DAILY MEAN	6.9	6.9	2.2
ANNUAL SEVEN-DAY MINIMUM	7.4	9.5	3.1
10 PERCENT EXCEEDS	40	51	85
50 PERCENT EXCEEDS	13	21	23
90 PERCENT EXCEEDS	9.8	14	12

e Estimated

01376800 HACKENSACK RIVER AT WEST NYACK, NY--Continued



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

HACKENSACK RIVER BASIN

01377000 HACKENSACK RIVER AT RIVERVALE, NJ

LOCATION.--Lat 40°59'57", long 73°59'23" (revised), Bergen County, Hydrologic Unit 02030103, on upstream right bank at bridge on Westwood Avenue in Rivervale, 1.5 mi upstream from Pascack Brook, 4.1 mi downstream of Lake Tappan, and 4.6 mi upstream from Oradell Dam.

DRAINAGE AREA.--58.0 mi².

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WDR-NJ-80-1: 1968-79(M).

GAGE.--Water-stage recorder, crest-stage gages, and concrete control. Datum of gage is 22.51 ft above sea level.

REMARKS.--Records good except estimated discharges, which are fair. Flow regulated by De Forest Lake (since 1956) and Lake Tappan (since 1965), see Hackensack River basin, reservoirs in. Diversions from De Forest Lake and West Nyack, NY, for municipal water supply (see Hackensack River basin, diversions). Several measurements of water temperature were made during the year. United Water New Jersey (formerly Hackensack Water Co.) gage-height telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with United Water New Jersey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	30	58	55	164	30	85	58	35	31	99	111
2	120	39	58	55	162	30	72	56	34	28	77	116
3	88	156	58	56	161	29	66	52	36	26	63	138
4	103	137	58	58	129	29	76	47	31	28	74	119
5	179	104	58	68	93	29	81	44	29	36	57	109
6	137	83	62	58	92	29	72	42	96	57	44	99
7	99	69	62	56	92	29	67	40	492	51	44	91
8	74	55	58	56	92	28	61	41	262	47	40	70
9	61	47	58	56	92	26	71	38	120	48	41	74
10	69	42	58	74	92	28	73	39	87	48	40	73
11	86	44	57	66	93	53	66	47	67	46	80	70
12	72	48	56	57	94	57	64	42	99	46	159	70
13	59	65	55	56	92	34	55	50	96	46	89	81
14	55	63	65	55	117	31	48	123	76	48	75	71
15	46	74	66	e55	43	29	45	112	62	67	75	92
16	42	103	57	55	33	32	55	85	53	52	78	72
17	40	121	56	56	32	112	68	66	47	50	67	71
18	86	121	55	56	30	151	95	58	49	49	52	70
19	70	121	55	56	30	116	87	98	49	48	44	101
20	72	121	62	55	30	94	73	99	41	48	37	95
21	77	121	75	53	29	81	103	94	35	48	33	73
22	64	121	58	54	30	72	334	80	49	47	30	72
23	64	118	57	53	33	65	243	68	44	46	29	64
24	59	118	56	53	34	60	190	117	38	46	32	39
25	50	118	56	54	34	55	144	127	32	46	31	37
26	43	124	56	54	33	63	116	101	31	60	29	39
27	40	124	55	53	32	56	95	76	33	92	28	40
28	36	62	55	69	34	188	85	63	36	46	35	37
29	32	59	55	75	31	211	77	52	32	42	57	35
30	32	58	55	74	---	133	71	43	37	163	56	34
31	32	---	55	115	---	105	---	37	---	117	75	---
TOTAL	2246	2666	1805	1866	2053	2085	2838	2095	2228	1653	1770	2263
MEAN	72.5	88.9	58.2	60.2	70.8	67.3	94.6	67.6	74.3	53.3	57.1	75.4
MAX	179	156	75	115	164	211	334	127	492	163	159	138
MIN	32	30	55	53	29	26	45	37	29	26	28	34

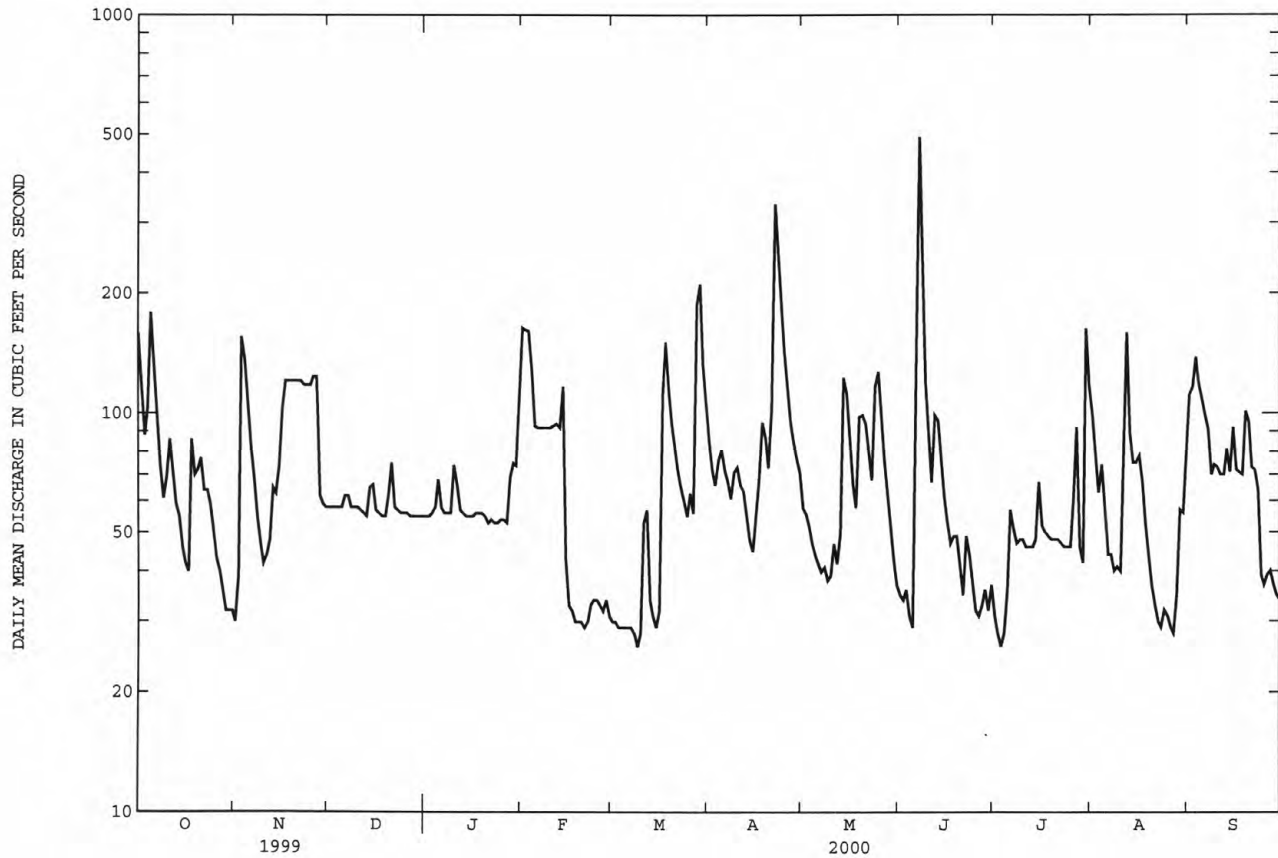
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2000, BY WATER YEAR (WY)

	MEAN	58.9	69.5	78.9	87.5	90.8	134	138	101	74.3	77.6	69.8	65.5
MAX	312	240	248	251	221	379	438	310	319	339	197	177	
(WY)	1956	1956	1997	1949	1951	1953	1983	1989	1972	1945	1955	1975	
MIN	12.1	16.6	12.6	22.6	23.0	11.2	14.5	20.4	13.4	11.6	11.4	7.87	
(WY)	1942	1996	1981	1982	1967	1981	1981	1981	1957	1954	1944	1953	

01377000 HACKENSACK RIVER AT RIVERVALE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1942 - 2000	
ANNUAL TOTAL	22816.8		25568		87.2	
ANNUAL MEAN	62.5		69.9		156	
HIGHEST ANNUAL MEAN					30.9	
LOWEST ANNUAL MEAN					2190	
HIGHEST DAILY MEAN	1450	Sep 17	492	Jun 7	May 31	1984
LOWEST DAILY MEAN	9.1	Jan 2	26	Mar 9	Oct 10	1995
ANNUAL SEVEN-DAY MINIMUM	12	Aug 30	28	Mar 4	Oct 7	1995
INSTANTANEOUS PEAK FLOW			632	Jun 7	May 17	1989
INSTANTANEOUS PEAK STAGE			3.40	Jun 7	May 17	1989
INSTANTANEOUS LOW FLOW			26	Mar 8	Jan 16	1970
10 PERCENT EXCEEDS	95		118		167	
50 PERCENT EXCEEDS	54		58		59	
90 PERCENT EXCEEDS	14		32		21	

e Estimated



01377500 PASCACK BROOK AT WESTWOOD, NJ

LOCATION.--Lat 40°59'34", long 74°01'17" (revised), Bergen County, Hydrologic Unit 02030103, on right bank 75 ft upstream from Harrington Avenue in Westwood, 500 ft downstream from Musquapsink Brook, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--29.6 mi².

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.--WDR NJ-87-1: 1984 (P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 28.62 ft above sea level.

REMARKS.--Records fair except foreestimated daily discharges which are poor. Flow regulated by Woodcliff Lake 3.0 mi above station (see Hackensack River basin, reservoirs in). Water diverted for municipal supply by United Water New York (formerly Spring Valley Water Company), by pumpage from well fields in headwater area of Pascack Brook in vicinity of Spring Valley, NY, and by Park Ridge Water Department by pumping from wells above Woodcliff Lake probably reduces flow past this station. Water is diverted from Saddle River to Musquapsink Brook which then enters Pascack Brook 500 feet upstream of gage (see Diversions Into and From Hackensack River Basin). Several measurements of water temperature were made during the year. United Water New Jersey gage-height telemeter at station. Satellite gage-height telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with United Water New Jersey.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jul 30	1045	*900	*4.37	Aug 11	1845	718	4.02

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	29	56	21	26	60	43	29	27	29	132	30
2	97	62	45	21	24	58	42	30	28	24	74	33
3	68	115	27	22	24	56	76	28	29	24	43	36
4	65	100	27	27	24	54	70	32	26	32	46	37
5	71	51	26	37	24	54	37	38	42	24	38	33
6	57	72	35	22	23	52	35	37	171	23	36	30
7	31	52	40	21	23	51	36	37	172	33	36	29
8	31	42	19	24	23	52	38	38	40	39	35	29
9	28	34	30	34	23	53	47	37	36	38	40	32
10	27	27	31	104	24	47	42	35	74	73	35	31
11	30	27	30	115	27	112	55	34	107	103	155	29
12	32	27	31	79	28	153	48	27	123	105	165	29
13	31	26	38	54	37	69	38	29	90	62	121	39
14	30	26	74	35	214	53	31	67	32	35	128	30
15	31	27	128	33	121	38	31	62	31	115	107	59
16	60	27	77	30	70	63	36	33	31	42	59	32
17	50	27	60	22	62	97	61	52	30	36	50	30
18	50	27	27	20	59	56	64	92	33	37	51	34
19	57	27	27	18	61	42	41	100	31	37	48	93
20	46	27	49	18	58	39	70	66	30	36	36	125
21	42	28	56	18	56	53	140	39	30	35	35	100
22	37	27	25	18	57	40	126	47	40	34	35	96
23	31	25	23	18	62	33	78	36	30	39	39	31
24	34	27	22	19	69	33	92	51	29	44	37	26
25	34	27	21	23	79	33	64	31	29	51	34	25
26	32	38	22	23	80	39	31	31	28	78	31	31
27	31	85	21	22	68	57	31	32	30	171	30	27
28	31	83	21	22	86	177	31	29	28	116	31	25
29	30	60	21	22	71	74	30	28	26	103	30	24
30	29	56	21	22	---	53	30	28	27	321	30	23
31	29	---	21	31	---	45	---	27	---	132	30	---
TOTAL	1339	1308	1151	995	1603	1896	1594	1282	1480	2071	1797	1228
MEAN	43.2	43.6	37.1	32.1	55.3	61.2	53.1	41.4	49.3	66.8	58.0	40.9
MAX	97	115	128	115	214	177	140	100	172	321	165	125
MIN	27	25	19	18	23	33	30	27	26	23	30	23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2000, BY WATER YEAR (WY)

MEAN	39.0	48.4	51.7	54.4	58.5	78.6	78.2	62.1	49.5	45.5	42.3	41.9
MAX	143	131	129	151	135	197	198	155	175	180	127	196
(WY)	1956	1978	1984	1979	1973	1953	1983	1989	1972	1945	1971	1999
MIN	10.2	9.83	15.8	10.8	15.7	34.8	28.9	21.2	18.2	14.2	10.0	9.45
(WY)	1942	1950	1940	1954	1954	1965	1991	1992	1939	1944	1935	1939

HACKENSACK RIVER BASIN

39

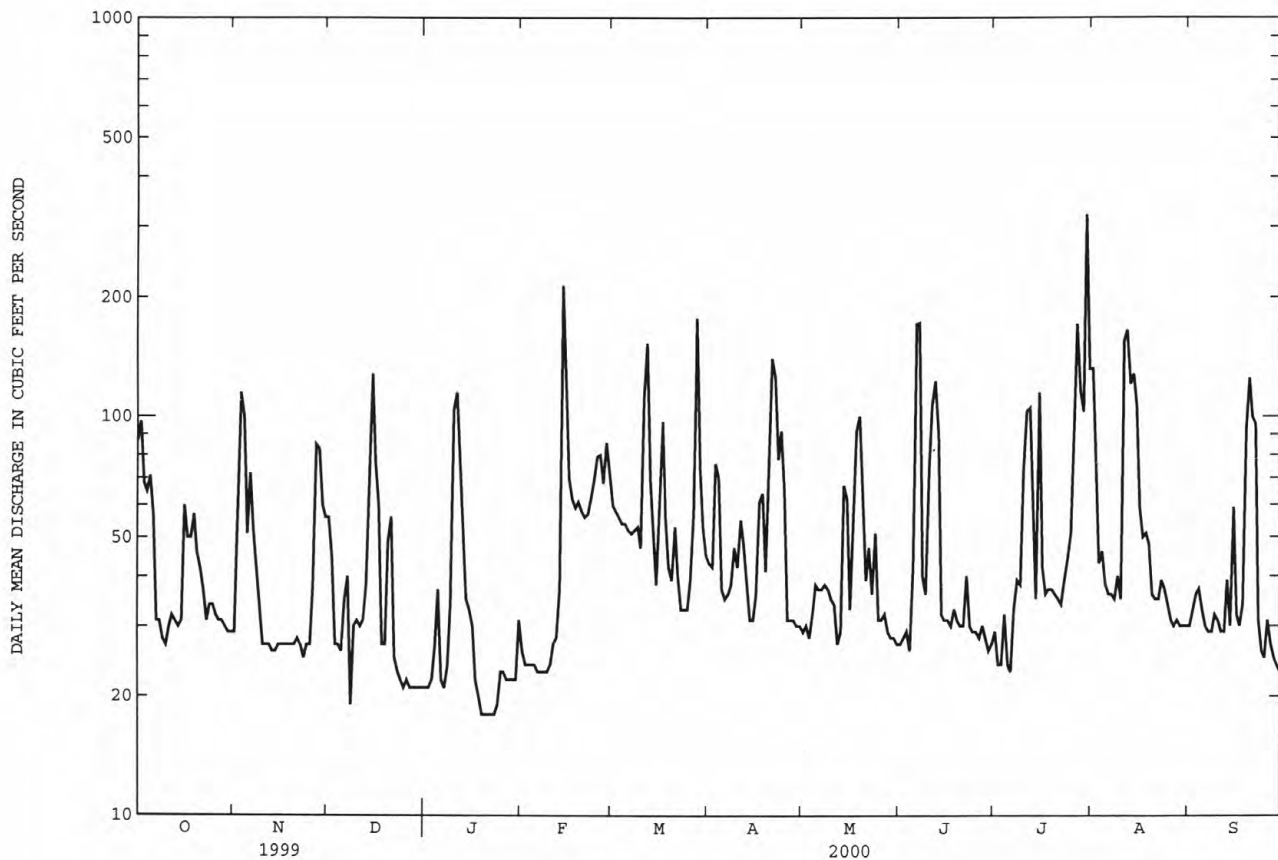
01377500 PASCACK BROOK AT WESTWOOD, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1935 - 2000	
ANNUAL TOTAL	20207		17744			
ANNUAL MEAN	55.4		48.5		54.1	
HIGHEST ANNUAL MEAN					88.6	
LOWEST ANNUAL MEAN					27.6	
HIGHEST DAILY MEAN	1460	Sep 17	321	Jul 30	1770	Aug 28 1971
LOWEST DAILY MEAN	12	Aug 24	18	Jan 19	.45	Apr 26 1991
ANNUAL SEVEN-DAY MINIMUM	17	Aug 19	18	Jan 18	6.3	Oct 19 1949
INSTANTANEOUS PEAK FLOW			900		9630a	
INSTANTANEOUS PEAK STAGE			4.37		12.22b	
INSTANTANEOUS LOW FLOW			12		.05c	
10 PERCENT EXCEEDS	93		94		96	
50 PERCENT EXCEEDS	32		35		39	
90 PERCENT EXCEEDS	21		24		18	

a From rating curve extended above 2,400 ft³/s on basis on contracted-opening computation of peak flow

b From floodmark

c Also occurred Sept. 28, 1993



LOCATION.--Lat 40°56'54", long 74°01'37" (revised), Bergen County, 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.

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

GAGE.--Water-stage recorder, crest-stage gage above south dam. Datum of gage is 6.25 ft above sea level. 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.

COOPERATION.--Gage-height record collected in cooperation with United Water New Jersey.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	9.1	22	18	12	10	30	14	15	14	365	6.5
2	9.2	11	22	18	12	9.7	21	15	14	14	31	1.3
3	31	20	22	18	12	9.4	19	15	14	14	12	2.9
4	53	30	22	19	12	15	46	16	15	19	13	1.8
5	343	38	22	19	12	18	32	17	14	14	10	6.5
6	431	40	26	19	11	16	21	17	20	14	20	9.5
7	426	39	22	19	11	18	19	16	52	11	11	10
8	127	39	16	19	11	17	19	18	235	.61	13	11
9	.92	39	16	18	11	15	20	14	80	.41	12	10
10	1.4	30	17	19	11	13	19	16	29	.62	11	14
11	1.1	27	16	18	11	16	20	16	28	.94	14	14
12	1.1	29	17	17	11	9.5	17	17	142	.81	126	14
13	1.4	28	18	16	11	16	15	17	144	.85	306	14
14	12	27	18	15	13	24	15	16	54	.81	255	13
15	18	16	15	15	10	21	15	15	21	4.0	221	14
16	131	14	15	15	10	16	16	12	12	.92	16	12
17	370	18	15	15	10	15	16	11	14	.80	13	12
18	48	18	14	15	10	15	16	14	15	.81	13	12
19	.94	19	16	15	10	14	16	13	14	.90	13	15
20	7.6	19	14	14	10	17	15	15	14	.80	13	12
21	12	20	12	14	10	19	460	14	14	.80	13	11
22	9.4	20	11	14	10	16	368	13	13	.79	13	11
23	13	21	13	14	10	15	217	13	14	.80	13	12
24	13	21	16	14	10	15	475	14	14	.80	12	12
25	12	21	17	14	10	15	148	13	15	1.8	12	11
26	11	23	18	13	10	16	17	17	14	9.8	14	12
27	8.4	22	18	13	11	17	15	17	17	8.3	15	11
28	11	22	18	13	9.7	18	15	17	16	4.4	13	10
29	15	22	18	13	9.8	15	14	15	15	3.8	11	15
30	11	22	18	13	---	31	14	14	15	381	13	17
31	9.9	---	18	12	---	41	---	15	---	509	13	---
TOTAL	2141.46	724.1	542	488	311.5	522.6	2150	466	1093	1034.57	1630	327.5
MEAN	69.1	24.1	17.5	15.7	10.7	16.9	71.7	15.0	36.4	33.4	52.6	10.9
MAX	431	440	26	19	13	41	475	18	235	509	365	17
MIN	.92	9.1	11	12	9.7	9.4	14	11	12	.41	10	1.1

MEAN	34.6	61.9	85.2	100	122	204	194	120	59.3	44.6	38.2	44.2
MAX	480	356	339	359	396	651	774	528	612	543	373	385
(WY)	1956	1928	1997	1937	1939	1936	1983	1989	1972	1945	1927	1927
MIN	.000	.000	.000	.000	.000	.000	.000	.39	.000	.000	.000	.000
(WY)	1922	1924	1932	1971	1977	1981	1981	1985	1977	1954	1924	1923

HACKENSACK RIVER BASIN

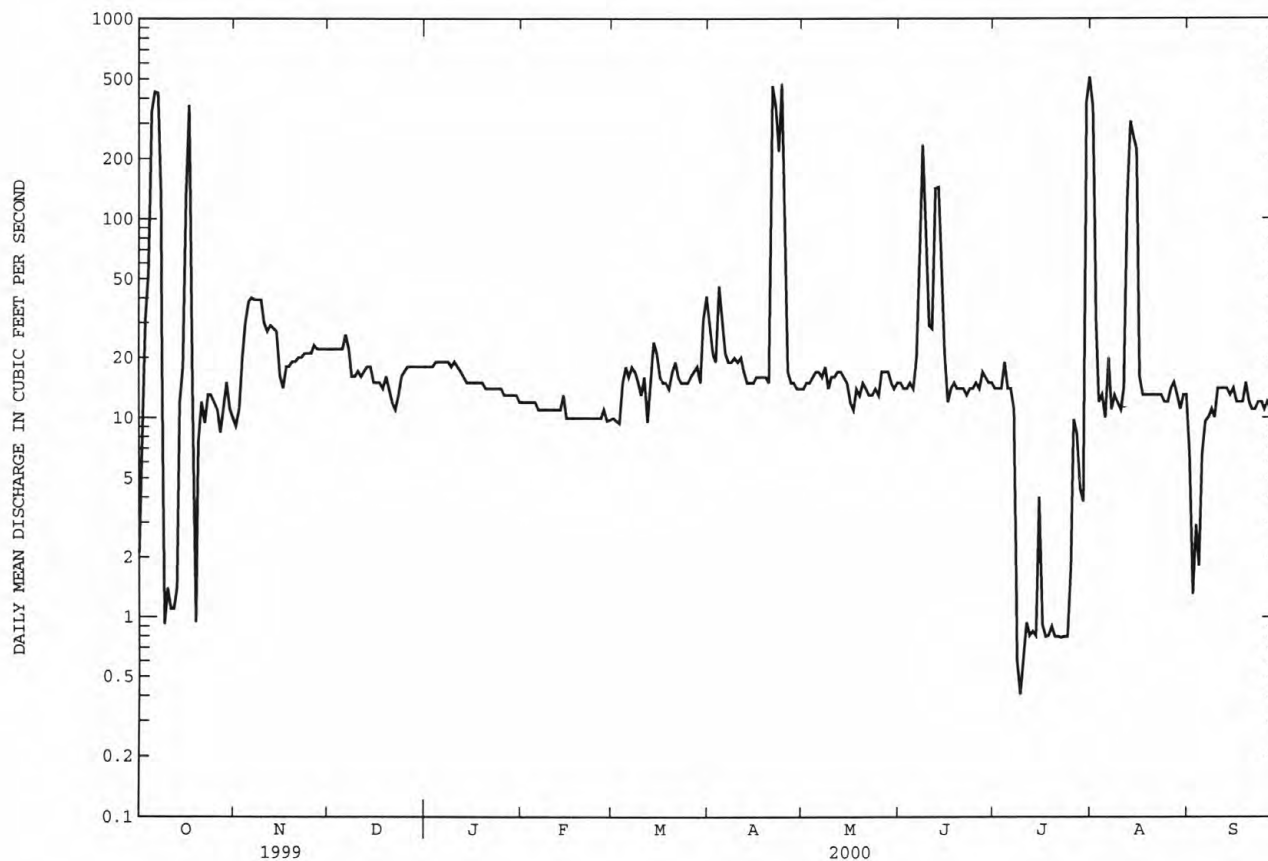
41

01378500 HACKENSACK RIVER AT NEW MILFORD, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1922 - 2000
ANNUAL TOTAL	15353.39	11430.73	
ANNUAL MEAN	42.1	31.2	92.2
HIGHEST ANNUAL MEAN			263
LOWEST ANNUAL MEAN			.40
HIGHEST DAILY MEAN	5580 Sep 17	509 Jul 31	5580 Sep 17 1999
LOWEST DAILY MEAN	.00 Jan 1	.41 Jul 9	.00 Oct 1 1921
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 11	.72 Jul 8	.00 Oct 1 1921
INSTANTANEOUS PEAK FLOW		1860 Apr 21	9760a Sep 17 1999
INSTANTANEOUS PEAK STAGE		4.50 Apr 21	11.45b Sep 17 1999
INSTANTANEOUS LOW FLOW		.40 Many days	.00 Many days
10 PERCENT EXCEEDS	24	31	269
50 PERCENT EXCEEDS	9.2	15	15
90 PERCENT EXCEEDS	.00	9.2	.00 Many days

a from rating curve extended above 1,700 ft³/s on basis of flow-over-dam computation of peak flow

b From high-water mark in gage house



RESERVOIRS IN HACKENSACK RIVER BASIN

01376700 DE FOREST LAKE.--Lat 41°06'23", long 73°58'01", Rockland County, NY, Hydrologic Unit 02030103, at dam on Hackensack River, 0.8 mi north of West Nyack, NY. DRAINAGE AREA, 27.5 mi². PERIOD OF RECORD, February 1956 to current year. REVISED RECORDS.--WDR NJ-84-1: Drainage area, WDR NJ-99-1: 1998 (elevation, contents). GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earthfill dam with sheet piling cutoff and concrete spillway; dam completed and storage began in February 1956. Crest of dam topped by two 50 ft Bascule Gates, 5 ft high. Capacity 5,670,000,000 gal, elevation, 85.00 ft, top of Bascule gates. Flow regulated by 12-inch Howell-Bunger valve at elevation, 59.25 ft and 24-inch Howell-Bunger valve at elevation, 61.25 ft. Reservoir used for storage and water released by United Water New Jersey, for municipal water supply.

COOPERATION.--Records provided by United Water New Jersey (formerly Hackensack Water Company).

01376950 LAKE TAPPAN.--Lat 41°01'05", long 74°00'05", Bergen County, Hydrologic Unit 02030103, at dam on Hackensack River, 0.5 mi north of Old Tappan. DRAINAGE AREA, about 49.0 mi². PERIOD OF RECORD, October 1966 to current year. REVISED RECORDS, WDR NJ-89-1: Capacity, WDR NJ-99-1: 1998 (elevation, contents). GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earthfill dam, completed in 1966. Capacity, 3,853,000,000 gal, elevation, 55.00 ft at top of Bascule gates. Flow regulated by four Bascule gates and one sluice gate. Water is released for diversion at New Milford (diversion discontinued May 1990) and Haworth by United Water New Jersey, for municipal water supply.

COOPERATION.--Records provided by United Water New Jersey (formerly Hackensack Water Company).

01377450 WOODCLIFF LAKE.--Lat 41°00'46", long 74°02'58", Bergen County, Hydrologic Unit 02030103, at dam on Pascack Brook, 0.7 mi north of Hillsdale. DRAINAGE AREA, 19.4 mi². PERIOD OF RECORD, December 1929 to current year. Monthend contents only, prior to September 1953, published in WSP 1302, 1722. REVISED RECORDS, WDR NJ-89-1: Capacity, WDR NJ-99-1: 1998 (elevation, contents). GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earthfill dam, completed about 1905. The dam was modified in 1984, which increased capacity, 871,000,000 gal, elevation, 95.00 ft at top of Bascule gates. Flow is regulated by two Bascule gates 85 ft long and 6 ft high each and one 24-inch Ball valve. Water is released for diversion at New Milford (diversion discontinued May 1990) and Haworth by United Water New Jersey, for municipal supply.

COOPERATION.--Records provided by United Water New Jersey (formerly Hackensack Water Company).

01378480 ORADELL RESERVOIR.--Lat 40°57'22", long 74°01'46", Bergen County, Hydrologic Unit 02030103, at dam on Hackensack River at Oradell. DRAINAGE AREA, 113 mi². PERIOD OF RECORD, December 1922 to current year. Monthend contents only, prior to September 1953, published in WSP 1302, 1722. REVISED RECORDS.--WDR NJ-84-1: Spillway elevation, WDR NJ-89-1: Capacity, WDR NJ-99-1: 1998 (elevation, contents). GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by hollow concrete dam, completed in 1922. Capacity at spillway level, 3,507,000,000 gal, elevation, 23.16 ft. Flow regulated by seven sluice gates (7 by 9 ft). Prior to May 1990, water was released for diversion by United Water New Jersey, 1 mi downstream from dam for municipal supply. Water is diverted from reservoir at Haworth by United Water New Jersey, for municipal supply.

COOPERATION.--Records provided by United Water New Jersey (formerly Hackensack Water Company).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)
01376700 DE FOREST LAKE				01376950 LAKE TAPPAN		
Sept. 30.....	85.18	5,730	--	55.27	3,951	--
Oct. 31.....	84.91	5,642	-4.4	55.15	3,908	-2.1
Nov. 30.....	85.11	5,707	+3.4	53.55	3,343	-29.1
Dec. 31.....	85.01	5,674	-1.6	53.86	3,450	+5.3
CAL YR 1999			+14.0			+7.6
Jan. 31.....	84.86	5,624	-2.5	53.46	3,311	-6.9
Feb. 29.....	85.21	5,741	+6.2	53.61	3,364	+2.8
Mar. 31.....	85.18	5,730	-5	55.25	3,944	+28.9
Apr. 30.....	85.12	5,710	-1.0	55.17	3,915	-1.5
May 31.....	85.06	5,690	-1.0	55.07	3,878	-1.8
June 30.....	84.82	5,613	-4.0	55.05	3,872	-3
July 31.....	84.49	5,504	-5.4	55.22	3,932	+3.0
Aug. 31.....	83.95	5,330	-8.7	54.75	3,763	-8.4
Sept. 30.....	83.60	5,220	-5.7	54.18	3,562	-10.4
WTR YR 2000			-2.1			-1.6
Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)
01377450 WOODCLIFF LAKE				01378480 ORADELL RESERVOIR		
Sept. 30.....	88.58	530	--	22.65	3,369	--
Oct. 31.....	89.73	587	+2.8	18.42	2,334	-51.6
Nov. 30.....	89.49	575	-6	19.41	2,561	+11.7
Dec. 31.....	90.79	642	+3.3	19.18	2,508	-2.6
CAL YR 1999			+1.0			+7
Jan. 31.....	90.79	642	0	17.84	2,202	-15.3
Feb. 29.....	91.07	656	+7	20.69	2,868	+35.5
Mar. 31.....	91.10	658	+1	23.21	3,522	+32.6
Apr. 30.....	90.98	651	-4	22.85	3,424	-5.1
May 31.....	92.40	727	+3.8	21.59	3,092	-16.6
June 30.....	93.20	771	+2.3	20.17	2,743	-18.0
July 31.....	92.63	740	-1.5	21.78	3,140	+19.8
Aug. 31.....	90.31	617	-6.1	18.38	2,324	-40.7
Sept. 30.....	90.42	622	+3	19.97	2,694	+19.1
WTR YR 2000			+4			-2.9

† Elevation at 2400 of the last day of each month.

HACKENSACK RIVER BASIN

43

DIVERSIONS INTO AND FROM HACKENSACK RIVER BASIN

- 01376272 United Water New Jersey, diverts water from Sparkill Creek (Hudson River basin) at foot of Danny Lane in Northvale, 300 ft south of New York-New Jersey state line and 0.6 mi upstream from Sparkill Brook. Water is diverted into Oradell Reservoir on the Hackensack River, for municipal supply. Records provided by United Water New Jersey (formerly Hackensack Water Company).
- 01376699 United Water New York (formerly Spring Valley Water Company), diverts water from De Forest Lake for municipal supply in Rockland County, NY. Records provided by United Water New York (formerly Spring Valley Water Company).
- 01376810 Village of Nyack, NY, diverts water from Hackensack River 100 ft downstream from gaging station on Hackensack River at West Nyack, NY (station 01376800, measured flow includes diversions) for municipal supply. Records provided by Board of Water Commissioners of Nyack, NY.
- 01378490 United Water New Jersey, diverts water for municipal supply from Oradell Reservoir at Haworth pumping station (station 01378478) 2.0 mi upstream from gaging station on Hackensack River at New Milford and prior to May 1990 from Hackensack River, at New Milford pumping station just upstream from gaging station on Hackensack River at New Milford, NJ (station 01378500). Diversion from the New Milford pumping station was discontinued in May 1990. Records provided by United Water New Jersey (formerly Hackensack Water Company).
- 01378521 (revised) United Water New Jersey, diverts water from Hirshfeld Brook, a tributary of the Hackensack River, below the gaging station on Hackensack River at New Milford, NJ, for municipal supply. Records provided by United Water New Jersey (formerly Hackensack Water Company).
- 01390520 (revised) United Water New Jersey, diverts water from Saddle River (Passaic River basin) 0.3 mi downstream from Grove Street in Paramus, and 0.3 mi upstream from Hohokus Brook. Water is diverted into Oradell Reservoir on the Hackensack River via Musquapsink and Pascack Brooks for municipal supply. Records provided by United Water New Jersey (formerly Hackensack Water Company).

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

MONTH	01376699 UNITED WATER NEW YORK.	01376810 WEST NYACK, NY	01378490 UNITED WATER NEW JERSEY
October	12.3	2.75	125
November	12.1	2.60	141
December	11.6	2.55	123
CAL YR 1999	14.2	2.94	147
January	12.5	2.67	134
February	12.1	2.85	140
March	12.2	2.76	140
April	12.3	2.85	140
May	14.0	3.10	149
June	15.3	3.03	165
July	17.2	3.10	172
August	14.5	3.09	153
September	13.2	3.09	144
WTR YR 2000	13.3	2.87	144

The following are diversions by pumpage from sources other than the Hackensack River into Oradell Reservoir. These figures are included in diversions from Hackensack River as noted above (station 01378490)

MONTH	01376272 SPARKILL CREEK (HUDSON RIVER BASIN)	01378521 HIRSHFELD BROOK (HACKENSACK RIVER BASIN)	01388981 POMPTON RIVER (PASSAIC RIVER BASIN)	01390520 SADDLE RIVER (PASSAIC RIVER BASIN)	WELLS TO SURFACE SUPPLY
October	0	0	0	0	.39
November	0	0	0	0	.54
December	0	0	0	0	.44
CAL YR 1999 .....	.38	.52	20.8	7.01	.83
January	0	0	0	0	.38
February	0	1.87	0	10.6	.50
March	0	0	0	7.52	.55
April	0	0	0	0	.61
May	0	0	.94	0	.58
June	0	0	7.67	.01	.57
July .....	.70	1.16	45.9	9.97	.47
August	0	0	2.82	0	.36
September	0	0	9.69	0	.37
WTR YR 2000 .....	.06	.25	5.63	2.32	.48

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ

LOCATION.--Lat 40°40'48", long 74°31'45", Somerset County, Hydrologic Unit 02030103, on right bank 200 ft downstream from Davis Bridge on Maple Avenue, 0.7 mi northwest of Millington, and 1.8 mi downstream from Black Brook.

DRAINAGE AREA.--55.4 mi².

PERIOD OF RECORD.--November 1903 to June 1906 (published as "at Millington"), October 1921 to current year. Monthly discharges only for some periods published in WSP 1302.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1905(M). WDR NJ-96-1: 1936 (M), 1949 (M), 1971 (M), 1975 (M), 1979 (M), 1984(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete-block control. Datum of gage is 215.60 ft above sea level (levels from New Jersey Geological Survey bench mark). Nov. 25, 1903 to July 15, 1906, nonrecording gage at bridge 0.8 mi downstream at different datum. Nov. 10, 1921 to Sept. 1, 1923, nonrecording gage at site 200 ft downstream at present datum. Oct. 31, 1923 to July 3, 1925, nonrecording gage and concrete control at present site and datum.

REMARKS.--Records fair, except for estimated daily discharges which are poor. Diversion from Osborn Pond by Commonwealth Water Co., Bernards Division, was discontinued in April 1979 and the installation dismantled. Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	42	78	44	e60	139	76	56	46	17	68	26
2	41	45	67	44	e49	119	67	52	40	16	69	29
3	39	82	62	48	e45	103	63	48	36	14	66	27
4	44	75	60	53	e42	89	67	43	31	15	106	29
5	62	63	58	85	e41	79	79	40	28	17	92	26
6	54	64	80	79	e40	68	67	38	34	15	71	24
7	48	60	126	79	e40	55	60	35	71	12	63	22
8	44	52	100	68	e41	56	54	33	65	9.3	52	21
9	40	46	85	59	e42	55	58	31	57	8.5	49	19
10	48	42	78	76	e43	53	67	31	42	8.0	45	18
11	75	40	79	e115	e48	61	59	44	33	7.4	40	17
12	59	37	72	e130	e53	129	59	39	80	5.9	94	16
13	50	35	65	133	e62	141	54	35	108	5.1	148	20
14	56	33	87	111	111	123	49	45	93	5.1	161	18
15	55	31	163	72	259	106	47	41	80	29	239	29
16	45	30	163	59	257	86	54	34	68	54	249	25
17	42	28	144	57	239	173	62	30	57	52	210	20
18	47	26	120	43	183	210	92	42	49	37	151	18
19	46	26	101	42	139	173	95	196	45	33	103	21
20	56	25	97	40	124	140	85	272	39	28	81	32
21	81	28	156	38	124	115	111	284	34	19	63	22
22	68	28	151	38	126	99	244	244	45	20	49	19
23	80	24	126	38	134	87	230	211	40	16	42	19
24	81	25	100	38	146	76	191	223	31	13	38	22
25	70	30	76	38	165	69	140	221	26	12	35	21
26	63	40	61	e44	166	65	114	176	24	26	32	27
27	56	128	54	e42	154	60	97	130	23	148	30	39
28	51	153	49	e40	167	118	84	97	30	171	28	30
29	47	111	45	e45	165	136	74	76	24	127	27	28
30	44	93	43	e48	---	112	65	62	20	112	25	25
31	43	---	44	e60	---	91	---	53	---	89	24	---
TOTAL	1692	1542	2790	1906	3265	3186	2664	2962	1399	1141.3	2550	709
MEAN	54.6	51.4	90.0	61.5	113	103	88.8	95.5	46.6	36.8	82.3	23.6
MAX	81	153	163	133	259	210	244	284	108	171	249	39
MIN	39	24	43	38	40	53	47	30	20	5.1	24	16
CFSM	.99	.93	1.62	1.11	2.03	1.86	1.60	1.72	.84	.66	1.48	.43
IN.	1.14	1.04	1.87	1.28	2.19	2.14	1.79	1.99	.94	.77	1.71	.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2000, BY WATER YEAR (WY)

MEAN	48.7	85.5	105	115	129	186	144	93.7	57.2	44.7	49.0	52.1
MAX	345	340	335	463	380	439	420	365	292	307	398	380
(WY)	1997	1933	1984	1905	1904	1994	1983	1989	1972	1975	1942	1971
MIN	3.56	7.47	8.18	6.78	26.1	64.2	25.9	20.3	3.95	1.25	1.37	.73
(WY)	1964	1966	1966	1981	1934	1981	1985	1965	1965	1965	1966	1964

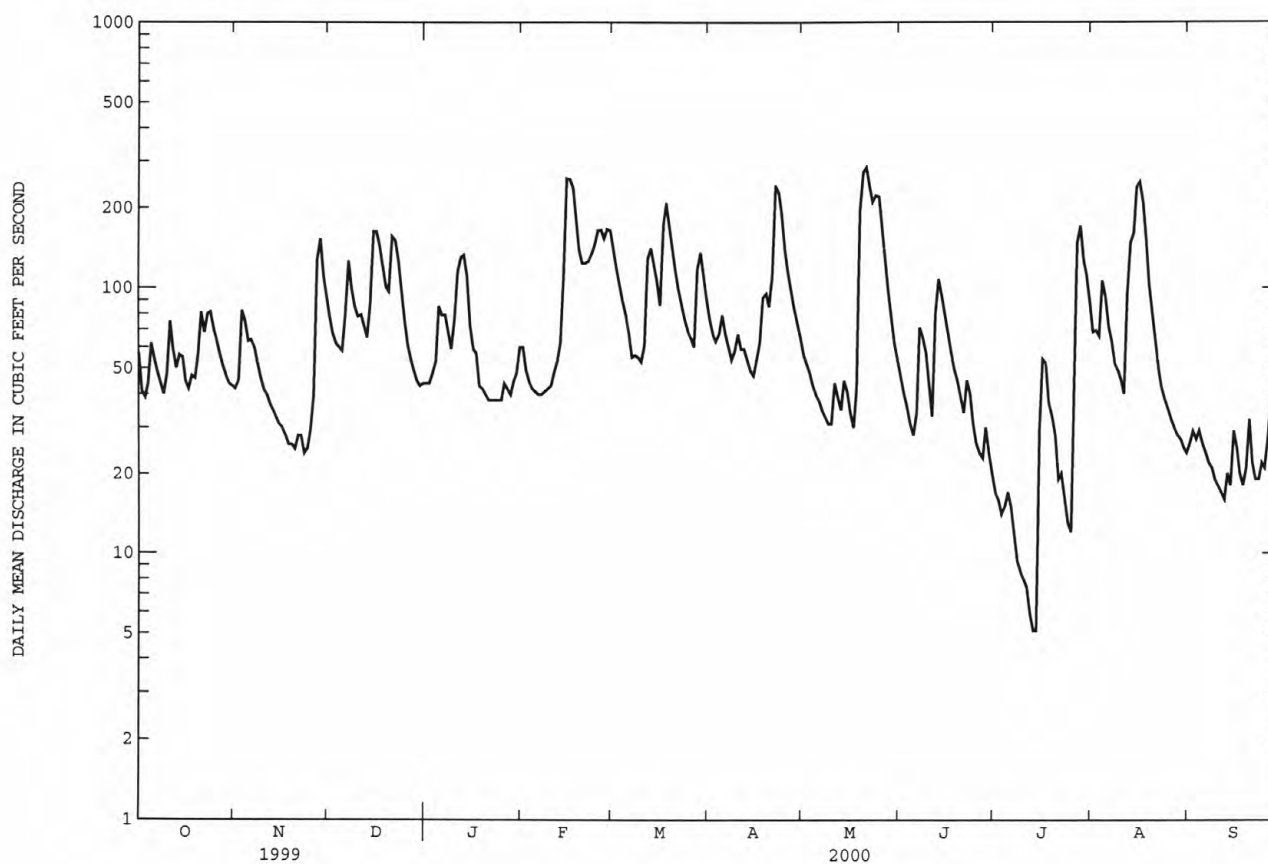
PASSAIC RIVER BASIN

45

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1904 - 2000
ANNUAL TOTAL	31073.13	25806.3	
ANNUAL MEAN	85.1	70.5	91.4
HIGHEST ANNUAL MEAN			163 1984
LOWEST ANNUAL MEAN			32.3 1965
HIGHEST DAILY MEAN	1510 Sep 17	284 May 21	2230 Oct 20 1996
LOWEST DAILY MEAN	.55 Aug 5	5.1 Jul 13	.30 Sep 13 1966
ANNUAL SEVEN-DAY MINIMUM	.82 Aug 2	7.0 Jul 8	.47 Sep 11 1964
INSTANTANEOUS PEAK FLOW		295 May 21	2290 Oct 20 1996
INSTANTANEOUS PEAK STAGE		6.24 May 21	9.89 Oct 20 1996
INSTANTANEOUS LOW FLOW		4.8 Jul 13	.20 Sep 12 1966
ANNUAL RUNOFF (CFSM)	1.54	1.27	1.65
ANNUAL RUNOFF (INCHES)	20.86	17.33	22.41
10 PERCENT EXCEEDS	162	147	223
50 PERCENT EXCEEDS	53	54	48
90 PERCENT EXCEEDS	3.2	23	9.0

e Estimated.



LOCATION.--Lat 40°43'34", long 74°23'24" (revised), Morris County, Hydrologic Unit 02030103, on left bank 150 ft downstream from bridge on Stanley Avenue in Chatham, and 3.0 mi upstream from Canoe Brook.

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 22	0730	*811	*5.38	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	55	140	78	75	267	149	110	97	41	199	81
2	85	84	116	75	61	221	128	101	85	36	147	190
3	61	165	101	77	54	189	117	95	74	34	145	94
4	79	131	94	92	52	163	134	88	64	42	242	62
5	144	106	89	193	52	143	141	82	56	42	213	53
6	129	92	147	185	51	128	129	74	95	36	146	46
7	94	86	271	141	51	113	115	68	167	33	119	44
8	75	78	246	128	51	102	106	63	140	31	104	42
9	64	71	172	112	49	99	113	61	111	27	92	39
10	92	65	145	122	53	94	132	66	91	26	88	36
11	163	60	144	179	69	127	120	99	77	24	144	33
12	137	58	132	202	e84	282	114	86	139	23	444	32
13	100	54	115	208	105	296	108	72	192	22	615	53
14	85	50	164	204	185	238	96	131	174	21	652	53
15	89	47	254	165	e300	194	88	100	148	155	603	98
16	82	47	267	131	e305	164	109	74	129	164	543	78
17	71	46	268	118	e280	372	192	61	110	146	452	49
18	91	44	232	86	e260	428	264	86	97	101	362	39
19	79	43	181	72	e230	389	231	579	90	68	250	69
20	102	42	157	63	e200	308	184	691	79	61	166	95
21	164	44	190	57	e190	233	276	700	69	50	127	68
22	151	44	213	55	e220	190	562	609	99	64	102	45
23	160	44	218	55	e270	162	504	506	99	49	83	38
24	164	44	203	55	e340	143	433	519	72	37	74	37
25	134	48	153	54	304	129	337	492	56	33	67	37
26	113	72	125	60	315	124	237	426	49	128	58	55
27	97	271	112	57	292	115	188	321	51	460	54	75
28	83	318	97	54	286	309	162	213	48	424	122	66
29	73	265	86	57	300	325	142	158	51	329	74	49
30	67	180	79	58	---	240	125	127	46	232	54	43
31	60	77	77	77	---	183	---	109	---	196	48	---
TOTAL	3206	2754	4988	3270	5084	6470	5736	6967	2855	3135	6589	1799
MEAN	103	91.8	161	105	175	209	191	225	95.2	101	213	60.0
MAX	164	318	271	208	340	428	562	700	192	460	652	190
MIN	60	42	77	54	49	94	88	61	46	21	48	32
CFSM	1.03	.92	1.61	1.05	1.75	2.09	1.91	2.25	.95	1.01	2.13	.60
IN.	1.19	1.02	1.86	1.22	1.89	2.41	2.13	2.59	1.06	1.17	2.45	.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2000, BY WATER YEAR (WY)

MEAN	93.8	156	202	228	238	339	263	176	114	84.2	94.4	96.6
MAX	576	590	655	735	493	719	711	637	533	539	664	713
(WY)	1904	1973	1984	1979	1908	1994	1983	1989	1972	1975	1942	1971
MIN	8.05	13.7	27.5	21.5	63.2	94.5	54.3	7.52	13.6	7.74	7.35	4.70
(WY)	1965	1950	1999	1981	1980	1911	1985	1903	1965	1966	1957	1906

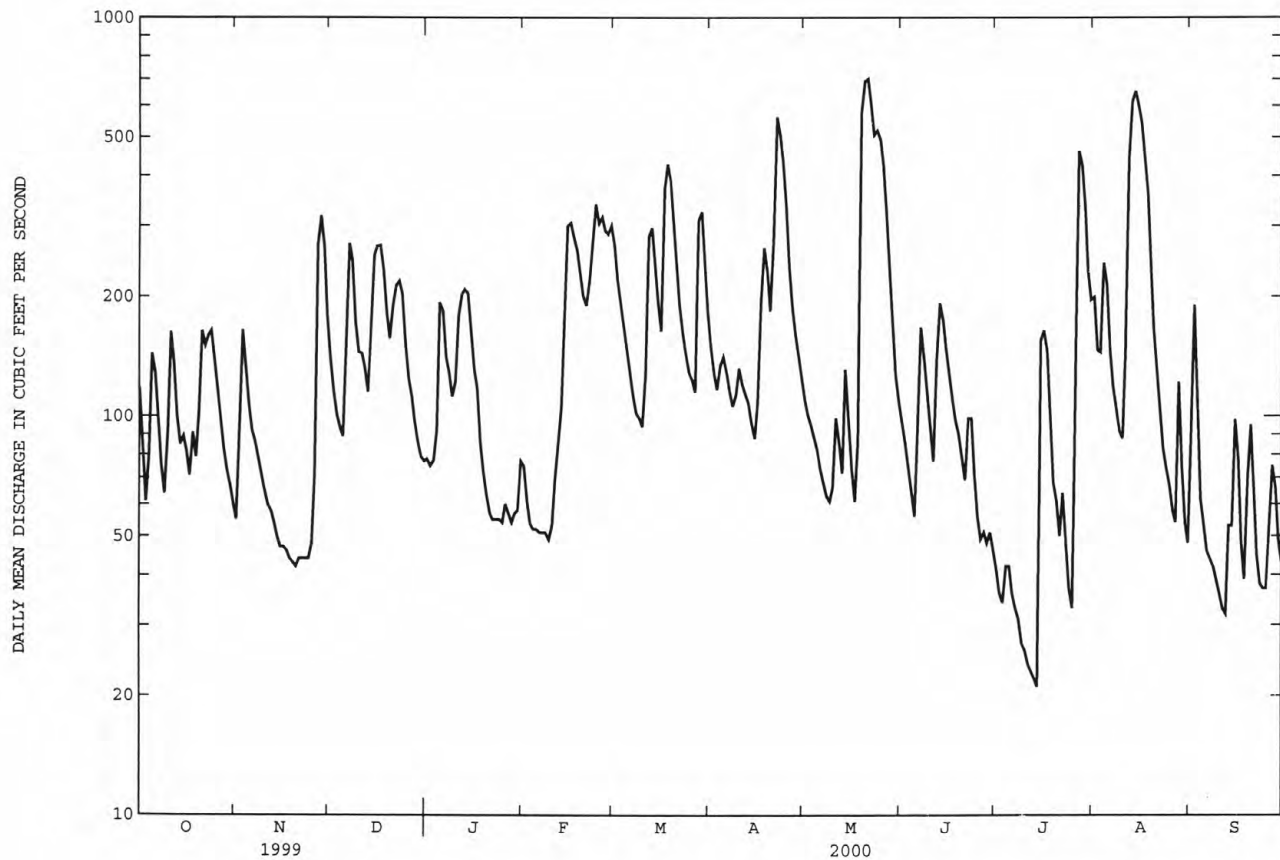
PASSAIC RIVER BASIN

47

01379500 PASSAIC RIVER NEAR CHATHAM, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1903 - 2000	
ANNUAL TOTAL	59604		52853		172	
ANNUAL MEAN	163		144		305	
HIGHEST ANNUAL MEAN					67.7	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	2100	Sep 18	700	May 21	2990	Jan 9 1905
LOWEST DAILY MEAN	11	Jul 27	21	Jul 14	2.0	May 15 1903
ANNUAL SEVEN-DAY MINIMUM	12	Jul 27	25	Jul 8	2.0	May 15 1903
INSTANTANEOUS PEAK FLOW			811	Apr 22	3380	Aug 2 1973
INSTANTANEOUS PEAK STAGE			5.38	Apr 22	9.36a	Aug 2 1973
INSTANTANEOUS LOW FLOW			25	Jul 9	11	Jul 28 1999
ANNUAL RUNOFF (CFSM)	1.63		1.44		1.72	
ANNUAL RUNOFF (INCHES)	22.17		19.66		23.43	
10 PERCENT EXCEEDS	316		297		457	
50 PERCENT EXCEEDS	97		102		84	
90 PERCENT EXCEEDS	17		46		17	

a From floodmark
e Estimated



PASSAIC RIVER BASIN

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ

LOCATION.--Lat 40°57'34", long 74°32'24", Morris County, Hydrologic Unit 02030103, on left bank at Picatinny Arsenal, 500 ft upstream from Picatinny Lake, and 0.55 mi downstream from Burnt Meadow Brook.

DRAINAGE AREA.--7.65 mi².

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 712.54 ft above sea level (U.S. Army, Picatinny Arsenal, bench mark).

REMARKS.--Records fair except for discharges below 1.0 cfs which are poor. Discharges given herein includes flow through sluice gates when open. Some regulation by Lake Denmark and Green Pond. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug 12	1830	*178	*2.95	Aug 14	1730	106	2.61

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	6.0	15	12	7.2	32	18	21	16	6.5	25	7.9
2	9.5	7.7	13	12	7.0	30	15	22	12	6.1	25	7.6
3	7.2	12	12	12	7.0	26	13	17	10	5.9	25	7.3
4	8.0	11	11	12	6.9	23	16	12	8.1	6.0	25	7.1
5	9.9	10	11	15	6.5	21	15	9.0	7.1	5.7	25	6.6
6	8.1	9.9	12	14	6.1	18	14	8.0	11	5.4	24	6.0
7	8.6	9.7	11	13	6.5	16	13	7.1	19	5.2	23	5.7
8	7.7	10	10	12	6.5	15	12	6.6	17	4.9	19	5.3
9	6.6	10	9.5	11	6.6	15	13	6.0	16	4.7	19	5.1
10	7.4	8.8	9.2	15	6.4	15	13	6.1	15	4.6	17	4.9
11	7.7	8.7	8.5	18	6.9	17	13	5.7	14	4.4	24	4.6
12	6.8	7.5	8.2	18	7.1	25	12	5.6	20	4.3	68	4.4
13	6.2	7.0	7.9	18	6.9	24	11	6.3	19	4.2	91	5.7
14	5.8	6.7	11	16	16	22	11	13	18	4.3	83	5.0
15	5.4	6.3	13	15	18	20	10	12	17	7.0	77	5.7
16	5.1	6.0	13	14	18	19	11	12	16	8.4	65	5.0
17	5.0	21	13	12	18	30	12	11	14	7.4	54	4.6
18	5.6	37	13	10	19	28	15	10	13	6.9	46	4.4
19	4.9	28	12	9.4	20	27	14	15	13	6.7	39	4.7
20	6.4	22	13	9.1	19	25	13	18	11	6.3	34	4.7
21	6.5	18	16	8.4	18	23	18	20	9.9	6.0	29	4.4
22	6.2	15	15	8.4	17	21	24	20	14	5.7	25	4.1
23	7.3	13	15	8.2	16	19	27	21	12	5.4	23	4.0
24	8.9	11	14	7.5	17	18	26	26	10	7.3	21	4.0
25	8.1	10	12	6.9	19	16	24	25	9.0	8.6	17	4.0
26	6.8	11	11	7.3	21	16	22	22	8.5	7.6	14	4.0
27	6.0	19	13	7.3	23	23	19	19	8.5	17	12	3.9
28	5.6	18	15	7.3	32	34	17	18	8.4	15	11	3.8
29	5.3	18	15	7.2	33	29	16	19	7.7	12	10	3.7
30	7.1	17	14	7.0	---	26	14	20	7.3	20	9.4	3.6
31	8.0	---	13	7.2	---	21	---	18	---	25	8.6	---
TOTAL	218.7	395.3	379.3	350.2	411.6	694	471	451.4	381.5	244.5	988.0	151.8
MEAN	7.05	13.2	12.2	11.3	14.2	22.4	15.7	14.6	12.7	7.89	31.9	5.06
MAX	11	37	16	18	33	34	27	26	20	25	91	7.9
MIN	4.9	6.0	7.9	6.9	6.1	15	10	5.6	7.1	4.2	8.6	3.6
CFSM	.92	1.72	1.60	1.48	1.86	2.93	2.05	1.90	1.66	1.03	4.17	.66
IN.	1.06	1.92	1.84	1.70	2.00	3.37	2.29	2.20	1.86	1.19	4.80	.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2000, BY WATER YEAR (WY)

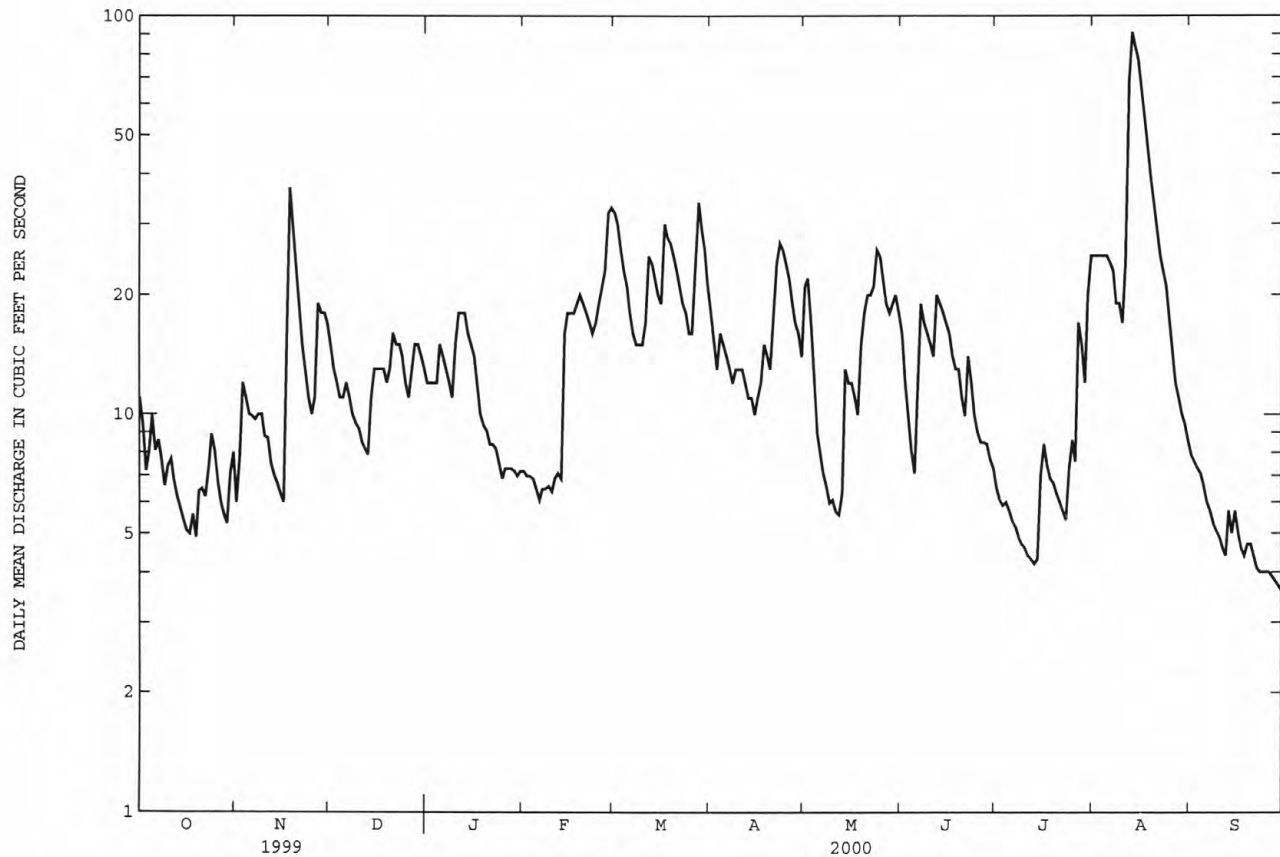
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	7.15	10.8	17.1	15.9	16.5	23.7	25.0	17.8	10.7	7.42	6.99	5.82
MAX	26.1	22.4	49.5	45.5	32.0	49.5	64.1	50.6	29.1	32.6	31.9	24.7
(WY)	1990	1996	1997	1996	1996	1983	1983	1989	1998	1984	2000	1987
MIN	.68	.53	.55	5.85	5.92	10.5	3.84	4.49	2.55	1.71	1.49	1.36
(WY)	1998	1999	1999	1992	1992	1985	1985	1999	1999	1999	1999	1998

PASSAIC RIVER BASIN

49

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1983 - 2000
ANNUAL TOTAL	3933.00	5137.3	
ANNUAL MEAN	10.8	14.0	13.7
HIGHEST ANNUAL MEAN			21.4 1984
LOWEST ANNUAL MEAN			6.63 1985
HIGHEST DAILY MEAN	77 Mar 22	91 Aug 13	248 Apr 5 1984
LOWEST DAILY MEAN	.30 Jan 2	3.6 Sep 30	.22 Nov 23 1998
ANNUAL SEVEN-DAY MINIMUM	1.2 Aug 7	3.9 Sep 24	.25 Nov 19 1998
INSTANTANEOUS PEAK FLOW		178 Aug 12	333 Apr 5 1984
INSTANTANEOUS PEAK STAGE		2.95 Aug 12	3.51 Apr 5 1984
INSTANTANEOUS LOW FLOW		2.6 Jul 14	.19 Nov 23 1998
ANNUAL RUNOFF (CFSM)	1.41	1.83	1.79
ANNUAL RUNOFF (INCHES)	19.13	24.98	24.38
10 PERCENT EXCEEDS	27	24	30
50 PERCENT EXCEEDS	7.1	12	8.7
90 PERCENT EXCEEDS	1.5	5.5	2.5



PASSAIC RIVER BASIN

01379780 GREEN POND BROOK BELOW PICATINNY LAKE, AT PICATINNY ARSENAL, NJ

LOCATION.--Lat 40°56'56", long 74°33'29", Morris County, Hydrologic Unit 02030103, on left bank 100 ft upstream from bridge on Whitmore Avenue at Picatinny Arsenal, and 200 ft downstream from dam on Picatinny Lake.

DRAINAGE AREA.--9.16 mi².

PERIOD OF RECORD.--October 1984 to current year.

REVISED RECORDS.--WDR NJ-90-1: 1987 (M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 694.91 ft above sea level (U.S. Army, Picatinny Arsenal, benchmark).

REMARKS.--Records fair, except for estimated daily discharges which are poor. Occasional regulation at Picatinny Lake. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 5, 1984 reached an elevation of 699.0 ft above sea level, 200 ft upstream from bridge on Whitmore Avenue.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 26	1515	149	3.34	Aug 14	2015	133	3.27
Aug 12	2145	*290	*3.83				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	4.9	12	12	8.8	41	21	19	17	5.8	26	5.8
2	10	6.5	13	12	e8.5	37	18	25	13	5.0	26	5.6
3	7.0	11	12	12	e8.4	32	16	21	10	4.5	25	5.4
4	4.9	9.8	12	13	e8.2	27	21	14	7.6	4.9	26	5.3
5	5.0	9.3	11	17	e7.4	24	18	11	6.6	4.4	23	4.2
6	6.0	8.9	12	14	e7.2	20	16	8.9	11	3.8	23	3.4
7	6.5	8.3	12	13	e7.0	17	15	7.7	24	3.5	23	3.2
8	6.7	7.9	9.7	12	e6.2	16	14	7.0	18	3.1	19	3.2
9	6.5	8.3	8.6	11	5.9	15	17	6.0	17	2.9	16	3.3
10	7.2	8.2	9.0	16	5.9	16	15	6.0	15	3.1	15	3.2
11	7.8	7.5	8.5	23	5.8	20	15	5.8	14	2.9	25	3.0
12	6.8	6.3	8.1	21	5.9	34	14	5.3	28	2.7	112	2.7
13	6.0	6.3	8.0	21	5.9	30	13	6.4	23	2.4	135	5.5
14	5.3	6.2	12	17	11	27	11	13	20	2.3	115	4.1
15	4.6	5.9	14	15	14	25	11	12	19	7.1	113	5.1
16	4.4	5.5	14	14	14	23	13	11	17	8.6	85	3.9
17	4.5	6.0	13	12	15	41	14	10	15	6.7	70	3.1
18	5.1	14	13	11	16	36	17	10	14	5.4	58	2.8
19	4.2	24	12	e10	17	33	15	17	13	4.8	48	3.5
20	19	24	13	e10	17	30	14	21	11	4.7	38	4.1
21	16	19	18	e9.0	16	28	23	22	9.7	4.1	31	3.3
22	7.6	14	17	e8.0	16	24	32	23	16	3.8	26	2.7
23	4.3	12	16	e8.0	16	22	33	24	13	3.5	22	2.5
24	4.2	10	15	e8.0	18	19	34	33	10	3.7	21	2.8
25	4.4	9.4	13	e9.0	22	18	31	30	8.3	5.3	16	2.7
26	4.5	54	12	e10	25	17	27	27	7.7	7.0	13	2.9
27	4.5	56	12	e8.0	28	21	23	22	7.8	23	10	2.3
28	4.2	38	15	e8.0	41	43	20	20	7.8	16	9.0	2.4
29	4.1	12	15	e8.0	43	38	19	19	7.0	12	8.3	2.2
30	4.1	4.0	13	e9.0	---	33	16	19	6.8	20	8.0	2.0
31	4.6	---	12	e10	---	26	---	19	---	25	6.8	---
TOTAL	204.0	417.2	384.9	381.0	420.1	833	566	495.1	407.3	212.0	1192.1	106.2
MEAN	6.58	13.9	12.4	12.3	14.5	26.9	18.9	16.0	13.6	6.84	38.5	3.54
MAX	19	56	18	23	43	43	34	33	28	25	135	5.8
MIN	4.1	4.0	8.0	8.0	5.8	15	11	5.3	6.6	2.3	6.8	2.0
CFSM	.72	1.52	1.36	1.34	1.58	2.93	2.06	1.74	1.48	.75	4.20	.39
IN.	.83	1.69	1.56	1.55	1.71	3.38	2.30	2.01	1.65	.86	4.84	.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2000, BY WATER YEAR (WY)

	1985	1985	1985	1985	1985	1985	1985	1985	1985	1985	1985	1985
MEAN	8.15	13.4	20.0	18.7	17.9	25.0	24.5	20.1	11.4	6.24	8.05	7.14
MAX	33.3	29.5	60.7	51.2	31.8	39.8	51.1	66.7	32.4	18.4	38.5	36.7
(WY)	1990	1996	1997	1996	1998	1999	1993	1989	1998	1990	2000	1987
MIN	.71	.28	1.04	6.98	7.08	10.6	2.48	4.77	2.23	1.48	.45	1.73
(WY)	1985	1985	1999	1985	1992	1985	1985	1999	1987	1993	1999	1998

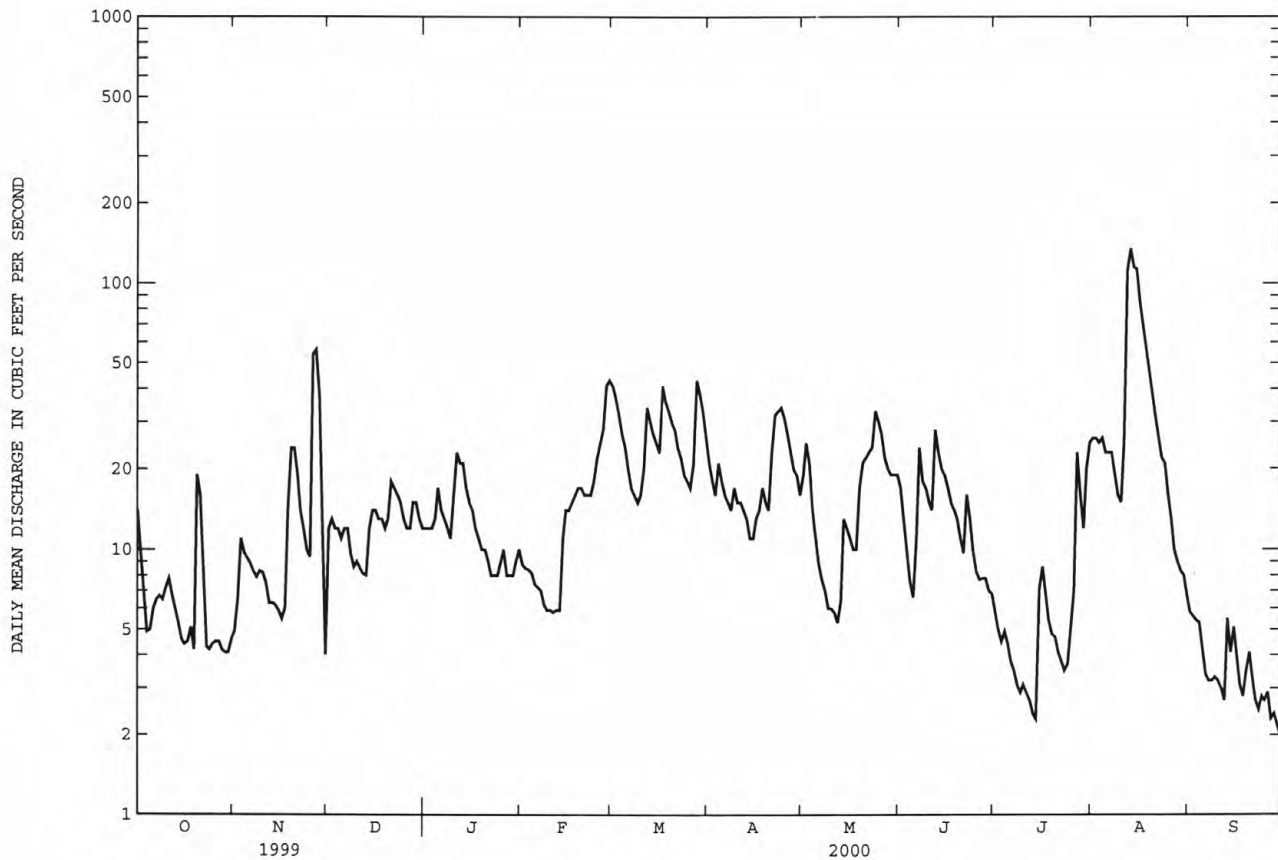
PASSAIC RIVER BASIN

51

01379780 GREEN POND BROOK BELOW PICATINNY LAKE, AT PICATINNY ARSENAL, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1985 - 2000
ANNUAL TOTAL	4569.01	5618.9	15.0
ANNUAL MEAN	12.5	15.4	22.1
HIGHEST ANNUAL MEAN			6.35
LOWEST ANNUAL MEAN			1990
HIGHEST DAILY MEAN	97 Mar 23	135 Aug 13	206 May 17 1990
LOWEST DAILY MEAN	.30 Aug 21	2.0 Sep 30	.20 Nov 20 1984
ANNUAL SEVEN-DAY MINIMUM	.35 Aug 18	2.5 Sep 24	.20 Nov 17 1984
INSTANTANEOUS PEAK FLOW		290 Aug 12	290 Aug 12 2000
INSTANTANEOUS PEAK STAGE		3.83 Aug 12	3.83 Aug 12 2000
INSTANTANEOUS LOW FLOW		1.1 Nov 29	.30 Aug 20 1999
ANNUAL RUNOFF (CFSM)	1.37	1.68	1.64
ANNUAL RUNOFF (INCHES)	18.56	22.82	22.30
10 PERCENT EXCEEDS	35	27	33
50 PERCENT EXCEEDS	6.5	12	9.3
90 PERCENT EXCEEDS	.56	4.1	1.5

e Estimate



PASSAIC RIVER BASIN

01379790 GREEN POND BROOK AT WHARTON, NJ

LOCATION.--Lat 40°55'04", long 74°35'02", Morris County, Hydrologic Unit 02030103, on left bank 600 ft upstream from bridge on northbound lane of State Route 15, 0.2 mi northwest of Wharton, and 1.7 mi upstream from mouth.

DRAINAGE AREA.--12.6 mi².

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 680.26 ft above sea level (U.S. Army, Picatinny Arsenal, bench mark).

REMARKS.--Records good except for estimated daily discharges which were poor. Some regulation from Lake Picatinny, Picatinny Arsenal sewage treatment plant, and flood gates located about 800 ft upstream from gage. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 130 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug 13	0245	*446	*4.56	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	10	16	17	e13	54	31	26	23	9.0	30	11
2	18	15	18	16	e12	50	28	33	19	7.4	31	11
3	15	26	17	17	11	45	25	30	16	6.3	29	10
4	13	18	17	19	11	40	38	23	13	6.8	31	9.9
5	16	16	16	30	11	37	31	19	11	6.0	26	8.9
6	13	15	19	22	10	32	27	16	21	4.9	25	6.5
7	12	14	19	19	10	28	25	14	44	4.1	26	6.2
8	11	13	16	17	10	26	24	13	28	3.5	22	6.1
9	11	14	15	16	9.8	24	29	11	23	3.2	18	5.9
10	12	13	14	27	9.8	28	28	10	20	3.3	17	5.9
11	14	12	14	40	10	33	27	12	23	3.1	23	5.7
12	13	10	12	31	11	63	26	10	62	2.6	215	5.3
13	15	10	15	30	10	47	23	12	43	2.5	372	13
14	9.9	10	21	26	42	42	21	24	33	2.3	180	8.4
15	8.7	9.8	27	22	46	38	21	18	29	11	165	12
16	8.4	9.8	23	21	38	36	25	17	26	13	111	8.0
17	8.2	9.4	21	19	35	69	26	16	23	8.8	83	6.2
18	15	19	20	16	35	54	33	17	21	6.6	69	5.3
19	9.3	26	18	15	37	48	28	32	20	5.8	59	6.7
20	21	29	20	15	34	45	25	37	17	5.6	49	9.6
21	29	26	32	14	30	42	38	34	15	4.6	43	6.9
22	17	20	26	12	29	39	53	30	30	3.9	36	5.2
23	14	17	24	11	29	35	46	34	20	3.4	34	4.6
24	10	15	21	11	33	32	45	51	16	3.3	33	5.7
25	9.9	15	19	13	42	30	42	42	13	4.8	27	5.3
26	9.8	36	17	16	45	29	38	35	12	8.3	21	5.2
27	9.8	81	16	14	46	30	34	32	13	40	18	4.5
28	9.5	52	19	12	63	56	31	28	13	24	16	4.3
29	10	28	20	11	57	49	29	26	11	16	15	3.9
30	8.9	8.7	19	e14	---	42	26	25	11	29	14	3.7
31	9.1	---	17	14	---	36	---	25	---	30	13	---
TOTAL	404.5	597.7	588	577	779.6	1259	923	754	669	283.1	1851	210.9
MEAN	13.0	19.9	19.0	18.6	26.9	40.6	30.8	24.3	22.3	9.13	59.7	7.03
MAX	29	81	32	40	63	69	53	51	62	40	372	13
MIN	8.2	8.7	12	11	9.8	24	21	10	11	2.3	13	3.7
CFSM	1.04	1.58	1.51	1.48	2.13	3.22	2.44	1.93	1.77	.72	4.74	.56
IN.	1.19	1.76	1.74	1.70	2.30	3.72	2.73	2.23	1.98	.84	5.46	.62

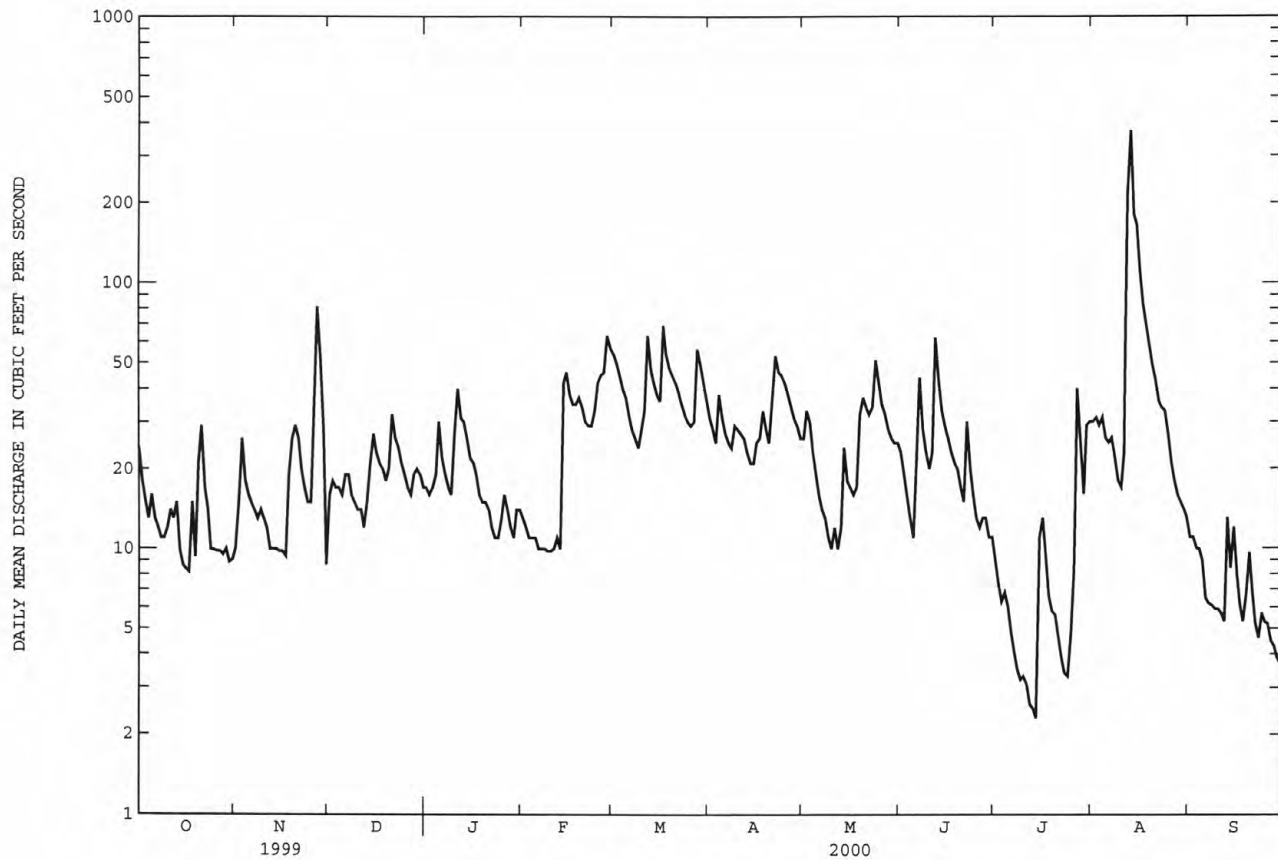
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2000, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	12.9	20.3	30.6	28.5	29.5	42.2	45.4	31.8	19.2	13.4	12.4	11.6						
MAX	46.7	46.3	79.4	80.2	49.7	89.2	112	87.0	40.9	61.4	59.7	54.0						
(WY)	1990	1996	1997	1996	1996	1983	1983	1989	1998	1984	2000	1987						
MIN	2.18	2.33	2.29	11.3	13.2	17.8	8.96	9.44	4.90	2.97	2.01	2.70						
(WY)	1999	1999	1999	1985	1992	1985	1985	1999	1999	1999	1999	1998						

01379790 GREEN POND BROOK AT WHARTON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1983 - 2000
ANNUAL TOTAL	6907.09	8896.8	
ANNUAL MEAN	18.9	24.3	24.8
HIGHEST ANNUAL MEAN			40.6
LOWEST ANNUAL MEAN			12.5
HIGHEST DAILY MEAN	178 Sep 17	372 Aug 13	512 Apr 6 1984
LOWEST DAILY MEAN	.54 Sep 5	2.3 Jul 14	.54 Sep 5 1999
ANNUAL SEVEN-DAY MINIMUM	.70 Aug 30	2.9 Jul 8	.70 Aug 30 1999
INSTANTANEOUS PEAK FLOW		446 Aug 13	572 Apr 5 1984
INSTANTANEOUS PEAK STAGE		4.56 Aug 13	5.11 Apr 5 1984
INSTANTANEOUS LOW FLOW		2.3 Jul 12	.53 Aug 19 1999
ANNUAL RUNOFF (CFSM)	1.50	1.93	1.97
ANNUAL RUNOFF (INCHES)	20.39	26.27	26.74
10 PERCENT EXCEEDS	45	42	52
50 PERCENT EXCEEDS	13	18	16
90 PERCENT EXCEEDS	2.1	6.6	4.3

e Estimated.



PASSAIC RIVER BASIN

01380500 ROCKAWAY RIVER ABOVE RESERVOIR, AT BOONTON, NJ

LOCATION.--Lat 40°54'10", long 74°24'36", Morris County, Hydrologic Unit 02030103, on right bank, under New Jersey Transit railroad bridge, just downstream from bridge on Morris Avenue in Boonton, 1.8 mi upstream from dam at Boonton Reservoir.

DRAINAGE AREA.--116 mi².

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for October 1937, published in WSP 1302.

REVISED RECORDS.--WRD-NJ 1974: 1938(M). WDR NJ-78-1: 1949(M), 1952(M), 1968(M), 1971(M), 1973(P), 1974(M), 1977(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 364.47 ft above sea level (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good except for estimated discharges, which are poor. Flow regulated by Splitrock Reservoir on Beaver Brook, 14.5 mi upstream from station (see Passaic River basin, reservoirs in). Town of Boonton diverts water for municipal supply from Taylortown Reservoir on Stony Brook, capacity, 75,000,000 gal and by pumping from wells in vicinity of Boonton. For diversion from Taylortown Reservoir, see Passaic River Basin diversions. Rockaway Valley trunk sewer bypasses the station (see station 01381000). Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun 12	1100	980	3.59	Aug 13	2400	*2,750	*5.02

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	84	160	137	e129	470	260	214	144	114	284	101
2	151	116	147	134	e94	418	244	199	138	101	267	102
3	119	337	138	135	e84	365	231	187	143	89	230	104
4	145	252	143	143	e87	328	392	178	119	86	279	108
5	254	203	147	260	e91	298	365	162	108	85	234	88
6	192	166	160	209	e92	273	288	153	190	74	185	78
7	146	149	177	174	e93	248	244	145	527	66	167	88
8	127	135	156	153	e92	231	220	139	381	67	144	74
9	109	119	139	144	e96	226	261	137	268	58	128	74
10	141	102	136	232	e98	241	276	131	204	55	117	70
11	171	77	144	462	e114	284	252	157	173	53	117	67
12	136	78	130	299	e169	617	264	134	733	50	368	72
13	118	77	123	241	e165	507	222	145	594	47	2310	125
14	111	79	177	175	e343	375	199	233	385	43	2200	102
15	91	88	297	163	e452	320	187	212	303	290	1580	153
16	93	95	258	181	e340	292	216	195	261	434	943	127
17	89	99	214	177	329	604	236	164	220	334	596	101
18	135	95	182	e180	286	574	319	155	206	196	428	90
19	120	100	163	e133	279	439	293	393	204	136	337	99
20	163	116	170	e97	248	372	252	413	178	116	279	146
21	202	123	307	e93	228	336	309	362	163	94	232	105
22	162	117	262	e94	218	317	659	298	301	77	196	99
23	196	107	223	e97	232	294	564	298	241	66	173	91
24	177	104	195	e104	274	275	456	464	178	57	180	92
25	150	119	164	e118	362	257	386	415	145	60	166	81
26	133	178	158	e152	424	261	336	314	125	90	146	78
27	122	496	153	e155	417	240	321	253	141	563	140	83
28	114	390	147	e143	522	476	325	219	166	449	135	62
29	106	263	145	e140	527	449	268	190	131	272	137	64
30	92	184	144	e135	---	339	240	172	143	255	117	71
31	87	---	141	e152	---	291	---	155	---	326	107	---
TOTAL	4377	4648	5400	5212	6885	11017	9085	6986	7213	4803	12922	2795
MEAN	141	155	174	168	237	355	303	225	240	155	417	93.2
MAX	254	496	307	462	527	617	659	464	733	563	2310	153
MIN	87	77	123	93	84	226	187	131	108	43	107	62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2000, BY WATER YEAR (WY)

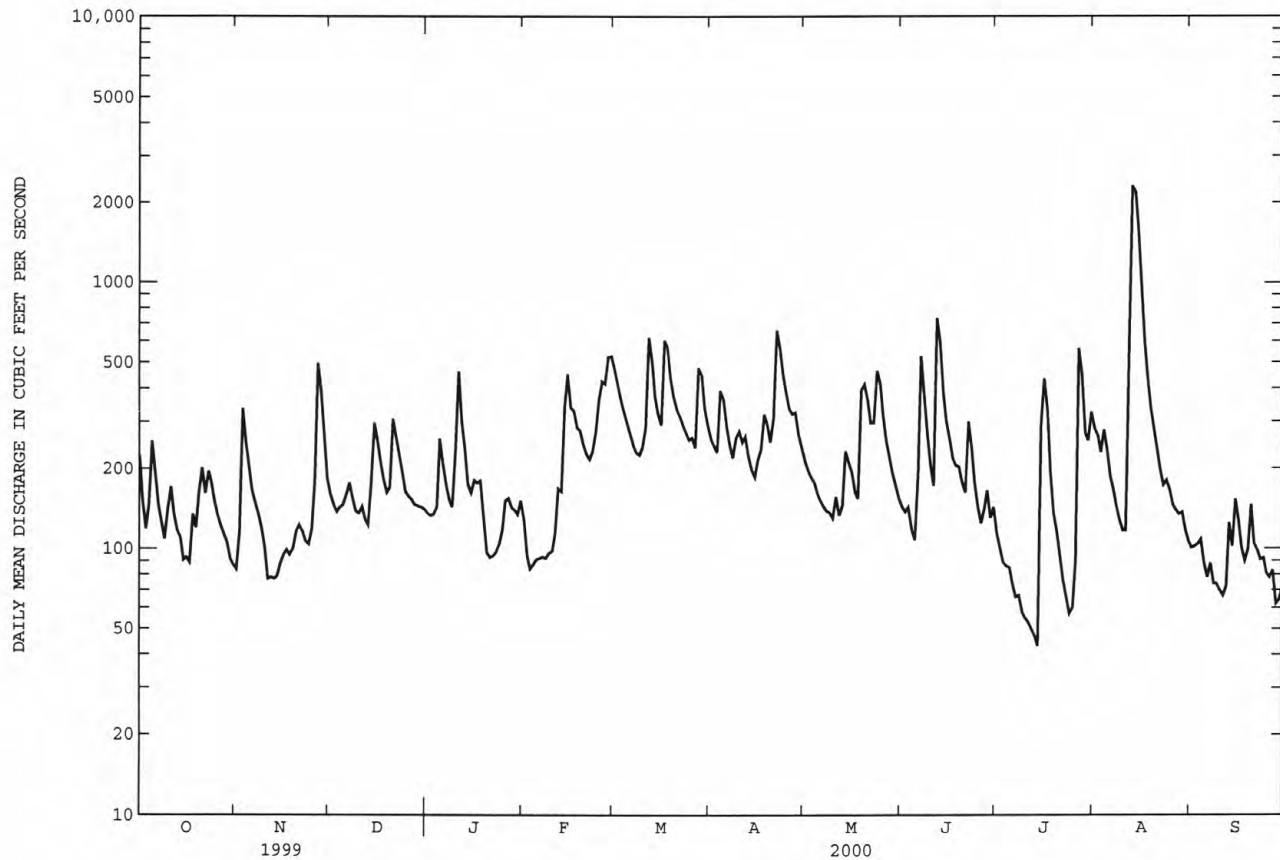
	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
MEAN	126	220	273	266	277	393	391	278	182	127	119	121
MAX	523	694	718	855	590	798	979	836	847	553	447	484
(WY)	1956	1973	1997	1979	1973	1977	1983	1989	1972	1975	1955	1971
MIN	23.7	47.8	49.5	74.8	107	152	87.0	90.5	35.3	18.1	16.6	16.8
(WY)	1965	1999	1999	1981	1940	1985	1985	1965	1965	1966	1957	1964

01380500 ROCKAWAY RIVER ABOVE RESERVOIR, AT BOONTON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1938 - 2000	
ANNUAL TOTAL	67793.2		81343		231	
ANNUAL MEAN	186		222		396	
HIGHEST ANNUAL MEAN					88.3	
LOWEST ANNUAL MEAN					1952	
HIGHEST DAILY MEAN	3190	Sep 17	2310	Aug 13	4220	Jan 25 1979
LOWEST DAILY MEAN	5.7	Aug 10	43	Jul 14	5.7	Aug 10 1999
ANNUAL SEVEN-DAY MINIMUM	6.1	Aug 7	53	Jul 8	6.1	Aug 7 1999
INSTANTANEOUS PEAK FLOW			2750	Aug 13	5590	Apr 5 1984
INSTANTANEOUS PEAK STAGE			5.02	Aug 13	7.23	Apr 5 1984
INSTANTANEOUS LOW FLOW			2.6a	Jan 15	2.6a	Jan 15 2000
10 PERCENT EXCEEDS	380		391		496	
50 PERCENT EXCEEDS	141		166		155	
90 PERCENT EXCEEDS	16		88		43	

a Result of a ice jam 0.2 mile upstream of gage.

e Estimated



PASSAIC RIVER BASIN

01381000 ROCKAWAY RIVER BELOW RESERVOIR, AT BOONTON, NJ

LOCATION.--Lat 40°53'49", long 74°23'42", Morris County, Hydrologic Unit 02030103, on right bank 2,000 ft downstream from Boonton Reservoir Dam at Boonton, and 0.4 mi upstream at bridge on Greenback Road.

DRAINAGE AREA.--119 mi².

PERIOD OF RECORD.--March to December 1903; January, February 1904 (gage height only); January 1906 to September 1950 (monthly discharge only, published in WSP 1302) October 1950 to current year (figures of daily discharge for October 1950 to September 1954 published in Special Report 16 of New Jersey Department of Environmental Protection). Published as "near Boonton" 1903-4, and as "at Boonton" 1906-37.

REVISED RECORDS.--WSP 1902: 1951-54. WDR NJ-79-1: 1949(M), 1952(M), 1968(M), 1970-74(M), 1977(M).

GAGE.--Water-stage recorder. Concrete control since Nov. 5, 1936. Datum of gage is 195.68 ft above sea level (levels from New Jersey Geological Survey bench mark). Mar. 15, 1903 to Feb. 2, 1904, nonrecording gage at site 1.9 mi downstream at different datum. Jan. 1, 1906 to Mar. 3, 1918, nonrecording gage on Boonton Reservoir Dam 2,000 ft upstream at datum 305.25 ft sea level (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good. Records represent flow in river only. Sewage effluent enters river about 600 ft below station (records given herein). Flow regulated by Boonton Reservoir (see Passaic River basin, reservoirs in) 2,000 ft upstream from station, and by Splitrock Reservoir (see Passaic River basin, reservoirs in) 16.5 mi above station. Water diverted from Boonton Reservoir for municipal supply of Jersey City (see Passaic River basin, diversions). Several measurements of water temperature were made during the year. Satellite telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with and record of sewage effluent furnished by Jersey City, Bureau of Water.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	18	86	53	47	371	184	143	70	37	218	27
2	12	43	69	55	44	327	170	125	62	25	177	28
3	12	224	58	53	36	279	151	114	57	17	150	44
4	13	203	60	65	35	239	249	106	45	15	172	50
5	12	153	64	131	33	209	276	93	29	13	149	25
6	12	114	71	138	30	185	218	82	59	13	113	14
7	12	90	91	112	28	162	172	74	343	13	87	14
8	12	77	80	83	26	75	161	59	350	13	59	14
9	12	70	65	69	23	11	164	54	226	13	45	12
10	12	58	62	106	21	11	180	34	146	13	27	12
11	12	43	64	349	27	14	170	56	104	13	21	12
12	12	45	50	258	47	178	176	51	476	13	173	12
13	13	39	41	179	49	425	157	60	572	13	1720	12
14	13	34	72	126	190	309	136	113	340	13	2380	12
15	12	31	179	72	512	254	124	122	241	24	1720	14
16	12	33	193	94	368	219	139	108	187	40	1110	23
17	12	24	140	67	268	414	160	89	145	203	682	34
18	12	21	106	258	223	515	224	91	122	149	438	17
19	12	21	87	295	202	364	232	216	125	72	330	14
20	13	35	87	284	172	294	195	323	103	46	257	52
21	55	41	184	104	149	257	205	294	93	28	197	46
22	93	47	185	53	134	233	500	236	158	15	155	25
23	122	44	149	35	140	215	501	216	163	13	121	21
24	112	47	116	36	163	193	368	321	112	13	117	20
25	91	44	88	50	232	178	302	349	86	13	106	14
26	76	76	83	56	296	178	256	257	50	14	87	12
27	55	343	72	53	312	158	232	195	38	131	74	13
28	50	380	61	50	386	303	237	152	64	381	61	12
29	43	232	61	48	429	362	199	124	54	231	65	11
30	34	136	56	43	---	263	168	101	51	179	50	12
31	33	---	51	52	---	214	---	86	---	214	36	---
TOTAL	1008	2766	2831	3427	4622	7409	6606	4444	4671	1990	11097	628
MEAN	32.5	92.2	91.3	111	159	239	220	143	156	64.2	358	20.9
MAX	122	380	193	349	512	515	501	349	572	381	2380	52
MIN	12	18	41	35	21	11	124	34	29	13	21	11
(I)	14	13.5	14.1	14.2	15.2	16	15.8	15.1	15.7	14.1	15	14.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2000, BY WATER YEAR (WY)

	MEAN	49.1	101	172	167	178	284	300	193	101	51.8	47.5	43.9
MAX	408	483	802	692	499	739	978	978	873	671	445	358	346
(WY)	1956	1973	1997	1979	1973	1994	1983	1989	1972	1984	2000	1960	
MIN	.23	.43	.35	.39	1.49	13.9	11.4	18.6	.40	.25	.29	.28	
(WY)	1964	1966	1966	1966	1966	1981	1985	1955	1957	1966	1966	1957	

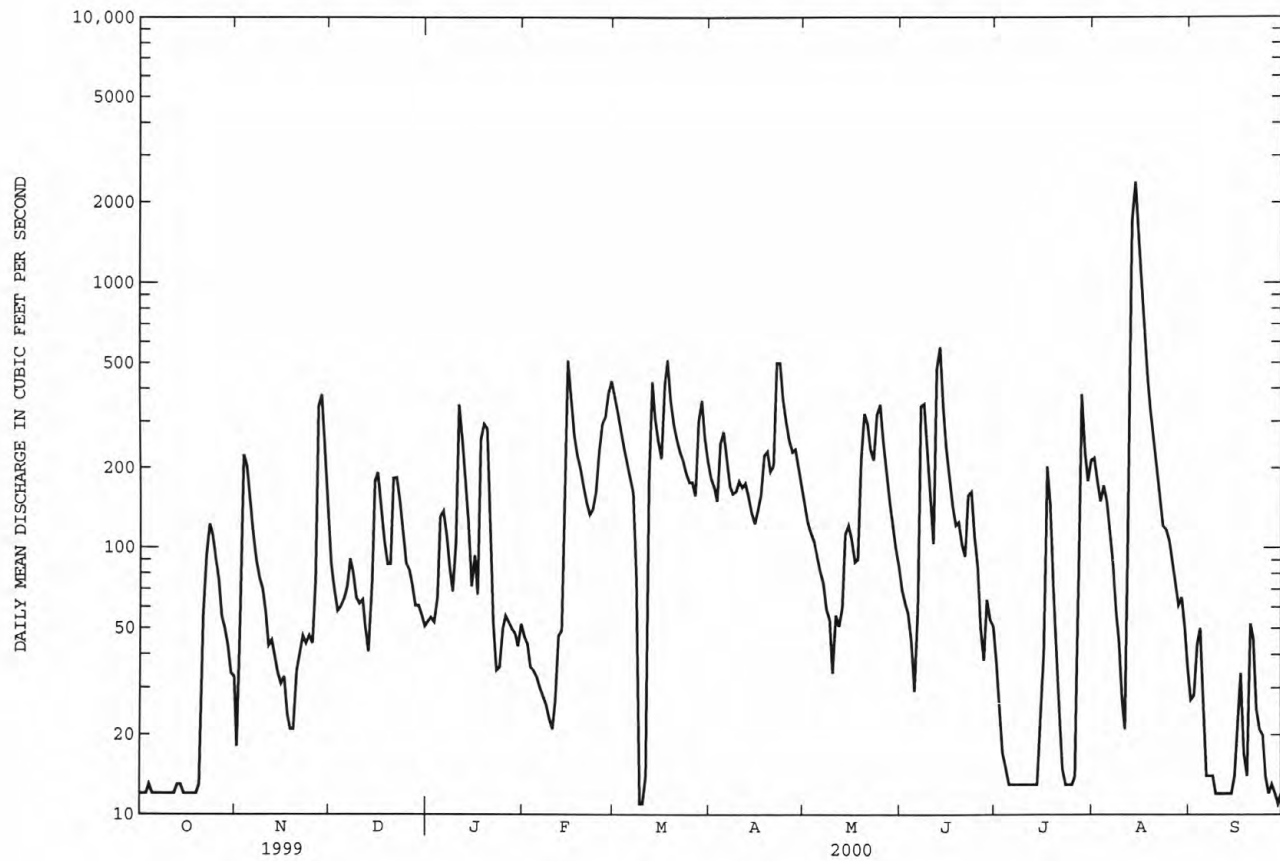
01381000 ROCKAWAY RIVER BELOW RESERVOIR, AT BOONTON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1950 - 2000	
ANNUAL TOTAL	31297.9		51499		140	
ANNUAL MEAN	85.7		141			
(I)	14.3		14.7			
HIGHEST ANNUAL MEAN					296	
LOWEST ANNUAL MEAN					7.19	
HIGHEST DAILY MEAN	1680		2380		3850	
LOWEST DAILY MEAN	9.1		11		.00	
ANNUAL SEVEN-DAY MINIMUM	9.7		12		.00	
INSTANTANEOUS PEAK FLOW			2610		7560ab	
INSTANTANEOUS PEAK STAGE			6.58		.00a	
INSTANTANEOUS LOW FLOW			11		3.2	
10 PERCENT EXCEEDS	196		302		368	
50 PERCENT EXCEEDS	21		84		40	
90 PERCENT EXCEEDS	10		13		1.0	

a Since 1903; see period of record section.

b Maximum daily

(I) Sewage effluent, in cubic feet per second, from plant at Rockaway Valley Regional Sewage Authority.



LOCATION.--Lat 40°48'44", long 74°30'44", Morris County, Hydrologic Unit 02030103, on left downstream side of bridge on Sussex Avenue, 1.9 mi northwest of Morristown, and 2.7 mi upstream from Lake Pocahontas Dam.

PERIOD OF RECORD.--Low-flow partial-record site 1964-72. August 1995 to current year.

REMARKS.--Records good except for estimated discharges which were fair. Water diverted at Clyde Potts Reservoir for municipal supply by the Southeast Morris County Municipal Utilities Authority. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 10	2345	153	5.02	Aug 4	0315	158	5.05
Feb 14	1730	*197	*5.27	Aug 13	0130	153	5.02
Jun 12	0700	174	5.15				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	12	16	15	e13	31	23	21	19	12	16	9.1
2	13	21	15	16	e12	30	22	23	19	12	14	9.5
3	12	45	15	17	e11	27	22	22	20	11	26	9.3
4	21	18	15	20	e11	25	56	20	17	12	89	8.9
5	21	15	15	38	e10	24	30	18	16	16	19	7.8
6	14	14	30	19	e11	23	25	18	36	11	14	7.7
7	12	13	23	18	e10	21	23	17	57	10	14	e7.7
8	12	13	17	16	e9.5	21	22	18	24	9.4	12	7.6
9	11	13	15	16	e9.8	21	32	18	19	9.2	14	7.4
10	28	13	17	51	e11	23	27	19	17	10	11	7.3
11	23	12	18	82	e15	37	26	27	20	8.8	22	7.1
12	15	12	15	28	e14	78	26	19	121	8.4	57	7.1
13	13	12	15	24	e13	37	22	22	72	8.1	86	10
14	20	12	33	e21	119	28	21	32	35	8.6	40	7.3
15	13	12	48	e19	90	26	21	19	32	52	59	21
16	12	11	25	e17	43	25	27	17	27	39	28	8.6
17	12	11	20	e16	35	89	28	15	23	46	18	7.6
18	21	11	18	e15	28	44	39	27	25	14	17	7.2
19	14	11	17	e15	27	33	27	102	23	12	16	15
20	29	12	24	e15	25	30	24	81	19	12	13	13
21	22	16	50	e13	24	29	48	62	18	10	12	8.1
22	16	12	23	e13	26	28	81	38	34	10	12	7.2
23	27	12	20	e12	31	27	37	38	19	8.9	11	7.3
24	17	13	18	e13	43	26	31	81	16	8.4	12	8.2
25	15	14	19	e13	50	25	28	42	15	8.3	11	7.3
26	14	28	16	e13	44	24	26	30	15	19	10	12
27	13	98	16	e16	39	23	25	26	27	97	9.6	9.6
28	13	32	16	e20	60	60	25	24	19	23	11	7.6
29	12	20	15	e29	37	32	24	22	15	15	10	7.0
30	12	18	15	e16	---	26	22	21	14	20	9.3	6.8
31	12	---	16	e13	---	24	---	20	---	15	9.1	---
TOTAL	504	556	635	649	871.3	997	890	959	833	556.1	702.0	267.3
MEAN	16.3	18.5	20.5	20.9	30.0	32.2	29.7	30.9	27.8	17.9	22.6	8.91
MAX	29	98	50	82	119	89	81	102	121	97	89	21
MIN	11	11	15	12	9.5	21	21	15	14	8.1	9.1	6.8
CFSM	1.16	1.32	1.46	1.50	2.15	2.30	2.12	2.21	1.98	1.28	1.62	.64
IN.	1.34	1.48	1.69	1.72	2.32	2.65	2.36	2.55	2.21	1.48	1.87	.71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)

MEAN	41.0	24.0	44.1	43.9	38.8	44.9	44.6	37.8	21.8	15.6	10.7	17.0
MAX	145	40.4	154	73.8	52.3	52.1	60.6	63.4	34.0	31.3	22.6	51.4
(WY)	1997	1996	1997	1996	1996	1999	1996	1998	1998	1996	2000	1999
MIN	7.39	7.03	6.03	20.9	22.2	32.2	27.2	17.8	7.17	3.76	5.25	4.87
(WY)	1999	1999	1999	2000	1999	2000	1999	1999	1999	1999	1999	1998

PASSAIC RIVER BASIN

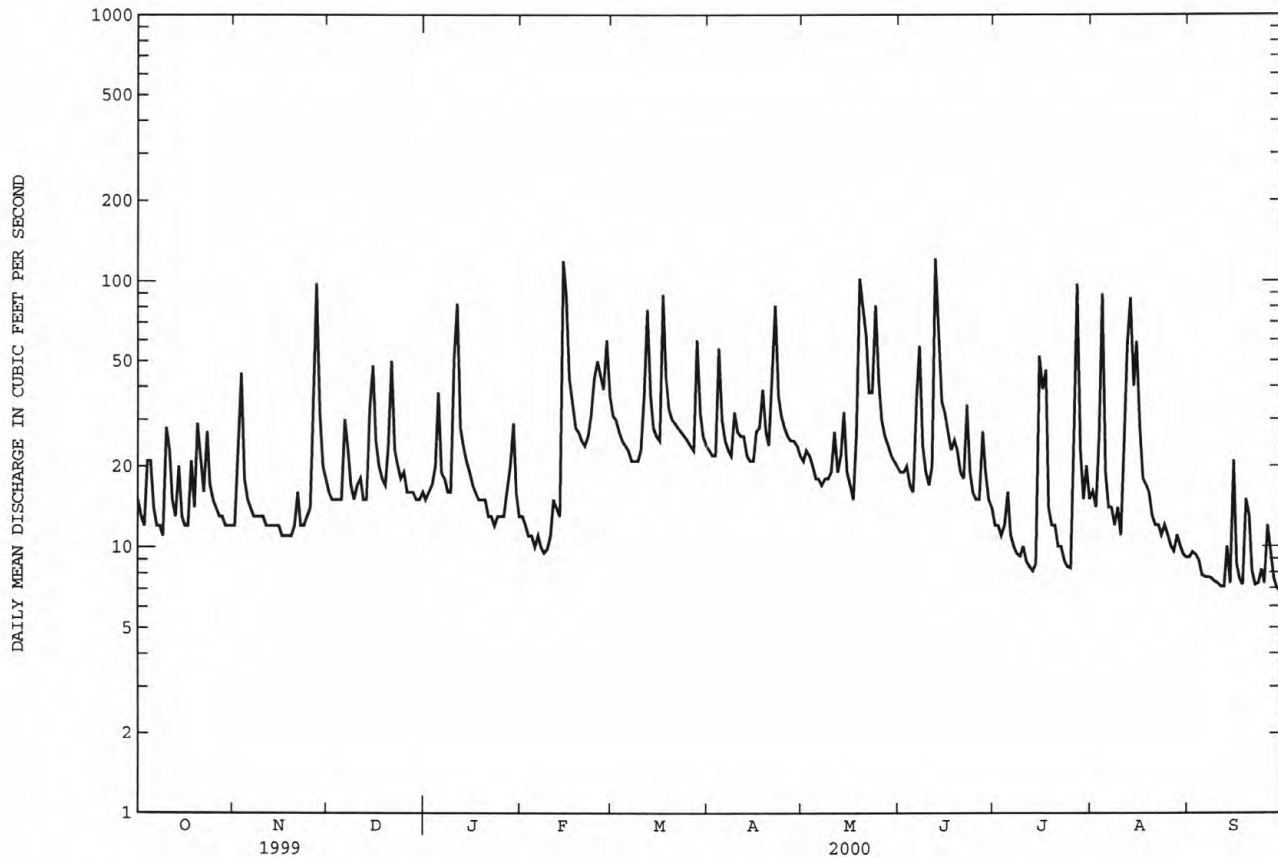
59

01381400 WHIPPANY RIVER NEAR MORRISTOWN, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1995 - 2000
ANNUAL TOTAL	8561.4	8419.7	
ANNUAL MEAN	23.5	23.0	32.2
HIGHEST ANNUAL MEAN			50.9
LOWEST ANNUAL MEAN			20.5
HIGHEST DAILY MEAN	728 Sep 16	121 Jun 12	2000 Oct 20 1996
LOWEST DAILY MEAN	1.9 Aug 3	6.8 Sep 30	1.9 Aug 3 1999
ANNUAL SEVEN-DAY MINIMUM	2.1 Aug 2	7.4 Sep 6	2.1 Aug 2 1999
INSTANTANEOUS PEAK FLOW		197 Feb 14	2950a Oct 20 1996
INSTANTANEOUS PEAK STAGE		5.27 Feb 14	9.31 Sep 16 1999
INSTANTANEOUS LOW FLOW		6.7 Sep 18	1.7 Aug 7 1999
ANNUAL RUNOFF (CFSM)	1.68	1.64	2.30
ANNUAL RUNOFF (INCHES)	22.75	22.37	31.24
10 PERCENT EXCEEDS	39	39	59
50 PERCENT EXCEEDS	14	18	18
90 PERCENT EXCEEDS	3.6	9.6	5.4

a From rating curve extended above 530 ft³/s

e Estimate



PASSAIC RIVER BASIN

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ

LOCATION.--Lat 40°48'26", long 74°27'22", Morris County, Hydrologic Unit 02030103, on left bank at Morristown sewage-disposal plant, 0.8 mi northeast of Morristown, and 9.0 mi upstream from mouth.

DRAINAGE AREA.--29.4 mi².

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. WRD-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 sea level (levels from New Jersey Geological Survey bench mark). Prior to July 16, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated discharges which are poor. Flow occasionally regulated by operation of gates in Pocahontas Dam, 2.5 mi above station. Diurnal fluctuations from unknown source at low flow. Several measurements of water temperature, other than those published, were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	26	29	28	28	60	45	45	36	28	39	26
2	27	62	27	28	26	56	43	47	39	27	35	25
3	25	99	27	30	24	52	44	47	38	26	65	60
4	55	42	28	43	25	49	114	44	33	26	177	59
5	58	33	27	74	25	48	66	40	32	33	41	25
6	33	30	58	39	24	46	50	40	75	26	32	23
7	26	28	46	33	25	43	46	39	127	24	31	22
8	25	27	32	31	24	43	44	39	48	23	27	21
9	24	27	28	30	23	42	63	37	37	23	33	22
10	65	27	30	112	26	43	55	43	33	26	26	21
11	60	26	33	170	35	85	50	51	52	23	54	21
12	33	25	28	59	e38	152	51	39	272	22	194	21
13	28	26	28	44	31	74	44	54	146	21	230	31
14	50	26	68	38	250	54	42	67	64	28	91	22
15	30	26	100	e40	183	54	42	38	56	138	123	59
16	26	25	51	e38	75	51	56	34	50	134	58	26
17	28	24	39	e36	65	186	59	33	43	103	41	21
18	47	23	34	e35	53	92	86	71	45	33	36	21
19	32	24	31	e34	e48	63	56	193	45	28	35	39
20	66	28	56	e35	e45	58	49	148	38	28	31	45
21	54	33	103	e32	46	55	125	108	38	25	29	24
22	38	27	47	e31	49	54	197	63	71	27	28	21
23	58	26	38	e30	57	52	81	62	40	22	28	20
24	39	30	35	26	72	50	66	156	33	22	29	22
25	32	31	31	29	88	49	59	75	31	22	27	21
26	30	65	30	30	80	46	55	51	36	51	25	32
27	28	214	30	35	71	44	53	45	51	291	24	29
28	27	70	29	44	111	138	52	42	46	63	34	22
29	26	38	29	63	73	68	50	40	33	35	30	20
30	26	33	28	33	---	52	47	38	30	53	25	20
31	26	---	29	30	---	47	---	37	---	39	24	---
TOTAL	1160	1221	1229	1360	1720	2006	1890	1866	1718	1470	1702	841
MEAN	37.4	40.7	39.6	43.9	59.3	64.7	63.0	60.2	57.3	47.4	54.9	28.0
MAX	66	214	103	170	250	186	197	193	272	291	230	60
MIN	24	23	27	26	23	42	42	33	30	21	24	20
CFSM	1.27	1.38	1.35	1.49	2.02	2.20	2.14	2.05	1.95	1.61	1.87	.95
IN.	1.47	1.54	1.56	1.72	2.18	2.54	2.39	2.36	2.17	1.86	2.15	1.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2000, BY WATER YEAR (WY)

	MEAN	32.9	45.6	54.5	59.5	64.7	87.3	87.5	67.0	47.3	38.6	35.4	34.9
MAX	133	132	185	211	147	215	231	237	214	186	158	123	
(WY)	1933	1933	1937	1979	1973	1936	1983	1989	1972	1975	1942	1971	
MIN	8.72	13.4	14.2	16.9	23.5	28.1	30.2	24.4	14.6	10.3	8.02	7.25	
(WY)	1931	1937	1940	1922	1940	1981	1985	1941	1965	1965	1932	1932	

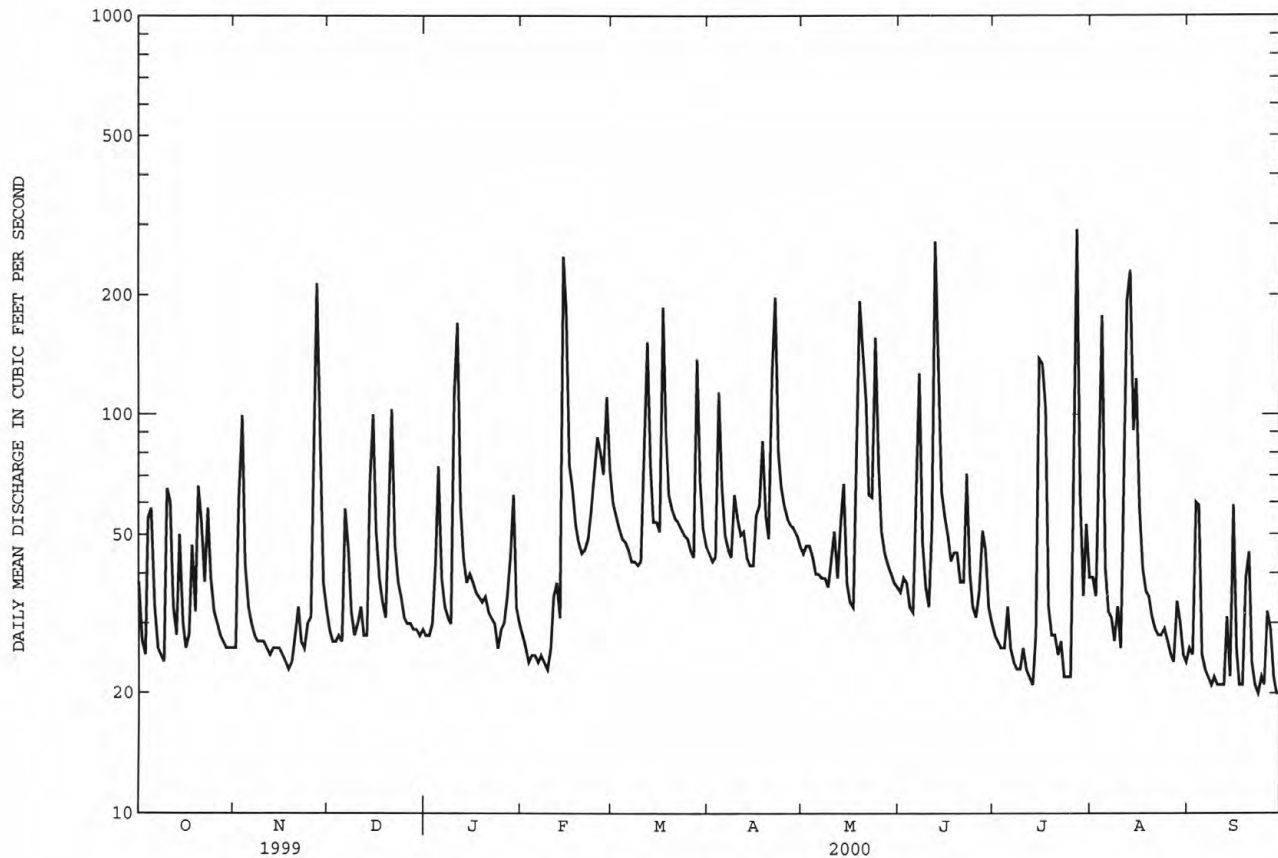
PASSAIC RIVER BASIN

61

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1922 - 2000	
ANNUAL TOTAL	18838		18183		54.5	
ANNUAL MEAN	51.6		49.7		98.5	
HIGHEST ANNUAL MEAN					23.3	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	1120	Sep 16	291	Jul 27	1510	Aug 28 1971
LOWEST DAILY MEAN	11	Aug 3	20	Sep 23	4.2	Sep 10 1932
ANNUAL SEVEN-DAY MINIMUM	12	Aug 2	22	Sep 6	4.7	Sep 9 1932
INSTANTANEOUS PEAK FLOW			733	Jul 16	2800	Aug 28 1971
INSTANTANEOUS PEAK STAGE			4.79	Jul 16	8.60	Aug 28 1971
INSTANTANEOUS LOW FLOW			19	Sep 30	2.8	Aug 27 1932
ANNUAL RUNOFF (CFSM)	1.76		1.69		1.86	
ANNUAL RUNOFF (INCHES)	23.84		23.01		25.21	
10 PERCENT EXCEEDS	86		80		105	
50 PERCENT EXCEEDS	32		38		36	
90 PERCENT EXCEEDS	16		24		15	

e Estimated



PASSAIC RIVER BASIN

01381800 WHIPPANY RIVER NEAR PINE BROOK, NJ

LOCATION.--Lat 40°50'42", long 74°20'51", Morris County, Hydrologic Unit 02030103, on left upstream abutment of former bridge on Edwards Road, 200 ft downstream from bridges of Interstate 280, 0.4 mi upstream from Rockaway River, and 1.2 mi southwest of Pine Brook. Water-quality samples collected 450 ft upstream at bridge on Ridgedale Avenue.

DRAINAGE AREA.--68.5 mi²

PERIOD OF RECORD.--Low-flow partial record station water years 1963-69, 1973, 1979-96. November 1992 to September 1996 (gage height and discharge measurements only), October 1996 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 162 ft above sea level (from topographic map).

REMARKS.--Records fair except periods of backwater and estimated daily discharges which are poor. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	35	122	40	69	260	136	139	77	53	327	51
2	67	57	70	39	63	233	102	116	71	47	302	97
3	51	237	53	43	57	198	82	105	79	43	251	81
4	71	254	52	50	60	155	136	95	65	42	331	145
5	125	186	55	135	59	114	179	85	58	45	315	85
6	81	121	90	124	42	90	129	77	103	43	222	54
7	54	79	138	88	35	76	94	72	288	39	141	47
8	41	60	103	65	34	62	78	68	331	36	92	43
9	35	53	80	53	33	44	88	64	259	34	83	42
10	64	47	67	90	38	45	102	59	171	35	73	40
11	117	42	72	285	55	64	87	99	95	36	81	40
12	72	38	57	320	69	161	90	73	278	33	263	48
13	53	37	46	261	53	257	76	93	449	32	566	73
14	74	35	89	185	208	244	66	158	439	42	e650	59
15	60	35	229	96	441	193	59	117	370	200	e630	128
16	44	35	250	71	467	144	74	85	296	326	e592	83
17	38	32	210	58	421	231	84	71	217	343	e534	56
18	69	30	158	93	360	320	161	74	146	281	e474	47
19	59	30	110	151	309	307	171	259	133	126	e416	61
20	86	31	89	152	263	265	132	369	109	75	e360	136
21	127	50	230	84	220	230	141	408	88	55	e292	75
22	99	40	241	47	173	198	350	393	164	55	e210	53
23	143	36	191	50	139	164	457	364	155	47	e142	46
24	136	46	140	52	139	128	453	390	105	43	107	50
25	91	45	90	54	176	102	411	424	77	42	83	49
26	75	70	62	65	210	92	367	394	65	70	73	62
27	57	251	52	54	217	78	327	343	89	296	57	80
28	45	332	47	48	245	187	296	291	107	423	53	53
29	42	293	42	52	275	264	253	230	71	406	88	47
30	38	209	42	51	---	236	190	157	62	366	56	44
31	36	---	41	67	---	183	---	98	---	345	45	---
TOTAL	2273	2846	3318	3023	4930	5325	5371	5770	5017	4059	7909	1975
MEAN	73.3	94.9	107	97.5	170	172	179	186	167	131	255	65.8
MAX	143	332	250	320	467	320	457	424	449	423	650	145
MIN	35	30	41	39	33	44	59	59	58	32	45	40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2000, BY WATER YEAR (WY)

	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
MEAN	122	104	236	200	199	231	219	190	119	77.5	98.7	109
MAX	323	161	696	260	274	291	331	274	181	131	255	258
(WY)	1997	1997	1997	1997	1997	1999	1997	1998	1998	2000	2000	1999
MIN	45.5	38.1	33.6	97.5	154	172	110	92.6	37.7	23.7	36.7	35.2
(WY)	1998	1999	1999	2000	1999	2000	1999	1999	1999	1999	1998	1998

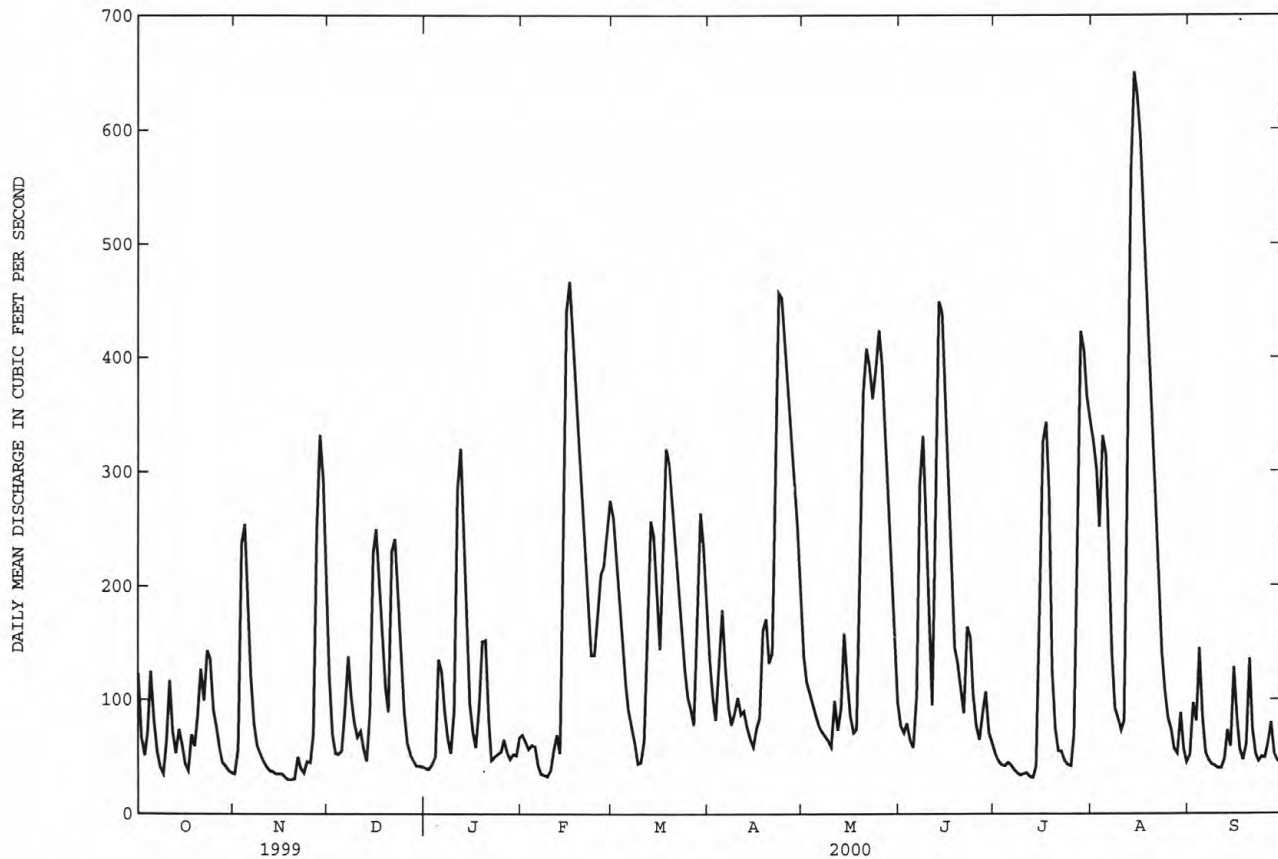
PASSAIC RIVER BASIN

63

01381800 WHIPPANY RIVER NEAR PINE BROOK, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1997 - 2000	
ANNUAL TOTAL	46314		51816		159	
ANNUAL MEAN	127		142		236	1997
HIGHEST ANNUAL MEAN					114	1999
LOWEST ANNUAL MEAN					1820	Oct 20 1996
HIGHEST DAILY MEAN	866	Sep 18	650	Aug 14	17	Aug 2 1999
LOWEST DAILY MEAN	17	Aug 2	30	Nov 18	17	Aug 2 1999
ANNUAL SEVEN-DAY MINIMUM	17	Aug 2	33	Nov 14	17	Aug 2 1999
INSTANTANEOUS PEAK FLOW			660	Aug 15	2080	Oct 20 1996
INSTANTANEOUS PEAK STAGE			7.76	Aug 15	9.22a	Oct 22 1996
INSTANTANEOUS LOW FLOW			28	Nov 18	17	Aug 6 1993
10 PERCENT EXCEEDS	306		328		366	
50 PERCENT EXCEEDS	70		88		90	
90 PERCENT EXCEEDS	22		42		31	

a Stage on Oct.20,1996 was higher (unknown).
e Estimated



01381900 PASSAIC RIVER AT PINE BROOK, NJ

LOCATION.--Lat 40°51'45", long 74°19'18", Morris County, Hydrologic Unit 02030103, on left bank 20 ft downstream from bridge on U.S. Route 46, 0.5 mi east of Pine Brook, and 1.3 mi downstream from Rockaway River.

DRAINAGE AREA. --349 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1963-69, 1973, and annual maximum, water years 1966-75, 1978-79. October 1979 to current year. Feb. 19 to Aug. 24, 1939 in files of U.S. Army Corps of Engineers, New York District.

REVISID RECORDS.--WDR NJ-77-1: 1967 (M) .

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 149.26 ft above sea level. December 1965 to September 1979, crest-stage gage at same site at datum 10.00 ft higher. Feb. 19 to Aug. 24, 1939, water-stage recorder at present State Route 506 bridge, 1,600 ft upstream from gage, operated by U.S. Army Corps of Engineers, New York District at datum 13.05 ft higher.

REMARKS.--Records good except those above 1,000 ft³/s, which are fair. Flow regulated by Boonton and Splitrock Reservoir (see Passaic River basin, reservoirs in) and many small lakes. Water diverted from Boonton Reservoir for municipal supply of Jersey City (see Passaic River basin, diversions). Several measurements of water temperature were made during the year. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1810, according to State Geologist's report for 1904, 23.2 ft, Oct. 10, 1903, present datum, from King Survey of highwater marks at present State Route 506 bridge, 1,600 ft upstream from gage. Floods of Mar. 13, 1936 and Sept. 24, 1938 reached stages of 20.8 ft and 19.4 ft respectively, at present State Route 506 bridge and present datum. Flood of July 23, 1945 reached a stage of 22.3 ft at present site and datum according to U.S. Army Corps of Engineers; minimum observed, 41.1 ft³/s, Sept. 22, 1964.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug 15	1245	*3,070	*19.29	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	549	231	734	286	255	1130	847	563	371	211	1070	217
2	402	265	534	282	253	1080	704	472	326	178	962	387
3	295	705	407	290	234	965	588	428	323	156	827	421
4	304	823	352	306	225	848	599	396	280	152	875	425
5	488	742	342	504	221	703	709	363	243	166	884	371
6	455	604	395	565	215	585	686	332	316	159	766	251
7	356	478	592	501	210	523	598	304	817	142	573	195
8	282	397	603	423	207	468	516	281	990	131	415	178
9	242	353	557	372	201	338	507	263	963	124	343	167
10	270	324	479	428	205	301	560	242	779	126	305	161
11	428	293	440	819	246	342	541	308	524	125	319	154
12	396	267	384	982	333	654	531	313	691	118	752	156
13	333	255	336	981	338	873	505	315	1070	114	1730	206
14	328	241	394	857	629	957	476	435	1260	115	2550	215
15	307	232	723	628	1120	913	423	444	1190	434	3040	331
16	267	225	875	467	1480	805	436	372	986	837	2970	339
17	248	217	894	383	1580	884	502	304	789	855	2690	251
18	341	203	823	397	1510	1170	675	281	588	803	2390	202
19	336	196	687	556	1390	1360	781	619	486	564	2100	192
20	350	199	561	558	1250	1340	746	944	418	353	1770	386
21	497	235	760	472	1080	1220	713	1250	353	245	1450	345
22	497	239	869	361	927	1070	1070	1420	442	214	1100	251
23	555	233	855	277	841	923	1520	1430	500	192	796	193
24	561	245	757	235	809	799	1700	1480	424	166	551	183
25	482	256	620	232	844	670	1630	1560	331	150	404	179
26	424	304	470	255	903	592	1480	1330	268	203	332	183
27	372	704	388	247	941	533	1280	1220	260	745	286	266
28	322	943	354	254	996	737	1080	1070	307	1090	272	233
29	292	1030	326	232	1090	971	905	899	262	1290	382	200
30	266	931	309	209	---	1060	723	700	236	1280	302	173
31	248	---	291	234	---	970	---	490	---	1190	235	---
TOTAL	11493	12370	17111	13593	20533	25784	24031	20828	16793	12628	33441	7411
MEAN	371	412	552	438	708	832	801	672	560	407	1079	247
MAX	561	1030	894	982	1580	1360	1700	1560	1260	1290	3040	425
MIN	242	196	291	209	201	301	423	242	236	114	235	155

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2000, BY WATER YEAR (WY)

MEAN	396	546	757	683	787	1019	1152	797	518	356	291	297
MAX	1566	1355	2286	1516	1268	2204	2842	2537	1482	1485	1079	1204
(WY)	1997	1996	1984	1996	1996	1994	1983	1989	1984	1984	2000	1999
MIN	133	148	107	105	211	272	161	289	146	98.1	117	91.0
(WY)	1995	1999	1981	1981	1980	1981	1985	1995	1999	1999	1981	1980

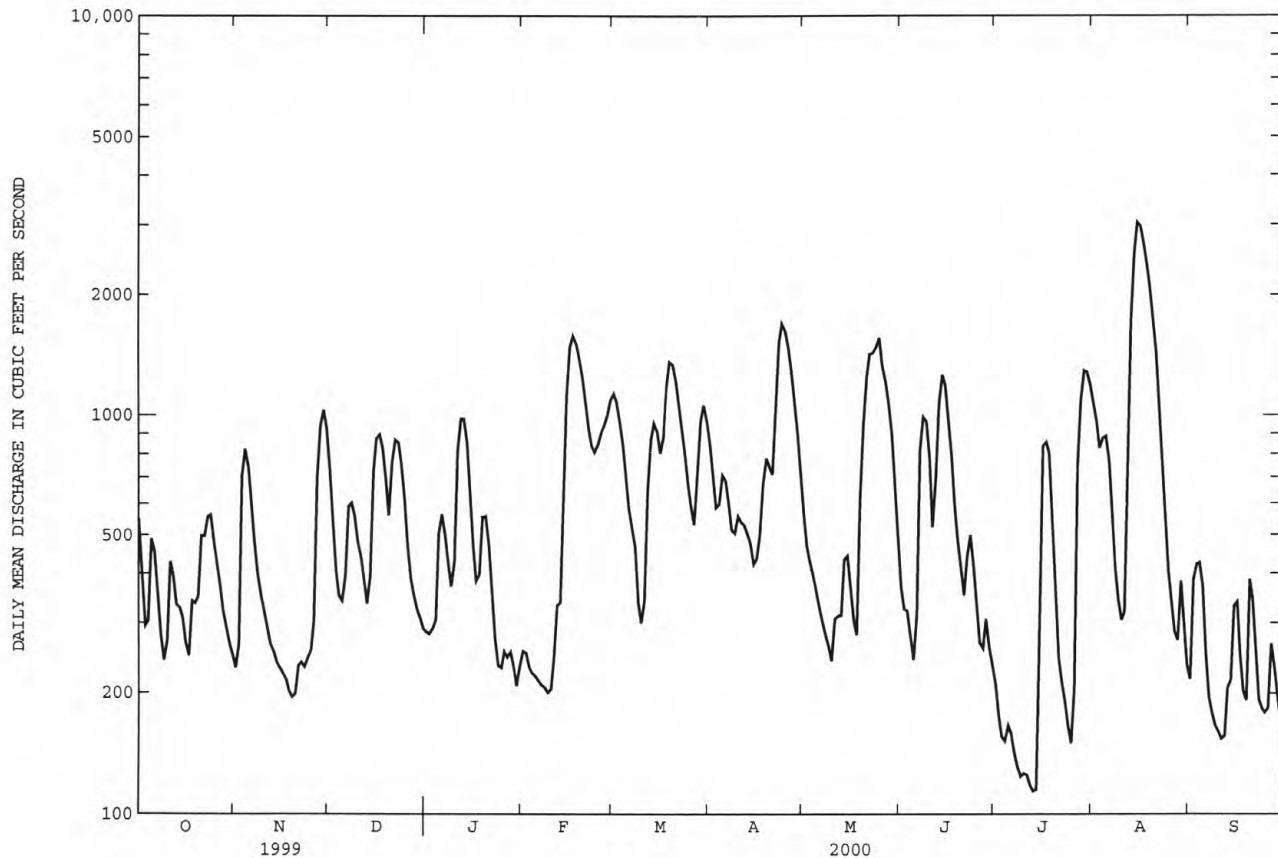
PASSAIC RIVER BASIN

65

01381900 PASSAIC RIVER AT PINE BROOK, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1980 - 2000	
ANNUAL TOTAL	203427		216016		632	
ANNUAL MEAN	557		590		1125	
HIGHEST ANNUAL MEAN					276	
LOWEST ANNUAL MEAN					7910	
HIGHEST DAILY MEAN	4350	Sep 18	3040	Aug 15	72	Apr 7 1984
LOWEST DAILY MEAN	76	Aug 8	114	Jul 13	78	Sep 29 1980
ANNUAL SEVEN-DAY MINIMUM	78	Aug 7	122	Jul 8	78	Oct 12 1980
INSTANTANEOUS PEAK FLOW			3070	Aug 15	8000	Apr 7 1984
INSTANTANEOUS PEAK STAGE			19.29	Aug 15	22.90a	Apr 7 1984
INSTANTANEOUS LOW FLOW			108	Jul 14	70	Sep 29 1980
10 PERCENT EXCEEDS	1230		1120		1500	
50 PERCENT EXCEEDS	362		431		364	
90 PERCENT EXCEEDS	93		206		124	

a Affected by backwater.



LOCATION.--Lat 41°01'05", long 74°24'07", Morris County, Hydrologic Unit 02030103, on left bank 15 ft downstream from culvert at crossover between northbound and southbound lanes on State Route 23, 1,000 ft downstream from Macopin Intake Dam, 0.6 mi downstream from Macopin River, and 2.8 mi northwest of Butler.

PERIOD OF RECORD.--January 1898 to March 1990, September 1992 to current year. Monthly discharge only for some periods, published in WSP 1302. Records for January 1892 to December 1897, published in WSP 541, have been found to be unreliable and should not be used.

REMARKS.--Records fair, except those for February through April, which are poor. Flow regulated by Canistear, Oak Ridge, Clinton, Charlotteburg Reservoirs, and Echo Lake (see Passaic River basin, reservoirs in). Water diverted at Charlotteburg Reservoir for municipal supply of city of Newark (see Passaic River basin, diversions). During peak flows, frequent variations in flow due to automatic gate operations upstream. Several measurements of water temperature were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2000, BY WATER YEAR (WY)

MEAN	16.4	32.6	40.6	41.7	51.3	99.7	131	67.4	32.0	19.1	15.1	18.5
MAX	288	309	357	308	270	572	506	263	360	238	228	211
(WY)	1956	1928	1997	1996	1939	1936	1983	1989	1972	1938	1955	1960
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1929	1929	1929	1931	1930	1965	1950	1954	1944	1923	1923	1929

PASSAIC RIVER BASIN

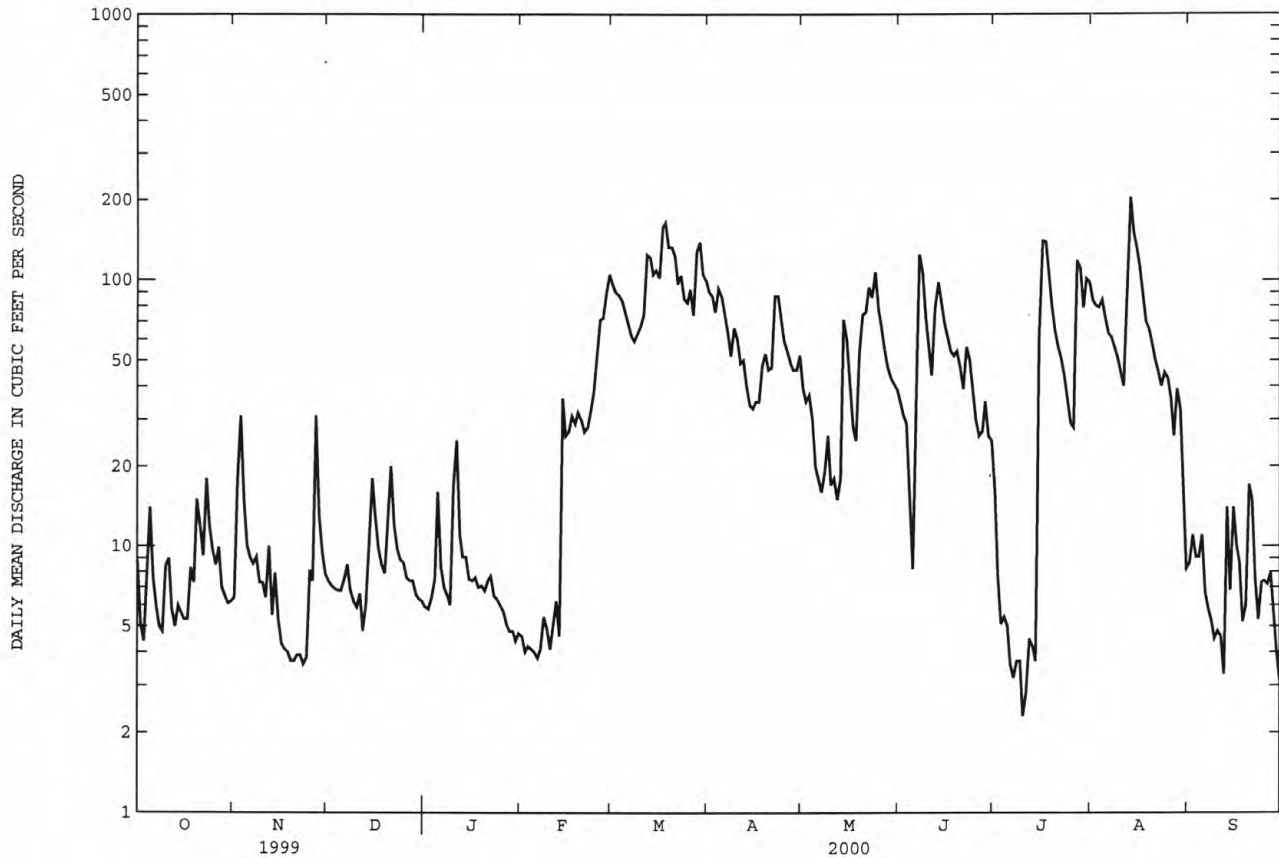
67

01382500 PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1923 - 2000
ANNUAL TOTAL	5330.12	13323.6	
ANNUAL MEAN	14.6	36.4	47.0
HIGHEST ANNUAL MEAN			109 1952
LOWEST ANNUAL MEAN			.12 1954
HIGHEST DAILY MEAN	192 Mar 28	204 Aug 13	3170 Apr 6 1984
LOWEST DAILY MEAN	.68 Jul 27	2.3 Jul 10	.00 Oct 1 1922
ANNUAL SEVEN-DAY MINIMUM	.75 Jul 24	3.4 Jul 6	.00 Oct 18 1922
INSTANTANEOUS PEAK FLOW		388 Aug 13	6100a Oct 10 1903
INSTANTANEOUS PEAK STAGE		4.54 Aug 13	17.40a Oct 10 1903
10 PERCENT EXCEEDS	27	92	141
50 PERCENT EXCEEDS	7.4	18	5.6
90 PERCENT EXCEEDS	.98	4.8	.00

a Since 1898, site and datum then in use.

e Estimate



PASSAIC RIVER BASIN

01383500 WANAQUE RIVER AT AWOSTING, NJ

LOCATION.--Lat 41°09'37", long 74°20'02" (revised), Passaic County, Hydrologic Unit 02030103, on right bank 700 ft downstream from dam at outlet of Greenwood Lake at Awosting.

DRAINAGE AREA.--27.1 mi².

PERIOD OF RECORD.--May 1919 to current year. Prior to October 1940, published as "at Greenwood Lake".

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922(M), 1928(M), 1936. WDR NJ-79-1: 1933(M), 1936(M), 1945(M), 1948(P), 1951(P), 1952(P), 1953(M), 1955(P), 1956(M), 1957(M), 1958(M), 1960(P), 1961(M), 1968(P), 1969(P). WDR NJ-80-1: 1960(P).

GAGE.--Water-stage recorder. Concrete control since Oct. 31, 1938. Datum of gage is 601.32 ft above sea level (levels from New Jersey Geological Survey bench mark). Prior to Apr. 1, 1926, nonrecording gage and Apr. 1, 1926, to Oct. 31, 1938, water-stage recorder at site 100 ft upstream at same datum.

REMARKS.--Records fair. Flow completely regulated by Greenwood Lake (see Passaic River basin, reservoirs in). Water diverted into basin above gage from Upper Greenwood Lake (Hudson River basin) by North Jersey District Water Supply Commission since 1968. Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with North Jersey District Water Supply Commission.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun 7	1845	*275	*3.28	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	34	46	30	35	172	73	56	35	26	106	15
2	42	52	37	30	32	150	64	56	32	23	97	15
3	37	149	35	30	29	132	61	48	33	20	93	15
4	41	146	35	32	29	110	71	43	26	20	91	16
5	52	125	34	45	27	96	75	42	24	18	79	15
6	48	107	37	37	26	82	65	41	54	16	63	11
7	42	94	42	36	24	71	58	37	230	14	58	11
8	34	76	36	33	23	64	52	37	252	14	55	7.7
9	33	64	33	31	21	60	68	35	203	13	47	3.1
10	37	59	32	40	21	59	63	38	158	13	42	3.2
11	44	59	39	60	22	64	59	43	131	13	44	3.1
12	38	45	32	61	23	105	60	36	151	13	66	3.1
13	32	42	26	60	22	107	52	37	144	12	62	4.2
14	38	40	36	35	44	97	48	51	128	11	65	3.6
15	28	38	50	31	64	86	47	44	111	30	89	9.5
16	27	36	54	49	68	80	50	36	98	128	95	14
17	28	31	53	46	68	120	50	31	88	170	86	9.8
18	33	24	51	36	72	121	63	29	80	145	69	8.0
19	26	23	48	33	76	108	63	43	76	112	57	13
20	34	23	48	32	68	98	58	48	65	91	46	29
21	39	24	66	34	62	89	68	52	53	71	37	25
22	37	23	65	29	55	80	111	52	55	60	31	20
23	54	23	59	27	52	71	130	52	50	49	27	16
24	56	23	56	27	52	64	143	71	42	41	33	16
25	51	25	50	35	67	58	130	78	36	34	33	14
26	47	26	43	43	92	56	115	73	39	35	28	14
27	47	54	41	39	105	48	101	63	38	98	24	9.8
28	42	60	38	34	158	85	90	56	38	124	22	9.6
29	40	55	35	30	188	98	81	49	32	112	19	7.1
30	38	52	32	28	---	93	73	43	31	110	17	5.0
31	36	---	32	39	---	84	---	38	---	117	16	---
TOTAL	1228	1632	1321	1152	1625	2808	2242	1458	2533	1753	1697	345.8
MEAN	39.6	54.4	42.6	37.2	56.0	90.6	74.7	47.0	84.4	56.5	54.7	11.5
MAX	56	149	66	61	188	172	143	78	252	170	106	29
MIN	26	23	26	27	21	48	47	29	24	11	16	3.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2000, BY WATER YEAR (WY)

	MEAN	MAX	MIN
1919	29.0	210	.20
1920	56.0	210	.18
1921	65.3	197	1.88
1922	64.1	221	3.00
1923	63.2	168	3.04
1924	102	271	41.2
1925	95.2	333	24.7
1926	60.9	233	13.4
1927	37.0	178	4.37
1928	26.4	132	2.76
1929	26.0	208	.006
1930	29.4	231	.057
1931		1927	
1932		1927	
1933		1927	
1934		1927	
1935		1927	
1936		1927	
1937		1927	
1938		1927	
1939		1927	
1940		1927	
1941		1927	
1942		1927	
1943		1927	
1944		1927	
1945		1927	
1946		1927	
1947		1927	
1948		1927	
1949		1927	
1950		1927	
1951		1927	
1952		1927	
1953		1927	
1954		1927	
1955		1927	
1956		1927	
1957		1927	
1958		1927	
1959		1927	
1960		1927	
1961		1927	
1962		1927	
1963		1927	
1964		1927	
1965		1927	
1966		1927	
1967		1927	
1968		1927	
1969		1927	
1970		1927	
1971		1927	
1972		1927	
1973		1927	
1974		1927	
1975		1927	
1976		1927	
1977		1927	
1978		1927	
1979		1927	
1980		1927	
1981		1927	
1982		1927	
1983		1927	
1984		1927	
1985		1927	
1986		1927	
1987		1927	
1988		1927	
1989		1927	
1990		1927	
1991		1927	
1992		1927	
1993		1927	
1994		1927	
1995		1927	
1996		1927	
1997		1927	
1998		1927	
1999		1927	
2000		1927	

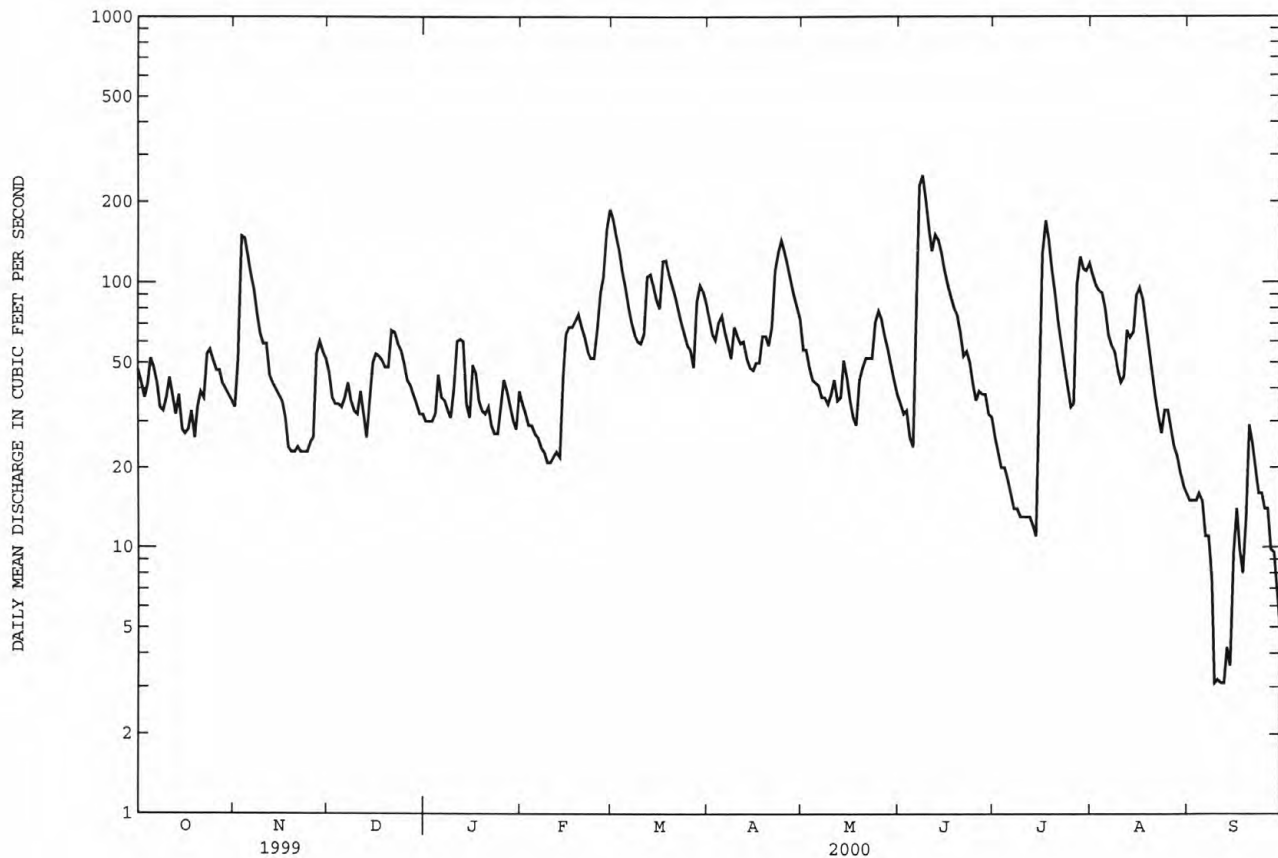
PASSAIC RIVER BASIN

69

01383500 WANAQUE RIVER AT AWOSTING, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1919 - 2000
ANNUAL TOTAL	19965.1	19794.8	
ANNUAL MEAN	54.7	54.1	54.4
HIGHEST ANNUAL MEAN			105 1984
LOWEST ANNUAL MEAN			19.9 1965
HIGHEST DAILY MEAN	1340 Sep 17	252 Jun 8	2350 Apr 6 1984
LOWEST DAILY MEAN	4.1 Aug 31	3.1 Sep 9	.00 Oct 15 1928
ANNUAL SEVEN-DAY MINIMUM	4.4 Aug 30	4.0 Sep 8	.00 Jul 27 1929
INSTANTANEOUS PEAK FLOW		275 Jun 7	2800a Apr 5 1984
INSTANTANEOUS PEAK STAGE		3.28 Jun 7	6.65 Apr 5 1984
INSTANTANEOUS LOW FLOW		3.1 Sep 8	
10 PERCENT EXCEEDS	110	106	125
50 PERCENT EXCEEDS	35	44	33
90 PERCENT EXCEEDS	6.1	16	4.8

a From rating curve extended above 750 ft³/s based on theoretical weir formula



01384500 RINGWOOD CREEK NEAR WANAQUE, NJ

LOCATION.--Lat 41°07'39", long 74°15'57" (revised), Passaic County, Hydrologic Unit 02030103, on right bank 500 ft upstream from Wanague Reservoir, 0.7 mi downstream from Ringwood Mill Pond dam, and 6.5 mi north of Wanague.

DRAINAGE AREA.--19.1 mi².

PERIOD OF RECORD.--October 1934 to September 1978, October 1985 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR NJ-82-1: 1935-77 (P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 292.67 ft above sea level (levels by New Jersey Geological Survey). Prior to Sept. 30, 1978, at datum 10.0 ft higher.

REMARKS.--Records good except for those above 40 ft³/s, which are fair. Estimated discharges are poor. Records given herein include flow over spillway and through ports in dam when open or through waste gate in dam. No flow through ports or waste gates this year. Flow slightly regulated by Ringwood Mill Pond, Sterling, and Sterling Forest Lakes, and several smaller lakes above station. Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with North Jersey District Water Supply Commission.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun 7	0430	*258	*11.61	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	16	29	27	e24	98	45	41	22	18	33	7.8
2	16	37	27	26	e21	88	42	38	21	15	31	8.1
3	13	75	25	27	e20	77	40	36	21	14	31	8.6
4	20	50	25	30	e20	67	57	32	18	14	32	8.4
5	33	43	24	42	e19	60	50	30	17	13	26	8.0
6	24	40	26	33	e18	53	43	29	71	11	22	7.5
7	19	38	26	29	e16	47	39	27	190	9.4	22	6.3
8	16	36	23	27	e15	44	37	25	95	8.4	19	6.2
9	15	33	20	26	e14	42	43	23	69	7.5	17	5.9
10	21	30	21	41	e14	41	45	22	56	7.3	16	5.8
11	24	28	21	64	e16	52	44	26	52	6.9	20	5.0
12	18	25	19	47	e19	105	42	22	83	6.0	29	4.4
13	15	24	18	e45	e18	74	37	30	70	5.3	21	7.2
14	16	21	26	e38	56	62	34	73	59	4.8	23	6.5
15	14	20	43	e34	58	56	33	36	53	62	31	9.4
16	13	19	38	e31	44	51	35	28	47	69	24	8.2
17	12	16	34	e29	43	103	36	24	41	38	20	6.7
18	14	15	30	e26	41	80	55	25	39	27	17	5.8
19	13	15	28	e25	40	68	48	43	38	23	16	9.9
20	20	15	31	e24	37	62	43	47	33	21	14	26
21	23	15	49	e23	34	56	55	46	28	18	12	15
22	19	15	40	e24	34	52	87	41	31	16	11	11
23	31	15	36	e21	36	47	92	39	26	14	10	8.8
24	27	15	33	e21	46	44	93	62	21	12	11	8.3
25	23	15	29	e22	71	40	78	50	19	12	11	8.3
26	21	19	27	e25	87	38	69	41	18	14	9.9	8.6
27	20	73	27	e22	89	34	65	36	21	48	8.8	8.3
28	18	47	29	e22	139	92	58	32	25	37	8.6	7.9
29	17	37	31	e20	117	68	52	29	20	28	8.6	7.2
30	17	33	30	e20	---	55	46	26	20	34	7.8	6.4
31	16	---	29	e24	---	49	---	24	---	38	7.4	---
TOTAL	591	880	894	915	1206	1905	1543	1083	1324	651.6	570.1	251.5
MEAN	19.1	29.3	28.8	29.5	41.6	61.5	51.4	34.9	44.1	21.0	18.4	8.38
MAX	33	75	49	64	139	105	93	73	190	69	33	26
MIN	12	15	18	20	14	34	33	22	17	4.8	7.4	4.4
CFM	1.00	1.54	1.51	1.55	2.18	3.22	2.69	1.83	2.31	1.10	.96	.44
IN.	1.15	1.71	1.74	1.78	2.35	3.71	3.01	2.11	2.58	1.27	1.11	.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2000, BY WATER YEAR (WY)

MEAN	16.1	32.1	42.5	42.0	41.5	66.2	58.6	39.5	22.5	14.3	12.7	12.3
MAX	131	88.8	124	149	109	157	123	131	121	86.1	107	62.4
(WY)	1956	1973	1997	1979	1970	1936	1940	1989	1972	1945	1955	1999
MIN	1.07	2.27	2.71	12.5	14.0	28.5	18.3	10.9	3.78	1.31	.70	.28
(WY)	1945	1950	1999	1940	1940	1938	1966	1941	1957	1966	1966	1964

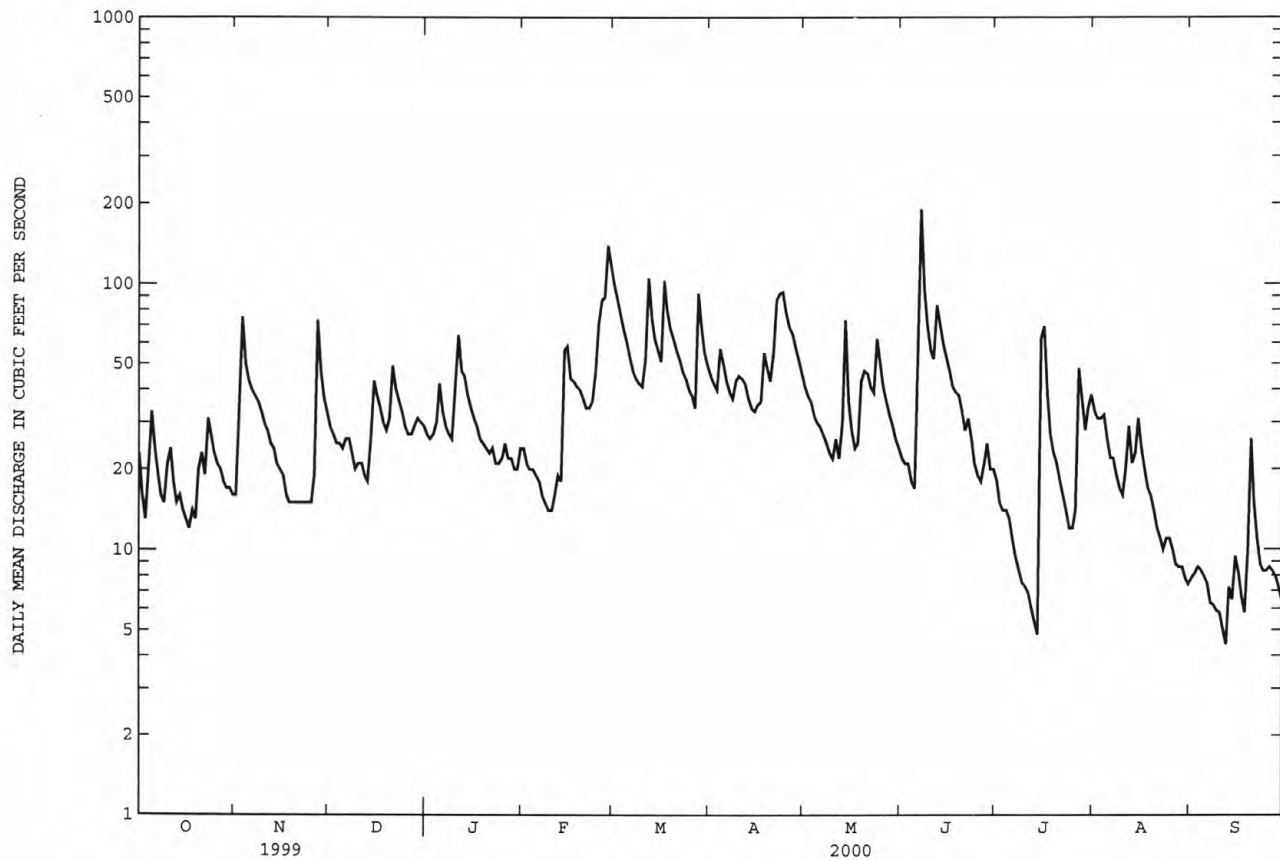
PASSAIC RIVER BASIN

71

01384500 RINGWOOD CREEK NEAR WANAQUE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1935 - 2000
ANNUAL TOTAL	11672.29	11814.2	
ANNUAL MEAN	32.0	32.3	33.3
HIGHEST ANNUAL MEAN			54.4 1952
LOWEST ANNUAL MEAN			13.2 1965
HIGHEST DAILY MEAN	605 Sep 16	190 Jun 7	756 Aug 19 1955
LOWEST DAILY MEAN	.40 Aug 10	4.4 Sep 12	.00 Sep 11 1963
ANNUAL SEVEN-DAY MINIMUM	.54 Aug 5	5.8 Sep 7	.16 Sep 5 1944
INSTANTANEOUS PEAK FLOW		258 Jun 7	2300 Sep 16 1999
INSTANTANEOUS PEAK STAGE		11.61 Jun 7	13.92 Sep 16 1999
INSTANTANEOUS LOW FLOW		4.2 Sep 12	4.2 Sep 12 2000
ANNUAL RUNOFF (CFSM)	1.67	1.69	1.74
ANNUAL RUNOFF (INCHES)	22.73	23.01	23.68
10 PERCENT EXCEEDS	62	62	76
50 PERCENT EXCEEDS	21	26	21
90 PERCENT EXCEEDS	1.2	8.8	2.2

e Estimated



PASSAIC RIVER BASIN

01387000 WANAQUE RIVER AT WANAQUE, NJ

LOCATION.--Lat 41°02'39", long 74°17'36", Passaic County, Hydrologic Unit 02030103, on left bank 750 ft downstream from Raymond Dam in Wanaque, and 50 ft upstream from bridge on County Route 511.

DRAINAGE AREA.--90.4 mi², considered as 94 mi² Oct. 1, 1928 to Sept. 30, 1934.

PERIOD OF RECORD.--December 1903 to December 1905 (gage heights only), September 1912 to April 1915, May 1919 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 210.00 ft above sea level (levels from New Jersey Geological Survey bench mark). Dec. 16, 1903, to Dec. 31, 1905, nonrecording gage on highway bridge at site 50 ft downstream at different datum. Sept. 15, 1912, to Apr. 1, 1922, nonrecording gage at site 200 ft downstream from present concrete control at different datum. Apr. 1, 1922 to Mar. 14, 1931, water-stage recorder at site 400 ft downstream from present concrete control at present datum.

REMARKS.--Records good. Flow regulated by Greenwood Lake 11 mi above station, since October 1987 by Monksville Reservoir just upstream from Wanaque Reservoir, and since 1928 by Wanaque Reservoir (see Passaic River basin, reservoirs in). North Jersey District Water Supply Commission diverts water for municipal supply from Wanaque Reservoir. Water is diverted to Wanaque Reservoir from Posts Brook at Wanaque and from Ramapo River at Pompton Lakes (see Passaic River basin, diversions). Water diverted into basin above gage from Upper Greenwood Lake (Hudson River basin) by North Jersey District Water Supply Commission since 1968). Several measurements of water temperature, other than those published, were made during the year. National Weather Service rain-gage and USGS satellite gage-height telemeters at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	6.9	6.9	6.9	17	17	82	37	17	18	18	18
2	6.5	7.8	6.9	6.9	17	17	69	59	19	18	18	18
3	6.5	7.0	6.9	6.9	17	17	57	22	23	18	18	18
4	7.0	6.9	6.9	7.2	17	17	102	21	18	18	18	18
5	6.6	6.9	6.9	7.0	17	17	115	22	18	18	18	18
6	6.5	6.9	7.0	6.9	17	17	76	21	37	18	18	18
7	6.4	6.9	6.9	6.9	17	17	51	21	321	18	18	18
8	6.5	6.9	6.9	6.9	17	17	41	20	466	18	18	18
9	6.5	6.9	6.9	6.9	17	17	109	21	318	18	18	17
10	6.6	6.6	6.9	7.8	17	17	46	19	202	18	18	17
11	6.5	6.9	6.9	7.3	17	18	36	20	142	18	18	17
12	12	6.9	6.9	7.3	17	18	80	17	203	18	18	17
13	13	6.9	6.9	7.3	17	18	23	18	228	18	18	18
14	7.3	6.9	7.5	7.3	19	18	19	19	182	17	19	17
15	7.3	6.9	7.2	7.3	17	17	18	28	145	20	18	18
16	7.3	6.9	7.8	7.3	17	17	23	18	114	18	18	17
17	7.4	6.9	6.9	7.2	17	32	27	17	88	18	18	17
18	7.5	6.9	6.9	7.4	17	28	61	18	68	18	18	17
19	7.1	6.9	6.9	7.3	17	45	78	20	60	18	18	18
20	7.2	6.9	7.5	11	17	102	49	18	34	18	18	18
21	6.9	6.9	7.4	17	17	116	78	17	19	18	18	18
22	7.0	6.9	7.3	17	17	96	225	17	19	18	18	18
23	7.2	6.9	7.2	17	17	67	285	18	22	18	18	18
24	6.9	6.9	7.0	17	17	49	298	56	18	18	18	18
25	6.9	6.9	7.0	17	17	30	229	90	18	18	18	18
26	7.0	7.3	7.0	17	17	42	188	77	18	18	18	18
27	6.9	7.8	6.9	17	17	19	153	37	18	19	18	18
28	6.9	6.9	6.9	17	18	99	129	28	18	18	18	18
29	6.9	6.9	6.9	17	17	154	116	20	18	18	18	18
30	6.9	6.9	6.9	17	---	129	117	19	18	19	18	18
31	6.9	---	6.9	17	---	107	---	17	---	18	18	---
TOTAL	224.6	209.0	217.9	334.0	496	1391	2980	852	2889	561	559	532
MEAN	7.25	6.97	7.03	10.8	17.1	44.9	99.3	27.5	96.3	18.1	18.0	17.7
MAX	13	7.8	7.8	17	19	154	298	90	466	20	19	18
MIN	6.4	6.6	6.9	6.9	17	17	18	17	17	17	18	17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2000, BY WATER YEAR (WY)

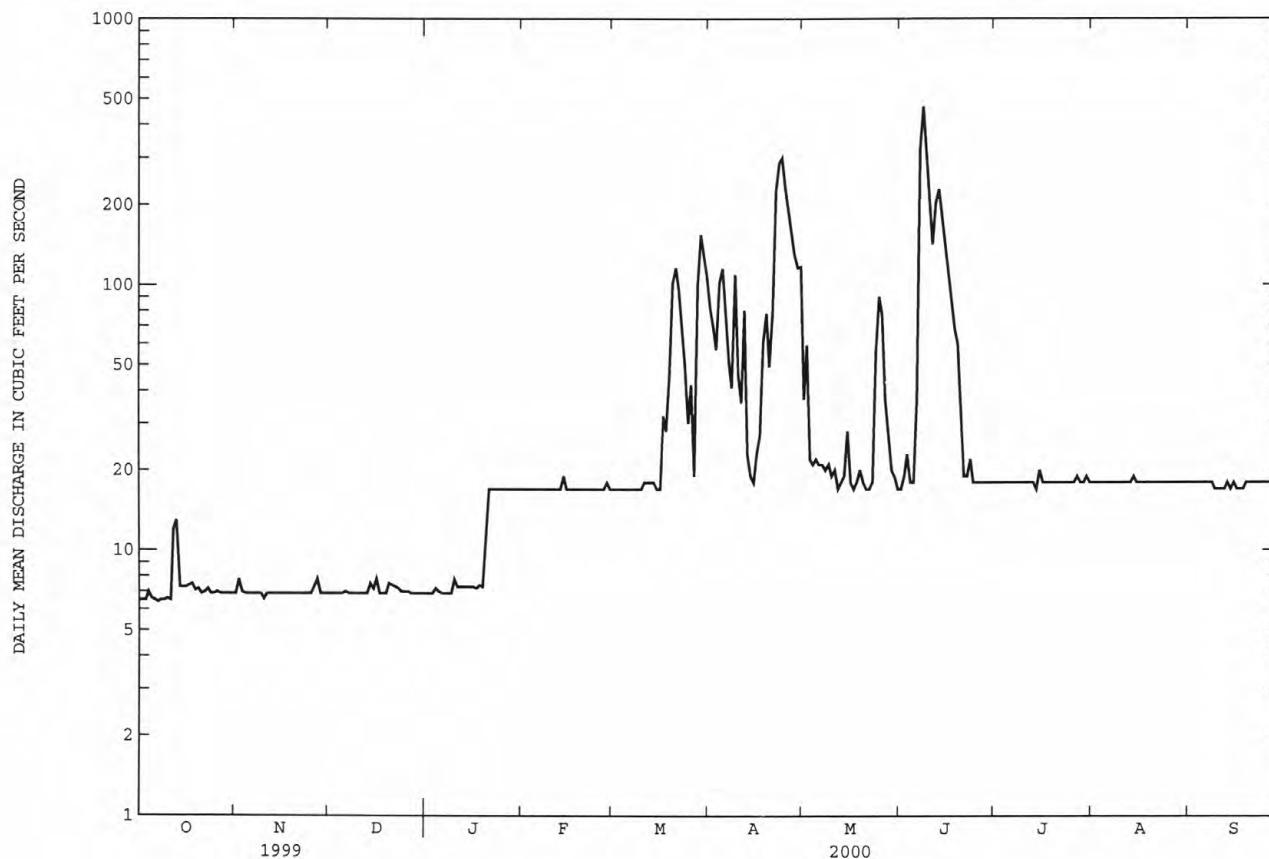
	MEAN	35.6	46.3	62.9	67.9	75.3	157	179	99.5	58.1	39.1	28.1	34.3
MAX	258	435	434	453	471	758	806	545	416	247	258	477	
(WY)	1956	1928	1921	1915	1915	1920	1984	1989	1972	1938	1927	1927	
MIN	1.82	1.70	1.48	.76	2.05	1.91	1.54	1.72	2.17	1.73	1.53	1.51	
(WY)	1966	1966	1950	1950	1966	1966	1966	1966	1966	1965	1965	1965	

PASSAIC RIVER BASIN

73

01387000 WANAQUE RIVER AT WANAQUE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1912 - 2000	
ANNUAL TOTAL	5261.7		11245.5		72.1	
ANNUAL MEAN	14.4		30.7		231	
HIGHEST ANNUAL MEAN					1.93	
LOWEST ANNUAL MEAN					5470	
HIGHEST DAILY MEAN	156	Sep 16	466	Jun 8	Apr 6 1984	
LOWEST DAILY MEAN	6.3	Sep 8	6.4	Oct 7	Oct 11 1984	
ANNUAL SEVEN-DAY MINIMUM	6.5	Aug 28	6.5	Oct 5	Dec 14 1949	
INSTANTANEOUS PEAK FLOW			518	Jun 8	Apr 5 1984	
INSTANTANEOUS PEAK STAGE			3.83	Jun 8	Apr 5 1984	
INSTANTANEOUS LOW FLOW			5.3	Nov 10	Aug 23 1999	
10 PERCENT EXCEEDS	18		76		196	
50 PERCENT EXCEEDS	17		18		18	
90 PERCENT EXCEEDS	6.9		6.9		15	



PASSAIC RIVER BASIN

01387250 RAMAPO RIVER AT SLOATSBURG, NY

LOCATION.--Lat 41°10'08", long 74°11'27", Rockland County, NY, Hydrologic Unit 02030103, on left bank 300 ft upstream from bridge on Washington Avenue at Sloatsburg, 600 ft downstream from unnamed tributary, 0.6 mi upstream from Stony Brook, and 4.5 mi northwest of Suffern.

DRAINAGE AREA.--60.1 mi², revised.

PERIOD OF RECORD.--September 1959 to September 1963, January 21, 1999 to September 30, 2000 (discontinued). Operated as crest-stage gage water years 1976-79.

REVISED RECORDS.--WDR-NY-79-1: 1978(M).

GAGE.--Water-stage recorder. Datum of gage is 361.86 ft above sea level. Prior to Jan. 21, 1999, datum was 1.09 ft lower.

REMARKS.--Records fair. Occasional regulation from lakes and ponds upstream from the station. Several measurements of water temperature were made during the year. Sewage effluent enters stream at Harriman and other locations upstream of gage.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 16, 1955, reached a stage of 12.2 ft (present datum), from floodmarks, (discharge at Tuxedo Park, drainage area, 57.7 mi², 5,970 ft³/s, by slope-area measurement).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	119	207	170	64	42	14	12	9.1
2	---	---	---	---	169	198	155	61	38	14	10	8.5
3	---	---	---	---	287	163	140	59	35	13	9.1	8.2
4	---	---	---	---	218	607	129	65	31	13	8.8	8.1
5	---	---	---	---	185	554	118	69	27	17	8.7	8.0
6	---	---	---	---	150	354	107	63	24	15	8.2	36
7	---	---	---	---	137	339	102	58	24	12	8.0	48
8	---	---	---	---	135	258	93	59	22	11	8.3	96
9	---	---	---	---	120	209	97	61	20	11	9.0	49
10	---	---	---	---	117	177	156	56	19	12	8.6	30
11	---	---	---	---	111	158	118	49	18	10	8.0	28
12	---	---	---	---	105	145	125	45	18	10	8.1	21
13	---	---	---	---	142	127	122	40	17	10	7.7	17
14	---	---	---	---	130	121	103	34	18	10	12	15
15	---	---	---	---	106	137	92	32	17	10	12	14
16	---	---	---	---	97	136	87	30	16	9.4	9.7	873
17	---	---	---	---	93	146	111	31	15	9.9	8.9	3660
18	---	---	---	---	149	169	103	30	16	9.6	8.4	1210
19	---	---	---	---	253	154	92	69	17	9.6	7.7	444
20	---	---	---	---	188	136	87	211	15	9.7	8.1	268
21	---	---	---	---	157	127	89	123	16	9.2	10	211
22	---	---	---	233	134	1230	83	78	16	9.2	11	186
23	---	---	---	240	112	1190	85	65	15	9.6	9.6	154
24	---	---	---	506	101	626	136	85	14	9.7	9.1	118
25	---	---	---	735	92	434	110	127	14	8.8	8.6	95
26	---	---	---	420	90	336	95	92	14	9.0	17	78
27	---	---	---	289	88	273	86	74	13	8.8	33	66
28	---	---	---	236	90	307	78	62	13	8.5	16	58
29	---	---	---	202	---	293	73	60	17	8.5	11	51
30	---	---	---	166	---	230	68	52	17	19	11	119
31	---	---	---	137	---	193	---	47	---	17	10	---
TOTAL	---	---	---	3164	3875	9734	3210	2051	598	347.5	327.6	7986.9
MEAN	---	---	---	316	138	314	107	66.2	19.9	11.2	10.6	266
MAX	---	---	---	735	287	1230	170	211	42	19	33	3660
MIN	---	---	---	137	88	121	68	30	13	8.5	7.7	8.0
CFSM	---	---	---	5.26	2.30	5.22	1.78	1.10	.33	.19	.18	4.43
IN.	---	---	---	1.96	2.40	6.03	1.99	1.27	.37	.22	.20	4.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1999, BY WATER YEAR (WY)

	MEAN	48.7	97.9	105	110	145	255	189	79.7	37.3	33.9	62.3	105
MAX	98.1	161	195	162	268	330	298	174	68.1	109	267	266	
(WY)	1960	1963	1960	1960	1961	1961	1961	1961	1961	1960	1960	1999	
MIN	10.4	29.6	48.8	60.9	46.7	118	78.3	35.0	16.2	6.38	9.86	8.35	
(WY)	1962	1962	1962	1961	1962	1960	1963	1962	1963	1962	1963	1962	

PASSAIC RIVER BASIN

75

01387250 RAMAPO RIVER AT SLOATSBURG, NY--Continued

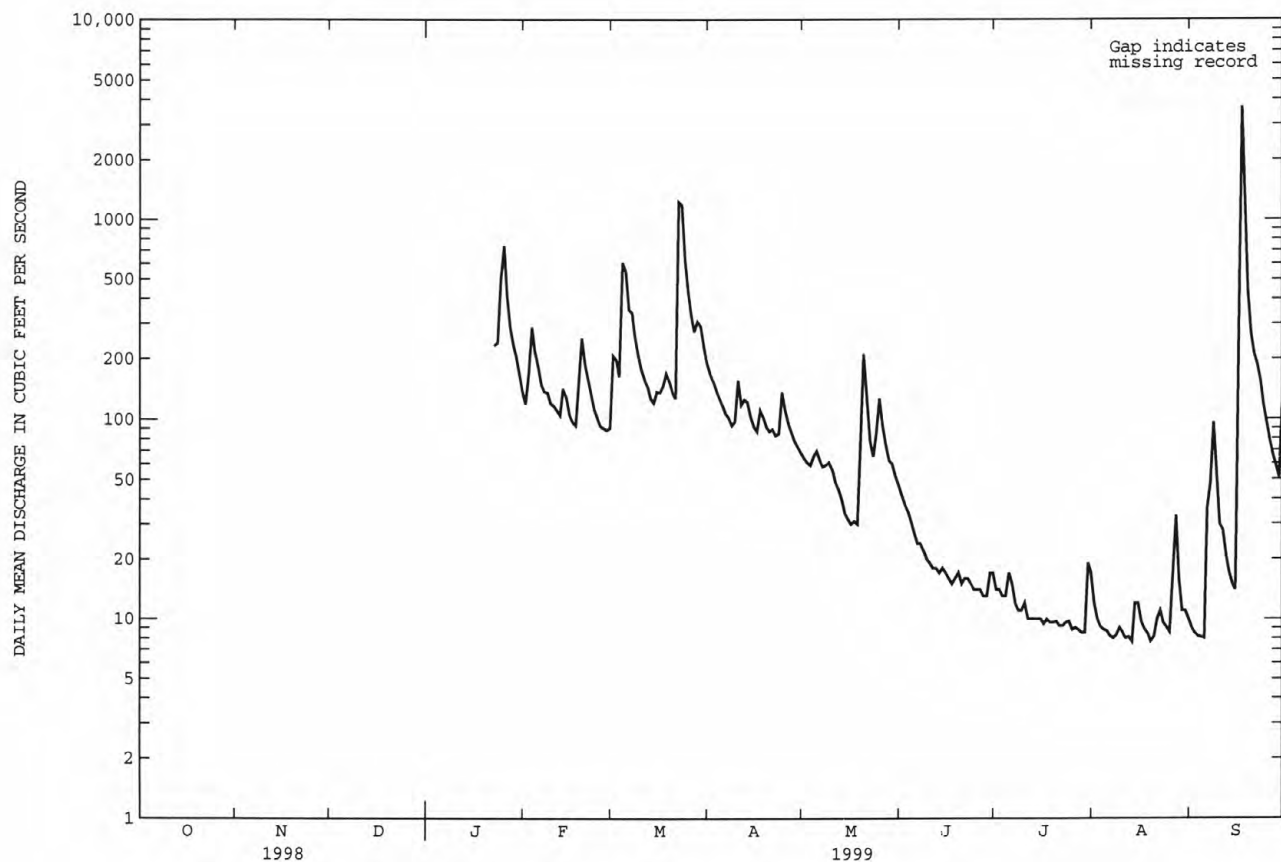
SUMMARY STATISTICS

FOR 1999 WATER YEAR

WATER YEARS 1959 - 1999

ANNUAL MEAN			105	
HIGHEST ANNUAL MEAN			162	1960
LOWEST ANNUAL MEAN			65.9	1962
HIGHEST DAILY MEAN	3660	Sep 17	3660	Sep 17 1999
LOWEST DAILY MEAN	7.7	Aug 13	4.2	Jul 11 1962
ANNUAL SEVEN-DAY MINIMUM	8.2	Aug 7	4.4	Sep 3 1963
INSTANTANEOUS PEAK FLOW	5780a	Sep 17	5780a	Sep 17 1999
INSTANTANEOUS PEAK STAGE	10.92	Sep 17	10.92	Sep 17 1999
INSTANTANEOUS LOW FLOW	7.2	Aug 13	3.7	Sep 17 1962
ANNUAL RUNOFF (CFSM)			1.75	
ANNUAL RUNOFF (INCHES)			23.71	
10 PERCENT EXCEEDS	239		254	
50 PERCENT EXCEEDS	62		56	
90 PERCENT EXCEEDS	9.1		8.4	

a From rating curve extended above 1,600 ft³/s on basis of slope area measurement at stage of 12.3 ft.



PASSAIC RIVER BASIN

01387250 RAMAPO RIVER AT SLOATSBURG, NY--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	151	48	131	65	51	373	165	140	66	130	160	30
2	95	70	113	61	48	306	150	131	60	85	140	49
3	73	383	102	64	43	255	139	120	60	66	127	39
4	81	293	97	67	43	216	172	108	52	67	156	34
5	141	202	91	112	42	189	178	99	48	58	120	30
6	124	160	90	96	41	167	145	100	138	56	93	26
7	92	141	109	78	38	147	127	90	793	41	91	25
8	73	126	95	71	37	138	114	88	582	35	82	24
9	68	109	84	63	34	131	134	81	e280	31	67	24
10	77	98	76	83	34	134	158	71	e220	32	59	23
11	96	92	82	203	37	138	156	89	170	29	68	22
12	76	83	74	162	50	344	143	79	281	26	192	22
13	64	76	69	129	45	318	127	83	243	25	145	29
14	63	68	82	112	106	240	114	147	205	24	115	31
15	64	66	200	97	251	205	107	109	182	234	152	43
16	56	63	193	84	197	184	107	83	158	399	155	38
17	49	58	164	e72	169	298	109	76	134	229	141	29
18	52	54	139	e65	146	328	160	74	122	155	105	26
19	52	54	122	e60	139	254	170	119	134	113	90	36
20	64	52	115	51	130	221	140	155	110	93	75	206
21	90	56	194	e60	116	199	143	158	90	75	63	103
22	71	54	178	e70	108	178	307	136	98	80	57	59
23	94	51	145	e80	112	161	328	124	84	66	50	45
24	101	50	126	60	133	147	434	181	67	54	61	41
25	87	50	108	49	249	134	324	186	59	49	51	37
26	74	59	92	61	416	125	261	145	60	50	44	34
27	69	261	89	e60	372	114	232	117	66	202	39	45
28	62	281	80	e65	512	264	207	100	83	215	37	38
29	59	193	74	e60	547	310	184	88	70	147	35	36
30	56	156	70	e60	---	227	159	80	201	141	32	31
31	52	---	69	e70	---	190	---	73	---	199	31	---
TOTAL	2426	3507	3453	2490	4246	6635	5394	3430	4916	3206	2833	1255
MEAN	78.3	117	111	80.3	146	214	180	111	164	103	91.4	41.8
MAX	151	383	200	203	547	373	434	186	793	399	192	206
MIN	49	48	69	49	34	114	107	71	48	24	31	22
CFSM	1.30	1.95	1.85	1.34	2.44	3.56	2.99	1.84	2.73	1.72	1.52	.70
IN.	1.50	2.17	2.14	1.54	2.63	4.11	3.34	2.12	3.04	1.98	1.75	.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2000, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1959	54.6	98.1	1960	10.4	1962
1960	102	161	1963	29.6	1962
1961	106	195	1960	48.8	1962
1962	104	162	1961	60.9	1961
1963	145	268	1961	46.7	1962
1964	249	330	1961	118	1960
1965	187	298	1961	78.3	1963
1966	84.9	174	1961	35.0	1962
1967	58.4	164	2000	16.2	1963
1968	45.4	109	1960	6.38	1962
1969	67.1	267	1960	9.86	1963
1970	94.4	266	1999	8.35	1962

PASSAIC RIVER BASIN

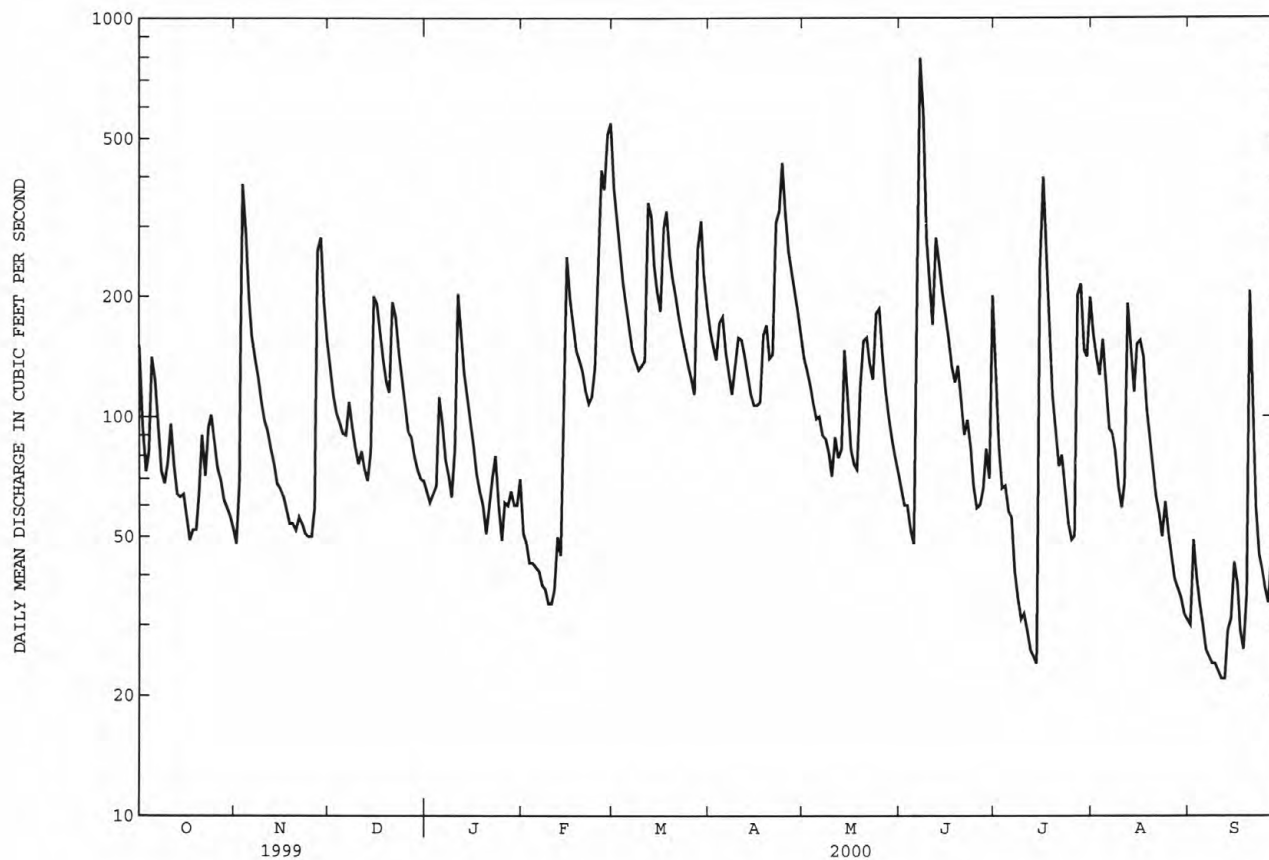
77

01387250 RAMAPO RIVER AT SLOATSBURG, NY--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1959 - 2000
ANNUAL TOTAL		43791	
ANNUAL MEAN		120	108
HIGHEST ANNUAL MEAN			162
LOWEST ANNUAL MEAN			65.9
HIGHEST DAILY MEAN	3660 Sep 17	793 Jun 7	3660 Sep 17 1999
LOWEST DAILY MEAN	7.7 Aug 13	22 Sep 11	4.2 Jul 11 1962
ANNUAL SEVEN-DAY MINIMUM	8.2 Aug 7	24 Sep 6	4.4 Sep 3 1963
INSTANTANEOUS PEAK FLOW		899 Jun 7	5780a Sep 17 1999
INSTANTANEOUS PEAK STAGE		6.62 Jun 7	10.92 Sep 17 1999
INSTANTANEOUS LOW FLOW		21 Sep 11	3.7 Sep 17 1962
ANNUAL RUNOFF (CFSM)		1.99	1.79
ANNUAL RUNOFF (INCHES)		27.11	24.38
10 PERCENT EXCEEDS	211	223	243
50 PERCENT EXCEEDS	74	92	64
90 PERCENT EXCEEDS	9.6	38	9.0

a From rating curve extended above 1,600 ft³/s on basis of slope area measurement at stage of 12.3 ft.

e Estimated



PASSAIC RIVER BASIN

01387420 RAMAPO RIVER AT SUFFERN, NY

LOCATION.--Lat 41°07'06", long 74°09'38", Rockland County, NY, Hydrologic Unit 02030103, on left bank, 145 ft downstream from highway bridge on New York State Thruway at Suffern, and 1.1 mi upstream from Mahwah River.

DRAINAGE AREA.--93.0 mi².

PERIOD OF RECORD.--June 1979 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 264.44 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow affected by diversion from United Water New York well field upstream from station and by occasional regulation by Lake Sebago. Satellite gage-height telemeter at station.

COOPERATION.--Figures of pumpage from well field provided by United Water New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft³/s, Apr. 5, 1984, gage height, 15.38 ft, from rating curve extended above 5,400 ft³/s; minimum discharge, 1.7 ft³/s, Sept. 7, 1995, gage height, 1.04 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 6,600 ft³/s, Mar. 12, 1936, by computation of flow over dam at site 0.65 mi upstream, drainage area, 90.6 mi².

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s and maximum(*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 6	1400	*1,350	*6.17	No other peak greater than base discharge.			

Minimum discharge, 16 ft³/s, Sept. 12, 13; minimum gage height, 1.53 ft, Sept. 12.

REVISIONS.--The maximum discharge for the water year 1999 has been revised to about 10,500 ft³/s, Sept. 16, 1999, gage height, 15.23 ft (backwater), based on runoff comparison with nearby stations. This figure supercedes that published in the report for 1999.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	275	80	201	100	84	571	234	183	78	147	234	30
2	178	156	164	97	75	467	207	168	70	92	202	44
3	134	634	145	101	70	387	190	151	72	71	181	51
4	170	474	141	112	68	325	287	133	61	70	228	43
5	286	333	136	198	64	285	276	121	55	62	164	36
6	249	275	143	157	61	250	214	119	238	58	119	28
7	190	231	168	126	58	214	179	107	1230	41	113	24
8	168	194	141	110	54	196	158	102	849	34	104	22
9	135	169	122	101	52	184	201	94	454	29	85	21
10	167	154	117	178	52	188	233	84	319	28	74	19
11	203	141	126	373	60	220	222	104	252	25	109	18
12	153	123	111	297	71	552	200	93	399	22	256	17
13	125	111	96	e230	66	475	171	104	358	20	184	27
14	126	105	143	e180	241	355	151	270	300	19	170	29
15	112	99	330	e160	400	301	139	168	266	464	228	52
16	98	91	324	e130	328	271	145	114	225	608	214	46
17	90	81	270	e120	281	485	154	96	181	334	190	30
18	115	74	222	e110	249	470	250	94	161	206	134	25
19	97	71	190	e88	246	367	253	171	174	136	110	52
20	128	70	199	e84	204	320	198	231	138	109	89	268
21	169	75	360	e82	175	288	232	237	110	87	74	140
22	134	72	317	e80	164	259	483	200	127	84	65	77
23	186	69	263	e75	175	227	509	181	107	73	60	56
24	188	73	219	e70	224	207	615	289	84	61	75	49
25	149	76	181	e76	392	185	470	279	71	53	65	43
26	127	99	159	e100	601	171	375	208	67	58	55	41
27	113	457	144	e90	567	151	331	162	78	327	46	55
28	101	446	130	e88	804	436	296	134	105	330	42	44
29	95	308	119	e80	790	455	261	116	83	219	38	37
30	90	246	111	70	---	332	219	103	226	212	35	32
31	85	---	106	88	---	277	---	89	---	287	33	---
TOTAL	4636	5587	5598	3951	6676	9871	7853	4705	6938	4366	3776	1456
MEAN	150	186	181	127	230	318	262	152	231	141	122	48.5
MAX	286	634	360	373	804	571	615	289	1230	608	256	268
MIN	85	69	96	70	52	151	139	84	55	19	33	17
†	8.1	9.3	9.8	9.1	8.7	9.1	9.0	9.0	9.0	9.1	9.0	8.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2000, BY WATER YEAR (WY)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	102	178	212	202	218	324	340	217	109	61.5	50.6	76.1										
MAX	389	496	693	654	475	816	862	777	269	308	305	508										
(WY)	1990	1996	1984	1996	1981	1983	1984	1989	1982	1996	1990	1999										
MIN	11.0	14.6	14.8	6.84	49.7	128	77.1	79.4	18.5	8.03	7.40	8.17										
(WY)	1985	1999	1999	1981	1980	1981	1985	1995	1999	1993	1993	1995										

e Estimated

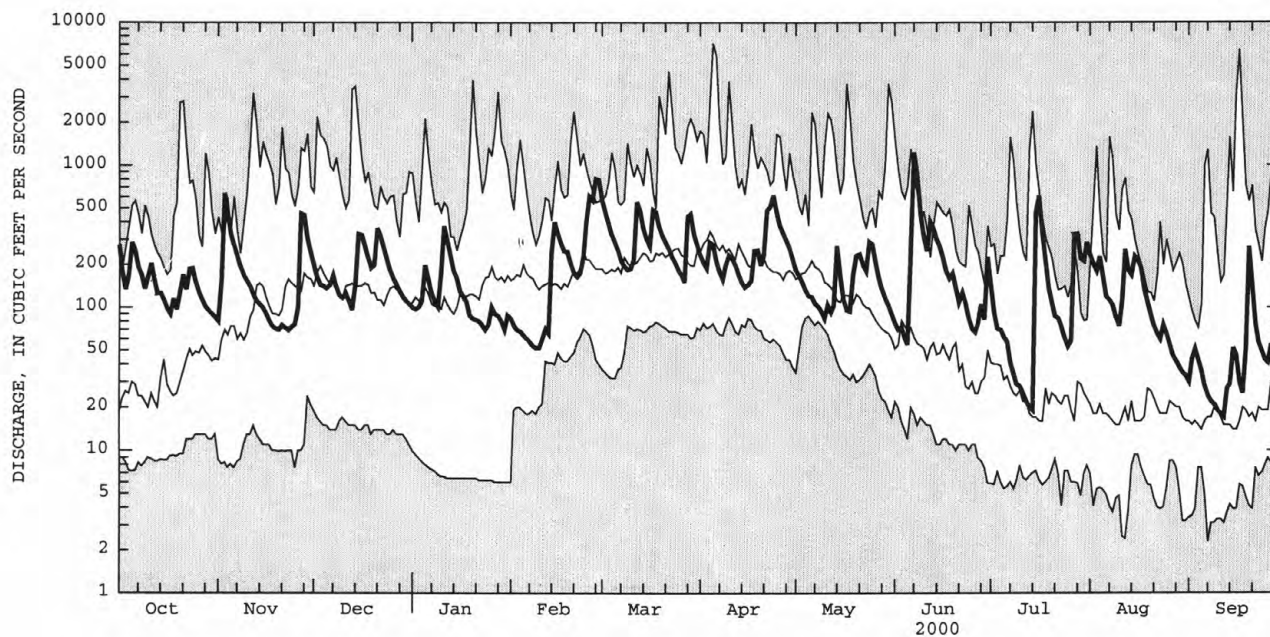
† Diversion, in cubic feet per second, by pumpage from well field upstream of station.

PASSAIC RIVER BASIN

79

01387420 RAMAPO RIVER AT SUFFERN, NY--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1979 - 2000	
ANNUAL TOTAL	69321.5		65413		174	
ANNUAL MEAN	190		179		295	
HIGHEST ANNUAL MEAN					78.2	
LOWEST ANNUAL MEAN					7110	
HIGHEST DAILY MEAN	6400	Sep 17	1230	Jun 7	2.3	Apr 5 1984
LOWEST DAILY MEAN	4.4	Aug 12	17	Sep 12	3.1	Sep 7 1995
ANNUAL SEVEN-DAY MINIMUM	4.7	Aug 7	21	Sep 7	372	
10 PERCENT EXCEEDS	353		333		91	
50 PERCENT EXCEEDS	115		141		13	
90 PERCENT EXCEEDS	9.1		52			



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
 SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

PASSAIC RIVER BASIN

01387500 RAMAPO RIVER NEAR MAHWAH, NJ

LOCATION.--Lat 41°05'51", long 74°09'48", Bergen County, Hydrologic Unit 02030103, on left bank 350 ft downstream from State Highway 17, 0.6 mi downstream from Mahwah River, and 1.0 mi west of Mahwah.

DRAINAGE AREA.--120 mi².

PERIOD OF RECORD.--October 1902 to December 1906, September 1922 to current year. October 1902 to February 1905 monthly discharge only, published in WSP 1302. Figures of daily discharge Feb. 10, 1903, to Dec. 31, 1904, published in WSP 97, 125, are unreliable and should not be used. Gage-height records for 1903-14 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 781: 1904(M). WSP 1031: 1938, 1940. WSP 1552: 1923(M), 1924, 1925-26(M), 1927-28, 1933, 1937. WRD- NJ 1971: 1968(M). WDR NJ-82-1: Drainage area. WDR-NJ-87-1: 1986.

GAGE.--Water-stage recorder. Datum of gage is 253.10 ft above sea level. Prior to Dec. 31, 1906, nonrecording gage on former bridge at site 250 ft downstream at different datum. Sept. 1, 1922 to Dec. 23, 1936, water-stage recorder just below former bridge at present datum.

REMARKS.--Records good. Flow affected by diversion from United Water New York well field upstream from station (see station 01387420). Occasional regulation from lakes and ponds upstream from the station. Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun 7	1015	*1,860	*6.71	Aug 11	1730	1,580	6.37
Jul 15	1515	1,680	6.50				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	351	110	229	130	108	674	258	224	111	163	256	67
2	226	236	194	126	96	541	230	213	102	111	222	73
3	170	826	176	130	91	439	212	195	102	89	212	82
4	250	570	174	155	89	362	364	179	94	92	259	74
5	372	387	168	252	87	310	318	167	89	80	190	62
6	302	308	177	191	83	267	244	160	404	73	149	54
7	231	258	197	157	80	232	208	150	1740	59	150	49
8	203	223	169	140	76	214	186	146	1080	51	134	47
9	171	198	149	129	73	204	235	133	518	46	114	45
10	230	184	144	256	75	208	262	126	345	46	102	44
11	255	170	153	465	86	274	247	152	270	43	390	42
12	192	151	138	337	98	681	224	134	462	40	365	42
13	160	140	124	265	90	563	194	173	402	41	219	91
14	164	134	199	214	371	405	174	428	315	37	229	65
15	146	127	401	188	510	333	164	233	276	868	275	115
16	140	118	375	165	391	292	172	169	240	734	250	81
17	138	109	299	151	324	606	184	143	204	361	217	63
18	186	102	247	132	272	562	293	154	185	221	167	53
19	141	97	215	116	269	423	281	246	194	157	146	121
20	181	97	245	113	227	361	222	292	163	134	124	312
21	223	102	459	110	199	316	305	278	137	116	106	147
22	177	101	381	118	189	280	637	236	175	107	96	83
23	231	99	303	101	201	247	628	218	134	96	93	62
24	237	108	258	100	250	227	745	396	106	83	107	61
25	192	117	217	105	454	206	556	326	92	76	98	51
26	163	159	193	125	724	200	434	249	86	102	87	52
27	149	616	178	110	672	175	378	204	98	504	78	59
28	139	542	164	105	1050	597	331	176	124	378	76	56
29	128	356	151	95	1000	554	293	155	106	233	70	47
30	121	276	143	90	---	385	256	139	217	268	65	41
31	115	---	137	112	---	306	---	124	---	301	61	---
TOTAL	6084	7021	6757	4983	8235	11444	9235	6318	8571	5710	5107	2241
MEAN	196	234	218	161	284	369	308	204	286	184	165	74.7
MAX	372	826	459	465	1050	681	745	428	1740	868	390	312
MIN	115	97	124	90	73	175	164	124	86	37	61	41
CFSM	1.64	1.95	1.82	1.34	2.37	3.08	2.57	1.70	2.38	1.53	1.37	.62
IN.	1.89	2.18	2.09	1.54	2.55	3.55	2.86	1.96	2.66	1.77	1.58	.69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2000, BY WATER YEAR (WY)

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
MEAN	143	224	273	268	281	442	401	258	152	99.1	99.3	112
MAX	954	736	873	877	701	1151	1055	994	735	602	755	641
(WY)	1904	1978	1984	1979	1970	1936	1984	1989	1972	1945	1955	1999
MIN	13.8	21.6	19.8	16.5	70.8	144	88.4	79.5	29.6	15.8	11.3	11.1
(WY)	1942	1999	1999	1981	1980	1985	1985	1905	1999	1993	1993	1964

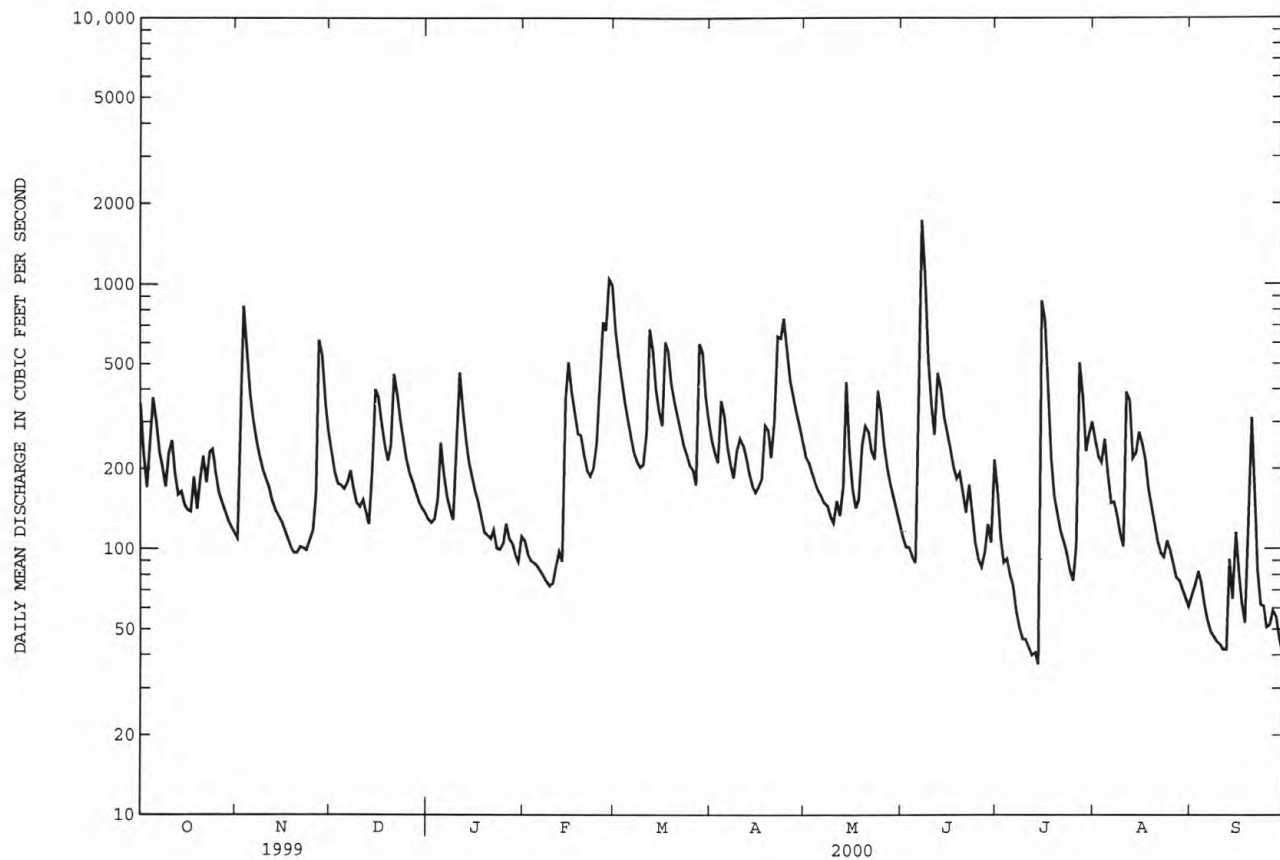
PASSAIC RIVER BASIN

81

01387500 RAMAPO RIVER NEAR MAHWAH, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1903 - 2000	
ANNUAL TOTAL	84743.1		81706		229	
ANNUAL MEAN	232		223		461	1903
HIGHEST ANNUAL MEAN					99.5	1985
LOWEST ANNUAL MEAN					8920	Oct 9 1903
HIGHEST DAILY MEAN	8330	Sep 17	1740	Jun 7	1.2	Aug 12 1993
LOWEST DAILY MEAN	9.7	Aug 7	37	Jul 14	3.7	Sep 7 1995
ANNUAL SEVEN-DAY MINIMUM	9.9	Aug 3	43	Jul 8	15500a	Apr 5 1984
INSTANTANEOUS PEAK FLOW			1860	Jun 7	13.35	Apr 5 1984
INSTANTANEOUS PEAK STAGE			6.71	Jun 7	.20	Aug 11 1993
INSTANTANEOUS LOW FLOW			36	Jul 14	1.91	
ANNUAL RUNOFF (CFSM)	1.93		1.86		25.94	
ANNUAL RUNOFF (INCHES)	26.27		25.33		505	
10 PERCENT EXCEEDS	385		404		138	
50 PERCENT EXCEEDS	149		176		27	
90 PERCENT EXCEEDS	13		76			

a From rating curve extended above 6,500 ft³/s.



PASSAIC RIVER BASIN

01387890 RAMAPO RIVER DOWNSTREAM OF POND BROOK AT OAKLAND, NJ

LOCATION.--Lat 41°01'40", long 74°15'00", Bergen County, Hydrologic Unit 02030103, on left bank at the downstream side of bridge on Interstate 287 in Oakland, 400 ft upstream of bridge on West Oakland Avenue, 100 feet upstream of the outlet stream from Ramapo Lake, 0.6 mi downstream of Pond Run, and 2.1 mi upstream from Pompton Lake.

DRAINAGE AREA.--143 mi².

PERIOD OF RECORD.--January 1999 to September 2000 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is about 204 ft above sea level (from flood study profiles).

REMARKS.--Records good, except those under 20 ft³/s, which are fair. Flow effected by pumping from groundwater wells in Oakland, Mahwah, NJ and Hillburn and Suffern NY for municipal supply. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--The following historic high-water marks have been published for the Ramapo River in vicinity of this gage: Mar. 12, 1936, 214.98 ft; Aug. 19, 1955, 215.9 ft; Oct. 16, 1955, 216.8; and Apr. 5, 1984, 217.9 ft. The Sep. 16, 1999 peak was reported to be equal to the 1984 peak by a local resident. All elevations given to mean sea level.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	268	553	412	115	78	24	5.0	14
2	---	---	---	---	514	490	377	105	71	22	7.2	11
3	---	---	---	---	864	377	337	101	65	20	6.1	10
4	---	---	---	---	624	1040	305	121	56	20	4.7	9.5
5	---	---	---	---	481	1180	272	133	48	19	3.1	8.3
6	---	---	---	---	400	818	237	122	43	17	2.9	32
7	---	---	---	---	350	817	224	109	39	14	2.8	54
8	---	---	---	---	332	616	200	124	35	13	1.7	112
9	---	---	---	---	290	487	208	136	31	11	2.2	245
10	---	---	---	---	257	420	344	118	31	10	3.3	106
11	---	---	---	---	240	376	267	102	31	10	3.2	74
12	---	---	---	---	231	330	290	90	28	10	3.2	77
13	---	---	---	---	303	278	266	82	28	9.9	4.2	64
14	---	---	---	---	274	255	214	72	30	9.4	11	50
15	---	---	---	---	220	335	183	66	30	9.3	29	41
16	---	---	---	---	193	336	173	62	26	9.2	17	e3900
17	---	---	---	---	182	340	221	60	23	8.9	9.8	e11000
18	---	---	---	---	367	380	205	58	23	8.5	7.0	e3600
19	---	---	---	---	547	357	177	214	22	8.9	8.4	e1170
20	---	---	---	---	426	298	178	481	20	9.1	9.5	e680
21	---	---	---	---	343	289	191	302	25	8.8	7.9	e520
22	---	---	---	---	282	2800	174	184	30	8.0	7.5	e460
23	---	---	---	---	235	2990	187	157	24	7.8	6.1	e370
24	---	---	---	---	207	1590	282	256	21	9.1	4.9	e290
25	---	---	---	---	184	1090	230	378	20	8.7	4.6	e250
26	---	---	---	---	176	836	194	258	18	8.7	225	e210
27	---	---	---	---	166	694	168	189	17	7.4	84	e190
28	---	---	---	---	230	753	152	148	17	6.2	34	e165
29	---	---	---	481	---	740	138	120	23	4.9	20	e150
30	---	---	---	401	---	567	129	101	46	4.2	22	e360
31	---	---	---	336	---	468	---	88	---	4.8	18	---
TOTAL	---	---	---	1218	9186	22900	6935	4652	999	341.8	575.3	24222.8
MEAN	---	---	---	406	328	739	231	150	33.3	11.0	18.6	807
MAX	---	---	---	481	864	2990	412	481	78	24	225	11000
MIN	---	---	---	336	166	255	129	58	17	4.2	1.7	8.3
CFSM	---	---	---	2.84	2.29	5.17	1.62	1.05	.23	.08	.13	5.65
IN.	---	---	---	.32	2.39	5.96	1.80	1.21	.26	.09	.15	6.30

PASSAIC RIVER BASIN

83

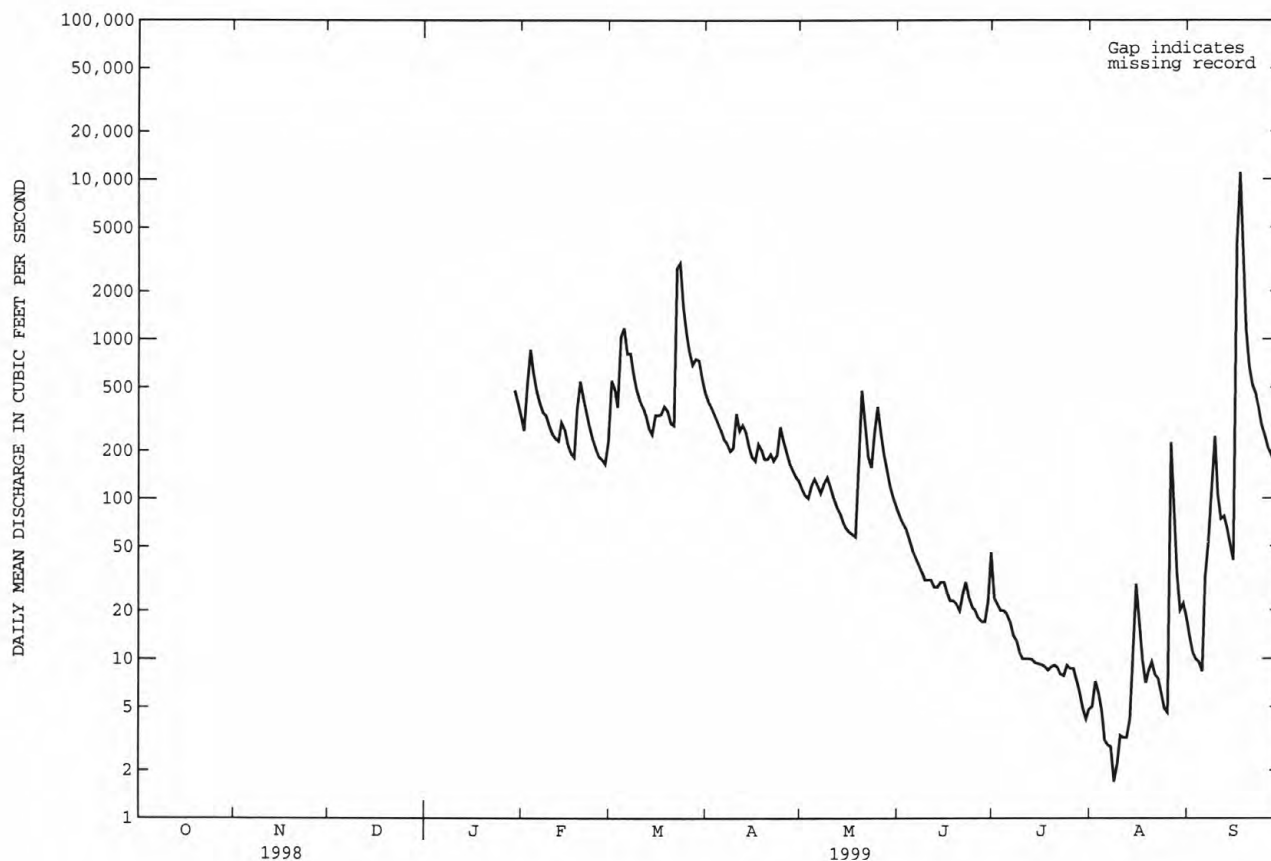
01387890 RAMAPO RIVER DOWNSTREAM OF POND BROOK AT OAKLAND, NJ--Continued

SUMMARY STATISTICS

FOR PERIOD JAN. 28
TO SEPT. 30, 1999

HIGHEST DAILY MEAN	11000	Sep 17
LOWEST DAILY MEAN	1.7	Aug 8
ANNUAL SEVEN-DAY MINIMUM	2.7	Aug 5
INSTANTANEOUS PEAK FLOW	12500	Sep 17
INSTANTANEOUS PEAK STAGE	13.18a	Sep 17
INSTANTANEOUS LOW FLOW	1.6	Aug 8
10 PERCENT EXCEEDS	516	
50 PERCENT EXCEEDS	122	
90 PERCENT EXCEEDS	7.9	

a From high-water marks near gage
e estimate



PASSAIC RIVER BASIN

01387890 RAMAPO RIVER DOWNSTREAM OF POND BROOK AT OAKLAND, NJ--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e420	126	273	160	138	863	344	274	133	194	368	71
2	e280	197	235	153	121	675	319	256	121	133	312	80
3	e210	926	212	155	113	541	292	236	121	106	273	90
4	e280	756	207	169	111	441	453	212	107	107	347	92
5	e420	469	201	299	108	379	423	197	103	95	256	81
6	e350	366	206	238	103	330	330	181	425	84	195	66
7	e270	307	238	194	99	292	281	166	1830	71	193	59
8	e240	268	204	173	94	271	254	164	1470	59	168	54
9	e200	238	180	158	90	259	295	151	754	53	145	51
10	e250	224	171	262	92	266	327	133	467	49	126	49
11	e300	204	187	561	103	314	310	171	337	46	280	47
12	e240	183	168	421	122	768	294	145	539	42	613	46
13	e210	174	149	328	113	732	258	162	555	41	299	95
14	e200	166	214	277	418	513	232	540	416	38	295	79
15	e180	158	453	220	639	416	219	301	361	742	407	143
16	e170	148	449	209	492	364	234	203	315	1030	317	102
17	155	134	359	175	409	688	239	166	265	471	279	76
18	220	124	296	157	346	729	366	162	231	294	214	64
19	175	118	260	149	333	535	368	273	240	193	185	88
20	205	116	273	143	293	447	304	343	205	156	155	354
21	262	120	564	138	260	392	362	347	170	135	131	217
22	219	118	456	123	244	352	818	299	226	116	116	130
23	270	114	361	130	257	317	800	276	177	108	108	97
24	277	119	307	128	303	293	911	525	137	91	125	98
25	233	134	265	130	492	270	733	447	116	82	118	85
26	197	160	237	153	806	272	557	327	105	99	102	83
27	177	676	227	135	805	238	476	263	108	684	91	97
28	166	683	224	112	1070	687	417	219	144	536	87	85
29	153	429	201	118	1190	739	370	190	122	317	88	79
30	153	325	184	113	---	499	322	169	207	447	78	68
31	141	---	172	136	---	391	---	151	---	429	74	---
TOTAL	7223	8280	8133	6017	9764	14273	11908	7649	10507	7048	6545	2826
MEAN	233	276	262	194	337	460	397	247	350	227	211	94.2
MAX	420	926	564	561	1190	863	911	540	1830	1030	613	354
MIN	141	114	149	112	90	238	219	133	103	38	74	46
CFSM	1.63	1.93	1.83	1.36	2.35	3.22	2.78	1.73	2.45	1.59	1.48	.66
IN.	1.88	2.15	2.12	1.57	2.54	3.71	3.10	1.99	2.73	1.83	1.70	.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2000, BY WATER YEAR (WY)

	1999	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
MEAN	233	276	262	194	332	600	314	198	192	119	115	451
MAX	233	276	262	194	337	739	397	247	350	227	211	807
(WY)	2000	2000	2000	2000	2000	1999	2000	2000	2000	2000	2000	1999
MIN	233	276	262	194	328	460	231	150	33.3	11.0	18.6	94.2
(WY)	2000	2000	2000	2000	1999	2000	1999	1999	1999	1999	1999	2000

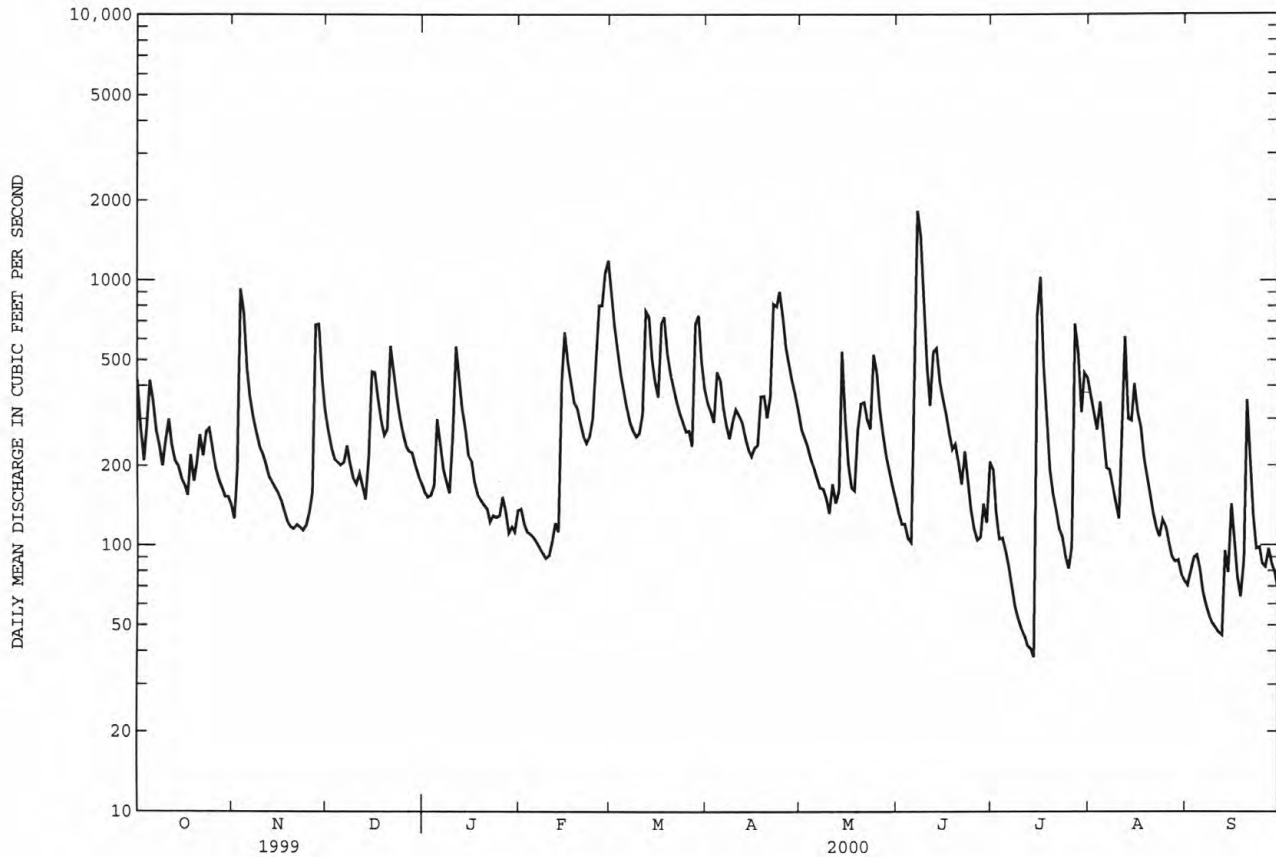
PASSAIC RIVER BASIN

85

01387890 RAMAPO RIVER DOWNSTREAM OF POND BROOK AT OAKLAND, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1999 - 2000	
ANNUAL TOTAL			100173			
ANNUAL MEAN			274		274	
HIGHEST ANNUAL MEAN					274	2000
LOWEST ANNUAL MEAN					274	2000
HIGHEST DAILY MEAN	11000	Sep 17	1830	Jun 7	11000	Sep 17 1999
LOWEST DAILY MEAN	1.7	Aug 8	38	Jul 14	1.7	Aug 8 1999
ANNUAL SEVEN-DAY MINIMUM	2.7	Aug 5	47	Jul 8	2.7	Aug 5 1999
INSTANTANEOUS PEAK FLOW			1970	Jun 7	12500	Sep 17 1999
INSTANTANEOUS PEAK STAGE			5.34	Jun 7	13.18a	Sep 17 1999
INSTANTANEOUS LOW FLOW			37	Jul 14	1.6	Aug 8 1999
ANNUAL RUNOFF (CFSM)			1.91		1.91	
ANNUAL RUNOFF (INCHES)			26.06		26.01	
10 PERCENT EXCEEDS	481		535		524	
50 PERCENT EXCEEDS	180		216		193	
90 PERCENT EXCEEDS	8.9		91		20	

a From high-water marks near gage
e estimate



LOCATION.--Lat 40°59'33", long 74°16'44", Passaic County, Hydrologic Unit 02030103, on right end of dam at pumping station in Pompton Lakes, 450 ft upstream from bridge on Paterson-Hamburg Turnpike, and 2.0 mi upstream from mouth. Water samples collected upstream from dam at water-supply intake, on right bank. Water-quality monitor is 450 ft downstream from dam.

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

REVISED RECORDS.--WSP 1552: 1922 (M), 1924-25, 1929-31 (M), 1934-35 (M), WRD-NJ 1970: 1968-69, WRD-NJ 1988: 1984 (M).

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 190.96 ft above sea level. Prior to October 1, 1981, at datum 10.00 ft higher.

REMARKS.--Records good. Diversion by North Jersey District Water Supply Commission to Wanaque Reservoir since December 1953 (see Passaic River basin, diversions) and to Oradell Reservoir by United Water New Jersey since February 1985 (see Hackensack River basin, diversions) for municipal supply. Slight regulation by Pompton Lake, capacity, 300,000,000 gal. Several measurements of water temperature, other than those published, were made during the year. National Weather Service telephone telemeter at station. Satellite telemeter at auxiliary station 450 ft below station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1.600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun 7	1630	*1,940	*11.45	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	484	154	324	214	190	882	404	338	181	251	454	77
2	343	195	276	202	167	695	378	314	162	177	394	84
3	260	813	245	203	154	572	355	296	155	137	347	95
4	323	774	237	221	153	484	498	271	142	127	413	100
5	488	521	233	362	143	423	489	254	136	119	339	89
6	439	421	237	323	133	374	396	237	357	101	263	74
7	342	356	274	262	129	337	344	222	1760	88	252	66
8	299	307	243	234	121	314	311	216	1550	74	224	61
9	255	272	214	214	113	304	351	203	837	64	193	64
10	300	260	201	275	111	308	392	182	543	61	160	65
11	383	236	214	638	114	339	375	217	409	56	176	62
12	300	214	197	527	139	743	362	199	551	51	685	61
13	251	204	178	418	136	766	322	213	619	51	382	118
14	239	196	220	356	401	562	296	564	487	49	322	105
15	213	189	508	283	696	466	281	391	430	569	489	180
16	199	177	528	275	568	415	296	270	380	1030	387	142
17	197	161	442	231	479	665	298	220	325	557	352	103
18	261	147	363	195	416	753	420	210	279	382	282	85
19	225	137	316	197	394	582	440	313	282	260	240	90
20	239	132	314	198	352	498	378	406	254	207	202	377
21	313	135	621	185	314	442	399	420	219	175	167	301
22	278	137	556	159	290	401	841	368	276	144	141	180
23	318	129	451	173	300	366	834	340	226	133	129	132
24	341	134	391	170	345	346	920	553	175	111	141	125
25	290	153	345	176	507	323	787	526	146	97	142	115
26	247	175	307	201	797	329	616	401	130	107	122	103
27	219	634	290	186	837	291	537	332	128	640	112	121
28	204	742	291	155	1020	672	484	282	167	609	106	107
29	188	511	266	162	1160	788	433	252	157	395	104	102
30	179	393	241	155	---	567	388	225	212	538	93	86
31	175	---	230	181	---	459	---	203	---	528	81	---
TOTAL	8792	9009	9753	7731	10679	15466	13625	9438	11675	7888	7894	3470
MEAN	284	300	315	249	368	499	454	304	389	254	255	116
MAX	488	813	621	638	1160	882	920	564	1760	1030	685	377
MIN	175	129	178	155	111	291	281	182	128	49	81	61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2000, BY WATER YEAR (WY)

MEAN	150	267	321	325	352	550	514	347	206	136	133	147
MAX	1154	954	1181	1035	838	1670	1465	1195	973	895	889	811
(WY)	1956	1933	1997	1979	1970	1936	1983	1989	1972	1945	1955	1999
MIN	13.6	21.3	12.8	27.5	83.0	67.8	24.9	72.0	39.9	5.89	6.17	10.8
(WY)	1981	1999	1981	1981	1969	1985	1985	1965	1965	1985	1985	1964

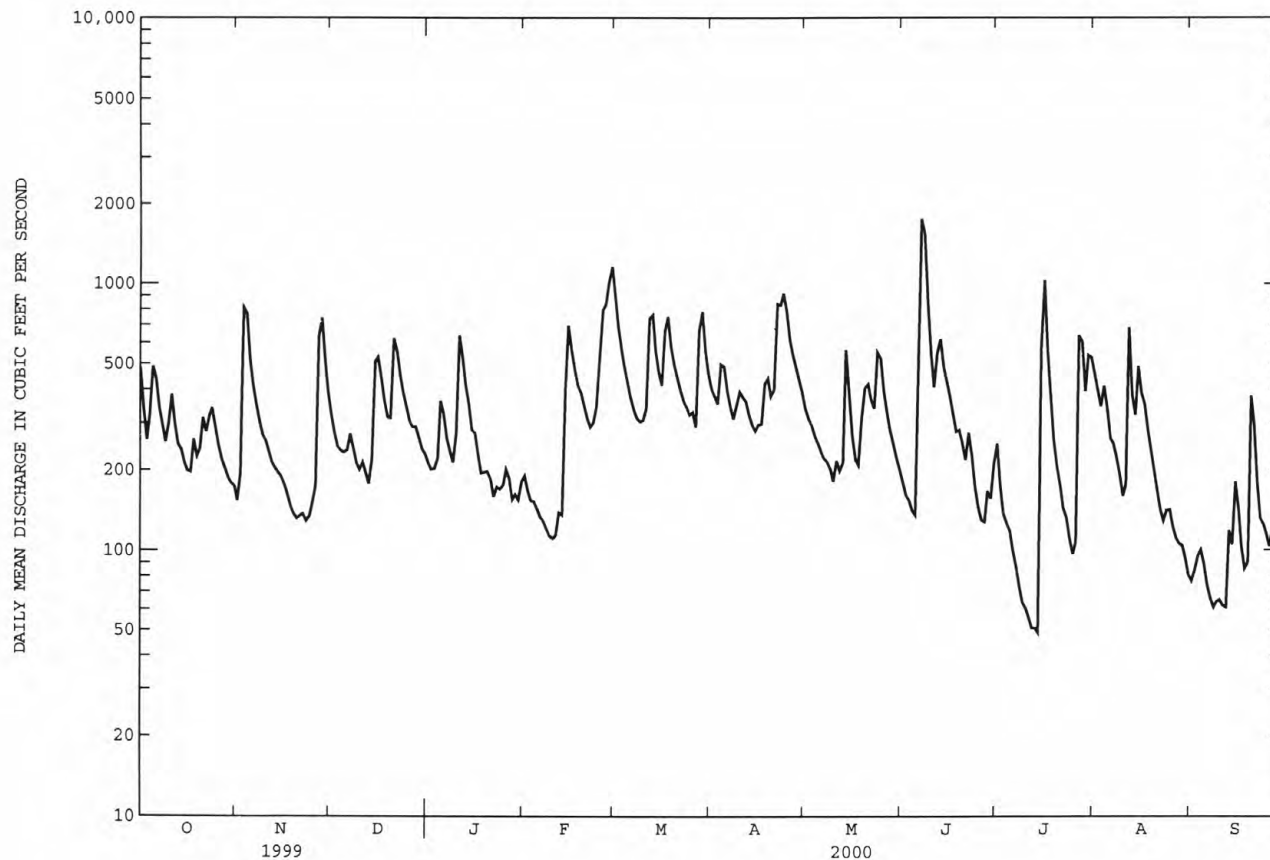
PASSAIC RIVER BASIN

87

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1922 - 2000
ANNUAL TOTAL	107528.9	115420	
ANNUAL MEAN	295	315	287
HIGHEST ANNUAL MEAN			512 1984
LOWEST ANNUAL MEAN			73.1 1985
HIGHEST DAILY MEAN	10700 Sep 17	1760 Jun 7	10700 Sep 17 1999
LOWEST DAILY MEAN	3.4 Aug 10	49 Jul 14	.00 Oct 1 1922
ANNUAL SEVEN-DAY MINIMUM	4.5 Aug 4	58 Jul 8	.00 Dec 1 1980
INSTANTANEOUS PEAK FLOW		1940 Jun 7	15400 Apr 5 1984
INSTANTANEOUS PEAK STAGE		11.45 Jun 7	15.21a Apr 5 1984
INSTANTANEOUS LOW FLOW		47 Jul 13	.00 many days
10 PERCENT EXCEEDS	526	567	641
50 PERCENT EXCEEDS	197	270	163
90 PERCENT EXCEEDS	15	111	35

a From gage well, outside high-water marks at 15.33 ft.



LOCATION.--Lat 40°58'09", long 74°16'56", Passaic County, Hydrologic Unit 02030103, on left bank just upstream of the Passaic Valley Water Commission pumping station, 800 ft below 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.

PERIOD OF RECORD.--March 1903 to December 1904, May 1940 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 160.00 ft above sea level. 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.

COOPERATION.--Gage-height record collected in cooperation with Passaic Valley Water Commission.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun 8	0015	*3,710	*12.20	No other peak greater than base discharge.			

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	666	193	434	256	e288	1320	843	628	295	338	1060	134
2	404	329	367	243	e258	1100	750	544	267	243	924	142
3	313	1270	336	251	e243	1030	673	456	258	198	824	154
4	423	1140	327	267	e240	978	1020	387	222	198	943	157
5	712	813	323	472	e228	863	1070	354	195	177	736	143
6	598	644	327	378	e219	749	840	330	629	154	509	119
7	410	502	365	295	e214	643	665	310	3200	139	470	107
8	351	413	329	265	e194	581	532	309	3140	120	387	102
9	303	365	292	240	e176	590	755	294	1970	110	335	118
10	381	342	280	385	e160	627	749	272	1310	105	278	120
11	498	319	302	948	170	734	682	306	963	98	315	116
12	362	291	281	734	201	1540	729	283	1300	91	1170	113
13	318	278	255	538	190	1470	566	301	1630	88	1200	213
14	310	267	335	419	733	1120	432	1080	1310	86	1020	171
15	270	256	801	325	1110	948	386	836	1100	1280	1210	285
16	249	239	814	324	912	851	431	484	934	2460	961	207
17	243	219	653	e290	790	1430	497	337	769	1640	778	159
18	347	199	518	e270	684	1530	848	325	655	1030	556	139
19	287	189	426	e277	663	1210	914	606	658	636	440	166
20	320	186	445	e275	566	1140	729	920	504	410	352	538
21	410	188	952	e252	470	1040	824	973	374	324	288	413
22	351	189	808	e223	428	921	1860	853	569	271	244	246
23	448	185	633	e240	445	796	1990	771	441	238	226	196
24	441	191	505	e237	555	687	1980	1220	328	193	249	192
25	365	213	411	e250	855	595	1660	1190	266	173	242	185
26	313	256	366	e283	1220	679	1360	946	233	212	204	192
27	284	1010	342	e262	1240	546	1170	718	229	1490	177	207
28	262	1060	339	e228	1510	1310	1040	534	284	1370	181	186
29	242	757	313	e240	1660	1540	942	418	260	922	187	176
30	226	563	288	e237	---	1190	861	363	305	1420	155	160
31	219	---	273	e278	---	972	---	333	---	1320	135	---
TOTAL	11326	13066	13440	10182	16622	30730	27798	17681	24598	17534	16756	5556
MEAN	365	436	434	328	573	991	927	570	820	566	541	185
MAX	712	1270	952	948	1660	1540	1990	1220	3200	2460	1210	538
MIN	219	185	255	223	160	546	386	272	195	86	135	107

MEAN	290	417	528	519	570	936	963	625	379	240	216	231
MAX	2369	1417	2245	1777	1654	2477	2995	2778	2177	1530	1520	1067
(WY)	1904	1956	1997	1996	1973	1983	1983	1989	1972	1945	1955	1999
MIN	40.2	52.3	34.8	39.2	149	118	62.7	110	62.9	34.2	34.2	46.7
(WY)	1981	1981	1981	1981	1969	1981	1985	1965	1965	1965	1966	1980

PASSAIC RIVER BASIN

89

01388500 POMPTON RIVER AT POMPTON PLAINS, NJ--Continued

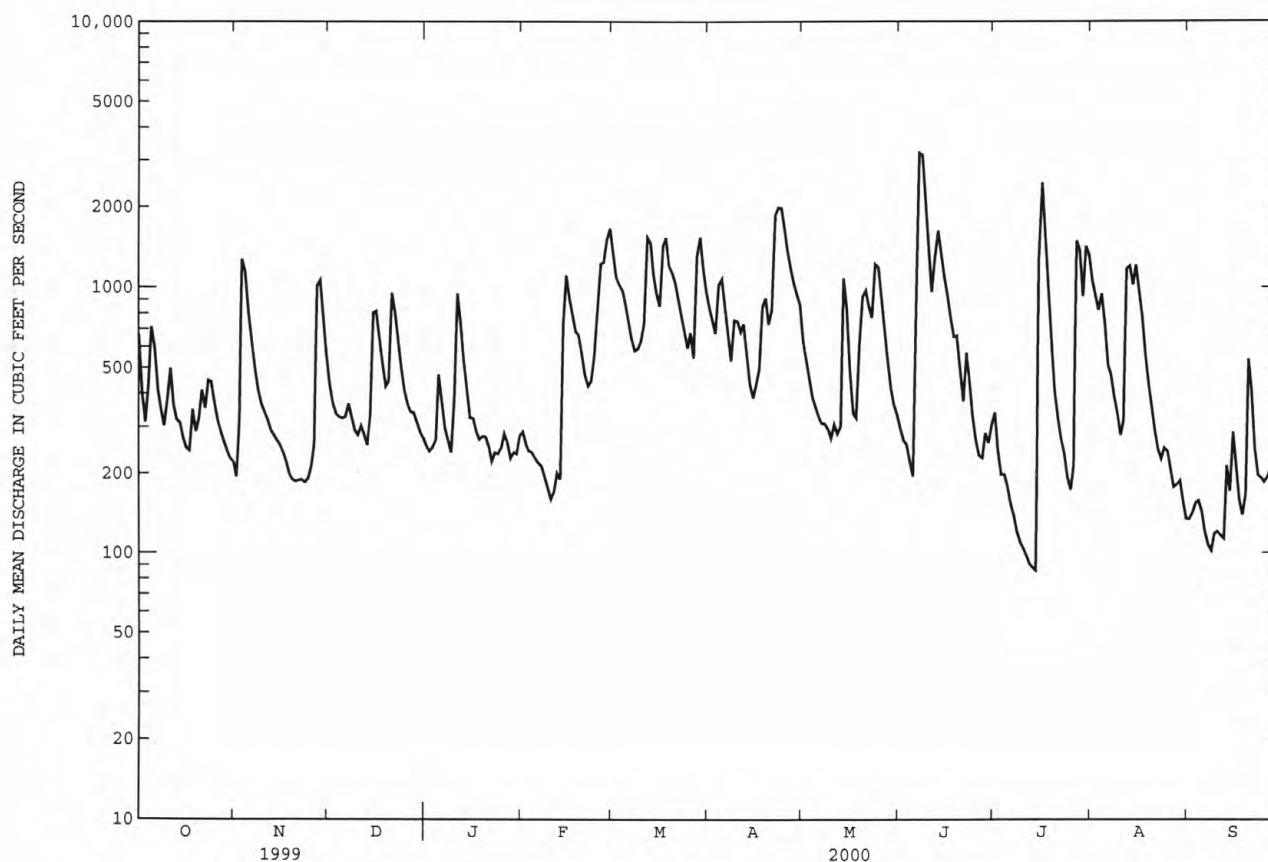
SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1903 - 2000	
ANNUAL TOTAL	161405		205289		491	
ANNUAL MEAN	442		561		906	
HIGHEST ANNUAL MEAN					117	
LOWEST ANNUAL MEAN					28300	
HIGHEST DAILY MEAN	13600	Sep 17	3200	Jun 7	28300	Oct 10 1903
LOWEST DAILY MEAN	27	Aug 25	86	Jul 14	.00	Aug 18 1904
ANNUAL SEVEN-DAY MINIMUM	30	Aug 4	100	Jul 8	1.7	Aug 14 1904
INSTANTANEOUS PEAK FLOW			3710	Jun 8	28300a	Oct 10 1903
INSTANTANEOUS PEAK STAGE			12.20	Jun 8	14.3bc	Oct 10 1903
INSTANTANEOUS LOW FLOW			82	Jul 14	.00	Aug 18 1904
10 PERCENT EXCEEDS	875		1190		1150	
50 PERCENT EXCEEDS	278		366		246	
90 PERCENT EXCEEDS	40		184		72	

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.

e Estimated



PASSAIC RIVER BASIN

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ

LOCATION.--Lat 40°53'05", long 74°13'35", Passaic County, Hydrologic Unit 02030103, on left bank 0.6 mi downstream from Beatties Dam in Little Falls, and 1.0 mi upstream from Peckman River.

DRAINAGE AREA.--762 mi². Area at site used prior to Oct. 1, 1955, 799 mi².

PERIOD OF RECORD.--September 1897 to current year. Monthly discharge only for September 1897, published in WSP 1302. Published as "at Paterson", September 1897 to September 1955.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 120.00 ft above sea level (levels by Passaic Valley Water Commission). Prior to Jan. 8, 1933, nonrecording gage and Jan. 8, 1933, to Sept. 30, 1955, water-stage recorder, at site 3.7 mi downstream at sea level (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good. Diurnal fluctuation at medium and low flow caused by hydroelectric plant at Beatties Dam. Flow regulated by reservoirs in Rockaway, Pequannock, Wanaque, and Ramapo River subbasins (see Passaic River basin, reservoirs in). Large diversions for municipal supply from Passaic River above Beatties Dam, and from Rockaway, Pequannock, Pompton, Ramapo, and Wanaque Rivers (see Passaic River basin, diversions and Hackensack River basin, diversions). In addition, the New Jersey-American Water Company (formerly Commonwealth Water Co.) diverts from Canoe Brook near Summit and from Passaic River (see Passaic River basin, diversions); that company, the city of East Orange, and others also divert water for municipal supply by pumping wells in the basin. Several measurements of water temperature, other than those published, were made during the year. National Weather Service rain- gage and gage-height telemetry and USGS satellite telemeters at station.

COOPERATION.--Gage-height record collected in cooperation with the Passaic Valley Water Commission.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
------	------	-----------------------------------	---------------------	------	------	-----------------------------------	---------------------

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	232	1050	536	457	1910	1490	1170	687	506	1910	308
2	846	401	799	515	431	1710	1310	952	554	417	1670	528
3	634	1230	632	527	388	1540	1160	854	410	331	1500	584
4	662	1430	522	572	382	1430	1240	774	322	314	1580	563
5	1040	1250	481	857	371	1250	1440	710	333	295	1430	524
6	986	1000	564	911	358	1170	1360	591	699	265	1230	382
7	791	790	713	820	341	970	1160	521	2450	231	1020	291
8	649	628	742	715	327	892	974	544	3060	205	825	254
9	555	540	750	621	240	784	1020	542	2710	173	685	263
10	619	497	724	784	154	772	1110	497	2000	175	592	275
11	812	446	571	1340	207	851	1070	571	1410	172	628	243
12	769	391	516	1430	316	1490	1050	599	1430	141	1310	235
13	657	372	429	1370	341	1840	989	480	1890	137	1870	372
14	620	338	564	1240	1020	1730	891	847	1940	136	2080	386
15	562	313	1060	989	1550	1590	804	1040	1800	1070	2710	591
16	484	294	1220	817	1600	1440	827	815	1630	2290	3140	594
17	469	251	1210	666	1610	1770	923	577	1380	2160	3100	434
18	659	235	1100	449	1550	2070	1190	564	1120	1680	2800	338
19	630	200	967	706	1510	2000	1390	1040	963	1220	2450	385
20	659	169	873	738	1420	1940	1350	1440	842	800	2080	701
21	837	199	1210	699	1300	1850	1380	1650	695	565	1720	762
22	745	219	1280	500	1190	1710	2110	1680	821	461	1400	542
23	761	215	1200	461	1100	1530	2490	1660	861	402	1100	407
24	782	240	1070	427	1090	1360	2670	1960	748	323	850	364
25	685	272	903	412	1210	1180	2660	2070	578	283	666	350
26	557	391	718	448	1480	1100	2410	1940	465	396	535	358
27	479	1120	586	451	1620	1030	2130	1760	327	1640	452	438
28	394	1410	600	377	1810	1590	1880	1570	418	1990	403	417
29	342	1350	643	380	2000	1980	1660	1370	444	1770	516	360
30	301	1220	597	368	---	1900	1420	1120	397	2020	491	283
31	277	---	556	418	---	1690	---	864	---	2140	341	---
TOTAL	20333	17643	24850	21544	27373	46069	43558	32772	33384	24708	43084	12532
MEAN	656	588	802	695	944	1486	1452	1057	1113	797	1390	418
MAX	1070	1430	1280	1430	2000	2070	2670	2070	3060	2290	3140	762
MIN	277	169	429	368	154	772	804	480	322	136	341	235

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2000, BY WATER YEAR (WY)

	MEAN	621	932	1257	1341	1432	2352	2073	1313	767	532	543	535
MAX	5613	4757	4497	4039	3787	6755	5761	4554	4290	3124	2859	3561	
(WY)	1904	1908	1903	1979	1973	1936	1983	1989	1972	1945	1942	1971	
MIN	44.5	56.5	44.8	104	178	423	228	227	64.5	60.3	30.4	28.9	
(WY)	1931	1999	1999	1981	1901	1981	1985	1965	1999	1954	1923	1964	

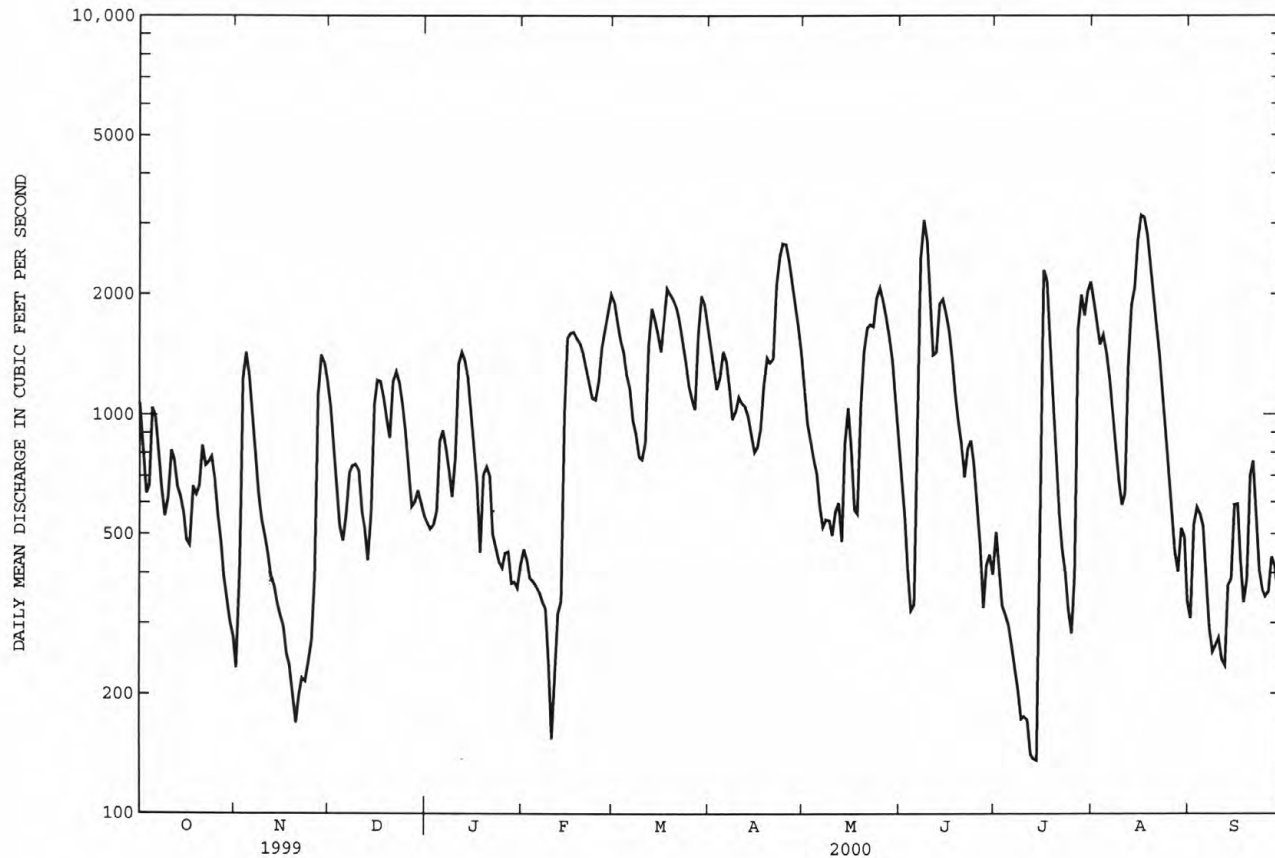
PASSAIC RIVER BASIN

91

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1898 - 2000	
ANNUAL TOTAL	301225		347850		1140	
ANNUAL MEAN	825		950		2394	
HIGHEST ANNUAL MEAN					269	
LOWEST ANNUAL MEAN					1903	
HIGHEST DAILY MEAN	11300	Sep 18	3140	Aug 16	28000	Oct 10 1903
LOWEST DAILY MEAN	32	Jan 2	136	Jul 14	.00	Jul 3 1904
ANNUAL SEVEN-DAY MINIMUM	43	Aug 4	163	Jul 8	13	Sep 19 1932
INSTANTANEOUS PEAK FLOW			3210	Aug 16	31700a	Oct 10 1903
INSTANTANEOUS PEAK STAGE			4.86	Aug 16	----	
INSTANTANEOUS LOW FLOW			28	Nov 20	.00	Jul 3 1904
10 PERCENT EXCEEDS	1610		1870		2760	
50 PERCENT EXCEEDS	564		778		631	
90 PERCENT EXCEEDS	53		314		122	

a Present site.



PASSAIC RIVER BASIN

01390500 SADDLE RIVER AT RIDGEWOOD, NJ

LOCATION.--Lat 40°59'06", long 74°05'27", Bergen County, Hydrologic Unit 02030103, on left bank 15 ft upstream from bridge on State Highway 17 in Ridgewood and 2.8 mi upstream from Hohokus Brook.

DRAINAGE AREA.--21.6 mi².

PERIOD OF RECORD.--October 1954 to September 1974, October 1977 to current year. Operated as a maximum-stage gage water years 1975- 77.

REVISED RECORDS.--WRD-NJ 1974: 1971.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 71.74 ft above sea level (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records fair except estimated daily discharges which are poor. The flow past this station is effected by pumpage from wells by United Water New Jersey and others. Several measurements of water temperature were made during the year. Satellite telemeter at station.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of July 23, 1945, reached a discharge of 6,400 ft³/s, at site 1.6 mi upstream, drainage area, 19.1 mi², by slope-area measurement.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 2	2315	389	3.82	Jul 15	1545	542	4.35
Apr 21	2215	381	3.79	Jul 27	0930	438	4.00
Jun 6	1500	418	3.93	Jul 30	1015	580	4.47
Jun 7	0415	452	4.05	Aug 11	2230	*998	*5.65

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	20	18	14	15	21	29	25	17	9.9	36	14
2	15	97	17	14	13	20	28	26	17	8.5	29	16
3	14	111	17	14	13	18	27	23	17	8.0	35	15
4	49	30	18	17	13	17	62	22	15	9.4	46	20
5	37	21	17	37	12	17	35	21	14	7.8	22	15
6	18	19	22	17	12	16	30	20	168	7.0	19	13
7	15	18	22	16	12	16	26	19	208	6.7	24	13
8	14	e18	17	16	12	16	23	27	45	6.1	17	12
9	14	e18	16	16	11	17	32	18	32	5.9	19	13
10	29	e17	16	97	12	17	26	19	27	5.9	17	14
11	21	e17	16	54	14	65	24	30	24	5.3	191	12
12	15	e17	15	23	16	76	23	19	49	4.8	98	11
13	14	e17	15	19	13	29	20	29	42	4.5	38	35
14	16	e17	47	e17	147	21	20	110	28	12	59	15
15	13	e17	48	e16	51	19	20	27	26	245	47	59
16	13	e17	26	16	25	19	25	21	23	50	48	18
17	15	e16	19	16	23	75	29	19	20	23	31	14
18	40	15	17	16	19	28	45	24	23	27	25	13
19	16	14	16	15	19	23	27	56	20	16	24	33
20	27	15	35	15	18	21	22	44	16	13	21	33
21	22	15	58	14	17	20	94	34	14	12	19	e12
22	16	14	23	15	18	19	113	26	38	10	17	e12
23	26	15	19	14	21	19	64	22	16	9.0	20	e13
24	20	18	18	13	26	18	53	108	13	8.5	22	e16
25	16	17	17	14	34	18	39	38	11	8.3	18	e18
26	15	48	16	14	29	24	35	27	11	36	17	23
27	15	148	16	e13	23	19	33	23	13	216	16	e24
28	16	33	16	13	39	132	32	21	13	42	21	e18
29	15	22	15	12	24	47	29	19	11	20	18	e16
30	15	19	15	12	---	35	27	18	17	151	15	e15
31	16	---	15	17	---	31	---	18	---	44	15	---
TOTAL	608	880	662	616	701	933	1092	953	988	1032.6	1044	555
MEAN	19.6	29.3	21.4	19.9	24.2	30.1	36.4	30.7	32.9	33.3	33.7	18.5
MAX	49	148	58	97	147	132	113	110	208	245	191	59
MIN	13	14	15	12	11	16	20	18	11	4.5	15	11
CFSM	.91	1.36	.99	.92	1.12	1.39	1.69	1.42	1.52	1.54	1.56	.86
IN.	1.05	1.52	1.14	1.06	1.21	1.61	1.88	1.64	1.70	1.78	1.80	.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2000, BY WATER YEAR (WY)

	MEAN	21.6	33.6	35.5	36.5	40.0	54.4	57.9	42.3	27.1	20.2	19.2	19.1
MAX	104	109	109	115	86.9	104	152	118	121	87.6	77.1	87.4	
(WY)	1956	1978	1973	1979	1961	1983	1983	1989	1972	1984	1955	1999	
MIN	5.79	8.00	5.86	6.43	11.8	15.6	11.0	12.4	6.08	2.27	2.69	2.34	
(WY)	1983	1999	1999	1981	1980	1985	1985	1995	1999	1999	1995	1980	

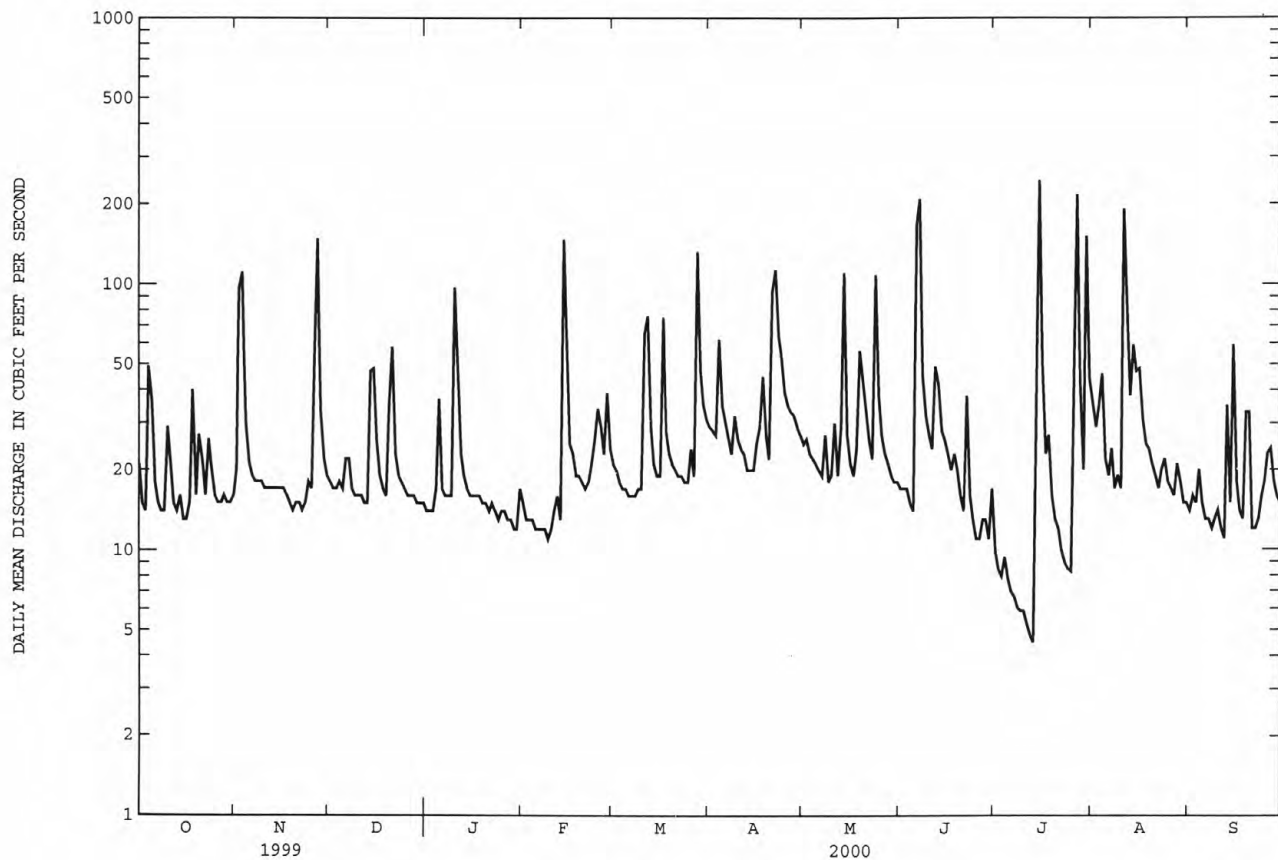
PASSAIC RIVER BASIN

93

01390500 SADDLE RIVER AT RIDGEWOOD, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1955 - 2000
ANNUAL TOTAL	11541.79	10064.6	
ANNUAL MEAN	31.6	27.5	33.9
HIGHEST ANNUAL MEAN			58.7 1984
LOWEST ANNUAL MEAN			14.7 1995
HIGHEST DAILY MEAN	1610 Sep 16	245 Jul 15	1610 Sep 16 1999
LOWEST DAILY MEAN	.89 Jul 22	4.5 Jul 13	.20 Sep 17 1966
ANNUAL SEVEN-DAY MINIMUM	1.4 Jul 11	5.6 Jul 7	.75 Sep 10 1995
INSTANTANEOUS PEAK FLOW		998 Aug 11	5380 Sep 16 1999
INSTANTANEOUS PEAK STAGE		5.65 Aug 11	13.40 Sep 16 1999
INSTANTANEOUS LOW FLOW		4.2 Jul 13	.00 Jul 27 1999
ANNUAL RUNOFF (CFSM)	1.46	1.27	1.57
ANNUAL RUNOFF (INCHES)	19.88	17.33	21.33
10 PERCENT EXCEEDS	48	47	67
50 PERCENT EXCEEDS	18	18	22
90 PERCENT EXCEEDS	3.0	13	6.6

e Estimated



PASSAIC RIVER BASIN

01391500 SADDLE RIVER AT LODI, NJ

LOCATION.--Lat 40°53'25", long 74°04'51", Bergen County, Hydrologic Unit 02030103, on left bank 560 ft upstream from bridge on Outwater Lane in Lodi and 3.2 mi upstream from mouth.

DRAINAGE AREA.--54.6 mi².

PERIOD OF RECORD.--September 1923 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1031: 1940(M). WSP 1552: 1929(M), 1936(M), 1938. WRD-NJ 1969: 1967. WRD- NJ 1970: 1968, 1969.

GAGE.--Water-stage recorder. Concrete control since Nov. 2, 1938. Datum of gage is 25.00 ft above sea level. Prior to Nov. 2, 1938, at site 560 ft downstream at datum 2.54 ft lower.

REMARKS.--Records fair. Occasional regulation at low flow. Diversion upstream from station at Paramus by United Water New Jersey, for municipal supply (see Hackensack River Basin, diversions). The flow past this station is affected by pumpage from wells by United Water New Jersey and others. Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jul 15	1615	1,330	4.88	Aug 12	0130	1,260	4.78
Jul 30	1400	*1,520	*5.22				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	55	72	65	76	80	97	89	66	58	181	63
2	80	135	68	65	65	76	93	89	67	57	139	81
3	71	293	66	66	61	70	92	83	72	68	141	92
4	151	99	70	85	61	66	161	80	61	58	170	179
5	192	76	67	156	60	64	114	79	60	58	106	89
6	97	69	113	83	58	62	96	77	410	54	92	65
7	77	64	93	74	58	60	90	77	589	39	101	62
8	71	62	72	69	55	61	87	89	165	28	88	61
9	69	61	66	68	55	62	121	74	119	28	100	109
10	119	60	69	250	58	66	106	83	95	28	84	69
11	111	59	68	239	67	186	97	118	87	30	247	60
12	75	57	63	110	72	285	99	79	168	28	435	59
13	67	58	63	91	50	127	81	86	137	28	169	118
14	77	59	133	82	353	93	78	262	102	41	193	70
15	64	59	189	74	206	95	79	103	93	701	201	215
16	61	57	107	74	112	93	106	80	89	249	154	84
17	76	55	87	68	89	281	118	73	80	94	111	64
18	147	53	78	71	78	152	159	119	99	85	98	59
19	73	53	73	67	84	121	107	199	84	62	92	172
20	105	56	129	67	74	112	92	154	75	56	83	244
21	92	61	217	65	70	105	252	121	71	51	78	86
22	72	55	106	66	68	100	339	96	139	45	75	67
23	92	55	88	64	76	95	171	87	83	40	83	63
24	76	63	84	63	88	88	153	255	70	40	91	71
25	66	71	77	66	106	86	117	124	65	39	76	71
26	62	148	73	67	109	118	107	92	65	185	70	88
27	59	350	73	63	89	89	102	81	74	609	67	89
28	57	128	70	67	124	378	98	75	74	198	73	66
29	57	90	68	64	97	160	96	72	64	112	75	60
30	55	78	68	64	---	115	92	70	82	559	65	58
31	55	---	68	98	---	104	---	68	---	223	64	---
TOTAL	2642	2639	2738	2671	2619	3650	3600	3234	3505	3951	3802	2734
MEAN	85.2	88.0	88.3	86.2	90.3	118	120	104	117	127	123	91.1
MAX	192	350	217	250	353	378	339	262	589	701	435	244
MIN	55	53	63	63	50	60	78	68	60	28	64	58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2000, BY WATER YEAR (WY)

	MEAN	65.3	88.9	100	106	118	155	155	118	84.6	72.1	68.2	69.2
MAX	257	284	301	331	258	333	457	315	336	371	225	256	
(WY)	1956	1978	1984	1979	1973	1953	1983	1984	1972	1945	1955	1971	
MIN	16.5	25.5	17.0	12.1	38.1	40.1	32.9	44.9	25.5	12.9	15.1	11.4	
(WY)	1936	1982	1981	1981	1980	1981	1985	1941	1999	1999	1966	1932	

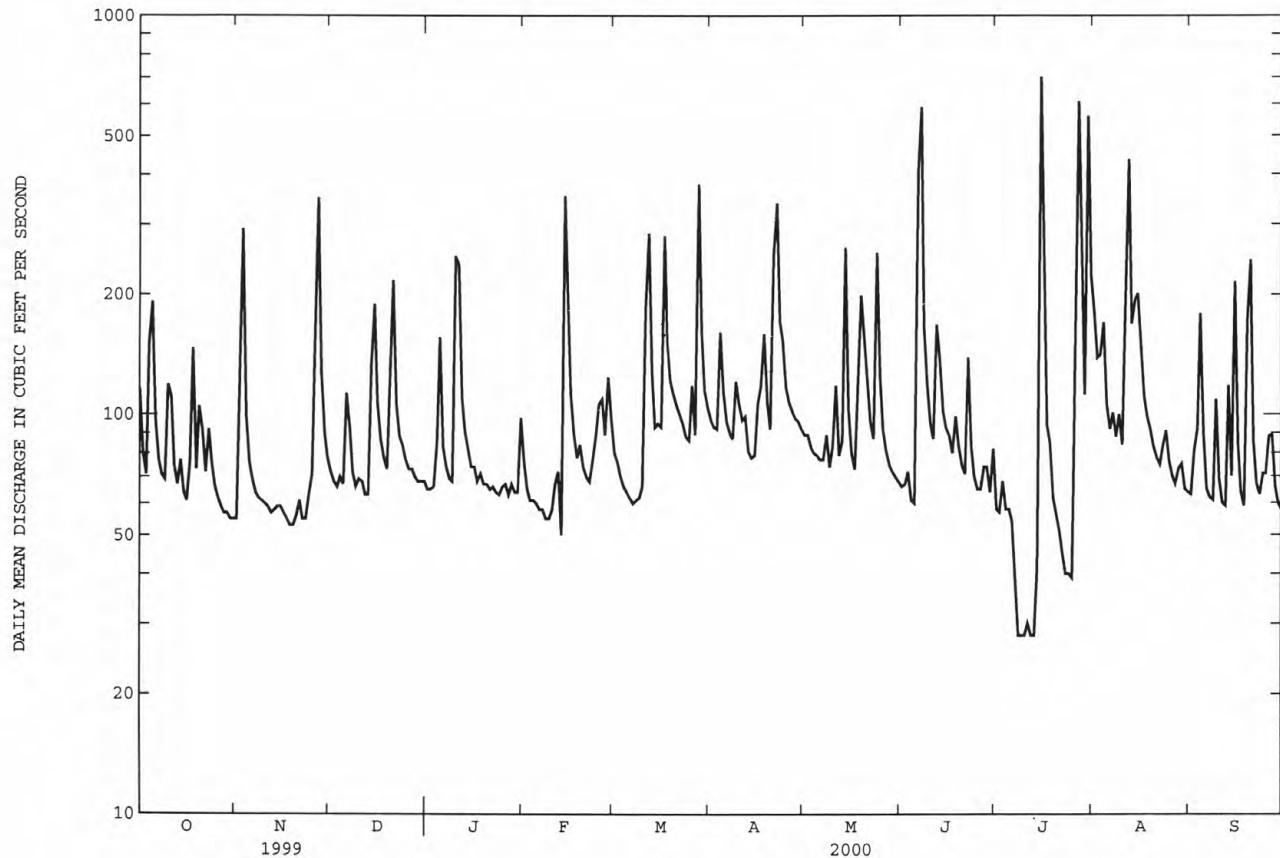
PASSAIC RIVER BASIN

95

01391500 SADDLE RIVER AT LODI, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1924 - 2000
ANNUAL TOTAL	31397.1	37785	
ANNUAL MEAN	86.0	103	99.9
HIGHEST ANNUAL MEAN			187 1984
LOWEST ANNUAL MEAN			45.2 1981
HIGHEST DAILY MEAN	1820 Sep 17	701 Jul 15	2970 Apr 5 1984
LOWEST DAILY MEAN	5.2 Aug 10	28 Jul 8	4.9 Sep 15 1995
ANNUAL SEVEN-DAY MINIMUM	7.6 Aug 1	30 Jul 7	7.1 Sep 10 1995
INSTANTANEOUS PEAK FLOW		1520 Jul 30	5330 Sep 17 1999
INSTANTANEOUS PEAK STAGE		5.22 Jul 30	13.94a Sep 17 1999
INSTANTANEOUS LOW FLOW		22 Jul 8	1.0 May 25 1935
10 PERCENT EXCEEDS	146	171	190
50 PERCENT EXCEEDS	65	79	69
90 PERCENT EXCEEDS	11	58	26

a From high-water mark in gage house



PASSAIC RIVER BASIN

01392590 PASSAIC RIVER AT NEWARK, NJ

LOCATION.--Lat 40°44'00", long 74°09'30", Essex County, Hydrologic Unit 02030103, on right bank at Newark Fire Training Academy in Newark, 800 ft upstream from bridge on South Fourth Street, 0.3 mi downstream from railroad bridges on AMTRAK mainline, and 4.2 mi upstream from Newark Bay.

DRAINAGE AREA.--923 mi².

PERIOD OF RECORD.--June 1993 to September 1999.

GAGE.--Water-stage recorder. Datum of gage is 10.00 ft below sea level. Gage-height record converted to elevation above or below (-) sea level for publication.

REMARKS.--Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 7.54 ft, Oct. 19, 1996; minimum recorded, -4.77 ft, Nov. 5, 1994.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 10.9 ft, Dec. 11, 1992, from high-water mark.

No data recorded this water year due to inoperable gage.

RESERVOIRS IN PASSAIC RIVER BASIN

- 01379990 SPLITROCK RESERVOIR.--Lat 40°57'40", long 74°27'45", Morris County, Hydrologic Unit 02030103, at dam on Beaver Brook, 2 mi northeast of Hibernia. DRAINAGE AREA, 5.50 mi². PERIOD OF RECORD, September 1925 to September 1931, December 1948 to September 1950, October 1953 to current year. Monthend contents only 1925-31, 1948-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, water-stage recorder. Datum of gage is sea level.
REVISED RECORDS.--WDR NJ-94-1: 1993.
REMARKS.--Reservoir is formed by a concrete gravity dam with earth embankment; present dam constructed 1946-48 and sluice gate first closed Dec. 22, 1948. Prior to 1946, reservoir was formed by earthfill dam with crest about 20 ft lower. Capacity of spillway level, 3,310,000,000 gal, elevation, 835 ft. Flow is regulated by two 30-inch sluice gates. Flow is released for diversion for municipal supply of United Water New Jersey.
COOPERATION.--Records provided by United Water New Jersey, Bureau of Water.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,652,500,000 gal, Apr. 5, 1973, elevation, 836.75 ft; minimum, 1,522,800,000 gal, Jan. 4, 1954, elevation, 824.20 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,414,000,000 gal, Aug. 15, elevation, 835.55 ft; minimum, 3,256,000,000 gal, July 14, elevation, 834.75 ft.
- 01380900 BOONTON RESERVOIR.--Lat 40°53'45", long 74°23'55", Morris County, Hydrologic Unit 02030103, at dam on Rockaway River at Boonton. DRAINAGE AREA, 119 mi². PERIOD OF RECORD, April 1904 to September 1950, October 1953 to current year. Monthend contents only 1904-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. REVISED RECORDS.--WDR NJ-85-1: 1984. GAGE, hook gage. Datum of gage is sea level.
REVISED RECORDS.--WDR NJ-94-1: 1993.
REMARKS.--Reservoir is formed by a cyclopean masonry dam with earth wings; dam completed and storage began in 1904. Total capacity at spillway level, 7,620,000,000 gal elevation, 305.25 ft of which 7,366,000,000 gal is usable contents above elevation 259.75 ft, sill of lowest outlet gate. Spillway is topped with two Bascule gates, 2 ft high; prior to 1952, flashboards were used. Flow regulated by Bascule gates, three outlets in gatehouse at head of conduit and by two 48-inch pipes (bottom of sluice pipes at elevation 205 ft). Water is diverted from reservoir for municipal supply of United Water New Jersey.
COOPERATION.--Records provided by United Water New Jersey, Bureau of Water.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,580,000,000 gal, May 12, 1998, elevation, 309.50 ft; minimum, 1,445,000,000 gal, Jan. 31, 1981, elevation 274.71 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,354,000,000 gal, Aug. 14, elevation, 308.67 ft; minimum, 7,482,000,000 gal, Feb. 10, elevation, 305.27 ft.
- 01382100 CANISTEAR RESERVOIR.--Lat 41°06'30", long 74°29'30", Sussex County, Hydrologic Unit 02030103, at dam on Pacock Brook, 1.8 mi northeast of Stockholm. DRAINAGE AREA, 6.08 mi². PERIOD OF RECORD, October 1923 to September 1950, October 1953 to current year. Monthend contents 1923-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is sea level.
REVISED RECORDS.--WDR NJ-94-1: 1993, WDR NJ-99-1: 1998 (elevation, contents).
REMARKS.--Reservoir is formed by earth-embankment type dam, completed about 1896. Capacity at spillway level, 2,407,000,000 gal, elevation, 1,086.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and for diversion at Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply for City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.
- 01382200 OAK RIDGE RESERVOIR.--Lat 41°02'30", long 74°30'10", Passaic County, Hydrologic Unit 02030103, at dam on Pequannock River, 0.9 mi southwest of Oak Ridge. DRAINAGE AREA, 27.3 mi². PERIOD OF RECORD, October 1923 to September 1950, October 1953 to current year. Monthend contents only 1923-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is sea level.
REVISED RECORDS.--WDR NJ-99-1: 1998 (elevation, contents).
REMARKS.--Reservoir is formed by earthfill dam with concrete-core wall and ogee overflow section; dam constructed between 1880-92; dam raised 10 ft during 1917-19. Capacity at spillway level, 3,895,000,000 gal, elevation, 846.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and for diversion at Charlotteburg Reservoir since May 21, 1961, for municipal supply of City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.
- 01382300 CLINTON RESERVOIR.--Lat 41°04'30", long 74°27'00", Passaic County, Hydrologic Unit 02030103, at dam on Clinton Brook, 2.0 mi north of Newfoundland. DRAINAGE AREA, 10.5 mi². PERIOD OF RECORD, October 1923 to September 1950, October 1953 to current year. Monthend contents only 1923-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is sea level.
REVISED RECORDS.--WDR NJ-99-1: 1998 (elevation, contents).
REMARKS.--Reservoir is formed by earthfill dam constructed between 1889-92. Capacity at spillway level, 3,518,000,000 gal, elevation, 992.0 ft. Reservoir used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and for diversion at Charlotteburg Reservoir since May 21, 1961, for municipal supply of City of Newark. Outflow is controlled mostly by operation of gates in pipes through dam.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.
- 01382380 CHARLOTTEBURG RESERVOIR.--Lat 41°01'34", long 74°25'30", Passaic County, Hydrologic Unit 02030103, at dam on Pequannock River, 1.1 mi upstream from Macopin River, and 1.5 mi southeast of Newfoundland, NJ. DRAINAGE AREA, 56.2 mi². PERIOD OF RECORD, May 1961 to current year. GAGE, water-stage recorder. Datum of gage is sea level.
REVISED RECORDS.--WRD NJ-74: Station number, WDR NJ-99-1: 1998 (elevation, contents).
REMARKS.--Reservoir is formed by concrete-masonry dam and earth embankment, with concrete spillway at elevation 738.00 ft; storage began May 19, 1961. Spillway equipped with automatic Bascule gate 5 ft high. Capacity, 2,964,000,000 gal, elevation, 743.00 ft, top of Bascule gate. No dead storage. Outflow is controlled by sluice and automatic Bascule gates. Water diverted from reservoir since May 21, 1961, for municipal supply of City of Newark.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.
- 01382400 ECHO LAKE.--Lat 41°03'00", long 74°24'30", Passaic County, Hydrologic Unit 02030103, at Echo Lake Dam on Macopin River, 1.6 mi north of Charlotteburg, and 1.9 mi upstream from mouth. DRAINAGE AREA, 4.35 mi². PERIOD OF RECORD, October 1927 to September 1950, October 1953 to current year. Monthend contents only 1928-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, staff gage. Datum of gage is sea level.
REVISED RECORDS.--WDR NJ-99-1: 1998 (elevation, contents).
REMARKS.--Lake is formed by earth-embankment type dam completed about 1925. Capacity at spillway level, 1,583,000,000 gal, elevation, 893.0 ft, with provision for additional storage of 180,000,000 gal at elevation 894.9 ft with flashboards. Usable contents, 1,045,000,000 gal above elevation 880.0 ft. Lake used for storage and water released for diversion at Macopin intake dam on Pequannock River prior to May 21, 1961, and water diverted to Charlotteburg Reservoir on Pequannock River since May 21, 1961, for municipal supply of City of Newark. Outflow to Macopin River controlled by operation of gates in gatehouse at dam and water released through pipe and canal to Charlotteburg Reservoir.
COOPERATION.--Records provided by City of Newark, Division of Water Supply.

RESERVOIRS IN PASSAIC RIVER BASIN--Continued

01383000 GREENWOOD LAKE.--Lat 41°09'36", long 74°20'03", Passaic County, Hydrologic Unit 02030103, in gatehouse near right end of Greenwood Lake Dam on Wanaque River at Awosting. DRAINAGE AREA, 27.1 mi². PERIOD OF RECORD, June 1898 to November 1903, June 1907 to current year (gage heights only prior to October 1953). GAGE, water-stage recorder. Datum of gage is 608.86 ft above sea level (levels from New Jersey Geological Survey bench mark). Prior to Oct. 1, 1931, staff gage on former railroad bridge at site 100 ft upstream at datum 89.75 ft lower.

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway; dam completed about 1837 and reconstruction completed in 1928 with crest of spillway 0.25 ft lower. Usable capacity, 6,860,000,000 gal between gage heights -4.00 ft, sill of gate, and 10.00 ft, crest of spillway. Dead storage, 7,140,000,000 gal. Outflow mostly regulated by two gates, 3.5 by 5.0 ft. Records given herein represent usable capacity. Lake used for recreation. Diversions by NJDWSC from Upper Greenwood Lake enter via Green Brook.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 9,528,000,000 gal, Oct. 9-14, 1903, gage height, 14.25 ft, present datum; minimum, 3,160,000,000 gal, several days in November 1900, gage height, 3.50 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,319,000,000 gal, June 7, gage height, 10.74 ft; minimum, 6,750,000,000 gal, July 14, 15, gage height, 9.82 ft.

REVISED RECORDS.--WDR NJ-94-1: 1993, WDR NJ-97-1: 1995-96.

01384002 MONKSVILLE RESERVOIR.--Lat 41°07'20", long 74°17'49", Passaic County, Hydrologic Unit 02030103, at dam on Wanaque River at Monks. DRAINAGE AREA, 40.4 mi². PERIOD OF RECORD, September 1988 to current year. GAGE, measurement from reference point. Datum of gage is sea level.

REMARKS.--Reservoir is formed by a roller compacted concrete dam constructed in 1988. Total capacity at spillway level, 7,000,000,000 gal, elevation 400.0 ft. Reservoir used for storage and water released to Wanaque Reservoir. Outflow is controlled by a 60-inch fixed-cone valve in a 72-inch pipe and 10-inch cone valve which can discharge directly into Wanaque Reservoir or into the 72-inch pipe.

COOPERATION.--Records provided by North Jersey District Water Supply Commission.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,150,000,000 gal, Oct. 20, 1989, elevation 401.1 ft (corrected); minimum, 860,000,000, Sept. 28, 1988 (first filling), elevation 339.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,000,000,000 gal, many days, elevation 400.0 ft; minimum, 7,000,000,000 gal, many days, elevation 400.0 ft.

01386990 WANAQUE RESERVOIR.--Lat 41°02'42", long 74°17'44", Passaic County, Hydrologic Unit 02030103, at Raymond Dam on Wanaque River at Wanaque. DRAINAGE AREA, 90.4 mi². PERIOD OF RECORD, February 1928 to September 1950, October 1953 to current year. Monthend contents only 1928-50, published in WSP 1302. October 1950 to September 1953 in Special Report 16, New Jersey Department of Environmental Protection. GAGE, water-stage recorder. Datum of gage is sea level (levels by North Jersey District Water Supply Commission).

REMARKS.--Reservoir is formed by earthfill with concrete-core wall main dam and seven secondary dams; dams completed in 1927 and storage began in March 1928. Total capacity at spillway level, 29,630,000,000 gal, revised, elevation, 302.4 ft, prior to 1986, 300.3 ft. Capacity available by gravity at spillway level, 27,850,000,000 gal. Outflow mostly controlled by sluice gates in intake conduits in gage house. Water is diverted from reservoir for municipal supply. Diversion to reservoir from Posts Brook, Pompton River, and Ramapo River (see Passaic River basin, diversions). Records given herein represent total capacity.

REVISED RECORDS.--WDR NJ-85-1: 1984 (M).

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 31,280,000,000 gal, Apr. 5, 1984, elevation, 304.52 ft; minimum, 5,110,000,000 gal, Dec. 26, 1964, elevation, 256.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,910,000,000 gal, June 8, elevation, 302.76 ft; minimum, 20,260,000,000 gal, Oct. 22, elevation, 289.12 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)
01379990 SPLITROCK RESERVOIR				01380900 BOONTON RESERVOIR			01382100 CANISTEAR RESERVOIR		
Sept. 30.....	834.95	3,296	--	304.46	7,278	--	1,085.90	2,396	--
Oct. 31.....	834.95	3,296	0	307.25	7,989	+35.5	1,085.90	2,396	0
Nov. 30.....	835.20	3,345	+2.5	307.46	8,043	+2.8	1,085.90	2,396	0
Dec. 31.....	835.00	3,306	-1.9	307.33	8,009	-1.7	1,085.80	2,386	-1.5
CAL YR 1999			+2.6			+23.0			+1.0
Jan. 31.....	835.05	3,315	+4	305.42	7,520	-24.4	1,085.90	2,396	+5
Feb. 29.....	835.10	3,325	+5	305.81	7,619	+5.3	1,086.10	2,417	+1.1
Mar. 31.....	835.10	3,325	0	307.54	8,063	+22.2	1,086.00	2,407	-5
Apr. 30.....	835.10	3,325	0	307.48	8,048	-8	1,086.00	2,407	0
May 31.....	835.05	3,315	-5	307.37	8,019	-1.4	1,086.00	2,407	0
June 30.....	834.95	3,296	-1.0	307.33	8,009	-5	1,082.50	2,050	-18.4
July 31.....	835.10	3,325	+1.4	307.54	8,063	+2.7	1,075.60	1,412	-31.8
Aug. 31.....	835.00	3,306	-9	307.27	7,994	-3.4	1,069.20	879	-26.6
Sept. 30.....	834.95	3,296	-5	307.02	7,929	-3.4	1,068.60	833	-2.4
WTR YR 2000			0			+2.8			-6.6
Date	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)
01382200 OAK RIDGE RESERVOIR				01382300 CLINTON RESERVOIR			01382380 CHARLOTTEBURG RESERVOIR		
Sept. 30.....	830.5	1,902	--	991.8	3,492	--	735.75	2,181	--
Oct. 31.....	834.5	2,365	+23.1	988.9	3,121	18.5	735.80	2,186	+2
Nov. 30.....	838.4	2,836	+24.3	988.7	3,096	-1.3	736.80	2,283	+5.0
Dec. 31.....	839.9	3,058	+11.1	991.6	3,467	+18.5	736.15	2,220	-3.1
CAL YR 1999			+9.7			+8.5			+6
Jan. 31.....	841.0	3,204	+7.3	992.1	3,531	+3.2	735.40	2,148	-3.6
Feb. 29.....	846.2	3,924	+38.4	992.1	3,531	0	741.00	2,730	+31.0
Mar. 31.....	846.1	3,909	-7	992.1	3,531	0	743.05	2,970	+12.0
Apr. 30.....	846.2	3,924	+8	992.0	3,518	-7	743.10	2,977	+4
May 31.....	846.0	3,895	-1.4	992.0	3,518	0	742.95	2,964	-6
June 30.....	846.0	3,895	0	992.1	3,531	+7	742.10	2,958	-3
July 31.....	846.3	3,938	+2.1	992.2	3,544	+6	743.30	3,002	+2.2
Aug. 31.....	846.1	3,904	-1.7	992.0	3,518	-1.3	742.05	2,906	-4.8
Sept. 30.....	846.2	3,924	+1.0	991.9	3,505	-7	735.75	2,181	-37.4
WTR YR 2000			+8.6			0			0

PASSAIC RIVER BASIN

99

RESERVOIRS IN PASSAIC RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)**	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)b	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)
01382400 ECHO LAKE				01383000 GREENWOOD LAKE			01384002 MONKSVILLE RESERVOIR		
Sept.30.....	893.4	1,621	--	10.15	6,953	--	400.0	7,000	--
Oct. 31.....	892.0	1,493	-6.4	10.10	6,922	-1.5	400.0	7,000	0
Nov. 30.....	891.8	1,475	-.9	10.26	7,021	+5.1	400.0	7,000	0
Dec. 31.....	892.5	1,537	+3.1	10.17	6,965	-2.8	400.0	7,000	0
CAL YR 1999			+1.0			+1.6			+8.1
Jan. 31.....	893.1	1,592	+2.7	10.15	6,953	-.6	400.0	7,000	0
Feb. 29.....	893.5	1,630	+2.0	10.62	7,244	+15.5	400.0	7,000	0
Mar. 31.....	893.5	1,630	0	10.34	7,071	-8.6	400.0	7,000	0
Apr. 30.....	893.5	1,630	0	10.26	7,021	-2.6	400.0	7,000	0
May 31.....	893.5	1,630	0	10.11	6,928	-4.6	400.0	7,000	0
June 30.....	893.5	1,630	0	10.08	6,910	-.9	400.0	7,000	0
July 31.....	893.6	1,638	+.4	10.41	7,114	+10.2	400.0	7,000	0
Aug. 31.....	893.5	1,630	-.4	10.00	6,860	-12.7	400.0	7,000	0
Sept.30.....	893.5	1,630	0	10.00	6,860	0	400.0	7,000	0
WTR YR 2000			0			-.4			0

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)
01386990 WANAQUE RESERVOIR			
Sept.30.....	290.12	20,900	--
Oct. 31.....	290.30	21,020	+6.0
Nov. 30.....	294.46	23,800	+143.4
Dec. 31.....	297.17	25,700	+94.8
CAL YR 1999			+77.6
Jan. 31.....	295.63	24,610	-54.4
Feb. 29.....	298.98	27,020	+128.6
Mar. 31.....	302.51	29,720	+134.7
Apr. 30.....	302.43	29,650	-3.6
May 31.....	302.19	29,470	-9.0
June 30.....	301.69	29,080	-20.1
July 31.....	299.40	27,330	-87.3
Aug. 31.....	297.94	26,250	-53.9
Sept.30.....	293.86	23,390	-147.5
WTR YR 2000			+10.5

* Elevation at 0900 on the first day of the following month.

** Elevation at 0800 on the first day of the following month.

† Elevation at 2400 on the last day of each month.

b Previously reported data recorded at 0800 on first day of following month, beginning in 1999 water year data recorded at 2400 of the last day of each month.

PASSAIC RIVER BASIN

DIVERSIONS WITHIN PASSAIC RIVER BASIN

- 01368720 North Jersey District Water Supply Commission diverts water from Upper Greenwood Lake (Hudson River basin) near Moe, NJ to the Green Brook, a tributary of Greenwood Lake, for municipal supply. Consult North Jersey District Water Supply Commission for data available.
- 01379510 New Jersey-American Water Company diverts water from Passaic River, 1.2 mi upstream from Canoe Brook for municipal supply. Records provided by New Jersey-American Water Company.
- 01379530 New Jersey-American Water Company diverts water from Canoe Brook near Summit, 0.5 mi from mouth, for municipal supply. Records provided by New Jersey-American Water Company.
- 01380280 The Town of Boonton diverts water from a tributary of Stony Brook at Taylortown Reservoir for Municipal Water Supply. Records furnished by Town of Boonton.
- 01380800 Jersey City diverts water from Boonton Reservoir on Rockaway River at Boonton for municipal supply. Records provided by United Water New Jersey. REVISED RECORDS.--WDR NJ-97-1: 1996.
- 01382370 City of Newark diverts water from Charlotteburg Reservoir on Pequannock River since May 21, 1961 for municipal supply. Prior to May 21, 1961 water was diverted from reservoir formed by Macopin intake dam on Pequannock River (former diversion 01382490). Records provided by City of Newark, Division of Water Supply. REVISED RECORDS.--WDR NJ-82-1: Station number.
- 01386980 North Jersey District Water Supply Commission diverts water for municipal supply from Wanaque Reservoir on Wanaque River. Records provided by North Jersey District Water Supply Commission.
- 01387020 North Jersey District Water Supply Commission diverts water from Posts Brook near Wanaque into Wanaque Reservoir for municipal supply. Records not available.
- 01387959 Passaic Valley Water Commission diverts water from Point View Reservoir to the PVWC's intake canal at Little Falls for municipal supply. No diversion this year. REVISED RECORDS.--WDR NJ-00-1: 1999.
- 01387990 North Jersey District Water Supply Commission diverts water from Ramapo River by pumping from Pompton Lakes into Wanaque Reservoir. Records provided by North Jersey District Water Supply Commission.
- 01388490 Passaic Valley Water Commission supplements the dependable yield of its supply at Little Falls by diverting water at high flows at the Jackson Avenue Pumping Station into Point View Reservoir on Haycock Brook. Water can also be released from Point View Reservoir into the Pompton River at Jackson Avenue Pumping Station and are noted as negative discharges. Also water may be released into Haycock Brook for maintenance of flow in that stream. These diversions and releases occur upstream from Pompton Plains gaging station (01388500). Records provided by Passaic Valley Water Commission. REVISED RECORDS.--WDR NJ-82-1: Station number.
- 01388980 North Jersey District Water Supply Commission diverts water from the Wanaque South pumping station on the Pompton River at Two Bridges, 750 ft upstream from the Passaic River, to Wanaque Reservoir since January 1987. Records provided by the North Jersey District Water Supply Commission.
- 01388981 United Water New Jersey diverts water from the Wanaque South pumping station on the Pompton River at Two Bridges, 750 ft upstream from the Passaic River, to Oradell Reservoir. Water can also be diverted from Wanaque Reservoir to Oradell Reservoir in the Hackensack River basin. Figures given herein include diversion from both sources. Prior to water year 1989, diversion was from Ramapo River at Pompton Lakes. Records provided by the United Water New Jersey.
- 01388982 The Passaic Valley Water Commission (PVWC) diverts water from the Wanaque South pumping station on the Pompton River at Two Bridges, 750 ft upstream from the Passaic River, to the PVWC's intake canal just upstream of Beatties Dam at Little Falls. Previous diversions at this location were included with those made at Little Falls (01389490). Records provided by Passaic Valley Water Commission.
- 01389490 The Passaic Valley Water Commission diverts water from Passaic River above Beatties Dam at Little Falls for municipal supply. Records provided by Passaic Valley Water Commission.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

MONTH	01379510 New Jersey - American Water Company from Passaic River	01379530 New Jersey - American Water Company from Canoe Brook	01380280 Stony Brook tributary diversion at Taylortown	01380800 Jersey City	01382370 Newark
October.....	5.99	3.24	.62	77.0	72.7
November.....	8.92	.71	.63	68.5	60.5
December.....	15.5	1.70	.65	79.6	64.9
CAL YR 1999	8.47	3.36	.67	80.6	73.3
January.....	11.4	1.84	.64	76.6	67.9
February.....	20.5	2.02	.63	76.0	71.1
March.....	13.2	3.03	.63	69.1	72.9
April.....	7.84	1.49	.75	65.1	83.3
May.....	12.7	4.25	.85	76.9	72.5
June.....	0	1.19	.88	81.9	73.1
July.....	0	2.10	.87	82.7	71.4
August.....	0	6.13	.75	84.7	80.0
September.....	0	.65	.69	83.2	76.5
WTR YR 2000	7.98	2.38	.72	76.8	72.2

PASSAIC RIVER BASIN

101

DIVERSIONS WITHIN PASSAIC RIVER BASIN--Continued

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000, Continued

MONTH	01386980 Wanaque Reservoir	01387959 Point View Reservoir to Little Falls (WY 1999)	01387990 Ramapo River to Wanaque Reservoir	01388980 Pompton River to Wanaque Reservoir
October.....	169	0 a	0	29.8
November.....	177	0 a	0	163
December.....	181	0 a	0	137
CAL YR 1997	164	0 a	22.4	94.7
January.....	173	0 a	0	0
February.....	173	0 a	0	116
March.....	173	0 a	0	48.8
April.....	158	0 a	0	0
May.....	171	0 a	0	25.1
June.....	181	0 a	0	24.5
July.....	180	18.0a	0	0
August.....	159	16.7a	0	0
September.....	168	0 a	0	0
WTR YR 1998	172	2.94a	0	45.0

MONTH	01388981* To Oradell Reservoir	01388982 Pompton River to Passaic Valley Water Commission at Little Falls	01389490 Passaic River to Passaic Valley Water Commission at Little Falls
October.....	0	27.4	73.9
November.....	0	34.1	51.6
December.....	0	48.0	51.5
CAL YR 1997	20.8	--	--
January.....	0	48.3	56.7
February.....	0	49.1	68.2
March.....	0	49.5	60.2
April.....	0	49.2	58.9
May.....	.94	22.0	67.9
June.....	7.67	68.7	89.8
July.....	45.9	66.6	82.7
August.....	2.82	36.2	92.5
September.....	9.69	66.5	70.9
WTR YR 1998	5.63	47.0	68.7

* Diversion is to the Hackensack River Basin from Pompton River or Wanaque Reservoir.

a Water year 1999 figures.

ELIZABETH RIVER BASIN

01393450 ELIZABETH RIVER AT URSINO LAKE, AT ELIZABETH, NJ

LOCATION.--Lat 40°40'30", long 74°13'20", Union County, Hydrologic Unit 02030104, on left bank at Ursino Lake Dam in Elizabeth, 75 ft upstream from bridge on Trotters Lane and 3.8 mi upstream from mouth.

DRAINAGE AREA.--16.9 mi².

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

REVISED RECORDS.--WSP 1552: Drainage area, 1922-23, 1927-29(M), 1932, 1933-34(M), 1938(P), 1942(M) 1944(P), 1945(M), 1948(P), 1952-53(M). WDR NJ-84-1: 1974.

GAGE.--Water-stage recorder, two crest-stage gages, and two concrete weirs. The right concrete weir was lowered 5 ft on Dec. 18, 1985. Datum of gage is sea level (levels by Corps of Engineers). Prior to Oct. 1, 1922, nonrecording gage at site 2,800 ft downstream at datum 4.14 ft higher and Oct. 1, 1922 to May 18, 1923, at same site at datum 5.23 ft higher. May 19, 1923 to Dec. 27, 1972, at site 2,800 ft downstream at datum 5.23 ft higher and published as "Elizabeth River at Elizabeth" (station 01393500), drainage area 18.0 mi².

REMARKS.--Records good. Diversion by pumpage from Hammock Well Field in Union for municipal supply by Elizabethtown Water Co., probably reduces the flow past the station. Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 28	0415	1,630	19.04	May 24	0430	*1,640	*19.06

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	7.3	8.3	8.4	13	10	11	10	11	8.3	33	17
2	8.7	107	8.0	8.3	11	10	10	12	20	8.1	14	24
3	7.0	27	7.9	8.6	9.7	9.4	11	11	14	11	45	31
4	44	13	9.9	62	11	9.0	38	9.9	10	10	33	82
5	77	10	7.6	32	10	8.7	12	18	10	17	13	14
6	12	8.3	91	12	9.6	8.6	10	13	88	11	11	9.7
7	8.1	7.5	22	10	11	8.8	9.9	11	90	8.1	10	8.1
8	7.2	7.6	12	9.2	10	8.9	9.7	13	16	7.6	10	7.7
9	7.0	7.6	9.6	8.6	11	8.6	42	10	12	7.6	14	7.5
10	109	7.5	17	195	14	8.3	12	47	11	11	9.6	7.2
11	18	7.3	11	30	20	108	13	23	41	7.8	105	7.2
12	10	7.2	8.2	16	14	67	14	16	112	7.5	75	7.5
13	8.2	7.2	11	13	11	16	9.9	48	28	7.4	29	49
14	32	7.1	92	11	101	12	9.9	65	15	9.3	156	9.5
15	7.6	7.2	32	9.5	24	11	11	13	13	188	30	98
16	7.4	8.3	20	9.5	16	13	55	10	12	30	21	12
17	7.7	7.3	12	9.2	13	150	50	9.5	12	21	12	8.6
18	56	7.2	10	9.9	26	21	35	120	18	14	25	8.0
19	10	7.3	9.2	11	56	14	16	272	11	14	12	164
20	84	7.6	99	9.5	24	13	12	104	10	10	9.4	41
21	15	8.3	27	9.9	17	12	211	34	9.5	8.8	9.0	13
22	10	7.0	15	13	15	11	42	20	36	39	8.8	9.2
23	42	7.2	12	8.4	14	10	23	18	11	9.2	9.5	8.4
24	9.8	7.3	10	8.9	13	10	16	203	9.6	8.7	9.5	8.5
25	8.5	30	9.3	9.5	16	10	14	41	9.5	8.5	8.4	8.0
26	8.2	70	9.3	11	12	12	13	18	10	257	8.2	59
27	7.9	69	9.0	8.8	11	9.9	12	14	22	238	24	12
28	7.6	14	9.1	9.3	15	214	12	13	10	36	11	8.9
29	7.6	10	8.6	8.5	11	21	11	12	9.1	18	8.4	8.0
30	7.3	8.7	8.6	8.9	---	14	10	12	8.6	33	7.9	7.4
31	7.2	---	10	43	---	12	---	11	---	22	7.9	---
TOTAL	666.0	508.0	625.6	621.9	539.3	851.2	755.4	1231.4	689.3	1086.9	779.6	755.4
MEAN	21.5	16.9	20.2	20.1	18.6	27.5	25.2	39.7	23.0	35.1	25.1	25.2
MAX	109	107	99	195	101	214	211	272	112	257	156	164
MIN	7.0	7.0	7.6	8.3	9.6	8.3	9.7	9.5	8.6	7.4	7.9	7.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2000, BY WATER YEAR (WY)

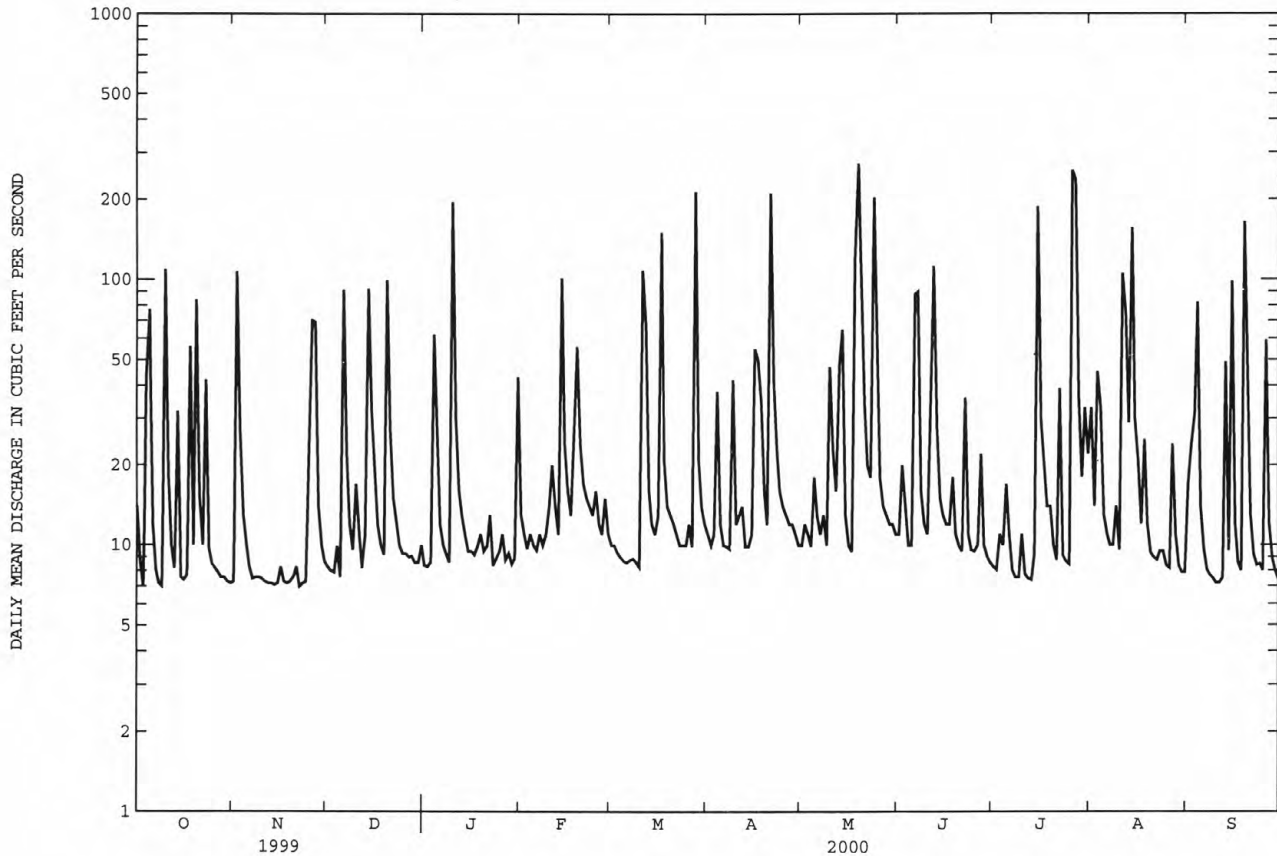
	MEAN	20.6	24.4	23.4	24.1	26.3	31.9	29.6	27.4	23.0	27.2	27.3	25.7
MAX	60.1	90.7	85.1	86.3	55.1	75.5	97.0	83.8	57.4	83.1	195	102	
(WY)	1928	1973	1984	1979	1971	1983	1983	1968	1972	1922	1971	1966	
MIN	1.58	5.05	6.25	3.71	6.56	6.03	10.3	5.97	3.94	3.24	.068	1.99	
(WY)	1922	1923	1981	1925	1934	1981	1963	1923	1923	1923	1923	1923	

ELIZABETH RIVER BASIN

103

01393450 ELIZABETH RIVER AT URSINO LAKE, AT ELIZABETH, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1922 - 2000	
ANNUAL TOTAL	10233.7		9110.0		25.9	
ANNUAL MEAN	28.0		24.9		48.3	
HIGHEST ANNUAL MEAN					10.2	
LOWEST ANNUAL MEAN					1900	
HIGHEST DAILY MEAN	1570	Sep 16	272	May 19	1900	Aug 28 1971
LOWEST DAILY MEAN	5.4	Aug 10	7.0	Oct 3	.00	Jul 14 1922
ANNUAL SEVEN-DAY MINIMUM	5.8	Aug 6	7.3	Nov 9	.00	Aug 7 1923
INSTANTANEOUS PEAK FLOW			1640	May 24	4510	Sep 16 1999
INSTANTANEOUS PEAK STAGE			19.06	May 24	21.61	Sep 16 1999
INSTANTANEOUS LOW FLOW			6.6	Oct 3		
10 PERCENT EXCEEDS	47		56		51	
50 PERCENT EXCEEDS	11		11		11	
90 PERCENT EXCEEDS	6.6		7.7		5.6	



RAHWAY RIVER BASIN

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ

LOCATION.--Lat 40°41'11", long 74°18'44", Union County, Hydrologic Unit 02030104, on left bank 50 ft downstream from bridge on eastbound U.S. Highway 22, 100 ft downstream from Pope Brook, and 1.5 mi south of Springfield.

DRAINAGE AREA.--25.5 mi².

PERIOD OF RECORD.--July 1938 to current year.

REVISED RECORDS.--WSP 1622: 1945. WRD-NJ 1973: 1938(M), 1968(M), 1971(M).

GAGE.--Water-stage recorder. Former concrete control is no longer effective. Datum of gage is 66.17 ft above sea level.

REMARKS.--Records good. Water for municipal supply diverted from river by city of Orange at Orange Reservoir upstream on the West Branch Rahway River. The flow past this station is affected by diversions by pumpage from wells by Orange, South Orange, New Jersey-American Water Co., and Springfield station of Elizabethtown Water Co. (no longer active). Several measurements of water temperature were made during the year. Since 1980, the site may be affected during high flows by backwater from the Lenape Park flood control dam, about 1 mi downstream. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

CORRECTION.--The peak discharge for the flood of Sept. 17, 1999 was 7,990 ft³/s, gage height 10.67 ft. Inconsistent data was published in WDR-NJ-99-1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	22	12	16	19	19	19	19	24	12	44	34
2	11	151	13	16	15	19	18	21	30	12	23	33
3	10	67	14	16	14	18	18	18	27	13	37	19
4	34	18	13	50	15	17	41	18	22	14	70	66
5	58	15	12	50	17	17	18	40	22	32	20	17
6	11	14	129	17	17	16	17	20	106	11	16	12
7	12	15	30	17	18	16	15	18	119	10	16	12
8	15	14	17	16	17	16	16	19	18	9.8	15	12
9	16	14	13	16	18	15	42	17	16	9.8	17	12
10	93	13	27	184	22	15	19	57	15	12	14	12
11	22	11	20	48	33	107	18	48	32	9.9	166	12
12	17	11	17	24	23	72	20	17	111	9.8	115	12
13	17	11	18	22	17	22	19	39	43	9.8	88	41
14	29	11	116	18	209	19	17	74	18	11	191	11
15	16	9.8	55	17	47	17	17	18	17	301	83	96
16	16	9.9	32	18	28	19	58	18	15	22	39	12
17	25	11	22	17	24	177	61	20	14	15	21	12
18	49	9.3	21	17	27	30	61	114	27	12	28	11
19	15	9.8	19	17	64	24	25	347	15	13	19	106
20	62	9.7	87	18	31	21	22	133	14	12	16	50
21	21	13	59	16	25	20	206	52	14	11	15	15
22	19	10	24	16	23	20	109	36	37	48	15	13
23	46	10	21	16	25	19	40	32	13	11	15	12
24	19	13	20	15	26	19	28	204	12	11	15	12
25	18	27	18	16	30	18	26	53	12	11	14	12
26	18	66	18	17	24	20	24	32	12	236	13	61
27	18	101	17	15	22	18	22	29	23	439	16	15
28	18	18	17	15	26	191	22	27	14	49	69	12
29	19	14	16	14	19	27	21	26	12	24	14	11
30	19	13	16	15	---	20	20	25	12	43	13	11
31	21	---	17	37	---	20	---	24	---	55	14	---
TOTAL	776	731.5	930	806	895	1068	1059	1615	866	1489.1	1251	766
MEAN	25.0	24.4	30.0	26.0	30.9	34.5	35.3	52.1	28.9	48.0	40.4	25.5
MAX	93	151	129	184	209	191	206	347	119	439	191	106
MIN	10	9.3	12	14	14	15	15	17	12	9.8	13	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2000, BY WATER YEAR (WY)

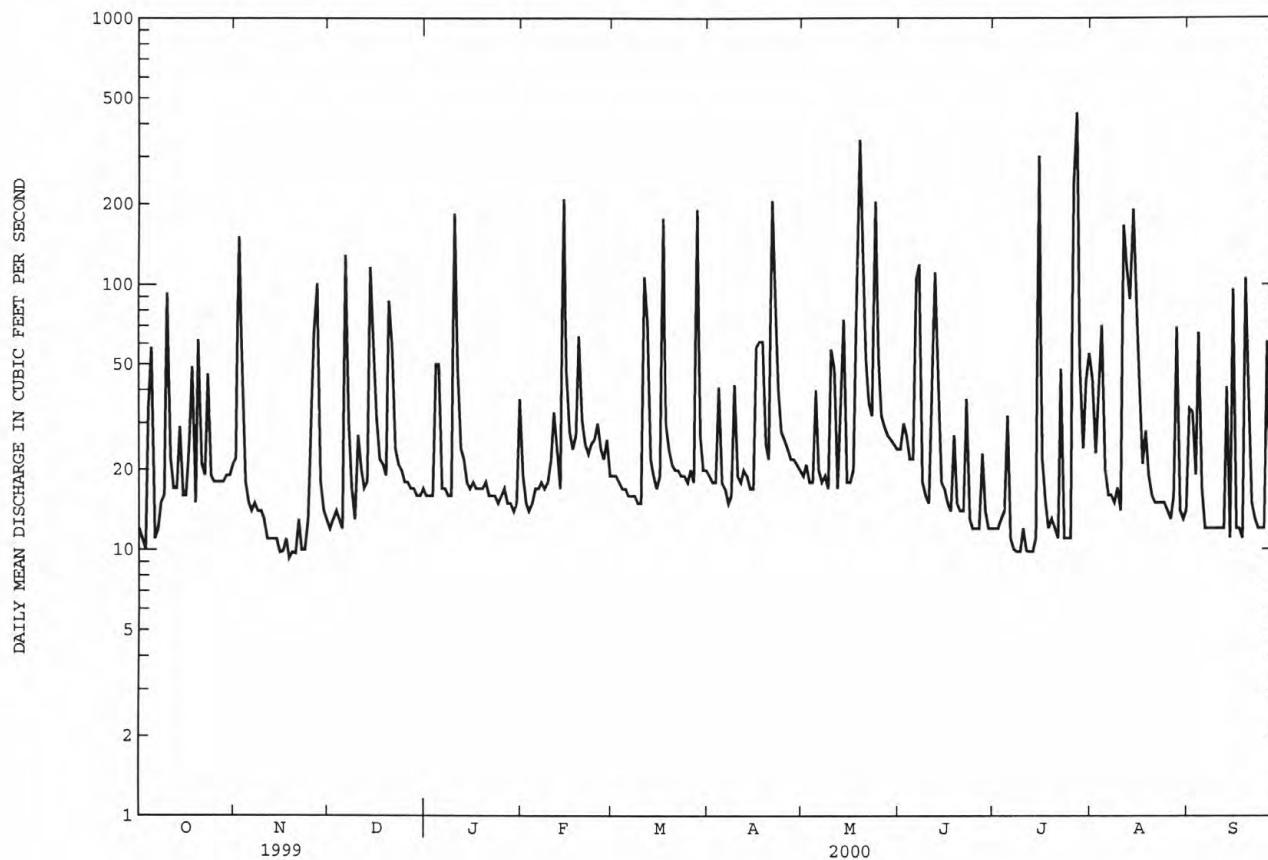
	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
MEAN	18.8	27.3	30.8	31.6	34.5	47.7	42.9	35.0	24.0	25.5	23.0	23.3
MAX	108	107	129	116	79.5	120	139	112	110	138	112	151
(WY)	1997	1973	1984	1979	1998	1994	1983	1989	1972	1975	1942	1999
MIN	2.17	2.73	4.02	4.26	7.01	8.08	7.37	6.31	4.14	2.23	2.10	2.97
(WY)	1964	1950	1940	1966	1954	1981	1963	1965	1965	1966	1964	1964

RAHWAY RIVER BASIN

105

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1939 - 2000
ANNUAL TOTAL	14062.2	12252.6	
ANNUAL MEAN	38.5	33.5	30.3
HIGHEST ANNUAL MEAN			55.9 1973
LOWEST ANNUAL MEAN			10.0 1965
HIGHEST DAILY MEAN	2270 Sep 16	439 Jul 27	2270 Sep 16 1999
LOWEST DAILY MEAN	4.9 Aug 25	9.3 Nov 18	.40 Sep 11 1966
ANNUAL SEVEN-DAY MINIMUM	5.7 Aug 6	10 Nov 14	.71 Oct 8 1970
INSTANTANEOUS PEAK FLOW		768 May 18	7990a Sep 16 1999
INSTANTANEOUS PEAK STAGE		4.86 May 18	10.67 Sep 16 1999
INSTANTANEOUS LOW FLOW		8.6 Nov 18	.10 Sep 11 1966
10 PERCENT EXCEEDS	56	66	60
50 PERCENT EXCEEDS	14	18	11
90 PERCENT EXCEEDS	6.7	12	3.4

a From rating curve extend above 1,600 ft³/s on basis of slope-area measurement of peak flow.


RAHWAY RIVER BASIN

01395000 RAHWAY RIVER AT RAHWAY, NJ

LOCATION.--Lat 40°37'05", long 74°17'00", Union County, Hydrologic Unit 02030104, on left bank 100 ft upstream from St. Georges Avenue bridge in Rahway and 0.9 mi upstream from Robinsons Branch.

DRAINAGE AREA.--40.9 mi².

PERIOD OF RECORD.--July 1908 to April 1915 (gage heights and discharge measurements only), October 1921 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23(M), 1924, 1930-31(M), 1937. WDR NJ-79-1: 1978.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8.77 ft above sea level. Prior to Aug. 25, 1934, nonrecording gage at site 40 ft downstream from Church Street and 1,500 ft downstream from present site at datum 2.77 ft lower.

REMARKS.--Records good except for estimated daily discharge which is fair. Water for municipal supply diverted from river by Rahway and Orange. The flow past this station is affected by diversions by pumpage from wells by Orange, South Orange, New Jersey-American Water Co., Springfield station of Elizabethtown Water Co., by storage in the Lenape Park flood control reservoir (since 1980) and by gate operations at Hansels Dam 5.6 mi upstream from gage in Cranford, and Taylor Park Dam 11.6 mi upstream from gage on the West Branch Rahway River in Millburn. Several measurements of water temperature were made during the year. Satellite gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 21	2130	625	3.24	Jul 27	1030	782	3.53
May 19	0230	1,050	3.98	Aug 27	2330	*1,130	*4.12
May 24	0615	691	3.36				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	17	15	22	36	26	25	25	28	9.7	53	27
2	16	99	14	21	22	26	24	27	28	8.9	31	104
3	12	206	16	21	18	25	24	24	38	21	43	19
4	46	32	17	36	16	23	64	23	24	22	108	51
5	99	19	16	120	18	23	28	29	25	39	28	62
6	20	18	123	29	17	23	24	49	94	10	19	14
7	14	16	102	23	18	22	22	21	193	8.7	16	14
8	14	14	28	23	18	22	20	24	29	7.8	14	12
9	16	14	20	23	18	22	57	20	21	7.7	17	12
10	107	15	24	140	22	20	35	26	18	11	14	11
11	56	13	41	195	36	98	25	107	22	8.5	125	11
12	44	11	21	44	45	178	31	22	136	7.2	190	11
13	22	12	21	32	25	47	26	38	83	6.5	183	80
14	36	12	108	27	237	31	23	130	27	6.5	117	16
15	19	11	139	21	106	27	22	25	24	286	210	145
16	16	11	57	23	47	27	78	21	20	113	54	21
17	16	9.4	34	e21	41	282	68	22	17	15	25	14
18	77	9.8	28	e22	39	69	117	51	37	3.9	29	13
19	23	9.2	24	e20	127	39	39	731	24	4.0	35	74
20	61	9.9	60	e21	63	32	28	263	16	16	17	141
21	57	12	160	e20	53	28	192	120	14	10	16	20
22	22	13	43	e18	41	28	259	47	61	61	15	15
23	62	12	31	e19	41	19	70	51	17	13	15	14
24	27	11	28	e16	43	23	45	379	12	10	17	14
25	20	27	24	19	43	24	37	93	12	8.9	14	12
26	18	64	23	21	42	27	35	49	12	266	12	64
27	19	186	22	19	34	23	32	40	17	638	86	48
28	19	41	22	19	40	291	30	37	25	136	198	16
29	19	21	20	19	31	53	28	35	12	25	30	14
30	19	17	20	19	---	32	25	31	11	41	15	14
31	18	---	21	50	---	25	---	28	---	70	13	---
TOTAL	1038	962.3	1322	1123	1337	1635	1533	2588	1097	1891.3	1759	1083
MEAN	33.5	32.1	42.6	36.2	46.1	52.7	51.1	83.5	36.6	61.0	56.7	36.1
MAX	107	206	160	195	237	291	259	731	193	638	210	145
MIN	12	9.2	14	16	16	19	20	20	11	3.9	12	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2000, BY WATER YEAR (WY)

	MEAN	29.2	43.2	47.9	52.2	58.4	78.6	69.1	53.6	37.0	42.2	39.2	38.2
MAX	197	221	255	211	156	190	246	199	173	268	242	231	
(WY)	1997	1973	1984	1979	1925	1983	1983	1989	1972	1975	1971	1999	
MIN	1.48	3.05	3.27	1.41	12.5	12.6	7.80	6.20	3.32	.33	.43	2.26	
(WY)	1964	1966	1981	1981	1954	1981	1963	1965	1965	1966	1964	1964	

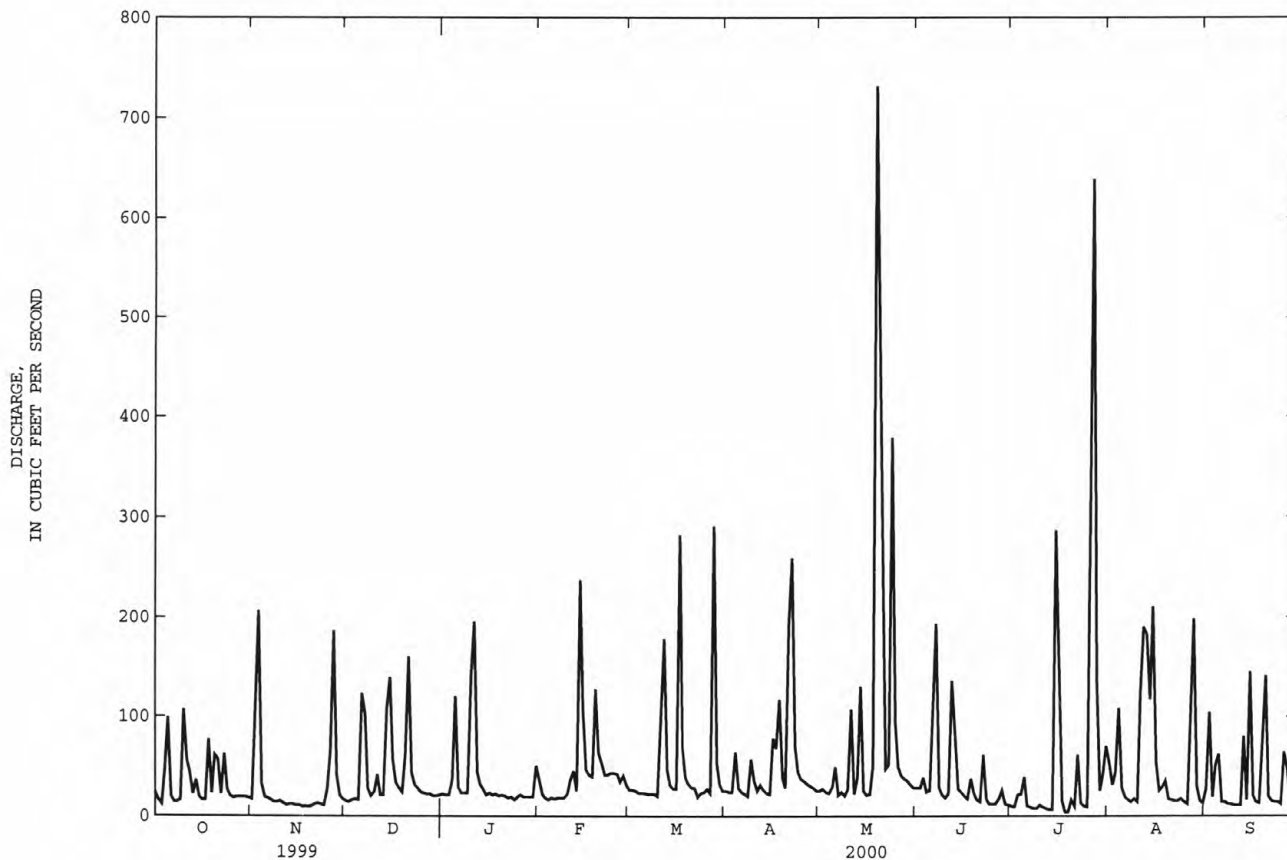
RAHWAY RIVER BASIN

107

01395000 RAHWAY RIVER AT RAHWAY, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1922 - 2000	
ANNUAL TOTAL	21735.1		17368.6		49.0	
ANNUAL MEAN	59.5		47.5		105	
HIGHEST ANNUAL MEAN					15.0	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	3670	Sep 17	731	May 19	3670	Sep 17 1999
LOWEST DAILY MEAN	1.1	Aug 1	3.9	Jul 18	.00	Oct 9 1964
ANNUAL SEVEN-DAY MINIMUM	1.2	Jul 29	7.9	Jul 8	.00	Jul 10 1981
INSTANTANEOUS PEAK FLOW			1130	Aug 27	5590	Sep 17 1999
INSTANTANEOUS PEAK STAGE			4.12	Aug 27	9.60	Sep 17 1999
INSTANTANEOUS LOW FLOW			1.6	Jul 19	.00	Oct 1 1981
10 PERCENT EXCEEDS	100		110		100	
50 PERCENT EXCEEDS	19		24		19	
90 PERCENT EXCEEDS	3.4		12		3.5	

e estimated



RARITAN RIVER BASIN

01396190 SOUTH BRANCH RARITAN RIVER AT FOUR BRIDGES, NJ

LOCATION.--Lat 40°48'21", long 74°44'28", Morris County, Hydrologic Unit 02030105, on right bank, just downstream of bridge on Elizabeth Avenue, 1.7 mi west of Chester and 0.6 mi south of Drakes Brook on Bartley Road.

DRAINAGE AREA.--31.0 mi².

PERIOD OF RECORD.--January 1999 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 564.00 ft North American Vertical Datum of 1988 (revised, levels from New Jersey Geological Survey bench mark).

REMARKS.--Records fair. Several measurements of water temperature were made during the year. Occasional diurnal fluctuations due to sewage treatment plants upstream.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 27	0605	447	5.97	Aug 12	1915	531	6.10
Mar 17	0300	590	6.20	Aug 13	1130	429	5.94
Apr 21	1900	417	5.92	Aug 14	1930	918	6.67
Jun 12	0130	*1,020	*6.80				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e29	e19	30	24	25	68	46	40	31	27	38	33
2	e23	e28	27	25	22	63	43	42	30	24	38	31
3	e20	e72	26	27	22	55	49	39	32	23	51	24
4	e25	e34	29	34	23	53	115	38	27	21	53	28
5	e42	e24	30	55	23	88	63	38	25	26	32	25
6	e28	e25	42	31	22	75	48	37	71	22	29	22
7	e22	e24	37	26	22	64	43	35	103	19	28	20
8	e18	e26	30	23	22	60	41	34	43	18	24	17
9	e19	25	27	23	22	59	69	e33	32	17	23	15
10	e32	24	25	99	23	62	60	32	27	17	22	14
11	e38	23	23	70	29	99	53	39	48	16	34	21
12	e26	21	20	37	30	220	50	32	350	14	213	21
13	e22	21	20	31	27	88	41	32	128	13	210	38
14	e22	21	53	26	146	68	36	52	69	13	216	26
15	e19	20	57	32	106	61	33	33	61	73	121	51
16	e19	19	36	25	60	58	47	28	53	50	73	28
17	e19	18	28	29	49	265	52	26	44	29	47	23
18	e24	17	25	21	40	85	79	59	50	23	41	19
19	e21	18	27	22	38	66	55	177	46	21	38	22
20	e32	20	49	21	35	60	47	85	38	22	34	24
21	e37	20	72	22	33	56	146	61	35	19	31	17
22	e24	19	44	23	34	55	116	55	105	18	28	15
23	e35	22	37	23	39	52	73	63	44	16	27	15
24	e29	22	33	21	66	50	59	162	34	16	27	17
25	e25	29	29	46	91	49	53	e85	31	16	26	16
26	e24	37	30	47	95	49	49	e58	30	25	24	18
27	e24	184	29	25	93	46	48	45	55	141	22	17
28	e24	56	26	26	191	144	48	42	45	49	23	15
29	e19	39	25	27	87	67	46	38	33	30	25	15
30	e21	33	23	26	---	53	43	35	29	32	e23	14
31	e20	---	23	29	---	49	---	33	---	34	23	---
TOTAL	782	960	1012	996	1515	2387	1751	1608	1749	884	1644	661
MEAN	25.2	32.0	32.6	32.1	52.2	77.0	58.4	51.9	58.3	28.5	53.0	22.0
MAX	42	184	72	99	191	265	146	177	350	141	216	51
MIN	18	17	20	21	22	46	33	26	25	13	22	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2000, BY WATER YEAR (WY)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
MEAN	25.2	32.0	32.6	66.0	51.9	90.3	55.7	43.2	36.0	17.4	30.2	55.3
MAX	25.2	32.0	32.6	99.8	52.2	104	58.4	51.9	58.3	28.5	53.0	88.6
(WY)	2000	2000	2000	1999	2000	1999	2000	2000	2000	2000	2000	1999
MIN	25.2	32.0	32.6	32.1	51.5	77.0	53.0	34.5	13.7	6.30	7.39	22.0
(WY)	2000	2000	2000	2000	1999	2000	1999	1999	1999	1999	1999	2000

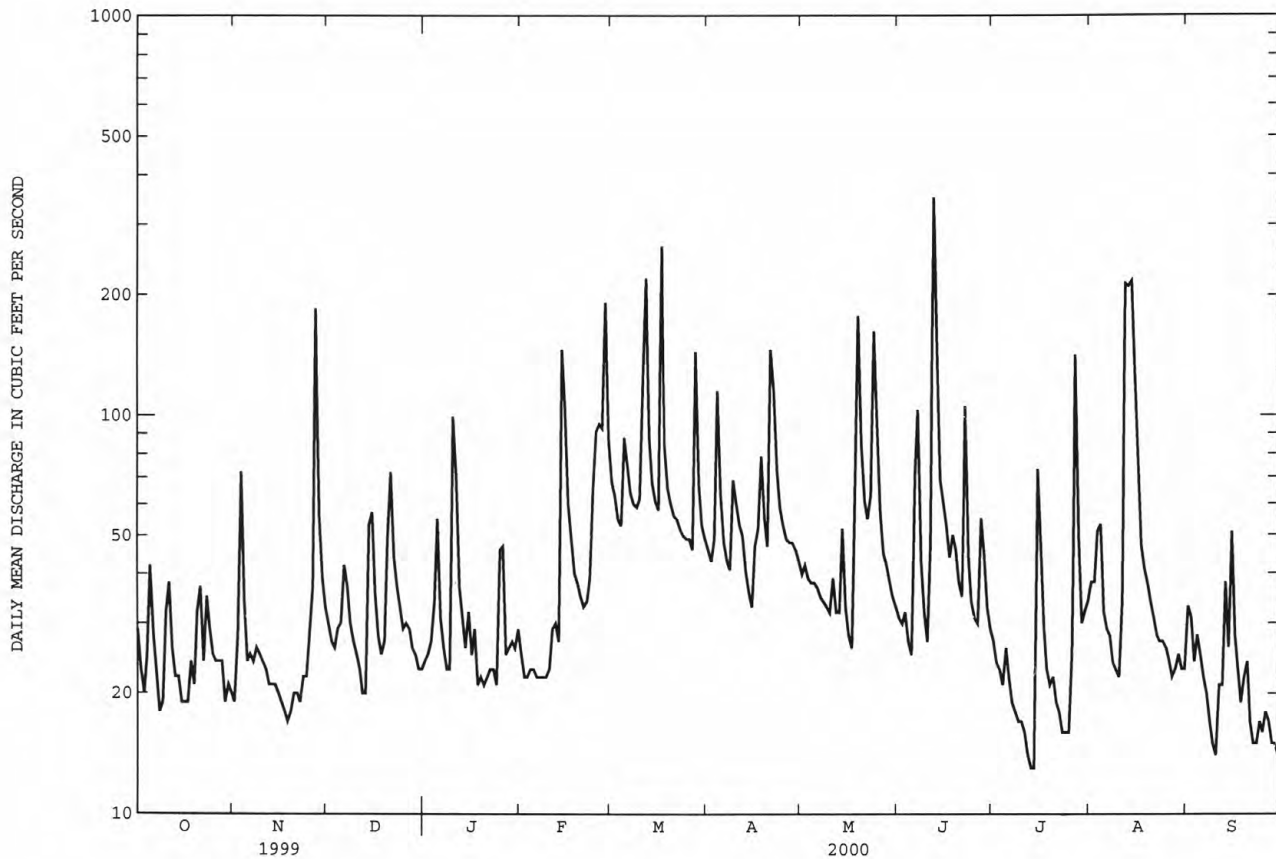
RARITAN RIVER BASIN

109

01396190 SOUTH BRANCH RARITAN RIVER AT FOUR BRIDGES, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1999 - 2000	
ANNUAL TOTAL	16653.7		15949			
ANNUAL MEAN	45.6		43.6		43.6	
HIGHEST ANNUAL MEAN					43.6	
LOWEST ANNUAL MEAN					43.6	
HIGHEST DAILY MEAN	1530	Sep 16	350	Jun 12	1530	Sep 16 1999
LOWEST DAILY MEAN	3.5	Aug 3	13	Jul 13	3.5	Aug 3 1999
ANNUAL SEVEN-DAY MINIMUM	3.9	Jul 31	15	Jul 8	3.9	Jul 31 1999
INSTANTANEOUS PEAK FLOW			1020	Jun 12	5100a	Sep 16 1999
INSTANTANEOUS PEAK STAGE			6.80	Jun 12	10.60	Sep 16 1999
INSTANTANEOUS LOW FLOW			12	Jul 13	3.4	Aug 2 1999
10 PERCENT EXCEEDS	72		73		75	
50 PERCENT EXCEEDS	26		32		31	
90 PERCENT EXCEEDS	5.2		19		8.7	

a From rating curve extended above 530 ft³/s
e Estimated



LOCATION.--Lat 40°40'40", long 74°52'46", Hunterdon County, Hydrologic Unit 02030105, on left bank 1.0 mi northeast of High Bridge, and 4.4 mi upstream from Spruce Run.

PERIOD OF RECORD.--October 1918 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 601: 1924. WSP 781: Drainage area. WSP 1552: 1919(M), 1920(M), 1921, 1923, 1924(M), 1927-28(M), 1934(M), 1941(M).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Sept. 28, 1930. Datum of gage is 282.10 ft above sea level (levels from New Jersey Geological Survey bench mark). Prior to Sept. 30, 1921, reference point at same site and datum.

REMARKS.--Records good, except for estimated discharges which are fair. Occasional regulation from unknown source. Several measurements of water temperature were made during the year. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods occurred on Feb. 6, 1896, in February 1902, and October 1903. At High Bridge, according to reports of the New Jersey State Geologist, the discharges for these floods respectively were 7,560 ft³/s, 3,840 ft³/s, and 2,670 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2000, BY WATER YEAR (WY)[illegible]

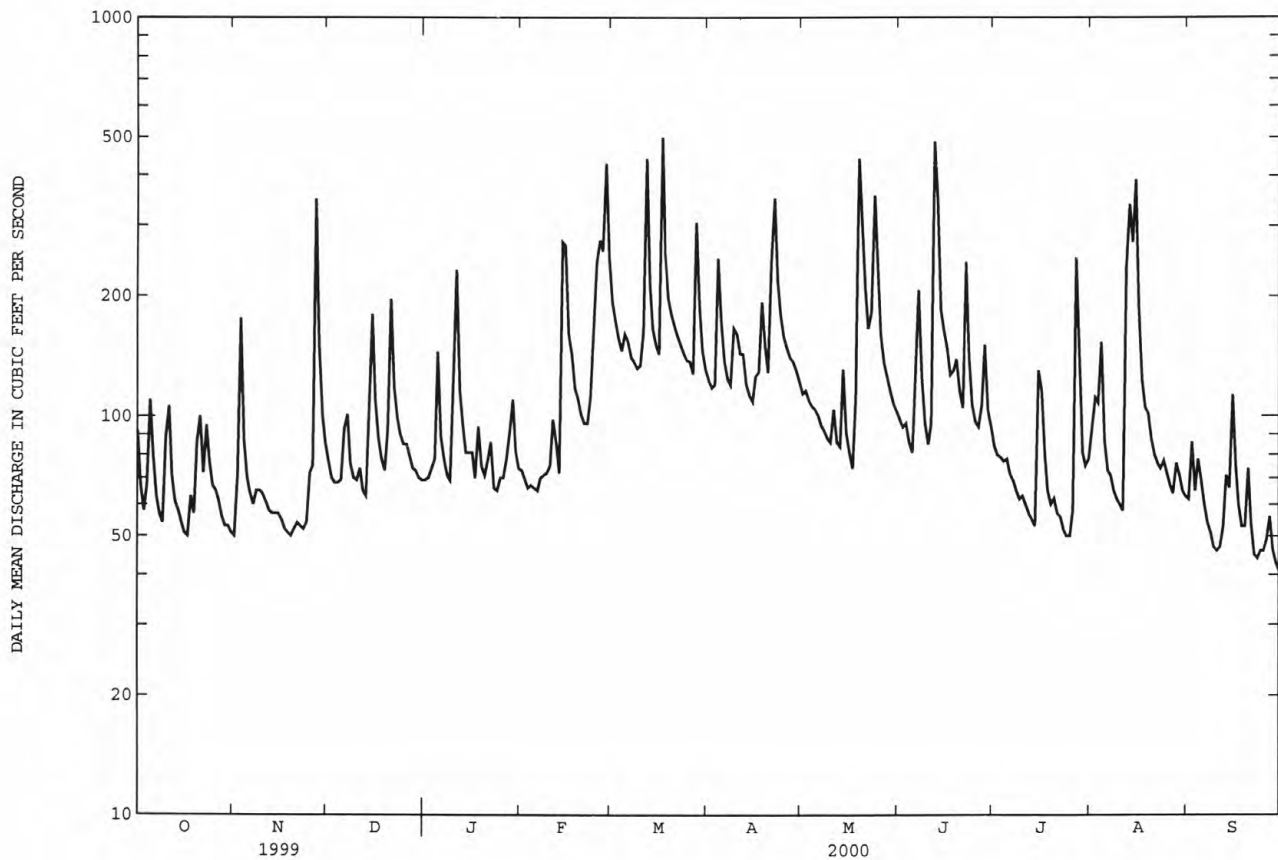
RARITAN RIVER BASIN

111

01396500 SOUTH BRANCH RARITAN RIVER NEAR HIGH BRIDGE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1919 - 2000	
ANNUAL TOTAL	36739		40841		123	
ANNUAL MEAN	101		112		213	
HIGHEST ANNUAL MEAN					46.2	
LOWEST ANNUAL MEAN					1928	
HIGHEST DAILY MEAN	1710	Sep 17	499	Mar 17	3340	Jan 25 1979
LOWEST DAILY MEAN	16	Aug 7	41	Sep 30	13	Aug 11 1966
ANNUAL SEVEN-DAY MINIMUM	17	Aug 3	47	Sep 24	17	Aug 3 1999
INSTANTANEOUS PEAK FLOW			793	Aug 15	6910	Jan 25 1979
INSTANTANEOUS PEAK STAGE			8.12	Aug 15	14.26a	Jan 28 1994
INSTANTANEOUS LOW FLOW			40	Sep 30	6.6	Oct 11 1930
ANNUAL RUNOFF (CFSM)	1.54		1.71		1.88	
ANNUAL RUNOFF (INCHES)	20.93		23.27		25.58	
10 PERCENT EXCEEDS	168		190		235	
50 PERCENT EXCEEDS	73		86		86	
90 PERCENT EXCEEDS	22		54		36	

a Result of an ice jam
e Estimated



RARITAN RIVER BASIN

01396580 SPRUCE RUN AT GLEN GARDNER, NJ

LOCATION.--Lat 40°41'35", long 74°56'25", Hunterdon County, Hydrologic Unit 02030105, on right downstream wingwall of bridge on Sanatorium Road in Glen Gardner, 0.8 mi downstream from Alpaugh Brook, and 2.0 mi upstream from Spruce Run Reservoir.

DRAINAGE AREA.--11.3 mi².

PERIOD OF RECORD.--March 1978 to September 1988, December 1991 to current year.

REVISED RECORD.--WDR NJ-86-1: 1983-85(P). WDR NJ-93-1: Drainage area, longitude.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 389.10 ft above sea level.

REMARKS.--Records fair except for estimated daily discharges which are poor. Some regulation from unknown sources upstream. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 21	1900	504	3.76	Jun 12	2015	*1,070	*5.17
May 18	2345	762	4.40	Aug 14	1815	559	3.90

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	4.8	13	12	e22	e29	15	14	10	6.5	16	15
2	8.5	55	12	12	e18	e27	15	16	11	5.9	22	21
3	3.7	54	12	13	e17	e23	15	e14	9.9	5.8	13	8.7
4	6.3	19	12	21	e17	e22	58	12	7.5	6.3	15	10
5	16	14	11	40	e17	e25	24	13	6.9	6.8	8.8	9.7
6	6.7	12	27	16	e15	e21	17	12	26	5.3	7.6	5.3
7	4.2	11	21	14	e16	e18	15	10	26	4.8	7.6	4.5
8	3.2	10	14	13	e16	e17	15	9.5	10	4.5	6.0	4.2
9	3.0	9.6	13	13	e19	e16	46	8.3	7.4	4.5	5.6	4.1
10	21	9.5	13	58	e32	15	29	8.9	6.1	5.3	5.0	3.9
11	15	9.0	15	40	e19	44	24	13	29	4.7	4.8	3.8
12	6.4	8.2	12	20	e15	112	23	8.4	183	4.1	14	3.7
13	4.9	8.2	12	17	e17	30	16	8.7	64	4.0	13	5.5
14	6.0	8.0	54	16	e94	22	14	28	22	4.3	89	4.0
15	4.5	7.6	45	16	e58	19	15	9.7	23	15	34	16
16	3.9	7.1	25	13	e31	19	21	7.3	17	14	24	5.9
17	3.8	6.7	19	18	e29	167	24	6.3	11	11	12	4.3
18	5.0	6.4	16	11	e24	41	40	85	26	7.1	10	3.8
19	4.0	6.6	15	11	e22	30	20	185	18	6.6	10	5.1
20	16	7.0	20	10	e19	26	16	90	11	7.4	7.9	9.0
21	11	8.0	40	11	e18	24	145	44	12	6.2	6.9	4.7
22	7.2	7.9	20	11	e18	22	73	31	55	6.8	6.3	3.6
23	19	7.2	16	9.5	e22	20	71	31	14	5.4	6.6	4.0
24	10	7.5	14	10	e36	19	41	103	9.3	5.5	7.4	5.1
25	7.6	20	14	11	e56	18	28	53	8.2	5.5	6.1	4.6
26	6.6	16	13	13	e52	19	24	24	7.6	11	5.3	6.2
27	6.1	108	12	14	e54	16	21	19	7.6	46	4.7	7.4
28	5.3	26	12	e11	e87	90	21	16	8.9	14	8.9	5.1
29	5.2	17	11	e11	e37	28	18	14	8.0	9.2	9.5	4.3
30	5.1	14	11	e14	---	20	16	12	8.5	8.6	6.2	3.9
31	5.0	---	12	e36	---	17	---	11	---	7.9	5.5	---
TOTAL	241.2	505.3	556	535.5	897	1016	920	917.1	663.9	260.0	398.7	196.4
MEAN	7.78	16.8	17.9	17.3	30.9	32.8	30.7	29.6	22.1	8.39	12.9	6.55
MAX	21	108	54	58	94	167	145	185	183	46	89	21
MIN	3.0	4.8	11	9.5	15	15	14	6.3	6.1	4.0	4.7	3.6
CFSM	.69	1.49	1.59	1.53	2.74	2.90	2.71	2.62	1.96	.74	1.14	.58
IN.	.79	1.66	1.83	1.76	2.95	3.34	3.03	3.02	2.19	.86	1.31	.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2000, BY WATER YEAR (WY)

	MEAN	12.7	18.4	24.2	26.6	25.6	36.2	35.5	25.2	14.6	11.1	6.55	9.01
MAX	44.4	34.6	87.6	106	44.7	83.5	73.7	61.3	31.4	46.9	12.9	29.5	
(WY)	1996	1986	1997	1979	1994	1983	1984	1992	1984	2000	1979	1979	
MIN	3.54	4.32	3.54	5.66	9.93	12.8	9.74	8.95	3.16	1.85	2.48	1.88	
(WY)	1983	1999	1999	1981	1980	1981	1985	1995	1999	1999	1999	1980	

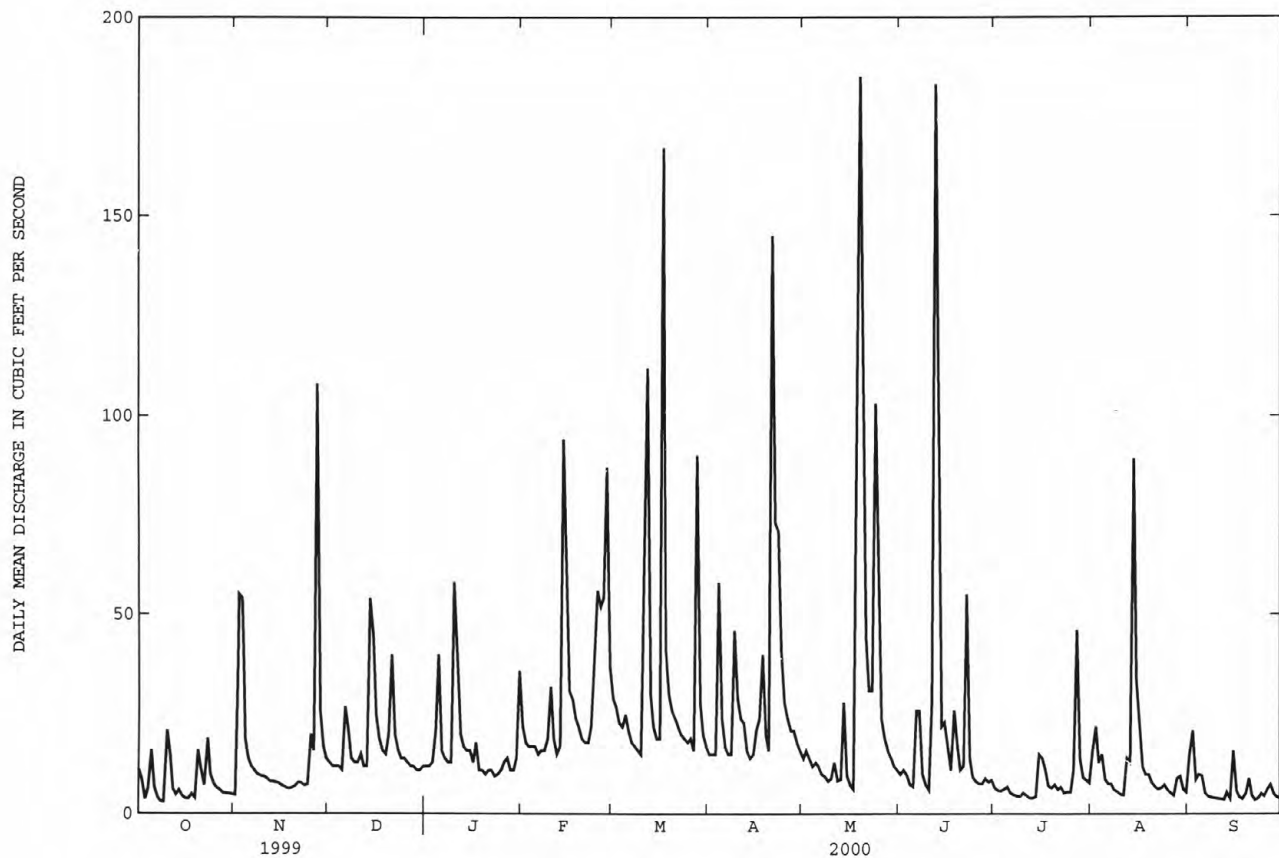
RARITAN RIVER BASIN

113

01396580 SPRUCE RUN AT GLEN GARDNER, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1978 - 2000	
ANNUAL TOTAL	5622.0		7107.1		20.7	
ANNUAL MEAN	15.4		19.4		33.2	
HIGHEST ANNUAL MEAN					11.3	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	650	Sep 16	185	May 19	650	Sep 16 1999
LOWEST DAILY MEAN	1.0	Sep 4	3.0	Oct 9	1.0	Sep 4 1999
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 31	4.2	Sep 8	1.3	Aug 31 1999
INSTANTANEOUS PEAK FLOW			1070	Jun 12	2750	Sep 16 1999
INSTANTANEOUS PEAK STAGE			5.17	Jun 12	9.27	Sep 16 1999
INSTANTANEOUS LOW FLOW			3.0	Oct 9	.80	Sep 23 1998
ANNUAL RUNOFF (CFSM)	1.36		1.72		1.83	
ANNUAL RUNOFF (INCHES)	18.51		23.40		24.91	
10 PERCENT EXCEEDS	27		40		41	
50 PERCENT EXCEEDS	8.5		13		11	
90 PERCENT EXCEEDS	1.7		5.0		3.5	

e Estimated



RARITAN RIVER BASIN

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ

LOCATION.--Lat 40°38'51", long 74°58'09", Hunterdon County, Hydrologic Unit 02030105, on left bank downstream side of bridge on Jutland Road, 0.2 mi south of Van Syckel, 0.8 mi north of Perryville, and 0.3 mi upstream from Spruce Run Reservoir.

DRAINAGE AREA.--11.8 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1973-77. July 1977 to current year.

REVISED RECORDS.--WDR-NJ 89-1: 1978(P), 1979(P), 1980(P), 1981(P), 1982(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 280.25 ft above sea level.

REMARKS.--Records good except for estimated discharges which are fair. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 17	0215	*382	*2.88	Aug 14	1830	335	2.72
Apr 21	1900	332	2.71				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e9.0	6.2	8.7	8.4	8.1	23	15	16	13	9.0	12	15
2	e6.0	42	8.2	8.6	7.8	21	15	17	12	8.3	17	13
3	e5.0	32	8.1	8.9	7.4	18	15	15	12	8.3	21	8.2
4	e12	12	8.3	21	7.7	17	43	15	11	8.5	19	7.7
5	27	9.6	8.1	26	7.5	16	19	14	10	7.9	8.8	6.4
6	10	8.7	35	12	7.3	14	16	14	20	7.2	8.0	5.8
7	7.3	8.0	16	10	7.5	14	14	13	15	6.9	8.0	5.7
8	6.7	7.6	11	9.2	7.2	14	15	12	11	6.6	6.7	5.7
9	6.4	7.3	9.5	9.1	7.0	14	36	12	9.9	6.3	7.6	5.6
10	37	7.3	11	41	8.5	13	22	13	9.1	6.9	6.2	5.6
11	16	6.9	10	24	15	39	19	15	20	6.2	6.7	5.5
12	10	6.4	8.7	14	13	83	18	12	72	5.8	20	5.4
13	7.8	6.6	9.0	12	9.4	24	15	12	35	5.6	10	10
14	11	6.5	48	9.0	80	19	14	19	19	6.0	64	5.9
15	7.6	6.3	31	8.2	46	17	15	11	23	8.2	25	28
16	6.6	6.1	17	9.3	31	17	18	10	17	9.4	13	7.9
17	6.3	6.0	14	7.1	26	120	18	10	14	7.7	8.6	6.3
18	7.0	6.0	12	8.3	18	30	25	22	23	6.1	8.8	5.7
19	5.9	6.0	11	8.1	19	24	16	77	16	6.6	8.2	19
20	19	6.1	16	8.1	18	22	15	53	13	6.6	6.8	21
21	12	7.1	20	8.1	18	21	110	28	16	5.8	6.1	e6.0
22	9.0	6.6	13	7.9	22	21	55	24	47	9.5	5.9	e5.0
23	19	6.5	11	7.7	28	18	43	26	15	5.6	6.5	e5.0
24	9.7	6.6	9.9	7.7	45	17	28	89	12	5.5	7.1	e5.5
25	7.8	15	8.7	7.9	54	17	24	47	11	5.6	5.9	e5.0
26	7.3	11	8.8	8.5	42	17	22	21	15	17	5.4	e6.0
27	6.9	63	8.9	7.9	36	15	20	17	11	49	16	e6.0
28	6.4	17	8.4	7.5	69	66	20	17	10	12	50	e5.0
29	6.3	12	8.2	7.5	28	23	18	15	11	8.5	14	e5.0
30	6.3	9.9	8.2	7.4	---	18	17	14	12	7.9	8.9	e5.0
31	6.3	---	8.8	8.9	---	16	---	13	---	13	8.1	---
TOTAL	320.6	358.3	414.5	349.3	693.4	808	740	693	535.0	283.5	419.3	246.9
MEAN	10.3	11.9	13.4	11.3	23.9	26.1	24.7	22.4	17.8	9.15	13.5	8.23
MAX	37	63	48	41	80	120	110	89	72	49	64	28
MIN	5.0	6.0	8.1	7.1	7.0	13	14	10	9.1	5.5	5.4	5.0
CFSM	.88	1.01	1.13	.95	2.03	2.21	2.09	1.89	1.51	.78	1.15	.70
IN.	1.01	1.13	1.31	1.10	2.19	2.55	2.33	2.18	1.69	.89	1.32	.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2000, BY WATER YEAR (WY)

	MEAN	MAX	MIN	WY
1977	12.3	35.6	4.55	1983
1978	16.7	32.6	4.50	1984
1979	21.6	77.9	3.95	1985
1980	24.6	79.2	5.01	1986
1981	24.1	40.2	11.1	1987
1982	31.7	76.8	10.2	1988
1983	34.2	94.1	6.88	1989
1984	26.4	59.2	10.0	1990
1985	16.9	61.1	4.62	1991
1986	12.1	53.2	1.98	1992
1987	8.62	25.3	2.79	1993
1988	9.96	40.0	2.85	1994
1989				
1990				
1991				
1992				
1993				
1994				
1995				
1996				
1997				
1998				
1999				
2000				

RARITAN RIVER BASIN

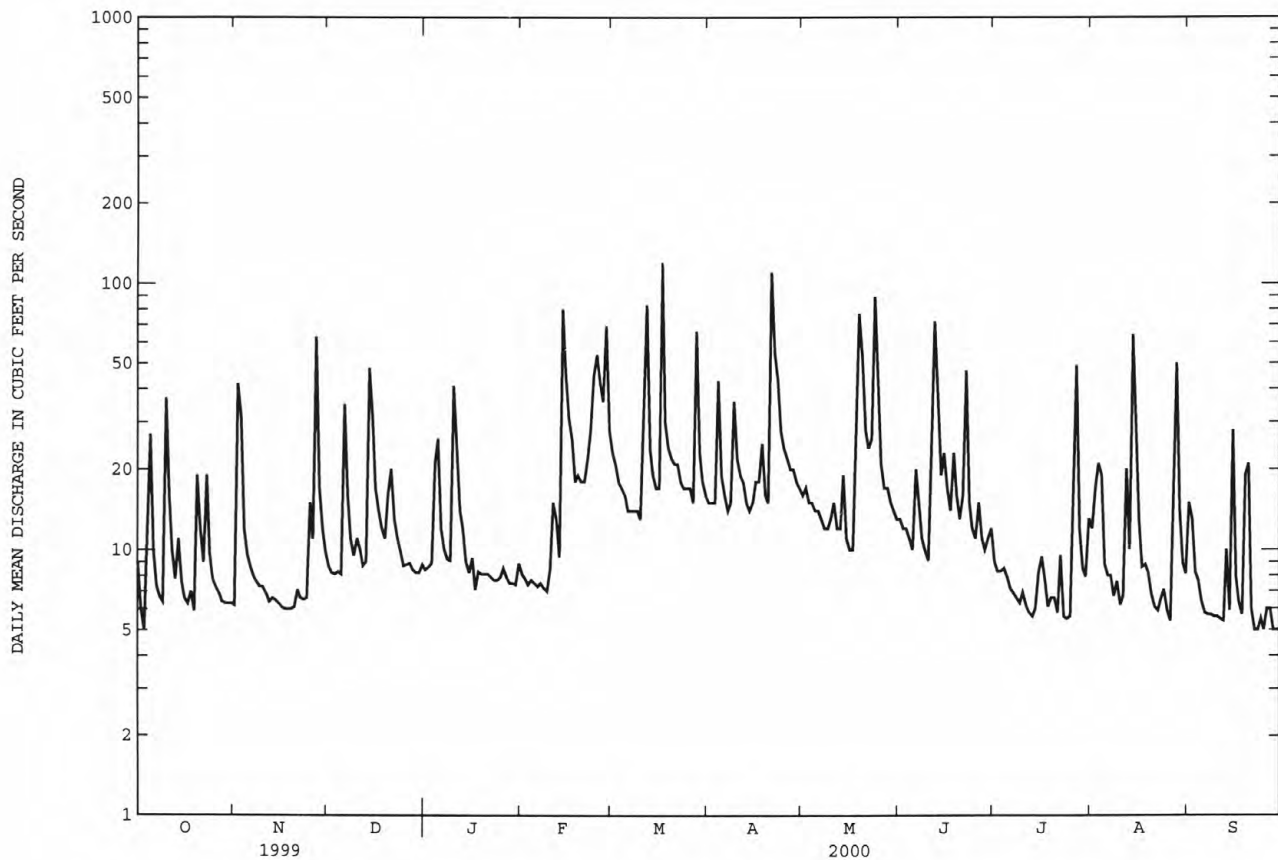
115

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1977 - 2000	
ANNUAL TOTAL	5843.7		5861.8		19.9	
ANNUAL MEAN	16.0		16.0		35.2	
HIGHEST ANNUAL MEAN					11.1	
LOWEST ANNUAL MEAN					11.1	
HIGHEST DAILY MEAN	918	Sep 16	120	Mar 17	918	Sep 16 1999
LOWEST DAILY MEAN	1.1	Aug 2	5.0	Oct 3	1.1	Aug 2 1999
ANNUAL SEVEN-DAY MINIMUM	1.2	Aug 1	5.4	Sep 22	1.2	Aug 1 1999
INSTANTANEOUS PEAK FLOW			382	Mar 17	3590a	Sep 20 1989
INSTANTANEOUS PEAK STAGE			2.88	Mar 17	7.41	Sep 20 1989
INSTANTANEOUS LOW FLOW			4.5	Jan 17	1.0	Aug 2 1999
ANNUAL RUNOFF (CFSM)	1.36		1.36		1.69	
ANNUAL RUNOFF (INCHES)	18.42		18.48		22.95	
10 PERCENT EXCEEDS	25		29		38	
50 PERCENT EXCEEDS	9.5		11		12	
90 PERCENT EXCEEDS	2.0		6.1		4.2	

a From rating curve extended above 1,200 ft³/s.

e Estimated



RARITAN RIVER BASIN

01396800 SPRUCE RUN AT CLINTON, NJ

LOCATION.--Lat 40°38'21", long 74°54'58", Hunterdon County, Hydrologic Unit 02030105, 1,800 ft downstream from dam at Spruce Run Reservoir, 0.2 mi north of Clinton, 0.3 mi upstream from mouth, and 2.2 mi southwest of High Bridge.

DRAINAGE AREA.--41.3 mi².

PERIOD OF RECORD.--May 1959 to current year.

GAGE.--Water-stage recorder. Concrete control since Mar. 15, 1964. Datum of gage is 193.5 ft above sea level. May to Nov. 24, 1959, nonrecording gage; Nov. 25, 1959 to July 23, 1961, water-stage recorder at site 1,800 ft upstream and at datum 1.41 ft lower; July 24, 1961 to Mar. 14, 1964, water-stage recorder at site 1,500 ft upstream at datum 1.41 ft lower.

REMARKS.--Records good. Flow regulated by Spruce Run Reservoir (see Raritan River basin, reservoirs in). Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	9.3	8.0	9.1	9.3	118	134	38	61	31	9.5	21
2	5.7	9.5	8.4	9.1	9.1	111	132	71	68	70	9.6	40
3	5.1	9.1	8.5	9.1	9.1	114	95	49	71	87	12	36
4	5.7	8.5	8.9	9.3	9.1	126	65	53	42	85	11	30
5	15	8.4	9.1	8.9	9.1	106	84	60	37	51	8.7	18
6	45	7.2	9.9	8.5	9.1	68	87	63	69	36	8.5	13
7	46	6.8	9.2	8.5	9.1	66	91	61	97	96	8.5	11
8	28	8.1	8.3	8.5	9.1	98	142	46	63	145	8.4	12
9	6.6	10	9.1	8.5	35	74	175	47	53	148	9.4	11
10	7.5	9.8	9.2	9.7	89	86	54	39	45	141	9.1	19
11	6.9	9.3	9.1	9.8	91	129	10	72	49	147	43	25
12	6.5	9.8	9.1	9.2	92	186	26	34	250	165	37	23
13	7.3	8.8	9.1	9.1	94	81	9.4	40	309	175	8.1	21
14	7.6	8.5	10	8.8	42	67	9.0	80	149	168	13	7.8
15	7.4	8.2	10	11	9.4	82	22	55	114	82	13	52
16	7.4	8.9	8.7	9.4	38	72	56	31	106	18	11	38
17	6.3	9.2	9.1	9.1	81	294	69	26	89	7.0	8.5	20
18	6.5	9.0	9.1	9.1	82	178	95	51	84	54	8.2	9.3
19	7.6	9.1	9.1	8.8	82	125	81	413	95	63	8.3	11
20	9.1	9.3	9.5	37	83	107	67	261	71	42	8.2	35
21	8.1	9.4	9.4	79	84	100	170	193	65	71	8.0	45
22	8.1	9.1	9.1	49	93	95	309	140	170	77	7.9	15
23	8.6	9.1	9.1	8.5	102	105	190	136	106	78	8.2	11
24	5.6	8.8	8.8	8.5	97	112	142	246	63	131	8.4	18
25	6.5	8.0	8.5	8.6	52	144	104	224	55	129	7.9	12
26	7.7	8.2	8.5	8.5	9.4	152	93	140	67	51	7.9	9.2
27	8.4	9.3	8.5	8.4	9.1	96	86	99	58	11	8.1	16
28	8.5	7.3	8.5	34	97	81	84	86	43	7.9	8.7	22
29	9.0	7.7	8.8	79	138	90	80	75	40	8.2	14	12
30	9.8	8.3	9.1	79	---	80	100	67	46	8.3	17	9.9
31	9.8	---	9.5	52	---	102	---	62	---	10	19	---
TOTAL	333.6	262.0	279.2	625.0	1572.9	3445	2861.4	3058	2635	2393.4	368.1	623.2
MEAN	10.8	8.73	9.01	20.2	54.2	111	95.4	98.6	87.8	77.2	11.9	20.8
MAX	46	10	10	79	138	294	309	413	309	175	43	52
MIN	5.1	6.8	8.0	8.4	9.1	66	9.0	26	37	7.0	7.9	7.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2000, BY WATER YEAR (WY)

MEAN	58.1	30.3	48.6	59.6	65.1	78.8	99.4	73.4	62.6	73.5	58.9	74.7
MAX	290	96.2	308	258	162	190	342	225	278	244	171	241
(WY)	1990	1990	1997	1979	1971	1993	1983	1984	1972	1975	1995	1989
MIN	.000	.000	.000	.000	.000	.19	.86	.81	2.60	4.24	4.32	.50
(WY)	1964	1964	1964	1964	1964	1964	1964	1964	1981	1964	1963	1963

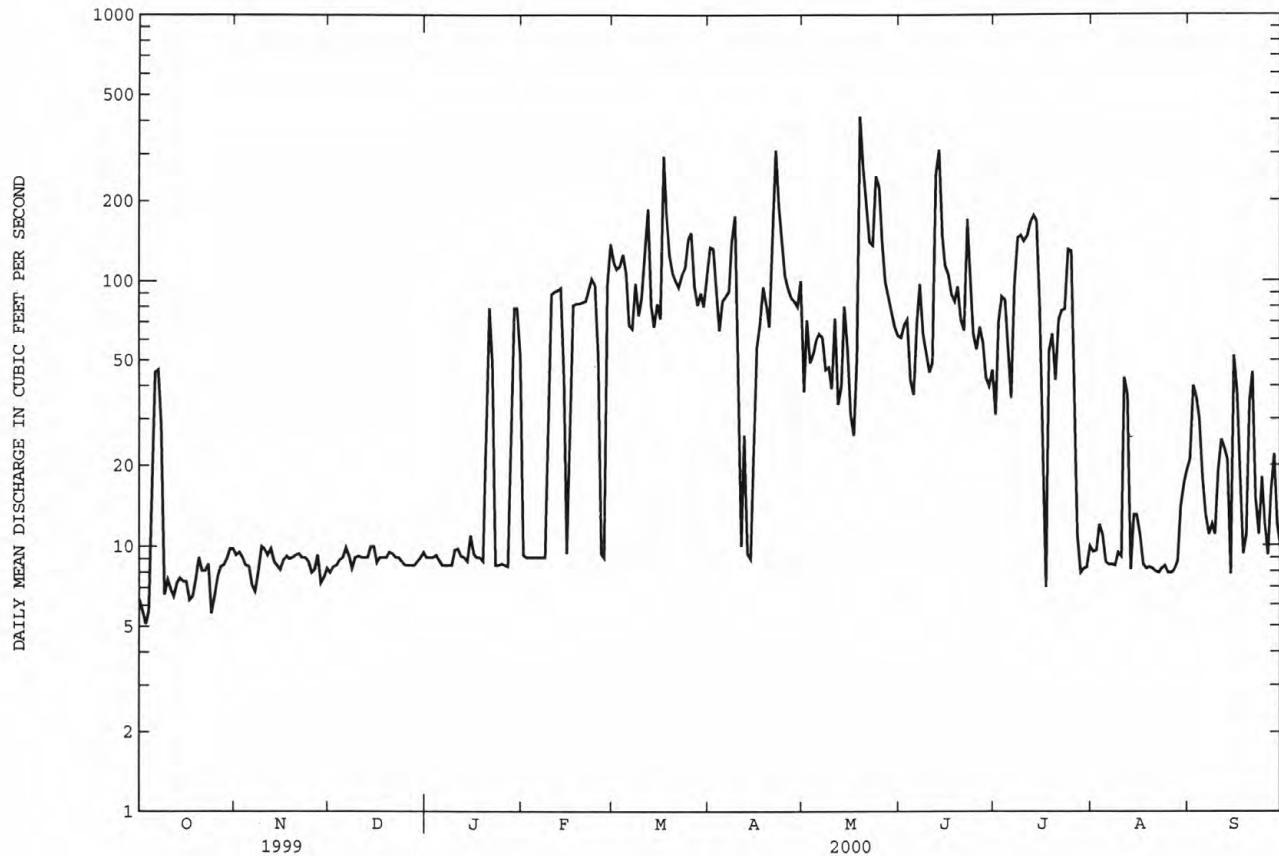
RARITAN RIVER BASIN

117

01396800 SPRUCE RUN AT CLINTON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1959 - 2000	
ANNUAL TOTAL	9431.7		18456.8		65.2	
ANNUAL MEAN	25.8		50.4		111	
HIGHEST ANNUAL MEAN					3.81	
LOWEST ANNUAL MEAN					2060	
HIGHEST DAILY MEAN	208	Jun 28	413	May 19		Jul 7 1984
LOWEST DAILY MEAN	4.8	Apr 25	5.1	Oct 3	.00a	Aug 22 1963
ANNUAL SEVEN-DAY MINIMUM	5.7	Apr 24	7.0	Oct 12	.00a	Aug 22 1963
INSTANTANEOUS PEAK FLOW			448	Apr 21	6410	Apr 2 1970
INSTANTANEOUS PEAK STAGE			2.46	Apr 21	5.17	Apr 2 1970
INSTANTANEOUS LOW FLOW			1.5	Oct 5	.00a	Aug 22 1963
10 PERCENT EXCEEDS	76		127		151	
50 PERCENT EXCEEDS	9.1		22		41	
90 PERCENT EXCEEDS	6.3		8.2		7.0	

a Result of reservoir filling.



RARITAN RIVER BASIN

01397000 SOUTH BRANCH RARITAN RIVER AT STANTON, NJ

LOCATION.--Lat 40°34'21", long 74°52'10", Hunterdon County, Hydrologic Unit 02030105, on right bank at downstream side of bridge on Stanton Road at Stanton Station, 0.4 mi upstream from Prescott Brook, and 1.4 mi west of Stanton.

DRAINAGE AREA.--147 mi².

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.

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

REMARKS.--Records good, except for estimated daily discharges which are poor. Flow regulated by Spruce Run Reservoir since September 1963 (see Raritan River basin, reservoirs in). Water diverted at the Hamden Pumping Station, 4.0 mi upstream, into Round Valley Reservoir since February 1966 (see Raritan River basin, diversions). Water can be released (maximum rate 186 ft³/s) from Round Valley Reservoir at Hamden Pumping Station since July 1990. Several measurements of water temperature were made during the year. National Weather Service telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	89	121	113	188	226	72	139	206	137	137	122
2	108	132	112	113	182	185	66	166	199	149	177	162
3	91	322	108	109	180	153	76	141	222	174	179	135
4	112	163	107	132	180	95	218	135	170	174	297	127
5	178	127	107	227	177	74	143	138	158	152	140	129
6	173	113	190	147	175	103	90	78	216	119	113	102
7	146	104	182	125	171	78	90	68	388	151	109	93
8	124	103	141	118	170	105	68	111	251	204	98	90
9	89	108	123	112	168	72	149	107	191	207	100	85
10	143	106	123	195	182	83	139	99	166	202	90	83
11	179	101	128	395	212	88	66	160	155	198	108	91
12	121	95	115	198	169	607	74	127	872	215	581	94
13	103	93	110	165	162	253	63	145	910	223	547	124
14	119	92	220	107	699	109	112	244	410	221	616	102
15	96	91	339	175	858	118	63	183	327	227	706	237
16	89	88	213	109	157	91	87	136	304	185	315	154
17	86	84	172	126	175	886	184	124	257	112	220	108
18	106	82	151	169	117	351	280	123	234	115	179	88
19	102	81	139	164	81	179	227	1030	279	141	171	94
20	141	82	159	166	72	189	184	813	223	112	147	145
21	181	91	312	351	92	161	358	541	194	127	130	126
22	129	87	201	309	101	144	795	383	486	159	121	87
23	163	83	169	157	137	127	392	403	303	126	118	76
24	139	84	156	142	191	125	352	833	206	168	123	83
25	114	95	141	145	272	101	269	684	178	183	112	87
26	111	112	140	172	174	97	240	415	185	156	104	89
27	105	492	133	169	136	96	221	316	176	343	115	99
28	97	252	126	178	511	330	213	281	224	192	183	93
29	93	158	120	398	349	189	137	253	169	120	139	80
30	93	135	119	391	---	100	144	229	169	101	117	72
31	91	---	117	410	---	109	---	215	---	148	114	---
TOTAL	3793	3845	4794	5987	6438	5624	5572	8820	8428	5241	6406	3257
MEAN	122	128	155	193	222	181	186	285	281	169	207	109
MAX	181	492	339	410	858	886	795	1030	910	343	706	237
MIN	86	81	107	107	72	72	63	68	155	101	90	72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2000, BY WATER YEAR (WY)

	MEAN	164	203	263	288	316	400	374	272	192	178	163	164
MAX	641	659	1026	1099	807	1057	1137	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	

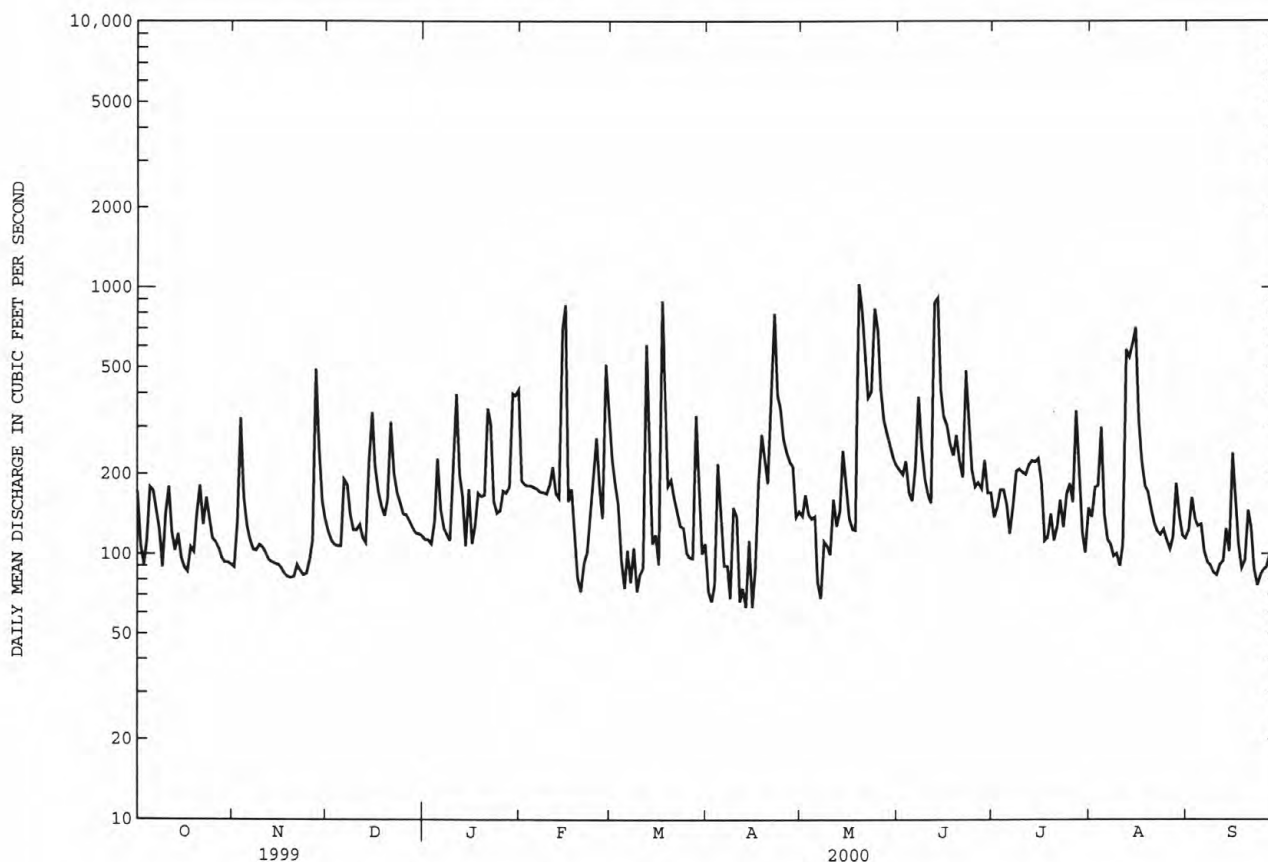
RARITAN RIVER BASIN

119

01397000 SOUTH BRANCH RARITAN RIVER AT STANTON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1904 - 2000	
ANNUAL TOTAL	66918		68205		248	
ANNUAL MEAN	183		186		413	1952
HIGHEST ANNUAL MEAN					95.0	1966
LOWEST ANNUAL MEAN					8060	Aug 19 1955
HIGHEST DAILY MEAN	4210	Sep 16	1030	May 19	12	Oct 18 1963
LOWEST DAILY MEAN	53	Jul 5	63	Apr 13	25	Sep 4 1957
ANNUAL SEVEN-DAY MINIMUM	57	Jul 2	84	Nov 17	18000a	Aug 19 1955
INSTANTANEOUS PEAK FLOW			1940	Aug 14	15.22	Aug 19 1955
INSTANTANEOUS PEAK STAGE			5.88	Aug 14	9.0	Nov 7 1931
INSTANTANEOUS LOW FLOW			48	Jan 17		
10 PERCENT EXCEEDS	254		333		488	
50 PERCENT EXCEEDS	133		142		166	
90 PERCENT EXCEEDS	67		89		64	

a From rating curve extended 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.



RARITAN RIVER BASIN

01398000 NESHANIC RIVER AT REAVILLE, NJ

LOCATION.--Lat 40°28'22", long 74°49'40" (revised), Hunterdon County, Hydrologic Unit 02030105, on left bank 50 ft downstream from bridge on Everitts Road, 0.6 mi southwest of Reaville, 1.5 mi downstream from Third Neshanic River, and 2.2 mi upstream from Back Brook.

DRAINAGE AREA.--25.7 mi².

PERIOD OF RECORD.--June 1930 to current year.

REVISED RECORDS.--WSP 1552: 1933, 1934(M), 1936(M), 1938, 1940(M), 1942(M), 1945-46, 1951, 1952(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 26, 1935. Datum of gage is 109.46 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	8.1	20	14	18	52	23	13	11	3.6	13	23
2	10	48	17	14	13	45	21	13	9.8	3.1	9.0	16
3	8.1	75	16	15	11	37	20	12	10	2.6	8.0	8.2
4	18	27	15	43	11	32	39	11	7.9	2.6	13	30
5	49	21	14	92	11	28	23	10	7.1	2.3	5.5	14
6	25	18	130	33	9.8	23	19	9.7	12	1.8	3.8	5.9
7	17	15	58	29	9.8	21	16	8.7	12	1.6	4.0	4.7
8	14	13	38	24	9.1	20	16	7.8	7.8	1.4	3.8	4.2
9	12	12	31	23	8.6	19	37	7.3	6.4	1.3	3.7	3.8
10	50	12	37	117	10	17	29	7.3	5.4	1.4	3.0	3.2
11	35	10	38	80	18	32	19	9.4	4.9	1.2	4.2	3.6
12	22	8.7	26	46	27	106	18	7.1	35	1.0	70	2.9
13	18	8.6	24	40	17	38	16	7.9	43	.91	47	22
14	19	8.6	212	26	427	31	15	23	14	.88	195	6.4
15	13	7.7	142	26	204	27	14	7.8	12	7.1	116	32
16	11	7.3	81	21	143	25	19	6.8	10	3.3	40	8.3
17	11	6.6	54	16	103	230	25	6.5	7.9	3.4	22	5.5
18	17	6.0	43	13	66	75	48	7.3	9.3	2.3	18	4.6
19	10	5.9	35	14	158	54	26	155	7.6	2.1	16	69
20	39	5.9	76	13	134	44	22	117	6.4	3.0	10	41
21	30	6.2	103	13	109	38	61	78	6.1	2.0	8.1	15
22	21	5.9	51	12	100	36	69	50	13	7.2	6.9	9.5
23	37	5.9	40	12	101	30	44	38	6.9	2.2	6.4	8.0
24	22	5.9	33	12	124	26	35	132	5.4	1.7	7.0	8.1
25	17	6.3	25	11	124	23	28	66	4.4	1.7	5.6	6.9
26	15	13	23	14	98	23	24	35	4.2	14	4.6	35
27	13	168	21	12	76	19	21	26	4.8	44	4.0	27
28	11	47	18	9.2	147	115	20	21	3.9	8.7	3.9	15
29	10	32	16	9.0	67	43	18	17	3.7	5.0	4.7	11
30	9.5	25	15	8.8	---	32	15	14	5.4	4.1	3.7	9.2
31	8.6	---	15	21	---	27	---	13	---	8.3	3.6	---
TOTAL	606.2	639.6	1467	833.0	2354.3	1368	800	937.6	297.3	145.79	663.5	453.0
MEAN	19.6	21.3	47.3	26.9	81.2	44.1	26.7	30.2	9.91	4.70	21.4	15.1
MAX	50	168	212	117	427	230	69	155	43	44	195	69
MIN	8.1	5.9	14	8.8	8.6	17	14	6.5	3.7	.88	3.0	2.9
CFSM	.76	.83	1.84	1.05	3.16	1.72	1.04	1.18	.39	.18	.83	.59
IN.	.88	.93	2.12	1.21	3.41	1.98	1.16	1.36	.43	.21	.96	.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2000, BY WATER YEAR (WY)

MEAN	15.3	33.7	48.7	57.4	58.8	76.7	55.4	33.4	21.1	18.4	18.0	18.9
MAX	147	139	206	280	147	201	200	135	119	138	216	283
(WY)	1997	1933	1997	1994	1939	1994	1983	1989	1972	1938	1971	1999
MIN	.67	.90	1.42	1.14	3.92	15.2	7.20	3.78	1.11	.066	.44	.47
(WY)	1965	1966	1999	1981	1934	1985	1985	1963	1965	1999	1964	1965

RARITAN RIVER BASIN

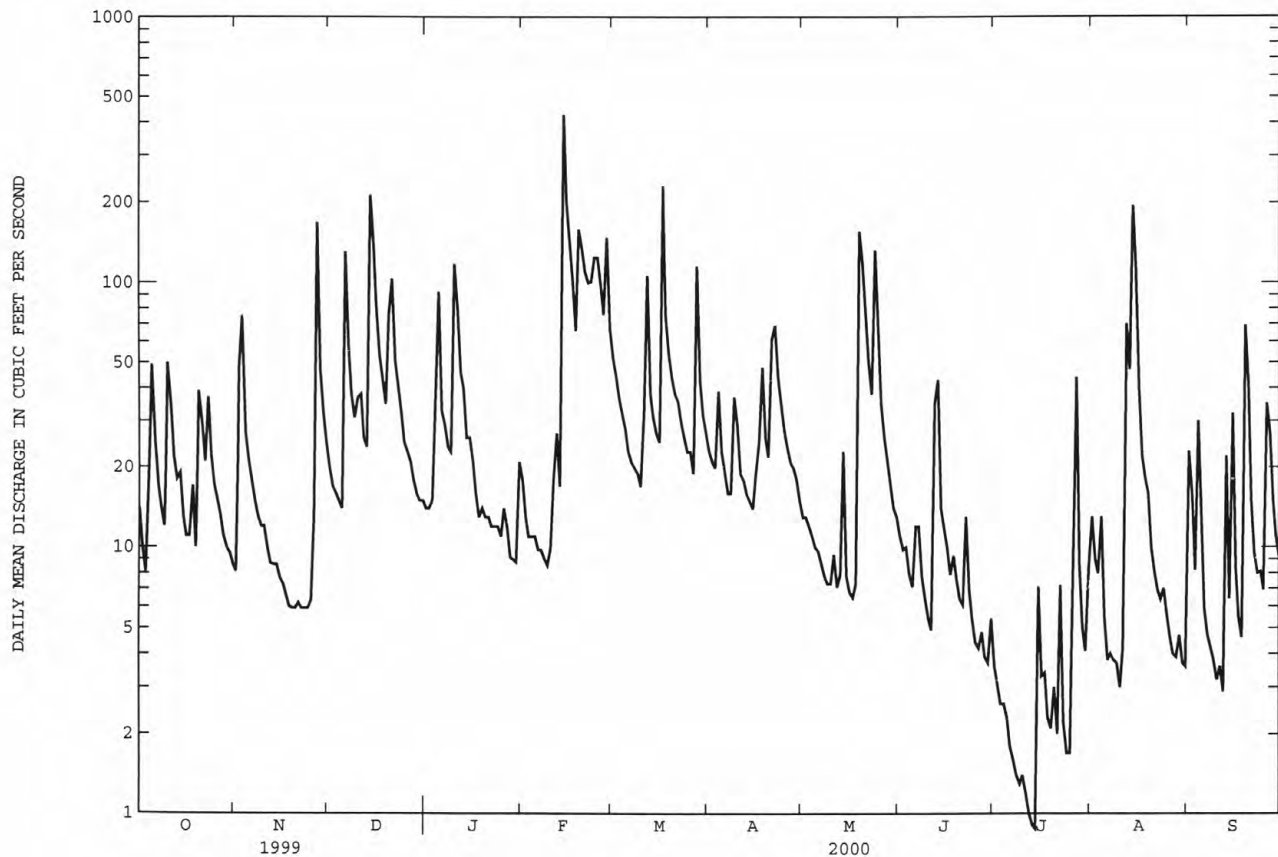
121

01398000 NESHANIC RIVER AT REAVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1931 - 2000	
ANNUAL TOTAL	18043.94		10565.29		37.9	
ANNUAL MEAN	49.4		28.9		70.8	
HIGHEST ANNUAL MEAN					14.5	
LOWEST ANNUAL MEAN					7000	
HIGHEST DAILY MEAN	7000	Sep 16	427	Feb 14	7000	Sep 16 1999
LOWEST DAILY MEAN	.00	Jul 7	.88	Jul 14	.00	Jul 29 1965
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 7	1.2	Jul 8	.00	Aug 4 1966
INSTANTANEOUS PEAK FLOW			1290	Feb 14	23100a	Sep 16 1999
INSTANTANEOUS PEAK STAGE			6.66	Feb 14	15.33b	Sep 16 1999
INSTANTANEOUS LOW FLOW			.82	Jul 13	.00	Jul 29 1965
ANNUAL RUNOFF (CFSM)	1.92		1.12		1.47	
ANNUAL RUNOFF (INCHES)	26.12		15.29		20.03	
10 PERCENT EXCEEDS	56		69		76	
50 PERCENT EXCEEDS	14		15		12	
90 PERCENT EXCEEDS	.00		4.0		1.3	

a From rating curve extended above 1,700 ft³/s on basis of slope-area measurement 0.7 mi downstream (adjusted to present site) at gage height 11.90 ft.

b From high-water mark in gage house.



RARITAN RIVER BASIN

01398500 NORTH BRANCH RARITAN RIVER NEAR FAR HILLS, NJ

LOCATION.--Lat 40°42'30", long 74°38'11", Somerset County, Hydrologic Unit 02030105, on left bank 75 ft upstream from Ravine Lake Dam, 1.6 mi north of Far Hills, and 2.3 mi upstream from Peapack Brook.

DRAINAGE AREA.--26.2 mi².

PERIOD OF RECORD.--October 1921 to September 1975, October 1977 to current year. Operated as crest-stage gage, water years 1976-77. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23, 1924-25(M), 1935(M). WSP 1902: 1954.

GAGE.--Water-stage recorder and crest-stage gage above masonry dam. Datum of gage is 224.49 ft above sea level (New Jersey Geological Survey bench mark). Prior to June 18, 1925, nonrecording gage in stilling box at left end of dam at same datum.

REMARKS.--Records fair. Records given herein include diversion by small turbine at dam (average discharge, 3.0 ft³/s) and returned to river 1,000 ft downstream from Ravine Lake Dam. Turbine was not operating during this water year. Flow regulated occasionally by operation of waste gate in dam. Telemetered rain gage, 500 ft downstream from station. Several measurements of water temperature were made during the year. Gage-height and rain-gage radio telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

CORRECTION.--The peak discharge for the flood of Sept.16, 1999 was 5,410 ft³/s, gage height 6.76 ft. Inconsistent data was published in WDR-NJ-99-1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e23	e30	26	28	48	45	45	36	26	27	18
2	8.7	77	e29	26	25	46	45	45	35	24	28	19
3	8.5	76	e25	26	23	43	45	43	35	23	80	18
4	15	20	e26	29	24	41	87	42	32	25	91	17
5	23	21	e28	52	23	40	55	41	31	26	37	15
6	14	23	e65	35	23	38	48	40	51	23	28	13
7	11	22	e52	31	22	38	46	38	65	21	27	12
8	10	20	e29	28	21	39	45	38	34	19	22	13
9	9.9	20	e26	27	19	46	56	36	27	18	23	13
10	29	20	e27	73	22	53	52	36	24	20	21	13
11	27	19	e30	75	28	70	50	42	27	19	44	15
12	18	e19	e28	42	36	161	50	36	192	17	158	16
13	15	e19	e27	39	26	62	44	35	87	16	110	21
14	24	e18	e70	32	226	52	43	44	55	16	105	19
15	21	e18	e76	30	90	50	44	35	51	147	94	38
16	23	e17	e44	35	53	49	51	33	47	46	58	22
17	30	e17	e36	23	49	168	51	31	41	36	43	16
18	41	e17	e32	23	43	67	67	42	44	27	40	14
19	25	e18	34	28	42	58	51	130	44	23	39	15
20	64	e17	37	28	39	55	47	113	39	24	34	22
21	54	e19	58	28	38	53	104	66	36	21	29	16
22	28	e19	44	24	39	51	104	52	57	21	27	13
23	52	e18	38	25	42	50	68	56	43	18	27	13
24	39	e18	32	26	54	49	57	108	35	16	28	14
25	27	e24	27	29	67	47	53	59	32	16	26	14
26	21	e30	29	30	64	48	51	48	29	22	23	19
27	22	e200	29	26	59	46	51	44	38	101	22	25
28	e25	e50	27	22	90	109	50	42	42	38	21	16
29	e25	e35	26	25	55	57	49	40	34	27	21	13
30	e24	e30	26	25	---	48	47	38	30	26	19	12
31	e23	---	26	32	---	46	---	37	---	27	18	---
TOTAL	768.1	944	1113	1000	1370	1828	1656	1535	1373	929	1370	504
MEAN	24.8	31.5	35.9	32.3	47.2	59.0	55.2	49.5	45.8	30.0	44.2	16.8
MAX	64	200	76	75	226	168	104	130	192	147	158	38
MIN	8.5	17	25	22	19	38	43	31	24	16	18	12
CFSM	.95	1.20	1.37	1.23	1.80	2.25	2.11	1.89	1.75	1.14	1.69	.64
IN.	1.09	1.34	1.58	1.42	1.95	2.60	2.35	2.18	1.95	1.32	1.95	.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2000, BY WATER YEAR (WY)

	MEAN	26.5	42.6	49.5	54.7	59.2	81.7	82.0	59.4	38.7	30.4	27.7	27.1
MAX	120	170	124	182	128	207	226	178	190	132	153	134	
(WY)	1997	1928	1974	1979	1973	1936	1983	1989	1972	1984	1942	1971	
MIN	6.29	9.22	7.93	6.76	22.1	22.8	26.8	20.0	10.5	4.41	4.55	3.61	
(WY)	1954	1965	1999	1981	1934	1981	1985	1965	1965	1966	1965	1964	

RARITAN RIVER BASIN

123

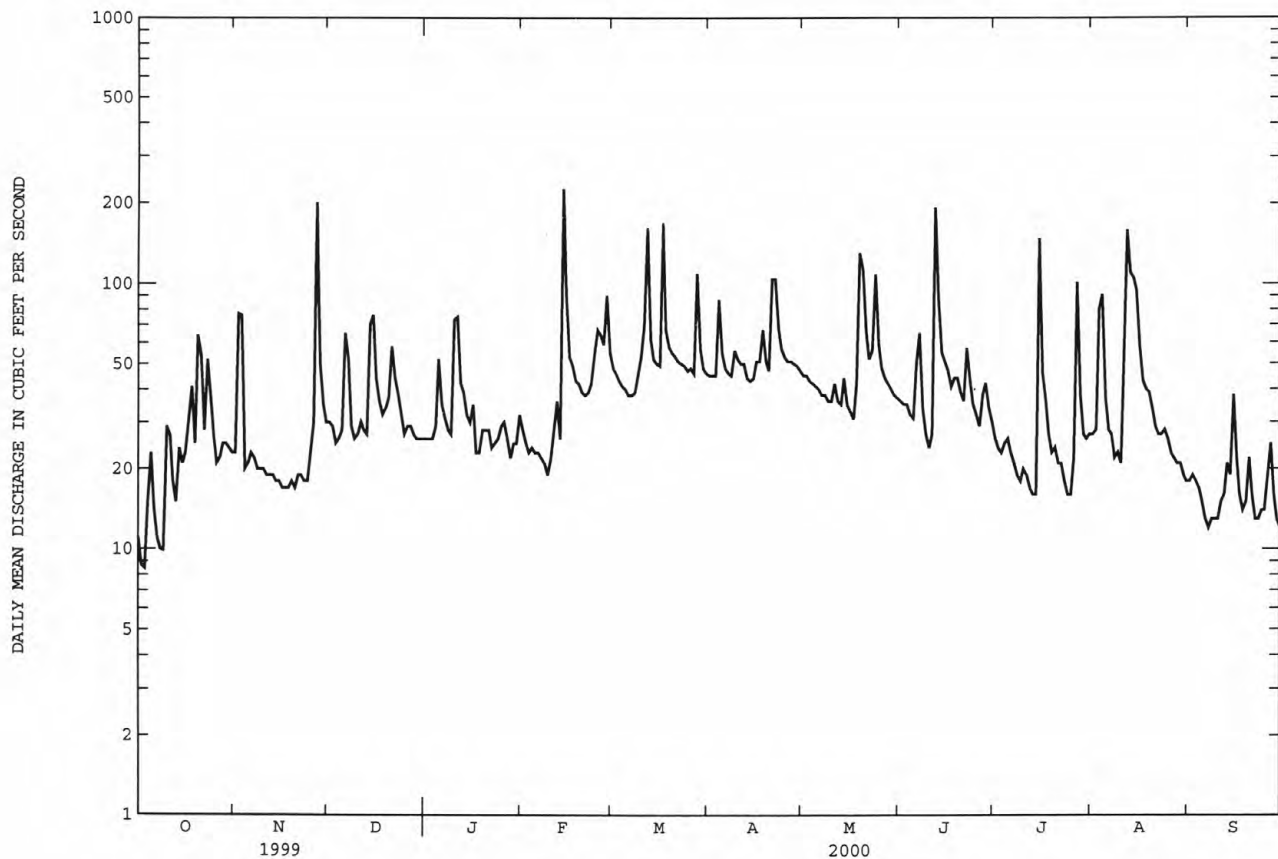
01398500 NORTH BRANCH RARITAN RIVER NEAR FAR HILLS, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1922 - 2000	
ANNUAL TOTAL	14162.9		14390.1			
ANNUAL MEAN	38.8		39.3		48.2	
HIGHEST ANNUAL MEAN					89.7	
LOWEST ANNUAL MEAN					17.7	
HIGHEST DAILY MEAN	1170	Sep 16	226	Feb 14	1770	Oct 19 1996
LOWEST DAILY MEAN	2.0	Aug 11	8.5	Oct 3	.20	Oct 22 1953
ANNUAL SEVEN-DAY MINIMUM	3.0	Aug 5	13	Oct 2	.20	Oct 22 1953
INSTANTANEOUS PEAK FLOW			546	Aug 3	6390a	Aug 28 1971
INSTANTANEOUS PEAK STAGE			3.18	Nov 27	7.28	Aug 28 1971
INSTANTANEOUS LOW FLOW			.10	Dec 9	.00b	
ANNUAL RUNOFF (CFSM)	1.48		1.50		1.84	
ANNUAL RUNOFF (INCHES)	20.11		20.43		25.01	
10 PERCENT EXCEEDS	63		65		95	
50 PERCENT EXCEEDS	27		32		33	
90 PERCENT EXCEEDS	6.9		17		10	

a From rating curve extended above 2000 ft³/s on basis of flow over dam computation of peak flow.

b Several times when lake was filling.

e Estimated



RARITAN RIVER BASIN

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ

LOCATION.--Lat 40°43'39", long 74°43'50", Morris County, Hydrologic Unit 02030105, on right bank 1.1 mi upstream from bridge on State Highway 512, 1.2 mi northwest of Pottersville, and 5.5 mi upstream from Cold Brook.

DRAINAGE AREA.--32.8 mi².

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October and November 1921, published in WSP 1302. Prior to October 1952, published as "Black River near Pottersville".

REVISED RECORDS.--WSP 741: 1932. WSP 781: Drainage area. WSP 1552: 1922, 1924-29(M), 1931(M), 1933-34(M), 1938(P), 1939(M), 1940, 1941(M), 1942-46(P), 1947(M), 1948-49(P), 1951-52(P), 1953(M). WDR-NJ-80-1: Correction 1979(P).

GAGE.--Water-stage recorder. Concrete control since July 1, 1937. Datum of gage is 284.14 ft above sea level (levels from New Jersey Geological Survey bench mark). Prior to July 1, 1922, nonrecording gage on downstream side of highway bridge at Pottersville, 1.1 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated occasionally by pond above station. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug 3	2000	*587	*3.28	Aug 12	1530	404	2.97

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	27	51	30	e29	95	64	53	43	36	51	28
2	29	33	45	31	28	88	59	52	41	34	48	27
3	27	43	40	33	27	77	57	50	38	34	86	26
4	34	34	37	38	27	67	89	48	35	32	88	25
5	42	30	35	50	27	61	75	47	33	29	50	24
6	35	30	43	42	27	56	69	45	46	27	40	22
7	30	31	42	39	27	53	66	42	57	26	38	21
8	28	29	37	37	28	52	62	41	49	24	34	20
9	28	28	35	36	31	52	69	38	51	22	32	20
10	44	27	36	65	28	51	67	38	53	23	28	20
11	42	26	37	73	34	60	65	40	65	21	35	20
12	33	25	36	55	40	113	67	37	119	19	102	19
13	29	25	34	54	46	82	62	36	87	17	108	19
14	29	24	50	e47	118	80	59	48	80	17	145	18
15	27	23	59	e41	91	77	56	40	95	30	170	29
16	27	22	50	e39	80	70	59	38	90	25	147	22
17	26	22	46	e33	85	135	59	36	77	25	131	24
18	30	22	45	e32	79	93	71	43	70	29	112	27
19	26	22	43	e31	67	89	66	108	63	34	94	31
20	36	22	44	29	59	87	62	104	55	34	78	32
21	36	23	54	29	55	80	89	95	51	29	66	28
22	32	22	46	27	58	74	102	94	72	27	57	25
23	40	22	43	25	61	68	88	91	55	24	51	24
24	37	23	46	29	74	63	87	115	48	22	48	23
25	34	30	e42	e28	86	59	80	90	47	20	43	24
26	33	35	e40	e29	90	58	73	77	46	23	38	28
27	33	84	e37	e29	93	55	66	71	51	71	35	27
28	32	58	36	e28	122	96	63	64	48	41	33	24
29	31	52	32	e27	103	77	59	57	42	34	30	23
30	29	54	29	e26	---	71	56	51	37	39	30	21
31	28	---	30	e30	---	70	---	47	---	48	29	---
TOTAL	1001	948	1280	1142	1720	2309	2066	1836	1744	916	2077	721
MEAN	32.3	31.6	41.3	36.8	59.3	74.5	68.9	59.2	58.1	29.5	67.0	24.0
MAX	44	84	59	73	122	135	102	115	119	71	170	32
MIN	26	22	29	25	27	51	56	36	33	17	28	18
CFSM	.98	.96	1.26	1.12	1.81	2.27	2.10	1.81	1.77	.90	2.04	.73
IN.	1.14	1.08	1.45	1.30	1.95	2.62	2.34	2.08	1.98	1.04	2.36	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2000, BY WATER YEAR (WY)

	MEAN	34.3	49.5	59.8	65.2	70.4	90.1	88.3	67.0	45.7	36.4	32.8	32.7
MAX	116	163	207	225	144	230	239	169	191	165	126	123	
(WY)	1956	1928	1997	1979	1973	1936	1984	1989	1972	1984	1928	1971	
MIN	5.69	11.2	15.4	11.7	28.0	32.0	25.9	19.0	10.1	5.48	5.61	3.76	
(WY)	1931	1965	1981	1981	1934	1981	1985	1965	1965	1965	1966	1964	

RARITAN RIVER BASIN

125

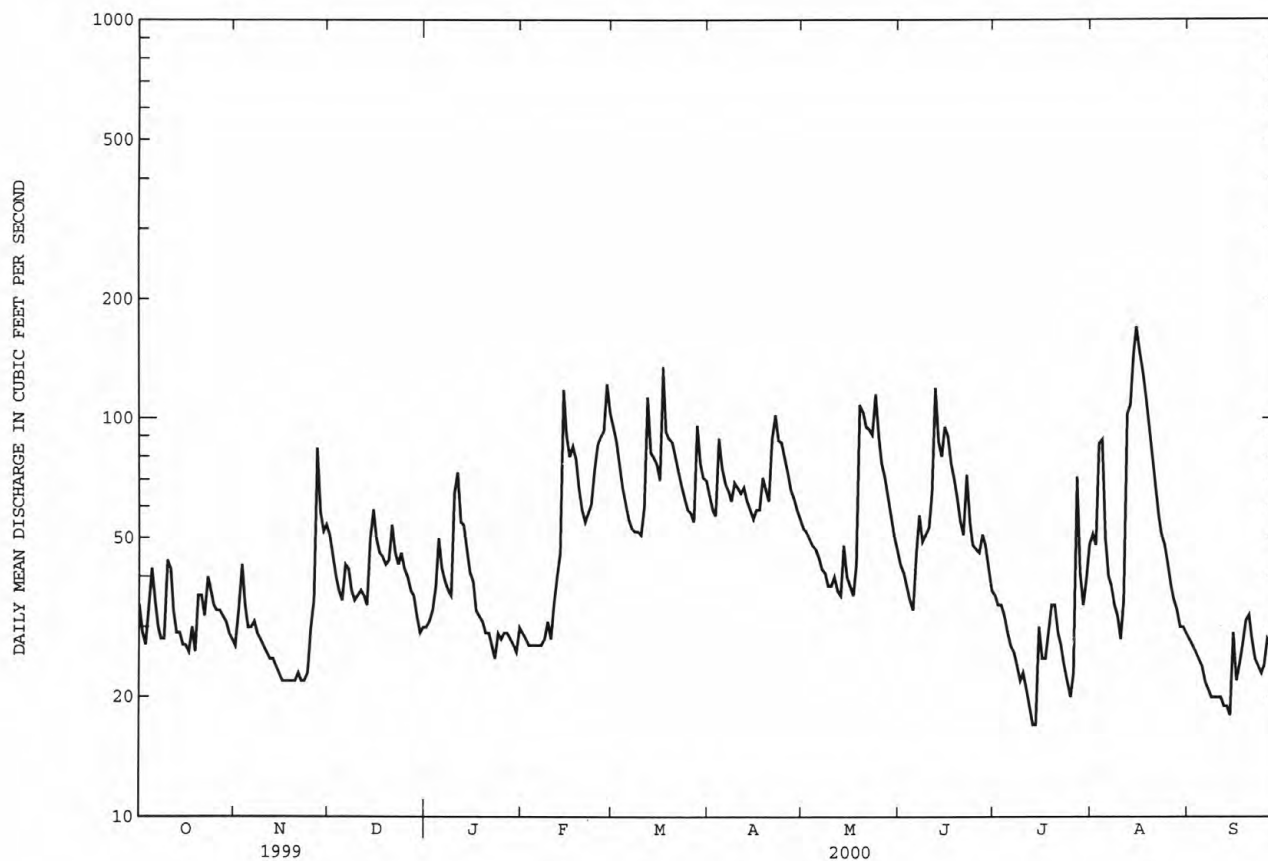
01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1922 - 2000	
ANNUAL TOTAL	16060.2		17760		55.9	
ANNUAL MEAN	44.0		48.5		104	
HIGHEST ANNUAL MEAN					20.5	
LOWEST ANNUAL MEAN					905	
HIGHEST DAILY MEAN	419	Sep 16	170	Aug 15	1.5	Jan 25 1979
LOWEST DAILY MEAN	2.8	Aug 10	17	Jul 13	2.4	Oct 4 1930
ANNUAL SEVEN-DAY MINIMUM	2.9	Aug 7	19	Sep 8	3460a	Sep 22 1964
INSTANTANEOUS PEAK FLOW			587	Aug 3	1.3	Jul 7 1984
INSTANTANEOUS PEAK STAGE			3.28	Aug 3	5.94b	Jul 7 1984
INSTANTANEOUS LOW FLOW			17	Jul 13	1.3	Oct 4 1930
ANNUAL RUNOFF (CFSM)	1.34		1.48		1.71	
ANNUAL RUNOFF (INCHES)	18.21		20.14		23.17	
10 PERCENT EXCEEDS	78		87		112	
50 PERCENT EXCEEDS	36		40		43	
90 PERCENT EXCEEDS	6.4		24		14	

a From rating curve extended above 380 ft³/s on basis of slope-area measurement at gage height 4.71 ft.

b From floodmark.

e Estimated



RARITAN RIVER BASIN

01399670 SOUTH BRANCH ROCKAWAY CREEK AT WHITEHOUSE STATION, NJ

LOCATION.--Lat 40°37'10", long 74°46'30", Hunterdon County, Hydrologic Unit 02030105, on right bank 1,700 ft upstream from bridge on U.S. Route 22, 0.4 mi northeast of Whitehouse Station, and 0.8 mi upstream from mouth.

DRAINAGE AREA.--12.3 mi².

PERIOD OF RECORD.--October 1986 to current year. March 1977 to September 1986, water-stage recorder 1,700 ft downstream, at datum 8.07 ft lower (sta. 01399690), drainage area 13.2 mi².

REVISED RECORDS.--WDR NJ-88-1: 1987. WDR NJ-90-1: 1988.

GAGE.--Water-stage recorder. Datum of gage is 121.5 ft above sea level.

REMARKS.--Records good except for daily discharges below 5.0 ft³/s, which are fair. Releases from Round Valley Reservoir enter stream directly upstream from station (see Raritan River basin, reservoirs in and diversions from). Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	5.1	6.5	5.6	5.9	18	11	8.5	7.5	3.0	14	108
2	6.0	10	5.9	5.6	5.0	16	11	9.3	7.6	2.8	13	30
3	5.1	19	5.8	6.1	4.6	14	10	8.0	9.0	2.8	14	14
4	11	6.9	5.8	10	4.8	12	27	7.7	5.7	3.2	32	14
5	18	5.7	5.3	25	4.7	11	13	8.7	5.3	2.8	10	11
6	8.2	5.4	37	8.4	4.4	9.7	11	9.4	13	2.4	8.2	10
7	6.0	5.3	17	7.5	4.7	9.0	9.8	7.1	12	2.4	8.1	9.7
8	5.3	4.8	9.8	6.6	4.8	9.0	9.5	6.5	6.3	2.2	6.9	9.5
9	5.2	4.8	8.1	6.5	4.4	8.6	19	6.1	5.2	2.2	9.4	9.2
10	23	5.0	10	42	5.6	8.1	14	6.9	4.5	2.4	6.8	8.9
11	17	4.9	11	29	12	20	11	12	6.3	2.2	8.6	8.5
12	8.3	4.7	7.2	14	15	73	13	6.2	48	2.0	151	8.2
13	7.0	4.7	7.0	12	7.9	21	9.6	6.4	33	2.0	44	17
14	15	5.2	48	8.5	134	16	9.1	13	12	2.1	141	9.5
15	7.5	4.9	35	9.0	55	14	9.2	6.0	11	29	67	37
16	6.5	4.6	18	7.6	34	13	13	5.4	8.9	8.3	31	12
17	6.2	4.3	13	5.7	28	95	14	5.1	6.8	6.0	23	9.6
18	12	4.3	11	5.1	20	27	29	15	6.9	5.2	18	8.9
19	6.2	4.3	9.2	5.1	28	21	15	145	6.0	5.8	16	14
20	22	4.6	14	5.4	25	18	12	98	5.2	7.7	13	15
21	16	6.5	28	5.2	25	16	38	43	5.4	5.8	11	9.7
22	10	4.7	13	4.3	25	15	35	31	26	9.3	10	8.4
23	20	4.7	10	4.5	26	13	23	33	6.3	5.0	11	8.6
24	10	4.7	8.8	4.7	35	12	18	79	4.6	5.4	12	9.6
25	8.1	5.1	7.1	5.7	35	12	15	40	4.3	6.6	10	8.7
26	7.0	8.0	7.2	5.5	30	12	13	19	4.1	15	8.9	14
27	6.5	59	6.8	4.2	25	10	12	15	3.8	59	19	12
28	5.9	15	6.3	4.4	40	55	12	13	3.6	13	125	9.1
29	5.7	9.5	6.0	4.3	21	19	11	10	3.5	8.4	35	8.1
30	5.4	7.6	5.8	4.2	---	14	9.5	9.2	3.6	8.7	95	7.7
31	5.0	---	6.1	7.1	---	13	---	8.3	---	17	140	---
TOTAL	303.7	243.3	389.7	278.8	669.8	624.4	456.7	690.8	285.4	249.7	1111.9	459.9
MEAN	9.80	8.11	12.6	8.99	23.1	20.1	15.2	22.3	9.51	8.05	35.9	15.3
MAX	23	59	48	42	134	95	38	145	48	59	151	108
MIN	5.0	4.3	5.3	4.2	4.4	8.1	9.1	5.1	3.5	2.0	6.8	7.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2000, BY WATER YEAR (WY)

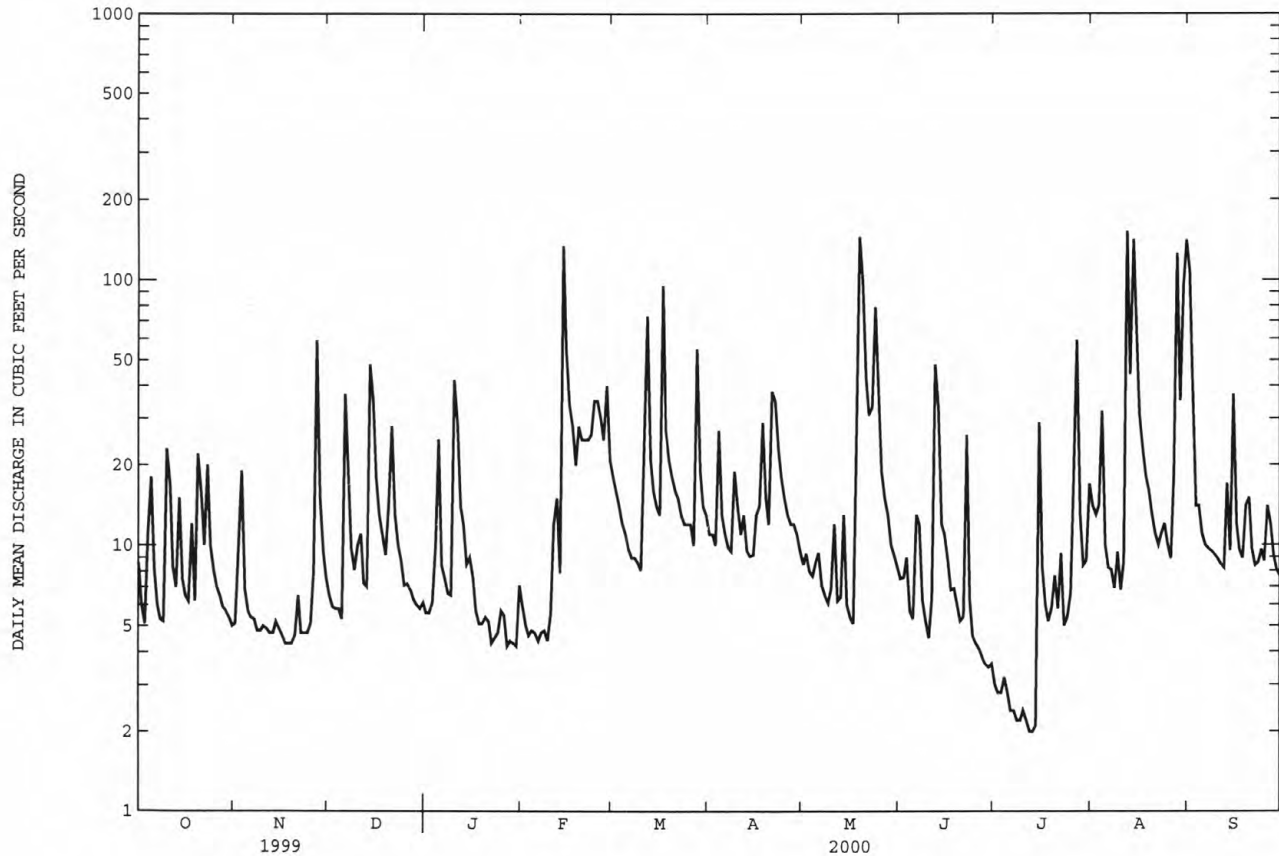
MEAN	27.5	27.3	33.9	33.4	26.0	33.0	30.9	25.1	18.3	29.2	30.1	28.5
MAX	116	88.9	91.6	93.3	51.1	74.5	85.0	60.5	38.7	245	128	146
(WY)	1981	1999	1981	1981	1979	1994	1983	1989	1989	1999	1980	1980
MIN	4.55	6.58	9.85	8.31	9.90	10.2	3.80	8.18	8.50	4.78	5.49	4.19
(WY)	1995	1982	1996	1985	1992	1985	1985	1995	1993	1993	1983	1983

RARITAN RIVER BASIN

127

01399670 SOUTH BRANCH ROCKAWAY CREEK AT WHITEHOUSE STATION, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1977 - 2000	
ANNUAL TOTAL	17507.8		5764.1		28.9	
ANNUAL MEAN	48.0		15.7		11.1	
HIGHEST ANNUAL MEAN					66.0	
LOWEST ANNUAL MEAN					11.1	
HIGHEST DAILY MEAN	885	Sep 16	151	Aug 12	885	Sep 16 1999
LOWEST DAILY MEAN	2.5	Sep 3	2.0	Jul 12	.07	Nov 12 1994
ANNUAL SEVEN-DAY MINIMUM	2.7	Aug 30	2.2	Jul 8	.09	Aug 5 1995
INSTANTANEOUS PEAK FLOW			672	Aug 14	2620	Sep 16 1999
INSTANTANEOUS PEAK STAGE			5.85	Aug 14	10.68	Sep 16 1999
INSTANTANEOUS LOW FLOW			1.9	Jul 11	.00	Feb 2 1993
10 PERCENT EXCEEDS	221		31		67	
50 PERCENT EXCEEDS	11		9.2		14	
90 PERCENT EXCEEDS	4.6		4.7		4.8	



LOCATION.--Lat 40°34'10", long 74°40'45", Somerset County, Hydrologic Unit 02030105, on right bank, 400 ft upstream from U.S. Highway 202, 1.4 mi upstream from confluence with South Branch, and 2.7 mi west of Raritan.

PERIOD OF RECORD.--June 1923 to current year. Monthly discharge only for June 1923, published in WSP 1302. Prior to October 1943, published as "at Milltown".

GAGE.--Water-stage recorder. Concrete control since Sept. 1, 1936. Datum of gage is 50.43 ft above sea level. Prior to Oct. 17, 1936, nonrecording gage at site 30 ft downstream at same datum.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug 12	2400	*6,000	*8.50	No other peak greater than base discharge.			

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	109	168	135	200	371	243	204	183	118	213	627
2	119	125	155	132	166	340	230	206	174	110	183	488
3	103	320	145	138	140	299	224	194	182	109	153	183
4	147	159	141	168	138	267	458	184	151	117	634	224
5	253	128	137	448	129	250	307	179	142	108	194	184
6	158	121	572	202	122	228	247	176	221	97	142	130
7	122	115	442	173	121	214	230	163	338	88	136	115
8	107	111	180	161	118	208	220	158	204	82	123	107
9	102	109	150	153	107	201	295	149	173	78	128	104
10	261	109	149	506	131	199	281	143	161	78	114	100
11	300	106	181	635	185	319	236	192	157	80	141	97
12	161	101	155	290	279	998	259	147	777	73	1700	93
13	131	100	151	241	167	417	217	147	587	68	1390	166
14	203	100	579	196	1870	318	205	224	291	67	923	110
15	137	97	660	200	1020	290	202	154	278	422	1150	285
16	117	93	299	226	560	268	254	138	268	193	496	139
17	112	90	243	171	484	1360	260	131	228	142	342	107
18	169	89	204	117	348	537	472	145	211	109	285	101
19	132	89	191	150	456	397	295	1740	214	103	270	129
20	281	90	235	154	428	357	252	1090	187	114	214	179
21	271	110	489	148	412	324	554	671	166	101	185	118
22	174	102	258	138	376	300	838	443	366	133	166	100
23	293	96	210	175	398	277	436	462	209	91	154	94
24	200	97	189	183	501	259	361	1020	165	80	162	99
25	161	107	155	206	596	243	312	629	149	79	145	97
26	144	154	194	226	560	252	285	370	145	127	131	138
27	134	971	184	202	473	225	262	297	142	640	231	164
28	124	332	152	167	775	863	251	264	170	224	990	109
29	120	219	146	174	466	386	239	233	144	147	351	95
30	115	187	135	176	---	291	222	209	137	141	213	90
31	111	---	137	221	---	264	---	193	---	190	262	---
TOTAL	5133	4736	7386	6612	11726	11522	9147	10655	6920	4309	11921	4772
MEAN	166	158	238	213	404	372	305	344	231	139	385	159
MAX	300	971	660	635	1870	1360	838	1740	777	640	1700	627
MIN	102	89	135	117	107	199	202	131	137	67	114	90

MEAN	177	281	352	396	431	521	472	343	223	184	187	173
MAX	882	824	1077	1416	948	1272	1368	1027	1270	1291	1068	675
(WY)	1997	1973	1997	1979	1925	1936	1983	1989	1972	1984	1942	1999
MIN	26.6	46.1	73.1	79.4	109	163	117	84.1	46.4	25.5	22.3	14.8
(WY)	1931	1965	1966	1940	1934	1981	1985	1926	1965	1966	1932	1964

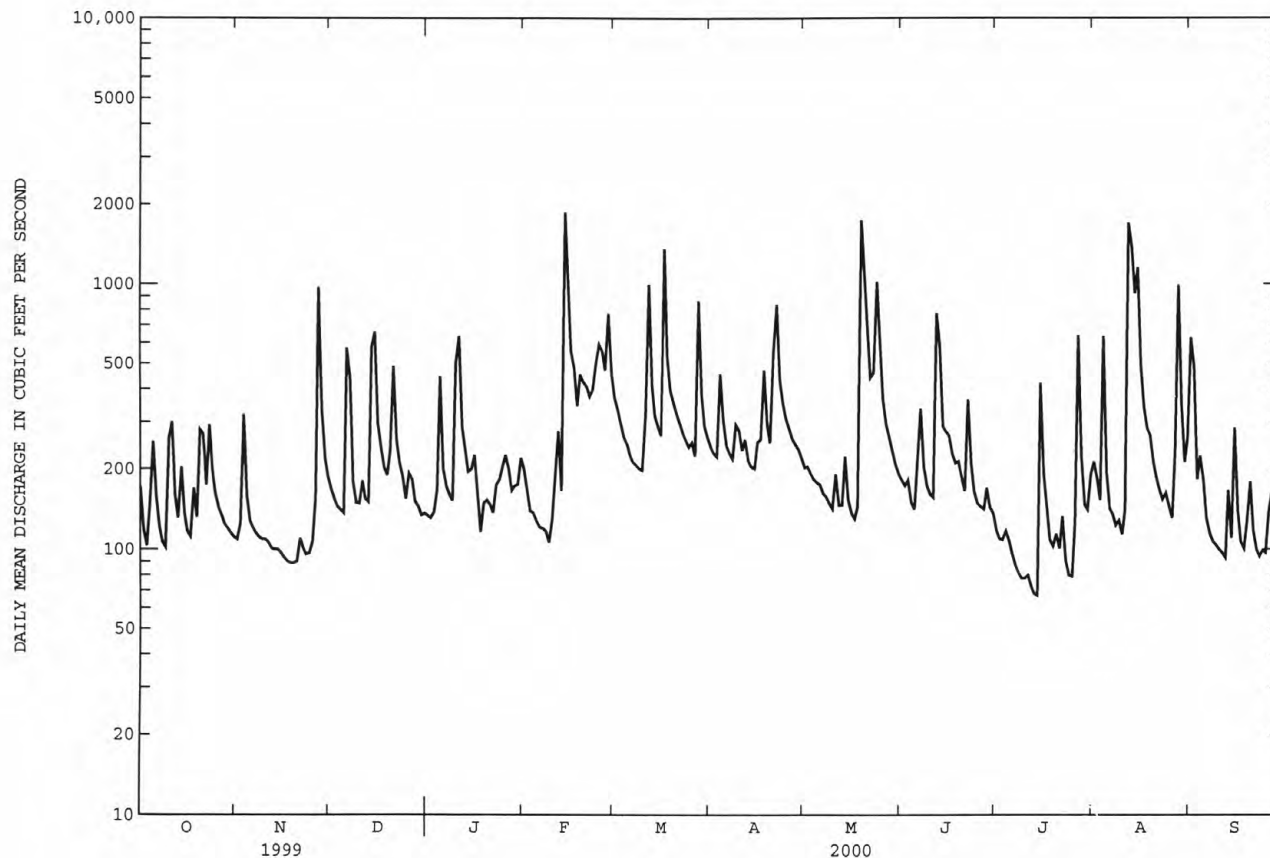
RARITAN RIVER BASIN

129

01400000 NORTH BRANCH RARITAN RIVER NEAR RARITAN, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1924 - 2000	
ANNUAL TOTAL	111466		94839		311	
ANNUAL MEAN	305		259		605	
HIGHEST ANNUAL MEAN					120	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	9010	Sep 17	1870	Feb 14	15300	Jul 7 1984
LOWEST DAILY MEAN	26	Sep 4	67	Jul 14	7.5	Sep 26 1964
ANNUAL SEVEN-DAY MINIMUM	31	Aug 30	75	Jul 8	8.9	Sep 22 1964
INSTANTANEOUS PEAK FLOW			6000	Aug 12	29100	Oct 19 1996
INSTANTANEOUS PEAK STAGE			8.50	Aug 12	18.98	Sep 16 1999
INSTANTANEOUS LOW FLOW			64	Jul 14	3.0a	Nov 28 1930
10 PERCENT EXCEEDS	469		488		623	
50 PERCENT EXCEEDS	194		183		185	
90 PERCENT EXCEEDS	81		103		57	

a About, result of freezeup.



RARITAN RIVER BASIN

01400500 RARITAN RIVER AT MANVILLE, NJ

LOCATION.--Lat 40°33'18", long 74°35'02", Somerset County, Hydrologic Unit 02030105, on left bank at downstream side of bridge on North Main Street (Finderne Avenue) at Manville, and 1.4 mi upstream from Millstone River.

DRAINAGE AREA.--490 mi².

PERIOD OF RECORD.--June 1903 to March 1907 (published as "at Finderne"), August 1908 to April 1915 (gage heights only, published in WSP 521), August 1921 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1552: 1904, 1906, 1922, 1923(M), 1924-25, 1926-29(M), 1930, 1932-33(M), 1924-54. WDR NJ-75-1: 1964(M), 1969(M), 1970(P), 1971(P), 1972(P), 1973(P).

GAGE.--Water-stage recorder. Datum of gage is 20.61 ft above sea level. Prior to Aug. 15, 1923, nonrecording gage on downstream side of highway bridge at same site and datum. From Oct. 1, 1952 to Sept. 30, 1966, water-stage recorder at station at Bound Brook, above Calco Dam (station 01403000) used as auxiliary gage when stage is above 5.0 ft. In Oct. 1, 1966, water-stage recorder at station at Bound Brook, used as auxiliary gage, was moved downstream to present site (station 01403060). Between June 9, 1978 and June 7, 1979, gage temporarily relocated at site 1.4 mi downstream, just upstream from Millstone River, because of reconstruction of highway bridge.

REMARKS.--Records good except for records over 5,000 ft³/s which are fair. Records given herein represent flow at gage only. Slight diurnal fluctuation at low flow. Flow regulated by Spruce Run and Round Valley Reservoirs (see Raritan River basin, reservoirs in). Diversion to Round Valley Reservoir since March 1966 (see Raritan River basin, diversions). Prior to Sept. 1, 1986, water diverted 1,500 ft upstream from station by Johns-Manville Corporation and returned to river, 600 ft downstream from Millstone River. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	497	284	419	344	e414	809	537	465	531	373	575	813
2	306	299	378	336	e300	701	478	474	511	329	511	1790
3	249	832	355	346	e263	609	462	476	543	371	441	557
4	324	517	342	377	e264	551	712	430	472	400	905	537
5	608	386	334	1050	e253	465	677	414	428	375	548	597
6	477	346	1080	594	e257	428	533	420	512	317	389	366
7	375	322	1150	478	e249	412	477	341	857	290	360	308
8	321	301	582	436	e277	390	446	326	654	341	329	282
9	281	298	483	407	e247	402	529	365	501	367	318	267
10	416	293	448	723	e353	370	660	351	449	365	311	249
11	744	282	525	1730	e491	453	480	419	421	359	374	242
12	454	265	440	803	e728	1690	479	412	1390	359	1000	239
13	370	255	404	e600	e639	1000	434	393	1800	365	3480	463
14	424	252	1130	e474	3040	608	401	568	939	374	1990	341
15	360	243	2230	e367	2790	547	439	507	766	784	3710	641
16	302	231	1070	e396	1260	505	474	398	725	628	1310	479
17	293	223	752	e266	1150	2810	537	364	631	436	880	317
18	372	215	606	e292	774	1750	946	350	571	316	663	268
19	338	212	543	e300	1150	1010	759	2550	604	328	633	315
20	504	213	584	e290	1090	811	619	2200	544	338	510	671
21	740	241	1390	e304	1010	735	681	1620	481	308	434	382
22	503	240	821	e316	890	672	1790	1040	822	448	392	305
23	672	225	626	e300	893	608	1230	1020	718	333	374	250
24	559	226	552	e269	1020	575	995	2220	509	305	391	252
25	450	241	451	e276	1250	541	821	1870	438	351	373	255
26	400	346	459	e304	1120	528	724	1110	423	482	333	314
27	375	1810	477	e296	887	482	655	852	421	1330	455	486
28	356	1020	410	e283	1390	1550	621	751	466	716	1470	318
29	324	582	380	e298	1110	991	580	670	431	418	836	275
30	307	478	352	e340	---	683	495	605	412	356	423	240
31	293	---	352	e409	---	587	---	560	---	406	460	---
TOTAL	12994	11678	20125	14004	25559	24273	19671	24541	18970	13268	25178	12819
MEAN	419	389	649	452	881	783	656	792	632	428	812	427
MAX	744	1810	2230	1730	3040	2810	1790	2550	1800	1330	3710	1790
MIN	249	212	334	266	247	370	401	326	412	290	311	239

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2000, BY WATER YEAR (WY)

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
MEAN	461	671	885	1000	1066	1357	1155	807	525	471	463	474
MAX	2433	2460	2877	3856	2406	3260	3507	2707	2581	2542	2552	2068
(WY)	1904	1933	1997	1979	1925	1936	1983	1989	1972	1975	1955	1971
MIN	64.8	87.5	148	188	265	354	259	212	88.8	65.1	50.5	51.2
(WY)	1942	1932	1966	1966	1934	1981	1985	1926	1965	1955	1932	1941

RARITAN RIVER BASIN

131

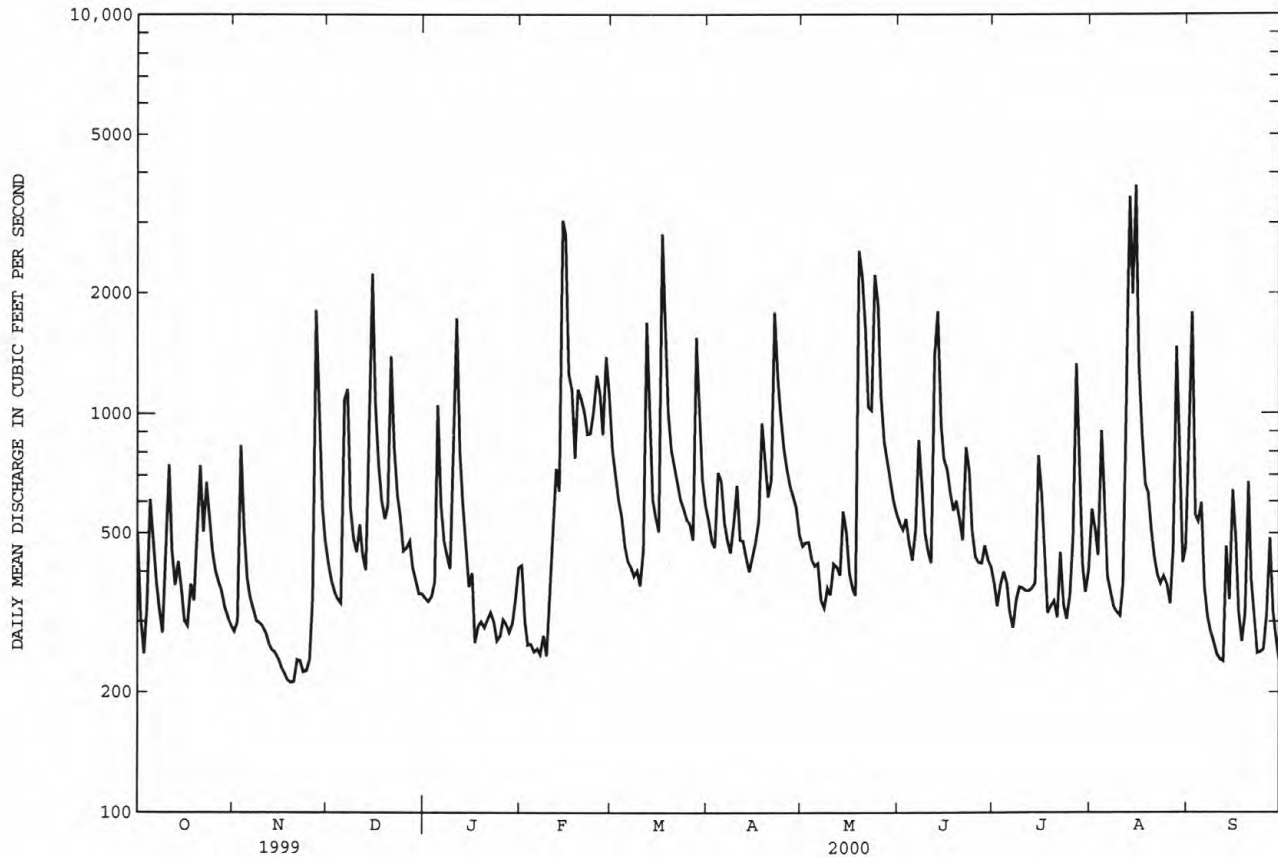
01400500 RARITAN RIVER AT MANVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1904 - 2000	
ANNUAL TOTAL	272336		223080		776	
ANNUAL MEAN	746		610		1365	
HIGHEST ANNUAL MEAN					309	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	30700	Sep 17	3710	Aug 15	30700	Sep 17 1999
LOWEST DAILY MEAN	99	Aug 30	212	Nov 19	17a	Sep 19 1964
ANNUAL SEVEN-DAY MINIMUM	141	Aug 29	224	Nov 17	29	Aug 27 1944
INSTANTANEOUS PEAK FLOW			6660	Feb 14	77600b	Sep 16 1999
INSTANTANEOUS PEAK STAGE			9.23	Feb 14	27.49	Sep 17 1999
INSTANTANEOUS LOW FLOW			212	Nov 18		
10 PERCENT EXCEEDS	1150		1100		1590	
50 PERCENT EXCEEDS	380		454		440	
90 PERCENT EXCEEDS	218		282		141	

a Does not include water diverted to Johns-Manville plant.

b From rating curve extended above 14,000 ft³/sec on basis of slope-area measurements at gage heights 14.9, 20.42, and 27.49 ft.

e Estimated



RARITAN RIVER BASIN

01401000 STONY BROOK AT PRINCETON, NJ

LOCATION.--Lat 40°19'59", long 74°40'56", Mercer County, Hydrologic Unit 02030105, on right bank 10 ft downstream from bridge on U.S. Highway 206, 1.6 mi southwest of Princeton, and 4.0 mi upstream from Carnegie Lake.

DRAINAGE AREA.--44.5 mi².

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 62.23 ft above sea level (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records fair. Since July 1959 some regulation by several small reservoirs, combined capacity, 49,800,000 gal. Several measurements of water temperature were made during the year. Satellite gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 14	2300	2,170	5.96	Aug 14	2015	*2,260	*6.08

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	13	28	27	42	66	44	29	21	8.1	96	7.5
2	11	13	25	26	32	59	40	28	20	7.6	103	168
3	8.5	82	23	27	26	50	38	26	23	7.3	37	20
4	8.4	31	23	36	25	42	61	24	17	10	132	20
5	52	21	21	328	25	39	53	23	14	9.2	35	13
6	30	17	98	85	23	35	37	22	18	7.4	18	9.0
7	14	15	166	56	22	32	33	18	29	6.6	17	7.4
8	11	14	56	47	23	32	30	16	22	5.8	23	6.7
9	9.5	13	40	41	20	30	51	15	15	5.4	13	6.3
10	18	14	43	99	23	30	86	14	13	5.3	9.9	5.7
11	58	13	100	234	38	56	43	17	11	4.8	8.4	5.4
12	22	12	50	e66	86	211	37	15	12	4.5	137	5.3
13	15	12	38	e72	51	107	32	14	21	4.3	170	9.2
14	12	12	443	e50	506	61	29	46	19	4.3	548	9.3
15	13	12	403	e40	e659	49	29	23	15	38	295	57
16	12	12	155	e41	e256	43	51	15	14	33	67	17
17	12	12	95	e32	e213	664	75	13	13	42	31	8.5
18	14	11	65	e29	e181	183	175	13	12	13	25	6.5
19	13	11	52	e27	e544	112	85	257	43	10	29	152
20	27	11	61	e25	e511	85	56	161	17	10	17	191
21	52	11	296	22	e342	70	138	122	12	8.8	12	29
22	26	11	105	19	e231	76	351	56	28	7.9	10	15
23	45	11	66	19	e220	64	129	43	19	7.1	9.5	11
24	34	11	54	20	e228	56	88	482	12	6.3	9.1	11
25	25	14	e46	20	e211	49	63	208	9.9	6.3	9.3	10
26	21	20	e40	24	e155	45	52	76	9.0	54	8.1	187
27	17	261	e39	22	e119	39	45	45	8.2	153	6.9	117
28	15	95	e35	17	e165	300	42	36	7.8	25	6.3	35
29	14	43	e33	16	95	116	37	30	7.7	12	5.9	23
30	14	32	27	15	---	68	32	26	9.2	19	6.0	18
31	13	---	27	32	---	53	---	24	---	111	6.1	---
TOTAL	655.4	860	2753	1614	5072	2922	2062	1937	491.8	647.0	1900.5	1180.8
MEAN	21.1	28.7	88.8	52.1	175	94.3	68.7	62.5	16.4	20.9	61.3	39.4
MAX	58	261	443	328	659	664	351	482	43	153	548	191
MIN	8.4	11	21	15	20	30	29	13	7.7	4.3	5.9	5.3
CFSM	.48	.64	2.00	1.17	3.93	2.12	1.54	1.40	.37	.47	1.38	.88
IN.	.55	.72	2.30	1.35	4.24	2.44	1.72	1.62	.41	.54	1.59	.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000, BY WATER YEAR (WY)

	MEAN	28.4	51.7	90.1	97.7	106	132	105	64.0	32.3	32.1	30.6	31.0
MAX	181	212	363	319	203	337	295	216	164	216	240	210	
(WY)	1997	1973	1997	1996	1971	1994	1983	1989	1989	1975	1955	1999	
MIN	1.00	1.50	1.94	3.22	19.7	31.3	20.9	8.95	2.67	.56	.14	1.31	
(WY)	1958	1966	1999	1981	1978	1985	1985	1963	1957	1957	1966	1970	

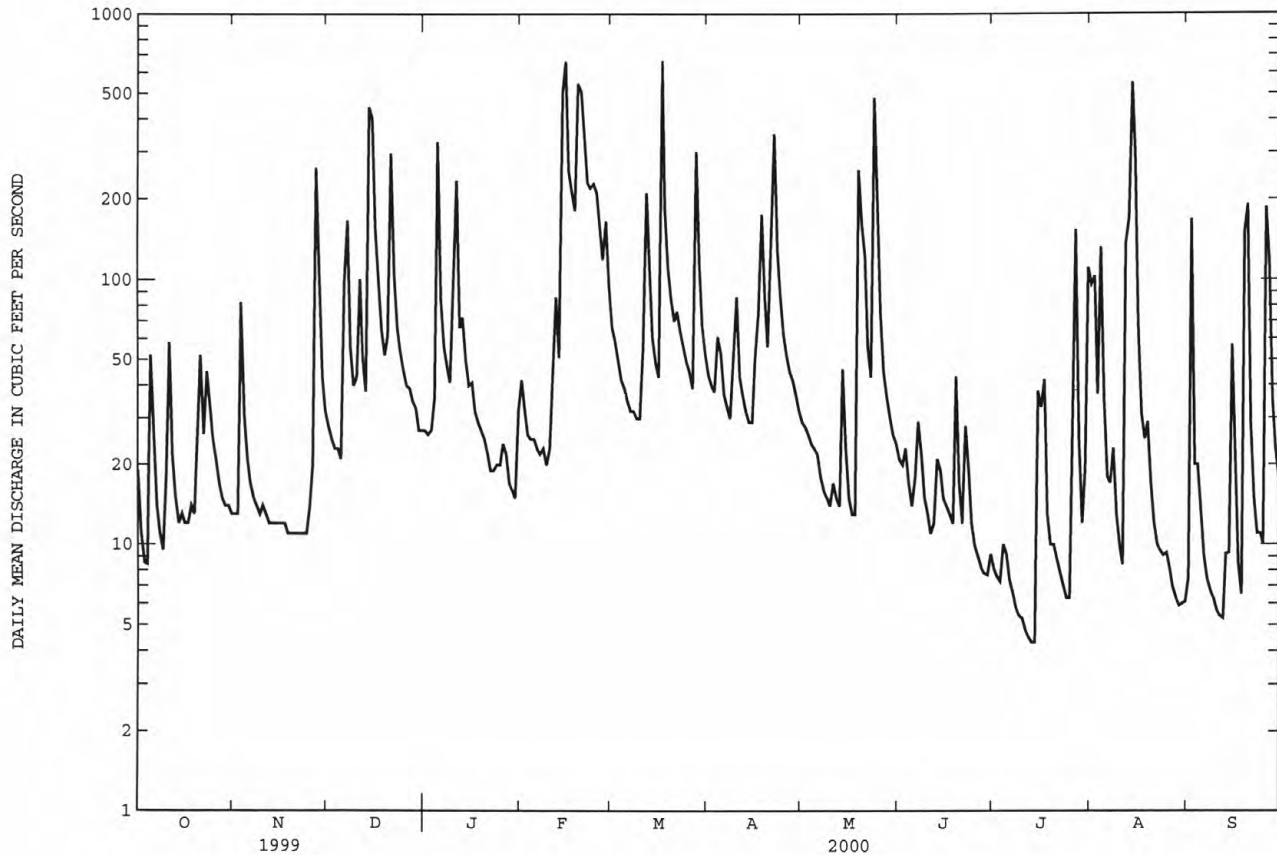
RARITAN RIVER BASIN

133

01401000 STONY BROOK AT PRINCETON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1954 - 2000
ANNUAL TOTAL	23868.54	22095.5	
ANNUAL MEAN	65.4	60.4	66.6
HIGHEST ANNUAL MEAN			118 1996
LOWEST ANNUAL MEAN			28.5 1966
HIGHEST DAILY MEAN	3730 Sep 16	664 Mar 17	3730 Sep 16 1999
LOWEST DAILY MEAN	.30 Aug 5	4.3 Jul 13	.00 Aug 5 1966
ANNUAL SEVEN-DAY MINIMUM	.47 Jul 30	4.9 Jul 8	.00 Aug 5 1966
INSTANTANEOUS PEAK FLOW		2260 Aug 14	8960a Aug 28 1971
INSTANTANEOUS PEAK STAGE		6.08 Aug 14	14.26 Aug 28 1971
INSTANTANEOUS LOW FLOW		4.1 Jul 13	.00 Jan 1 1966
ANNUAL RUNOFF (CFSM)	1.47	1.36	1.50
ANNUAL RUNOFF (INCHES)	19.95	18.47	20.34
10 PERCENT EXCEEDS	110	157	142
50 PERCENT EXCEEDS	17	27	22
90 PERCENT EXCEEDS	1.3	8.5	2.0

a From rating extended above 4,000 ft³/s on basis of contracted-opening measurement of peak flow.
e Estimated



RARITAN RIVER BASIN

01401650 PIKE RUN AT BELLE MEAD, NJ

LOCATION.--Lat 40°28'05", long 74°38'57", Somerset County, Hydrologic Unit 02030105, on right bank 20 ft upstream from bridge on Township Line Road, 0.7 mi east of Belle Mead, 0.8 mi upstream from Cruser Brook, and 1.0 mi downstream from bridge on U.S. Route 206.

DRAINAGE AREA.--5.36 mi².

PERIOD OF RECORD.--July 1980 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete parking-block control. Datum of gage is 58.85 ft above sea level.

REMARKS.--Records fair. Several measurements of water temperature were made during the year. Some regulation during summer months, possibly from irrigation. Rain-gage and gage-height radio telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1810, 13.5 ft, Aug. 28, 1971, from floodmark, present datum.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 17	0445	320	5.41	Aug 14	1815	324	5.43
May 24	0615	*330	*5.46				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	.65	2.9	1.9	2.1	4.8	4.3	3.3	1.6	.31	16	.88
2	1.0	1.3	2.6	2.0	1.3	4.4	3.9	3.6	1.4	.21	5.4	1.3
3	.83	3.9	2.4	2.3	1.2	3.7	3.8	3.4	1.2	2.5	6.0	1.4
4	4.3	1.1	2.3	12	1.1	3.2	5.5	3.4	1.0	2.0	9.1	1.6
5	13	.78	2.0	24	1.1	3.0	4.3	3.9	.94	.70	3.5	1.7
6	3.9	.70	26	5.3	1.0	2.6	3.5	4.1	2.8	.33	2.4	.83
7	2.1	.61	9.6	4.3	1.2	2.3	3.1	3.9	4.4	.20	2.0	.70
8	1.4	.84	5.4	3.5	1.3	2.3	2.9	3.8	1.9	.14	1.5	.64
9	1.3	1.0	4.4	3.3	1.3	2.3	6.0	3.7	1.2	.12	1.2	.59
10	8.6	1.0	5.7	30	2.3	2.0	5.8	3.7	.90	.12	1.0	.53
11	5.9	.94	6.1	12	6.8	11	3.8	5.0	.72	.10	.91	.49
12	2.9	.81	4.0	5.9	7.6	18	3.5	3.8	15	.06	50	.46
13	2.0	.78	3.9	5.0	4.0	6.5	2.9	4.4	14	.03	14	2.9
14	2.4	.78	59	3.5	113	4.7	2.9	9.8	3.9	.03	96	.98
15	2.2	.78	22	2.7	23	3.9	2.8	3.8	3.3	8.4	24	8.0
16	1.4	.78	8.6	2.8	11	3.8	6.3	2.9	2.8	2.6	6.3	1.4
17	1.3	.70	6.0	3.4	8.6	104	7.4	2.7	1.9	3.0	3.7	.68
18	3.0	.68	4.8	1.5	6.2	10	13	2.6	1.4	.81	3.4	.51
19	1.6	.64	4.0	1.3	25	7.2	6.6	26	1.3	.62	3.2	3.8
20	8.9	.64	24	1.2	23	6.9	5.4	19	1.1	.62	1.9	4.1
21	5.8	.72	22	1.2	14	6.3	44	9.1	.84	.21	1.4	1.1
22	3.8	.78	6.7	1.2	10	5.7	27	6.3	1.3	.56	1.1	.75
23	11	.77	5.1	1.0	9.7	4.9	9.7	5.3	.91	.21	1.0	.64
24	3.5	.86	4.1	1.1	11	4.4	6.9	74	.64	.14	1.1	.69
25	1.9	1.4	3.0	1.1	9.5	4.1	5.6	12	.57	.13	.88	.63
26	1.3	8.5	2.7	1.2	7.7	4.0	5.1	5.9	.52	14	.78	6.6
27	1.0	42	2.6	1.0	6.5	3.4	4.7	4.4	.49	25	.74	4.3
28	.80	7.0	2.3	1.1	9.0	40	4.3	3.5	.44	3.2	8.1	1.9
29	.71	4.8	2.0	1.1	5.7	8.2	4.0	2.7	.46	1.6	2.9	1.2
30	.64	3.7	1.9	1.2	---	5.9	3.6	2.2	.71	1.4	1.2	.99
31	.64	---	2.2	2.6	---	5.0	---	1.9	---	13	.98	---
TOTAL	100.82	89.94	260.3	141.7	325.2	298.5	212.6	244.1	69.64	82.35	271.69	52.29
MEAN	3.25	3.00	8.40	4.57	11.2	9.63	7.09	7.87	2.32	2.66	8.76	1.74
MAX	13	42	59	30	113	104	44	74	15	25	96	8.0
MIN	.64	.61	1.9	1.0	1.0	2.0	2.8	1.9	.44	.03	.74	.46
CFSM	.61	.56	1.57	.85	2.09	1.80	1.32	1.47	.43	.50	1.64	.33
IN.	.70	.62	1.81	.98	2.26	2.07	1.48	1.69	.48	.57	1.89	.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2000, BY WATER YEAR (WY)

	5.49	8.04	11.2	14.0	12.8	14.5	12.9	9.08	4.47	6.15	3.40	5.37
MEAN	5.49	8.04	11.2	14.0	12.8	14.5	12.9	9.08	4.47	6.15	3.40	5.37
MAX	40.1	22.3	35.5	43.3	27.5	38.8	43.1	26.2	20.9	26.1	9.94	56.9
(WY)	1997	1989	1997	1996	1994	1994	1983	1989	1989	1984	1990	1999
MIN	.55	.28	.12	.043	4.74	3.05	2.18	1.89	.37	.000	.17	.51
(WY)	1995	1999	1999	1981	1992	1981	1985	1986	1995	1999	1980	1983

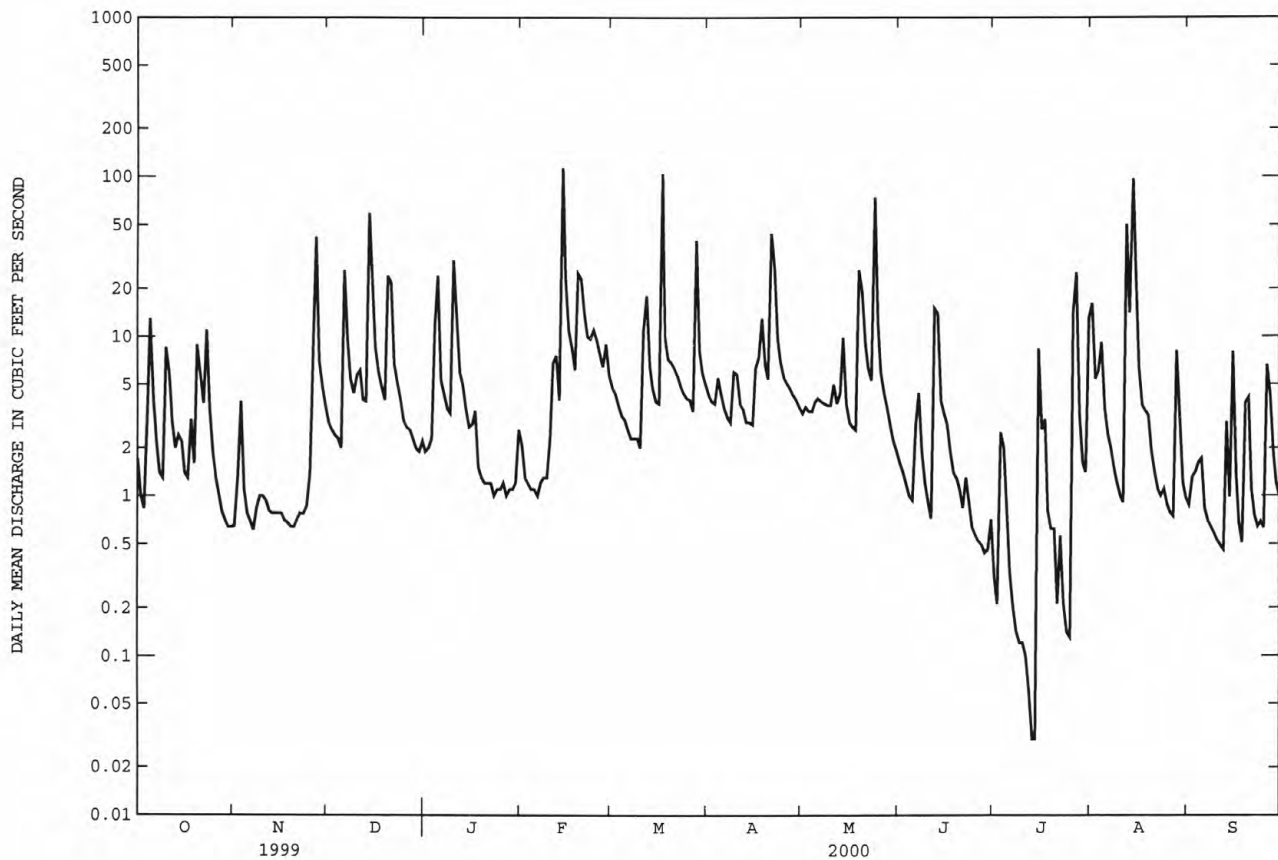
RARITAN RIVER BASIN

135

01401650 PIKE RUN AT BELLE MEAD, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1980 - 2000	
ANNUAL TOTAL	4180.62		2149.13		9.00	
ANNUAL MEAN	11.5		5.87		14.3	
HIGHEST ANNUAL MEAN					3.79	
LOWEST ANNUAL MEAN					1590	
HIGHEST DAILY MEAN	1590	Sep 16	113	Feb 14	1590	Sep 16 1999
LOWEST DAILY MEAN	.00	Jan 2	.03	Jul 13	.00	Aug 20 1980
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 24	.09	Jul 8	.00	Aug 20 1980
INSTANTANEOUS PEAK FLOW			330	May 24	8200a	Sep 16 1999
INSTANTANEOUS PEAK STAGE			5.46	May 24	13.61b	Sep 16 1999
INSTANTANEOUS LOW FLOW			.00	Jul 14	.03	Aug 20 1980
ANNUAL RUNOFF (CFSM)	2.14		1.10		1.68	
ANNUAL RUNOFF (INCHES)	29.01		14.92		22.80	
10 PERCENT EXCEEDS	16		11		16	
50 PERCENT EXCEEDS	2.2		2.8		2.7	
90 PERCENT EXCEEDS	.00		.64		.26	

a From rating curve extend above 790 ft³/s on basis of step-backwater computation
b From high-water mark in gage.



01402000 MILLSTONE RIVER AT BLACKWELLS MILLS, NJ

LOCATION.--Lat 40°28'30", long 74°34'34", Somerset County, Hydrologic Unit 02030105, on left bank 30 ft downstream from highway bridge at Blackwells Mills, and 0.3 mi downstream from Six Mile Run.

DRAINAGE AREA.--258 mi².

PERIOD OF RECORD.--June 1903 to December 1904 (gage heights only), August 1921 to current year. Monthly discharge only for some periods, published in WSP 1302. Published as "at Millstone" 1903-04.

REVISED RECORDS.--WSP 1552: 1924-25 (M), 1926.

GAGE.--Water-stage recorder. Concrete control since Nov. 18, 1933. Datum of gage is 26.97 ft above sea level. June 27, 1903 to Dec. 31, 1904, nonrecording gage at bridge 2.0 mi downstream at Millstone at different datum. Aug. 4, 1921 to Aug. 16, 1928, nonrecording gage at present site and datum.

REMARKS.--Records good. Inflow from and losses to Delaware and Raritan Canal above station. Flow slightly regulated by Carnegie Lake, capacity, 310,000,000 gal and several smaller reservoirs, combined capacity, 49,800,000 gal. Several measurements of water temperature were made during the year. Satellite gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	102	198	174	219	330	283	206	159	83	615	89
2	167	108	173	173	212	294	255	187	147	74	499	205
3	118	224	156	175	188	265	235	180	169	78	492	295
4	122	256	145	208	171	241	305	168	138	106	819	288
5	310	206	139	837	161	225	291	161	121	98	470	275
6	329	213	266	540	155	212	245	159	159	87	309	172
7	253	151	538	380	149	195	211	148	266	74	243	135
8	178	120	331	299	150	186	211	138	213	65	253	113
9	134	105	252	258	147	185	240	127	165	64	199	99
10	170	98	235	401	157	182	347	117	134	64	164	89
11	269	93	334	803	222	239	268	137	115	64	135	85
12	255	90	278	463	353	823	234	128	153	61	276	83
13	174	95	232	357	320	750	206	127	276	58	1140	116
14	136	100	833	288	807	460	190	273	200	55	841	118
15	117	99	1750	222	1630	338	180	222	180	186	1900	277
16	111	97	1000	210	1010	277	259	168	159	243	766	302
17	102	95	567	185	728	1610	382	136	133	291	382	252
18	118	92	387	161	496	1780	696	122	122	168	260	198
19	151	91	308	153	1020	853	506	513	192	112	271	203
20	198	91	343	149	1220	519	361	897	176	113	211	748
21	307	94	1050	148	1020	411	479	726	142	98	174	402
22	264	96	726	134	749	376	1580	484	181	94	146	309
23	332	98	486	131	623	344	923	361	181	83	130	210
24	293	101	346	132	631	310	552	1340	140	74	123	162
25	220	112	272	145	628	283	398	1220	115	70	115	143
26	224	162	234	157	542	264	324	572	98	230	105	404
27	166	798	221	147	448	245	287	351	88	776	100	734
28	138	582	204	131	451	942	262	264	80	409	112	464
29	125	332	193	124	418	736	244	220	76	252	106	323
30	113	245	180	120	---	437	223	191	95	169	91	218
31	106	---	176	166	---	335	---	172	---	359	85	---
TOTAL	5911	5146	12553	7971	15025	14647	11177	10215	4573	4758	11532	7511
MEAN	191	172	405	257	518	472	373	330	152	153	372	250
MAX	332	798	1750	837	1630	1780	1580	1340	276	776	1900	748
MIN	102	90	139	120	147	182	180	117	76	55	85	83
CFSM	.74	.66	1.57	1.00	2.01	1.83	1.44	1.28	.59	.59	1.44	.97
IN.	.85	.74	1.81	1.15	2.17	2.11	1.61	1.47	.66	.69	1.66	1.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2000, BY WATER YEAR (WY)

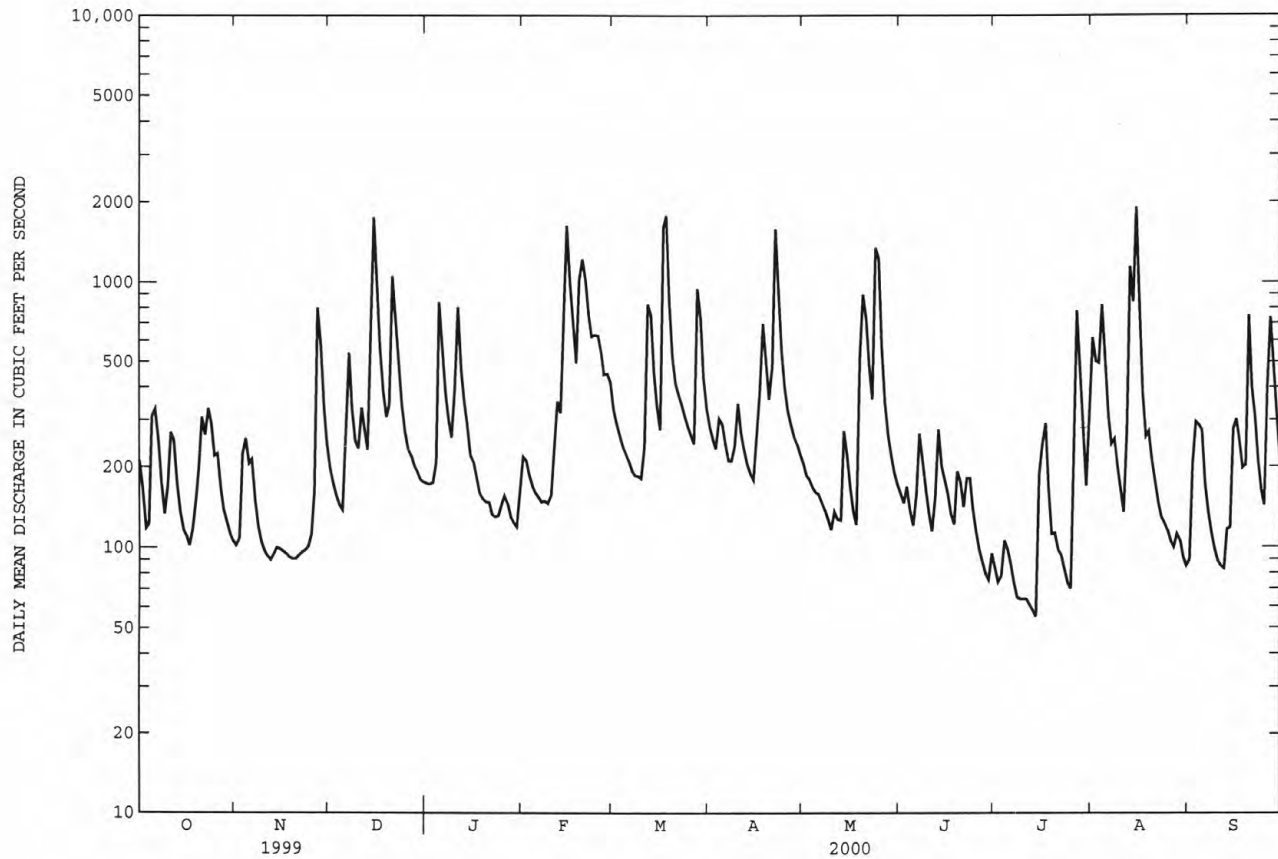
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
MEAN	199	330	464	518	568	691	539	363	236	244	218	231
MAX	1079	1113	1550	1743	1199	1882	1520	1264	823	1808	1267	1370
(WY)	1997	1973	1997	1979	1925	1994	1983	1989	1989	1975	1971	1999
MIN	42.6	51.2	67.0	62.9	105	158	103	82.8	45.5	19.3	17.3	20.2
(WY)	1942	1966	1966	1981	1934	1985	1985	1963	1963	1966	1981	1980

RARITAN RIVER BASIN

137

01402000 MILLSTONE RIVER AT BLACKWELLS MILLS, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1922 - 2000	
ANNUAL TOTAL	149185		111019		383	
ANNUAL MEAN	409		303		690	1975
HIGHEST ANNUAL MEAN					165	1985
LOWEST ANNUAL MEAN					22000	Sep 17 1999
HIGHEST DAILY MEAN	22000	Sep 17	1900	Aug 15	5.0	Sep 16 1923
LOWEST DAILY MEAN	24	Aug 4	55	Jul 14	6.3	Aug 7 1966
ANNUAL SEVEN-DAY MINIMUM	25	Aug 1	62	Jul 8	21.01	Sep 17 1999
INSTANTANEOUS PEAK FLOW			2110	Mar 17	5.0	Sep 17 1999
INSTANTANEOUS PEAK STAGE			6.02	Mar 17	21.01	Sep 17 1999
INSTANTANEOUS LOW FLOW			52	Jul 14	5.0	Sep 16 1923
ANNUAL RUNOFF (CFSM)	1.58		1.18		1.48	
ANNUAL RUNOFF (INCHES)	21.51		16.01		20.15	
10 PERCENT EXCEEDS	702		726		822	
50 PERCENT EXCEEDS	198		209		199	
90 PERCENT EXCEEDS	52		98		59	



01403060 RARITAN RIVER BELOW CALCO DAM, AT BOUND BROOK, NJ

LOCATION.--Lat 40°33'05", long 74°32'54", Somerset County, Hydrologic Unit 02030105, on right bank 1,000 ft downstream from Calco Dam and Cuckold Brook, 1,400 ft upstream from bridge on Interstate 287, 1.2 mi downstream from Millstone River, and 1.2 mi southwest of Bound Brook.

DRAINAGE AREA.--785 mi² (includes 11 mi² which drains into the Delaware and Raritan Canal).

PERIOD OF RECORD.--September 1903 to March 1909, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1966 published as "Raritan River at Bound Brook" (station 01403000).

REVISED RECORDS.--WSP 1552: 1903-07, 1946(M), 1949, 1952(P).

GAGE.--Water-stage recorder. Datum of gage is sea level. Sept. 12, 1903 to Mar. 31, 1909, nonrecording gages at highway bridge, 1.2 mi downstream at different datum. October 1944 to Sept. 30, 1966, water-stage recorder and concrete control at site 1,000 ft upstream at datum 18.06 ft higher.

REMARKS.--Records good. Water diverted 1.2 mi above station by Elizabethtown Water Co. for municipal supply (see Raritan River basin, diversions). Flow regulated by Spruce Run and Round Valley Reservoirs (see Raritan River basin, reservoirs in). Diversions to and releases from Round Valley Reservoir (see Raritan River basin, diversions and station 01399690). Slight diurnal fluctuations at low flow. Several measurements of water temperature were made during the year. Satellite gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug 13	0430	*12,600	*25.73	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	713	282	515	424	494	1230	711	503	482	210	1080	753
2	429	305	442	397	362	1020	598	486	437	165	841	2440
3	329	993	404	407	302	845	555	486	502	200	760	737
4	420	664	384	476	293	737	962	416	392	291	1920	767
5	947	470	362	1990	276	598	886	399	333	233	930	803
6	782	433	1350	1160	267	533	638	390	453	172	527	431
7	568	374	1950	786	256	514	538	284	999	135	425	328
8	444	318	908	649	257	487	502	271	683	133	391	273
9	363	303	667	557	238	497	633	291	439	165	327	243
10	519	289	590	1030	287	459	904	290	352	172	281	216
11	1040	279	794	2820	423	613	620	382	294	149	327	190
12	620	256	636	1370	785	2810	563	362	1570	137	3100	179
13	455	260	536	961	581	2020	488	347	2300	139	7160	464
14	458	256	1880	708	3810	1120	433	751	1060	160	2970	353
15	382	243	4190	465	5150	861	469	548	790	778	6150	852
16	312	237	2250	509	2560	740	575	378	699	641	2320	690
17	301	216	1430	309	2160	5000	760	308	555	463	1330	454
18	402	198	1000	314	1400	3790	1710	282	499	236	868	349
19	390	195	802	331	2350	2050	1270	3600	571	195	851	376
20	612	187	869	319	2490	1400	876	3570	502	221	624	1400
21	1030	223	2590	322	2270	1150	1230	2730	395	164	484	707
22	665	231	1690	334	1860	985	4220	1610	782	312	401	500
23	963	212	1160	313	1710	846	2310	1390	703	178	350	359
24	779	215	857	272	1880	776	1610	3960	413	136	351	301
25	560	234	641	271	2190	717	1190	3380	327	186	314	282
26	501	381	555	293	1950	678	965	1830	279	567	264	551
27	439	2670	550	295	1500	589	804	1170	286	2350	432	1190
28	387	1810	488	279	2130	2630	756	893	308	1120	1650	702
29	330	904	455	289	1800	1900	690	745	295	528	1030	505
30	307	646	419	343	---	1100	560	618	271	371	399	351
31	297	---	416	432	---	831	---	538	---	575	423	---
TOTAL	16744	14284	31780	19425	42031	39526	29026	33208	17971	11482	39280	17746
MEAN	540	476	1025	627	1449	1275	968	1071	599	370	1267	592
MAX	1040	2670	4190	2820	5150	5000	4220	3960	2300	2350	7160	2440
MIN	297	187	362	271	238	459	433	271	271	133	264	179

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2000, BY WATER YEAR (WY)

MEAN	674	1025	1465	1612	1687	2141	1757	1272	758	674	661	688
MAX	2953	3684	4615	5825	3232	5093	5326	3862	3883	4624	3576	3358
(WY)	1904	1973	1997	1979	1971	1994	1983	1989	1972	1975	1955	1999
MIN	113	138	165	179	485	454	230	329	117	84.7	69.9	76.1
(WY)	1958	1966	1999	1981	1980	1985	1985	1992	1965	1955	1957	1957

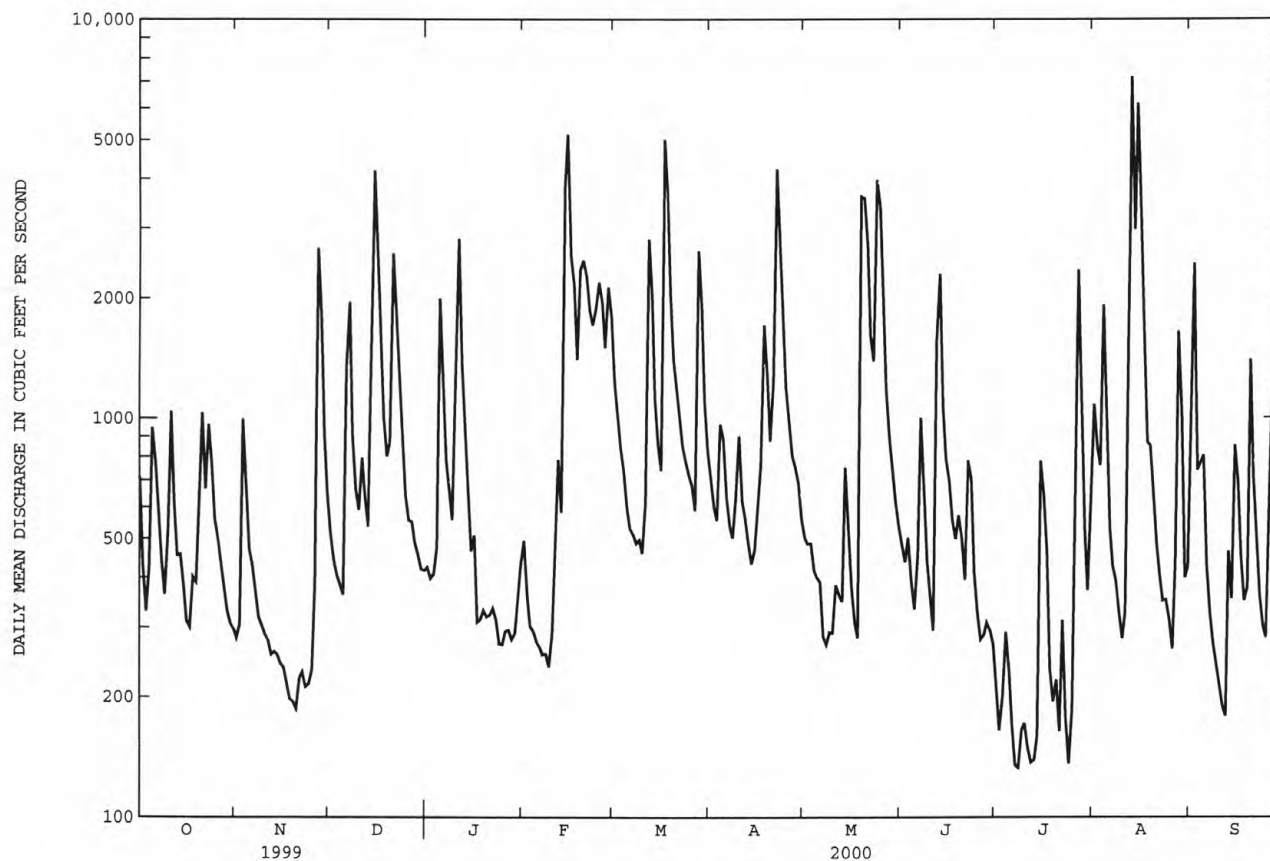
RARITAN RIVER BASIN

139

01403060 RARITAN RIVER BELOW CALCO DAM, AT BOUND BROOK, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1903 - 2000	
ANNUAL TOTAL	388395		312503		1198	
ANNUAL MEAN	1064		854		2046	
HIGHEST ANNUAL MEAN					480	
LOWEST ANNUAL MEAN					61000	
HIGHEST DAILY MEAN	61000	Sep 17	7160	Aug 13	61000	Sep 17 1999
LOWEST DAILY MEAN	103	Aug 24	133	Jul 8	37	Sep 6 1964
ANNUAL SEVEN-DAY MINIMUM	137	Aug 30	147	Jul 7	46	Sep 4 1957
INSTANTANEOUS PEAK FLOW			12600	Aug 13	82900a	Sep 17 1999
INSTANTANEOUS PEAK STAGE			25.73	Aug 13	42.13b	Sep 17 1999
INSTANTANEOUS LOW FLOW			109	Jul 24		
10 PERCENT EXCEEDS	1870		1960		2600	
50 PERCENT EXCEEDS	475		523		628	
90 PERCENT EXCEEDS	148		252		168	

a From rating extended above 46,000 ft³/s on basis of indirect computation of peak flow downstream at Fieldville Dam
b From floodmark, highest since 1700



LOCATION.--Lat 40°36'44", long 74°35'28", Somerset County, Hydrologic Unit 02030105, on left bank 150 ft upstream from bridge on Crim Road, 1.4 mi northwest of Martinsville, and 1.8 mi upstream from confluence with East Branch Middle Brook.

PERIOD OF RECORD.--June 1979 to current year.

REVISED RECORDS.--WDR NJ-91-1: 1990. WDR NJ-96-1: 1980-94 (P). WDR NJ-99-1: 1990 (M), 1997 (M).

REMARKS.--Records fair. Several measurements of water temperature were made during the year. Rain-gage radio telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 18	2345	170	4.41	Aug 27	2045	273	4.99
Aug 11	1730	760	7.11	Sep 1	2045	524	6.19
Aug 12	1615	*981	*7.86				

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.82	.72	.53	.80	1.7	1.4	.95	.71	.25	1.1	26
2	.88	2.4	.65	.56	.64	1.6	1.4	1.0	.68	.22	.80	3.6
3	.79	1.1	.60	.63	.57	1.3	1.4	.88	.65	.83	2.2	1.1
4	4.2	.40	.57	3.3	.54	1.2	2.1	.87	.55	.40	2.2	.90
5	4.6	.35	.53	3.3	.55	1.1	1.3	.84	.54	.25	.77	.46
6	1.6	.34	14	1.1	.54	.99	1.2	.79	1.5	.22	.67	.33
7	1.1	.55	2.2	.96	.59	.98	1.1	.72	2.0	.19	.62	.28
8	.87	.58	1.2	.81	.55	.99	1.1	.68	.79	.18	.47	.23
9	.84	.39	.92	.79	.53	.98	2.5	.62	.68	.17	.57	.21
10	6.1	.40	1.2	7.7	.78	.88	1.6	.68	.60	.20	.41	.18
11	2.2	.50	1.2	2.5	2.9	5.6	1.5	.77	1.5	.18	43	.16
12	1.4	.57	.83	1.3	1.9	6.7	1.7	.58	3.2	.16	93	.15
13	1.1	.57	.78	1.2	.94	2.4	1.2	1.4	1.5	.16	5.6	3.3
14	1.4	.60	12	.75	26	1.8	1.2	2.0	.91	.16	16	.25
15	1.2	.68	4.1	.62	6.0	1.5	1.2	.66	.83	5.7	4.3	3.6
16	1.1	.71	1.9	.72	4.0	1.7	2.4	.57	.74	8.6	2.0	.31
17	1.3	.71	1.3	.70	2.4	21	2.8	.53	.62	1.2	1.0	.20
18	2.2	.71	.98	.64	1.6	3.5	4.3	9.9	.76	.49	1.1	.15
19	1.1	.72	.82	.66	4.8	2.3	2.1	27	.59	.47	.83	2.5
20	5.4	.85	7.2	.67	3.5	1.9	1.7	8.6	.48	.43	.59	.49
21	1.8	1.3	3.7	.65	3.2	1.6	16	3.2	.79	.36	.50	.23
22	1.4	1.1	1.6	.55	3.6	1.5	6.0	2.3	2.2	1.4	.44	.16
23	5.3	1.1	1.2	.54	4.5	1.4	2.9	2.1	.57	.36	.46	.28
24	1.5	1.8	.91	.60	5.4	1.2	2.1	14	.43	.30	.49	.38
25	1.1	1.9	.67	.71	4.1	1.2	1.7	3.7	.39	.29	.42	.34
26	1.0	6.6	.67	.61	3.0	1.4	1.4	1.7	.41	6.0	.38	1.2
27	.89	14	.64	.54	2.4	1.1	1.2	1.3	.37	15	15	.66
28	.81	1.7	.59	.51	4.9	12	1.2	1.0	.33	1.4	3.0	.45
29	.78	1.1	.53	.51	2.1	2.5	1.1	.86	.30	.81	1.1	.39
30	.71	.87	.52	.52	---	1.9	.99	.77	.30	1.1	.64	.37
31	.70	---	.57	1.1	---	1.6	---	.76	---	.76	.47	---
TOTAL	56.57	45.42	65.30	36.28	93.33	87.52	69.79	91.73	25.92	48.24	200.13	48.86
MEAN	1.82	1.51	2.11	1.17	3.22	2.82	2.33	2.96	.86	1.56	6.46	1.63
MAX	6.1	14	14	7.7	26	21	16	27	3.2	15	93	26
MIN	.70	.34	.52	.51	.53	.88	.99	.53	.30	.16	.38	.15
CFSM	.92	.76	1.06	.59	1.62	1.42	1.17	1.49	.43	.78	3.24	.82
IN.	1.06	.85	1.22	.68	1.74	1.64	1.30	1.71	.48	.90	3.74	.91

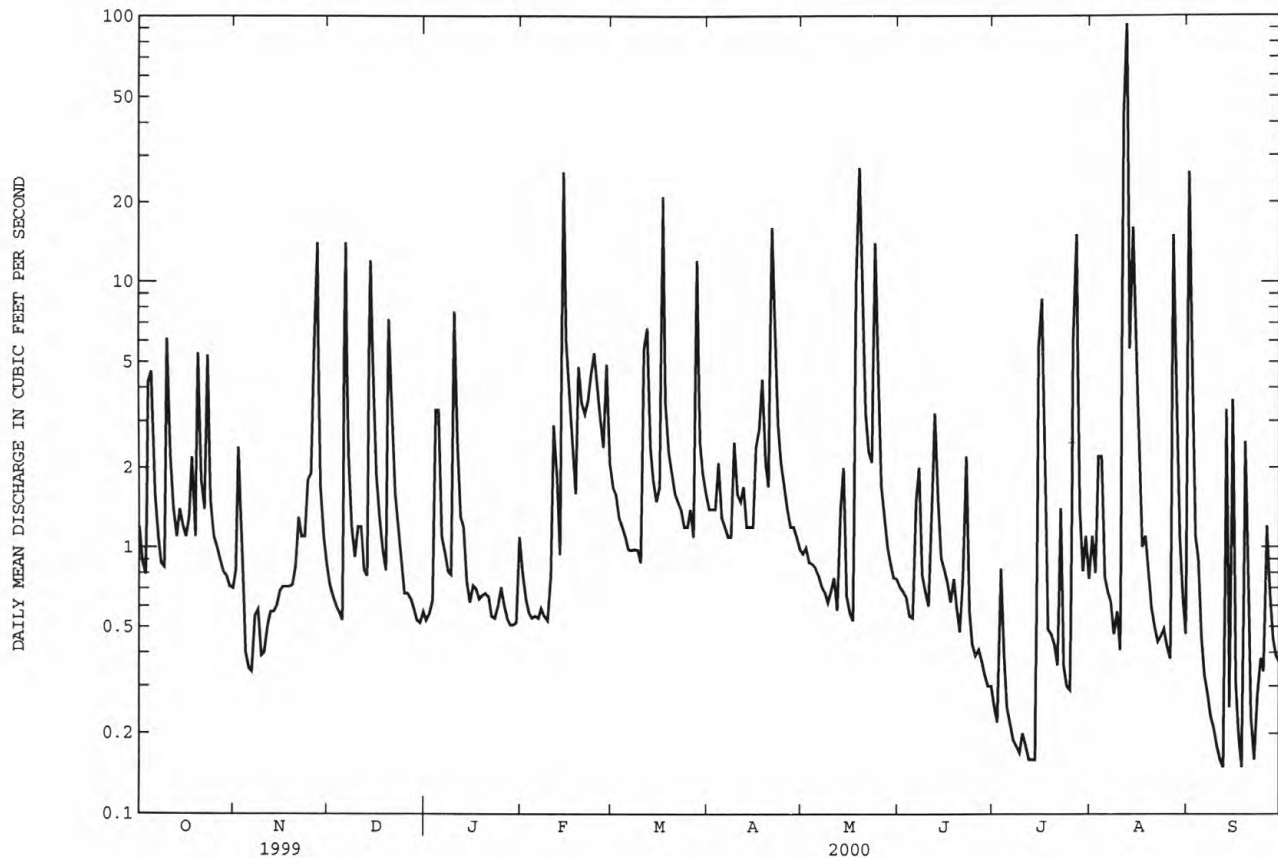
MEAN	2.36	3.53	4.40	4.66	4.17	6.29	5.61	4.62	2.09	2.04	1.28	2.03
MAX	9.28	10.5	11.5	11.9	9.02	21.4	11.6	19.4	6.88	6.40	6.46	11.7
(WY)	1990	1989	1984	1996	1988	1994	1983	1989	1989	1984	2000	1999
MIN	.22	.41	.13	.12	.92	1.64	.74	.76	.27	.083	.12	.11
(WY)	1987	1999	1999	1981	1980	1985	1985	1986	1999	1980	1980	1980

RARITAN RIVER BASIN

141

01403150 WEST BRANCH MIDDLE BROOK NEAR MARTINSVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1979 - 2000
ANNUAL TOTAL	1182.39	869.09	
ANNUAL MEAN	3.24	2.37	3.59
HIGHEST ANNUAL MEAN			5.48 1989
LOWEST ANNUAL MEAN			1.88 1981
HIGHEST DAILY MEAN	318 Sep 16	93 Aug 12	318 Sep 16 1999
LOWEST DAILY MEAN	.05 Aug 2	.15 Sep 12	.00 Sep 19 1980
ANNUAL SEVEN-DAY MINIMUM	.05 Aug 1	.17 Jul 8	.00 Sep 19 1980
INSTANTANEOUS PEAK FLOW		981 Aug 12	1490 Sep 16 1999
INSTANTANEOUS PEAK STAGE		7.86 Aug 12	9.30 Sep 16 1999
INSTANTANEOUS LOW FLOW		.13 Sep 12	.00 Sep 19 1980
ANNUAL RUNOFF (CFSM)	1.63	1.19	1.81
ANNUAL RUNOFF (INCHES)	22.10	16.25	24.54
10 PERCENT EXCEEDS	4.4	4.4	6.0
50 PERCENT EXCEEDS	.84	.95	.87
90 PERCENT EXCEEDS	.13	.37	.15



RARITAN RIVER BASIN

01403400 GREEN BROOK AT SEELEY MILLS, NJ

LOCATION.--Lat 40°39'58", long 74°24'13", revised, Somerset County, Hydrologic Unit 02030105, on right bank at Seeley Mills, 250 ft downstream from Blue Brook, 300 ft downstream from bridge on Diamond Hill Road, and 0.5 mi northwest of Scotch Plains.

DRAINAGE AREA.--6.23 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-64, 1969: annual maximum, water years 1969-79. June 1979 to current year. Fragmentary records 1944-53 in the files of the U.S. Geological Survey. Crest-stage data 1927-38, 1958-68 in files of Union County Park Commission.

REVISED RECORDS.--WDR-NJ 81-1: 1979(M). WDR-NJ 87-1: 1971(M), 1973(M), 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 184.44 ft above sea level. From 1944 to 1953, water-stage recorder and masonry dam about 400 ft downstream, above lower Seeley Mills dam at different datum. From July 1969 to May 1979, crest-stage gage about 450 ft downstream below lower Seeley Mills dam (washed out May 29, 1968) at different datum.

REMARKS.--Records poor. Several measurements of water temperature were made during the year. Satellite gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1938 reached an elevation of 196.5 ft, New Jersey Geological Survey datum, above lower Seeley Mills dam, discharge, 5,840 ft³/s, computed by State Water Policy Commission.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 18	2230	*415	*2.85	Aug 27	2115	252	2.30
May 19	1130	252	2.30	Sep 1	2130	369	2.71
Aug 11	1830	273	2.38				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.7	3.3	2.9	3.6	6.0	5.1	7.6	4.3	1.3	20	43
2	1.9	24	2.9	2.9	3.4	5.3	5.1	12	3.7	1.3	6.8	31
3	1.8	12	2.7	2.9	2.9	4.5	5.1	9.5	3.3	2.0	13	9.9
4	12	4.3	2.8	12	2.9	4.5	12	7.7	2.9	2.1	17	6.2
5	12	3.4	2.5	14	2.9	4.2	6.2	4.5	3.4	1.9	6.0	4.0
6	2.7	3.3	37	4.0	2.8	3.5	4.5	4.5	23	1.4	4.3	3.1
7	2.1	2.8	14	3.5	2.8	3.4	3.4	4.2	26	1.3	3.4	2.9
8	1.8	2.7	6.1	3.5	2.6	3.4	4.0	4.3	9.8	1.1	2.9	2.5
9	1.8	2.5	4.6	3.4	2.7	3.4	10	3.3	6.3	1.1	2.8	2.5
10	24	2.5	7.9	38	3.6	4.0	5.3	9.7	3.7	1.4	2.4	2.5
11	5.3	2.3	5.4	19	9.0	23	4.8	5.8	5.5	1.2	40	2.3
12	2.8	2.1	3.9	8.7	5.3	27	5.2	3.4	16	1.1	78	2.2
13	2.3	2.1	4.1	7.2	3.9	13	4.2	10	10	1.1	43	9.3
14	2.9	2.1	39	4.7	65	6.1	3.9	16	6.6	1.0	53	3.1
15	2.1	2.1	27	3.9	27	6.6	4.3	4.9	5.5	34	48	17
16	2.2	2.1	14	4.1	17	6.1	19	3.4	3.9	6.7	21	3.9
17	5.4	2.2	7.7	3.6	12	61	22	3.2	3.2	2.8	11	3.0
18	7.8	2.2	5.7	3.4	10	20	32	49	3.6	1.8	7.9	2.4
19	2.5	2.7	4.6	3.4	23	14	15	119	2.8	1.8	6.2	11
20	16	2.6	25	3.4	16	12	13	79	2.5	1.7	4.6	6.7
21	4.5	2.7	21	3.4	13	6.8	55	50	3.1	1.4	3.9	4.4
22	4.5	2.2	8.5	4.3	13	6.7	70	34	7.0	7.0	3.3	3.2
23	13	2.1	6.1	3.2	17	5.9	36	26	2.6	1.5	3.3	2.7
24	4.1	2.9	4.8	3.2	20	5.1	42	71	2.5	1.2	3.4	2.8
25	3.4	3.9	4.0	3.5	17	5.1	38	37	2.3	1.1	3.1	2.4
26	3.2	19	3.9	3.4	12	5.1	18	18	2.1	43	2.8	7.8
27	2.7	42	3.4	3.0	9.4	4.5	15	15	2.2	85	19	3.9
28	2.3	8.4	3.4	3.2	14	47	16	13	2.2	20	12	3.1
29	2.1	4.7	3.4	2.9	7.3	16	11	10	1.6	6.9	5.0	2.9
30	2.1	3.6	3.4	3.0	---	9.2	9.2	7.7	1.6	6.0	3.7	2.7
31	2.1	---	3.4	4.9	---	6.6	---	5.9	---	17	3.0	---
TOTAL	155.7	173.2	285.5	186.5	341.1	349.0	494.3	648.6	173.2	258.2	453.8	204.4
MEAN	5.02	5.77	9.21	6.02	11.8	11.3	16.5	20.9	5.77	8.33	14.6	6.81
MAX	24	42	39	38	65	61	70	119	26	85	78	43
MIN	1.8	1.7	2.5	2.9	2.6	3.4	3.4	3.2	1.6	1.0	2.4	2.2
CFSM	.81	.93	1.48	.97	1.89	1.81	2.64	3.36	.93	1.34	2.35	1.09
IN.	.93	1.03	1.70	1.11	2.04	2.08	2.95	3.87	1.03	1.54	2.71	1.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2000, BY WATER YEAR (WY)

	7.28	9.42	11.8	12.2	11.8	17.3	17.9	13.4	7.03	6.66	4.92	9.62
MEAN	7.28	9.42	11.8	12.2	11.8	17.3	17.9	13.4	7.03	6.66	4.92	9.62
MAX	31.9	22.4	46.9	27.1	22.3	40.9	41.1	42.0	23.4	18.9	16.1	97.1
(WY)	1997	1986	1984	1996	1998	1994	1983	1989	1992	1984	1990	1999
MIN	1.21	1.48	1.62	1.67	2.95	5.11	3.50	2.44	.35	.32	1.33	1.68
(WY)	1995	1999	1999	1981	1980	1985	1985	1999	1999	1999	1981	1994

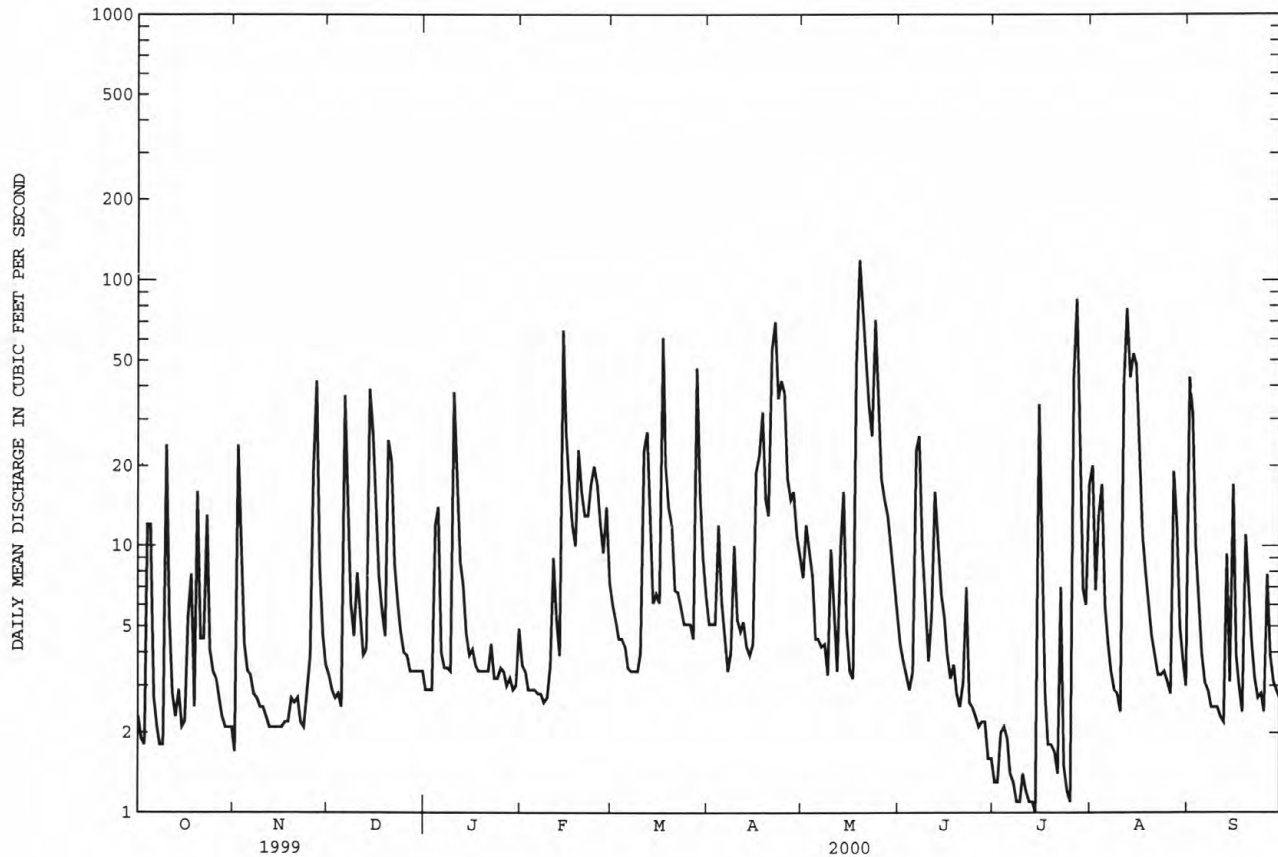
RARITAN RIVER BASIN

143

01403400 GREEN BROOK AT SEELEY MILLS, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1979 - 2000
ANNUAL TOTAL	5300.49	3723.5	
ANNUAL MEAN	14.5	10.2	10.8
HIGHEST ANNUAL MEAN			18.2 1984
LOWEST ANNUAL MEAN			5.16 1981
HIGHEST DAILY MEAN	1470 Sep 16	119 May 19	1470 Sep 16 1999
LOWEST DAILY MEAN	.22 Jul 30	1.0 Jul 14	.00 Sep 11 1981
ANNUAL SEVEN-DAY MINIMUM	.23 Jul 28	1.1 Jul 8	.05 Sep 24 1981
INSTANTANEOUS PEAK FLOW		415 May 18	6240a Aug 2 1973
INSTANTANEOUS PEAK STAGE		2.85 May 18	16.10b Aug 2 1973
INSTANTANEOUS LOW FLOW		.98 Nov 2	.00 Sep 11 1981
ANNUAL RUNOFF (CFSM)	2.33	1.63	1.73
ANNUAL RUNOFF (INCHES)	31.65	22.23	23.53
10 PERCENT EXCEEDS	20	24	21
50 PERCENT EXCEEDS	2.7	4.3	4.8
90 PERCENT EXCEEDS	.30	2.1	1.5

a From rating curve extended above 600 ft³/s on basis of slope area measurement of peak flow.
b Site and datum then in use.



LOCATION.--Lat 40°38'25", long 74°26'52", Somerset County, Hydrologic Unit 02030105, 700 ft upstream from dam on Best Lake in Watchung, 1,400 ft upstream from mouth, and 1.4 mi west of Plainfield.

PERIOD OF RECORD.--July 1980 to September 2000 (discontinued).

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 193.87 ft above sea level (levels by Somerset County).

REMARKS.--Records fair except those below 2.0 ft³/s which are poor. Records given herein represent flow over dam and leakage through ports in dam. Several measurements of water temperature were made during the year. Rain-gage and gage-height radio telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 2, 1973, reached a stage of 5.9 ft, present datum, from floodmarks, discharge, 2,840 ft³/s, by computation of flow over dam, embankment, and road.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 24	0245	108	1.71	Aug 27	2100	*623	*2.93
Aug 11	1745	162	1.85	Sep 1	2115	597	2.88
Aug 12	1730	159	1.84				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.71	.82	.86	1.2	1.0	2.4	2.4	1.5	1.2	.50	5.6	34
2	.57	5.4	.86	1.3	.85	2.3	2.3	1.6	1.1	.46	2.3	9.2
3	.52	3.5	.82	1.4	.80	1.7	2.3	1.3	.91	.81	4.3	3.5
4	1.9	1.4	.81	2.9	.84	1.5	3.7	1.1	.85	.78	4.2	2.4
5	3.9	1.1	.77	4.0	.81	1.4	2.2	.95	.77	.53	1.8	1.9
6	1.2	.93	8.0	2.3	.78	1.7	2.0	.84	3.0	.48	1.6	1.4
7	.77	1.0	3.6	2.0	.78	2.0	1.7	.76	4.0	.45	.95	1.1
8	.70	1.1	1.9	1.7	.79	1.8	1.9	.85	1.4	.42	.82	.98
9	.66	.90	1.5	1.4	.73	1.8	2.8	.66	1.1	.39	.84	.93
10	4.4	.98	2.0	7.7	.85	1.6	2.1	2.3	.92	.42	.75	.85
11	2.1	.86	1.8	4.4	2.1	4.7	2.0	1.8	1.2	.44	9.2	.85
12	.96	.97	1.2	2.9	2.2	5.3	2.1	.92	3.2	.40	27	.84
13	.79	1.2	1.1	2.4	1.5	e3.4	1.7	3.0	1.9	.38	6.9	4.0
14	.78	1.2	8.3	1.9	14	e2.7	1.6	3.4	1.2	.37	13	.99
15	.61	.61	5.2	1.5	5.4	e2.6	1.9	1.2	1.1	2.6	6.2	5.1
16	.72	.74	3.2	1.5	3.8	e2.7	3.3	.81	.84	.99	4.2	1.2
17	1.2	.67	2.2	1.3	2.9	e22	4.0	.73	.73	.72	2.4	.80
18	2.6	.63	1.8	.98	2.5	5.1	5.6	9.6	1.2	.55	2.5	.70
19	2.0	.66	1.4	.98	4.9	3.8	3.5	19	.85	.53	2.1	2.7
20	5.8	.73	4.8	.97	3.7	3.4	2.9	9.9	.73	.59	1.4	1.6
21	4.4	.77	4.5	.96	3.2	2.8	13	5.5	.86	.51	.93	.87
22	3.7	.77	3.2	.82	3.4	2.6	8.6	3.9	2.7	1.7	.85	.75
23	6.3	.73	2.4	.77	4.0	2.6	5.2	3.2	.80	.61	.89	.79
24	3.3	.96	2.2	.82	4.5	2.4	4.2	14	.68	.63	.90	.97
25	2.4	1.2	1.8	1.1	4.1	2.3	3.8	4.6	.62	.63	.85	.83
26	1.6	3.3	1.7	.91	3.4	2.3	3.2	3.1	.58	11	.77	2.5
27	1.7	7.8	1.5	.77	3.0	1.8	2.9	2.5	.64	11	28	1.1
28	1.3	2.3	1.4	.70	3.6	10	2.6	2.2	.61	3.0	7.3	.83
29	1.2	1.5	1.4	.68	2.4	3.7	2.3	1.9	.52	1.9	3.4	.81
30	.93	1.1	1.3	.71	---	2.8	1.7	1.5	.53	1.9	3.3	.77
31	.85	---	1.4	1.4	---	2.5	---	1.4	---	3.5	3.6	---
TOTAL	60.57	45.83	74.92	54.37	82.83	109.7	99.5	106.02	36.74	49.19	148.85	85.26
MEAN	1.95	1.53	2.42	1.75	2.86	3.54	3.32	3.42	1.22	1.59	4.80	2.84
MAX	6.3	7.8	8.3	7.7	14	22	13	19	4.0	11	28	34
MIN	.52	.61	.77	.68	.73	1.4	1.6	.66	.52	.37	.75	.70
CFSM	1.24	.97	1.54	1.12	1.82	2.25	2.11	2.18	.78	1.01	3.06	1.81
IN.	1.44	1.09	1.78	1.29	1.96	2.60	2.36	2.51	.87	1.17	3.53	2.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2000, BY WATER YEAR (WY)

MEAN	1.75	2.67	3.18	3.26	3.41	4.58	4.54	3.50	1.68	1.53	1.01	1.39
MAX	9.14	5.73	10.1	7.90	5.96	10.7	10.2	10.9	4.97	4.53	4.80	8.53
(WY)	1997	1986	1984	1996	1998	1994	1983	1989	1992	1984	2000	1999
MIN	.12	.27	.19	.068	1.40	1.67	.82	1.25	.40	.14	.095	.24
(WY)	1995	1999	1999	1981	1992	1981	1985	1986	1999	1980		

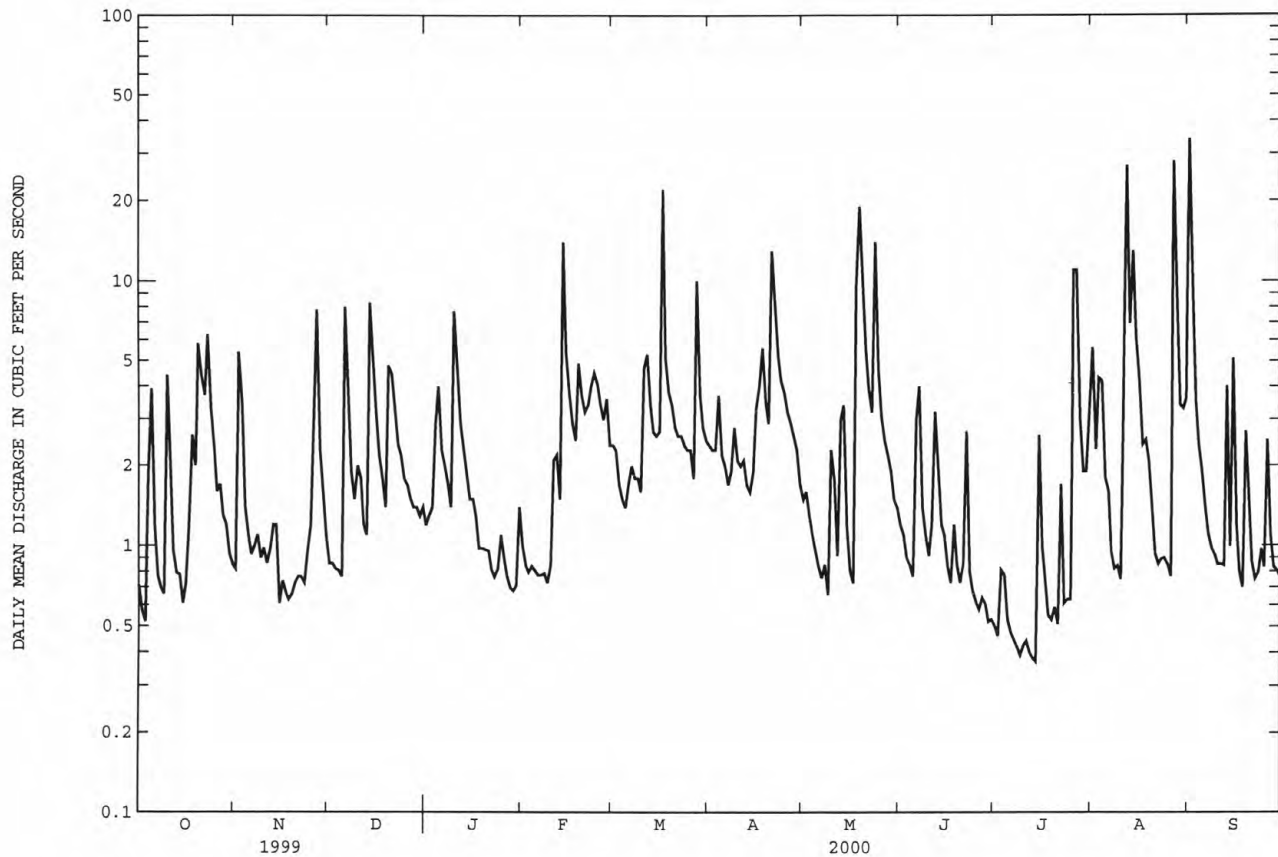
RARITAN RIVER BASIN

145

01403535 EAST BRANCH STONY BROOK AT BEST LAKE, AT WATCHUNG, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1980 - 2000
ANNUAL TOTAL	1012.73	953.78	
ANNUAL MEAN	2.77	2.61	2.72
HIGHEST ANNUAL MEAN			4.47
LOWEST ANNUAL MEAN			1.48
HIGHEST DAILY MEAN	230 Sep 16	34 Sep 1	230 Sep 16 1999
LOWEST DAILY MEAN	.08 Aug 3	.37 Jul 14	.00 Aug 30 1980
ANNUAL SEVEN-DAY MINIMUM	.08 Aug 1	.40 Jul 8	.00 Sep 3 1980
INSTANTANEOUS PEAK FLOW		623a Aug 27	2420a Sep 16 1999
INSTANTANEOUS PEAK STAGE		2.93 Aug 27	5.44 Sep 16 1999
INSTANTANEOUS LOW FLOW		.37 Jul 15	.00 Aug 30 1980
ANNUAL RUNOFF (CFSM)	1.77	1.66	1.73
ANNUAL RUNOFF (INCHES)	24.00	22.60	23.52
10 PERCENT EXCEEDS	4.5	5.0	5.4
50 PERCENT EXCEEDS	1.1	1.5	1.1
90 PERCENT EXCEEDS	.16	.69	.27

a From rating curve extended above 140 ft³/s on basis of flow over dam computation of peak flow.
e Estimated



RARITAN RIVER BASIN

01403540 STONY BROOK AT WATCHUNG, NJ

LOCATION.--Lat 40°38'12", long 74°27'06", Somerset County, Hydrologic Unit 02030105, on right bank at Watchung Borough Administration Building in Watchung, 150 ft downstream from bridge on Mountain Boulevard, 400 ft downstream from East Branch Stony Brook, and 2.9 mi upstream from confluence with Green Brook.

DRAINAGE AREA.--5.51 mi².

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR NJ-86-1: 1973 (P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 162.24 ft above sea level. Prior to Oct. 1, 1996, at datum 10.00 ft higher.

REMARKS.--Records good. Occasional regulation from Watchung and Best Lakes directly upstream from station and other small lakes. Several measurements of water temperature were made during the year. Gage-height radio telemetry at station. Channel significantly enlarged and modified in 1991, and modified again in 1997 when the right wall was replaced.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 2, 1973, reached a stage of 24.5 ft, from floodmark, corrected to current datum, discharge, 10,500 ft³/s, from slope-area measurements of peak flow.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug 11	1815	364	12.20	Aug 27	2100	*2,010	*14.68
Aug 12	1645	1,680	14.31	Sep 1	2115	1,310	13.86

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	2.4	3.7	3.7	4.4	7.9	6.3	6.2	5.2	1.7	11	84
2	3.3	12	3.5	3.6	3.7	7.2	6.0	6.3	4.8	1.5	5.7	23
3	2.9	9.0	3.4	3.6	3.4	6.2	5.9	6.0	3.8	2.3	11	11
4	6.0	6.4	3.4	7.8	3.4	5.8	8.4	5.8	3.5	3.4	13	8.1
5	11	4.5	3.2	13	3.6	5.5	6.2	5.8	3.3	2.2	5.5	6.1
6	4.6	3.7	22	6.4	3.4	4.9	5.5	5.8	7.9	1.7	4.3	4.9
7	3.4	3.3	11	5.5	3.4	4.6	5.0	5.3	12	1.5	3.9	4.2
8	3.1	3.2	7.4	4.8	3.4	4.6	5.0	5.4	5.2	1.2	3.4	3.6
9	3.0	3.0	6.1	4.6	3.4	4.4	7.4	4.9	4.4	1.2	3.2	3.2
10	12	3.0	6.6	22	3.5	4.1	6.4	8.4	3.9	1.2	3.0	3.0
11	7.9	2.8	6.7	14	5.5	13	5.6	8.8	4.1	1.2	27	2.8
12	4.7	2.6	5.2	8.9	7.5	17	5.7	4.9	8.8	1.1	176	2.7
13	3.6	2.6	4.8	7.9	5.2	10	4.9	7.5	7.1	.98	25	12
14	3.4	2.7	25	6.5	43	7.3	4.6	13	4.8	.98	36	4.7
15	3.0	2.3	16	6.3	17	6.4	4.7	5.1	4.5	6.1	18	17
16	2.8	2.1	11	5.7	12	6.2	8.0	4.1	4.2	3.8	13	5.4
17	3.2	2.4	7.9	4.7	10	40	11	3.7	4.0	3.1	8.5	3.9
18	6.5	2.2	6.5	4.6	8.5	14	16	25	4.7	2.4	7.5	3.1
19	3.7	2.1	5.9	4.6	15	11	10	60	4.0	2.1	6.7	5.7
20	9.3	2.3	16	4.4	12	9.2	8.3	31	3.6	2.1	5.6	6.1
21	7.5	2.9	16	4.4	12	8.0	41	17	3.5	2.1	5.1	3.6
22	5.2	2.8	9.3	4.4	11	7.1	25	13	7.9	4.4	4.3	2.8
23	11	2.5	7.5	4.3	13	6.7	15	10	4.0	2.3	4.0	2.5
24	6.2	2.5	6.2	3.8	15	6.1	12	43	3.4	1.8	4.0	2.5
25	4.7	2.8	5.4	4.1	13	6.0	10	16	3.1	1.7	3.7	2.2
26	4.0	6.5	5.0	3.9	11	6.3	8.9	12	2.7	29	3.5	5.6
27	3.7	22	4.7	3.6	9.7	5.5	8.4	9.5	2.8	39	114	5.2
28	3.3	7.4	4.4	3.6	12	28	8.2	8.3	2.8	7.8	21	3.1
29	3.2	5.5	4.1	3.6	9.0	10	7.5	7.0	2.4	4.9	8.9	2.4
30	3.3	4.5	3.9	3.4	---	8.1	6.6	6.3	2.1	4.7	6.9	2.3
31	2.9	---	3.9	4.7	---	7.0	---	5.7	---	6.9	6.8	---
TOTAL	156.4	134.0	245.7	186.4	277.0	288.1	283.5	370.8	138.5	146.36	569.5	246.7
MEAN	5.05	4.47	7.93	6.01	9.55	9.29	9.45	12.0	4.62	4.72	18.4	8.22
MAX	12	22	25	22	43	40	41	60	12	39	176	84
MIN	2.8	2.1	3.2	3.4	3.4	4.1	4.6	3.7	2.1	.98	3.0	2.2
CFSM	.92	.81	1.44	1.09	1.73	1.69	1.72	2.17	.84	.86	3.33	1.49
IN.	1.06	.90	1.66	1.26	1.87	1.95	1.91	2.50	.94	.99	3.84	1.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2000, BY WATER YEAR (WY)

	MEAN	MAX	MIN	CFSM	IN.
1975	5.97	24.6	.81	.92	1.06
1976	9.13	25.6	1.94	.81	.90
1977	11.9	37.1	1.21	1.44	1.66
1978	14.1	37.5	1.08	1.09	1.26
1979	12.1	20.1	3.60	1.73	1.87
1980	17.3	45.0	5.60	1.69	1.95
1981	15.8	38.3	3.89	1.72	1.91
1982	12.0	37.8	3.42	2.17	2.50
1983	6.34	20.1	1.79	.84	.94
1984	6.14	32.1	.55	.86	.99
1985	4.11	18.4	.75	3.33	3.84
1986	5.69	30.8	.87	1.49	1.67
1987					
1988					
1989					
1990					
1991					
1992					
1993					
1994					
1995					
1996					
1997					
1998					
1999					
2000					

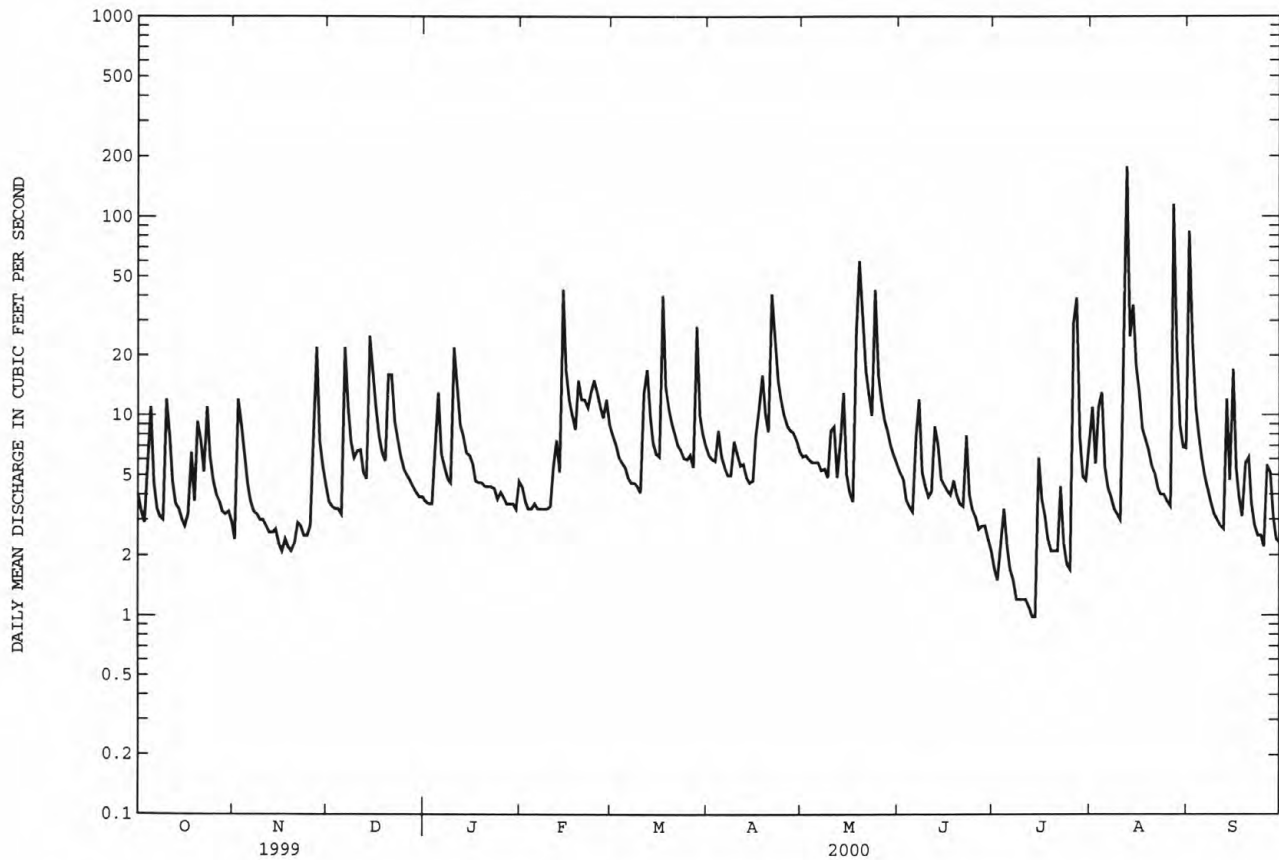
RARITAN RIVER BASIN

147

01403540 STONY BROOK AT WATCHUNG, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1975 - 2000
ANNUAL TOTAL	3372.86	3042.96	
ANNUAL MEAN	9.24	8.31	10.0
HIGHEST ANNUAL MEAN			16.0
LOWEST ANNUAL MEAN			5.43
HIGHEST DAILY MEAN	814 Sep 16	176 Aug 12	814 Sep 16 1999
LOWEST DAILY MEAN	.32 Aug 7	.98 Jul 13	.00 Sep 18 1982
ANNUAL SEVEN-DAY MINIMUM	.37 Aug 3	1.1 Jul 8	.06 Sep 13 1982
INSTANTANEOUS PEAK FLOW		2010a Aug 27	5380a Sep 16 1999
INSTANTANEOUS PEAK STAGE		14.68 Aug 27	20.40b Jul 14 1975
INSTANTANEOUS LOW FLOW		.98 Jul 12	.00 Sep 13 1982
ANNUAL RUNOFF (CFSM)	1.68	1.51	1.82
ANNUAL RUNOFF (INCHES)	22.77	20.54	24.77
10 PERCENT EXCEEDS	16	14	20
50 PERCENT EXCEEDS	3.7	5.2	4.6
90 PERCENT EXCEEDS	.57	2.6	1.1

a From rating curve extended above 500 ft³/s on basis of slope area measurement of peak flow.
b Corrected to datum



RARITAN RIVER BASIN

01405030 LAWRENCE BROOK AT WESTONS MILLS, NJ

LOCATION.--Lat 40°28'59", long 74°24'45", Middlesex County, Hydrologic Unit 02030105, on left bank at dam on Westons Mill Pond at Westons Mills, 200 ft downstream from bridge on State Route 18, and 1.3 mi upstream from mouth.

DRAINAGE AREA.--44.9 mi².

PERIOD OF RECORD.--Water-quality records water years 1976-81. December 1988 to October 1994, July 1995 to current year.

REVISED RECORDS.--WDR NJ-89-1: Drainage area.

GAGE.--Water-stage recorder above masonry dam. Datum of gage is sea level.

REMARKS.--Records fair. Flow regulated by Farrington Lake, capacity, 655,250,000 gal. Diversion at gage by New Brunswick Water Department (see Raritan River basin, diversions). Several measurements of water temperature were made during the year.

COOPERATION.--Water-stage recorder inspected by and records of gate openings and diversions provided by employees of City of New Brunswick.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	6.4	21	e15	17	24	27	31	27	9.3	32	15
2	13	28	19	e14	16	24	27	30	27	9.0	72	15
3	9.9	53	20	e14	17	24	24	29	28	8.5	71	16
4	17	13	19	19	16	24	39	30	27	9.8	179	16
5	69	8.1	19	62	17	23	32	29	27	8.6	45	15
6	22	7.2	20	35	16	23	25	27	28	8.5	29	17
7	11	7.0	33	25	16	22	23	28	45	8.0	24	16
8	7.3	6.7	28	22	15	21	26	27	37	9.0	23	16
9	1.6	11	22	21	15	21	45	26	30	8.2	22	15
10	29	13	22	62	16	20	39	27	29	7.1	21	15
11	27	12	25	86	16	23	23	28	29	8.3	22	13
12	14	15	25	34	18	164	25	29	37	10	266	13
13	11	13	23	27	19	78	20	29	79	11	318	10
14	12	19	137	23	162	42	22	54	27	14	88	6.1
15	7.0	16	130	22	166	31	22	35	20	16	81	53
16	7.2	14	49	23	69	27	40	28	19	14	37	29
17	8.5	14	29	20	52	323	51	29	18	13	25	18
18	25	13	23	20	52	129	91	27	20	12	24	17
19	12	12	20	18	193	60	46	104	33	12	31	44
20	28	11	75	17	120	43	27	128	24	11	22	101
21	26	11	163	16	79	41	109	75	18	11	17	32
22	12	9.8	52	17	55	41	236	45	19	10	16	22
23	27	9.1	33	16	46	34	83	38	18	9.9	17	23
24	13	12	24	16	40	29	53	242	19	8.6	15	23
25	9.1	17	22	15	36	27	41	171	18	8.3	16	21
26	7.5	19	19	14	33	21	36	58	15	18	15	90
27	5.6	21	e17	15	31	19	33	39	11	160	16	74
28	1.9	29	e15	15	34	158	32	33	9.8	49	14	19
29	5.3	24	e15	16	30	72	34	30	8.5	29	15	12
30	5.9	20	e14	15	---	38	34	29	8.5	25	14	12
31	5.6	---	e14	16	---	30	---	27	---	23	13	---
TOTAL	475.4	464.3	1147	750	1412	1656	1365	1562	755.8	559.1	1600	788.1
MEAN	15.3	15.5	37.0	24.2	48.7	53.4	45.5	50.4	25.2	18.0	51.6	26.3
MAX	69	53	163	86	193	323	236	242	79	160	318	101
MIN	1.6	6.4	14	14	15	19	20	26	8.5	7.1	13	6.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2000, BY WATER YEAR (WY)

	MEAN	37.0	35.1	62.7	67.1	54.7	79.8	70.3	66.4	42.5	38.9	44.3	46.1
MAX	104	70.9	174	114	113	179	116	169	98.9	92.7	103	184	
(WY)	1997	1996	1993	1996	1998	1993	1993	1989	1989	1989	1990	1989	
MIN	13.1	1.33	5.57	24.2	21.3	44.7	27.4	24.9	3.91	2.70	7.32	16.7	
(WY)	1993	1999	1999	2000	1992	1992	1995	1995	1999	1999	1995	1997	

RARITAN RIVER BASIN

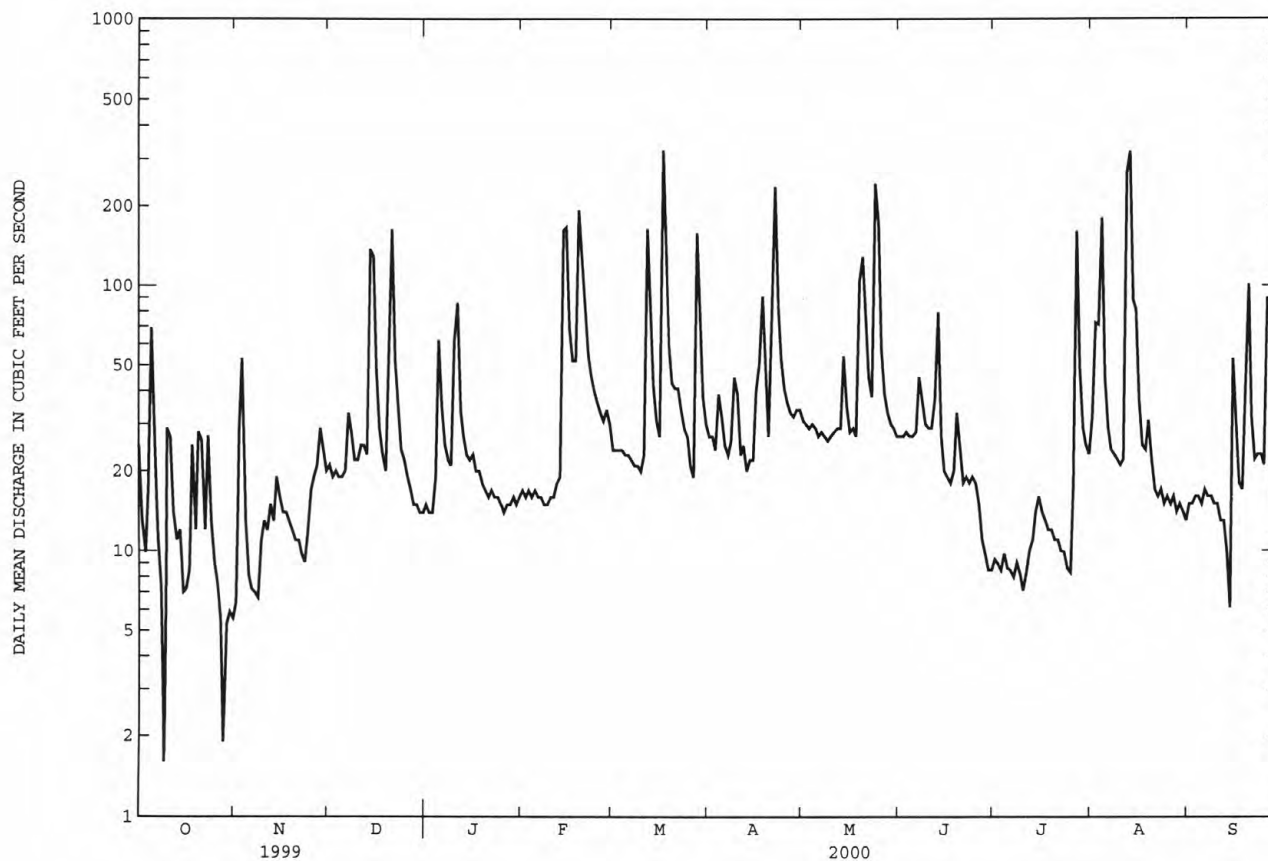
149

01405030 LAWRENCE BROOK AT WESTONS MILLS, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1989 - 2000
ANNUAL TOTAL	14673.59	12534.7	
ANNUAL MEAN	40.2	34.2	51.5
HIGHEST ANNUAL MEAN			69.1 1998
LOWEST ANNUAL MEAN			30.6 1995
HIGHEST DAILY MEAN	1740 Sep 16	323 Mar 17	2200 Sep 21 1989
LOWEST DAILY MEAN	.05 Aug 12	1.6 Oct 9	.00 Aug 19 1995
ANNUAL SEVEN-DAY MINIMUM	1.8 Jul 11	5.5 Oct 26	.00 Aug 19 1995
INSTANTANEOUS PEAK FLOW		1180 Aug 12	4850a Sep 21 1989
INSTANTANEOUS PEAK STAGE		17.22 Aug 12	19.20 Sep 21 1989
INSTANTANEOUS LOW FLOW		.05 Many days	.00 Sep 29 1989
10 PERCENT EXCEEDS	72	71	100
50 PERCENT EXCEEDS	15	22	29
90 PERCENT EXCEEDS	2.8	9.9	7.4

a From rating curve extended above 1,000 ft³/s.

e Estimated



RARITAN RIVER BASIN

01405400 MANALAPAN BROOK AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'22", long 74°23'27", Middlesex County, Hydrologic Unit 02030105, on right bank of DeVoe Lake Dam in Spotswood, 0.1 mi upstream from Cedar Brook, and 0.6 mi upstream from confluence with Matchaponix Brook.

DRAINAGE AREA.--40.7 mi².

PERIOD OF RECORD.--January 1957 to current year.

REVISED RECORDS.--WSP 1722: 1957-60.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is sea level (levels by Duhermal Water System). January 1957 to September 1966 at datum 17.72 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Discharge given herein includes flow through sluice gate when open. Gate open Oct. 1 to Apr. 21. Some regulation by Lake Manalapan, Helmetta Pond, and DeVoe Lake. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 229 ft³/s, Apr 22, gage height, 18.40 ft; minimum discharge, 0.00 ft³/s, on many days, gage height, 16.80 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.5	e23	e24	e28	e43	e20	e33	25	35	19	26	19
2	e15	e27	e23	e28	e35	e19	e33	25	31	19	84	20
3	e26	e47	e22	e27	e29	e19	e34	29	23	19	87	37
4	e27	e48	e21	e30	e26	e19	e38	33	21	19	122	41
5	e51	e31	e21	e47	e25	e19	e39	33	20	19	142	70
6	e58	e24	e23	e54	e23	e19	e38	45	28	18	60	44
7	e37	e21	e37	e40	e22	e19	e36	43	48	17	41	28
8	e25	e22	e42	e34	e21	e19	e35	36	45	17	62	23
9	e20	e22	e33	e31	e21	e20	e44	30	34	17	47	20
10	e27	e22	e29	e41	e23	e20	e52	29	29	17	35	19
11	e38	e21	e31	e57	e29	e26	e48	42	26	15	69	18
12	e33	e21	e31	e51	e35	e53	e43	41	24	15	64	17
13	e27	e21	e30	e38	e33	e64	e40	35	29	15	48	21
14	e23	e21	e59	e32	e48	e44	e41	62	36	21	51	19
15	e21	e21	e102	e29	e68	e34	e46	61	33	25	87	88
16	e20	e19	e81	e30	e52	e30	e70	39	30	18	61	164
17	e22	e19	e54	e30	e38	e59	e99	31	26	17	39	67
18	e36	e18	e40	e28	e32	e82	e109	40	25	16	25	36
19	e44	e17	e37	e27	e54	e55	e102	113	35	16	34	40
20	e45	e17	e44	e27	e71	e40	e85	167	30	17	31	131
21	e55	e17	e74	e27	e54	e32	e112	156	24	15	25	134
22	e45	e17	e68	e27	e38	e34	211	99	27	16	22	57
23	e42	e17	e47	e27	e29	e35	156	77	25	15	21	61
24	e37	e18	e38	e26	e27	e34	87	134	22	15	20	64
25	e30	e21	e33	e27	e26	e30	64	127	20	15	18	21
26	e25	e28	e32	e26	e24	e29	55	78	19	38	17	55
27	e22	e36	e31	e26	e22	e31	54	54	18	91	17	185
28	e19	e36	e30	e25	e23	e55	54	36	17	79	17	112
29	e19	e30	e28	e24	e22	e71	54	35	18	37	17	57
30	e20	e26	e27	e25	---	e52	44	35	19	27	17	40
31	e20	---	e28	e36	---	e41	---	35	---	27	17	---
TOTAL	933.5	728	1220	1005	993	1124	1956	1825	817	731	1423	1708
MEAN	30.1	24.3	39.4	32.4	34.2	36.3	65.2	58.9	27.2	23.6	45.9	56.9
MAX	58	48	102	57	71	82	211	167	48	91	142	185
MIN	4.5	17	21	24	21	19	33	25	17	15	17	17
CFSM	.74	.60	.97	.80	.84	.89	1.60	1.45	.67	.58	1.13	1.40
IN.	.85	.67	1.12	.92	.91	1.03	1.79	1.67	.75	.67	1.30	1.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2000, BY WATER YEAR (WY)

MEAN	40.4	56.1	73.9	79.0	76.9	90.6	84.3	67.4	46.3	42.7	42.7	41.0
MAX	95.2	154	156	186	139	164	154	148	109	141	128	138
(WY)	1990	1978	1984	1978	1979	1958	1983	1984	1968	1975	1990	1989
MIN	13.7	21.3	21.4	21.1	29.8	36.3	31.1	26.5	14.8	4.40	5.56	11.6
(WY)	1983	1999	1999	1981	1992	2000	1985	1977	1999	1966	1966	1965

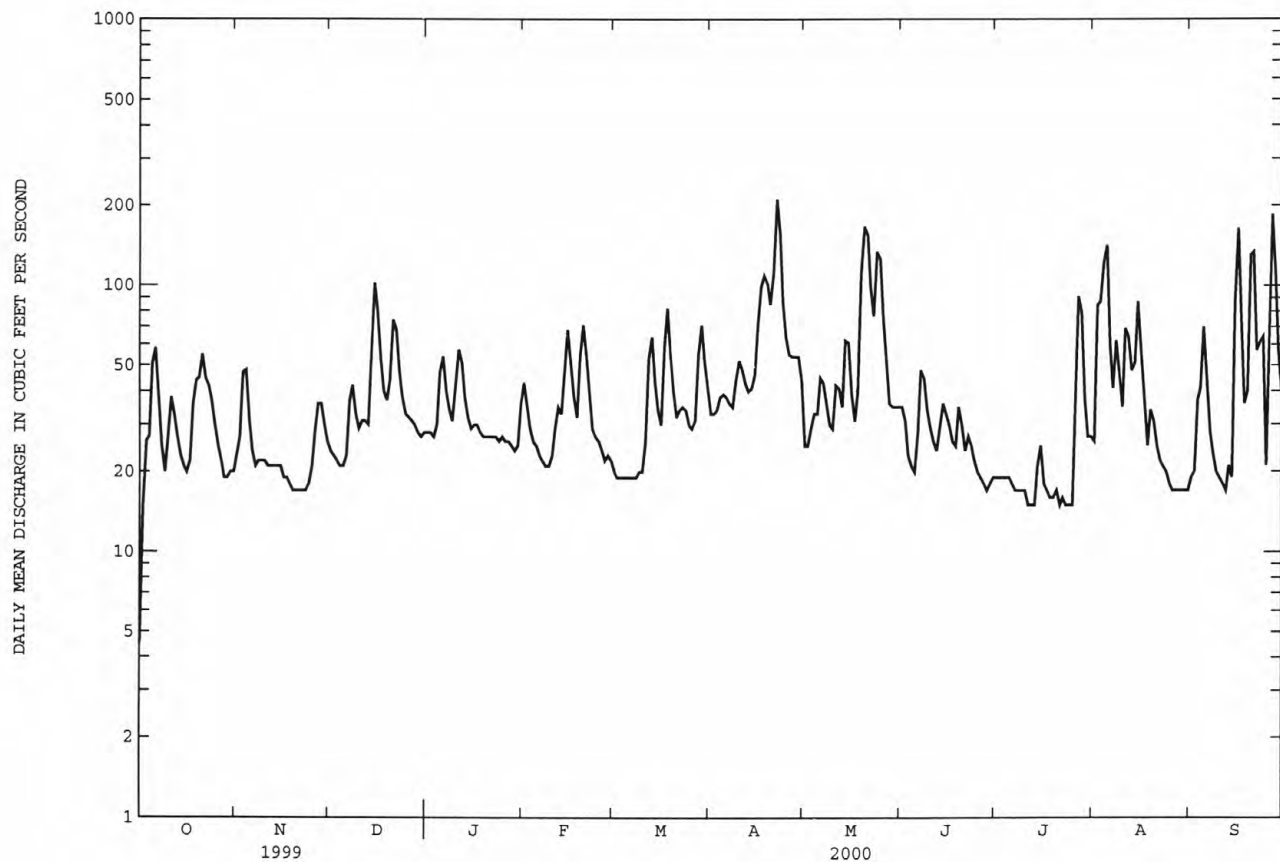
RARITAN RIVER BASIN

151

01405400 MANALAPAN BROOK AT SPOTSWOOD, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1957 - 2000
ANNUAL TOTAL	14492.58	14463.5	
ANNUAL MEAN	39.7	39.5	62.0
HIGHEST ANNUAL MEAN			101 1973
LOWEST ANNUAL MEAN			34.3 1981
HIGHEST DAILY MEAN	489 Sep 17	211 Apr 22	1390 May 30 1968
LOWEST DAILY MEAN	.10 Sep 26	4.5 Oct 1	.00 Jun 16 1957
ANNUAL SEVEN-DAY MINIMUM	.64 Sep 24	16 Jul 19	.64 Sep 24 1999
INSTANTANEOUS PEAK FLOW		229 Apr 22	1700 Sep 20 1989
INSTANTANEOUS PEAK STAGE		18.40 Apr 22	20.50 Sep 20 1989
INSTANTANEOUS LOW FLOW		4.5 Oct 1	.00 Jun 16 1957
ANNUAL RUNOFF (CFSM)	.98	.97	1.52
ANNUAL RUNOFF (INCHES)	13.25	13.22	20.69
10 PERCENT EXCEEDS	82	70	117
50 PERCENT EXCEEDS	24	30	44
90 PERCENT EXCEEDS	3.8	18	18

e Estimated



RARITAN RIVER BASIN

01406710 Raritan River at South Amboy, NJ

LOCATION.--Lat 40°29'32", long 74°16'54", Middlesex County, Hydrologic Unit 02030105, on right bank at the Werner Generating Station in South Amboy, 0.1 mi downstream from NJ Transit railroad bridge, 0.4 mi upstream from the mouth, and 1.3 mi southwest of Perth Amboy.

DRAINAGE AREA.--1,100 mi².

PERIOD OF RECORD.--August 1997 to September 1999 (unpublished fragmentary gage-height record), October 1999 to September 2000.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 0.99 ft. To determine corresponding Mean Lower Low Water Datum elevation, based on data from National Ocean Service station 8531232, add 3.18 ft.

REMARKS.--Record effected by frozen well, Jan. 18 to Feb. 10. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Gage-height satellite telemeter at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 5.08 ft (NAVD of 1988), Sept. 26, 2000; minimum recorded, -5.14 ft (NAVD of 1988), Jan. 17, 2000, but a lower elevation could have occurred when the well was frozen, Jan. 18 to Feb. 10, 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 9.4 ft (adjusted to NAVD of 1988), Dec. 11, 1992, from tidal crest-stage gage at Perth Amboy (station 01406700).

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 5.08 ft (NAVD of 1988), Sept. 26; minimum recorded, -5.14 ft (NAVD of 1988), Jan. 17, but a lower elevation could have occurred when the well was frozen, Jan. 18 to Feb. 10.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	4.50	3.81	3.75	4.95	3.90	4.35	4.69	4.12	4.67	4.63	4.43	5.08
high tide	Date	23	24	23	25	19	20	18	10	5	31	29	26
Minimum	Elevation	-4.18	-4.72	-5.02	-5.14	-4.54	-3.85	-4.82	-4.08	-3.92	-3.82	-3.51	-3.81
low tide	Date	27	4	11	17	21	2	10	6	4	2	28	18
Mean high tide		2.50	2.22	2.40	---	---	2.41	2.51	2.79	2.66	2.84	2.80	2.69
Mean water level		-.13	-.41	-.38	---	---	-.07	-.12	.18	.04	.19	.18	.10
Mean low tide		-2.85	-3.14	-3.08	---	---	-2.75	-2.73	-2.55	-2.72	-2.59	-2.59	-2.58

RARITAN RIVER BASIN

153

RESERVOIRS IN RARITAN RIVER BASIN

01396790 SPRUCE RUN RESERVOIR.--Lat 40°38'37", long 74°55'26", Hunterdon County, Hydrologic Unit 02030105, at dam on Spruce Run, 0.5 mi north of Clinton, and 0.6 mi upstream from mouth. DRAINAGE AREA, 41.3 mi². PERIOD OF RECORD, November 1963 to current year. GAGE, water-stage recorder. Datum of gage is sea level.
REMARKS.--Reservoir is formed by earthfill dam with concrete spillway; dam completed in October 1963 with crest of spillway at elevation 273.00 ft. Usable capacity, 11,000,000,000 gal. Dead storage 300,000 gal. Reservoir used for water supply and recreation. Outflow mostly regulated by gates. Water is released to maintain minimum flow on the South Branch Raritan River and, at times, for municipal supply. Records given herein represent usable capacity.
COOPERATION.--Records provided by New Jersey Water Supply Authority.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 11,820,000,000 gal, Jan. 24, 1979, elevation, 274.72 ft; minimum observed, 3,100,000,000 gal, Oct. 18, 1983, elevation, 246.68 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 11,150,000,000 gal, March 17, elevation, 273.27 ft; minimum observed, 8,170,000,000 gal, Oct. 1, elevation, 265.75 ft.
REVISED RECORDS.--WDR NJ-84-1: (M). WDR NJ-85-1: 1984.

01397050 ROUND VALLEY RESERVOIR.--Lat 40°36'39", long 74°50'42", Hunterdon County, Hydrologic Unit 02030105, at main dam on Prescott Brook, 1.8 mi south of Lebanon, 3.2 mi upstream from mouth, and 4.5 mi west of Whitehouse. DRAINAGE AREA, 5.7 mi². PERIOD OF RECORD, March 1966 to current year. Nonrecording gage read daily. Datum of gage is sea level.
REMARKS.--Reservoir is formed by earthfill dam at main dam on Prescott Brook and two dams on South Branch Rockaway River at Lebanon; storage began in March 1966. Capacity at spillway level, 55,000,000,000 gal, elevation, 385.00 ft. Reservoir is used primarily for storage and is filled by pumping from South Branch Raritan River at Hamden Pumping Station (see following page). Outflow is controlled by operation of gates in pipe in dams. Water is released into South Branch Rockaway Creek and Prescott Brook.
COOPERATION.--Records provided by New Jersey Water Supply Authority.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,400,000,000 gal, June 15, 1975, elevation, 385.63 ft; minimum observed (after first filling), 37,100,000,000 gal, Feb. 9, 1981, elevation, 361.30 ft.
EXTREMES FOR CURRENT YEAR: Maximum contents observed, 54,980,000,000 gal, Aug. 29, elevation, 384.98 ft; minimum observed, 42,880,000,000 gal, Nov. 19, elevation, 368.98 ft.
REVISED RECORDS.--WDR NJ-85-1: 1984.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)
01396790 SPRUCE RUN RESERVOIR				01397050 ROUND VALLEY RESERVOIR		
Sept. 30.....	265.65	8,150	--	369.24	43,120	--
Oct. 31.....	267.01	8,650	+25.0	369.17	43,070	-2.5
Nov. 30.....	268.63	9,250	+30.9	369.10	43,000	-3.6
Dec. 31.....	270.49	9,960	+35.4	369.10	43,000	0
CAL YR 1999			+26.5			-27.3
Jan. 31.....	271.64	10,400	+22.0	369.85	43,550	+27.4
Feb. 29.....	273.09	11,060	+35.2	373.88	46,680	+167.0
Mar. 31.....	272.93	10,970	-4.5	379.67	50,990	+215.1
Apr. 30.....	273.01	11,000	+1.5	383.19	53,550	+132.0
May 31.....	273.00	11,000	0	384.28	54,390	+41.9
June 30.....	273.00	11,000	0	384.48	54,580	+9.8
July 31.....	271.04	10,160	-41.9	384.52	54,610	+1.5
Aug. 31.....	273.00	11,000	+41.9	384.87	54,870	+13.0
Sept. 30.....	272.98	11,000	0	384.66	54,680	-9.8
WTR YR 2000			+12.0			+48.9

† Elevation at 0900 of the last day of each month.

RARITAN RIVER BASIN

DIVERSIONS IN RARITAN RIVER BASIN

- 01396920 Water is diverted 4.0 mi upstream from the gaging station on South Branch Raritan River at Stanton (see station 01397000), at the Hamden Pumping Station, for storage in Round Valley Reservoir. Water can also be released from Round Valley Reservoir into the South Branch Raritan River at Hamden and are noted as negative discharge. Records provided by New Jersey Water Supply Authority. REVISED RECORDS.--WDR NJ-85-1: 1984.
- 01399669 Water is released from Round Valley Reservoir and enters the South Branch Rockaway Creek directly upstream from gaging station (01399670) at Whitehouse Station. Records provided by New Jersey Water Supply Authority.
- 01400509 Elizabethtown Water Company diverts water from the Raritan and Millstone Rivers just upstream from the mouth of the Millstone River at Manville. Records given herein represent the total diversion from both rivers. Records provided by the Elizabethtown Water Company. REVISION.--The mean diversion for water year 1991 has been revised to 146 ft³/s superceding the figure published in WDR NJ-91-1.
- 01400836 Water is diverted from Carnegie Lake (Millstone River) at Princeton to the Delaware and Raritan Canal at the aqueduct 4.1 mi downstream from the gaging station on the Delaware and Raritan Canal at Port Mercer (station 01460440). Negative discharge indicates flow from Canal to Carnegie Lake. Records provided by New Jersey Water Supply Authority. REVISED RECORDS.--WDR NJ-85-1: 1984.
- 01402910 Water is diverted from the Raritan River just below the Millstone River to the Delaware and Raritan Canal at Ten Mile Lock for municipal supply. Negative discharge indicates flow from Canal to Millstone River. Records provided by the New Jersey Water Supply Authority. REVISED RECORDS.--WDR NJ-85-1: 1984.
- 01405029 Water is diverted from Lawrence Brook at Westons Mills, just upstream of gaging station (01405030), by City of New Brunswick (since 1873), for municipal supply. Records provided by City of New Brunswick Water Department.
- 01460570 Elizabethtown Water Company diverts water from the Delaware and Raritan Canal 1200 ft downstream from Ten Mile Lock at Franklin for municipal supply. Records provided by the Elizabethtown Water Company.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

MONTH	<u>01396920</u> Hamden pumping station	<u>01399669</u> Whitehouse Release	<u>01400509</u> Raritan and Millstone Rivers	<u>01400836</u> Carnegie Lake	<u>01402910</u> Ten Mile Lock diversion	<u>01405029</u> Westons Mills	<u>01460570</u> Delaware and Raritan Canal
October	0	0	160	0	-44.3	5.56	0
November	0	0	159	0	-45.2	6.02	0
December	0	0	174	0	-39.7	3.22	0
CAL YR 1999	-29.8	0	185	0	-36.4	5.55	4.6
January	23.5	0	187	0	-35.5	3.38	0
February	145.4	0	196	0	-33.6	5.26	0
March	199.3	0	185	0	-39.2	3.92	0
April	126.2	0	179	0	-42.1	5.76	0
May	25.1	0	197	0	-37.2	2.54	0
June	0	0	213	0	-36.2	3.12	.69
July	0	0	222	0	-26.9	3.12	3.7
August	0	6.65	199	0	-35.9	2.36	0
September ...	0	2.75	198	0	-38.6	3.61	0
WTR YR 2000	42.9	.79	189	0	-37.9	3.97	.37

WAACKAACK CREEK BASIN

155

01407080 Waackaack Creek at Keansburg, NJ

LOCATION.--Lat 40°26'55", long 74°08'52", Monmouth County, Hydrologic Unit 02030104, on left bank at Bayshore Flood Control Station in Keansburg, 200 ft upstream from tide gate, and 0.3 mi downstream from bridge on Laurel Avenue.

DRAINAGE AREA.--8.03 mi².

PERIOD OF RECORD.--September 1997 to January 1999 (unpublished fragmentary gage-height record), February to September 2000.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.18 ft.

REMARKS.--Record effected by frozen well, Feb. 1-13. Gage cannot measure a tide level of less than -2.62 ft (NAVD of 1988). Monthly minimum elevations, monthly mean low tides, and monthly mean water levels are undetermined. Some regulation by tide gate and pumps at Bayshore Flood Control Station. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines. Gage-height satellite telemeter at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 3.38 ft (NAVD of 1988), Sept. 26, 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum known elevation, 7.9 ft (adjusted to NAVD of 1988), Nov. 25, 1950, from high-water mark in Keansburg, published in Tidal Flood Plain Information - Sandy Hook Bay and Raritan Bay Shore Areas, Monmouth County, New Jersey, July 1972, by the U.S. Army Corp of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.38 ft (NAVD of 1988), Sept. 26.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	---	---	---	---	e3.07	3.18	3.23	3.30	3.33	3.27	3.29	3.38
high tide	Date	---	---	---	---	18	19	7,17,26	5	30	30	29	26
Minimum	Elevation	---	---	---	---	---	---	---	---	---	---	---	---
low tide	Date	---	---	---	---	---	---	---	---	---	---	---	---
Mean high tide		---	---	---	---	---	2.22	2.29	2.63	2.47	2.64	2.61	2.54
Mean water level		---	---	---	---	---	---	---	---	---	---	---	---
Mean low tide		---	---	---	---	---	---	---	---	---	---	---	---

e Estimated.

SHREWSBURY RIVER BASIN

01407500 SWIMMING RIVER NEAR RED BANK, NJ

LOCATION.--Lat 40°19'09", long 74°06'59" (revised), Monmouth County, Hydrologic Unit 02030104, on left bank 50 ft upstream from spillway at Swimming River Reservoir, 3.3 mi southwest of Red Bank, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--49.2 mi².

PERIOD OF RECORD.--August 1922 to current year.

REVISED RECORDS.--WSP 891: 1939. WDR NJ-83-1: Drainage area. WDR NJ-90-1: 1989.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 30.00 ft above sea level. Prior to Jan. 19, 1962, at site 800 ft upstream at datum 17.67 ft lower. Jan. 19 to Mar. 30, 1962, nonrecording gage, 700 ft upstream at datum 13.87 ft lower.

REMARKS.--Records excellent for days of no flow, good above 200 ft³/s, and fair below 200 ft³/s. Records given herein represent flow over spillway and flow or leakage through blowoff gates. Flow regulated by and diversions from Swimming River Reservoir for municipal supply (see Reservoirs and Diversions in Atlantic Coastal Basins). Several measurements of water temperature were made during the year.

COOPERATION.--Water-stage recorder inspected by and record of diversion furnished by New Jersey-American Water Co.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in July 1919 reached a stage of 7.84 ft (site and datum then in use), from floodmark, discharge about 11,800 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	6.3	17	16	51	22	23	23	12	.00	146	.31
2	13	8.3	14	16	33	24	21	24	11	.00	258	.10
3	9.2	66	12	16	23	21	19	25	9.0	.00	178	.00
4	7.8	34	12	17	21	19	23	22	7.3	.00	239	.45
5	40	21	11	56	20	18	23	21	5.4	.00	78	3.8
6	42	18	12	39	18	17	20	20	10	.00	38	3.3
7	22	15	49	29	16	16	17	17	35	.00	31	2.3
8	16	13	42	21	15	16	17	14	30	.00	41	1.6
9	14	12	29	19	14	17	23	12	19	.00	28	.93
10	14	11	24	26	16	16	26	9.8	13	.00	19	.30
11	18	9.7	26	44	28	39	23	30	8.2	.00	14	.03
12	15	8.5	20	25	51	212	28	27	5.8	.00	14	.00
13	12	7.9	19	21	33	66	23	22	12	.00	14	.00
14	10	7.7	168	19	150	38	21	40	15	.00	28	.00
15	7.2	6.8	231	15	138	30	24	25	15	.00	64	90
16	5.5	5.9	80	14	54	24	77	18	15	.00	35	71
17	4.5	5.0	42	12	40	202	57	14	12	.00	20	27
18	18	4.1	37	8.7	51	103	57	12	10	.00	18	17
19	20	3.5	32	7.2	193	52	48	139	15	.00	27	46
20	35	3.4	41	7.3	102	41	40	144	15	.00	20	296
21	66	3.2	146	7.8	60	37	122	89	12	.00	16	63
22	38	3.1	64	6.8	42	37	352	46	12	.00	12	31
23	36	2.8	43	6.2	38	36	96	45	10	.00	9.1	22
24	26	2.8	34	6.0	37	33	57	99	6.5	.00	7.2	21
25	19	4.7	24	9.0	37	29	43	73	4.2	.00	5.4	19
26	16	13	21	13	35	24	38	36	2.2	.00	3.7	173
27	13	39	19	13	32	20	37	24	1.3	.00	2.3	185
28	11	41	18	11	32	94	36	20	.79	.00	1.7	56
29	9.7	26	17	9.4	26	55	33	17	.39	.00	.99	35
30	8.4	20	16	8.6	---	29	30	14	.16	.02	.71	24
31	7.5	---	15	32	---	25	---	13	---	10	.51	---
TOTAL	591.8	422.7	1335	551.0	1406	1412	1454	1134.8	324.24	10.02	1369.61	1189.12
MEAN	19.1	14.1	43.1	17.8	48.5	45.5	48.5	36.6	10.8	.32	44.2	39.6
MAX	66	66	231	56	193	212	352	144	35	10	258	296
MIN	4.5	2.8	11	6.0	14	16	17	9.8	.16	.00	.51	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2000, BY WATER YEAR (WY)

	MEAN	38.1	53.6	67.0	79.1	90.6	103	90.9	70.0	46.8	38.7	37.4	37.3
MAX	163	208	196	248	201	216	209	227	135	187	128	210	
(WY)	1944	1973	1978	1978	1979	1994	1980	1998	1972	1938	1955	1938	
MIN	.000	.000	.000	.000	1.19	18.1	2.93	4.07	.000	.000	.000	.000	
(WY)	1971	1981	1981	1981	1989	1985	1962	1985	1985	1966	1957	1980	

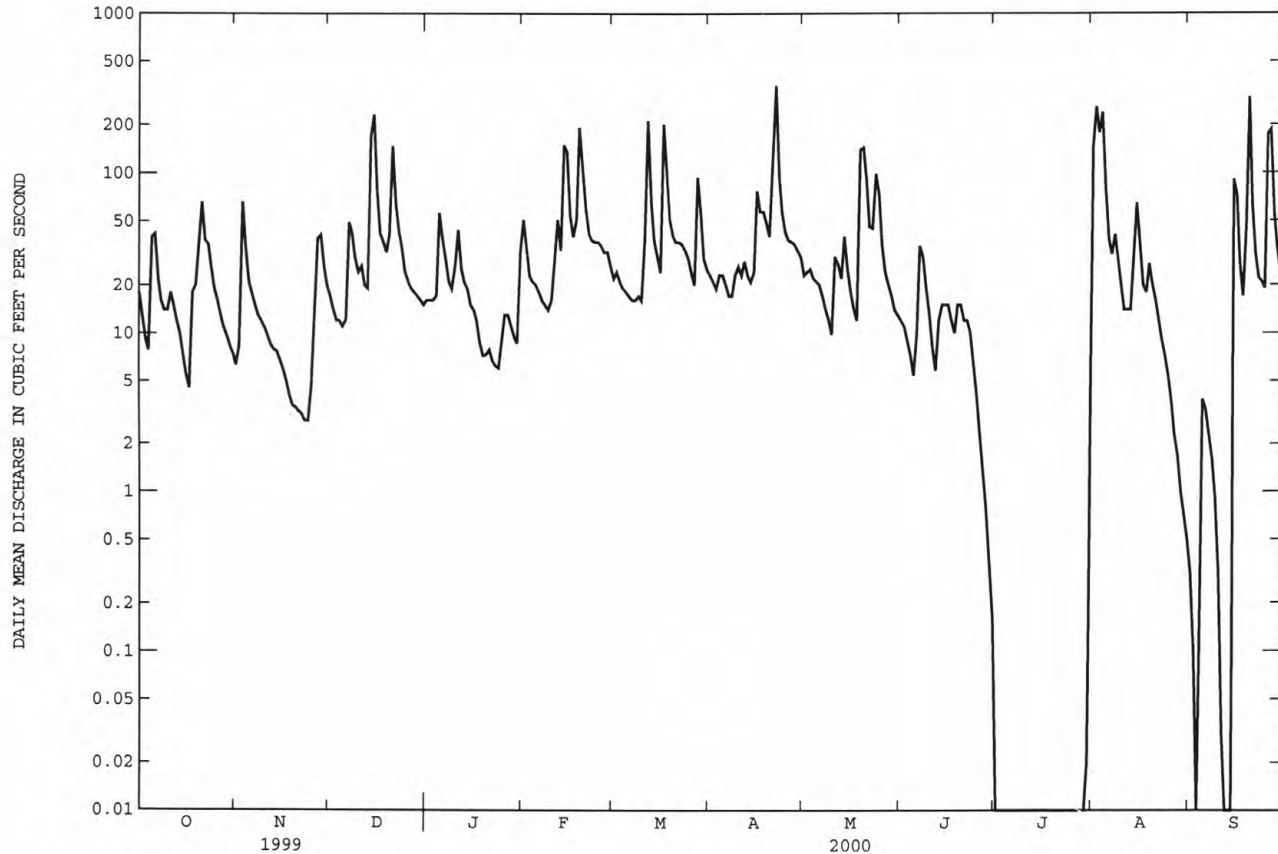
SHREWSBURY RIVER BASIN

157

01407500 SWIMMING RIVER NEAR RED BANK, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1922 - 2000
ANNUAL TOTAL	12664.30	11200.29	
ANNUAL MEAN	34.7	30.6	62.5
HIGHEST ANNUAL MEAN			123 1928
LOWEST ANNUAL MEAN			9.76 1985
HIGHEST DAILY MEAN	553 Sep 17	352 Apr 22	3050 Oct 27 1943
LOWEST DAILY MEAN	.00 Jan 1	.00 Jul 1	.00 Jun 22 1923
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 6	.00 Jul 1	.00 Jul 16 1955
INSTANTANEOUS PEAK FLOW		572 Apr 22	8910a Oct 27 1943
INSTANTANEOUS PEAK STAGE		5.63 Apr 22	8.96 Oct 27 1943
10 PERCENT EXCEEDS	71	63	120
50 PERCENT EXCEEDS	20	18	44
90 PERCENT EXCEEDS	.00	.14	.36

a From rating curve extended above 1,000 ft³/s on basis of weir formula, site and datum then in use.



SHREWSBURY RIVER BASIN

SHREWSBURY RIVER BASIN

01407600 Shrewsbury River at Sea Bright, NJ

01407600 Shrewsbury River at Sea Bright, NJ

LOCATION.--Lat 40°21'56", long 73°58'31", Monmouth County, Hydrologic Unit 02030104, on right upstream wingwall of County Route 520 bridge in Sea Bright, 0.5 mi downstream of Gunning Island, and 3.3 mi south of Sandy Hook Bay.

520 bridge in Sea Bright, 0.5 mi downstream of Gunning Island, and 3.3 mi south of Sandy Hook Bay.

PERIOD OF RECORD.--August 1997 to December 1999 (unpublished fragmentary gage-height record), January to September 2000.

PERIOD OF RECORD.--August 1997 to December 1999 (unpublished fragmentary gage-height record), January to September 2000.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.20 ft. To determine corresponding Mean Lower Low Water Datum elevation, based on data from National Ocean Service station 8531804, add 2.01 ft.

REMARKS.--Record effected by frozen well, Jan. 18 to Feb. 12. Gage cannot measure a tide level of less than -1.92 ft (NAVD of 1988). Monthly minimum elevations, monthly mean low tides, and monthly mean water levels are undetermined. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Gage-height satellite telemeter at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum recorded, 3.96 ft (NAVD of 1988), Jan. 25, 2000.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum recorded, 3.96 ft (NAVD of 1988), Jan. 25, 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 8.7 ft (adjusted to NAVD of 1988), Dec. 11, 1992, from high-water mark near the intersection of County Route 520 and Ocean Drive in Sea Bright.

mark near the intersection of County Route 520 and Ocean Drive in Sea Bright.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.96 ft (NAVD of 1988), Jan. 25.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.96
Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

[illegible]

SHARK RIVER BASIN

159

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ

LOCATION.--Lat 40°11'56", long 74°04'14", Monmouth County, Hydrologic Unit 02030104, on left bank 100 ft upstream from bridge on Remsen Mill Road, 0.3 mi downstream from Robins Swamp Brook, and 1.7 mi west of Neptune City.

DRAINAGE AREA.--9.96 mi².

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 7.05 ft above sea level.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversion above station by New Jersey-American Water Co. for municipal supply (See Shark River basin diversions) and by farmers for irrigation. Entire flow from 0.34 mi² of drainage area, subsequent to November 1962, controlled by Glendola Reservoir (capacity 1,000 million gal) on Robins Swamp Brook, 0.6 mi southwest of gage. Water pumped into Glendola Reservoir from Manasquan River or Reservoir subsequent to July 1990 (see Atlantic Coastal Basins, diversions). Several measurements of water temperature were made during the year.

COOPERATION.--Water-stage recorder inspected by New Jersey-American Water Co.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	5.9	3.0	6.1	8.9	4.1	6.2	6.4	4.3	4.3	13	3.5
2	7.8	18	8.0	5.1	6.1	3.5	4.2	6.5	2.7	3.4	17	3.4
3	6.4	21	6.8	5.1	5.2	2.9	6.0	6.1	2.3	2.8	25	17
4	6.6	5.7	3.2	6.6	6.8	2.6	4.3	5.7	3.1	6.5	52	39
5	15	3.4	3.9	19	7.6	2.5	4.5	5.5	2.7	4.4	15	15
6	7.3	3.4	8.1	7.0	4.8	2.2	4.3	5.8	19	4.8	7.6	5.3
7	7.0	2.9	11	4.1	5.0	2.1	4.7	4.8	11	7.8	12	4.5
8	6.9	5.1	4.0	3.6	4.6	2.2	5.5	6.5	4.9	7.5	14	3.2
9	5.1	5.2	2.8	3.4	5.4	2.5	9.5	6.2	5.2	7.6	7.5	4.2
10	7.2	4.3	4.7	13	5.9	2.5	11	6.7	5.7	7.6	6.2	5.0
11	5.0	4.6	3.1	10	9.0	22	7.9	9.3	5.1	7.3	6.2	4.9
12	5.2	4.9	3.5	6.2	11	48	7.2	6.9	6.2	7.1	6.2	4.7
13	6.6	4.9	5.1	5.4	7.8	17	6.5	6.8	11	7.1	6.2	5.2
14	5.5	3.0	70	3.5	31	7.9	6.0	11	6.8	14	18	4.5
15	5.8	3.2	42	4.2	23	6.0	6.0	6.9	6.6	33	11	107
16	7.4	3.1	15	4.4	13	7.0	15	6.8	6.4	7.3	8.0	21
17	7.0	2.6	9.8	3.6	9.7	51	13	6.4	4.8	5.1	6.3	5.8
18	28	4.9	6.5	6.3	21	16	13	5.5	6.5	5.2	8.4	4.3
19	5.2	5.1	4.6	6.3	62	9.2	16	52	18	5.8	8.8	24
20	25	3.2	21	6.3	19	7.2	11	31	5.1	6.0	6.3	76
21	16	3.7	23	4.6	11	7.6	56	20	5.0	4.4	5.5	14
22	6.9	3.8	10	6.8	9.3	7.8	93	13	6.6	9.9	5.4	7.5
23	7.6	4.9	6.9	7.6	8.3	7.2	25	12	4.7	5.8	5.4	7.1
24	5.2	6.3	6.0	8.3	3.7	6.8	15	32	5.7	8.0	5.6	8.8
25	5.4	5.7	4.0	8.2	3.5	6.6	12	11	5.4	5.2	5.4	7.7
26	6.1	6.4	5.2	5.9	6.5	5.6	10	4.6	5.0	142	4.8	87
27	5.0	12	5.9	4.9	5.1	4.3	9.9	5.0	4.4	100	35	51
28	5.8	3.9	5.8	5.1	5.4	21	9.3	2.5	4.3	21	11	17
29	6.3	6.0	5.5	4.6	5.4	10	8.7	2.3	6.1	11	5.3	12
30	5.1	4.0	5.5	4.7	---	7.1	7.6	3.6	5.3	8.0	2.6	10
31	4.9	---	5.6	21	---	7.0	---	3.6	---	8.4	3.2	---
TOTAL	252.3	171.1	319.5	210.9	325.0	309.4	408.3	312.4	189.9	478.3	343.9	579.6
MEAN	8.14	5.70	10.3	6.80	11.2	9.98	13.6	10.1	6.33	15.4	11.1	19.3
MAX	28	21	70	21	62	51	93	52	19	142	52	107
MIN	4.9	2.6	2.8	3.4	3.5	2.1	4.2	2.3	2.3	2.8	2.6	3.2

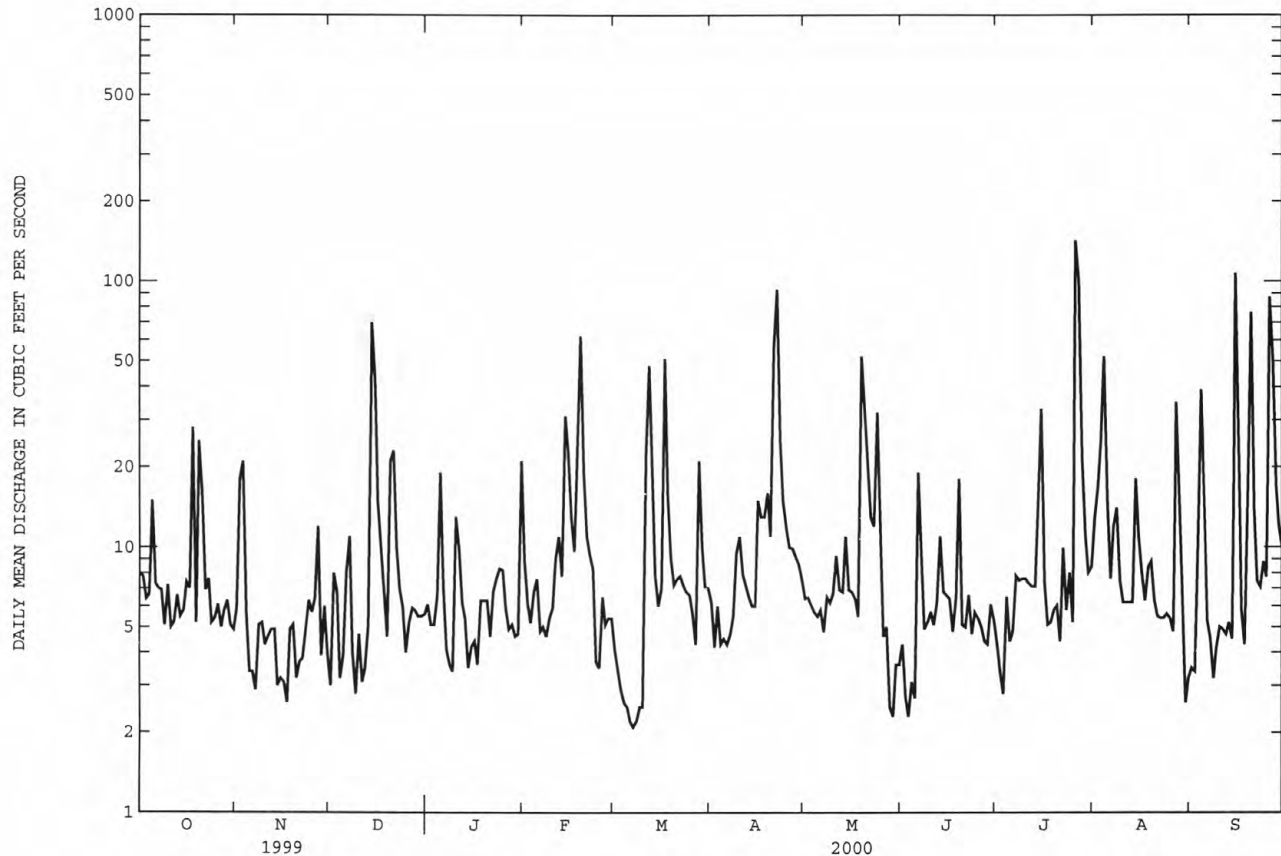
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2000, BY WATER YEAR (WY)

MEAN	9.96	12.8	16.7	18.2	16.4	22.0	19.7	16.6	9.05	9.87	11.0	9.19
MAX	34.0	31.7	44.2	41.1	42.4	56.3	48.3	50.9	21.9	30.1	29.2	22.6
(WY)	1990	1978	1970	1978	1998	1993	1983	1998	1975	1984	1992	1989
MIN	2.81	1.73	4.07	3.57	3.79	6.53	6.39	3.51	2.13	3.47	3.11	1.28
(WY)	1982	1982	1999	1981	1974	1986	1985	1986	1986	1985	1995	1988

SHARK RIVER BASIN

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1967 - 2000
ANNUAL TOTAL	4789.8	3900.6	
ANNUAL MEAN	13.1	10.7	14.3
HIGHEST ANNUAL MEAN			24.9
LOWEST ANNUAL MEAN			6.80
HIGHEST DAILY MEAN	271	142	560
LOWEST DAILY MEAN	2.0	2.1	.00
ANNUAL SEVEN-DAY MINIMUM	2.5	2.4	.70
INSTANTANEOUS PEAK FLOW		307	1170
INSTANTANEOUS PEAK STAGE		5.02	6.59
INSTANTANEOUS LOW FLOW		.57	.00
10 PERCENT EXCEEDS	23	20	28
50 PERCENT EXCEEDS	6.2	6.3	8.0
90 PERCENT EXCEEDS	3.1	3.5	2.6



SHARK RIVER BASIN

161

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ

LOCATION.--Lat 40°12'13", long 74°03'58", Monmouth County, Hydrologic Unit 02030104, on left bank 60 ft downstream from dam on Jumping Brook Reservoir, 0.8 mi upstream from mouth, and 1.4 mi west of Neptune City.

DRAINAGE AREA.--6.46 mi².

PERIOD OF RECORD.--October 1966 to current year. Records for water years 1976-83 are unpublished but are available in the files of New Jersey District Office.

REVISED RECORDS.--WDR-84-1: drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 13.76 ft above sea level.

REMARKS.--Records good except those above 300 ft³/s, which are fair. Diversion above station by New Jersey-American Water Co. for municipal supply (See shark river basin diversions for record) and by farmers for irrigation. Several measurements of water temperature were made during the year.

COOPERATION.--Water-stage recorder inspected by and records of diversion provided by New Jersey-American Water Co.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	3.2	4.6	3.6	9.6	4.3	4.0	4.0	2.9	1.6	11	3.3
2	2.9	15	3.3	3.5	5.7	4.1	3.7	4.6	2.6	1.5	13	2.9
3	3.0	21	3.3	3.5	4.3	3.9	4.1	4.2	2.5	2.0	17	9.4
4	3.9	6.0	3.4	6.2	3.9	3.7	5.5	3.8	2.5	4.2	33	16
5	24	4.4	3.4	20	3.9	3.7	4.9	3.7	2.2	2.7	7.3	8.4
6	6.0	3.5	8.1	5.8	3.7	3.5	4.0	3.7	18	1.7	4.6	3.7
7	3.8	3.5	14	4.4	3.8	3.5	3.8	3.5	12	1.4	9.6	3.0
8	3.4	3.1	5.4	3.9	4.0	3.5	3.4	3.4	4.9	1.3	16	2.8
9	3.1	3.3	4.2	3.7	4.2	3.5	12	3.6	3.3	1.4	4.8	2.6
10	6.7	3.4	5.2	14	6.1	3.5	6.9	3.6	2.5	1.4	3.8	2.3
11	5.5	3.4	5.5	11	9.9	19	4.5	5.8	2.2	1.1	3.2	2.4
12	3.6	3.3	4.0	5.3	9.3	33	4.3	3.7	2.2	1.0	6.5	2.4
13	3.0	3.5	5.3	4.5	5.1	9.1	3.7	3.4	21	1.6	4.6	2.7
14	3.8	3.5	57	3.7	23	5.6	3.5	9.3	5.6	13	15	2.7
15	2.7	3.3	35	3.4	11	4.7	6.3	3.8	4.2	43	9.0	108
16	2.6	3.2	9.8	3.5	6.2	7.4	16	3.0	3.4	13	4.4	11
17	5.8	3.2	5.8	3.2	5.1	40	10	2.7	2.6	4.3	3.3	5.5
18	31	3.2	4.7	2.9	17	11	11	2.6	3.0	2.9	5.6	4.0
19	6.4	3.1	4.2	2.8	43	6.3	13	43	15	3.8	6.2	23
20	24	2.9	19	3.0	11	5.4	6.6	21	4.1	4.4	3.4	57
21	14	3.1	22	3.2	6.6	5.0	51	12	3.0	2.8	2.9	8.0
22	5.9	3.2	7.2	3.0	5.4	4.7	65	7.3	4.7	7.4	2.3	4.8
23	6.8	3.3	5.3	3.1	4.9	4.2	12	7.9	3.1	2.8	2.1	5.0
24	4.8	3.3	4.5	3.2	4.8	4.0	7.7	28	2.6	2.1	2.4	6.9
25	4.0	4.7	3.9	3.9	4.7	4.1	6.3	10	2.3	2.2	2.2	4.7
26	3.6	5.5	3.8	4.1	4.8	3.9	5.6	5.4	2.0	230	2.2	74
27	3.9	12	3.8	3.6	4.5	3.7	5.3	4.3	2.5	72	22	23
28	3.3	5.7	3.6	3.3	6.1	22	5.3	3.8	3.7	11	7.8	7.3
29	3.1	4.1	3.5	3.1	4.7	6.9	4.9	3.4	2.8	6.9	4.4	5.2
30	3.0	3.7	3.6	3.5	---	4.9	4.6	3.9	2.1	5.1	3.5	4.6
31	3.3	---	3.5	22	---	4.3	---	2.9	---	4.5	3.8	---
TOTAL	205.7	147.6	269.9	167.9	236.3	246.4	298.9	225.3	145.5	454.1	236.9	416.6
MEAN	6.64	4.92	8.71	5.42	8.15	7.95	9.96	7.27	4.85	14.6	7.64	13.9
MAX	31	21	57	22	43	40	65	43	21	230	33	108
MIN	2.6	2.9	3.3	2.8	3.7	3.5	3.4	2.6	2.0	1.0	2.1	2.3

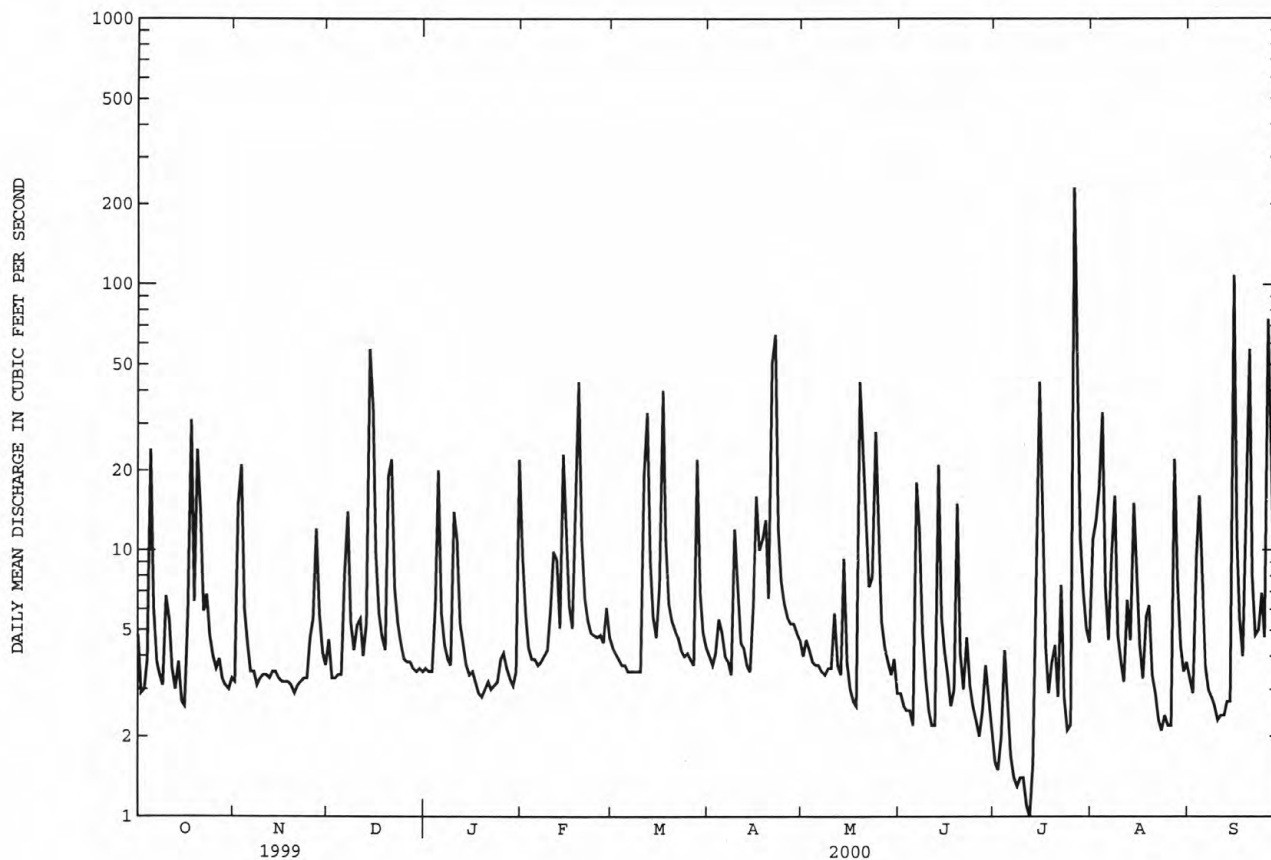
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2000, BY WATER YEAR (WY)

	7.02	8.72	10.5	12.7	11.7	14.1	14.0	12.4	6.90	7.26	7.55	7.02
MEAN	7.02	8.72	10.5	12.7	11.7	14.1	14.0	12.4	6.90	7.26	7.55	7.02
MAX	34.5	47.3	30.5	55.5	62.1	47.1	66.5	53.8	23.7	21.5	19.0	24.2
(WY)	1990	1978	1970	1979	1979	1984	1980	1989	1972	1989	1992	1971
MIN	1.97	1.89	2.78	1.94	3.53	3.86	3.29	2.08	2.11	2.44	1.52	1.25
(WY)	1982	1982	1981	1981	1968	1985	1985	1977	1986	1988	1982	1982

SHARK RIVER BASIN

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1967 - 2000
ANNUAL TOTAL	3334.8	3051.1	
ANNUAL MEAN	9.14	8.34	9.99
HIGHEST ANNUAL MEAN			20.4 1979
LOWEST ANNUAL MEAN			4.05 1981
HIGHEST DAILY MEAN	257 Jan 3	230 Jul 26	954 Jan 21 1979
LOWEST DAILY MEAN	1.4 Jul 30	1.0 Jul 12	.12 Sep 15 1981
ANNUAL SEVEN-DAY MINIMUM	1.5 Jul 28	1.3 Jul 7	.51 Oct 7 1966
INSTANTANEOUS PEAK FLOW		567a Jul 26	1830a Sep 12 1971
INSTANTANEOUS PEAK STAGE		6.08 Jul 26	7.43 Aug 18 1992
INSTANTANEOUS LOW FLOW		.99 Jul 11	.00 Jun 7 1971
10 PERCENT EXCEEDS	18	16	18
50 PERCENT EXCEEDS	4.8	4.2	4.9
90 PERCENT EXCEEDS	2.4	2.6	2.0

a From rating curve extend above 150 ft³/s.

MANASQUAN RIVER BASIN

163

01408000 MANASQUAN RIVER AT SQUANKUM, NJ

LOCATION.--Lat 40°09'41", Long 74°09'18" (revised), Monmouth County, Hydrologic Unit 02040301, on right bank 50 ft upstream from northbound bridge on State Highway 547 (Squankum Park Road) in Squankum, and 0.4 mi downstream from Marsh Bog Brook.

DRAINAGE AREA.--44.0 mi².

PERIOD OF RECORD.--July 1931 to current year. Monthly discharge only for July 1931, published in WSP 1302.

REVISED RECORDS.--WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 18.82 ft above sea level. Prior to Aug. 13, 1940, water stage recorder at site 80 ft upstream at same datum.

REMARKS.--Records good except for daily discharges above 300 ft³/s, which are fair. Several measurements of water temperature, other than those published, were made during the year. Satellite gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	36	37	43	67	52	48	49	41	24	108	27
2	34	42	35	42	50	50	46	49	40	23	99	26
3	32	121	35	41	43	48	46	46	41	23	111	42
4	40	58	33	41	42	46	49	44	35	41	180	88
5	114	49	33	101	40	45	53	43	33	25	78	75
6	56	45	38	55	38	43	45	53	56	21	52	36
7	43	42	100	48	37	42	43	43	68	21	63	31
8	38	40	53	44	39	42	42	40	43	20	84	29
9	36	38	45	43	38	42	64	39	36	20	46	27
10	48	37	43	63	50	41	59	37	35	19	40	27
11	49	37	57	80	71	64	46	75	32	18	37	26
12	37	35	42	52	76	150	46	44	31	17	36	25
13	34	35	40	48	50	80	42	39	75	16	37	31
14	35	35	175	43	116	61	41	71	42	18	83	28
15	32	34	164	38	102	55	44	42	38	53	87	236
16	31	33	91	40	69	53	94	37	36	31	50	80
17	32	32	75	e39	61	161	84	35	32	24	40	47
18	99	31	67	e37	68	95	82	35	33	22	42	38
19	50	31	61	e36	195	69	71	139	81	23	55	58
20	77	31	65	e37	119	61	61	119	40	33	37	261
21	92	31	149	e38	89	57	104	100	33	22	33	86
22	59	31	76	e38	73	59	223	71	44	24	31	56
23	67	31	66	e37	67	55	103	74	33	19	31	50
24	54	31	62	e38	63	52	78	119	30	19	31	52
25	48	39	55	e40	61	49	66	97	28	20	30	46
26	44	57	51	e39	61	49	60	66	27	146	28	212
27	42	70	49	e39	58	46	57	55	29	140	27	165
28	40	52	47	e36	62	126	55	51	34	52	27	82
29	38	43	46	e37	56	74	54	46	27	39	26	62
30	37	40	44	e39	---	58	51	43	26	34	27	54
31	37	---	43	102	---	51	---	43	---	34	28	---
TOTAL	1516	1267	1977	1454	1961	1976	1957	1844	1179	1041	1684	2103
MEAN	48.9	42.2	63.8	46.9	67.6	63.7	65.2	59.5	39.3	33.6	54.3	70.1
MAX	114	121	175	102	195	161	223	139	81	146	180	261
MIN	31	31	33	36	37	41	41	35	26	16	26	25
CFSM	1.11	.96	1.45	1.07	1.54	1.45	1.48	1.35	.89	.76	1.23	1.59
IN.	1.28	1.07	1.67	1.23	1.66	1.67	1.65	1.56	1.00	.88	1.42	1.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2000, BY WATER YEAR (WY)

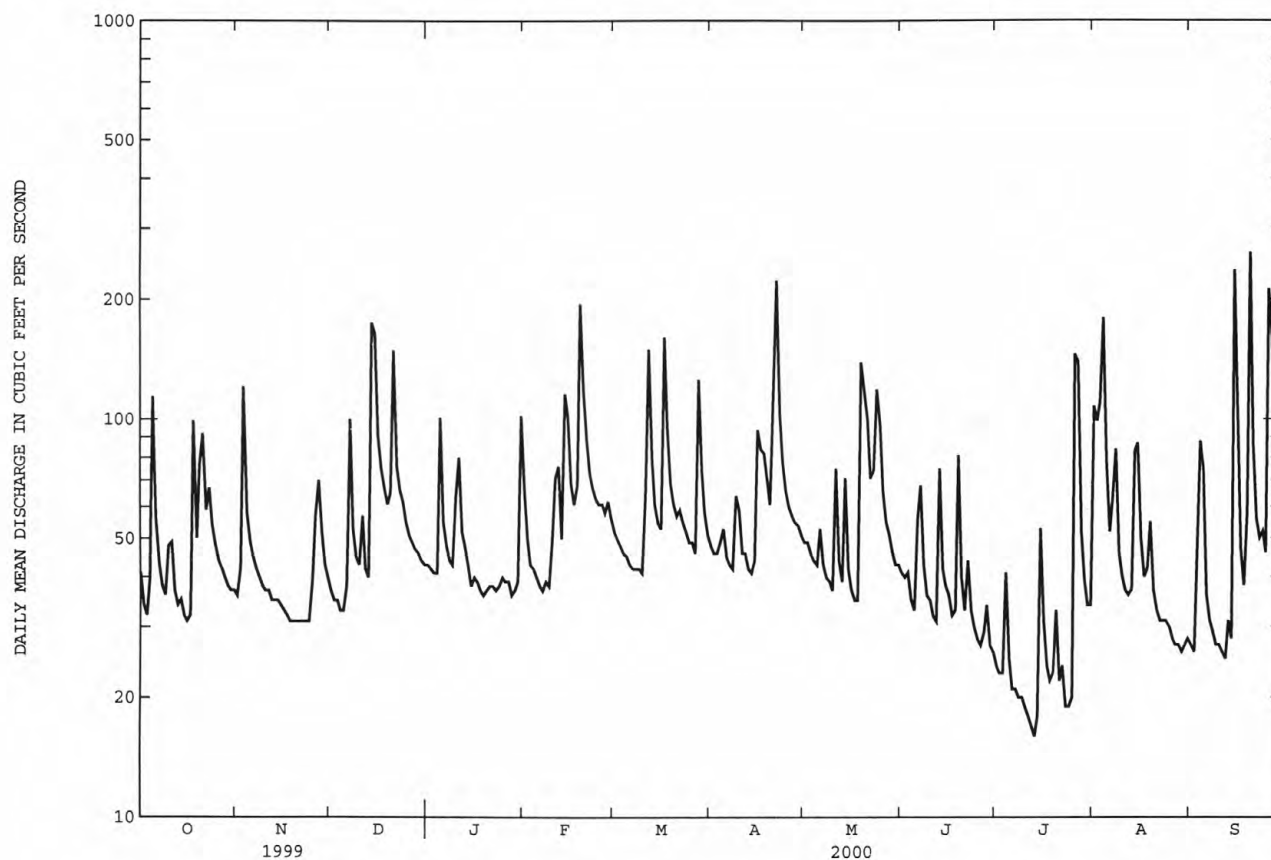
	MEAN	50.7	68.9	81.1	90.1	96.0	112	99.7	79.8	57.2	51.8	51.1	51.8
MAX	130	231	212	218	214	221	218	204	126	200	108	183	183
(WY)	1972	1978	1978	1979	1979	1984	1983	1998	1968	1938	1948	1938	1938
MIN	22.1	22.3	24.5	30.7	37.8	47.2	38.6	38.8	26.6	19.9	16.7	16.7	16.7
(WY)	1964	1966	1999	1981	1992	1985	1995	1955	1957	1966	1932	1932	1932

MANASQUAN RIVER BASIN

01408000 MANASQUAN RIVER AT SQUANKUM, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1932 - 2000
ANNUAL TOTAL	21999	19959	74.1
ANNUAL MEAN	60.3	54.5	131
HIGHEST ANNUAL MEAN			40.2
LOWEST ANNUAL MEAN			1978
HIGHEST DAILY MEAN	563 Sep 17	261 Sep 20	1720 Nov 8 1977
LOWEST DAILY MEAN	13 Jul 30	16 Jul 13	10 Dec 5 1998
ANNUAL SEVEN-DAY MINIMUM	14 Jul 29	18 Jul 8	13 Sep 7 1995
INSTANTANEOUS PEAK FLOW		446 Sep 20	2940 Sep 21 1938
INSTANTANEOUS PEAK STAGE		4.82 Sep 20	12.45 Sep 21 1938
INSTANTANEOUS LOW FLOW		14 Jul 12	8.1 Aug 6 1981
ANNUAL RUNOFF (CFSM)	1.37	1.24	1.68
ANNUAL RUNOFF (INCHES)	18.60	16.87	22.88
10 PERCENT EXCEEDS	102	93	130
50 PERCENT EXCEEDS	49	43	54
90 PERCENT EXCEEDS	19	28	26

e Estimated



MANASQUAN RIVER BASIN

165

01408029 MANASQUAN RIVER NEAR ALLENWOOD, NJ

LOCATION.--Lat 40°08'48", long 74°07'23", Monmouth County, Hydrologic Unit 02040301, on left bank just downstream from pumping station of Manasquan Water Supply System, 1400 ft upstream from Hospital Road near Allenwood, 1.2 mi downstream from Mill Run, and 7.9 mi from mouth.

DRAINAGE AREA.--63.3 mi².

PERIOD OF RECORD.--June 1990 to current year.

REVISED RECORDS.--WDR NJ-92-1: 1991 Diversion.

GAGE.--Water-stage recorder and concrete control. Datum of gage is sea level (New Jersey Water Supply Authority benchmark).

REMARKS.--Records good. Diversion by New Jersey-American Water Company from Manasquan Reservoir since 1990 and by Manasquan Water Supply System at gage to Manasquan Reservoir for municipal supply since March 1990 (see Manasquan River, diversions). Records of diversions provided by New Jersey Water Supply Authority. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	26	32	43	47	56	55	45	35	13	106	36
2	22	32	29	42	32	53	53	47	33	13	103	34
3	20	157	29	42	22	50	67	43	33	14	102	42
4	25	55	29	42	19	46	71	40	25	26	216	128
5	126	38	29	121	14	45	78	38	23	12	35	105
6	41	42	29	58	15	42	59	28	52	13	16	46
7	26	38	103	41	19	40	47	21	79	14	42	30
8	26	34	44	38	16	40	39	33	43	13	77	18
9	24	36	34	48	16	40	68	32	29	14	40	16
10	34	36	42	58	20	40	74	31	25	14	31	14
11	33	31	29	88	46	51	48	74	24	14	28	13
12	26	30	33	52	45	239	49	41	26	15	27	15
13	22	29	38	41	34	131	44	36	88	13	27	15
14	23	29	224	38	147	82	38	75	34	15	70	16
15	19	28	275	41	152	66	42	40	37	25	94	392
16	17	27	111	43	72	61	122	31	33	15	34	110
17	20	25	70	40	65	261	101	28	27	20	31	18
18	131	24	32	55	60	167	106	26	25	13	29	26
19	44	23	23	57	255	99	100	154	131	15	51	48
20	73	24	52	57	110	79	76	133	52	19	28	397
21	121	24	190	57	85	70	132	149	30	13	22	123
22	49	25	79	54	59	71	428	92	38	18	19	59
23	42	24	61	58	51	60	169	96	26	14	18	46
24	23	25	49	56	53	43	104	172	20	14	18	53
25	31	31	18	50	49	40	81	133	16	15	19	45
26	35	42	16	42	31	58	69	79	14	201	15	277
27	31	47	38	37	30	58	63	58	13	293	22	341
28	29	27	47	52	68	174	60	50	27	55	37	112
29	28	33	45	57	61	104	56	44	16	15	35	69
30	27	36	44	61	---	72	50	39	14	28	36	54
31	27	---	44	116	---	58	---	37	---	30	37	---
TOTAL	1219	1078	1918	1685	1693	2496	2549	1945	1068	1006	1465	2698
MEAN	39.3	35.9	61.9	54.4	58.4	80.5	85.0	62.7	35.6	32.5	47.3	89.9
MAX	131	157	275	121	255	261	428	172	131	293	216	397
MIN	17	23	16	37	14	40	38	21	13	12	15	13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2000, BY WATER YEAR (WY)

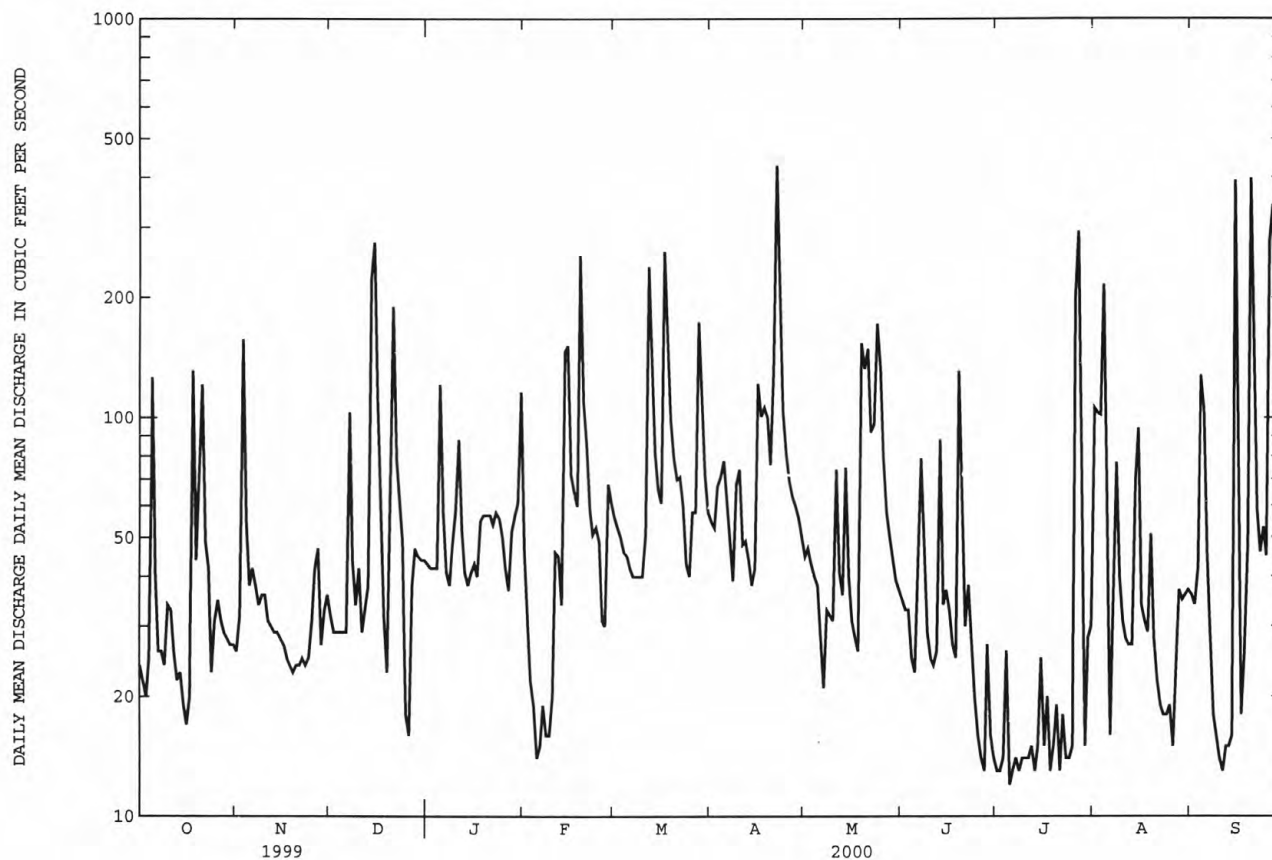
MEAN	48.5	55.5	94.0	131	104	162	115	86.7	48.2	37.6	58.1	48.7
MAX	152	129	227	218	270	319	180	312	124	66.4	131	89.9
(WY)	1997	1996	1997	1996	1998	1993	1997	1998	1998	1990	1990	2000
MIN	19.2	20.5	17.3	54.4	35.8	44.5	28.0	31.2	17.0	15.0	22.6	21.7
(WY)	1995	1999	1999	2000	1992	1992	1992	1992	1999	1999	1999	1995

MANASQUAN RIVER BASIN

01408029 MANASQUAN RIVER NEAR ALLENWOOD, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1990 - 2000	
ANNUAL TOTAL	23709		20820		81.6	
ANNUAL MEAN	65.0		56.9		133	
HIGHEST ANNUAL MEAN					39.4	
LOWEST ANNUAL MEAN					1930	
HIGHEST DAILY MEAN	1070	Sep 17	428	Apr 22	1930	Dec 12 1992
LOWEST DAILY MEAN	12	Aug 17	12	Jul 5	12	Jun 23 1990
ANNUAL SEVEN-DAY MINIMUM	13	Jul 14	13	Jul 5	13	Jul 14 1999
INSTANTANEOUS PEAK FLOW			639	Sep 15	2580	Mar 9 1999
INSTANTANEOUS PEAK STAGE					15.87	Mar 9 1999
INSTANTANEOUS LOW FLOW			6.4	Feb 1	.00a	Jun 24 1993
10 PERCENT EXCEEDS	129		113		162	
50 PERCENT EXCEEDS	35		40		44	
90 PERCENT EXCEEDS	14		16		15	

a Results of pumping to Manasquan Reservoir.



METEDECONK RIVER BASIN

167

01408120 NORTH BRANCH METEDECONK RIVER NEAR LAKEWOOD, NJ

LOCATION.--Lat 40°05'30", long 74°09'10", Ocean County, Hydrologic Unit 02040301, on upstream right bank at bridge on State Route 549, 1.0 mi upstream from confluence with South Branch Metedeconk River, and 2.3 mi east of Lakewood.

DRAINAGE AREA.--34.9 mi².

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3.89 ft above sea level. Prior to Nov. 17, 1977, gage located on upstream left side of bridge. Nov. 17, 1977 to Dec. 19, 1984, gage located on the downstream side of bridge.

REMARKS.--Records fair. Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jul 27	0500	291	6.41	Sep 15	1830	*347	*6.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	33	35	37	78	43	41	43	33	21	60	22
2	31	45	33	38	62	41	39	44	31	19	66	21
3	27	93	32	37	47	39	38	43	38	19	66	41
4	28	78	32	39	42	37	41	41	31	27	126	50
5	64	60	32	83	41	37	43	41	28	23	102	54
6	57	47	38	67	39	36	38	42	54	19	64	38
7	41	40	78	52	38	35	36	39	65	17	61	27
8	32	37	62	44	40	35	35	36	46	17	60	24
9	29	35	48	40	38	35	49	34	35	16	39	22
10	36	35	42	52	43	34	57	33	29	16	32	21
11	41	34	47	71	52	47	46	50	26	16	28	20
12	34	33	41	57	61	103	42	45	26	15	27	20
13	30	33	39	49	52	96	38	40	110	15	29	23
14	30	33	122	44	71	61	36	63	86	28	56	22
15	29	33	190	38	82	47	39	50	51	63	97	232
16	27	32	130	37	75	44	73	39	40	46	66	208
17	29	31	87	34	61	106	70	34	37	28	40	77
18	90	31	59	33	63	96	76	32	38	25	33	39
19	76	31	47	32	142	78	76	69	73	22	40	42
20	76	31	55	33	124	57	59	107	87	31	32	94
21	94	31	94	33	94	48	78	110	44	23	27	85
22	70	31	84	34	70	48	190	85	38	47	24	69
23	66	31	71	33	55	46	131	74	36	32	23	39
24	54	31	54	34	49	44	92	109	29	20	23	43
25	45	34	45	36	46	41	66	102	25	20	23	39
26	40	54	41	38	49	40	57	70	23	130	22	144
27	37	74	40	36	47	38	54	50	21	253	21	191
28	35	61	39	35	52	81	52	43	21	126	21	110
29	34	46	38	33	49	79	49	39	27	55	21	71
30	34	39	37	33	---	61	46	36	24	38	26	46
31	34	---	38	82	---	47	---	34	---	34	24	---
TOTAL	1395	1257	1830	1344	1762	1680	1787	1677	1252	1261	1379	1934
MEAN	45.0	41.9	59.0	43.4	60.8	54.2	59.6	54.1	41.7	40.7	44.5	64.5
MAX	94	93	190	83	142	106	190	110	110	253	126	232
MIN	27	31	32	32	38	34	35	32	21	15	21	20
CFSM	1.29	1.20	1.69	1.24	1.74	1.55	1.71	1.55	1.20	1.17	1.27	1.85
IN.	1.49	1.34	1.95	1.43	1.88	1.79	1.90	1.79	1.33	1.34	1.47	2.06

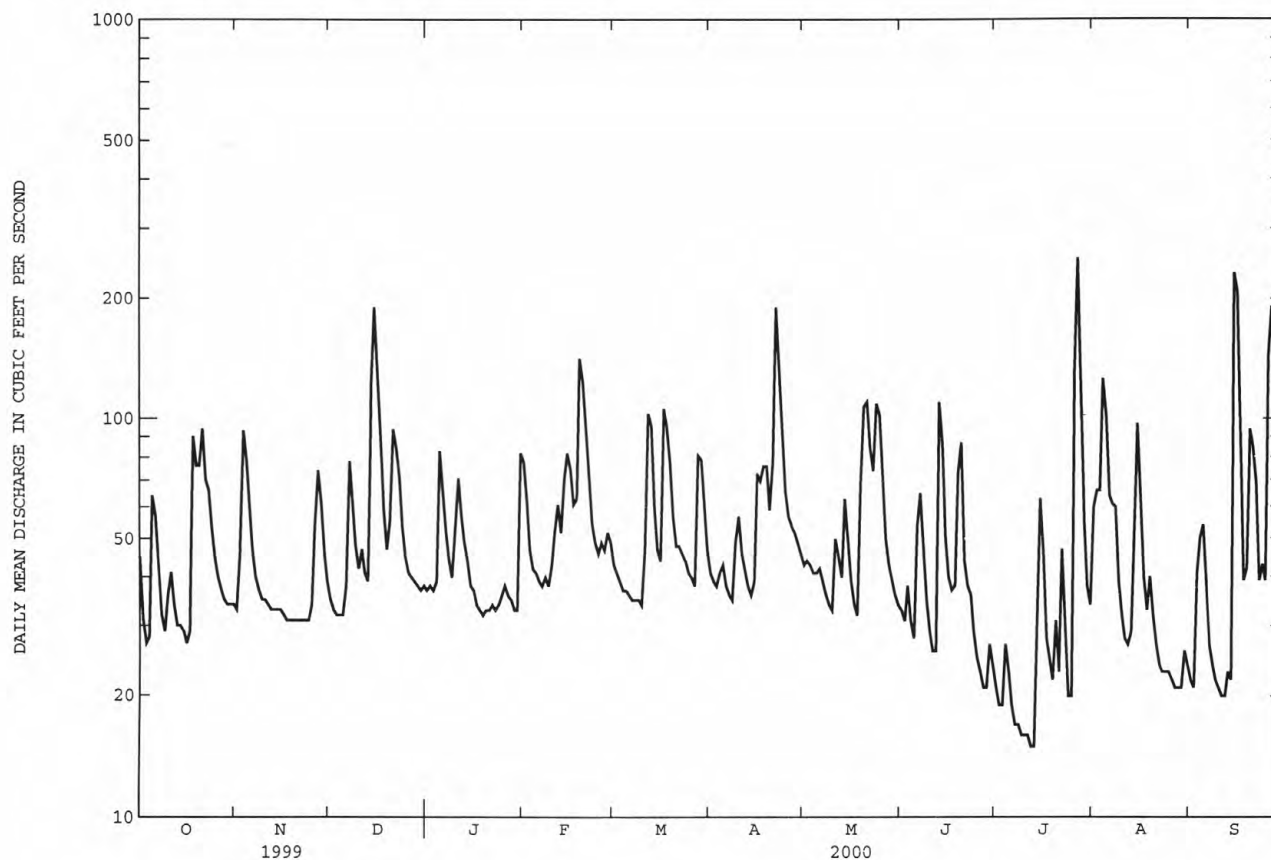
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2000, BY WATER YEAR (WY)

	44.0	57.8	70.3	76.4	71.3	83.6	81.4	66.4	47.6	43.1	43.1	39.9
MEAN	44.0	57.8	70.3	76.4	71.3	83.6	81.4	66.4	47.6	43.1	43.1	39.9
MAX	92.6	141	129	153	153	160	153	160	89.6	107	88.8	80.9
(WY)	1990	1973	1978	1979	1979	1984	1984	1998	1984	1984	1990	1989
MIN	23.5	26.1	22.7	25.2	33.0	38.8	32.9	27.1	25.7	20.4	15.2	17.8
(WY)	1999	1982	1999	1981	1992	1981	1995	1977	1999	1999	1981	1988

METEDECONK RIVER BASIN

01408120 NORTH BRANCH METEDECONK RIVER NEAR LAKEWOOD, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1973 - 2000	
ANNUAL TOTAL	19312		18558		60.4	
ANNUAL MEAN	52.9		50.7		91.5	1984
HIGHEST ANNUAL MEAN					34.7	1981
LOWEST ANNUAL MEAN					838	Feb 25 1979
HIGHEST DAILY MEAN	494	Jan 4	253	Jul 27	10	Sep 12 1995
LOWEST DAILY MEAN	11	Aug 3	15	Jul 12	11	Sep 2 1995
ANNUAL SEVEN-DAY MINIMUM	11	Aug 1	16	Jul 7	1370a	Nov 8 1977
INSTANTANEOUS PEAK FLOW			347	Sep 15	9.28	Nov 8 1977
INSTANTANEOUS PEAK STAGE			6.70	Sep 15	10	Sep 8 1995
INSTANTANEOUS LOW FLOW			14	Jul 13	1.73	
ANNUAL RUNOFF (CFSM)	1.52		1.45		23.50	
ANNUAL RUNOFF (INCHES)	20.58		19.78		110	
10 PERCENT EXCEEDS	98		86		45	
50 PERCENT EXCEEDS	41		40		22	
90 PERCENT EXCEEDS	18		24			

a From rating curve extended above 600 ft³/s

RESERVOIRS IN ATLANTIC COASTAL BASINS

01407500 SWIMMING RIVER RESERVOIR. --Lat 40°19'08", long 74°06'56", Monmouth County, Hydrologic Unit 02030104, at dam on Swimming River, 3.3 mi southwest of Red Bank, and 4.8 mi upstream from mouth. DRAINAGE AREA, 49.2 mi². PERIOD OF RECORD, August 1922 to current year. GAGE, water-stage recorder above concrete dam. Datum of gage is sea level.

REMARKS.--Reservoir formed by concrete core and earth embankment dam, with a Trenton-type overflow spillway. Capacity at spillway level, 2,610,000,000 gal, elevation, 35.0 ft. Reservoir used for storage and water diversion by New Jersey-American Water Company. Reservoir enlarged and dam raised in 1962. Outflow is controlled by gates on a pipe.

COOPERATION.--Water-stage recorder inspected by and records of discharge provided by New Jersey-American Water Company.

EXTREMES FOR CURRENT WATER YEAR.--Maximum contents 2,742,000,000 gal, Apr. 22, elevation, 35.63 ft; minimum, 1,665,000,000 gal, Sep. 14, 15, elevation, 29.78 ft.

01407965 MANASQUAN RESERVOIR.--Lat 40°10'48", long 74°11'40", Monmouth County, Hydrologic Unit 02040301, at dam on Timber Swamp Brook, 1.6 mi southwest of Farmingdale, and 1.2 mi upstream from the Manasquan River. DRAINAGE AREA, 3.18 mi² (revised). PERIOD OF RECORD, March 1990 to current year. GAGE, water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by an earthfill dam 4,840 ft long, utilizing a soil-bentonite cut-off wall to control water seepage; dam completed in July 1990 with nominal crest elevation 112.0 ft, but filling began earlier. Usable capacity 4,669,700,000 gal (revised) at elevation 103.0 ft, which represents the normal and service spillway elevation; outflow is regulated through an inlet/outlet tower and the reservoir is filled by pumping from the Manasquan River Intake Pumping Station and the Reservoir Pumping Station through 5.25 mi of 66-in. pipeline (see station 01408029). Water is used for municipal supply.

COOPERATION.--Records provided by New Jersey Water Supply Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,694,000,000 gal, Mar. 26, 1993, elevation, 103.1 ft; minimum (after first filling), 3,531,000,000 gal, Feb. 26, 1992, elevation 97.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents 4,670,000,000 gal, May 24, elevation, 103.0 ft; minimum, 3,610,000,000 gal, Oct. 4, elevation, 98.15 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation (feet)†	Contents (million gallons)	* Change in contents (equivalent in ft ³ /s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)
01407500 SWIMMING RIVER RESERVOIR (WY 1999)				01407500 SWIMMING RIVER RESERVOIR (WY 2000)		
Sept. 30.....	33.25a	2,270a	--	35.09	2,630	--
Oct. 31.....	32.97a	2,210a	-3.0a	34.92	2,590	-2.0
Nov. 30.....	32.74a	2,170a	-2.1a	35.08	2,630	+2.1
Dec. 31.....	32.35a	2,100a	-3.5a	35.04	2,620	-.5
CAL YR 1999			-2.4a			+2.2
Jan. 31.....	35.15a	2,640a	+26.9a	35.25	2,660	+2.0
Feb. 29.....	35.28a	2,670a	+1.6a	35.15	2,640	-1.1
Mar. 31.....	35.15a	2,640a	-1.5a	35.15	2,640	0
Apr. 30.....	35.14a	2,640a	0 a	35.15	2,640	0
May 31.....	34.88a	2,590a	-2.5a	35.04	2,620	-1.0
June 30.....	33.10a	2,240a	-18.0a	34.62	2,530	-4.6
July 31.....	31.11a	1,890a	-17.5a	35.23	2,660	+6.5
Aug. 31.....	31.14a	1,890a	0 a	34.68	2,550	-5.5
Sept. 30.....	35.09a	2,630a	+38.2a	30.41	1,770	-40.2
WTR YR 2000			+1.5a			-3.6
Date	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)			
01407965 MANASQUAN RESERVOIR						
Sept. 30.....	98.17	3,610	--			
Oct. 31.....	98.67	3,720	+5.5			
Nov. 30.....	98.85	3,760	+2.1			
Dec. 31.....	100.25	4,050	+14.5			
CAL YR 1999			+5			
Jan. 31.....	100.02	4,010	-2.0			
Feb. 29.....	102.93	4,640	+33.6			
Mar. 31.....	102.88	4,620	-1.0			
Apr. 30.....	102.85	4,620	0			
May 31.....	102.85	4,620	0			
June 30.....	102.58	4,550	-3.6			
July 31.....	102.10	4,460	-4.5			
Aug. 31.....	102.21	4,480	+1.0			
Sept. 30.....	102.00	4,440	-2.1			
WTR YR 2000			+3.5			

† Elevation at 2400 on the last day of each month.

* Elevation at 0600 on the first day of the following month.

a Corrected figures for 1999 water year.

ATLANTIC COASTAL BASINS

DIVERSIONS IN ATLANTIC COASTAL RIVER BASINS

- 01407499 Water is diverted from Swimming River Reservoir just upstream of gaging station (01407500) near Red Bank by New Jersey-American Water Company for municipal supply. Records provided by New Jersey-American Water Company.
- 01407704 Water is diverted from Shark River just upstream of gaging station (01407705) near Neptune City by New Jersey-American Water Company (since 1962), for municipal supply. Records provided by New Jersey-American Water Company.
- 01407704 Water is diverted from Jumping Brook just upstream of gaging station (01407760) near Neptune City by New Jersey-American Water Company (since 1962), for municipal supply. Records provided by New Jersey-American Water Company. REVISED RECORDS.--WDR NJ-98-1: 1997.
- 0140802880 New Jersey Water Supply Authority diverts water from the Manasquan Reservoir System, for municipal supply. Figures include water pumped to Glendola Reservoir for New Jersey American Water Company.
- 0140802890 New Jersey Water Supply Authority diverts water from the Manasquan Reservoir System to the Glendola Reservoir of New Jersey American Water Company in the Shark River Basin, for municipal supply.
- 01408153 Brick Township Municipal Utilities Authority diverts water from the Metedeconk River at a site located 0.7 mi downstream of the dam on Forge Pond for municipal supply (since 1987). Records furnished by Brick Township Municipal Utilities Authority.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

MONTH	<u>01407499</u> Swimming River diversion	<u>01407704</u> Shark River	<u>01407759</u> Jumping Brook	<u>0140802880</u> Manasquan Reservoir System	<u>0140802890</u> Glendola Reservoir NJ American Water Company	<u>01408153</u> Metedeconk River diversion
October	35.3	11.9	0	32.2	17.7	8.74
November	35.3	10.7	0	31.4	17.6	4.51
December	37.8	12.8	0	43.3	17.8	4.01
CAL YR 1998	34.3	12.9	0	30.9	20.1	8.40
January	38.2	11.7	0	25.5	17.1	7.28
February	37.6	14.4	0	63.3	17.1	7.15
March	36.8	12.2	0	27.4	17.4	10.7
April	33.9	8.79	0	26.0	16.8	10.7
May	38.2	4.00	0	29.7	17.6	14.6
June	39.5	3.40	0	27.2	17.2	14.3
July	46.7	2.09	0	29.6	21.3	7.43
August	38.4	2.37	0	30.8	17.2	12.1
September	39.1	3.23	0	22.8	17.0	11.1
WTR YR 1999	38.1	8.12	0	32.3	17.7	9.38

BARNEGAT BAY

171

01408168 BARNEGAT BAY AT MANTOLOKING, NJ

LOCATION.--Lat 40°02'24", long 74°03'25", Ocean County, Hydrologic Unit 02040301, at east end of Downer Avenue in Mantoloking and 0.1 mi south of bridge on State Route 528.

PERIOD OF RECORD.--Tidal crest-stage gage 1979-85, 1993. June 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10.00 ft below sea level. Gage-height record converted to elevation above or below (-) sea level for publication.

REMARKS.--No gage-height or doubtful record, Jan. 17-18, 22-23, and 26 to Feb. 3. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation known, 4.93 ft, Oct. 11, 1992, from crest-stage gage; minimum recorded, -0.43 ft, Oct. 8, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.21 ft, Nov. 2; minimum recorded, -0.28 ft, Feb. 14.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	2.43	3.21	2.33	2.10	1.79	2.19	2.65	2.32	2.29	2.29	2.41	2.38
high tide	Date	23	2	15	25	14	12	8	18	21	4	3	27
Minimum	Elevation	-.03	.13	-.18	e-.20	-.28	.01	-.07	.28	.60	.78	.61	.17
low tide	Date	15	17	12	18	8	3	10	19	18	25	25	5
Mean high tide		1.51	1.26	1.30	---	.85	1.31	1.34	1.65	1.58	1.75	1.72	1.49
Mean water level		1.22	1.03	.99	---	.55	1.06	1.10	1.39	1.30	.68	1.45	1.23
Mean low tide		.95	.77	.73	---	.39	.78	.86	1.09	1.07	1.21	1.16	.97

e Estimated.

BARNEGAT BAY

01408200 BARNEGAT BAY AT BAY SHORE, NJ

LOCATION.--Lat 39°56'56", long 74°06'52", Ocean County, Hydrologic Unit 02040301, at west end of bridge on State Route 37 over Barnegat Bay at Bay Shore, 2.2 mi west of Seaside Heights, and 4.5 mi east of Toms River.

PERIOD OF RECORD.--Tidal crest-stage gage 1965-86, 1992. August 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10.00 ft below sea level. Gage-height record converted to elevation above or below (-) sea level for publication.

REMARKS.--No gage-height or doubtful record, Dec. 25 to Jan. 12 and Jan. 14 to Feb. 11. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines.

COOPERATION.--Record of stage collected in cooperation with the U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation known, 4.27 ft, Oct. 30, 1991, from crest-stage gage; minimum recorded, -0.10 ft, Mar. 29, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.04 ft, Nov. 2; minimum recorded, (e)0.0 ft, Jan. 22, but lower elevation could have occurred during the period of missing record.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	2.55	3.04	2.56	e2.30	1.78	2.31	2.58	2.33	2.21	2.34	2.56	2.70
high tide	Date	23	2	15	25	14	12	21	11	7	30	2	27
Minimum	Elevation	.44	.50	.43	e0	e.20	.34	.47	.57	.77	.90	.81	.90
low tide	Date	15	17	12	22	8	3	10	19	18	24	25	22
Mean high tide		1.66	1.36	1.35	---	---	1.51	1.54	---	1.73	1.89	1.87	1.81
Mean water level		1.45	1.22	---	---	---	1.24	1.37	---	1.44	1.64	1.59	1.53
Mean low tide		1.10	1.02	---	---	---	.92	1.07	1.14	1.11	1.27	1.19	1.22

e Estimated.

TOMS RIVER BASIN

173

01408500 TOMS RIVER NEAR TOMS RIVER, NJ

LOCATION.--Lat 39°59'10", long 74°13'29", Ocean County, Hydrologic Unit 02040301, on left bank 500 ft downstream from bridge on State Route 527 (Oak Ridge Parkway), 1.9 mi downstream from Union Branch, and 2.6 mi northwest of community of Toms River.

DRAINAGE AREA.--123 mi².

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for October and November 1928, published in WSP 1302.

REVISED RECORDS.--WSP 1702: 1938. WDR NJ-76-1: 1975(M). WDR NJ-77-1: 1976.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 8.10 ft above sea level.

REMARKS.--Records good. Diversions by Ciba-Geigy Inc., 800 ft. upstream July 1966 through an unknown date; the effluent is returned by pipeline directly into the Atlantic Ocean, thus bypassing station. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 28	2115	*453	*6.10	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	151	161	172	199	197	196	170	150	102	168	98
2	162	157	167	168	214	191	181	166	142	97	162	97
3	150	205	167	167	210	183	173	161	139	94	161	98
4	144	219	164	168	194	177	173	157	138	97	185	111
5	171	242	147	198	183	172	177	155	129	95	250	139
6	188	247	144	206	174	168	172	150	144	90	312	154
7	199	216	181	220	168	164	164	147	158	87	275	147
8	183	190	192	208	165	161	159	142	155	85	204	121
9	162	174	202	193	162	159	167	138	142	84	172	110
10	160	165	198	157	164	157	180	133	129	83	148	103
11	166	158	185	166	173	163	184	145	120	83	133	99
12	166	152	177	203	184	198	179	164	113	82	140	96
13	155	149	174	205	191	220	170	164	121	80	150	97
14	144	147	215	190	203	238	162	168	135	92	163	99
15	134	142	266	175	213	221	161	170	136	113	201	295
16	129	139	310	169	231	201	186	161	130	124	235	353
17	128	135	347	166	239	229	205	149	126	113	244	372
18	173	134	327	151	232	237	224	141	140	96	192	343
19	198	133	274	151	270	256	230	159	154	94	164	248
20	235	133	246	149	284	251	225	213	170	102	148	237
21	263	133	251	148	318	221	224	258	164	99	134	243
22	260	134	262	144	312	209	271	293	141	94	122	247
23	266	133	287	146	270	201	281	296	138	95	115	222
24	250	139	280	146	241	193	300	295	126	92	112	178
25	233	151	247	154	204	184	272	296	116	89	109	165
26	216	168	222	157	212	178	238	283	109	152	106	262
27	195	185	204	156	209	171	221	247	104	247	102	327
28	180	184	191	144	209	197	207	211	101	277	98	416
29	169	183	182	149	204	210	190	187	113	323	98	432
30	160	173	176	145	---	228	179	169	109	253	100	326
31	154	---	174	189	---	217	---	158	---	186	101	---
TOTAL	5659	4971	6720	5260	6232	6152	6051	5846	3992	3800	5004	6235
MEAN	183	166	217	170	215	198	202	189	133	123	161	208
MAX	266	247	347	220	318	256	300	296	170	323	312	432
MIN	128	133	144	144	162	157	159	133	101	80	98	96
CFSM	1.48	1.35	1.76	1.38	1.75	1.61	1.64	1.53	1.08	1.00	1.31	1.69
IN.	1.71	1.50	2.03	1.59	1.88	1.86	1.83	1.77	1.21	1.15	1.51	1.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
MEAN	156	197	223	246	252	291	280	244	185	156	160	152
MAX	325	475	447	506	455	541	573	541	463	439	359	414
(WY)	1972	1973	1973	1978	1973	1958	1984	1998	1968	1938	1990	1971
MIN	83.3	85.5	93.6	104	128	143	120	118	96.8	71.0	57.9	63.0
(WY)	1942	1966	1999	1981	1992	1985	1985	1992	1977	1999	1966	1995

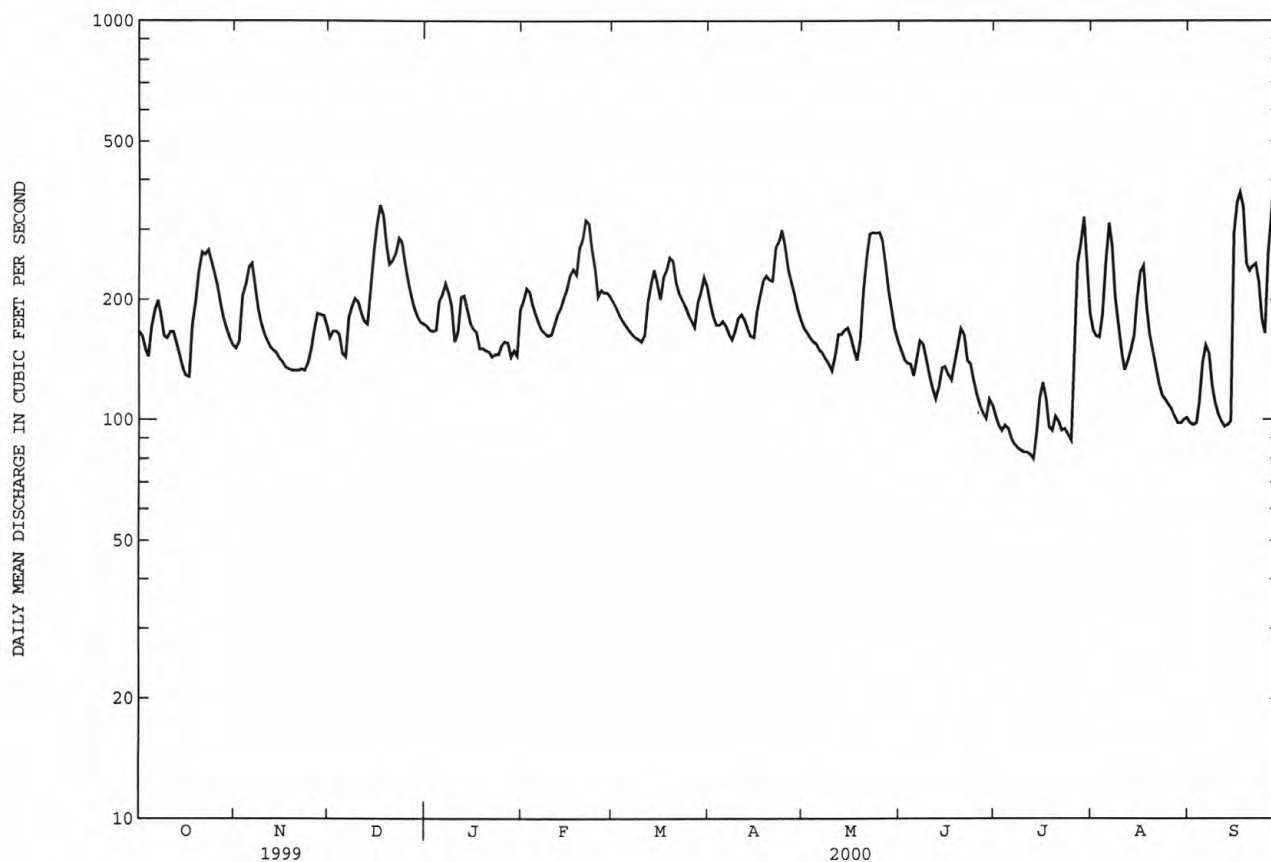
TOMS RIVER BASIN

01408500 TOMS RIVER NEAR TOMS RIVER, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1929 - 2000	
ANNUAL TOTAL	67335		65922		212	
ANNUAL MEAN	184		180		335	
HIGHEST ANNUAL MEAN					128	
LOWEST ANNUAL MEAN					1910	
HIGHEST DAILY MEAN	1040	Sep 18	432	Sep 29	43	Sep 23 1938
LOWEST DAILY MEAN	50	Aug 4	80	Jul 13	44	Sep 11 1995
ANNUAL SEVEN-DAY MINIMUM	51	Aug 2	83	Jul 7	2000a	Sep 10 1995
INSTANTANEOUS PEAK FLOW			453	Sep 28	12.50b	Sep 23 1938
INSTANTANEOUS PEAK STAGE			6.10	Sep 28	42	Sep 23 1938
INSTANTANEOUS LOW FLOW			78	Jul 13	1.72	Sep 11 1995
ANNUAL RUNOFF (CFSM)	1.50		1.46		23.37	
ANNUAL RUNOFF (INCHES)	20.36		19.94		353	
10 PERCENT EXCEEDS	297		262		183	
50 PERCENT EXCEEDS	171		168		97	
90 PERCENT EXCEEDS	75		104			

a From rating curve extended above 1,500 ft³/s.

b From floodmark.



BARNEGAT BAY

175

01408750 BARNEGAT BAY AT SEASIDE HEIGHTS, NJ

LOCATION.--Lat 39°56'18", long 74°04'56", Ocean County, Hydrologic Unit 02040301, on public fishing pier in Seaside Heights, 0.2 mi southeast of the east end of State Highway 37 bridge over Barnegat Bay, and 5.5 mi east of Village of Toms River.

PERIOD OF RECORD.--June 1997 to March 2000 (unpublished fragmentary record), April to September 2000.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.15 ft. To determine corresponding Mean Lower Low Water Datum elevation, based on data from National Ocean Service station 8533135, add 0.28 ft.

REMARKS.--Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Gage-height satellite telemeter at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 1.59 ft (NAVD of 1988), Sept. 27, 2000; minimum elevation recorded, -1.15 ft (NAVD of 1988), April 10, 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 3.05 ft (adjusted to NAVD of 1988), March 7, 1962, from high-water mark at the foot of South Bayview Avenue in Seaside Park. Maximum elevation known, 3.0 ft (adjusted to NAVD of 1988), March 6-7, 1962, from high-water mark on foot of 12th Avenue in Seaside Park.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 1.59 ft (NAVD of 1988), Sept. 27; minimum elevation recorded, -1.15 ft (NAVD of 1988), April 10.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	---	---	---	---	---	---	1.36	1.29	1.12	1.27	1.48	1.59
high tide	Date	---	---	---	---	---	---	21,22	24	7	4	2	27
Minimum	Elevation	---	---	---	---	---	---	-1.15	-.61	-.41	-.27	-.36	-.56
low tide	Date	---	---	---	---	---	---	10	19	18	12	25	22
Mean high tide		---	---	---	---	---	---	.42	.67	.62	.78	.78	.71
Mean water level		---	---	---	---	---	---	.13	.36	.33	.48	.45	.38
Mean low tide		---	---	---	---	---	---	-.18	.03	.02	.16	.12	.04

BARNEGAT BAY

01409110 BARNEGAT BAY AT WARETOWN, NJ

LOCATION.--Lat 39°47'29", long 74°10'58", Ocean County, Hydrologic Unit 02040301, on the pier of the Waretown Fishing Station at the end of Bryant Road on west side of Barnegat Bay, 0.7 mi east of Waretown, and 3.2 mi south of Forked River.

PERIOD OF RECORD.--August 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10.00 ft below sea level. Gage-height record converted to elevation above or below (-) sea level for publication.

REMARKS.--No gage-height or doubtful record Jan. 21-24, 27 to Feb. 4. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 3.63 ft, Oct. 19, 1996; minimum recorded, -0.64 ft, Mar. 4, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 2.75 ft, Apr. 22; minimum recorded, (e)-0.60 ft, Jan. 22, but lower elevation could have occurred during the periods of missing record.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	2.38	2.50	2.56	2.69	1.81	2.54	2.75	2.34	2.40	2.26	2.45	2.64
high tide	Date	23	3	14,15	25	19	22	22	11	7	31	13	26
Minimum	Elevation	.10	.03	-.49	e-.60	-.33	.12	-.02	.82	.58	.72	.70	.55
low tide	Date	14	5	12	22	7	1	10	6	11	13	23	9,22
Mean high tide		1.49	1.31	1.29	---	.90	1.43	1.54	1.73	1.52	1.71	1.69	1.64
Mean water level		1.25	1.06	1.00	---	.69	1.16	1.21	1.47	1.28	1.45	1.44	1.39
Mean low tide		.99	.78	.78	---	.44	.88	1.00	1.20	1.03	1.18	1.17	1.13

e Estimated.

BARNEGAT BAY

177

01409135 BARNEGAT BAY AT LOVELADIES, NJ

LOCATION.--Lat 39°43'24", long 74°08'06", Ocean County, Hydrologic Unit 02040301, on the bulkhead at Mathew's Point Park on the east shore of Barnegat Bay in Loveladies on Long Beach Island, 2.0 mi north of Harvey Cedars, and 3.0 mi south of Barnegat Inlet.

PERIOD OF RECORD.--August 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10.00 ft below sea level. Gage-height record converted to elevation above or below (-) sea level for publication.

REMARKS.--No gage-height or doubtful record, Jan. 18 to Feb. 18. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 4.46 ft, Feb. 6, 1996; minimum recorded, -0.34 ft, Mar. 5, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.31 ft, Dec. 15; minimum recorded, (e)-0.20 ft, Jan. 22.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	2.92	3.07	3.31	e3.20	2.44	3.04	3.28	2.82	3.06	2.82	3.05	3.04
high tide	Date	23	2	15	5	19	22	22	11	7	27	13	27
Minimum	Elevation	.52	.47	.10	e-.20	0	.47	.31	.83	.88	.95	.91	.88
low tide	Date	14	5	12	22	7	1	10	4	21	13	23	9
Mean high tide		2.02	1.88	1.94	---	---	1.92	1.96	2.12	2.02	2.20	2.20	2.16
Mean water level		1.68	1.49	1.63	---	---	1.55	1.60	1.76	1.67	1.85	1.85	1.81
Mean low tide		1.36	1.19	1.30	---	---	1.19	1.25	1.41	1.35	1.50	1.50	1.47

e Estimated.

MULLICA RIVER BASIN

01409400 MULLICA RIVER NEAR BATSTO, NJ

LOCATION.--Lat 39°40'28", long 74°39'55", Atlantic County, Hydrologic Unit 02040301, on right bank 2.4 mi upstream from Sleeper Branch, and 2.5 mi north of Batsto.

DRAINAGE AREA.--46.7 mi².

PERIOD OF RECORD.--September 1957 to current year.

REVISED RECORDS.--WRD-NJ 1969: 1958(M), 1960(M), 1967-68(M), WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 11.93 ft above sea level.

REMARKS.--Records fair. Some regulation from upstream cranberry bogs and Atsion Lake. Diversions from Sleeper Branch enter river upstream from gage and substantially increase the discharge at the gage. Several measurements of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 335 ft³/s, Mar. 25, gage height, 3.13 ft; minimum discharge, 26 ft³/s, July 11, 12, gage height, 0.58 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	80	62	85	80	115	171	93	56	47	45	72
2	63	85	65	83	83	93	174	90	53	44	44	70
3	60	98	64	82	84	88	161	68	50	42	53	70
4	60	90	63	83	85	85	156	63	49	54	56	65
5	76	86	62	106	88	82	156	67	48	46	51	67
6	79	82	68	116	88	79	139	71	54	43	51	62
7	77	77	81	115	88	77	114	75	55	41	54	60
8	74	72	78	113	90	76	109	74	53	38	70	59
9	75	71	74	104	88	75	115	83	52	29	82	56
10	73	70	74	102	94	79	116	79	49	27	57	53
11	73	69	76	107	101	81	114	78	46	27	39	51
12	69	64	73	93	109	88	114	75	45	27	40	49
13	67	63	74	85	108	88	106	72	54	27	56	49
14	70	62	97	79	116	85	102	73	51	28	69	40
15	75	61	142	74	116	80	103	68	50	34	103	49
16	68	60	162	76	118	78	112	63	50	40	122	50
17	70	59	151	65	118	95	121	64	48	43	81	54
18	90	58	143	72	137	100	128	54	49	50	89	63
19	87	57	136	68	191	97	140	57	63	47	100	73
20	93	58	134	70	225	93	147	62	71	41	96	103
21	111	59	153	69	206	106	142	67	79	32	68	112
22	113	57	156	70	189	188	146	87	80	31	38	101
23	114	57	148	71	178	270	151	98	76	29	37	84
24	111	52	138	65	169	266	157	101	68	28	38	73
25	104	52	127	65	158	322	153	108	54	28	40	73
26	107	62	119	63	151	310	145	98	49	40	39	140
27	114	74	116	64	145	265	131	68	54	57	38	194
28	110	82	101	64	140	211	118	73	51	85	44	184
29	107	59	89	63	132	181	108	97	72	100	57	234
30	96	54	86	62	---	165	100	112	62	68	65	236
31	84	---	87	80	---	156	---	75	---	46	70	---
TOTAL	2636	2030	3199	2514	3675	4174	3949	2413	1691	1319	1892	2646
MEAN	85.0	67.7	103	81.1	127	135	132	77.8	56.4	42.5	61.0	88.2
MAX	114	98	162	116	225	322	174	112	80	100	122	236
MIN	60	52	62	62	80	75	100	54	45	27	37	40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2000, BY WATER YEAR (WY)

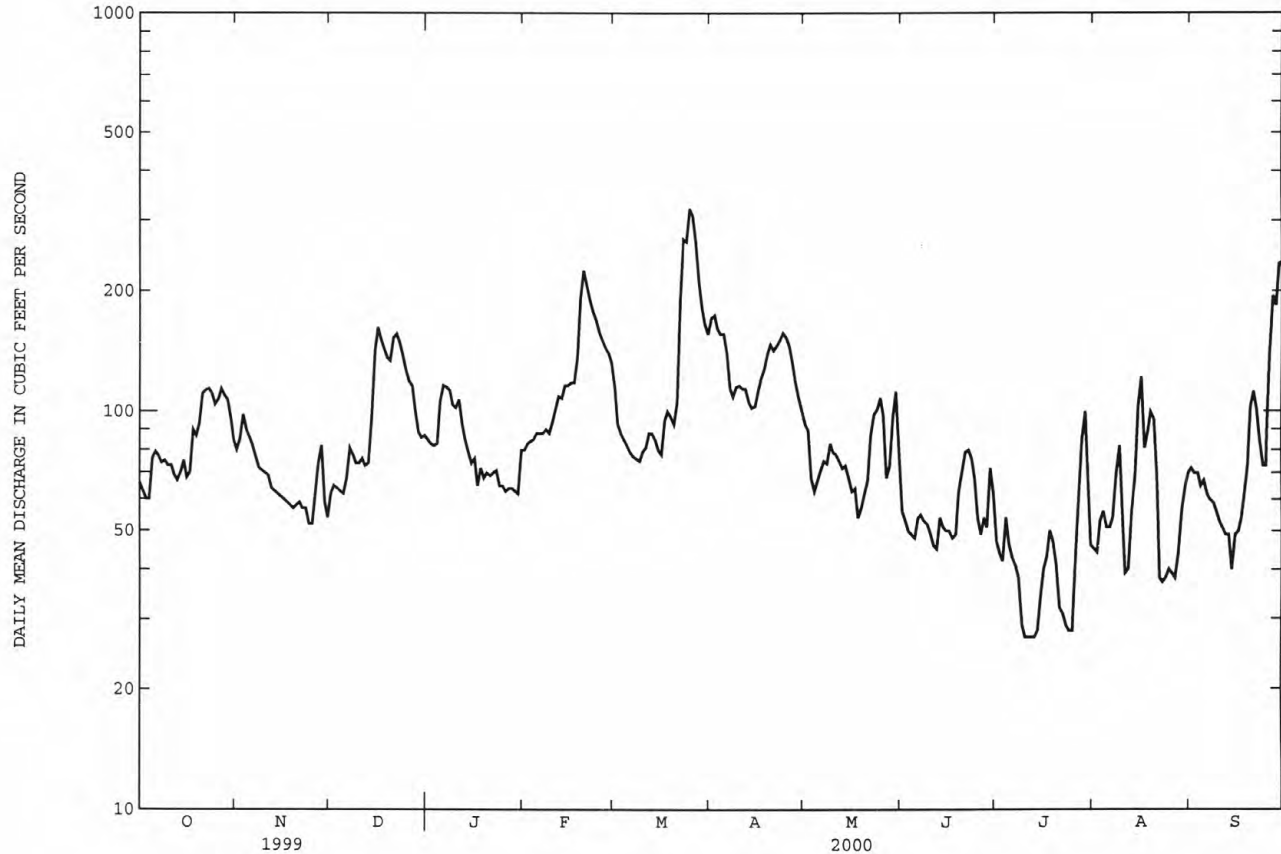
	MEAN	67.8	86.6	118	139	140	161	151	123	75.9	69.8	74.3	61.7
MAX	192	305	305	311	292	312	358	273	159	177	253	223	
(WY)	1976	1973	1973	1978	1979	1994	1983	1989	1979	1989	1958	1975	
MIN	24.1	22.0	21.8	29.3	64.4	59.1	50.3	53.3	32.3	21.9	19.8	17.6	
(WY)	1966	1966	1999	1981	1992	1985	1985	1992	1977	1977	1995	1995	

MULLICA RIVER BASIN

179

01409400 MULLICA RIVER NEAR BATSTO, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1957 - 2000	
ANNUAL TOTAL	30537		32138		106	
ANNUAL MEAN	83.7		87.8		168	
HIGHEST ANNUAL MEAN					50.4	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	332	Sep 18	322	Mar 25	1630	Feb 26 1979
LOWEST DAILY MEAN	13	Aug 8	27	Jul 10	5.1	Sep 16 1995
ANNUAL SEVEN-DAY MINIMUM	13	Aug 7	28	Jul 9	6.4	Sep 10 1995
INSTANTANEOUS PEAK FLOW			355	Mar 25	1840	Feb 26 1979
INSTANTANEOUS PEAK STAGE			3.13	Mar 25	6.14	Feb 26 1979
INSTANTANEOUS LOW FLOW			26	Jul 11	4.9	Sep 16 1995
10 PERCENT EXCEEDS	148		146		200	
50 PERCENT EXCEEDS	76		76		85	
90 PERCENT EXCEEDS	27		46		31	



MULLICA RIVER BASIN

01409500 BATSTO RIVER AT BATSTO, NJ

LOCATION.--Lat 39°38'33", long 74°39'00", Burlington County, Hydrologic Unit 02040301, on right bank 30 ft downstream from bridge on State Highway 542 at Batsto, 0.6 mi east of Pleasant Mills, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--67.8 mi².

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for April to September 1939, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1930, 1933, 1936, 1938. WDR NJ-83-1: Drainage area. WDR-87-1: 1939 (M). WDR-94-1: 1993 (M).

GAGE.--Water-stage recorder. Concrete control since Oct. 12, 1939; prior to Mar. 24, 1939, wooden control at site 50 ft downstream. Auxiliary tide gage (01409510) located 0.9 mi downstream used to adjust record for tide effect. Datum of gage is 1.4 ft above sea level.

REMARKS.--Records fair except for estimated discharges, which are poor. Considerable regulation at times by sluice gates prior to December 1954 and by automatic Bascule and sluice gates since July 1959 at Batsto Lake, 300 ft upstream; the capacity of Batsto Lake is about 60,000,000 gal. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	88	86	93	92	116	146	91	75	63	75	78
2	86	90	82	92	93	112	134	88	72	59	69	75
3	80	98	78	91	92	106	123	85	70	57	66	74
4	79	95	76	91	92	101	117	84	66	69	67	74
5	84	95	76	98	91	97	117	83	63	66	73	77
6	108	91	77	106	89	91	119	85	67	62	78	80
7	116	89	87	111	87	87	113	85	69	59	78	75
8	107	87	92	108	86	87	105	78	66	57	82	74
9	95	85	93	104	85	87	105	75	63	53	74	69
10	92	83	91	101	85	85	103	70	62	51	66	66
11	91	83	90	106	89	84	104	72	59	51	62	65
12	91	80	90	110	94	90	103	78	59	50	63	63
13	87	79	89	110	100	93	98	75	62	47	87	61
14	82	77	96	104	107	92	95	77	60	47	112	60
15	79	76	118	99	113	89	93	75	62	51	119	68
16	80	75	163	94	125	87	99	80	62	52	136	82
17	74	74	171	83	125	94	106	85	60	50	136	105
18	86	73	163	93	127	104	122	84	60	48	126	119
19	97	72	152	86	149	110	133	81	68	48	109	128
20	108	72	139	e80	e170	108	128	93	81	53	96	122
21	116	72	145	79	e202	105	122	92	80	52	84	123
22	137	72	156	76	e195	144	121	91	79	50	76	134
23	168	72	163	76	e171	181	130	91	76	49	70	128
24	156	72	152	75	e157	228	137	95	71	47	67	116
25	146	75	138	e80	146	224	134	102	65	47	64	104
26	129	85	126	e78	139	198	125	103	62	62	62	158
27	113	94	114	77	130	170	118	98	70	84	59	210
28	102	94	107	75	125	163	110	92	66	89	62	354
29	93	93	102	74	120	164	102	89	68	95	70	365
30	89	90	97	74	---	176	97	83	66	91	76	287
31	88	---	95	85	---	165	---	79	---	81	80	---
TOTAL	3147	2481	3504	2809	3476	3838	3459	2639	2009	1840	2544	3594
MEAN	102	82.7	113	90.6	120	124	115	85.1	67.0	59.4	82.1	120
MAX	168	98	171	111	202	228	146	103	81	95	136	365
MIN	74	72	76	74	85	84	93	70	59	47	59	60
CFSM	1.50	1.22	1.67	1.34	1.77	1.83	1.70	1.26	.99	.88	1.21	1.77
IN.	1.73	1.36	1.92	1.54	1.91	2.11	1.90	1.45	1.10	1.01	1.40	1.97

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2000, BY WATER YEAR (WY)

	MEAN	87.3	110	124	141	148	171	156	142	102	90.9	101	91.9
MAX	241	307	302	280	361	353	322	285	242	257	332	242	
(WY)	1959	1973	1973	1949	1939	1958	1970	1998	1948	1938	1958	1960	
MIN	43.9	43.4	46.0	55.6	75.9	79.5	71.8	65.1	50.9	40.6	42.0	40.5	
(WY)	1966	1966	1999	1966	1931	1981	1985	1977	1977	1977	1957	1995	

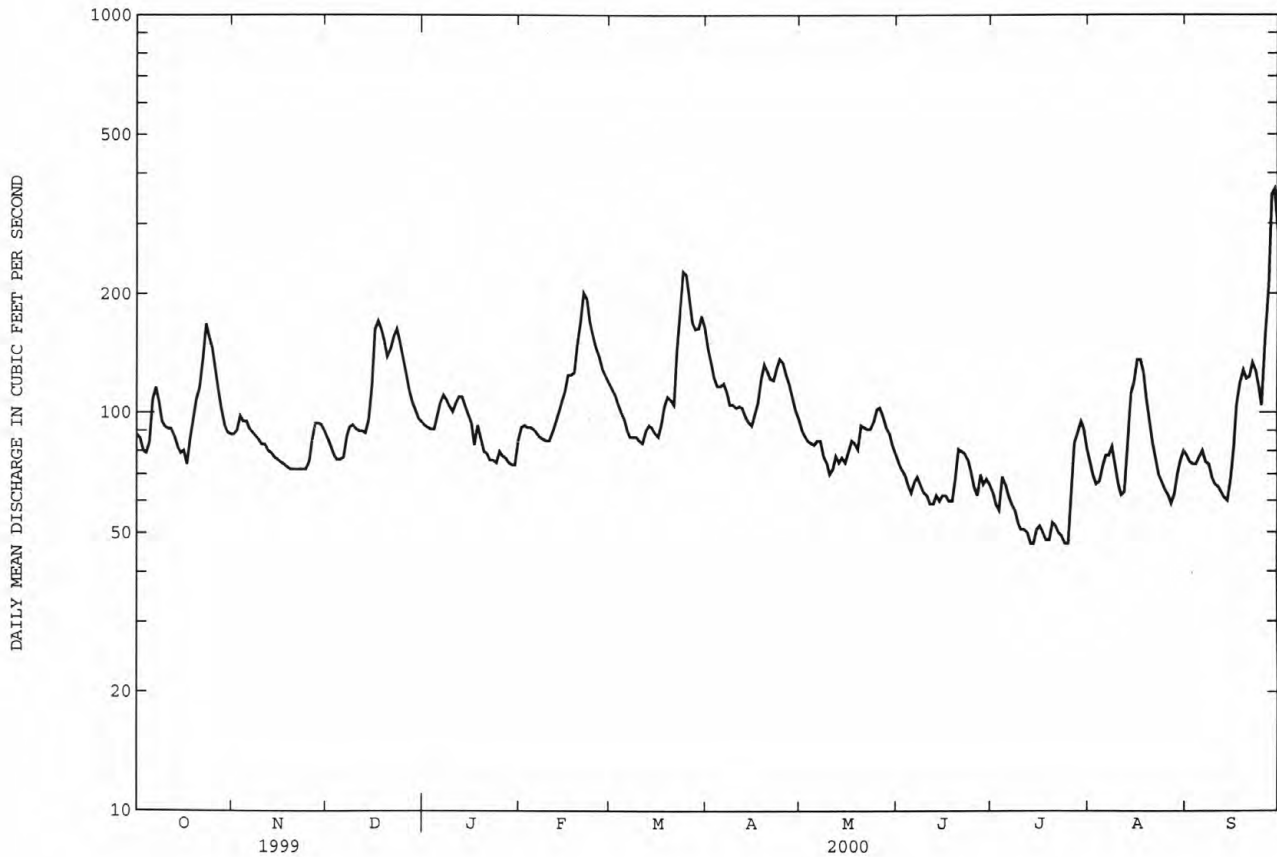
MULLICA RIVER BASIN

181

01409500 BATSTO RIVER AT BATSTO, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1928 - 2000	
ANNUAL TOTAL	37758		35340		121	
ANNUAL MEAN	103		96.6		193	
HIGHEST ANNUAL MEAN					66.2	
LOWEST ANNUAL MEAN					1958	
HIGHEST DAILY MEAN	630	Sep 18	365	Sep 29	2000	Aug 20 1939
LOWEST DAILY MEAN	35	Aug 9	47	Jul 13	5.7	Oct 4 1959
ANNUAL SEVEN-DAY MINIMUM	37	Aug 5	49	Jul 13	35	Sep 5 1995
INSTANTANEOUS PEAK FLOW			419	Sep 29	2000	Aug 20 1939
INSTANTANEOUS PEAK STAGE			3.70	Sep 29	8.70a	Aug 20 1939
INSTANTANEOUS LOW FLOW					.99	Sep 9 1909
ANNUAL RUNOFF (CFSM)	1.53		1.42		1.79	
ANNUAL RUNOFF (INCHES)	20.72		19.39		24.31	
10 PERCENT EXCEEDS	158		138		204	
50 PERCENT EXCEEDS	93		89		102	
90 PERCENT EXCEEDS	50		62		56	

a From floodmark.
e Estimated.



MULLICA RIVER BASIN

01409510 BATSTO RIVER AT PLEASANT MILLS, NJ

LOCATION.--Lat 39°37'55", long 74°38'40", Burlington County, Hydrologic Unit 02040301, on right bank, 0.4 mi upstream from Mullica River, 0.5 mi southeast of Pleasant Mills, and 0.9 mi downstream from highway bridge on State Highway 542 at Batsto.

DRAINAGE AREA.--73.6 mi².

PERIOD OF RECORD.--July 1958 to current year. Annual maximum only published for 1958 to 1965.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 8.6 ft below sea level. Gage-height record converted to elevation above or below (-) sea level for publication.

REMARKS.--No gage-height or doubtful record, Jan. 18 to Feb. 25. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 7.2 ft, Mar. 7, 1962; minimum recorded (after 1965), -0.67 ft, Jan. 2, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 4.37 ft, Sept. 26; minimum recorded, (e)-0.5 ft, Jan. 22.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.54	4.02	4.45	e4.30	e4.00	4.31	4.20	3.51	3.69	3.61	3.71	4.37
high tide	Date	22	2	14	25	21	22	19	20,30	6	28	30	26
Minimum	Elevation	.79	.61	.57	e-.5	e0	.53	.57	.52	.47	.64	.80	.75
low tide	Date	14	19,21	5	22	6	16	9	5	17	2	27	13
Mean high tide		2.86	2.60	2.63	---	---	2.83	2.83	2.94	2.82	2.99	3.03	3.01
Mean water level		1.90	1.62	1.81	---	---	1.85	1.89	1.86	1.73	1.95	2.07	2.10
Mean low tide		1.05	.79	1.03	---	---	.91	.93	.72	.70	.85	1.08	1.19

e Estimated.

MULLICA RIVER BASIN

183

01410000 OSWEGO RIVER AT HARRISVILLE, NJ

LOCATION.--Lat 39°39'47", long 74°31'26", Burlington County, Hydrologic Unit 02040301, on right bank 50 ft downstream from bridge on State Highway Spur 563 at Harrisville, and 0.3 mi upstream from confluence with West Branch Wading River.

DRAINAGE AREA.--72.5 mi².

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1955, published as "East Branch Wading River at Harrisville".

REVISED RECORDS.--WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since June 23, 1939. Datum of gage is 4.62 ft above sea level.

REMARKS.--Records good. Figures given herein represent flow over main spillway and through bypass channel. Flow regulated by Harrisville Pond 200 ft above station, capacity, about 30,000,000 gal and by ponds and cranberry bogs 5 to 10 mi upstream. Flow probably reduced by ground-water outflow to nearby surface drainage basins, such as Oyster Creek. Several measurements of water temperature, other than those published, were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	56	48	56	76	68	62	57	62	53	79	66
2	65	61	48	54	72	66	60	56	59	49	82	63
3	66	86	46	54	70	63	58	54	53	47	68	62
4	61	90	45	54	68	61	64	57	47	60	60	62
5	87	88	44	63	67	59	110	66	46	56	57	64
6	95	87	49	61	65	67	86	60	48	49	53	60
7	70	85	67	58	64	64	68	55	50	44	51	57
8	63	79	66	55	64	63	65	51	47	41	66	54
9	63	68	62	54	63	53	67	52	45	40	67	54
10	73	67	59	61	63	50	66	52	43	39	61	51
11	68	67	58	68	67	55	62	51	41	37	55	50
12	61	65	56	65	70	64	61	50	43	36	67	48
13	60	61	55	63	68	69	59	47	55	35	458	48
14	57	57	82	58	83	80	57	51	51	35	588	36
15	54	54	110	54	91	56	62	49	50	55	497	49
16	54	53	107	52	76	54	82	48	47	56	380	58
17	54	53	92	51	69	74	90	47	43	52	248	56
18	70	50	81	49	77	78	110	45	45	46	172	51
19	69	48	75	48	127	74	103	53	63	45	146	54
20	77	48	78	48	133	80	96	64	59	54	124	66
21	96	47	97	48	118	91	90	65	52	51	103	67
22	91	46	94	48	104	112	99	64	50	47	88	59
23	88	46	82	48	93	98	92	67	47	42	79	52
24	84	46	74	48	86	86	85	83	44	41	75	50
25	77	53	67	56	81	75	81	97	42	40	72	54
26	70	58	64	57	77	68	79	91	41	83	69	220
27	66	60	63	56	74	64	75	82	46	173	65	344
28	63	57	62	53	75	81	66	78	48	194	63	336
29	60	53	60	52	71	75	61	71	62	145	67	206
30	57	49	59	53	---	69	58	65	59	116	67	142
31	56	---	57	73	---	65	---	64	---	93	67	---
TOTAL	2141	1838	2107	1718	2312	2182	2274	1892	1488	1954	4194	2639
MEAN	69.1	61.3	68.0	55.4	79.7	70.4	75.8	61.0	49.6	63.0	135	88.0
MAX	96	90	110	73	133	112	110	97	63	194	588	344
MIN	54	46	44	48	63	50	57	45	41	35	51	36
CFSM	.95	.85	.94	.76	1.10	.97	1.05	.84	.68	.87	1.87	1.21
IN.	1.10	.94	1.08	.88	1.19	1.12	1.17	.97	.76	1.00	2.15	1.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2000, BY WATER YEAR (WY)

	MEAN	63.8	81.4	83.9	101	103	119	113	98.2	71.2	66.7	76.7	62.6
MAX	176	234	200	242	210	255	253	261	162	201	207	163	
(WY)	1959	1973	1973	1979	1939	1998	1970	1998	1998	1938	1933	1938	
MIN	28.6	30.8	27.1	33.9	53.2	51.9	41.3	43.9	33.7	24.2	23.9	24.4	
(WY)	1966	1966	1966	1966	1931	1985	1985	1942	1966	1977	1957	1951	

MULICA RIVER BASIN

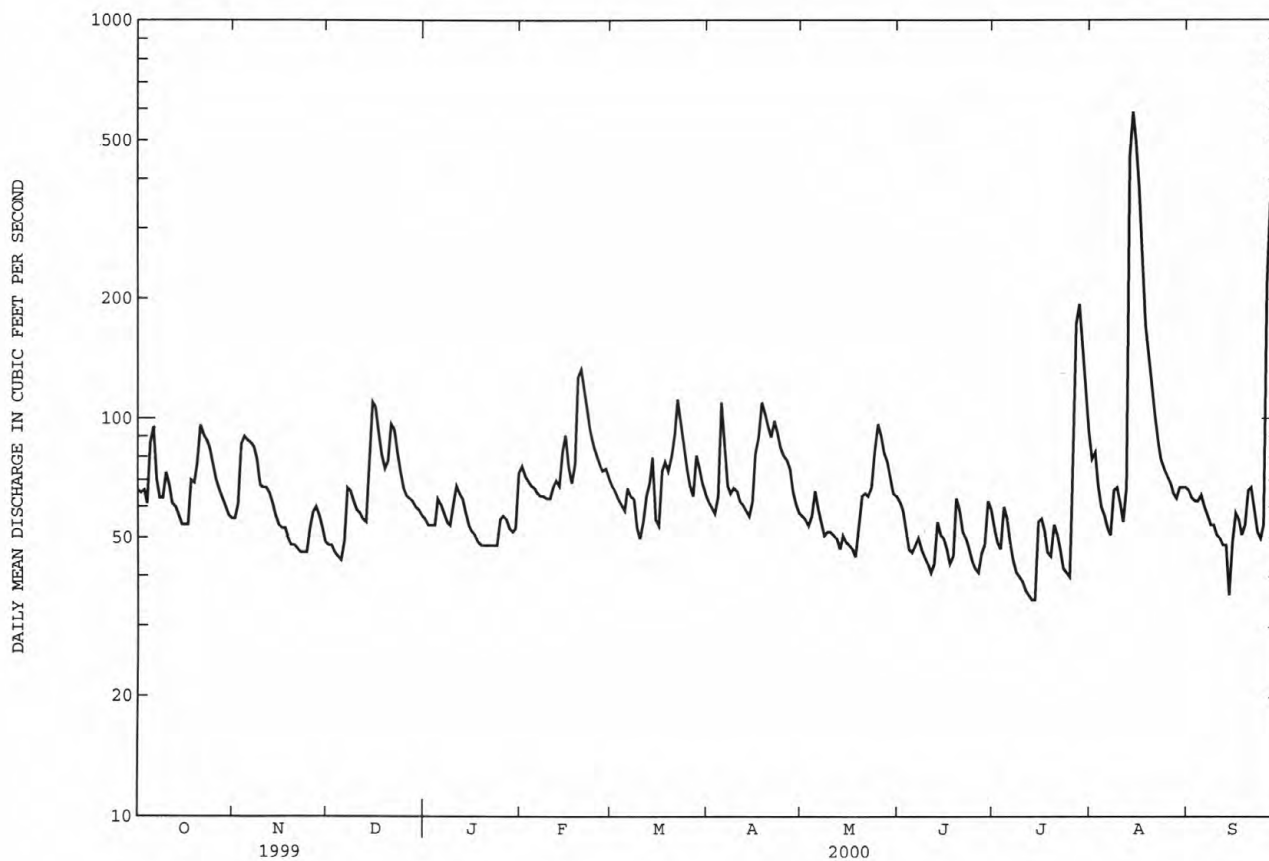
01410000 OSWEGO RIVER AT HARRISVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1931 - 2000
ANNUAL TOTAL	28836	26739	
ANNUAL MEAN	79.0	73.1	86.7
HIGHEST ANNUAL MEAN			138 1978
LOWEST ANNUAL MEAN			41.4 1966
HIGHEST DAILY MEAN	452 Sep 17	588 Aug 14	1220 Aug 20 1939
LOWEST DAILY MEAN	23 Aug 7	35 Jul 13	4.0 Jun 23 1967
ANNUAL SEVEN-DAY MINIMUM	25 Aug 2	38 Jul 8	14 Sep 7 1966
INSTANTANEOUS PEAK FLOW		645 Aug 13	1390a Aug 20 1939
INSTANTANEOUS PEAK STAGE		5.36 Aug 13	9.54b Aug 20 1939
INSTANTANEOUS LOW FLOW		35 Jul 12	.00c Oct 26 1932
ANNUAL RUNOFF (CFSM)	1.09	1.01	1.20
ANNUAL RUNOFF (INCHES)	14.80	13.72	16.24
10 PERCENT EXCEEDS	118	93	150
50 PERCENT EXCEEDS	69	62	71
90 PERCENT EXCEEDS	35	47	37

a From rating curve extended above 840 ft³/s.

b From high-water mark in gage house.

c While pond filling.



MULLICA RIVER BASIN

185

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETN, NJ

LOCATION.--Lat 39°37'23", long 74°26'30", Burlington County, Hydrologic Unit 02040301, on left bank upstream from bridge on Stage Road, 0.7 mi west of Lake Absegami, 2.2 mi north of New Gretna, and 5.3 mi upstream from mouth.

DRAINAGE AREA.--8.11 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1969 to 1974. January 1978 to current year.

REVISED RECORDS.--WDR NJ-81-1: 1978-80(P). WDR NJ-92-1: 1978, 1979, 1989, 1991 (P).

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft above sea level.

REMARKS.--Records good, except for gage height record above 200 ft³/s. which are considered fair. Occasional regulation by Lake Absegami. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 65 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jul 27	0100	77	5.23	Aug 13	0530	*471	*6.50

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	15	14	15	20	17	16	16	13	12	19	22
2	15	18	14	15	17	16	16	16	13	12	18	21
3	15	23	14	15	15	16	16	16	13	12	17	25
4	15	20	14	15	15	15	17	16	12	16	19	26
5	17	17	14	20	15	15	19	15	12	15	24	29
6	17	16	15	18	15	15	17	15	13	13	20	23
7	15	16	19	15	15	15	16	15	15	12	17	20
8	15	15	17	15	15	15	16	15	13	11	17	19
9	14	15	15	15	15	15	17	14	12	11	17	18
10	15	15	15	15	15	15	18	14	12	11	16	18
11	16	15	15	16	16	15	17	16	12	11	15	18
12	15	15	14	15	16	18	16	15	12	11	29	17
13	14	15	14	15	15	17	16	15	16	11	235	17
14	14	15	19	14	18	15	16	15	16	11	75	17
15	14	15	23	14	19	15	18	15	14	19	58	24
16	14	14	19	14	17	14	27	14	13	21	45	26
17	14	14	16	14	15	20	24	14	12	15	37	20
18	21	14	16	13	18	21	21	14	13	13	34	17
19	20	14	15	13	30	17	20	14	23	12	36	19
20	20	14	17	14	27	16	19	14	19	15	31	22
21	25	14	20	14	21	16	19	16	15	14	28	20
22	21	14	18	13	19	25	19	16	14	13	26	17
23	19	14	16	13	18	23	19	17	13	12	25	18
24	17	14	16	14	18	19	18	20	12	12	24	19
25	16	17	15	16	17	18	18	20	12	12	25	19
26	16	20	15	15	17	17	19	16	12	37	23	53
27	16	18	15	14	17	17	18	15	12	66	22	51
28	15	17	15	13	18	21	18	15	13	39	22	33
29	15	15	15	13	18	20	17	15	14	26	21	25
30	15	15	15	14	---	18	16	14	13	22	22	23
31	15	---	15	21	---	17	---	14	---	20	22	---
TOTAL	507	473	494	460	511	533	543	476	408	537	1039	696
MEAN	16.4	15.8	15.9	14.8	17.6	17.2	18.1	15.4	13.6	17.3	33.5	23.2
MAX	25	23	23	21	30	25	27	20	23	66	235	53
MIN	14	14	14	13	15	14	16	14	12	11	15	17
CF5M	2.02	1.94	1.96	1.83	2.17	2.12	2.23	1.89	1.68	2.14	4.13	2.86
IN.	2.33	2.17	2.27	2.11	2.34	2.44	2.49	2.18	1.87	2.46	4.77	3.19

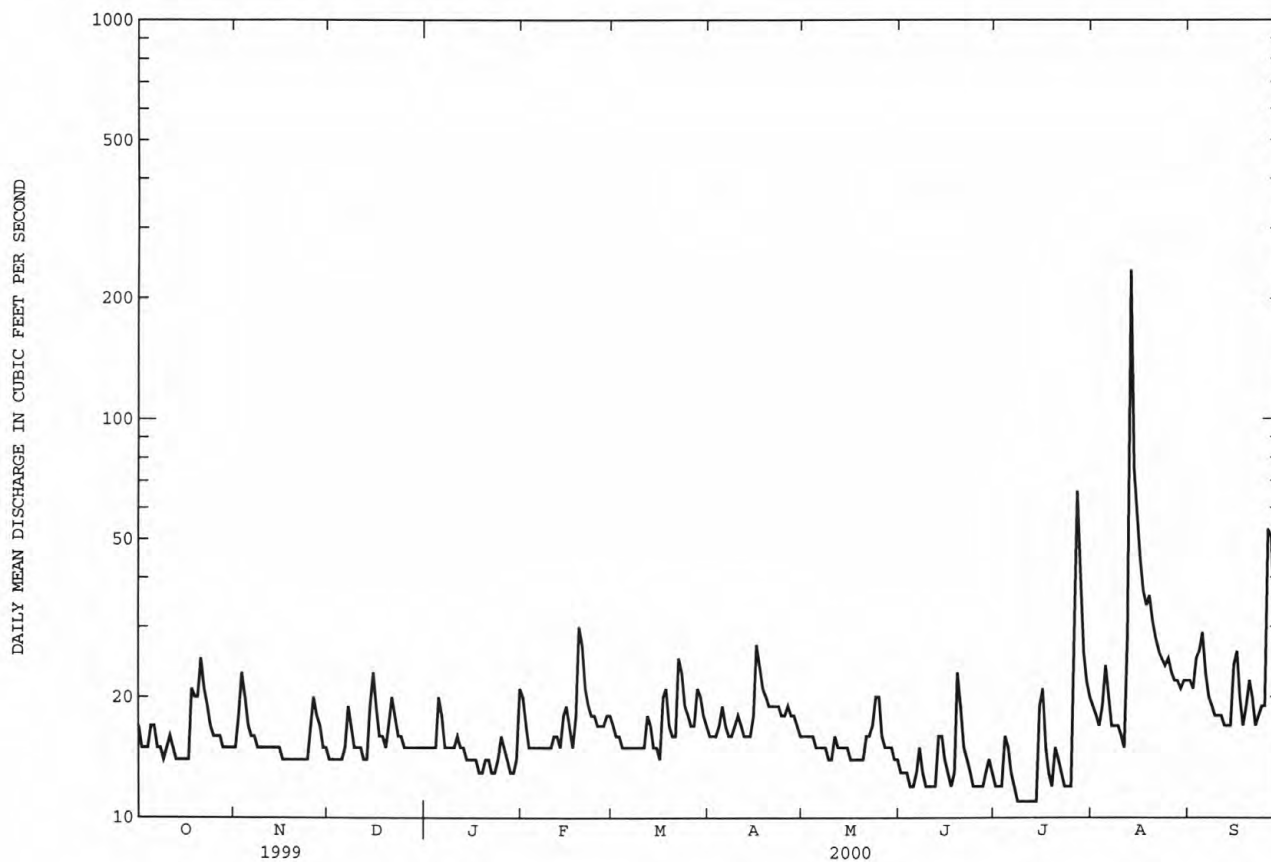
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2000, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	12.5	13.8	15.5	18.6	18.3	21.1	21.4	19.7	15.6	13.9	15.6	12.9	12.5	13.1	13.8	14.5	15.2	15.6	15.6	15.6	15.6	15.6	15.6
MAX	24.2	23.1	28.3	35.0	34.3	40.8	38.6	41.5	35.2	25.8	43.7	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2
(WY)	1990	1990	1997	1978	1998	1998	1984	1998	1998	1978	1997	2000	1990	1990	1997	1978	1998	1998	1998	1998	1998	1998	1998
MIN	8.13	8.75	9.78	9.28	11.2	10.5	9.06	8.95	8.11	7.80	6.54	6.77	8.13	8.75	9.78	9.28	11.2	10.5	9.06	8.95	8.11	7.80	6.54
(WY)	1983	1982	1986	1981	1992	1981	1985	1985	1986	1985	1995	1995	1983	1982	1986	1981	1992	1981	1985	1985	1986	1985	1995

MULICA RIVER BASIN

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETN, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1978 - 2000	
ANNUAL TOTAL	5759.7		6677		16.3	
ANNUAL MEAN	15.8		18.2		25.3	
HIGHEST ANNUAL MEAN					9.60	
LOWEST ANNUAL MEAN					1998	
HIGHEST DAILY MEAN	49	Sep 17	235	Aug 13	533	Aug 21 1997
LOWEST DAILY MEAN	9.7	Jan 2	11	Jul 8	4.8	Sep 15 1995
ANNUAL SEVEN-DAY MINIMUM	10	Jul 27	11	Jul 8	5.0	Sep 10 1995
INSTANTANEOUS PEAK FLOW			471a	Aug 13	1130a	Aug 21 1997
INSTANTANEOUS PEAK STAGE			6.50	Aug 13	7.28	Aug 21 1997
INSTANTANEOUS LOW FLOW			10	Jul 13	4.7	Sep 15 1995
ANNUAL RUNOFF (CFSM)	1.95		2.25		2.01	
ANNUAL RUNOFF (INCHES)	26.42		30.63		27.33	
10 PERCENT EXCEEDS	21		23		27	
50 PERCENT EXCEEDS	15		16		14	
90 PERCENT EXCEEDS	11		13		8.7	

a From rating curve extended above 200 ft³/sec.

GREAT EGG HARBOR RIVER BASIN

187

01411000 GREAT EGG HARBOR RIVER AT FOLSOM, NJ

LOCATION.--Lat 39°35'42", long 74°51'06", Atlantic County, Hydrologic Unit 02040302, on left bank 25 ft upstream from bridge on State Highway 54, 1.0 mi south of Folsom, and 2.0 mi upstream from Pennypot Stream.

DRAINAGE AREA.--57.1 mi².

PERIOD OF RECORD.--September 1925 to current year. Prior to October 1947, published as "Great Egg River at Folsom".

REVISED RECORDS.--WSP 1432: 1928(M), 1933. WDR NJ-83-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Nov. 26, 1934. Datum of gage is 53.32 ft above sea level. Prior to Mar. 6, 1941, water-stage recorder at site 100 ft downstream at same datum. Mar. 6 to Oct. 5, 1941, nonrecording gage at site 145 ft downstream at datum 0.25 ft higher.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Satellite rain-gage and gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

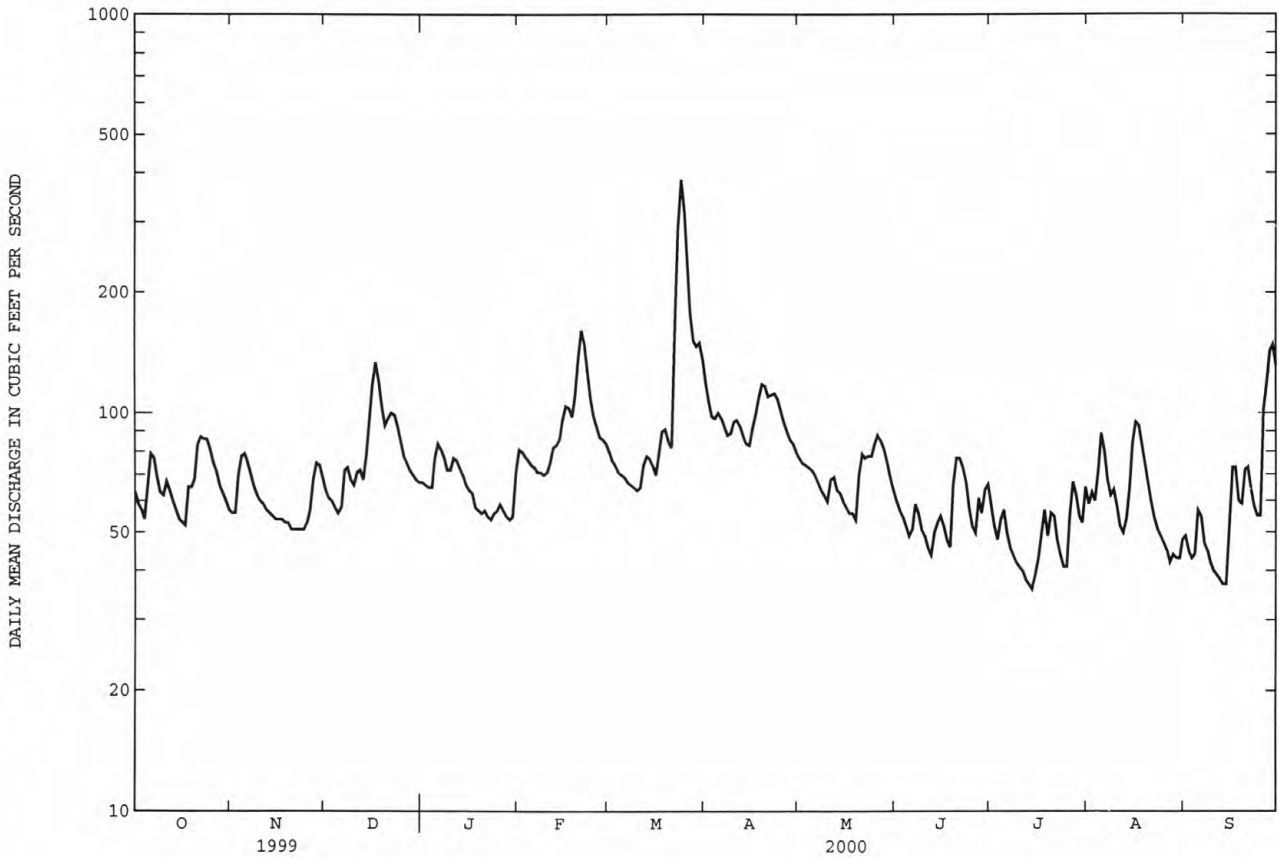
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	56	64	67	81	80	119	77	60	58	59	49
2	59	56	61	66	80	76	106	75	57	52	63	45
3	57	70	60	65	78	74	98	74	55	48	60	43
4	54	78	58	65	76	71	97	73	52	54	71	44
5	66	79	56	77	74	70	100	72	49	57	89	57
6	79	75	58	84	73	69	97	70	51	50	80	55
7	77	70	72	81	71	67	92	67	59	46	68	47
8	69	65	73	77	71	66	88	64	56	44	62	45
9	63	62	68	72	70	65	89	62	51	42	64	42
10	62	60	66	72	71	64	95	60	49	41	58	40
11	67	59	71	77	75	65	96	68	46	40	52	39
12	64	57	72	76	82	74	93	69	44	38	50	38
13	60	56	68	73	83	78	88	64	50	37	54	37
14	57	55	79	70	86	77	84	63	53	36	65	37
15	54	54	98	66	96	74	83	60	55	39	84	51
16	53	54	118	64	104	70	91	58	52	43	95	73
17	52	54	134	63	103	80	99	56	48	50	93	73
18	65	53	120	58	98	90	109	56	46	57	83	60
19	65	53	103	57	110	91	118	54	66	49	75	59
20	68	51	93	56	136	85	117	70	77	56	66	72
21	83	51	97	57	161	82	110	79	77	55	59	73
22	87	51	100	55	149	145	111	77	73	48	54	64
23	86	51	99	54	127	287	112	78	67	44	51	58
24	86	51	93	56	109	385	109	78	58	41	49	55
25	81	53	85	57	98	322	102	84	52	41	47	55
26	75	57	78	59	92	239	95	88	50	55	45	102
27	71	68	75	57	87	178	90	85	61	67	42	119
28	66	75	72	55	86	152	86	81	56	62	44	143
29	63	74	70	54	84	147	84	75	64	55	43	148
30	60	69	68	55	---	150	80	69	66	53	43	132
31	57	---	67	71	---	137	---	64	---	65	48	---
TOTAL	2069	1817	2496	2016	2711	3710	2938	2170	1700	1523	1916	1955
MEAN	66.7	60.6	80.5	65.0	93.5	120	97.9	70.0	56.7	49.1	61.8	65.2
MAX	87	79	134	84	161	385	119	88	77	67	95	148
MIN	52	51	56	54	70	64	80	54	44	36	42	37
CFSM	1.17	1.06	1.41	1.14	1.64	2.10	1.72	1.23	.99	.86	1.08	1.14
IN.	1.35	1.18	1.63	1.31	1.77	2.42	1.91	1.41	1.11	.99	1.25	1.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2000, BY WATER YEAR (WY)

	60.4	77.4	92.3	103	106	122	114	95.3	71.0	62.3	63.9	60.5
MEAN	60.4	77.4	92.3	103	106	122	114	95.3	71.0	62.3	63.9	60.5
MAX	148	213	212	203	228	229	234	199	149	187	182	215
(WY)	1939	1973	1973	1936	1939	1958	1983	1958	1948	1938	1967	1940
MIN	27.8	30.1	35.1	39.3	50.7	60.1	53.9	47.1	34.4	22.1	19.3	25.6
(WY)	1931	1966	1966	1981	1931	1981	1985	1955	1977	1966	1966	1964

GREAT EGG HARBOR RIVER BASIN
01411000 GREAT EGG HARBOR RIVER AT FOLSOM, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1925 - 2000	
ANNUAL TOTAL	26205		27021		85.6	
ANNUAL MEAN	71.8		73.8		133	
HIGHEST ANNUAL MEAN					44.4	
LOWEST ANNUAL MEAN					15	
HIGHEST DAILY MEAN	309	Sep 18	385	Mar 24	1300	Sep 3 1940
LOWEST DAILY MEAN	16	Aug 4	36	Jul 14	15	Aug 29 1966
ANNUAL SEVEN-DAY MINIMUM	16	Aug 7	39	Jul 9	16	Aug 26 1966
INSTANTANEOUS PEAK FLOW			393	Mar 24	1440	Sep 3 1940
INSTANTANEOUS PEAK STAGE			5.77	Mar 24	9.09	Sep 3 1940
INSTANTANEOUS LOW FLOW			35	Jul 13	15	Sep 6 1957
ANNUAL RUNOFF (CFSM)	1.26		1.29		1.50	
ANNUAL RUNOFF (INCHES)	17.07		17.60		20.37	
10 PERCENT EXCEEDS	118		102		148	
50 PERCENT EXCEEDS	67		67		73	
90 PERCENT EXCEEDS	30		48		36	



189

LOCATION.--Lat 39°18'25", long 74°49'15", Cape May County, Hydrologic Unit 02040302, on right bank at highway bridge on State Route 49, 0.2 mi upstream from McNeals Branch, 0.4 mi southeast of Head of River, and 3.7 mi west of Tuckahoe.

PERIOD OF RECORD.--December 1969 to current year.

REVISED RECORDS.--WDR NJ-78-1: 1975(M), 1976(M). WDR NJ-89-1: (M). WDR NJ-91-1: 1990. WRD NJ-97-1: 1971(M), 1978(M), 1979 (M), 1983 (P), 1994(P).

GAGE.--Water-stage recorder, wooden control, and downstream tidal crest-stage gage. Datum of gage is sea level.

REMARKS.--Records good except for estimated discharges which are fair. Occasional regulation by ponds above station. There is a fish gate in the left weir which was open this year. Planks were placed on top of the center and right weirs from April 3 to May 16 to raise the water level for fish migration. Several measurements of water temperature were made during the year.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	18	22	34	28	57	35	25	39	23	e26
2	15	19	18	21	31	27	51	34	23	28	22	e22
3	15	25	17	21	28	26	44	33	22	23	21	e20
4	14	23	17	22	27	26	48	32	23	22	26	e21
5	16	21	17	30	27	26	52	31	21	21	46	e33
6	15	19	20	28	27	25	49	31	22	20	54	e30
7	14	18	27	25	26	25	43	31	23	19	49	e19
8	14	18	24	23	27	25	38	30	21	17	36	e17
9	14	17	22	23	26	24	47	28	21	16	28	e18
10	16	17	22	26	28	24	53	28	20	14	26	e19
11	16	17	25	30	30	24	47	29	19	14	24	e18
12	15	17	23	24	32	27	42	28	18	14	25	e17
13	14	17	21	23	30	27	36	27	17	13	30	e16
14	14	16	34	23	37	25	32	26	17	13	89	e18
15	14	16	45	22	44	24	39	24	18	14	170	e31
16	13	16	38	22	38	24	88	24	17	15	111	e54
17	14	16	30	21	33	38	95	24	17	14	68	e45
18	24	16	27	20	37	37	78	23	17	13	49	e23
19	21	16	25	20	70	32	67	23	21	13	48	e21
20	25	16	28	21	74	29	58	21	20	24	42	e35
21	35	16	39	20	54	38	51	23	18	20	36	e38
22	30	16	37	20	42	255	52	28	20	21	31	e32
23	27	16	31	19	37	305	50	31	19	19	29	e30
24	24	16	28	20	34	192	45	39	17	18	27	e30
25	22	17	25	33	32	131	37	39	16	17	26	e30
26	20	20	24	22	31	94	46	34	15	45	24	e82
27	19	23	24	21	29	71	46	31	14	77	24	e101
28	18	22	23	20	31	96	43	31	34	57	24	e91
29	17	20	23	20	30	107	40	31	49	41	24	e83
30	17	19	22	21	---	87	38	28	53	31	e23	e62
31	17	---	22	37	---	68	---	27	---	26	e27	---
TOTAL	566	541	796	720	1026	1987	1512	904	657	738	1282	1082
MEAN	18.3	18.0	25.7	23.2	35.4	64.1	50.4	29.2	21.9	23.8	41.4	36.1
MAX	35	25	45	37	74	305	95	39	53	77	170	101
MIN	13	16	17	19	26	24	32	21	14	13	21	16
CFSM	.59	.59	.83	.75	1.15	2.08	1.64	.95	.71	.77	1.34	1.17
IN.	.68	.65	.96	.87	1.24	2.40	1.83	1.09	.79	.89	1.55	1.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2000, BY WATER YEAR (WY)

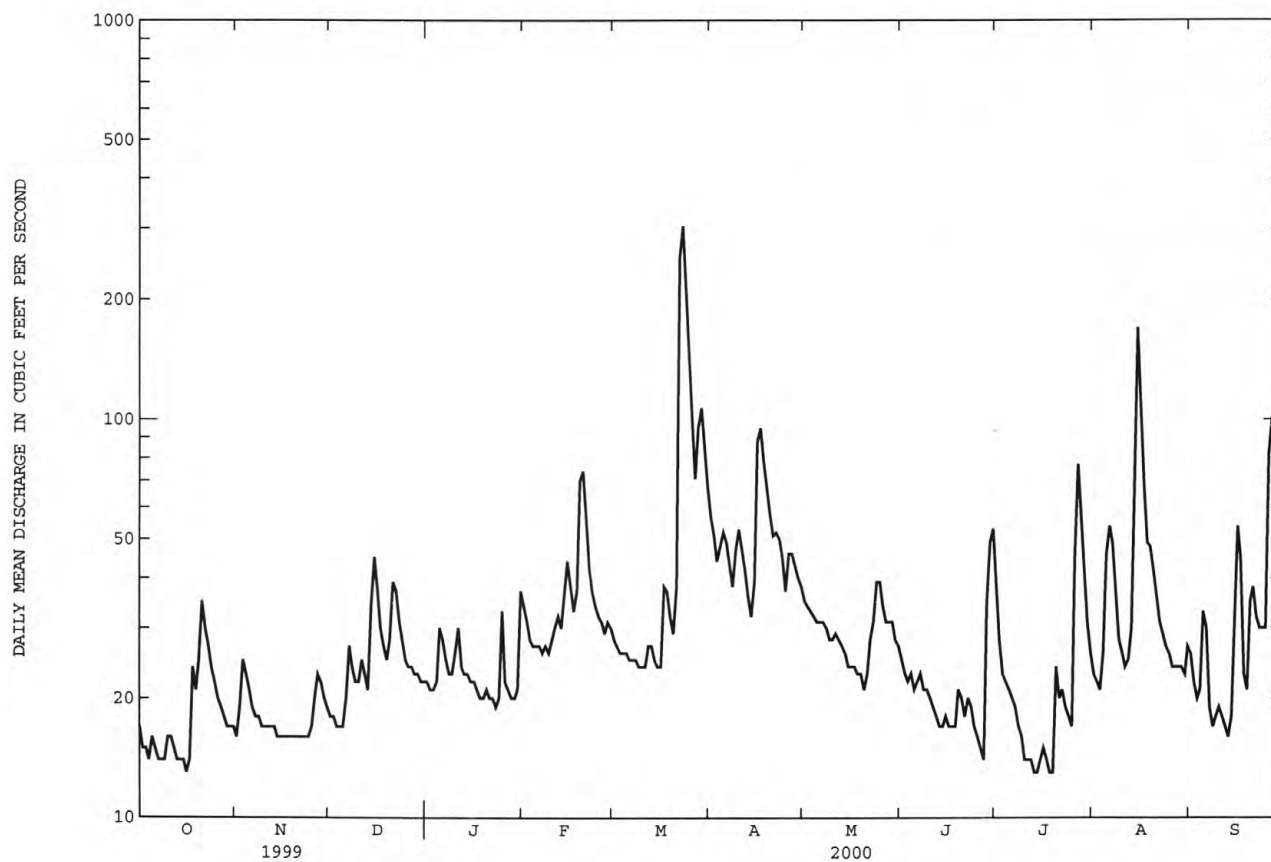
MEAN	26.8	33.6	42.0	52.0	54.5	69.9	69.7	54.9	37.3	27.2	27.8	23.2
MAX	59.9	81.4	97.0	101	101	162	174	123	83.7	55.8	99.3	64.7
(WY)	1997	1973	1997	1978	1973	1998	1983	1998	1984	1996	1997	1989
MIN	15.1	16.8	19.4	16.0	24.4	26.4	21.3	20.0	14.8	11.7	10.6	7.04
(WY)	1978	1992	1981	1981	1995	1995	1985	1977	1977	1999	1988	1980

TUCKAHOE RIVER BASIN

01411300 TUCKAHOE RIVER AT HEAD OF RIVER, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1970 - 2000	
ANNUAL TOTAL	10980.3		11811		43.1	
ANNUAL MEAN	30.1		32.3		66.0	
HIGHEST ANNUAL MEAN					21.7	
LOWEST ANNUAL MEAN					1.3	
HIGHEST DAILY MEAN	149	Mar 16	305	Mar 23	920	Aug 21 1997
LOWEST DAILY MEAN	6.9	Aug 13	13	Oct 16	1.9	Sep 3 1980
ANNUAL SEVEN-DAY MINIMUM	7.2	Aug 7	14	Jul 13	1340	Sep 9 1980
INSTANTANEOUS PEAK FLOW			342	Mar 22	1340	Aug 21 1997
INSTANTANEOUS PEAK STAGE			5.67	Mar 22	9.09	Aug 22 1997
INSTANTANEOUS LOW FLOW			12	Jul 19	5.7	Aug 13 1999
ANNUAL RUNOFF (CFSM)	.98		1.05		1.40	
ANNUAL RUNOFF (INCHES)	13.26		14.27		19.02	
10 PERCENT EXCEEDS	55		51		83	
50 PERCENT EXCEEDS	23		25		32	
90 PERCENT EXCEEDS	11		16		15	

e estimated.



BEACH THOROFARE

191

01411330 BEACH THOROFARE AT MARGATE, NJ

LOCATION.--Lat 39°20'15", long 74°30'48", Atlantic County, Hydrologic Unit 02040302, on pier near southeast end of County Route 563 bridge leading into Margate City, 500 ft east of Pork Island, and 3.2 mi northeast of Great Egg Harbor Inlet.

PERIOD OF RECORD.--June 1997 to March 2000 (unpublished fragmentary gage-height record), April to September 2000.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.30 ft.

REMARKS.--Record for complete analysis unavailable, April 1-23. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Gage-height satellite telemeter at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 3.99 ft (NAVD of 1988), Sept. 26, 2000; minimum recorded, -3.27 ft (NAVD of 1988), May 5, 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 9.8 ft (adjusted to NAVD of 1988), tides of March 6-7, 1962, from high-water mark near the intersection of Washington and Atlantic Avenues in Margate.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.99 ft (NAVD of 1988), Sept. 26; minimum recorded, -3.27 ft (NAVD of 1988), May 5.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	---	---	---	---	---	---	2.83	2.87	3.29	3.37	3.45	3.99
high tide	Date	---	---	---	---	---	---	26	11	6	31	13	26
Minimum	Elevation	---	---	---	---	---	---	-2.04	-3.27	-2.92	-3.03	-2.71	-3.12
low tide	Date	---	---	---	---	---	---	30	5	4	4	28	18
Mean high tide		---	---	---	---	---	---	---	1.94	1.83	2.03	2.05	1.99
Mean water level		---	---	---	---	---	---	---	-.08	-.19	.00	.03	.02
Mean low tide		---	---	---	---	---	---	---	-2.12	-2.25	-2.07	-2.03	-1.98

LOCATION.--Lat 39°09'27", long 74°41'51", Cape May County, Hydrologic Unit 02040302, on bulkhead at Sea Isle City Municipal Marina in Sea Isle City, 700 ft southeast of east side of bridge on County Route 625 over Ludlam Thorofare, and 0.9 mi. south of Ludlam Bay.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.27 ft. From May 1975 to May 1978, water-stage recorder at NGVD of 1929 located 800 ft southwest of current station. From October 1978 to September 1984, crest-stage gage at NGVD of 1929 located 800 ft southwest of current station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 6.34 ft (adjusted to NAVD 0f 1988), March 29, 1984, from tidal crest-stage gage.

Summaries of tide elevations during the year are as follows:

[illegible]

GREAT CHANNEL

193

01411360 GREAT CHANNEL AT STONE HARBOR, NJ

LOCATION.--Lat 39°03'24", long 74°45'52" (revised), Cape May County, Hydrologic Unit 02040302, on County pier near east of bridge on west end of Borough of Stone Harbor, 3.7 mi southeast of Cape May Court House, and 3.9 mi southwest of Avalon.

PERIOD OF RECORD.--October 1964 to September 1999 (annual maximum elevation only), October 1977 to May 1978, May 1997 to February 2000 (unpublished fragmentary gage-height record), March to September 2000.

GAGE.--Water-stage recorder and tidal crest-stage gage. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.30 ft. To determine corresponding Mean Lower Low Water Datum elevation, based on data from National Ocean Service station 8535581, add 2.69 ft. From October 1964 to September 1999, crest-stage gage at NGVD of 1929. From October 1977 to May 1978, water-stage recorder at NGVD of 1929.

REMARKS.-- Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Gage-height satellite telemeter at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 6.03 ft (adjusted to NAVD of 1988), March 29, 1984, from tidal crest-stage gage; minimum elevation recorded, -4.27 ft (NAVD of 1988), April 10, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 4.39 ft (NAVD of 1988), Sept. 26; minimum elevation recorded, -4.27 ft (NAVD of 1988), April 10.

REVISIONS.--The annual maximum tide elevations for water years 1997-99 have been revised to 5.05 ft, Dec. 13, 1996; 6.28 ft, Feb. 5, 1998; and 4.76 ft, Mar. 15, 1999, superceding the figures published in the annual water data reports for those years. These figures have also been adjusted to NAVD of 1988.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	---	---	---	---	---	3.81	4.03	3.10	3.50	3.45	3.73	4.39
high tide	Date	---	---	---	---	---	21	18	19	6	31	13	26
Minimum	Elevation	---	---	---	---	---	-3.14	-4.27	-3.47	-3.09	-3.08	-2.88	-3.26
low tide	Date	---	---	---	---	---	16	10	5	4	4	27	18
Mean high tide		---	---	---	---	---	1.86	1.84	1.98	1.89	2.11	2.11	2.13
Mean water level		---	---	---	---	---	---	-.29	-.08	-.17	.03	.05	.02
Mean low tide		---	---	---	---	---	-2.32	-2.38	-2.25	-2.36	-2.17	-2.14	-2.08

GRASSY SOUND CHANNEL

01411382 GRASSY SOUND CHANNEL AT WILDWOOD, NJ

LOCATION.--Lat 38°59'22", long 74°50'13", Cape May County, Hydrologic Unit 02040302, on pier in back of pump house at Lighthouse Point Marina in Wildwood, 900 ft southwest of bridge on State Highway 47, and 1000 ft north of Ephraim Island.

PERIOD OF RECORD.--May 1997 to February 2000 (unpublished fragmentary gage-height record), March to September 2000.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.30 ft. To determine corresponding Mean Lower Low Water Datum elevation, based on data from National Ocean Service station 8535838, add 3.03 ft.

REMARKS.--Record for complete analysis unavailable, March 1-3. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Gage-height satellite telemeter at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 4.16 ft (NAVD of 1988), Sept. 26, 2000; minimum recorded, -4.47 ft (NAVD of 1988), April 10, 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 7.5 ft (adjusted to NAVD of 1988), tides of March 6-7, 1962, from high-water mark at the intersection of 15th Street and New Jersey Avenue in North Wildwood.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 4.16 ft, Sept. 26; minimum recorded, -4.47 ft, April 10.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	---	---	---	---	---	3.60	3.83	3.13	3.70	3.80	3.82	4.16
high tide	Date	---	---	---	---	---	21	18	19	6	31	13	26
Minimum	Elevation	---	---	---	---	---	-3.52	-4.47	-3.83	-3.51	-3.54	-3.24	-3.42
low tide	Date	---	---	---	---	---	17	10	5	4	4	28	18
Mean high tide		---	---	---	---	---	2.02	1.98	2.18	2.09	2.34	2.32	2.27
Mean water level		---	---	---	---	---	---	-.31	-.06	-.17	.06	.07	.02
Mean low tide		---	---	---	---	---	-2.54	-2.63	-2.43	-2.58	-2.40	-2.38	-2.33

DENNIS CREEK BASIN

195

01411435 SLUICE CREEK NEAR SOUTH DENNIS, NJ

LOCATION.--Lat 39°09'42", long 74°49'57", Cape May County, Hydrologic Unit 02040206, on left upstream wingwall of bridge on State Highway 47, 1.6 mi upstream from Dennis Creek, and 3.3 mi from Delaware Bay.

DRAINAGE AREA.--9.37 mi².

PERIOD OF RECORD.--April 1997 to February 2000 (unpublished fragmentary gage-height record), March to September 2000.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.27 ft.

REMARKS.--Record for complete analysis unavailable, March 1-3. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Gage-height satellite telemeter at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 3.39 ft (NAVD of 1988), Sept. 26, 2000 (1054 and 2330 hours); minimum recorded, -4.91 ft (NAVD of 1988), April 6, 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 5.6 ft (adjusted to NAVD of 1988), Dec. 11, 1992, from high-water mark near Reeds Beach, 4.5 mi southwest of station.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.39 ft (NAVD of 1988), Sept. 26, (1054 and 2330 hours); minimum recorded, -4.91 ft (NAVD of 1988), April 6.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	---	---	---	---	---	3.12	3.03	2.94	3.08	3.13	3.25	3.39
high tide	Date	---	---	---	---	---	22	20	11	29,30	3,29	1	26
Minimum	Elevation	---	---	---	---	---	-4.78	-4.91	-4.67	-4.38	-4.37	-4.28	-3.91
low tide	Date	---	---	---	---	---	17	6	5	1	1	28	18
Mean high tide		---	---	---	---	---	---	2.27	2.38	2.35	2.48	2.48	2.45
Mean water level		---	---	---	---	---	---	.05	.20	.12	.36	.36	.37
Mean low tide		---	---	---	---	---	---	-3.38	-3.28	-3.37	-3.17	-3.11	-3.02

MAURICE RIVER BASIN

01411456 LITTLE EASE RUN NEAR CLAYTON, NJ

LOCATION.--Lat 39°39'32", long 75°04'04", Gloucester County, Hydrologic Unit 02040206, on right bank 30 ft downstream from bridge on Academy Road (County Route 610), 0.9 mi west of Fries Mill, 1.3 mi east of Clayton, and 1.4 mi downstream from Beaverdam Branch.

DRAINAGE AREA.--9.77 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1966, 1976-84, 1987. February 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 100.94 ft above sea level.

REMARKS.--Records good except for estimated discharges, which are fair. Occasional regulation from unknown sources. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 22	1900	*124	*4.40	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	3.6	10	6.5	9.1	11	20	9.4	3.7	3.4	4.2	1.8
2	3.0	e4.7	8.6	6.3	10	10	18	8.7	3.2	2.6	4.3	1.7
3	2.7	e7.8	7.3	6.2	9.9	9.3	16	8.0	2.8	2.2	9.0	1.6
4	2.8	e7.3	6.5	6.7	9.3	8.5	16	7.4	2.5	2.4	16	1.6
5	8.2	e7.1	5.9	12	9.1	7.9	15	6.9	2.2	2.1	12	1.6
6	7.4	e6.3	6.3	12	8.7	7.2	14	6.2	3.0	1.8	7.1	1.6
7	6.1	e5.7	8.9	12	8.2	6.7	14	5.5	3.7	1.6	5.0	1.6
8	5.0	e5.2	8.4	10	8.0	6.4	13	4.9	2.8	1.4	4.3	1.5
9	4.2	e4.8	7.5	9.2	7.5	6.1	16	4.3	2.3	1.3	3.4	1.4
10	5.0	e4.8	7.8	9.0	7.6	5.9	17	4.3	2.1	1.3	2.8	1.4
11	6.3	e4.7	10	10	9.4	6.0	17	7.3	1.9	1.2	2.4	1.4
12	4.9	e4.5	9.5	9.6	12	9.6	16	5.7	1.8	1.1	2.3	1.4
13	4.1	e4.2	8.8	8.9	12	11	14	4.8	2.7	1.1	3.5	1.4
14	3.8	e4.1	18	8.0	15	11	13	4.8	3.2	1.1	7.5	1.3
15	3.4	e3.9	26	6.9	21	9.7	12	4.0	3.2	1.7	14	6.0
16	3.1	e3.8	26	6.2	21	8.7	15	3.5	2.8	1.7	9.7	3.6
17	3.0	e3.7	24	5.7	20	13	20	3.1	2.3	1.8	6.2	2.3
18	5.5	e3.7	20	5.0	19	15	23	3.0	3.9	1.5	4.5	1.9
19	4.9	e3.6	16	4.4	29	14	22	4.4	15	1.5	4.1	2.0
20	7.1	e3.6	15	4.1	33	13	19	8.5	12	2.4	3.3	3.2
21	12	e3.6	16	4.1	29	14	17	10	8.7	1.9	2.6	2.4
22	11	3.1	15	4.0	24	93	18	11	8.0	1.5	2.2	1.9
23	13	3.0	14	3.8	20	104	17	12	5.8	1.3	2.0	1.7
24	12	2.9	13	3.8	18	73	16	12	4.0	1.2	1.9	1.8
25	10	3.2	11	4.0	16	48	14	11	3.0	1.3	1.8	2.1
26	8.4	4.0	9.4	4.2	14	34	13	9.6	2.6	2.1	1.6	17
27	7.0	12	8.5	4.1	13	27	12	7.6	2.4	3.6	1.6	19
28	5.8	15	7.9	3.9	13	30	12	7.0	2.3	2.9	2.0	16
29	4.8	14	7.4	3.7	12	29	11	6.0	6.4	2.3	1.9	13
30	4.2	13	7.0	3.8	---	27	10	5.0	4.7	2.5	1.8	8.9
31	3.8	---	6.7	8.2	---	24	---	4.3	---	5.3	1.9	---
TOTAL	186.2	170.9	366.4	206.3	437.8	693.0	470	210.2	125.0	61.1	146.9	124.1
MEAN	6.01	5.70	11.8	6.65	15.1	22.4	15.7	6.78	4.17	1.97	4.74	4.14
MAX	13	15	26	12	33	104	23	12	15	5.3	16	19
MIN	2.7	2.9	5.9	3.7	7.5	5.9	10	3.0	1.8	1.1	1.6	1.3
CFSM	.61	.58	1.21	.68	1.55	2.29	1.60	.69	.43	.20	.49	.42
IN.	.71	.65	1.40	.79	1.67	2.64	1.79	.80	.48	.23	.56	.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2000, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	5.78	7.52	12.0	14.8	14.5	20.6	17.0	12.1	6.17	4.73	5.07	4.67	
MAX	19.7	15.0	35.5	26.5	22.4	38.7	26.2	29.3	15.4	19.0	15.2	20.4	
(WY)	1990	1990	1997	1991	1997	1994	1996	1989	1989	1989	1989	1989	
MIN	1.24	3.75	2.08	6.65	6.37	9.91	5.65	4.45	1.38	.85	.93	.92	
(WY)	1999	1999	1999	2000	1992	1992	1992	1999	1999	1999	1998	1998	

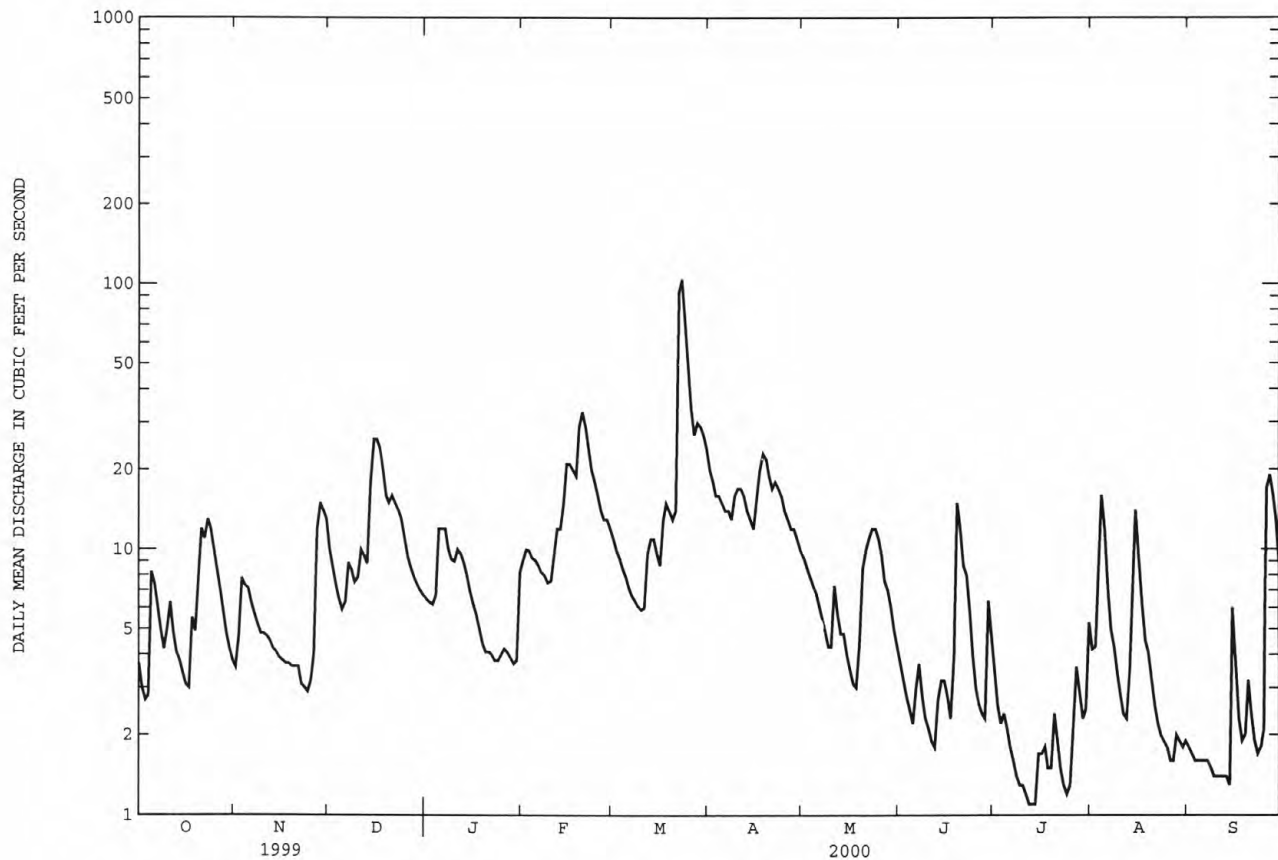
MAURICE RIVER BASIN

197

01411456 LITTLE EASE RUN NEAR CLAYTON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1988 - 2000
ANNUAL TOTAL	2755.45	3197.9	
ANNUAL MEAN	7.55	8.74	10.6
HIGHEST ANNUAL MEAN			14.3
LOWEST ANNUAL MEAN			5.70
HIGHEST DAILY MEAN	82 Sep 17	104 Mar 23	111 Sep 20 1989
LOWEST DAILY MEAN	.54 Jul 29	1.1 Jul 12	.41 Aug 16 1988
ANNUAL SEVEN-DAY MINIMUM	.55 Aug 7	1.2 Jul 8	.50 Aug 10 1988
INSTANTANEOUS PEAK FLOW		124 Mar 22	124 Sep 20 1989
INSTANTANEOUS PEAK STAGE		4.40 Mar 22	4.40 Mar 22 2000
INSTANTANEOUS LOW FLOW		1.0 Jul 13	.35 Aug 15 1988
ANNUAL RUNOFF (CFSM)	.77	.89	1.08
ANNUAL RUNOFF (INCHES)	10.49	12.18	14.67
10 PERCENT EXCEEDS	16	17	23
50 PERCENT EXCEEDS	5.6	6.2	7.1
90 PERCENT EXCEEDS	.85	1.8	1.4

e Estimated



01411500 MAURICE RIVER AT NORMA, NJ

DRAINAGE AREA.--112 mi².

PERIOD OF RECORD.--July 1932 to current year. Monthly discharge only for December 1933, published in WSP 1302.

REVISED RECORDS.--WSP 1382: 1933. WDR NJ-79-1: 1967(P). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Dec. 27, 1937. Datum of gage is 46.94 ft above sea level.

REMARKS.--Records good. Occasional regulation by ponds above station. Several measurements of water temperature, other than those published, were made during the year. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 24	1015	*828	*4.20	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	107	127	129	151	178	268	170	115	124	147	90
2	107	115	120	127	152	168	252	166	112	113	146	87
3	107	143	115	127	149	156	240	161	110	104	134	86
4	109	144	112	128	145	136	238	147	104	120	122	86
5	125	146	109	153	142	135	243	146	101	113	130	82
6	127	143	114	144	139	135	234	142	106	100	134	77
7	131	139	133	143	135	135	217	140	112	90	127	74
8	127	133	128	141	135	135	203	136	111	83	120	73
9	120	129	124	138	133	132	209	133	107	80	109	72
10	122	127	124	139	133	130	214	131	102	78	101	71
11	126	124	133	144	140	130	211	152	96	77	95	70
12	121	121	132	140	147	144	210	148	92	75	88	68
13	117	116	130	138	149	150	206	141	99	72	88	67
14	112	112	158	133	162	148	198	139	104	71	128	66
15	103	108	184	125	177	145	178	135	107	82	184	84
16	106	105	186	122	179	144	171	125	105	87	169	93
17	107	102	187	120	181	169	214	126	101	99	150	94
18	108	100	187	112	189	172	241	125	97	100	134	91
19	107	99	181	109	233	170	247	122	110	96	129	89
20	127	98	174	111	245	164	248	124	117	105	115	91
21	150	98	185	113	245	171	247	131	126	103	105	91
22	146	98	181	111	244	390	257	141	130	97	91	88
23	154	99	171	109	234	630	245	152	122	89	88	84
24	150	100	163	109	220	812	234	154	111	84	87	82
25	144	102	156	117	205	738	225	154	101	81	85	84
26	137	108	149	122	192	561	214	150	97	88	82	166
27	130	131	148	118	181	434	200	141	161	105	79	216
28	123	144	142	115	182	391	190	136	164	107	84	216
29	118	138	136	112	182	348	183	133	148	103	91	202
30	113	133	131	112	---	311	174	124	137	99	91	173
31	110	---	130	146	---	291	---	119	---	126	91	---
TOTAL	3788	3562	4550	3907	5101	8053	6611	4344	3405	2951	3524	3013
MEAN	122	119	147	126	176	260	220	140	114	95.2	114	100
MAX	154	146	187	153	245	812	268	170	164	126	184	216
MIN	103	98	109	109	133	130	171	119	92	71	79	66
CFSM	1.09	1.06	1.31	1.13	1.57	2.32	1.97	1.25	1.01	.85	1.01	.90
IN.	1.26	1.18	1.51	1.30	1.69	2.67	2.20	1.44	1.13	.98	1.17	1.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2000, BY WATER YEAR (WY)

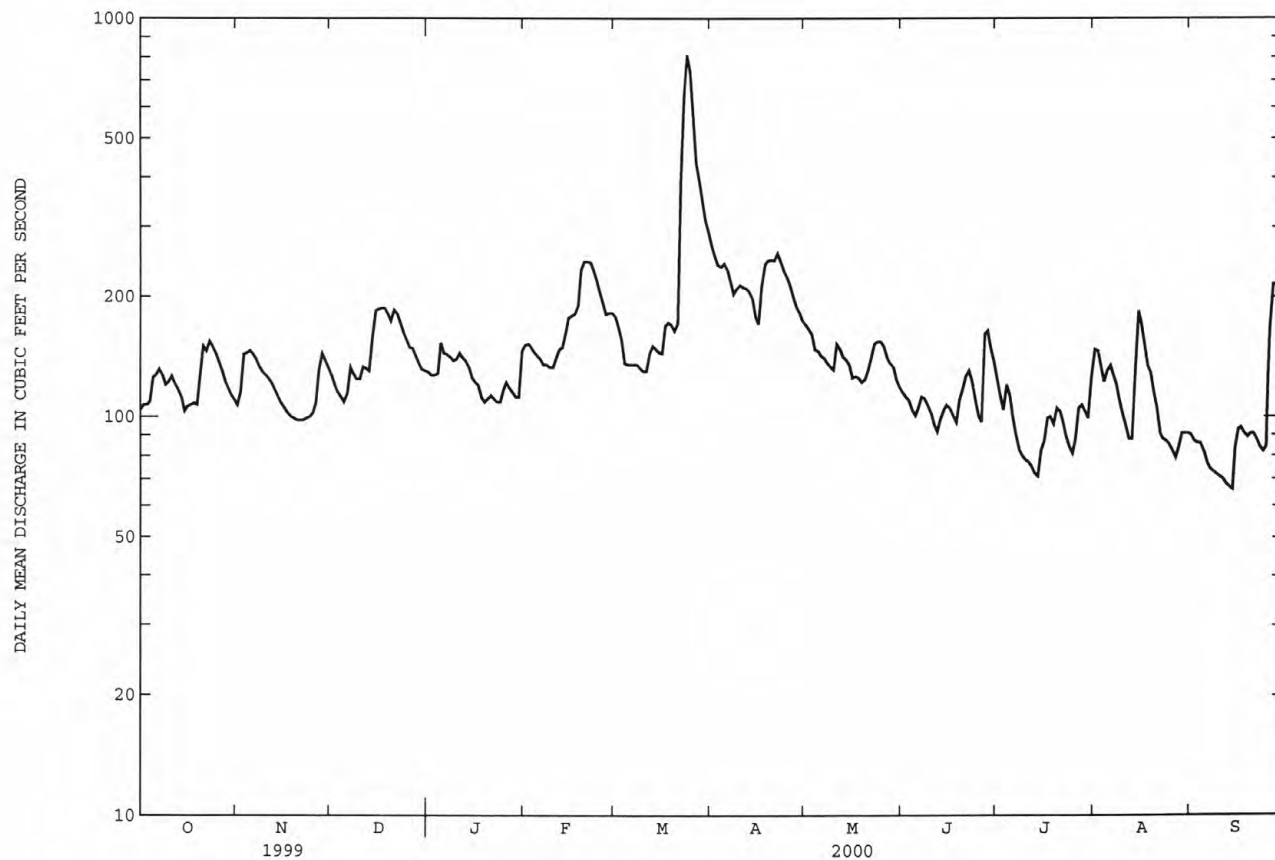
MEAN	112	138	166	189	200	232	226	189	145	122	124	121
MAX	266	330	385	380	418	427	437	387	291	333	327	591
(WY)	1990	1973	1973	1936	1939	1979	1984	1958	1979	1975	1958	1940
MIN	48.6	46.7	57.1	64.7	95.7	97.2	90.9	79.5	57.7	35.6	34.6	40.6
(WY)	1966	1966	1966	1966	1981	1981	1966	1977	1966	1966	1966	1965

MAURICE RIVER BASIN

199

01411500 MAURICE RIVER AT NORMA, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1933 - 2000	
ANNUAL TOTAL	47344		52809		164	
ANNUAL MEAN	130		144		253	1973
HIGHEST ANNUAL MEAN					67.4	1966
LOWEST ANNUAL MEAN					5260	Sep 2 1940
HIGHEST DAILY MEAN	454	Sep 19	812	Mar 24	23	Sep 8 1964
LOWEST DAILY MEAN	34	Aug 13	66	Sep 14	23	Sep 7 1966
ANNUAL SEVEN-DAY MINIMUM	41	Aug 7	70	Sep 8	7360a	Sep 2 1940
INSTANTANEOUS PEAK FLOW			828	Mar 24	8.72	Sep 2 1940
INSTANTANEOUS PEAK STAGE			4.20	Mar 24	23	Sep 8 1964
INSTANTANEOUS LOW FLOW			65	Sep 14	1.46	
ANNUAL RUNOFF (CFMS)	1.16		1.29		19.84	
ANNUAL RUNOFF (INCHES)	15.72		17.54		281	
10 PERCENT EXCEEDS	196		212		142	
50 PERCENT EXCEEDS	124		130		68	
90 PERCENT EXCEEDS	65		88			

a From rating curve extended above 3,000 ft³/s, highest since 1867.


MAURICE RIVER BASIN

01412150 MAURICE RIVER AT BIVALVE, NJ

LOCATION.--Lat 39°13'54", long 75°02'01", Cumberland County, Hydrologic Unit 02040406, on pier at Long Reach Marina in Bivalve, 1.1 mi south of Port Norris, and 1.4 mi northeast of Delaware Bay.

PERIOD OF RECORD.--October 1964 to September 1985 (annual maximum elevation only), May 1997 to February 1999 (unpublished fragmentary gage-height record), March to September 2000.

GAGE.--Water-stage recorder. Datum of gage is at 0.00 ft North American Vertical Datum of 1988 (NAVD of 1988). To determine approximate corresponding National Geodetic Vertical Datum of 1929 (NGVD of 1929) elevation, add 1.20 ft. To determine corresponding Mean Lower Low Water Datum elevation, based on data from National Ocean Service station 8536889, add 3.54 ft. From October 1964 to September 1985, crest-stage gage at NGVD of 1929 located 0.3 mi downstream of current station.

REMARKS.--Records fair. Record for complete analysis unavailable, March 1-8. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Gage-height satellite telemeter at station.

EXTREMES FOR PERIOD OF PUBLISHED RECORD.--Maximum elevation recorded, 6.91 ft (adjusted to NAVD of 1988), Oct. 25, 1980, from tidal crest-stage gage; minimum recorded, -4.87 ft (NAVD of 1988), April 9, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 4.54 ft (NAVD of 1988), Sept. 26; minimum recorded, -4.87 ft (NAVD of 1988), April 9.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	---	---	---	---	---	3.60	4.05	3.66	4.22	4.50	4.21	4.54
high tide	Date	---	---	---	---	---	20	19	19	2	31	29	26
Minimum	Elevation	---	---	---	---	---	-4.41	-4.87	-4.16	-3.83	-3.76	-3.59	-3.70
low tide	Date	---	---	---	---	---	17	9	5	3	4	28	18
Mean high tide		---	---	---	---	---	---	2.59	2.84	2.75	3.00	2.94	2.89
Mean water level		---	---	---	---	---	---	-.17	.08	-.01	.18	.17	.17
Mean low tide		---	---	---	---	---	---	-3.04	-2.88	-2.99	-2.84	-2.80	-2.75

DELAWARE RIVER BASIN

201

01434000 DELAWARE RIVER AT PORT JERVIS, NY

LOCATION.--Lat 41°22'14", long 74°41'52", Pike County, PA, Hydrologic Unit 02040104, on right bank 250 ft downstream from bridge (on U.S. Highways 6 and 209) between Port Jervis, N.Y. and Matamoras, PA, 1.2 mi upstream from Neversink River, and 6.5 mi downstream from Mongaup River.

DRAINAGE AREA.--3,070 mi².

PERIOD OF RECORD.--October 1904 to current year.

REVISED RECORDS.--WSP 1031: 1905-36. WDR NY-71-1: 1970. WDR NY-82-1: Drainage area. WDR NY-86-1: 1979-80.

GAGE.--Water-stage recorder. Datum of gage is 415.35 ft above sea level. October 1904 to August 13, 1928, non-recording gage at bridge 250 ft upstream at present datum; operated by U.S. Weather Service prior to June 20, 1914.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Lake Wallenpaupack and by Toronto, Cliff Lake, and Swinging Bridge Reservoirs (see Reservoirs in Delaware River Basin) and smaller reservoirs. Large diurnal fluctuations at medium and low flows caused by powerplants on tributary streams. Subsequent to September 1954, entire flow from 371 mi² of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi² of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow from these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Satellite gage-height telemeter and National Weather Service telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge prior to current degree of regulation, 233,000 ft³/s, Aug. 19, 1955, gage height, 23.91 ft, from floodmarks in gage house, from rating curve extended above 89,000 ft³/s, on basis of slope-area measurement of peak flow; maximum discharge since current degree of regulation, 134,000 ft³/s, Jan. 20, 1996, gage height, 18.37 ft; maximum gage height, 26.6 ft, Feb. 12, 1981 (ice jam), from floodmarks; minimum observed discharge, 175 ft³/s, Sept. 23, 1908, gage height, 0.6 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--The U.S. Weather Bureau reported a discharge of 205,000 ft³/s, Oct. 10, 1903, gage height, 23.1 ft, from rating curve extended above 70,000 ft³/s, by velocity-area studies; maximum gage height, 25.5 ft, Mar. 8, 1904 (ice jam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,500 ft³/s, Feb. 28, gage height, 9.39 ft; minimum, 1,280 ft³/s, Sept. 1, gage height, 2.14 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2830	1810	e5000	2810	e2800	15700	7740	6350	6430	4240	3420	1860
2	3060	2350	e4300	2180	e2900	13100	6650	5870	5880	3490	3640	2010
3	2140	3120	e3800	2310	e2900	12300	6370	5290	4980	2880	3360	2070
4	2150	4430	e3400	2790	e2600	10600	7810	4870	3860	3000	3070	2220
5	3370	3850	e3300	3180	e2700	9250	14800	4480	3790	3240	2660	1830
6	3650	3160	e3200	3190	e2400	8550	13300	3870	6970	2760	1890	1900
7	2950	2540	e3300	2810	e2500	7900	11500	3260	18900	2330	2580	1960
8	2630	2400	e3300	2540	e3200	7850	9160	3460	16400	2200	3510	1850
9	2370	2190	e3000	2160	e3100	9240	10200	3840	12900	1680	2930	1880
10	2320	2090	e2700	2470	e2900	11700	12100	3580	10600	1630	3060	1660
11	3130	2020	e2600	4170	e2600	12900	11300	6560	8700	1910	2640	1770
12	3850	2010	e2500	4710	e2800	20500	10200	7190	9210	1870	5550	2040
13	3290	1890	e2400	4220	e2300	22500	9240	9520	10600	1820	8400	2800
14	3110	1790	e2600	3950	e2500	16700	8430	11100	11700	1630	4830	6080
15	3560	1910	e3800	3270	e4000	13800	7560	11400	12300	1970	3950	4400
16	3310	1660	e4700	2580	e6400	12000	6850	9370	10800	3170	3720	3790
17	2620	1600	e5000	2600	e7000	13000	6920	8250	9300	6180	3120	2870
18	2350	1570	e4500	2700	e6000	14600	9930	7570	8420	5250	2810	2570
19	2570	1480	e4000	2630	e5600	12800	14700	9030	8960	3610	2290	2770
20	2450	1510	e3500	e2700	e4700	11100	13000	13700	8500	2860	1830	2830
21	2530	1510	e4300	e2700	e4400	9660	10900	13300	7180	2750	1790	2930
22	2690	1480	e4500	2980	e4100	8790	14400	12100	7410	2420	2150	2450
23	2600	1470	e4400	2390	e3100	7990	15100	13800	7800	2310	1950	2130
24	2200	1480	e4000	2560	e4300	7100	15200	17700	6410	2210	2570	1570
25	2620	1470	e3100	3000	5450	6120	14000	25300	5210	2310	2530	1710
26	2580	1640	e3300	e2800	9090	5380	12400	20400	4980	2260	2260	2190
27	2500	4980	e3100	e2800	13200	5370	11000	15900	6560	3280	1710	2320
28	2540	8590	e3100	e2900	27400	7680	9900	12800	5930	3470	1580	2560
29	2240	6720	e3000	e3000	24200	12100	8230	10700	4940	2630	1730	2430
30	2120	5470	e2800	e2300	---	10700	6880	9270	4940	2340	1820	2320
31	1590	---	2690	e2300	---	9310	---	7680	---	3010	1900	---
TOTAL	83920	80190	109190	89700	168140	346290	315770	297510	250560	86710	91250	73770
MEAN	2707	2673	3522	2894	5798	11170	10530	9597	8352	2797	2944	2459
MAX	3850	8590	5000	4710	27400	22500	15200	25300	18900	6180	8400	6080
MIN	1590	1470	2400	2160	2300	5370	6370	3260	3790	1630	1580	1570

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)

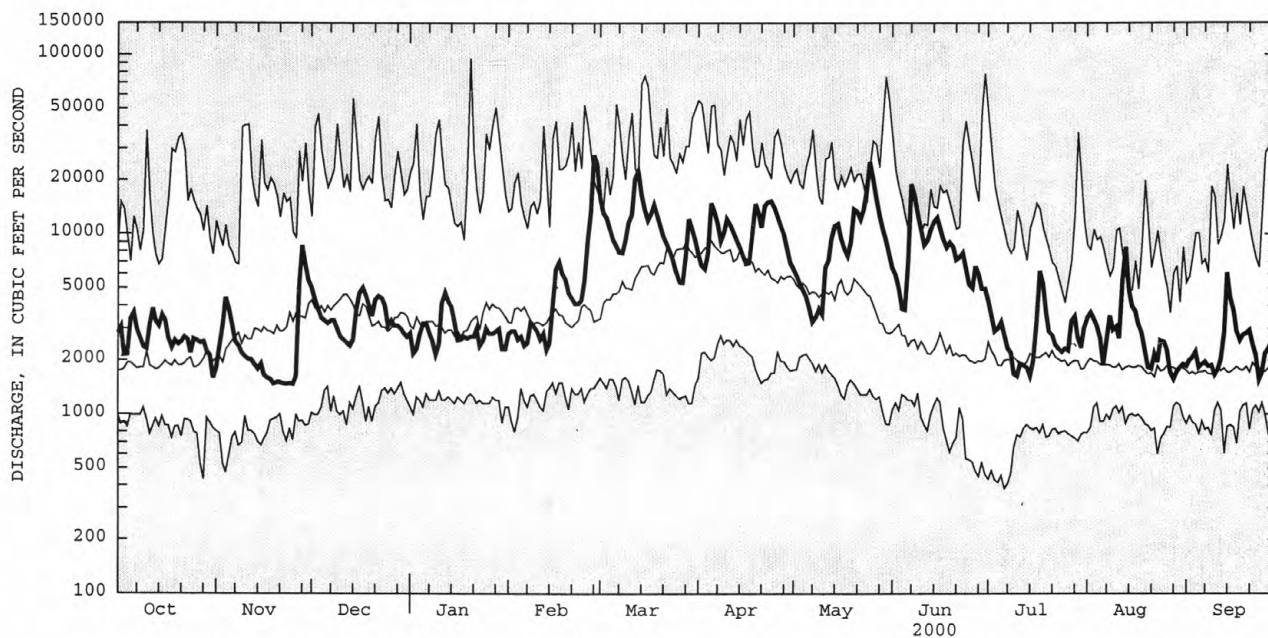
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
MEAN	2978	4101	5125	4863	5160	8091	9430	6182	3900	2716	2241	2415
MAX	10440	10310	17280	12980	13730	17520	23650	12670	12650	6680	4513	7928
(WY)	1978	1973	1997	1996	1976	1977	1993	1984	1972	1973	1969	1987
MIN	1001	884	1475	1216	1601	2583	2954	1890	993	699	963	1144
(WY)	1965	1965	1999	1981	1980	1981	1985	1995	1965	1965	1965	1965

DELAWARE RIVER BASIN

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000	
ANNUAL TOTAL	1232760		1993000		4762	
ANNUAL MEAN	3377		5445		7216	
HIGHEST ANNUAL MEAN					2028	
LOWEST ANNUAL MEAN					95200	
HIGHEST DAILY MEAN	36000	Jan 25	27400	Feb 28	385	Jan 20 1996
LOWEST DAILY MEAN	1000	Jan 2	1470	Nov 23	432	Jul 6 1965
ANNUAL SEVEN-DAY MINIMUM	1390	Sep 7	1490	Nov 19	10300	Jul 1 1965
10 PERCENT EXCEEDS	6020		12100		2850	
50 PERCENT EXCEEDS	2490		3300		1500	
90 PERCENT EXCEEDS	1570		1900			

e Estimated



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
 SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

01437500 NEVERSINK RIVER AT GODEFFROY, NY

LOCATION.--Lat 41°26'28", long 74°36'08", Orange County, NY, Hydrologic Unit 02040104, on right bank just upstream from highway bridge on Graham Road, 0.5 mi downstream from Basher Kill, 0.8 mi southeast of Godeffroy, 1.7 mi south of Cuddebackville, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--307 mi².

PERIOD OF RECORD.--July 1937 to current year. Gage heights and discharge measurements, August to October 1903 and August 1909 to April 1914, and twice-daily figures of discharge for January 1911 to December 1912 (which do not represent daily mean discharges because of diurnal fluctuation) are published in WSP 97, 261, 321, 351, and 381. August to October 1903, published as "Navesink River at Godeffroy, NY."

REVISED RECORDS.--WSP 1502: 1951(M). WDR NY-82-1: Drainage area. WDR NY-87-1: 1986.

GAUGE.--Water-stage recorder. Datum of gage is 459.66 ft above sea level (levels by Corps of Engineers). Prior to Apr. 30, 1914, nonrecording gages at same site (August to October 1903 at datum 0.98 ft higher).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Prior to 1949, diurnal fluctuation at low and medium flow caused by powerplant at Cuddebackville. Subsequent to June 1953, entire flow from 92.5 mi² of drainage area controlled by Neversink Reservoir (see Reservoirs in Delaware River Basin). Part of flow diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill), impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge prior to regulation, 24,500 ft³/s, Nov. 26, 1950, gage height, 11.79 ft; maximum discharge since regulation, 33,000 ft³/s, Aug. 19, 1955, gage height, 12.49 ft, from rating curve extended above 11,000 ft³/s, on basis of slope-area measurement of peak flow; minimum discharge observed, no flow July 21, 22, 28, 1911, result of regulation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,120 ft³/s, June 7, gage height, 7.33 ft; minimum, 165 ft³/s, July 14, 15, gage height, 3.39 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	373	316	374	e270	e220	1390	504	543	517	275	456	227
2	305	350	347	e250	e210	1260	462	533	484	264	407	284
3	277	670	336	e270	e200	1070	440	508	481	257	446	357
4	331	512	332	313	e210	907	519	477	447	277	516	271
5	406	440	328	342	e230	818	568	453	441	257	418	247
6	353	410	350	e280	e210	748	473	449	1630	228	374	231
7	324	398	399	e270	e200	691	436	430	4690	209	720	218
8	307	380	360	e260	e190	819	405	432	3000	201	586	222
9	315	361	338	e250	e200	882	466	407	1970	196	463	224
10	371	350	323	315	e210	917	478	664	1270	194	465	216
11	462	344	334	568	e200	873	470	1110	892	191	446	212
12	382	328	324	448	e190	1920	453	765	1130	175	623	210
13	348	322	313	e380	e180	1410	422	861	880	171	641	326
14	356	316	327	e290	e200	1070	397	922	940	168	575	315
15	368	307	476	e310	e350	889	382	781	847	386	545	293
16	338	297	500	e330	418	765	368	650	721	3260	511	279
17	326	291	453	e270	375	1470	352	588	611	2350	461	257
18	318	282	423	e240	349	1210	546	566	599	1230	409	238
19	306	273	396	e260	e320	940	587	912	684	781	378	238
20	316	270	375	e260	e310	804	485	1210	512	519	344	303
21	366	270	526	e250	e300	702	618	1150	440	379	315	281
22	334	269	493	e240	e290	632	1870	967	559	308	297	258
23	472	264	442	e240	e300	564	1620	909	467	279	280	238
24	470	258	404	e240	e320	499	1340	1130	394	256	297	237
25	409	253	e370	e260	e450	451	1090	1310	359	243	275	243
26	386	292	349	e260	e600	434	936	1170	374	234	256	250
27	372	721	e330	e260	e620	405	819	895	405	583	245	279
28	349	577	e310	e240	e1600	891	744	749	370	461	239	258
29	331	451	e300	e230	1690	836	676	662	332	378	235	236
30	324	407	e290	e220	---	644	611	609	306	402	228	224
31	317	---	e270	e220	---	567	---	553	---	570	227	---
TOTAL	11012	10979	11492	8836	11142	27478	19537	23365	26752	15682	12678	7672
MEAN	355	366	371	285	384	886	651	754	892	506	409	256
MAX	472	721	526	568	1690	1920	1870	1310	4690	3260	720	357
MIN	277	253	270	220	180	405	352	407	306	168	227	210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000, BY WATER YEAR (WY)

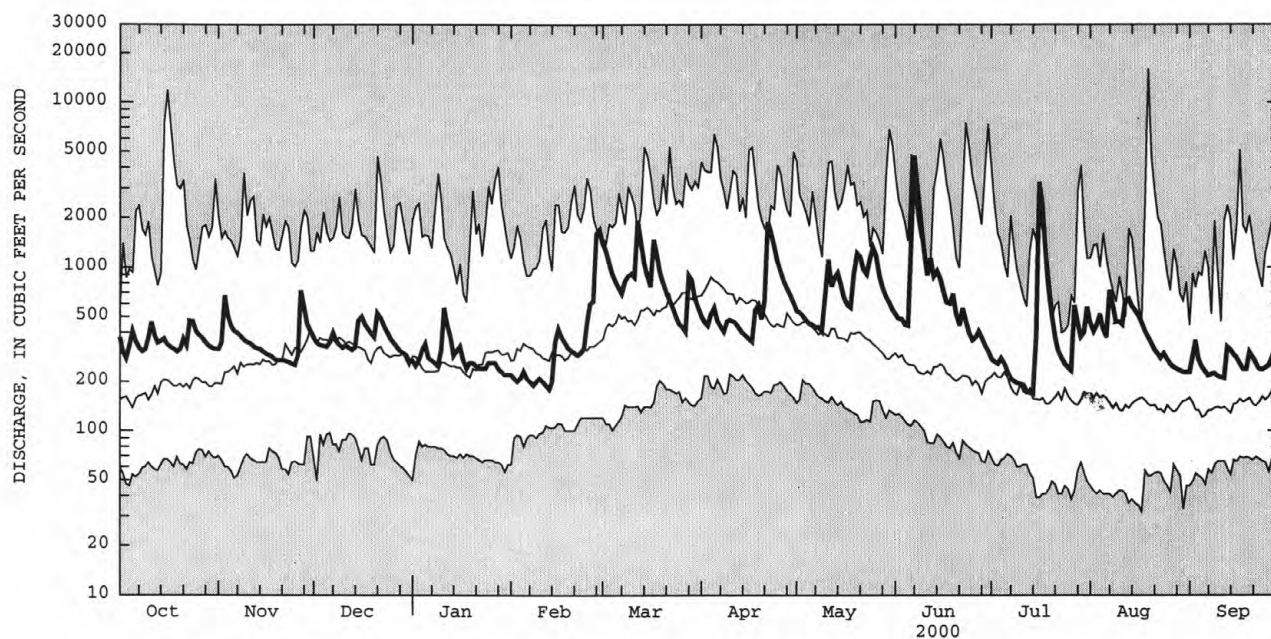
	MEAN	297	380	437	377	415	691	829	548	387	241	225	222
MAX	2033	1094	1227	1053	981	1370	2080	1392	1722	652	1327	705	
(WY)	1956	1956	1974	1979	1976	1977	1993	1989	1972	1972	1955	1960	
MIN	91.8	86.3	86.8	72.6	118	297	248	180	111	54.2	76.0	71.1	
(WY)	1998	1966	1999	1981	1980	1981	1985	1962	1957	1966	1968	1972	

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR				FOR 2000 WATER YEAR				WATER YEARS 1954 - 2000			
ANNUAL TOTAL	134056				186625							
ANNUAL MEAN	367				510				421			
HIGHEST ANNUAL MEAN									704			
LOWEST ANNUAL MEAN									215			
HIGHEST DAILY MEAN	5100				4690				15900			
LOWEST DAILY MEAN	50				168				32			
ANNUAL SEVEN-DAY MINIMUM	70				185				38			
10 PERCENT EXCEEDS	614				910				873			
50 PERCENT EXCEEDS	311				374				274			
90 PERCENT EXCEEDS	110				231				107			

e Estimated

DELAWARE RIVER BASIN

01437500 NEVERSINK RIVER AT GODEFFROY, NY--Continued



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

DELAWARE RIVER BASIN

205

01438500 DELAWARE RIVER AT MONTAGUE, NJ

LOCATION.--Lat 41°18'33", long 74°47'44", Pike County, PA, Hydrologic Unit 02040104, on right bank 1,500 ft upstream from toll bridge (on U.S. Route 206) between Montague, NJ and Milford, PA, 0.8 mi downstream from Sawkill Creek, and at river mile 246.3.

DRAINAGE AREA.--3,480 mi².

PERIOD OF RECORD.--March 1936 to September 1939 (gage heights only, published as "at Milford, PA"). October 1939 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR-NJ-81-2: 1980.

GAGE.--Water-stage recorder. Datum of gage is 369.93 ft above sea level. Prior to Feb. 9, 1940, nonrecording gage on upstream side of left span of subsequently dismantled bridge at present site at datum 70 ft lower.

REMARKS.-- Records good except for estimated daily discharges which are fair. Diurnal fluctuation at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, Cliff Lake, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, and Neversink Reservoirs (see Delaware River basin, diversions). Several measurements of water temperature were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3310	2050	5650	3430	e3400	19600	8870	7170	7130	4820	4110	2190
2	3750	2760	4830	2680	e3400	16000	7610	6700	6480	4030	4290	2380
3	2640	3880	4310	2790	e3500	14600	7220	6040	5660	3440	4040	2690
4	2590	5170	4000	3400	e3100	12600	8570	5580	4400	3470	4200	2740
5	3870	4660	3950	3890	e3200	11200	15800	5170	4250	3650	3560	2160
6	4350	3920	3790	3900	e2800	10400	14000	4620	7950	3260	2620	2330
7	3590	3160	3990	3420	e3000	9670	12200	3840	24900	2730	3290	2170
8	3190	2920	3850	3070	e3800	9600	10000	3990	20600	2560	4510	2150
9	3000	2740	3390	2620	e3700	11100	10900	4480	15300	2010	3820	2050
10	2880	2560	3160	2900	e3300	13500	12700	4240	12200	1900	3850	2120
11	3660	2460	3040	5500	3090	14800	11900	7800	10100	2250	3450	1940
12	4550	2380	2940	6450	3440	25000	11000	8270	10800	2130	5450	2370
13	3970	2360	2810	5320	2740	27500	10100	10500	11800	2060	10300	2760
14	3710	2180	2810	4770	3000	19800	9280	12100	12900	1860	6260	6240
15	4070	2230	4250	e4200	4790	16000	8410	12300	13300	2260	5140	4950
16	4030	2080	5700	e3300	e7800	13600	7630	10300	11800	5540	4780	4260
17	3190	1940	6050	e3100	8360	16200	7630	9160	10300	8650	4150	3490
18	2850	1880	5080	e3300	7040	17900	10700	8440	9280	6870	3630	2860
19	3030	1800	4470	e3100	6480	14800	16000	9940	9920	4920	3190	3140
20	2970	1750	4010	e3300	5630	12600	13900	15000	9340	3700	2450	3260
21	3100	1800	4990	e3200	5300	11000	12000	14600	8010	3190	2230	3460
22	3170	1770	5490	e3400	4830	9990	17300	13000	8220	2930	2600	2880
23	3420	1750	5110	e2900	4920	9050	18000	14700	8580	2690	2520	2640
24	2940	1750	4500	e2900	5280	8000	17600	18800	7220	2480	2920	1890
25	3180	1770	3620	e3700	6930	6800	15800	27800	5990	2560	3070	1920
26	3270	1940	3910	e3300	11000	5990	13700	22500	5540	2450	2930	2470
27	3060	7130	3710	e3400	17400	6020	12100	17200	7050	4210	2100	2730
28	3100	12900	3730	e3600	28700	8620	11000	13600	6610	4460	1980	2800
29	2810	8910	3530	e3500	30200	13100	9320	11400	5540	3280	2140	2830
30	2690	6780	3320	e2700	---	11700	7870	10000	5430	3010	2090	2660
31	2050	---	3340	e2700	---	10400	---	8440	---	3660	2360	---
TOTAL	101990	101380	127330	109740	200130	407140	349110	327680	286600	107030	114030	84530
MEAN	3290	3379	4107	3540	6901	13130	11640	10570	9553	3453	3678	2818
MAX	4550	12900	6050	6450	30200	27500	18000	27800	24900	8650	10300	6240
MIN	2050	1750	2810	2620	2740	5990	7220	3840	4250	1860	1980	1890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2000, BY WATER YEAR (WY)

	MEAN	3311	5084	6144	5876	5991	10010	11870	7434	4441	3074	2602	2660
MAX	15690	11760	18830	15600	15120	24480	31560	16090	15200	11220	14230	9167	
(WY)	1956	1952	1997	1996	1976	1945	1940	1943	1972	1945	1955	1960	
MIN	807	995	1665	1318	1748	3191	3322	2215	1214	864	715	892	
(WY)	1942	1965	1999	1981	1980	1981	1985	1965	1965	1954	1954	1941	

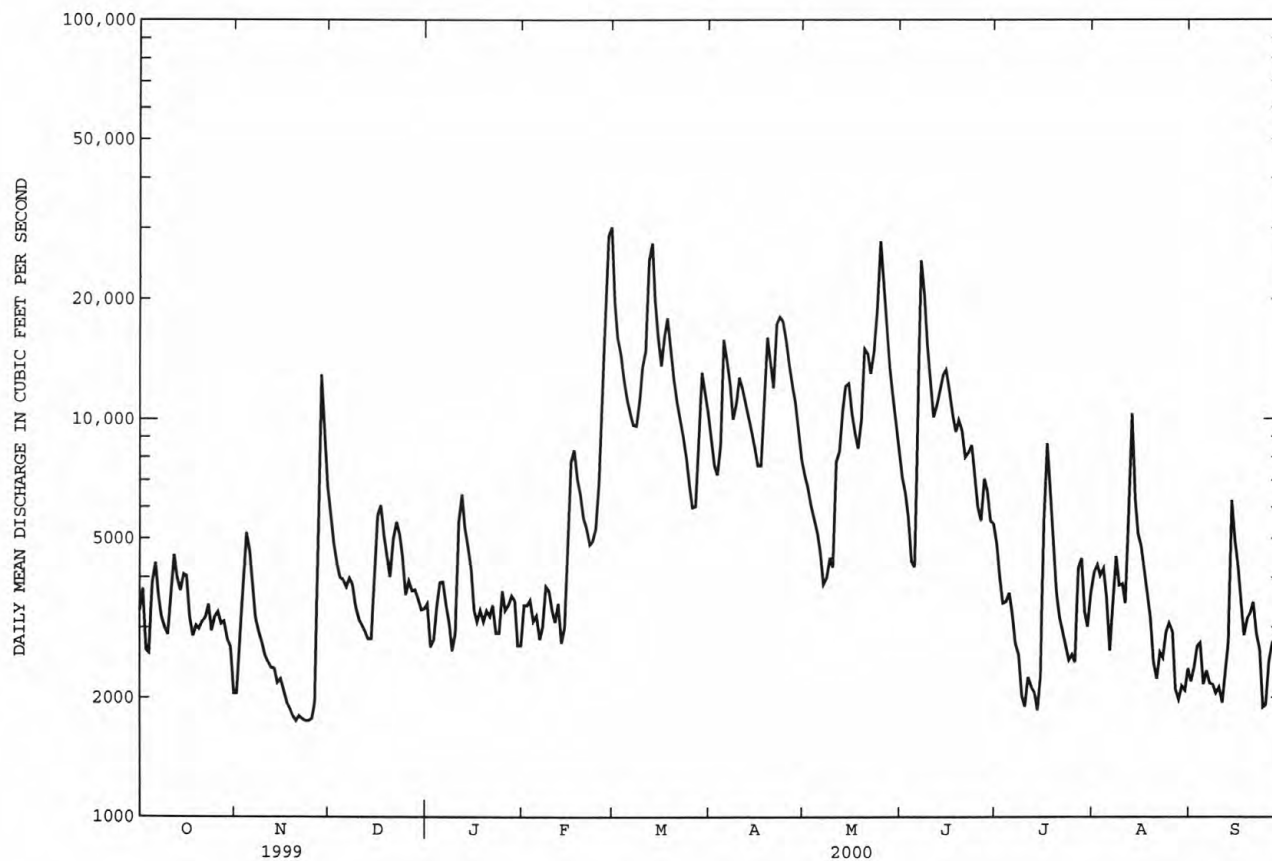
DELAWARE RIVER BASIN

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1940 - 2000	
ANNUAL TOTAL	1451460		2316690		5702	
ANNUAL MEAN	3977		6330		8621	
HIGHEST ANNUAL MEAN					2309	
LOWEST ANNUAL MEAN					187000	
HIGHEST DAILY MEAN	42000	Jan 25	30200	Feb 29	412	Aug 19 1955
LOWEST DAILY MEAN	1100	Jan 2	1750	Nov 20	565	Aug 23 1954
ANNUAL SEVEN-DAY MINIMUM	1360	Jan 1	1770	Nov 19	250000a	Jul 1 1965
INSTANTANEOUS PEAK FLOW			40000	Feb 28	35.15	Aug 19 1955
INSTANTANEOUS PEAK STAGE			14.33	Feb 28	382	Aug 19 1955
INSTANTANEOUS LOW FLOW			1630	Nov 25	12100	Aug 24 1954
10 PERCENT EXCEEDS	6970		13400		3440	
50 PERCENT EXCEEDS	3030		4030		1600	
90 PERCENT EXCEEDS	1750		2310			

a From rating curve extended above 90,000 ft³/s on basis of flood-routing study.

e Estimated



DELAWARE RIVER BASIN

207

01440000 FLAT BROOK NEAR FLATBROOKVILLE, NJ

LOCATION.--Lat 41°06'24", long 74°57'09", Sussex County, Hydrologic Unit 02040104, on right bank 1.0 mi upstream from Flatbrookville, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--64.0 mi².

PERIOD OF RECORD.--July 1923 to current year

REVISED RECORDS.--WSP 1432: 1924(M), 1928(M), 1929, 1930(M), 1932, 1933(M), 1936, 1938(M), 1939-40, 1949(M), 1952-53(M).
WDR-NJ-80-2: 1970(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Aug. 19, 1929. Datum of gage is 347.73 ft above sea level. Prior to Jan. 6, 1926, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow occasionally regulated by ponds above station. 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 650 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 22	0730	*987	*4.35	Aug 13	0800	660	3.71
Jun 7	1700	689	3.77				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	46	63	70	e78	468	144	140	64	77	142	45
2	68	44	65	68	e70	372	139	139	61	67	128	45
3	54	101	54	70	e61	310	129	133	58	62	115	53
4	64	86	54	81	e61	258	165	120	55	60	201	52
5	108	68	55	89	e54	230	195	114	55	56	138	45
6	89	61	59	77	e51	208	154	108	168	52	107	40
7	68	57	70	68	e47	188	136	102	567	48	113	37
8	58	55	63	65	e48	177	134	100	341	45	104	35
9	56	52	58	62	e53	166	161	99	198	42	83	34
10	68	52	53	74	e57	158	175	90	149	41	70	36
11	94	52	56	191	57	161	173	94	125	41	63	35
12	72	49	54	136	64	450	160	86	367	38	113	34
13	64	48	51	104	56	352	142	94	434	36	485	52
14	62	50	59	84	113	251	129	119	296	34	248	52
15	64	51	165	88	239	215	125	99	250	52	191	58
16	59	50	157	73	176	192	124	83	219	183	152	53
17	54	49	124	e74	134	379	119	74	182	150	120	42
18	49	47	104	e77	108	357	169	68	162	88	103	36
19	49	43	93	e79	110	257	172	126	162	60	97	34
20	55	42	88	e78	100	220	141	149	137	52	85	48
21	75	45	165	e75	86	199	212	142	117	46	74	46
22	63	44	148	e71	81	184	797	124	152	57	67	37
23	91	44	124	e67	88	181	494	122	135	56	62	33
24	94	44	109	e64	104	160	354	171	108	46	72	33
25	73	44	e87	63	179	148	274	166	95	41	71	33
26	64	46	e84	85	297	143	230	122	100	39	61	33
27	61	119	e78	78	302	131	203	104	107	235	56	47
28	55	134	e71	74	716	242	188	92	127	218	52	42
29	50	90	e74	e75	714	249	172	82	98	125	53	36
30	49	72	74	e72	---	185	154	74	89	128	50	32
31	47	---	73	e94	---	157	---	68	---	183	47	---
TOTAL	2075	1785	2632	2526	4304	7348	6064	3404	5178	2458	3523	1238
MEAN	66.9	59.5	84.9	81.5	148	237	202	110	173	79.3	114	41.3
MAX	108	134	165	191	716	468	797	171	567	235	485	58
MIN	47	42	51	62	47	131	119	68	55	34	47	32
CFSM	1.05	.93	1.33	1.27	2.32	3.70	3.16	1.72	2.70	1.24	1.78	.64
IN.	1.21	1.04	1.53	1.47	2.50	4.27	3.52	1.98	3.01	1.43	2.05	.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2000, BY WATER YEAR (WY)

MEAN	56.3	97.3	122	122	135	205	206	143	88.3	56.6	51.2	48.0
MAX	306	292	412	367	275	513	570	372	334	333	386	258
(WY)	1956	1928	1997	1979	1951	1936	1983	1989	1972	1928	1955	1933
MIN	9.57	12.2	16.7	24.5	37.3	82.0	65.9	44.0	23.7	11.1	8.96	7.01
(WY)	1964	1965	1999	1981	1940	1985	1946	1941	1965	1999	1999	1964

DELAWARE RIVER BASIN

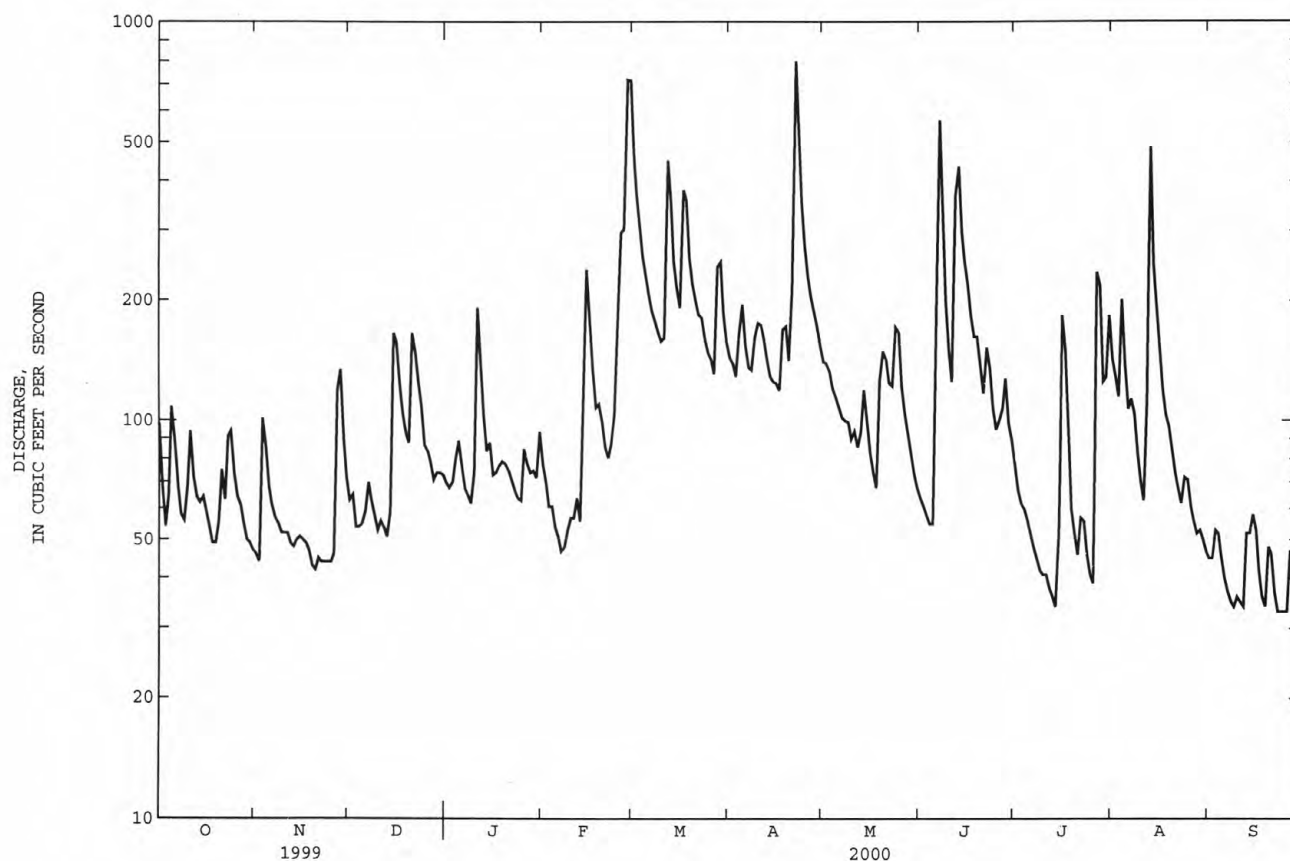
01440000 FLAT BROOK NEAR FLATBROOKVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1924 - 2000	
ANNUAL TOTAL	31040.5		42535		111	
ANNUAL MEAN	85.0		116		210	1928
HIGHEST ANNUAL MEAN					43.4	1965
LOWEST ANNUAL MEAN					6310	Aug 19 1955
HIGHEST DAILY MEAN	2420	Sep 17	797	Apr 22	4.1	Sep 11 1966
LOWEST DAILY MEAN	5.5	Aug 9	32	Sep 30	5.3	Sep 6 1995
ANNUAL SEVEN-DAY MINIMUM	5.6	Aug 7	36	Sep 6	9560a	Aug 19 1955
INSTANTANEOUS PEAK FLOW			987	Apr 22	12.58b	Aug 19 1955
INSTANTANEOUS PEAK STAGE			4.35	Apr 22	3.6	Sep 25 1964
INSTANTANEOUS LOW FLOW			26	Feb 13	1.73	
ANNUAL RUNOFF (CFSM)	1.33		1.82		23.51	
ANNUAL RUNOFF (INCHES)	18.04		24.72		237	
10 PERCENT EXCEEDS	156		213		72	
50 PERCENT EXCEEDS	63		83		17	
90 PERCENT EXCEEDS	9.5		45			

a From rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow.

b From high-water mark in gage house.

e Estimated



DELAWARE RIVER BASIN

209

01443280 EAST BRANCH PAULINS KILL NEAR LAFAYETTE, NJ

LOCATION.--Lat 41°04'34", long 74°41'45", Sussex County, Hydrologic Unit 02020007, on right downstream wingwall of bridge on Garrison Road, 0.8 mi upstream from mouth, and 1.6 mi south of Lafayette.

DRAINAGE AREA.--13.0 mi².

PERIOD OF RECORD.--August 1992 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 555.40 ft above sea level (levels from American Geodetic Survey Co. benchmark).

REMARKS.--Records fair. Possible regulation from ponds and golf courses upstream. A significant portion of the base flow is the result of pumpage from a limestone quarry into a tributary approximately 1.5 mi upstream from gage.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 22	1215	104	4.16	Aug 13	1000	*238	*5.52

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	15	13	13	13	44	22	23	16	16	24	13
2	19	17	12	13	14	38	21	24	16	15	22	13
3	17	31	12	14	13	33	22	23	15	15	22	14
4	19	25	12	15	13	30	27	22	14	18	27	18
5	28	19	13	20	13	28	27	21	14	18	25	17
6	25	17	13	17	13	26	23	21	18	15	20	13
7	21	16	13	15	13	24	21	20	47	14	19	12
8	19	16	12	15	13	23	20	21	36	13	17	12
9	18	14	12	15	13	22	24	20	22	13	16	11
10	20	14	12	16	12	24	26	19	19	13	14	11
11	22	14	12	21	14	25	23	20	19	12	14	11
12	19	13	12	18	15	48	22	18	38	12	42	11
13	18	13	11	16	14	44	20	20	52	12	210	21
14	18	13	15	15	24	32	19	30	38	11	132	24
15	18	13	25	15	34	28	19	24	29	15	116	24
16	17	12	21	14	28	26	21	20	25	19	85	24
17	17	12	18	14	25	47	25	19	22	16	55	17
18	17	12	17	14	22	52	34	18	22	14	43	14
19	16	12	16	14	22	37	32	24	25	13	34	14
20	22	12	16	13	21	32	25	31	22	13	29	17
21	26	13	22	13	20	29	39	36	20	12	25	15
22	22	13	19	13	19	28	93	28	28	12	22	13
23	27	12	17	13	20	25	73	28	25	12	21	12
24	26	11	16	13	24	24	51	34	21	11	21	12
25	23	12	15	13	31	24	38	30	18	11	20	12
26	20	13	14	14	37	25	35	23	16	12	18	12
27	18	21	14	13	38	23	32	21	20	24	17	14
28	17	21	14	13	58	36	30	20	21	26	16	13
29	18	17	14	13	59	38	28	19	18	19	15	12
30	17	14	13	13	---	28	25	18	18	22	14	11
31	16	---	14	13	---	24	---	16	---	29	13	---
TOTAL	624	457	459	451	655	967	917	711	714	477	1168	437
MEAN	20.1	15.2	14.8	14.5	22.6	31.2	30.6	22.9	23.8	15.4	37.7	14.6
MAX	28	31	25	21	59	52	93	36	52	29	210	24
MIN	16	11	11	13	12	22	19	16	14	11	13	11
CFSM	1.55	1.17	1.14	1.12	1.74	2.40	2.35	1.77	1.83	1.18	2.90	1.12
IN.	1.79	1.31	1.31	1.29	1.88	2.77	2.63	2.04	2.04	1.37	3.34	1.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2000, BY WATER YEAR (WY)

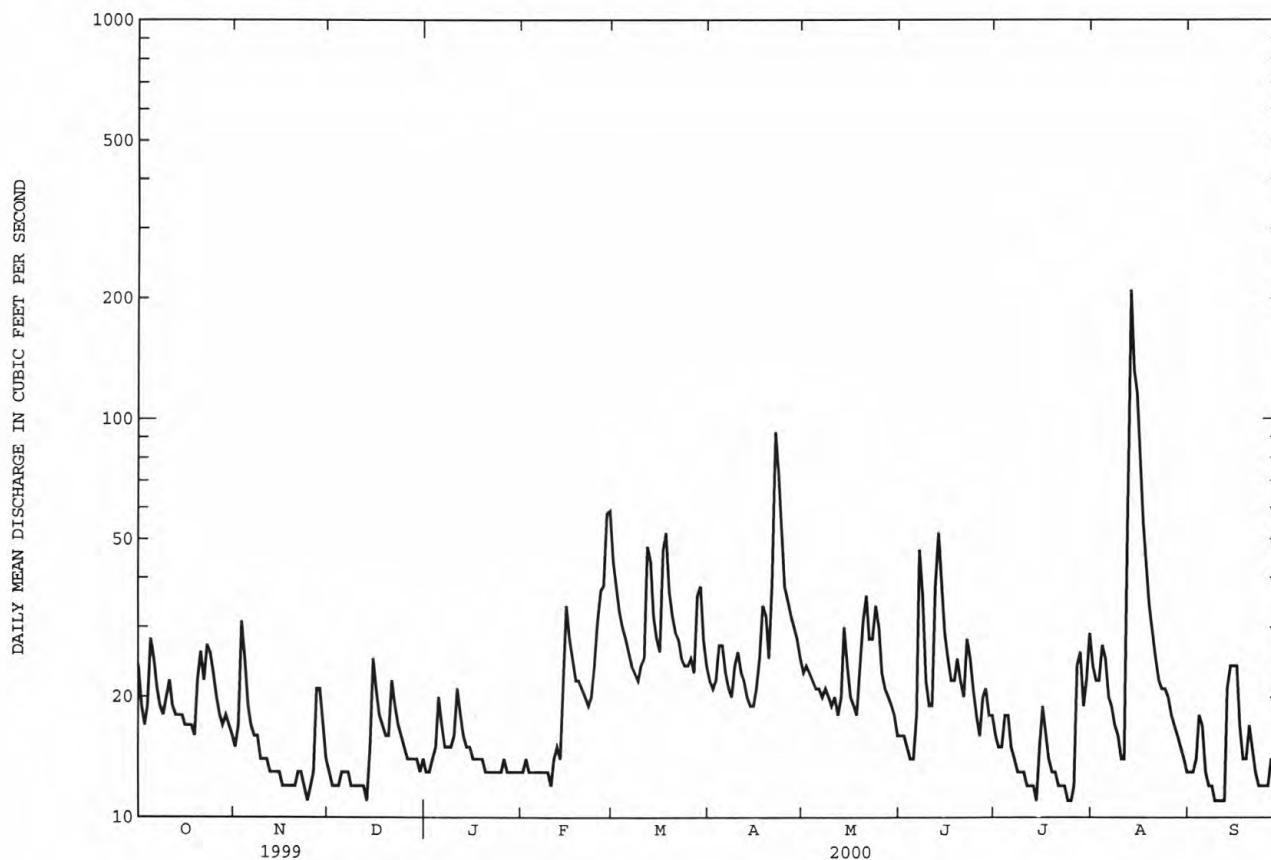
	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	16.2	18.6	23.9	26.0	24.5	38.5	37.9	25.6	17.5
MAX	33.2	34.3	63.4	41.1	32.5	58.5	64.3	48.8	36.4
(WY)	1997	1996	1997	1996	1996	1993	1993	1998	1996
MIN	8.52	10.4	8.55	14.5	17.4	25.5	17.5	14.3	8.27
(WY)	1993	1999	1999	2000	1995	1997	1995	1995	1999

DELAWARE RIVER BASIN

01443280 EAST BRANCH PAULINS KILL NEAR LAFAYETTE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1992 - 2000	
ANNUAL TOTAL	6425.3		8037		22.3	
ANNUAL MEAN	17.6		22.0		27.2	
HIGHEST ANNUAL MEAN					15.6	
LOWEST ANNUAL MEAN					210	
HIGHEST DAILY MEAN	196	Sep 17	210	Aug 13	210	Aug 13 2000
LOWEST DAILY MEAN	5.3	Aug 25	11	many days	4.3	Nov 10 1998
ANNUAL SEVEN-DAY MINIMUM	5.8	Aug 1	12	Sep 6	5.8	Aug 1 1999
INSTANTANEOUS PEAK FLOW			238	Aug 13	275	Jan 20 1996
INSTANTANEOUS PEAK STAGE			5.52	Aug 13	5.81a	Jan 20 1996
INSTANTANEOUS LOW FLOW			11	many days	2.9	Sep 29 1998
ANNUAL RUNOFF (CFSM)	1.36		1.69		1.72	
ANNUAL RUNOFF (INCHES)	18.40		23.02		23.33	
10 PERCENT EXCEEDS	27		33		42	
50 PERCENT EXCEEDS	16		18		17	
90 PERCENT EXCEEDS	6.4		12		8.2	

a From crest-stage gage.



DELAWARE RIVER BASIN

211

01443500 PAULINS KILL AT BLAIRSTOWN, NJ

LOCATION.--Lat 40°58'51", long 74°57'14" (revised), Warren County, Hydrologic Unit 02040105, on right bank 1,200 ft upstream from bridge on State Highway 94 in Blairstown, 1,400 ft upstream from Blairs Creek, and 10 mi upstream from mouth.

DRAINAGE AREA.--126 mi².

PERIOD OF RECORD.--October 1921 to September 1976, October 1977 to current year.

REVISED RECORDS.--WSP 971: 1942. WSP 1382: 1952-53(M).

GAGE.--Water-stage recorder and concrete control (Aug. 1, 1931, to Aug. 3, 1941, concrete control at site 280 ft, downstream). Datum of gage is 335.86 ft above sea level. Prior to May 24, 1922, nonrecording gage and May 24, 1922 to July 31, 1931, water-stage recorder, at site of former highway bridge 1,300 ft downstream at different datum. Aug. 1, 1931 to July 28, 1939, water-stage recorder at site 100 ft downstream at present datum.

REMARKS.--Records good, except for those above 200 ft³/s and estimated daily discharges which are poor. Diurnal fluctuations caused by unknown source and flow regulated slightly by Swartswood Lake. Pumpage from limestone quarry enters tributary upstream from gage for decades. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 28	1715	1,290	4.23	Apr 22	0830	*1,550	*4.87

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	83	113	129	113	832	251	212	128	173	249	78
2	125	88	101	129	102	663	233	201	120	148	238	85
3	109	139	97	130	97	531	223	186	116	138	230	86
4	110	146	95	139	106	453	275	162	105	144	379	96
5	153	134	98	174	99	397	298	155	100	136	279	94
6	147	118	105	160	91	349	253	147	150	119	224	109
7	128	108	118	139	90	310	229	137	379	108	223	111
8	110	99	112	134	84	289	213	132	320	94	202	107
9	103	93	101	127	86	270	265	130	233	86	171	105
10	117	90	99	145	93	266	282	137	181	84	153	102
11	140	91	104	241	93	279	262	144	181	80	136	97
12	119	85	103	214	105	652	246	136	529	73	160	93
13	104	86	98	189	102	552	219	140	767	69	661	169
14	104	85	125	179	162	445	204	211	601	67	633	147
15	100	85	238	185	285	390	196	189	480	88	551	170
16	92	82	226	142	e180	348	194	147	393	155	434	154
17	88	78	198	122	e150	595	202	135	322	128	319	131
18	85	75	180	122	e140	580	275	132	289	100	245	118
19	78	72	165	114	e130	465	276	193	268	89	216	113
20	89	74	159	113	e140	406	234	253	232	83	182	130
21	113	80	236	104	e140	359	458	263	210	77	154	121
22	107	78	244	e105	e150	329	1380	236	285	75	135	105
23	130	77	213	e100	e160	308	1050	230	246	67	129	94
24	136	75	193	e98	e180	291	761	318	204	63	130	94
25	120	77	168	e110	295	271	549	310	176	61	124	88
26	117	80	158	167	436	266	437	243	178	65	111	93
27	111	148	152	149	474	249	355	203	211	176	102	103
28	102	175	146	121	1040	357	303	187	255	187	96	99
29	93	146	139	111	1070	377	265	164	212	137	91	86
30	88	128	134	98	---	317	239	147	210	159	86	78
31	84	---	130	116	---	279	---	135	---	237	82	---
TOTAL	3456	2975	4548	4306	6393	12475	10627	5715	8081	3466	7125	3256
MEAN	111	99.2	147	139	220	402	354	184	269	112	230	109
MAX	154	175	244	241	1070	832	1380	318	767	237	661	170
MIN	78	72	95	98	84	249	194	130	100	61	82	78
CFSM	.88	.79	1.16	1.10	1.75	3.19	2.81	1.46	2.14	.89	1.82	.86
IN.	1.02	.88	1.34	1.27	1.89	3.68	3.14	1.69	2.39	1.02	2.10	.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2000, BY WATER YEAR (WY)

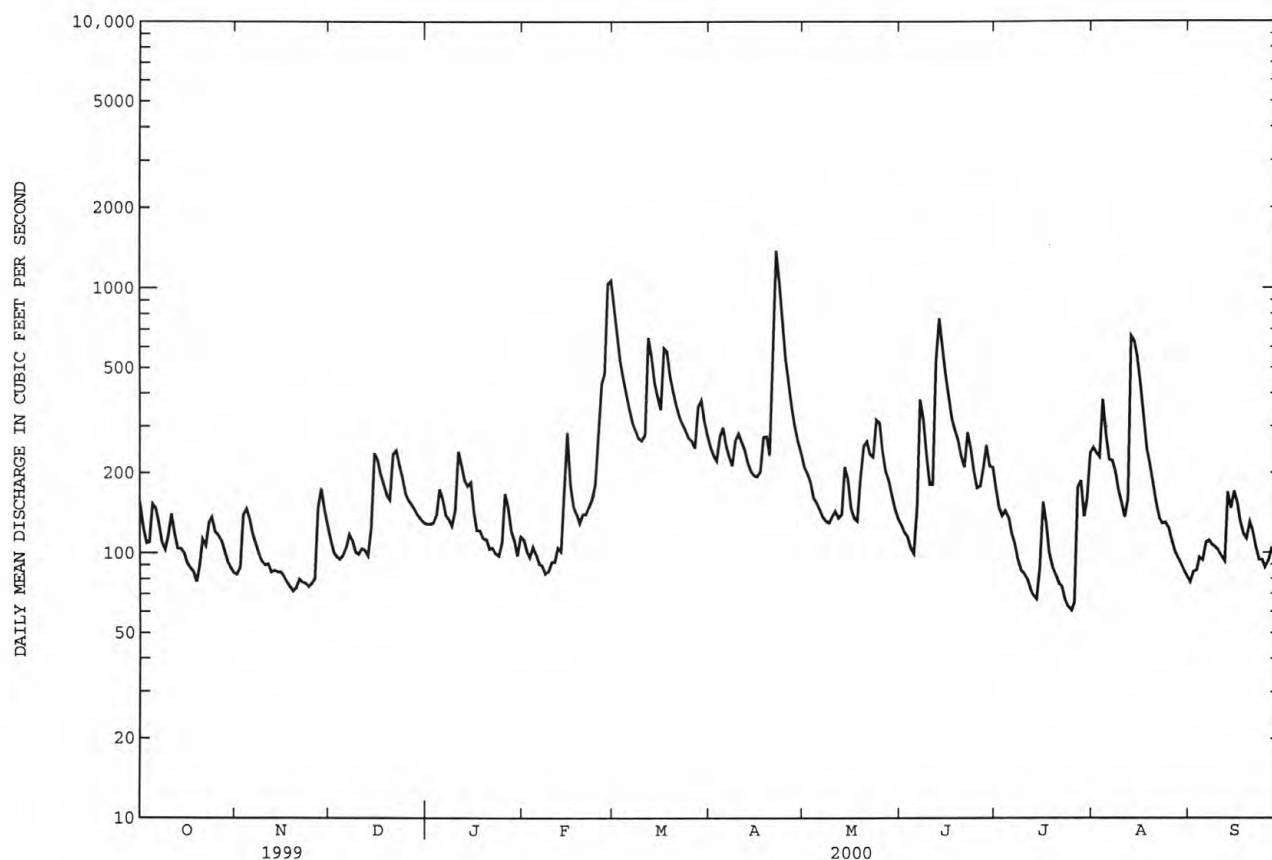
	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	109	166	213	223	249	372	338	224	153	114	105	106	634	479	862	712	516	963	930	650	690	527	663	626	1956	1933	1997	1979	1951	1936	1983	1989	1972	1945	1955	1933	20.5	22.1	35.5	50.5	67.4	139	106	54.6	41.0	19.4	19.6	18.2	1964	1965	1999	1981	1940	1965	1985	1941	1965	1955	1932	1964																			

DELAWARE RIVER BASIN

01443500 PAULINS KILL AT BLAIRSTOWN, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1922 - 2000	
ANNUAL TOTAL	53332		72423		197	
ANNUAL MEAN	146		198		362	
HIGHEST ANNUAL MEAN					67.4	
LOWEST ANNUAL MEAN					1952	
HIGHEST DAILY MEAN	2050	Sep 17	1380	Apr 22	5950	Aug 19 1955
LOWEST DAILY MEAN	11	Aug 4	61	Jul 25	5.0	Aug 13 1930
ANNUAL SEVEN-DAY MINIMUM	11	Aug 3	70	Jul 20	11	Aug 3 1999
INSTANTANEOUS PEAK FLOW			1550	Apr 22	8750	Aug 19 1955
INSTANTANEOUS PEAK STAGE			4.87	Apr 22	11.12	Aug 19 1955
INSTANTANEOUS LOW FLOW			57	Jul 26	2.8	Nov 1 1922
ANNUAL RUNOFF (CFSM)	1.16		1.57		1.56	
ANNUAL RUNOFF (INCHES)	15.75		21.38		21.26	
10 PERCENT EXCEEDS	275		358		412	
50 PERCENT EXCEEDS	110		143		133	
90 PERCENT EXCEEDS	19		86		35	

e Estimated



DELAWARE RIVER BASIN

213

01443900 YARDS CREEK NEAR BLAIRSTOWN, NJ

LOCATION.--Lat 40°58'51", long 75°02'25", Warren County, Hydrologic Unit 02040105, on left bank 100 ft upstream from bridge on Hainesburg-Mount Vernon Road, 1.4 mi downstream from Yards Creek Reservoir, 2.2 mi northeast of Hainesburg, 4.2 mi west of Blairstown, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--5.34 mi².

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WDR NJ-77-2: 1976. WDR NJ-79-2: 1977(m). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 606.8 ft above sea level.

REMARKS.--Records fair. Flow regulated by the GPU Generation Corp., at Yards Creek Reservoir 1.4 mi above station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.4	5.3	8.9	2.8	41	21	18	4.1	3.6	7.1	2.4
2	3.4	5.7	7.1	8.5	2.8	49	19	14	4.1	3.3	7.9	2.4
3	3.4	5.4	6.9	8.8	2.8	44	17	9.2	4.1	3.2	9.2	2.9
4	4.5	4.4	7.0	9.6	2.8	37	20	8.6	3.9	3.3	8.7	2.7
5	4.5	4.4	6.5	9.8	2.8	36	18	7.5	4.0	3.3	7.6	2.4
6	3.8	3.9	9.1	9.5	2.7	36	17	7.1	9.2	3.1	7.7	2.2
7	3.6	3.8	10	9.6	2.7	37	16	6.8	15	3.0	13	2.1
8	3.5	3.7	9.8	9.5	2.8	37	15	6.9	20	2.9	18	1.9
9	3.6	3.9	9.8	9.1	2.7	34	18	6.0	13	2.9	30	2.1
10	4.9	3.8	10	12	2.9	28	16	4.2	6.2	2.9	29	2.1
11	4.1	3.8	10	17	3.3	31	15	3.9	13	2.7	14	2.1
12	3.8	3.6	9.4	23	3.2	34	15	3.8	25	2.6	5.7	2.2
13	3.7	3.7	16	24	21	31	14	4.2	30	2.5	4.7	6.1
14	4.1	3.7	25	24	11	28	13	4.9	42	2.7	4.5	2.4
15	3.7	3.5	24	41	12	25	13	3.4	47	3.3	3.9	4.3
16	3.7	3.6	24	18	11	26	12	3.3	36	4.4	3.7	2.5
17	3.6	3.8	24	14	17	32	13	3.1	33	3.2	3.3	2.6
18	3.6	3.8	23	9.1	24	28	14	3.8	33	2.8	3.1	2.4
19	3.6	3.7	23	4.5	23	26	13	5.3	32	2.7	2.6	2.5
20	4.6	3.7	21	4.2	22	25	12	5.9	22	2.7	2.5	2.9
21	3.7	3.6	11	3.2	22	25	23	5.0	7.9	2.5	2.4	2.2
22	3.8	2.9	10	2.1	22	25	26	4.8	17	2.6	2.4	2.4
23	4.6	3.0	10	2.8	17	19	15	5.0	19	2.5	2.8	2.5
24	3.8	3.0	9.8	2.8	11	9.2	12	5.9	5.1	2.3	2.6	2.8
25	3.5	3.0	9.9	2.8	13	9.1	13	5.5	4.4	2.3	2.5	2.3
26	3.6	5.9	9.3	2.8	14	8.8	21	4.9	4.8	2.7	2.4	3.4
27	3.6	12	9.0	2.8	14	17	21	4.8	5.4	6.2	2.3	2.9
28	3.6	6.4	9.5	2.7	32	34	21	4.5	4.6	3.1	2.5	2.3
29	3.6	5.5	9.1	2.7	30	32	20	4.3	4.3	2.8	2.5	2.6
30	3.5	4.9	9.2	2.6	---	28	19	4.3	3.9	4.2	2.3	2.8
31	3.4	---	9.1	2.8	---	24	---	4.3	---	4.0	2.4	---
TOTAL	118.0	129.5	386.8	304.2	350.3	896.1	502	183.2	473.0	96.3	213.3	79.4
MEAN	3.81	4.32	12.5	9.81	12.1	28.9	16.7	5.91	15.8	3.11	6.88	2.65
MAX	4.9	12	25	41	32	49	26	18	47	6.2	30	6.1
MIN	3.4	2.9	5.3	2.1	2.7	8.8	12	3.1	3.9	2.3	2.3	1.9

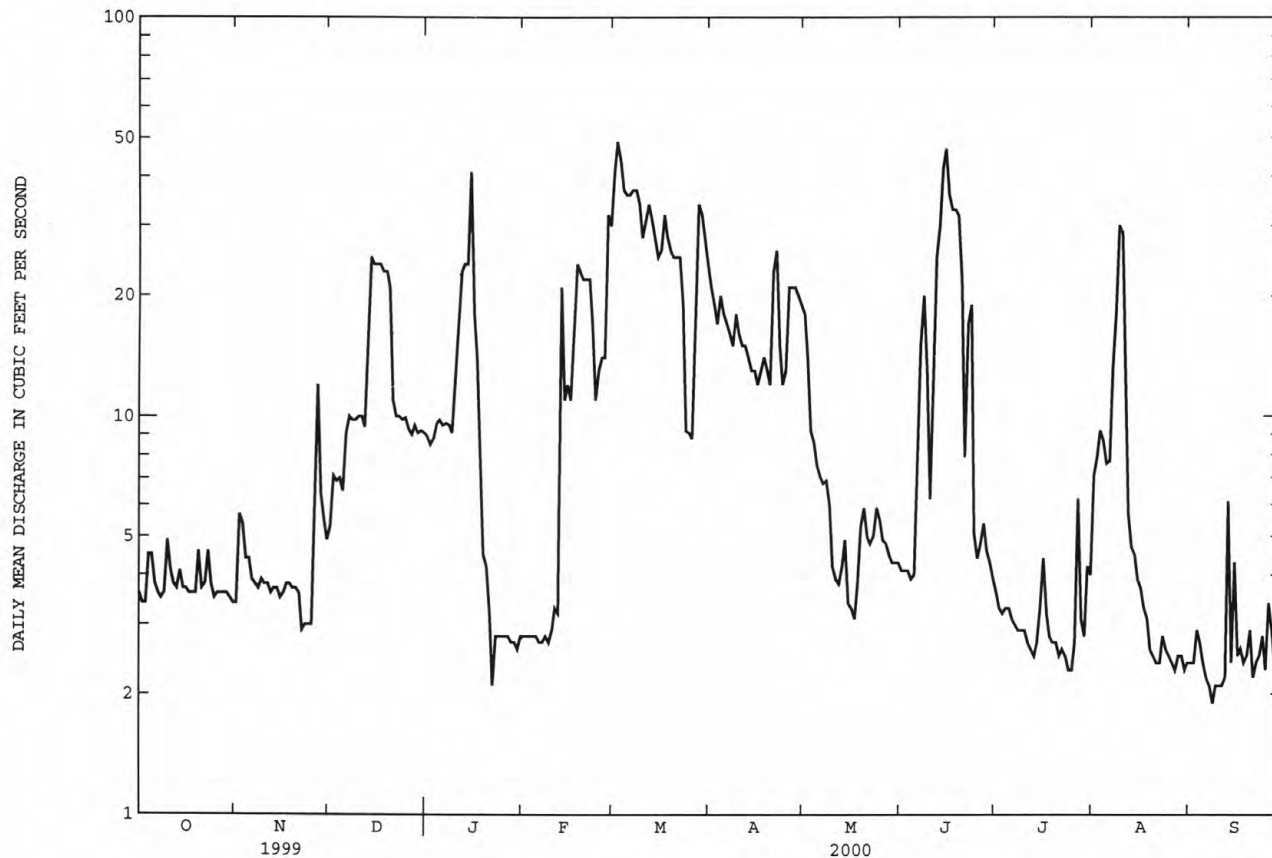
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2000, BY WATER YEAR (WY)

	5.99	8.12	14.0	14.3	14.7	18.3	17.9	13.7	8.67	4.83	4.54	4.49
MEAN												
MAX	33.6	26.3	48.4	51.0	36.4	50.1	55.3	33.7	35.2	19.9	21.6	27.0
(WY)	1990	1996	1997	1979	1979	1977	1983	1989	1972	1984	1969	1987
MIN	.97	1.20	.91	1.66	2.24	6.99	4.43	1.58	1.00	.89	.65	.58
(WY)	1981	1967	1981	1981	1985	1973	1981	1970	1980	1980	1980	1980

DELAWARE RIVER BASIN

01443900 YARDS CREEK NEAR BLAIRSTOWN, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1967 - 2000
ANNUAL TOTAL	2677.0	3732.1	
ANNUAL MEAN	7.33	10.2	10.8
HIGHEST ANNUAL MEAN			16.1
LOWEST ANNUAL MEAN			3.17
HIGHEST DAILY MEAN	46 Mar 4	49 Mar 2	225 Jan 18 1977
LOWEST DAILY MEAN	1.1 Jan 15	1.9 Sep 8	.02 Jun 19 1970
ANNUAL SEVEN-DAY MINIMUM	1.4 Aug 19	2.1 Sep 6	.46 Oct 7 1980
INSTANTANEOUS PEAK FLOW		97 Feb 13	583 Feb 24 1977
INSTANTANEOUS PEAK STAGE		2.91 Feb 13	3.92 Feb 24 1977
INSTANTANEOUS LOW FLOW		1.5 Jan 22	.00 Sep 12 1971
10 PERCENT EXCEEDS	18	25	24
50 PERCENT EXCEEDS	4.4	4.9	4.8
90 PERCENT EXCEEDS	1.9	2.6	1.2



LOCATION.--Lat 40°49'50", long 74°58'43", Warren County, Hydrologic Unit 02040105, on right bank at Pequest, 100 ft upstream from abandoned Lehigh and Hudson River Railway bridge, and 300 ft downstream from Furnace Brook.

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

REVISED RECORDS.--WSP 1902: 1940 (M), 1945, 1955 (M), 1957, 1959 (M).

GAGE.--Water-stage recorder. Concrete control since Sept. 29, 1929. Datum of gage is 398.78 ft above sea level. Prior to June 22, 1926, nonrecording gage at site 10 ft upstream at same datum.

REMARKS.--Records good. Several measurements of water temperature were made during the year. Some regulation from unknown sources upstream.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 28	0945	713	3.32	Jun 12	0830	861	3.64
Apr 22	0215	*1,080	*4.08	Aug 1	0130	813	3.54

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	78	100	100	81	407	189	215	131	149	560	90
2	111	87	90	100	80	361	182	214	123	132	291	111
3	95	179	84	104	77	319	179	201	124	122	330	102
4	97	134	85	108	79	287	200	184	118	136	350	114
5	154	117	86	151	79	262	200	174	111	146	251	127
6	139	107	93	128	78	238	180	167	133	125	201	103
7	117	100	103	115	77	218	167	160	198	112	179	89
8	101	93	93	107	74	205	162	155	183	106	165	82
9	94	91	89	101	70	194	194	148	150	95	152	77
10	107	92	90	120	78	203	208	142	128	94	138	74
11	124	92	97	182	81	226	186	152	121	93	125	74
12	108	89	90	143	93	425	182	141	680	85	186	73
13	99	88	87	126	86	343	165	146	549	77	243	99
14	101	86	124	101	145	287	164	337	356	74	260	110
15	94	84	215	87	231	245	169	221	285	90	394	142
16	94	82	163	108	214	225	164	171	251	170	267	129
17	96	81	139	64	199	438	157	149	220	152	213	109
18	86	78	127	85	175	367	199	143	212	114	176	91
19	82	75	121	84	165	314	192	312	229	97	166	89
20	93	75	118	80	154	279	172	327	199	92	150	116
21	113	78	163	77	144	260	383	321	174	84	137	102
22	111	76	152	72	142	244	876	273	398	79	126	87
23	125	74	139	77	157	230	610	257	276	74	118	79
24	117	74	128	78	195	217	491	300	208	72	119	76
25	101	79	109	74	252	205	399	282	174	70	115	74
26	93	86	110	72	301	201	341	228	160	76	109	74
27	91	163	113	90	315	190	295	193	167	206	102	78
28	84	148	105	77	607	308	268	178	214	170	96	74
29	82	119	103	78	484	289	247	162	170	132	95	69
30	82	109	101	74	---	240	230	150	170	137	95	67
31	81	---	100	76	---	208	---	139	---	249	97	---
TOTAL	3203	2914	3517	3039	4913	8435	7751	6342	6612	3610	6006	2781
MEAN	103	97.1	113	98.0	169	272	258	205	220	116	194	92.7
MAX	154	179	215	182	607	438	876	337	680	249	560	142
MIN	81	74	84	64	70	190	157	139	111	70	95	67
CFSM	.97	.92	1.07	.92	1.60	2.57	2.44	1.93	2.08	1.10	1.83	.87
IN.	1.12	1.02	1.23	1.07	1.72	2.96	2.72	2.23	2.32	1.27	2.11	.99

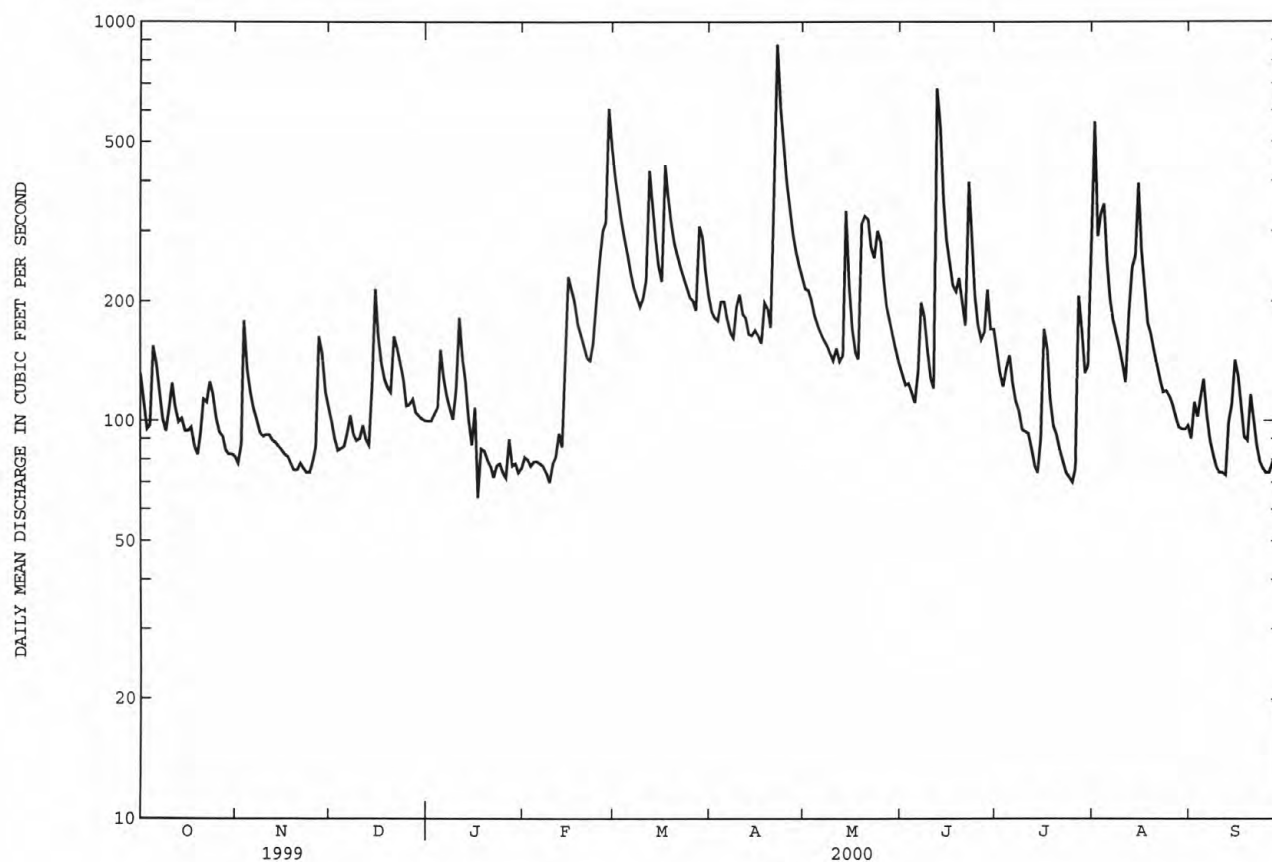
MEAN	88.2	128	163	172	198	278	264	188	129	104	90.7	88.8
MAX	391	409	714	627	372	750	720	430	556	487	409	354
(WY)	1990	1928	1997	1979	1939	1936	1983	1989	1972	1945	1928	1989
MIN	18.0	21.4	27.0	33.9	60.8	93.8	76.9	55.7	35.0	19.0	15.1	16.6
(WY)	1965	1966	1966	1966	1940	1965	1985	1965	1965	1965	1965	1964

DELAWARE RIVER BASIN

01445500 PEQUEST RIVER AT PEQUEST, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1922 - 2000	
ANNUAL TOTAL	43572		59123		157	
ANNUAL MEAN	119		162		285	1952
HIGHEST ANNUAL MEAN					45.8	1965
LOWEST ANNUAL MEAN						
HIGHEST DAILY MEAN	1390	Sep 17	876	Apr 22	2040	Jan 25 1979
LOWEST DAILY MEAN	19	Aug 4	64	Jan 17	12	Aug 18 1965
ANNUAL SEVEN-DAY MINIMUM	19	Aug 4	73	Sep 24	13	Aug 15 1965
INSTANTANEOUS PEAK FLOW			1080	Apr 22	2130	Jan 25 1979
INSTANTANEOUS PEAK STAGE			4.08	Apr 22	5.97a	Jan 25 1979
INSTANTANEOUS LOW FLOW			51	Jan 17	12	Aug 17 1965
ANNUAL RUNOFF (CFSM)	1.13		1.52		1.48	
ANNUAL RUNOFF (INCHES)	15.29		20.75		20.16	
10 PERCENT EXCEEDS	206		287		329	
50 PERCENT EXCEEDS	99		128		112	
90 PERCENT EXCEEDS	22		78		36	

a From high-water mark.



DELAWARE RIVER BASIN

217

01446500 DELAWARE RIVER AT BELVIDERE, NJ

LOCATION.--Lat 40°49'36", long 75°05'02", Warren County, Hydrologic Unit 02040105, on left bank at Belvidere, 800 ft downstream from Pequest River, and at river mile 197.7.

DRAINAGE AREA.--4,535 mi².

PERIOD OF RECORD.--October 1922 to current year.

REVISED RECORDS.--WSP 781: 1933(M). WSP 951: 1940-41, Drainage area. WSP 1432: 1923, 1924(M).

GAGE.--Water-stage recorder. Datum of gage 226.43 ft above sea level. Prior to Jan. 1, 1929, nonrecording gage at site 200 ft upstream at same datum.

REMARKS.--Records good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by lakes Wallenpaupack and Cliff, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversions from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Satellite telemeter and National Weather Service gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 10, 1903, reached a stage of 28.6 ft, from floodmark, discharge, 220,000 ft³/s, from rating curve extended above 170,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4680	3050	8350	4880	3420	30800	12800	10300	10100	7340	7450	3090
2	5060	3410	7180	4780	3930	23600	10800	10100	8840	6300	7530	3050
3	4580	5650	6360	4160	3900	21200	9920	9170	8260	5530	7130	3390
4	3950	6700	5880	4630	3920	18700	10700	8290	6760	5050	8010	3850
5	5030	7260	5650	5350	3920	16100	16000	7840	5890	5130	6750	3620
6	6250	6210	5650	5580	3790	15000	18400	7240	7110	5010	5550	3060
7	5620	5280	5780	5320	3290	13800	16100	6270	23100	4340	5050	3020
8	4850	4610	5710	4650	3300	12900	14000	5820	28700	3840	6340	2980
9	4460	4350	5280	4250	3740	14000	13000	6190	21200	3580	6120	2870
10	4400	4050	4850	4100	3790	15600	16000	6160	16600	3040	5460	2900
11	4850	3880	4650	6560	3620	18700	15600	7380	13800	2940	5230	2660
12	5840	3700	4450	9120	3500	25500	14800	10900	15100	3130	5340	2680
13	5900	3630	4290	8260	3450	38200	13600	10800	17700	3010	13000	3560
14	5380	3460	4460	6990	3660	28100	12400	14400	17300	2920	10800	4730
15	5170	3310	6090	5410	5140	22200	11700	15600	18200	2840	8610	7460
16	5590	3370	7590	5010	6730	19000	10600	13600	16600	4840	7410	5650
17	4930	3060	8190	4070	9010	19900	10000	11800	14600	10700	6630	4980
18	4360	2920	8010	3750	8400	24700	11600	10900	12900	9870	5650	4000
19	4050	2840	6960	3920	7250	21100	17600	11400	12900	7550	5150	3810
20	4310	2740	6370	4120	6740	18200	18000	16300	12800	5840	4370	4160
21	4420	2780	7540	4160	6180	15800	16900	18300	11400	4780	3720	4220
22	4450	2760	8420	3870	5730	14400	22700	16600	11800	4510	3560	4000
23	4930	2710	8000	3870	5570	13200	25500	16500	12100	4060	3780	3500
24	4800	2670	7390	3740	6160	11900	23900	19700	10700	3730	3750	3140
25	4360	2710	6090	3670	7120	10700	22200	30800	8880	3510	4240	2550
26	4720	2860	5000	3870	9830	9220	19200	28900	7950	3650	4050	2730
27	4450	5250	4940	3900	18700	8650	16900	23000	8680	5220	3620	3310
28	4260	17200	4940	3860	29300	10600	15200	18100	9930	7460	3070	3390
29	4210	13600	5010	3850	47100	15300	14000	15200	8330	6380	2910	3520
30	3850	10200	4650	3870	---	16100	11700	13200	7680	5500	2990	3320
31	3580	---	5030	3230	---	14300	---	11700	---	5910	3000	---
TOTAL	147290	146220	188760	146800	230190	557470	461820	412460	385910	157510	176270	109200
MEAN	4751	4874	6089	4735	7938	17980	15390	13310	12860	5081	5686	3640
MAX	6250	17200	8420	9120	47100	38200	25500	30800	28700	10700	13000	7460
MIN	3580	2670	4290	3230	3290	8650	9920	5820	5890	2840	2910	2550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2000, BY WATER YEAR (WY)

	MEAN	4616	7158	8413	8079	8380	14010	15810	9941	5987	4336	3652	3773
MAX	19570	21140	27730	21020	19930	42520	40720	21470	22280	16840	19260	13940	
(WY)	1956	1928	1997	1996	1976	1936	1940	1989	1972	1928	1955	1938	
MIN	1055	1226	1481	1683	2452	5243	4512	3261	1590	1017	881	1199	
(WY)	1942	1965	1923	1981	1980	1981	1985	1965	1965	1965	1954	1941	

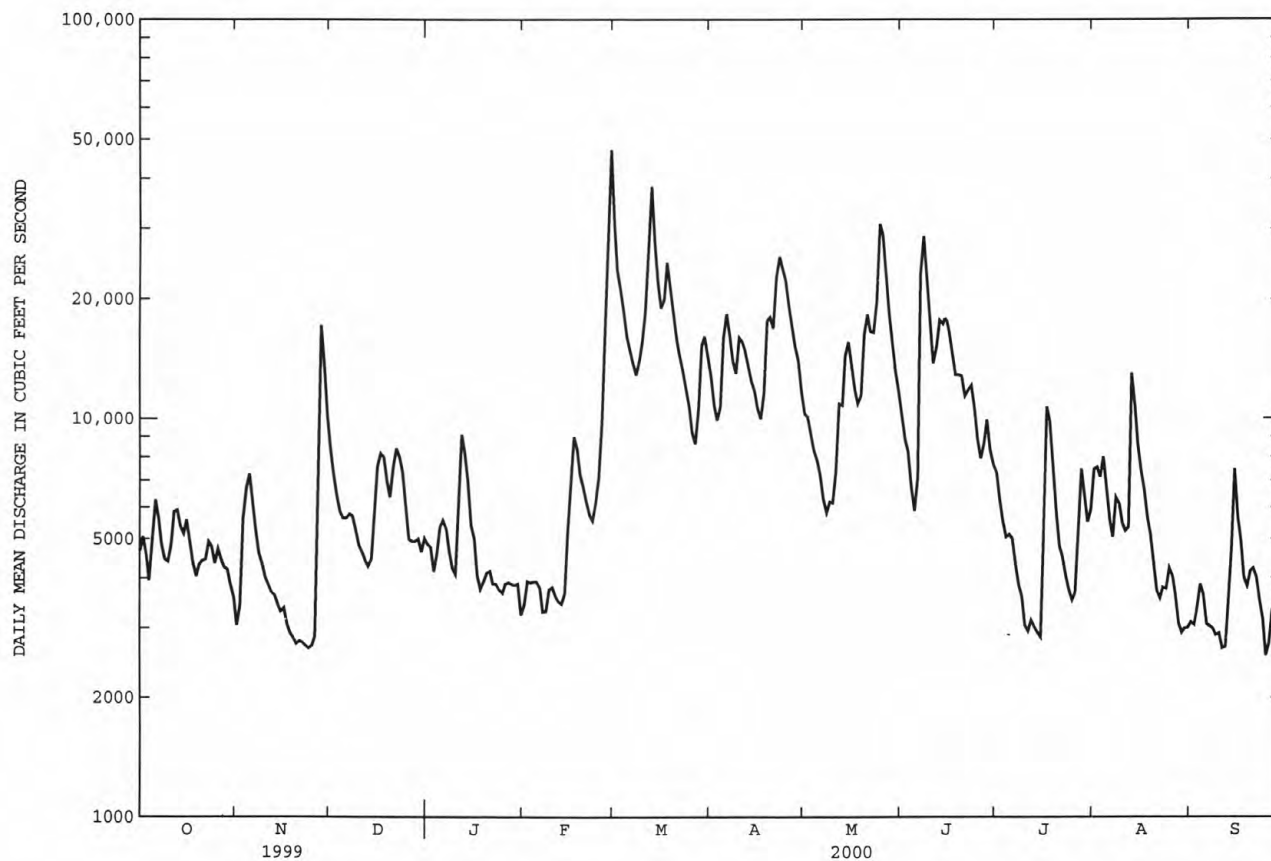
DELAWARE RIVER BASIN

01446500 DELAWARE RIVER AT BELVIDERE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1923 - 2000	
ANNUAL TOTAL	2097460		3119900		7838	
ANNUAL MEAN	5746		8524		14130	
HIGHEST ANNUAL MEAN					2990	
LOWEST ANNUAL MEAN					184000	
HIGHEST DAILY MEAN	51500	Jan 25	47100	Feb 29	184000	Aug 19 1955
LOWEST DAILY MEAN	1130	Jan 2	2550	Sep 25	610	Aug 25 1954
ANNUAL SEVEN-DAY MINIMUM	1770	Jan 1	2740	Nov 19	782	Aug 14 1954
INSTANTANEOUS PEAK FLOW			52700	Feb 29	273000a	Aug 19 1955
INSTANTANEOUS PEAK STAGE			12.92	Feb 29	30.21b	Aug 19 1955
INSTANTANEOUS LOW FLOW			2370	Sep 12	609	Sep 28 1943
10 PERCENT EXCEEDS	10200		17400		16600	
50 PERCENT EXCEEDS	4460		5830		5020	
90 PERCENT EXCEEDS	2090		3310		1950	

a From rating curve extended above 170,000 ft³/s on basis of flood-routing study.

b From high-water mark in gage house.



LEHIGH RIVER BASIN

219

01454700 LEHIGH RIVER AT GLENDON, PA
(National Water-Quality Assessment Station)

LOCATION.--Lat 40°40'09", long 75°14'12", Northampton County, Hydrologic Unit 02040106, on right bank 140 ft upstream from highway bridge in Hugh Moore Parkway at Glendon, 2.3 mi upstream from mouth, and 2.0 mi southwest of Easton.

DRAINAGE AREA.--1,359 mi².

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WDR PA-72-1: 1971(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 164.30 ft above sea level.

REMARKS.--Records good. Flow regulated by Francis E. Walter Reservoir (station 01447780), Penn Forest Reservoir (station 01449400), Wild Creek Reservoir (station 01449700), and since February 1971, by Beltzville Lake (station 01449790) about 60 mi upstream. Flows above 10,000 ft³/s may be affected by backwater from the Delaware River. Several measurements of water temperature were made during the year. Satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4120	1300	4550	1900	1430	8830	3870	2460	2700	3020	5910	1100
2	3500	1650	3180	1850	1390	7270	3590	2450	2520	2660	7760	1360
3	3280	3750	2600	1840	1320	5670	3460	2380	2370	2390	5830	1130
4	3330	4250	2400	1880	1320	4830	3990	2240	2240	2170	5030	1060
5	3460	3510	2270	2020	1370	4460	4280	2170	2110	2090	3710	1010
6	2790	2850	2490	1910	1310	4070	3790	2180	2880	1930	3030	949
7	2590	2610	2590	1860	1300	3360	3380	2060	4060	1790	2740	860
8	2330	2450	2310	1790	1220	3040	3010	1870	4300	1670	2450	874
9	2480	2020	2170	1700	1130	3020	3770	1680	3710	1590	2260	859
10	3360	1830	2120	1920	1120	3090	4030	1680	3050	1450	2070	797
11	3660	1790	2090	3090	1190	3310	3930	2710	2690	1360	1870	785
12	3070	1710	1930	3000	1130	5890	4120	3240	3840	1270	1940	783
13	4110	1670	1870	2870	1190	5290	3940	3270	4920	1220	1890	1240
14	4000	1620	2480	2530	1680	5900	3680	3870	4830	1230	1900	1170
15	3150	1590	3910	1970	2610	5350	3240	2950	4650	1300	1780	1470
16	2870	1540	3780	1980	2610	4090	3240	2680	4250	1750	1480	1210
17	2720	1480	3760	1660	2530	5260	3150	2310	3520	1740	1360	1380
18	2670	1400	3310	e1400	2210	5260	3580	2110	3130	1800	1320	1070
19	2500	1320	3010	1770	2170	4990	3620	4420	2960	1680	1310	1220
20	2410	1330	3000	1950	2090	4730	3150	4550	2910	1440	1230	1600
21	2260	1350	3580	1740	1970	4210	3970	4270	2840	1270	1070	1230
22	2000	1330	3270	e1500	1910	9280	4720	3990	4370	1320	1040	1050
23	1870	1240	3100	1650	1970	7780	4610	4190	3900	1280	1040	984
24	1710	1040	2800	1730	2180	5850	4270	5660	3400	1110	1170	987
25	1650	1120	2580	1630	2810	4910	3990	7020	3030	1080	1170	977
26	1490	1260	2520	1520	4180	4440	3610	6150	4000	1170	1080	1160
27	1420	5160	2470	1480	4830	4030	3280	4900	3950	1530	1220	1130
28	1400	4540	2130	1270	8260	6030	3100	4370	3730	1230	1180	997
29	1360	5110	1890	1300	10500	6160	2970	3820	3560	1110	1150	909
30	1350	5120	1830	1380	---	5610	2730	3460	3540	1540	1080	869
31	1320	---	1870	1360	---	4500	---	3060	---	2980	1060	---
TOTAL	80230	68940	83860	57450	70930	160510	110070	104170	103960	51170	69130	32220
MEAN	2588	2298	2705	1853	2446	5178	3669	3360	3465	1651	2230	1074
MAX	4120	5160	4550	3090	10500	9280	4720	7020	4920	3020	7760	1600
MIN	1320	1040	1830	1270	1120	3020	2730	1680	2110	1080	1040	783

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2000, BY WATER YEAR (WY)

MEAN	1982	2710	3425	3134	3275	4332	4470	3439	2534	1850	1488	1672
MAX	5272	5438	9593	8414	5385	8344	10810	8542	7607	4641	4179	7920
(WY)	1977	1971	1997	1996	1976	1977	1993	1989	1972	1984	1969	1987
MIN	771	798	633	405	1278	1805	1639	1502	906	630	607	660
(WY)	1981	1999	1981	1981	1980	1981	1985	1995	1999	1999	1999	1983

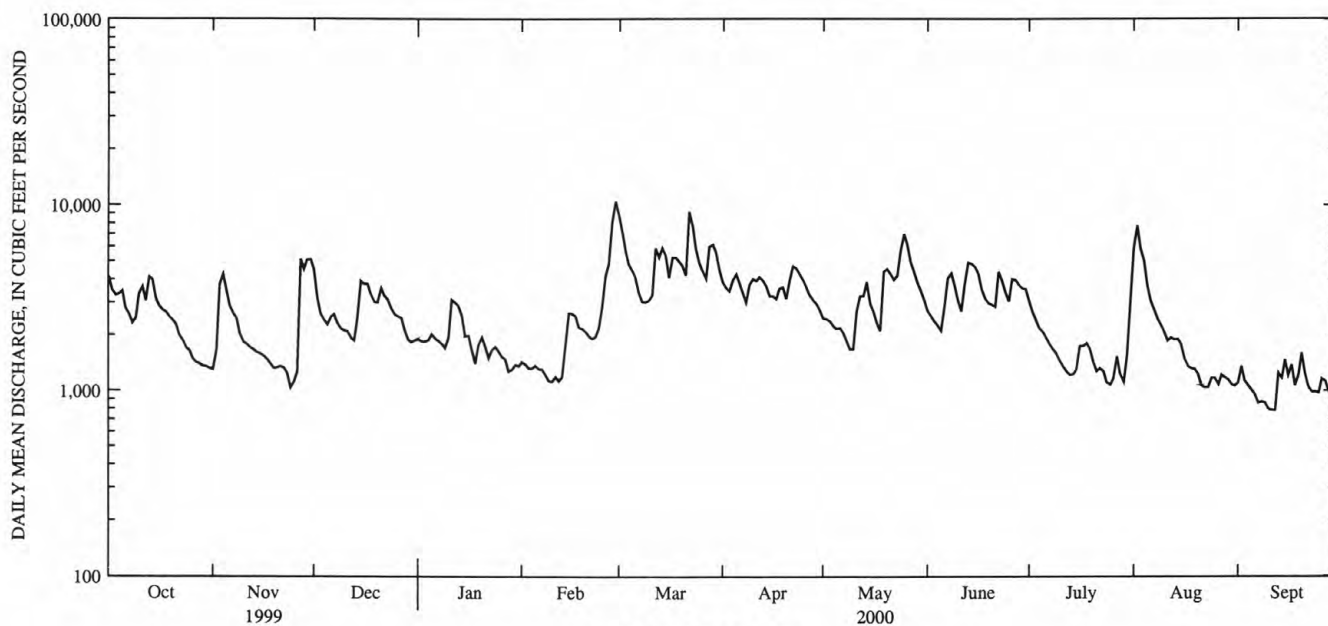
e Estimated.

LEHIGH RIVER BASIN

01454700 LEHIGH RIVER AT GLENDON, PA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1967 - 2000	
ANNUAL TOTAL	837061		992640			
ANNUAL MEAN	2293		2712		2856	
HIGHEST ANNUAL MEAN					3997	
LOWEST ANNUAL MEAN					1594	
HIGHEST DAILY MEAN	18900	Sep 17	10500	Feb 29	44300	Jun 23 1972
LOWEST DAILY MEAN	456	Sep 1	783	Sep 12	330	Jan 31 1981a
ANNUAL SEVEN-DAY MINIMUM	484	Aug 19	844	Sep 6	349	Jan 26 1981
INSTANTANEOUS PEAK FLOW			11500	Feb 29	60600b	Jun 23 1972
INSTANTANEOUS PEAK STAGE			12.80	Feb 29	24.86	Jun 23 1972
10 PERCENT EXCEEDS	4110		4670		5630	
50 PERCENT EXCEEDS	1930		2380		2090	
90 PERCENT EXCEEDS	572		1170		870	

a Also Feb. 1, 1981.

b From rating curve extended above 36,000 ft³/s.

1-YEAR HYDROGRAPH
OCTOBER 1, 1999 TO SEPTEMBER 30, 2000

DELAWARE RIVER BASIN

221

01457000 MUSCONETCONG RIVER NEAR BLOOMSBURY, NJ

LOCATION.--Lat 40°40'20", long 75°03'40", Warren County, Hydrologic Unit 02040105, on right bank just downstream from bridge on Limekiln Road (Person Road), 1.5 mi southwest of Bloomsbury, and 9.5 mi upstream from mouth.

DRAINAGE AREA.--141 mi².

PERIOD OF RECORD.--July 1903 to March 1907, July 1921 to current year.

REVISED RECORDS.--WSP 1051: 1944-45. WSP 1382: 1904-06, 1922, 1923-29(M), 1931(M), 1933-34(M), 1936(M), 1940, 1942(M), 1944-45(M), 1951-52(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Sept. 29, 1932. Datum of gage is 274.83 ft above sea level. July 1903 to Mar. 31, 1907, nonrecording gage at bridge 15 ft upstream at different datum. July 26 to Sept. 12, 1921, nonrecording gage at bridge at present datum.

REMARKS.--Records good. Flow occasionally regulated by Lake Hopatcong (see Delaware River basin, reservoirs in). Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jun 12	2200	1,380	4.20	Aug 15	0400	*2,320	*5.28
Aug 13	1900	1,010	3.65				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	137	240	149	147	460	237	284	246	244	424	242
2	161	152	231	147	141	429	230	281	236	221	292	328
3	141	251	226	150	137	415	221	270	227	200	309	272
4	149	190	228	161	135	380	267	259	209	193	349	261
5	194	175	217	211	130	360	262	246	203	198	324	247
6	189	166	212	192	129	340	245	236	243	190	273	208
7	166	155	222	179	128	313	223	229	331	177	254	204
8	156	180	204	170	125	309	217	217	336	165	233	191
9	151	219	191	166	122	296	246	210	290	162	217	170
10	172	213	185	200	124	263	258	207	258	154	198	154
11	178	222	169	278	131	264	254	221	261	152	183	153
12	168	219	160	235	142	385	248	207	692	148	253	147
13	154	218	150	214	132	344	233	194	724	144	608	173
14	160	213	178	193	269	300	225	284	518	147	908	183
15	162	211	235	213	344	274	218	300	453	171	1930	227
16	150	214	196	190	275	261	230	267	402	295	1380	206
17	143	211	174	170	267	451	237	237	363	227	958	187
18	147	213	174	182	242	418	278	278	351	183	721	187
19	146	208	179	190	244	363	281	543	340	170	583	190
20	173	205	178	148	227	335	269	447	314	164	483	211
21	183	206	226	148	215	309	428	429	295	156	407	178
22	169	208	212	138	213	279	585	394	394	149	353	154
23	186	204	188	138	221	266	537	384	355	138	310	161
24	179	202	182	139	252	258	479	469	307	132	288	170
25	164	223	162	128	315	250	438	454	271	134	267	164
26	142	219	158	156	364	243	403	385	264	150	269	154
27	127	374	154	178	378	232	363	344	267	300	251	162
28	120	341	152	163	523	329	344	319	285	277	239	157
29	117	277	153	208	512	324	327	291	277	223	237	140
30	122	249	152	153	---	278	303	271	258	205	244	133
31	138	---	152	143	---	258	---	262	---	274	227	---
TOTAL	4892	6475	5840	5430	6584	9986	9086	9419	9970	5843	13972	5714
MEAN	158	216	188	175	227	322	303	304	332	188	451	190
MAX	194	374	240	278	523	460	585	543	724	300	1930	328
MIN	117	137	150	128	122	232	217	194	203	132	183	133

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2000, BY WATER YEAR (WY)

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
MEAN	177	230	269	266	278	347	354	277	199	161	152	158
MAX	770	701	980	924	582	935	1027	680	843	659	583	454
(WY)	1904	1928	1997	1979	1973	1936	1983	1989	1972	1975	1928	1960
MIN	41.2	61.2	57.3	73.7	99.4	127	103	98.1	56.8	38.1	38.5	37.3
(WY)	1964	1966	1966	1977	1923	1965	1985	1965	1965	1965	1965	1965

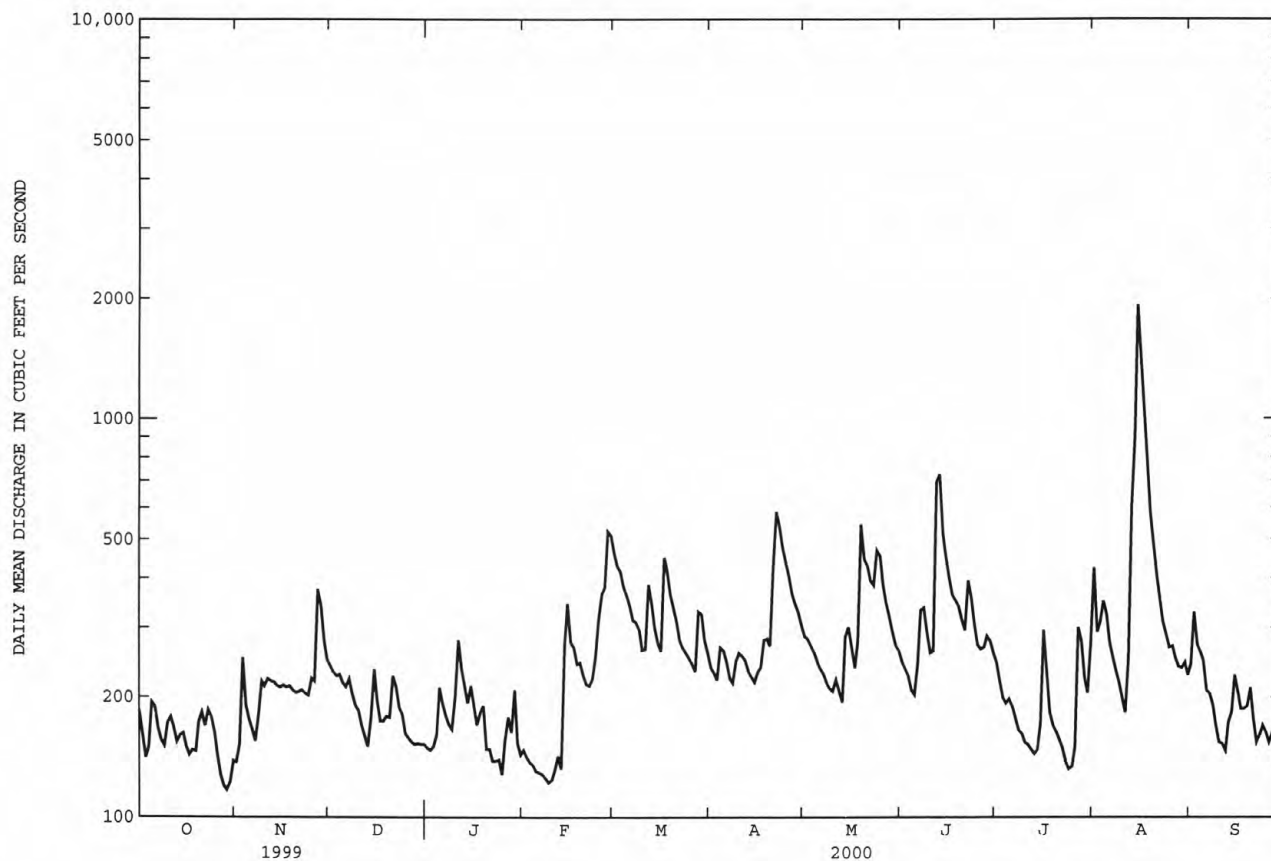
DELAWARE RIVER BASIN

01457000 MUSCONETCONG RIVER NEAR BLOOMSBURY, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1904 - 2000	
ANNUAL TOTAL	68213		93211		239	
ANNUAL MEAN	187		255		425	
HIGHEST ANNUAL MEAN					82.6	
LOWEST ANNUAL MEAN					1928	
HIGHEST DAILY MEAN	2080	Sep 17	1930	Aug 15	5850	Oct 10 1903
LOWEST DAILY MEAN	41	Aug 13	117	Oct 29	27	Sep 8 1966
ANNUAL SEVEN-DAY MINIMUM	50	Aug 7	127	Feb 5	32	Aug 28 1966
INSTANTANEOUS PEAK FLOW			2320a	Aug 15	7200a	Jan 25 1979
INSTANTANEOUS PEAK STAGE			5.28	Aug 15	8.50b	Jan 25 1979
INSTANTANEOUS LOW FLOW			102	Feb 9	8.1	Aug 2 1955
10 PERCENT EXCEEDS	283		385		459	
50 PERCENT EXCEEDS	166		221		183	
90 PERCENT EXCEEDS	58		147		77	

a From rating curve extended 1,800 ft³/s on basis of slope-area measurement at gage height 6.95 ft.

b From floodmark.



DELAWARE RIVER BASIN

223

01460440 DELAWARE AND RARITAN CANAL AT PORT MERCER, NJ

LOCATION.--Lat 40°18'16", long 74°41'08", Mercer County, Hydrologic Unit 02030105, on right bank, 300 ft upstream from bridge on Province Line (Quaker Bridge) Road at Port Mercer, 2.2 mi east of Lawrenceville, and 3.5 mi southwest of Princeton.

PERIOD OF RECORD.--August 1990 to current year. Miscellaneous measurements made 1923, 1937-38, 1942-43, 1945, 1981, 1987-90.

GAGE.--Water-stage recorder and ultrasonic-velocity meter. Datum of gage is sea level.

REMARKS.--Records fair. The canal diverts water from the Delaware River at Raven Rock and discharges into Raritan River at New Brunswick. Reverse flow (denoted by a negative symbol) can occur during periods of heavy precipitation due to waste gate operation upstream and inflow into canal downstream from gage. Gage is located at the drainage divide between the Delaware and Raritan River Basins. Satellite telemeter at station.

REVISIONS.--The mean daily discharge for Aug. 14, 1999 has been revised to 130 ft³/s due to an equipment malfunction, superseding the figure published in WDR-NJ-99-1. This revision resulted in a revised August 1999 total of 4,545 ft³/s-days, monthly mean discharge of 144 ft³/s, minimum daily mean of 120 ft³/s, and a 1999 annual total of 51,138 ft³/s-days. Other monthly, water year, and calendar year statistics were not affected.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	154	132	133	127	125	138	142	137	143	136	149
2	143	146	129	131	125	124	142	148	136	142	131	148
3	145	137	129	129	126	124	144	144	136	142	143	144
4	141	148	135	133	127	127	139	140	135	144	133	148
5	142	144	143	124	132	129	138	144	133	143	144	142
6	136	155	137	127	142	132	138	140	133	142	145	143
7	140	153	130	132	141	134	141	139	136	144	149	145
8	140	153	126	131	139	136	135	140	137	143	145	149
9	142	154	130	131	137	112	135	139	142	141	147	150
10	144	153	133	138	134	124	140	136	142	146	146	151
11	143	153	133	139	131	136	147	141	141	141	141	148
12	140	147	132	130	128	117	147	138	143	139	119	145
13	142	148	135	131	129	119	144	145	136	135	134	149
14	148	147	138	129	109	125	147	136	140	145	114	147
15	145	147	111	126	100	132	151	139	147	139	132	146
16	153	148	119	127	111	142	146	141	144	145	139	140
17	156	148	126	129	116	94	139	144	144	150	142	147
18	150	148	144	123	109	126	133	139	147	145	137	148
19	146	151	137	129	111	137	142	120	147	142	142	138
20	144	152	134	127	108	141	142	120	142	148	142	115
21	146	154	119	126	110	141	132	135	141	144	142	128
22	144	134	119	126	109	142	101	142	144	145	146	131
23	144	122	123	126	109	143	131	148	142	146	145	135
24	141	130	126	125	111	144	137	122	141	146	148	141
25	138	152	126	124	121	142	143	128	141	149	146	133
26	142	154	124	127	127	140	143	136	140	149	145	120
27	142	131	123	128	123	140	142	138	140	131	146	125
28	141	131	126	128	125	118	144	138	138	143	147	131
29	151	116	128	134	125	127	144	140	138	145	143	134
30	156	121	131	142	---	134	145	137	140	150	150	133
31	157	---	134	134	---	137	---	139	---	133	150	---
TOTAL	4485	4331	4012	4019	3542	4044	4190	4278	4203	4440	4369	4203
MEAN	145	144	129	130	122	130	140	138	140	143	141	140
MAX	157	155	144	142	142	144	151	148	147	150	150	151
MIN	136	116	111	123	100	94	101	120	133	131	114	115

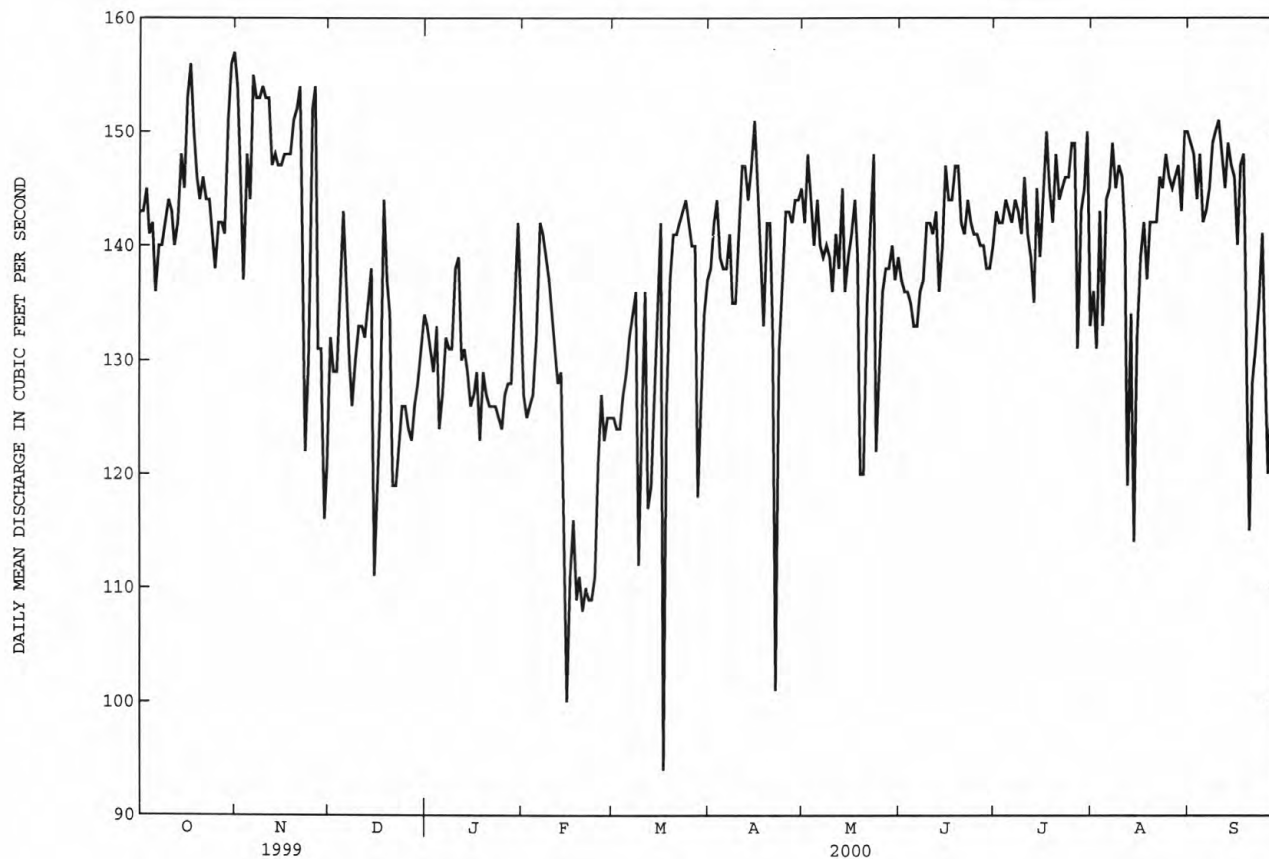
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2000, BY WATER YEAR (WY)

MEAN	137	134	127	124	129	123	132	142	143	146	143	139
MAX	159	154	143	143	143	148	147	152	159	163	152	155
(WY)	1999	1999	1996	1997	1995	1997	1997	1999	1999	1999	1992	1992
MIN	115	108	103	102	99.5	91.4	95.8	127	120	123	114	112
(WY)	1992	1992	1992	1999	1992	1992	1992	1998	1996	1996	1996	1999

DELAWARE RIVER BASIN

01460440 DELAWARE AND RARITAN CANAL AT PORT MERCER, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1990 - 2000	
ANNUAL TOTAL	50242		50116		135	
ANNUAL MEAN	138		137		143	
HIGHEST ANNUAL MEAN					120	
LOWEST ANNUAL MEAN					222	
HIGHEST DAILY MEAN	172	Jul 13	157	Oct 31	222	Aug 22 1990
LOWEST DAILY MEAN	-280	Sep 17	94	Mar 17	-280	Sep 17 1999
ANNUAL SEVEN-DAY MINIMUM	4.9	Sep 15	109	Feb 14	4.9	Sep 15 1999
INSTANTANEOUS PEAK STAGE			55.48	Apr 22	61.19	Sep 16 1999
10 PERCENT EXCEEDS	161		148		154	
50 PERCENT EXCEEDS	143		140		141	
90 PERCENT EXCEEDS	110		124		107	



DELAWARE RIVER BASIN

225

01463500 DELAWARE RIVER AT TRENTON, NJ

LOCATION.--Lat 40°13'18", long 74°46'42", Mercer County, Hydrologic Unit 02040105, on left bank 450 ft upstream from Calhoun Street Bridge at Trenton, 0.5 mi upstream from Assunpink Creek, and at river mile 134.5.

DRAINAGE AREA.--6,780 mi².

PERIOD OF RECORD.--February 1913 to current year. October 1912 to February 1913 monthly discharge only, published in WSP 1302. Gage- height records collected in this vicinity since 1904 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 951: Drainage area. WSP 1302: 1913-20. WSP 1382: 1924, 1928.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Sept. 30, 1965, at datum 7.77 ft higher. Feb. 24, 1913 to Oct. 2, 1928, nonrecording gage on downstream side of highway bridge at site 450 ft downstream.

REMARKS.--Records good except for estimated daily discharge, which are fair. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lakes Wallenpaupack and Hopatcong, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, Neversink, Wild Creek, and Merrill Creek Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs. Diversion to Bradshaw and Merrill Creek Reservoirs and to Delaware and Raritan Canal (see Delaware River basin, diversions). Water diverted just above station by borough of Morrisville, PA, and city of Trenton for municipal supply (see Delaware River basin, diversions). Satellite gage height and water-quality parameter telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 11, 1903, reached an elevation of about 28.5 ft above sea level, discharge estimated, 295,000 ft³/s. Maximum elevation known, 30.6 ft above sea level, Mar. 8, 1904, from floodmark, due to ice jam.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 29	1500	*62,400	*15.12	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10700	5310	15200	7640	e5600	47300	18500	14900	14600	11500	11400	4410
2	9080	4920	12900	7480	e5800	35500	16500	13600	13000	10400	17700	5200
3	9420	7750	10700	7240	e6200	29900	15100	13200	11800	9110	15200	4960
4	8360	11700	9650	6990	e6100	26300	15200	12200	11100	8210	15400	5040
5	9030	11900	9030	8830	e6100	23100	17700	11200	9270	7670	13500	5350
6	9530	11200	9800	8760	e6200	20800	24200	10800	8800	7570	11000	4960
7	9960	9590	10400	8520	e5800	18900	22000	10100	15900	7090	9250	4300
8	8730	8360	9540	8090	e5400	17300	19300	8860	34700	6270	8540	4180
9	7820	7660	9050	7150	e5700	16900	17700	8200	29100	5730	9710	4110
10	8310	6920	8340	6930	e5700	18400	19900	8570	22700	5340	8710	3980
11	10100	6520	8160	9240	e5800	20900	21300	8730	18500	4700	8010	3910
12	9560	6270	7630	11900	e5600	28500	20500	12500	18400	4480	8560	3660
13	10300	5940	7230	13200	e5300	42000	19100	14400	23900	4570	9620	3880
14	11100	5830	8560	11700	e6000	39100	17600	17500	23800	4420	19000	5210
15	9840	5590	12800	9690	e8300	31400	16500	18700	23600	4590	16500	7880
16	8930	5360	13000	8160	e10000	26400	15700	18200	23200	4870	12500	8990
17	9170	5320	13500	e7700	e12300	28800	15000	15700	20500	9120	10600	7240
18	8290	5060	13400	e5900	e12300	32000	15400	14100	17700	13200	9220	6450
19	7650	4730	12000	e6200	e11000	30600	18600	17300	16400	11300	8120	5810
20	7490	4590	11000	e6900	e10200	26400	23600	20900	16500	9070	7320	6440
21	7930	4520	11800	e7000	e8500	23100	22300	25500	15900	7340	6220	6240
22	7560	4590	12800	e6500	e9500	25500	30000	23700	16400	6300	5460	5750
23	7630	4570	12700	e6300	e9000	25400	33200	22000	17000	6060	5150	5280
24	7820	4380	11900	e6500	e9500	20700	31700	26700	16000	5480	5340	4770
25	7170	4180	10900	e6400	e11000	17700	29400	34200	14100	5000	5490	4420
26	6730	4350	9180	e6200	15300	15900	26200	39300	12400	5090	5780	4360
27	6850	7460	8360	e6400	20000	14400	23000	32300	12700	6320	5570	4650
28	6420	17300	8180	e6000	32500	17000	20600	26100	14000	8530	5230	4830
29	6140	22500	7750	e6000	56200	21400	18800	21600	13600	9000	4880	4640
30	6040	18000	7630	e6200	---	24300	16900	18500	12400	7830	4530	4620
31	5640	---	7170	e6100	---	21300	---	16600	---	8290	4510	---
TOTAL	259300	232370	320260	237820	316900	787200	621500	556160	517970	224450	288020	155520
MEAN	8365	7746	10330	7672	10930	25390	20720	17940	17270	7240	9291	5184
MAX	11100	22500	15200	13200	56200	47300	33200	39300	34700	13200	19000	8990
MIN	5640	4180	7170	5900	5300	14400	15000	8200	8800	4420	4510	3660

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2000, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1913	6862	28710	1956	1632	1942
1914	10460	27340	1928	1868	1915
1915	12610	42860	1997	2037	1923
1916	12510	34950	1979	2539	1981
1917	12850	27550	1951	3500	1920
1918	20660	60840	1936	7715	1981
1919	22270	52680	1940	6828	1985
1920	14190	31690	1989	5074	1995
1921	9088	33460	1972	2572	1965
1922	7041	25720	1928	1548	1965
1923	5909	30290	1955	1808	1965
1924	5770	22490	1933	1762	1932

DELAWARE RIVER BASIN

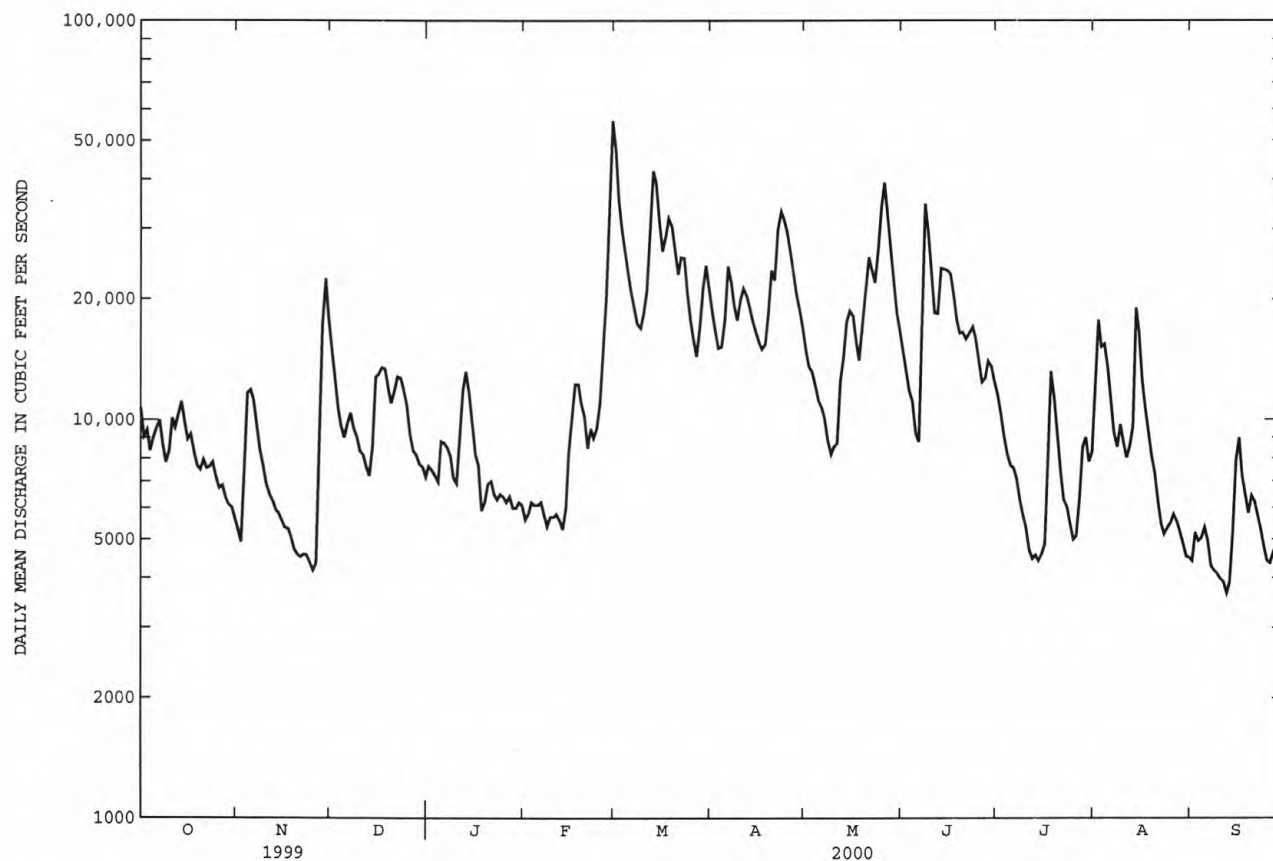
01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1913 - 2000	
ANNUAL TOTAL	3339300		4517470		11670	
ANNUAL MEAN	9149		12340		19810	1928
HIGHEST ANNUAL MEAN					4708	1965
LOWEST ANNUAL MEAN					279000	Aug 20 1955
HIGHEST DAILY MEAN	75300	Sep 17	56200	Feb 29	1240	Oct 31 1914
LOWEST DAILY MEAN	2260	Jul 13	3660	Sep 12	1310	Oct 31 1914
ANNUAL SEVEN-DAY MINIMUM	2540	Jul 12	4000	Sep 7	329000a	Aug 20 1955
INSTANTANEOUS PEAK FLOW			62400	Feb 29	28.60b	Aug 20 1955
INSTANTANEOUS PEAK STAGE			15.12	Feb 29	1180	Oct 31 1963
INSTANTANEOUS LOW FLOW			3310	Sep 12	24600	
10 PERCENT EXCEEDS	16500		23600		7940	
50 PERCENT EXCEEDS	7650		9260		3000	
90 PERCENT EXCEEDS	2660		5030			

a From rating curve extended above 230,000 ft³/s, maximum flow since 1692.

b From high-water mark in gage house, current datum.

e Estimated



LOCATION.--Lat 40°16'11", long 74°40'20", Mercer County, Hydrologic Unit 02040105, on left bank 250 ft upstream from bridge on Quaker Bridge Road, 0.7 mi downstream from dam at Lake Mercer, 1.9 mi south of Clarksville, 2.0 mi upstream from Shipetaukin Creek, and 7.6 mi upstream from mouth.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 28, 1971, reached a stage of 10.9 ft, discharge, 1,500 ft³/s.

MEAN	35.9	43.2a	80.0a	78.6a	70.8a	83.9a	64.8	47.5	38.5	29.2	30.1	34.7
MAX	93.8	112a	151a	151a	136a	204a	115	115	90.9	142	77.4	126
(WY)	1997	1973	1997	1979	1994	1994	1973	1998	1996	1975	1994	1999
MIN	9.70	19.2a	20.9a	12.9a	30.7a	33.8a	23.7	16.0	9.24	4.39	11.0	8.08
(WY)	1998	1995	1981	1981	1980	1981	1995	1992	1999	1999	1995	1992

DELAWARE RIVER BASIN

01463620 ASSUNPINK CREEK NEAR CLARKSVILLE, NJ--Continued

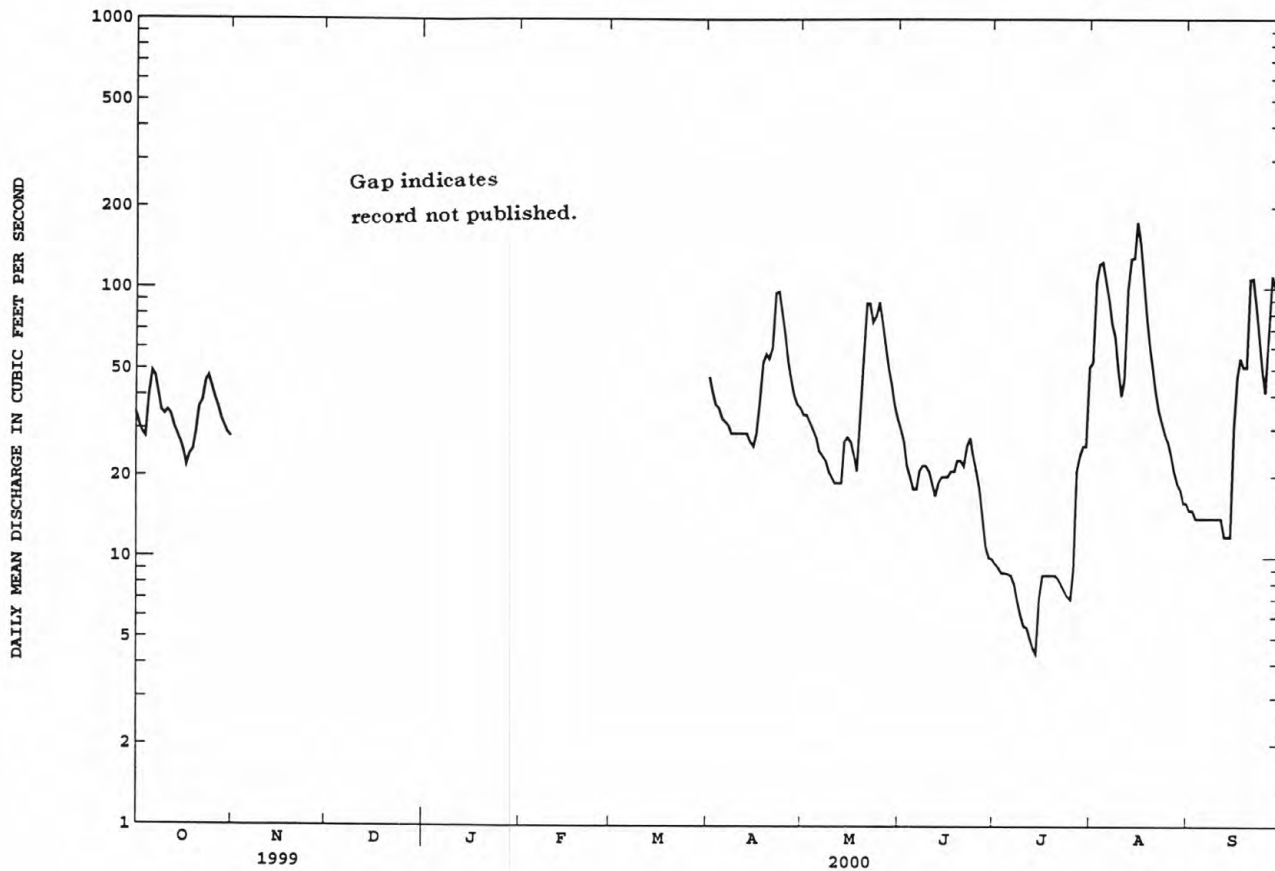
SUMMARY STATISTICS

Oct 1999 and Apr to Sept 2000

WATER YEARS 1973 - 2000

ANNUAL MEAN			50.8a	
HIGHEST ANNUAL MEAN			74.7a	1994
LOWEST ANNUAL MEAN			24.6a	1995
HIGHEST DAILY MEAN	177	Aug 15	832a	Feb 26 1979
LOWEST DAILY MEAN	4.4	Jul 14	1.0a	Sep 6 1995
INSTANTANEOUS PEAK FLOW	179	Aug 15	1050a	Jul 21 1975
INSTANTANEOUS PEAK STAGE	5.52	Aug 15	9.36a	Jul 21 1975
INSTANTANEOUS LOW FLOW	4.2	Jul 14	1.0a	Sep 6 1995

a Water year 1975 - 1995



229

LOCATION.--Lat 40°13'27", long 74°44'58", Mercer County, Hydrologic Unit 02040105, on left bank 20 ft upstream from bridge on Chambers Street (Lincoln Avenue) in Trenton, and 1.5 mi upstream from mouth.

PERIOD OF RECORD.--August 1923 to current year.

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder. Concrete control since July 10, 1932. Datum of gage is 24.76 ft above sea level (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good except for estimated discharges which are fair. Records include water diverted from outside the basin since February 1954 for municipal supply which returns to Assumpink Creek through Ewing-Lawrence Sewerage Authority Treatment Plant, 2.4 mi above station (records given herein). In addition there is an average inflow of about 2.0 ft³/s from industrial use of water that originates outside the basin. Some diversion for irrigation in headwater area during summer months. Flow regulated by several flood-control reservoirs upstream from gage since mid-1970's. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jul 30	2115	1,120	6.32	Aug 14	1730	993	5.98
Aug 2	0030	935	5.82	Sep 15	0600	1,100	6.27
Aug 12	1930	945	5.85	Sep 19	2045	*1,440	*7.17

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	62	74	72	94	112	140	79	66	36	251	52
2	76	81	67	71	83	105	124	73	65	33	544	55
3	67	104	64	71	75	94	120	66	56	35	365	53
4	97	66	61	134	74	87	169	63	52	49	566	76
5	253	62	60	272	74	83	130	62	e68	38	293	74
6	144	61	144	156	71	77	114	58	92	33	201	48
7	107	59	122	130	72	73	101	57	112	31	79	44
8	88	56	86	114	75	73	92	54	81	29	224	45
9	77	55	75	104	77	70	159	55	67	27	133	44
10	140	55	111	192	93	67	134	62	60	28	105	42
11	112	53	113	174	139	169	110	89	55	27	93	41
12	84	51	84	127	181	322	101	191	57	25	376	39
13	72	50	96	115	151	257	88	80	100	25	380	75
14	65	49	483	99	380	195	83	69	68	79	586	47
15	60	46	400	86	363	157	87	63	64	245	556	548
16	57	45	285	83	257	152	162	55	62	72	397	248
17	61	43	216	75	204	658	206	74	82	76	259	180
18	81	43	170	67	193	408	280	460	81	51	211	150
19	64	44	138	66	516	317	196	392	81	49	176	540
20	141	44	206	64	403	251	157	294	64	50	128	744
21	109	49	294	63	326	211	330	219	66	38	104	449
22	94	45	224	58	257	201	489	188	190	39	89	292
23	155	44	180	58	215	167	318	472	82	32	82	208
24	105	46	148	57	189	154	233	374	63	30	77	173
25	89	76	120	63	170	133	188	221	54	30	71	150
26	78	89	107	66	153	124	156	155	49	239	66	671
27	71	347	97	62	137	118	135	124	45	271	62	527
28	66	145	89	57	138	396	108	106	42	111	60	372
29	61	104	83	56	121	255	85	89	41	75	57	261
30	59	85	78	56	---	199	80	76	40	278	55	196
31	57	---	76	121	---	168	---	69	---	409	54	---
TOTAL	2885	2159	4551	2989	5281	5853	4875	4489	2105	2590	6830	6444
MEAN	93.1	72.0	147	96.4	182	189	162	145	70.2	83.5	220	215
MAX	253	347	483	272	516	658	489	472	190	409	586	744
MIN	57	43	60	56	71	67	80	54	40	25	54	39
(I)	15.8	12.7	15.8	14.3	18.4	18.7	17.3	15.7	13.5	12.1	14.9	13.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2000, BY WATER YEAR (WY)

MEAN	80.7	113	147	168	185	212	181	133	99.5	99.7	93.4	94.6
MAX	328	331	501	498	395	554	494	340	371	545	355	395
(WY)	1997	1973	1997	1979	1939	1994	1983	1989	1996	1975	1971	1999
MIN	19.1	27.6	32.0	44.2	52.0	76.7	65.2	40.0	25.9	17.2	17.3	15.8
(WY)	1931	1932	1999	1981	1934	1985	1963	1941	1942	1955	1966	1943

DELAWARE RIVER BASIN

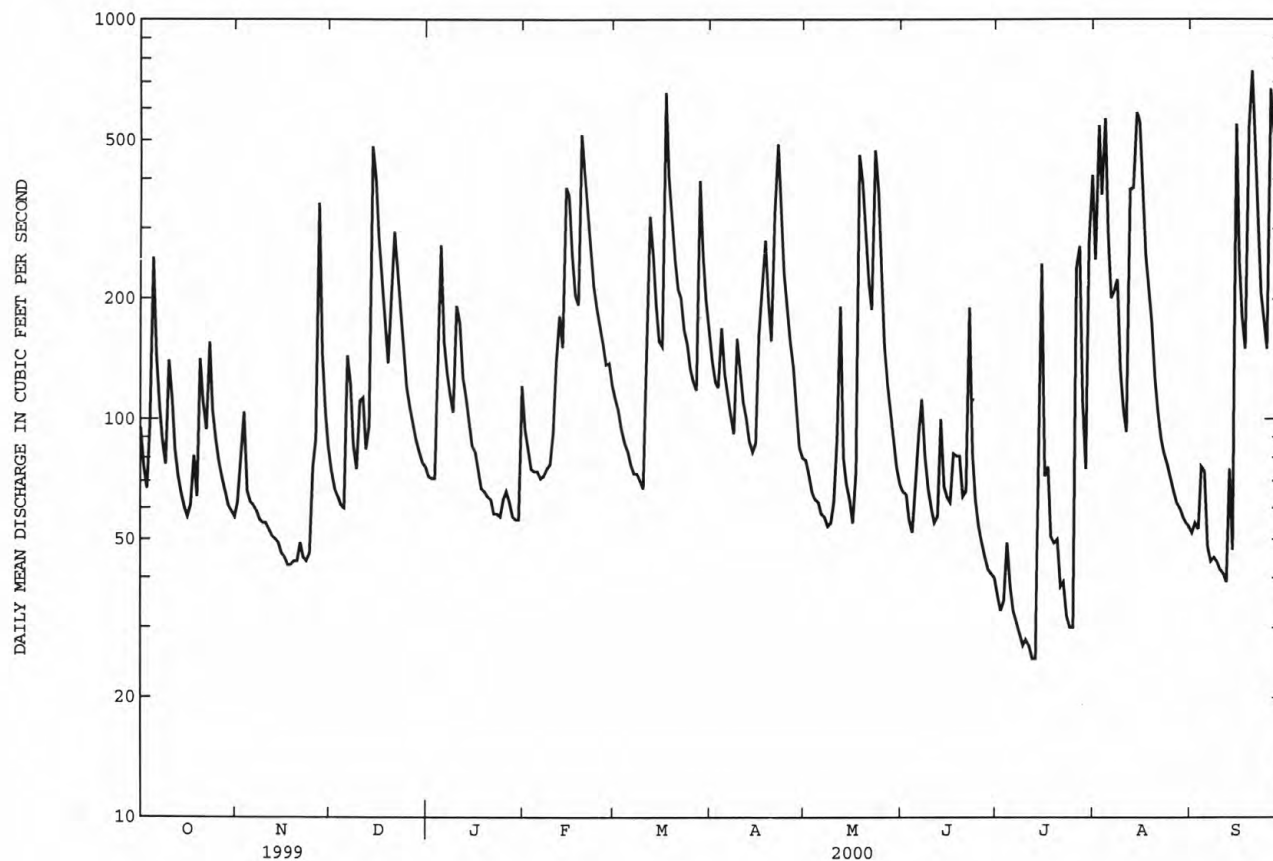
01464000 ASSUNPINK CREEK AT TRENTON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1924 - 2000	
ANNUAL TOTAL	49943.1		51051			
ANNUAL MEAN	137		139		134	
(I)	15.3		15.2			
HIGHEST ANNUAL MEAN					233	
LOWEST ANNUAL MEAN					69.2	
HIGHEST DAILY MEAN	3830	Sep 17	744	Sep 20	4050	Jul 21 1975
LOWEST DAILY MEAN	9.6	Aug 7	25	Jul 12	4.0	Jul 21 1929
ANNUAL SEVEN-DAY MINIMUM	10	Aug 1	27	Jul 7	9.6	Aug 25 1944
INSTANTANEOUS PEAK FLOW			1440	Sep 19	5450	Jul 21 1975
INSTANTANEOUS PEAK STAGE			7.17	Sep 19	14.61a	Jul 21 1975
INSTANTANEOUS LOW FLOW			21	Jul 12	1.0	Aug 21 1931
10 PERCENT EXCEEDS	279		301		274	
50 PERCENT EXCEEDS	74		88		87	
90 PERCENT EXCEEDS	20		47		33	

a From high-water mark in gage house

(I) Inflow from outside basin, equivalent in cubic feet per second, 2.4 mi. upstream of station through plant of Ewing-Lawrence Sewerage Authority.

e Estimated



DELAWARE RIVER BASIN

231

01464500 CROSSWICKS CREEK AT EXTONTVILLE, NJ

LOCATION.--Lat 40°08'15", long 74°36'02", Mercer County, Hydrologic Unit 02040201, on right bank upstream from bridge on Extonville Road, 0.5 mi south of Extonville, 0.5 mi upstream from Pleasant Run, and 0.7 mi downstream from Mercer- Monmouth County line.

DRAINAGE AREA.--81.5 mi².

PERIOD OF RECORD.--August 1940 to October 1951, October 1952 to current year.

REVISED RECORDS.--WDR NJ-79-2: 1971(M). WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 24.94 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated occasionally by lakes above station. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 15	1100	835	7.34	Sep 27	1000	797	7.18
Aug 4	1615	*887	*7.55				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	73	83	89	e148	101	98	75	61	38	204	69
2	75	77	77	88	e117	95	88	76	58	32	134	62
3	67	222	76	88	e106	88	86	80	68	30	159	61
4	66	181	74	93	e96	84	89	79	56	34	759	133
5	189	134	73	295	e94	82	100	73	48	33	451	140
6	164	111	75	212	e93	79	85	83	57	28	170	85
7	96	94	158	154	e88	76	80	79	82	25	130	70
8	75	83	142	127	e87	77	78	63	68	23	110	62
9	66	78	113	111	e90	76	95	58	54	22	83	57
10	75	77	102	123	e96	76	125	54	47	23	72	53
11	117	75	142	207	e124	80	92	152	43	23	64	50
12	89	72	111	153	e159	175	90	107	38	20	93	48
13	73	70	96	128	e145	162	85	78	54	19	182	57
14	61	71	346	111	237	128	80	119	53	21	271	75
15	53	70	749	94	304	105	84	100	51	101	459	318
16	49	68	390	e89	185	93	187	74	51	71	225	331
17	51	65	233	e85	152	330	194	65	45	45	134	147
18	192	63	170	e74	137	319	201	60	50	36	98	101
19	159	63	139	e64	388	179	181	158	139	34	94	116
20	147	63	154	e69	443	141	145	349	80	47	82	370
21	248	65	417	e73	261	120	151	300	59	41	72	201
22	173	64	269	e74	190	138	352	214	84	41	65	112
23	211	65	196	e73	157	134	220	185	74	41	60	85
24	194	66	157	e74	140	112	157	216	54	31	59	80
25	144	70	125	e78	128	101	120	228	45	31	57	78
26	115	105	107	e88	124	93	101	154	40	81	54	362
27	96	171	100	e84	121	86	92	102	36	254	51	728
28	86	185	95	e74	122	232	88	85	37	120	50	373
29	80	126	91	e74	115	220	86	76	46	89	48	193
30	77	97	89	e71	---	143	80	68	44	73	49	127
31	75	---	90	e117	---	113	---	64	---	77	51	---
TOTAL	3469	2824	5239	3334	4647	4038	3710	3674	1722	1584	4590	4744
MEAN	112	94.1	169	108	160	130	124	119	57.4	51.1	148	158
MAX	248	222	749	295	443	330	352	349	139	254	759	728
MIN	49	63	73	64	87	76	78	54	36	19	48	48
CFM	1.37	1.16	2.07	1.32	1.97	1.60	1.52	1.45	.70	.63	1.82	1.94
IN.	1.58	1.29	2.39	1.52	2.12	1.84	1.69	1.68	.79	.72	2.10	2.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2000, BY WATER YEAR (WY)

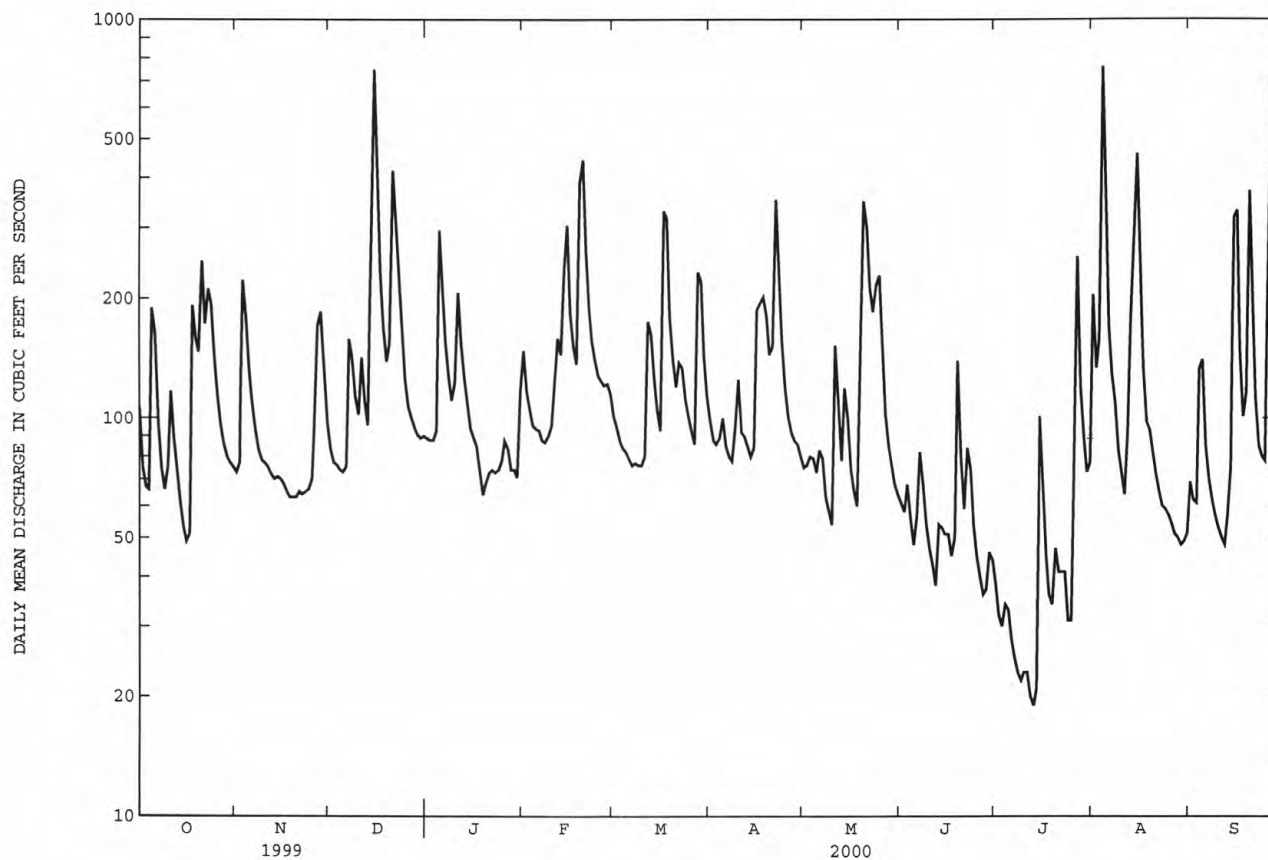
	MEAN	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
MEAN	88.9	127	160	177	179	201	173	133	95.9	98.4	94.3	91.0
MAX	231	406	392	452	416	476	388	325	251	390	299	284
(WY)	1997	1973	1997	1978	1979	1994	1983	1998	1968	1989	1971	1971
MIN	32.9	36.7	42.6	62.1	82.9	86.1	68.4	60.8	35.7	20.4	25.4	28.3
(WY)	1966	1966	1999	1981	1992	1985	1985	1955	1999	1999	1966	1995

DELAWARE RIVER BASIN

01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1940 - 2000	
ANNUAL TOTAL	44620.7		43575		135	
ANNUAL MEAN	122		119		225	1978
HIGHEST ANNUAL MEAN					69.9	1995
LOWEST ANNUAL MEAN					3930	Aug 28 1971
HIGHEST DAILY MEAN	2850	Sep 17	759	Aug 4	8.7	Aug 4 1999
LOWEST DAILY MEAN	8.7	Aug 4	19	Jul 13	10	Aug 1 1999
ANNUAL SEVEN-DAY MINIMUM	10	Aug 1	22	Jul 8	4860	Sep 1 1978
INSTANTANEOUS PEAK FLOW			887	Aug 4	14.18	Sep 1 1978
INSTANTANEOUS PEAK STAGE			7.55	Aug 4	7.3	Aug 4 1999
INSTANTANEOUS LOW FLOW			18	Jul 12	1.65	
ANNUAL RUNOFF (CFSM)	1.50		1.46		22.43	
ANNUAL RUNOFF (INCHES)	20.37		19.89		250	
10 PERCENT EXCEEDS	237		215		93	
50 PERCENT EXCEEDS	77		88		40	
90 PERCENT EXCEEDS	22		49			

e Estimated



DELAWARE RIVER BASIN

233

01464598 DELAWARE RIVER AT BURLINGTON, NJ

LOCATION.--Lat 40°04'42", long 74°52'28", Burlington County, Hydrologic Unit 02040201, on left bank in the intake canal of the Public Service Electric and Gas Company, 0.3 mi downstream from Burlington-Bristol Bridge, 1.4 mi downstream from Assiscunk Creek, and at river mile 117.54.

DRAINAGE AREA.--7,160 mi².

PERIOD OF RECORD.--July 1964 to current year. March 1921 to July 1926, January 1931 to November 1939, August 1951 to June 1954, July 1957 to June 1964, in files of Philadelphia District of the Army Corps of Engineers.

REVISED RECORDS.--WDR NJ-76-1: 1973 (m).

GAGE.--Water-stage recorder. Datum of gage is 12.90 ft below National Geodetic Vertical Datum of 1929 (NGVD of 1929). Gage-height record converted to elevation above or below NGVD of 1929 for publication. To determine corresponding North American Vertical Datum of 1988 (NAVD of 1988) elevation, subtract 1.07 ft. To determine corresponding Mean Lower Low Water Datum elevation, based on data from National Ocean Service station 8539094, add 2.86 ft. Prior to May 20, 1971, water-stage recorder at site 0.7 mi upstream at same datum.

REMARKS.--Record effected by frozen well, Jan. 18 to Feb. 12. Summaries for months with short periods of no gage-height record have been estimated with little or no loss of accuracy, unless otherwise noted. Some periods cannot be estimated and are noted by dash (---) lines. Satellite stage telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 8.78 ft (NGVD of 1929), Dec. 11, 1992; minimum recorded, -6.86 ft (NGVD of 1929), Nov. 21, 1989.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 10.8 ft (NGVD of 1929), Aug. 20, 1955, from high-water mark at site 1.4 mi upstream; minimum, -9.1 ft (NGVD of 1929), Dec. 31, 1962, at present site.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 7.41 ft (NGVD of 1929), Nov. 2; minimum recorded, -5.50 ft (NGVD of 1929), Jan. 17.

Summaries of tide elevations during the year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	6.48	7.41	6.58	e6.5	5.96	6.65	6.77	6.37	6.56	6.69	6.80	6.60
high tide	Date	23	2	14	20	19	22	21	30	30	31	1	15
Minimum	Elevation	-3.74	-4.08	-3.99	-5.50	e-4.0	-2.79	-2.92	-2.66	-2.77	-2.63	-2.63	-2.67
low tide	Date	18	17	12	17	7	3	10	7	3	7, 10	24	18
Mean high tide		5.23	4.81	4.78	---	---	5.43	5.37	5.60	5.52	5.51	5.48	5.32
Mean water level		1.57	1.28	1.28	---	---	1.97	1.94	2.04	1.91	1.83	1.86	1.76
Mean low tide		-2.41	-2.59	-2.51	---	---	-1.72	-1.80	-1.83	-2.01	-2.19	-2.10	-2.14

e Estimated.

DELAWARE RIVER BASIN

01465850 SOUTH BRANCH RANCOCAS CREEK AT VINCENTOWN, NJ

LOCATION.--Lat 39°56'22", long 74°45'50", Burlington County, Hydrologic Unit 02040202, on left bank 150 ft downstream from highway bridge on Landing Road (County Route 641), 0.8 mi west of Vincentown, 2.9 mi southwest of Lumberton, and 3.1 mi upstream from Southwest Branch Rancocas Creek.

DRAINAGE AREA.--53.3 mi².

PERIOD OF RECORD.--July 1961 to October 1975, October 1999 to current year. Operated as a crest-stage partial-record station 1976-95.

GAGE.--Water-stage recorder. Datum of gage is 13.17 ft above sea level. Prior to Oct. 30, 1961, at site 150 ft upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Occasional regulation by lakes and ponds above station. Satellite gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug 13	0200	363	4.90	Sep 27	0030	*605	*6.02
Aug 15	0115	427	5.24				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e67	e58	76	70	85	83	90	67	47	27	41	43
2	e59	e60	72	69	82	79	83	65	44	23	41	42
3	e56	90	67	68	77	76	80	62	42	19	43	65
4	e55	94	63	69	73	72	79	59	38	20	63	124
5	e92	87	61	108	72	70	80	57	35	20	65	230
6	e88	82	63	98	71	68	75	56	37	18	52	128
7	e76	77	76	87	69	65	72	49	44	17	47	80
8	e66	71	72	83	71	64	70	46	41	15	42	61
9	e58	69	65	79	70	63	73	40	36	14	38	55
10	e64	68	64	80	78	62	79	42	31	14	35	51
11	e76	66	71	101	97	62	75	61	26	15	33	46
12	e66	66	71	93	112	81	74	59	27	14	101	43
13	e63	66	71	85	91	85	67	55	38	12	309	40
14	e60	67	166	80	112	79	64	62	40	11	281	36
15	e56	68	289	73	142	75	63	57	40	15	355	102
16	e51	66	194	72	113	71	93	52	38	17	210	131
17	e50	65	147	70	104	108	147	52	35	16	153	119
18	e89	64	125	87	103	133	143	48	34	16	120	112
19	e88	66	114	61	237	107	153	50	53	16	105	108
20	e100	64	110	60	242	95	136	69	50	21	82	234
21	e129	63	174	64	175	92	110	80	41	18	65	145
22	e118	62	151	67	150	229	146	76	40	20	59	114
23	e141	61	127	59	134	194	132	76	38	20	54	91
24	e133	62	115	58	120	144	108	83	32	17	50	80
25	e116	64	102	58	109	120	99	88	26	16	47	77
26	e105	69	93	66	100	104	96	82	24	30	44	374
27	e90	83	87	72	94	91	96	74	21	64	39	475
28	e80	95	82	67	92	156	97	68	18	57	39	271
29	e72	88	85	60	88	155	91	61	25	50	41	208
30	e67	82	78	58	---	121	75	54	29	45	40	171
31	e62	---	72	77	---	105	---	50	---	42	41	---
TOTAL	2493	2143	3203	2299	3163	3109	2846	1900	1070	719	2735	3856
MEAN	80.4	71.4	103	74.2	109	100	94.9	61.3	35.7	23.2	88.2	129
MAX	141	95	289	108	242	229	153	88	53	64	355	475
MIN	50	58	61	58	69	62	63	40	18	11	33	36
CFSM	1.25	1.11	1.60	1.15	1.69	1.55	1.47	.95	.55	.36	1.37	1.99
IN.	1.44	1.24	1.85	1.33	1.82	1.79	1.64	1.10	.62	.41	1.58	2.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2000, BY WATER YEAR (WY)

	MEAN	67.2	96.8	132	117	126	138	126	88.3	63.2	58.6	68.2	65.4
MAX	155	325	291	177	238	200	243	184	165	139	169	155	
(WY)	1976	1973	1973	1964	1973	1962	1970	1972	1968	1975	1967	1975	
MIN	18.7	20.2	22.4	31.4	77.3	74.0	57.7	38.0	16.6	14.1	14.0	13.9	
(WY)	1966	1966	1966	1966	1968	1966	1963	1965	1965	1971	1964	1965	

DELAWARE RIVER BASIN

235

01465850 SOUTH BRANCH RANOCAS CREEK AT VINCENTOWN, NJ--Continued

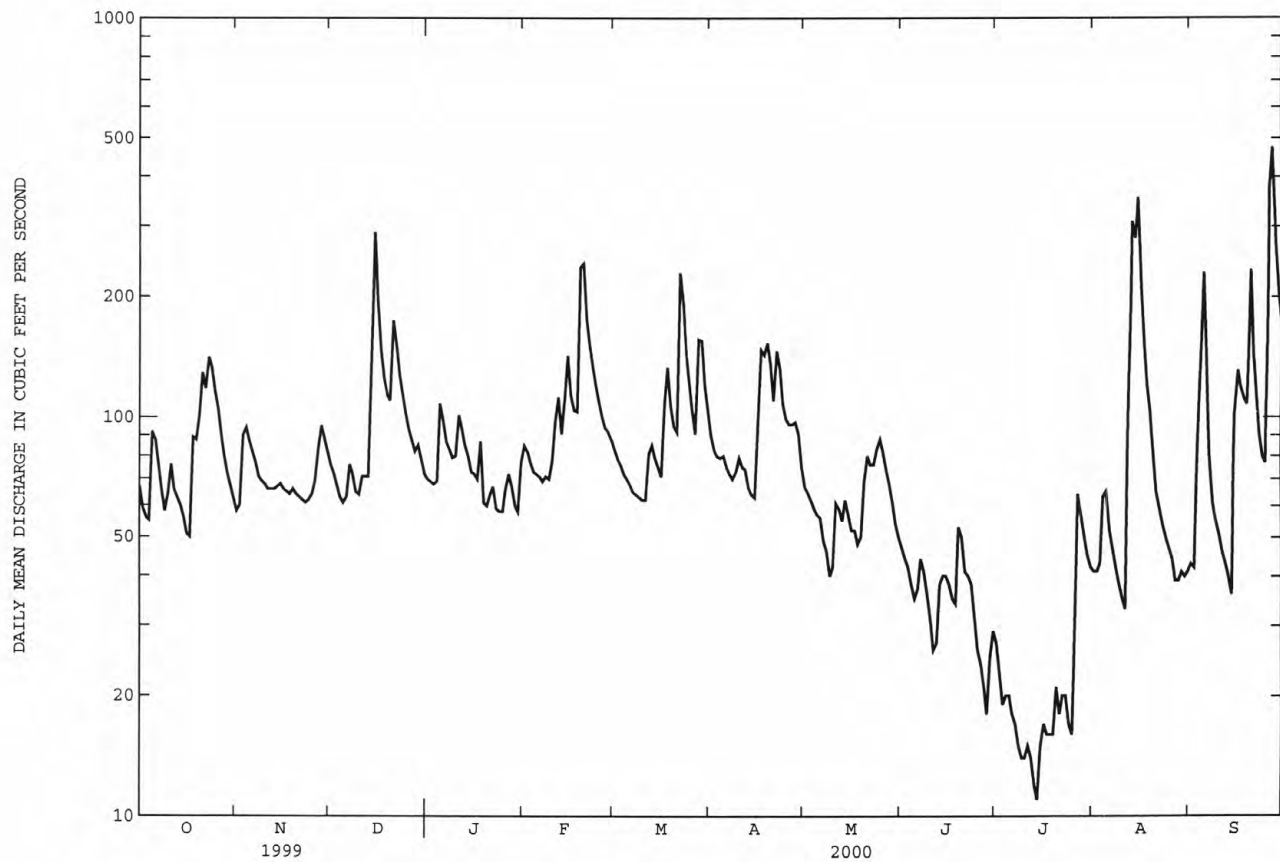
SUMMARY STATISTICS

FOR 2000 WATER YEAR

WATER YEARS 1961 - 2000

ANNUAL TOTAL	29536		94.9	
ANNUAL MEAN	80.7		157	1973
HIGHEST ANNUAL MEAN			47.3	1966
LOWEST ANNUAL MEAN			981	Nov 9 1972
HIGHEST DAILY MEAN	475	Sep 27	3.1	Aug 9 1966
LOWEST DAILY MEAN	11	Jul 14	7.7	Sep 7 1966
ANNUAL SEVEN-DAY MINIMUM	14	Jul 8	1320	Aug 28 1978
INSTANTANEOUS PEAK FLOW	605	Sep 27	7.98	Aug 28 1978
INSTANTANEOUS PEAK STAGE	6.02	Sep 27	2.8	Jul 17 1966
INSTANTANEOUS LOW FLOW	10	Jul 13	1.47	
ANNUAL RUNOFF (CFSM)	1.25		20.00	
ANNUAL RUNOFF (INCHES)	17.03		189	
10 PERCENT EXCEEDS	133		72	
50 PERCENT EXCEEDS	70		21	
90 PERCENT EXCEEDS	33			

e Estimated



DELAWARE RIVER BASIN

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ
(Hydrologic bench-mark station)

LOCATION.--Lat 39°53'05", long 74°30'20", Burlington County, Hydrologic Unit 02040202, on right bank, 25 ft upstream from Butterworth Road Bridge in Lebanon State Forest, 3.4 mi upstream from confluence with Cooper Branch, and 7.0 mi southeast of Browns Mills.

DRAINAGE AREA.--2.35 mi².

PERIOD OF RECORD.--October 1953 to current year. Prior to October 1962, published as "McDonald Branch in Lebanon State Forest".

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 117.73 ft above sea level (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good, except for estimated daily discharges, which are poor. Gage-height record is collected above concrete control and discharge record, which includes leakage around control, is measured at site 785 ft downstream. Several measurements of water temperature were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7.0 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.4	1.5	1.7	e1.8	e2.1	1.8	1.6	1.3	1.1	1.2	1.2
2	1.4	1.5	1.5	1.7	e1.8	e2.0	1.8	1.6	1.3	1.1	1.1	1.2
3	1.4	1.6	1.4	1.7	e1.7	e1.9	1.8	1.5	1.3	1.1	1.1	1.2
4	1.4	1.5	1.4	1.8	e1.7	e1.8	1.8	1.5	1.3	1.1	1.1	1.3
5	1.8	1.5	1.4	2.0	e1.6	e1.7	1.8	1.5	1.3	1.1	1.1	1.3
6	1.6	1.5	1.5	1.8	e1.6	e1.7	1.8	1.5	1.3	1.1	1.1	1.2
7	1.5	1.5	1.6	1.8	e1.6	e1.7	1.7	1.5	1.3	1.1	1.1	1.2
8	1.4	1.5	1.5	1.7	e1.7	e1.7	1.7	1.5	1.3	1.0	1.0	1.2
9	1.4	1.5	1.5	1.7	e1.7	e1.6	1.7	1.5	1.3	1.0	1.0	1.2
10	1.4	1.5	1.5	1.9	e1.8	e1.7	1.7	1.5	1.2	1.0	1.0	1.2
11	1.4	1.5	1.5	1.9	e1.8	e1.7	1.7	1.5	1.2	1.0	1.0	1.2
12	1.4	1.5	1.5	1.9	e1.8	e2.1	1.7	1.5	1.3	1.0	1.4	1.2
13	1.4	1.4	1.5	1.8	e1.8	e1.9	1.7	1.5	1.4	1.0	1.6	1.2
14	1.4	1.4	1.9	1.8	e1.9	1.7	1.7	1.5	1.3	1.0	1.7	1.2
15	1.4	1.4	1.9	1.7	e2.0	1.7	1.7	1.5	1.3	1.3	1.6	2.1
16	1.3	1.4	2.0	e1.7	e2.0	1.7	1.7	1.4	1.2	1.1	1.4	1.6
17	1.3	1.4	2.2	e1.7	e1.9	1.9	1.7	1.4	1.2	1.1	1.3	1.4
18	1.6	1.4	2.1	1.6	e2.0	1.9	1.7	1.4	1.2	1.0	1.3	1.4
19	1.5	1.4	2.0	e1.5	e2.6	1.9	1.7	1.4	1.3	1.1	1.3	1.5
20	1.6	1.4	2.1	e1.6	e2.5	1.9	1.7	1.5	1.2	1.1	1.3	1.5
21	1.6	1.4	2.3	e1.6	e2.5	1.9	1.7	1.5	1.2	1.0	1.3	1.4
22	1.5	1.4	2.2	e1.6	e2.4	1.9	1.8	1.5	1.2	1.0	1.2	1.4
23	1.5	1.4	2.2	e1.6	e2.1	1.9	1.8	1.5	1.2	1.0	1.2	1.3
24	1.5	1.5	2.1	e1.5	e2.1	1.9	1.9	1.6	1.2	1.0	1.2	1.3
25	1.4	1.5	2.0	e1.5	e2.1	1.9	1.8	1.6	1.1	1.0	1.2	1.4
26	1.5	1.6	1.9	e1.5	e2.1	1.8	1.8	1.5	1.1	1.6	1.2	2.4
27	1.4	1.6	1.9	e1.5	e2.2	1.8	1.7	1.5	1.1	1.7	1.2	3.1
28	1.4	1.5	1.9	e1.4	e2.2	2.1	1.7	1.5	1.1	1.5	1.2	3.1
29	1.4	1.5	1.8	e1.5	e2.1	2.0	1.7	1.4	1.2	1.3	1.2	2.3
30	1.4	1.5	1.8	e1.5	---	1.9	1.7	1.4	1.1	1.2	1.2	2.0
31	1.4	---	1.8	e1.8	---	1.9	---	1.3	---	1.2	1.2	---
TOTAL	45.1	44.1	55.4	52.0	57.1	57.3	52.2	46.1	37.0	34.9	38.0	46.2
MEAN	1.45	1.47	1.79	1.68	1.97	1.85	1.74	1.49	1.23	1.13	1.23	1.54
MAX	1.8	1.6	2.3	2.0	2.6	2.1	1.9	1.6	1.4	1.7	1.7	3.1
MIN	1.3	1.4	1.4	1.4	1.6	1.6	1.7	1.3	1.1	1.0	1.0	1.2
CFSM	.62	.63	.76	.71	.84	.79	.74	.63	.52	.48	.52	.66
IN.	.71	.70	.88	.82	.90	.91	.83	.73	.59	.55	.60	.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2000, BY WATER YEAR (WY)

	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
MEAN	1.57	1.71	2.05	2.28	2.40	2.88	2.90	2.66	2.17	1.85	1.81	1.65
MAX	4.45	4.82	5.75	4.78	5.69	5.67	5.74	6.86	5.35	4.15	5.65	4.31
(WY)	1959	1973	1973	1973	1973	1979	1984	1998	1979	1958	1958	1958
MIN	.80	.95	.98	.98	1.13	1.25	1.24	1.17	1.05	1.00	.91	.71
(WY)	1996	1986	1999	1981	1989	1966	1985	1995	1995	1977	1995	1995

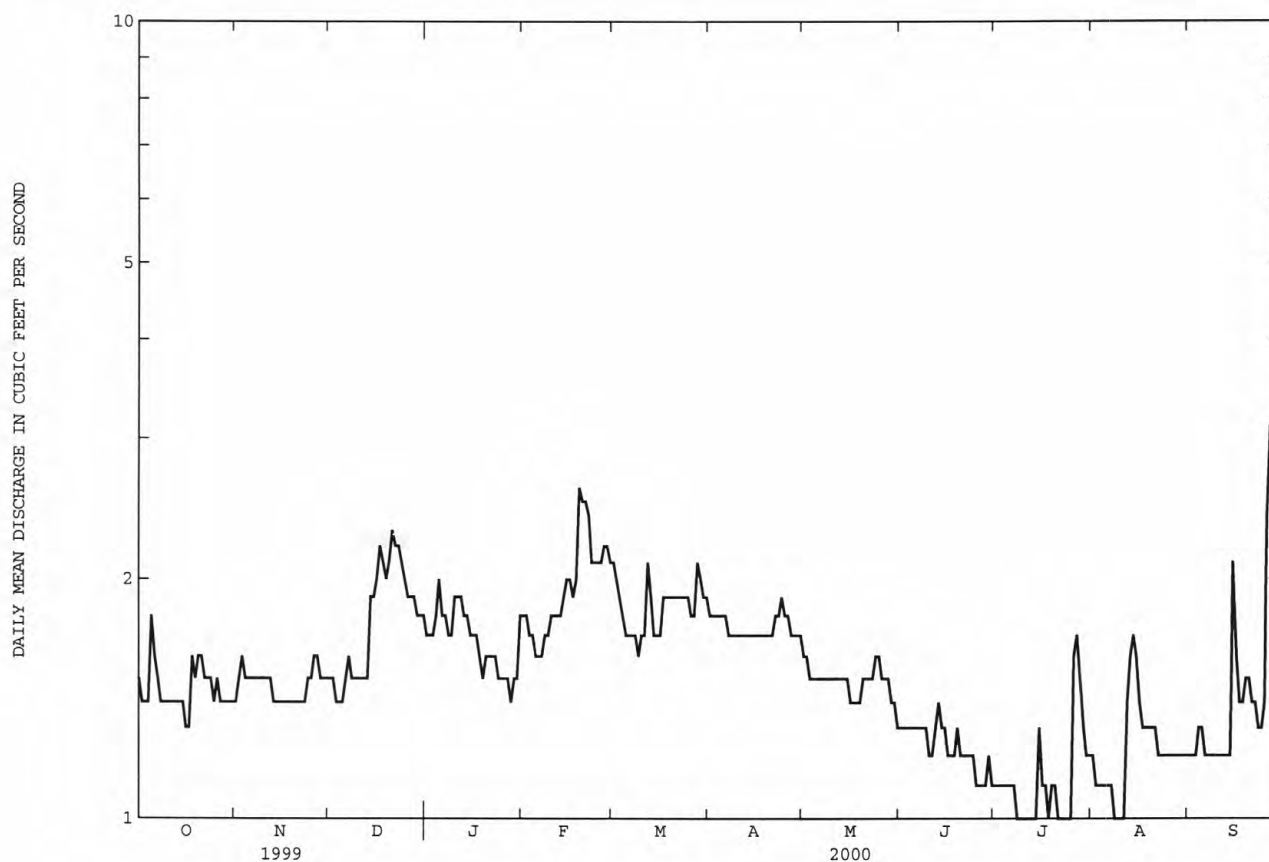
DELAWARE RIVER BASIN

237

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued
(Hydrologic bench-mark station)

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1954 - 2000
ANNUAL TOTAL	579.92	565.4	
ANNUAL MEAN	1.59	1.54	2.16
HIGHEST ANNUAL MEAN			3.85 1973
LOWEST ANNUAL MEAN			1.17 1995
HIGHEST DAILY MEAN	3.7 Sep 16	3.1 Sep 27	20 Feb 28 1958
LOWEST DAILY MEAN	.89 Aug 7	1.0 Jul 8	.50 Oct 13 1995
ANNUAL SEVEN-DAY MINIMUM	.91 Aug 6	1.0 Jul 8	.58 Oct 8 1995
INSTANTANEOUS PEAK FLOW		4.1 Sep 27	35 Aug 25 1958
INSTANTANEOUS PEAK STAGE		1.55 Sep 27	2.33 Aug 25 1958
INSTANTANEOUS LOW FLOW		.96 Jul 13	.49 Oct 13 1995
ANNUAL RUNOFF (CFSM)	.68	.66	.92
ANNUAL RUNOFF (INCHES)	9.18	8.95	12.49
10 PERCENT EXCEEDS	2.1	1.9	3.6
50 PERCENT EXCEEDS	1.5	1.5	1.8
90 PERCENT EXCEEDS	1.1	1.1	1.1

e Estimated



DELAWARE RIVER BASIN

01466900 GREENWOOD BRANCH AT NEW LISBON, NJ

LOCATION.--Lat 39°57'22", long 74°37'41", Burlington County, Hydrologic Unit 02040202, at bridge on Fourmile Road (State Route 646) in New Lisbon, 0.5 mi. upstream from mouth, and 0.7 mi south of State Route 530.

DRAINAGE AREA.--77.9 mi².

PERIOD OF RECORD.--Occasional miscellaneous discharge measurements, water years 1954, 1973. May 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 50 ft above sea level (from topographic map).

REMARKS.--Records good except for estimated daily discharges, which are poor. Water diverted for water supply to Fort Dix Army Base just upstream from gage. Several measurements of water temperature (see diversions in Delaware River basin) were made during the year. Satellite rain-gage and gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	77	87	85	95	94	91	71	63	45	71	45
2	77	80	79	84	101	97	89	68	57	42	65	43
3	73	87	74	84	99	88	94	66	52	41	61	42
4	70	94	77	86	96	86	93	64	48	41	79	52
5	82	104	73	96	92	81	93	64	45	38	80	58
6	91	116	79	102	90	77	92	67	47	32	76	66
7	90	105	83	102	88	74	87	76	61	30	58	72
8	83	93	85	99	86	73	91	77	57	32	54	66
9	75	87	87	96	85	75	96	71	49	29	46	61
10	75	84	82	96	85	74	94	68	45	29	39	57
11	81	81	77	99	87	74	87	81	43	27	44	53
12	81	79	75	102	90	90	84	93	39	25	65	49
13	77	73	73	100	91	95	85	82	47	23	90	44
14	91	69	88	97	95	87	91	77	50	23	135	41
15	92	67	107	92	100	88	94	73	51	39	157	76
16	85	66	124	88	104	78	96	66	53	50	148	126
17	76	64	137	86	102	95	102	64	51	42	128	158
18	83	65	131	81	100	94	109	64	52	35	110	131
19	102	66	115	74	112	100	106	67	58	32	94	107
20	103	67	108	e73	128	100	102	80	55	37	84	110
21	108	67	120	e73	140	101	98	93	47	34	73	127
22	114	66	132	e75	141	105	106	106	46	33	61	112
23	116	65	123	e77	125	105	113	109	44	31	55	95
24	114	73	115	76	114	101	112	110	41	28	51	89
25	112	84	112	78	110	100	101	117	38	28	48	85
26	107	92	110	81	106	95	92	117	36	41	46	105
27	100	99	107	81	105	87	81	100	35	77	43	170
28	94	106	102	80	99	93	74	88	35	95	41	199
29	88	104	97	78	93	100	70	82	44	104	40	157
30	85	97	95	76	---	100	70	75	49	91	41	135
31	78	---	92	86	---	96	---	70	---	76	42	---
TOTAL	2782	2477	3046	2683	2959	2803	2793	2506	1438	1330	2225	2731
MEAN	89.7	82.6	98.3	86.5	102	90.4	93.1	80.8	47.9	42.9	71.8	91.0
MAX	116	116	137	102	141	105	113	117	63	104	157	199
MIN	70	64	73	73	85	73	70	64	35	23	39	41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2000, BY WATER YEAR (WY)

MEAN	62.4	58.6	63.8	97.2	101	104	95.0	75.5	61.2	40.4	54.0	81.2
MAX	89.7	82.6	98.3	108	102	119	96.9	80.8	96.6	48.7	71.8	121
(WY)	2000	2000	2000	1999	2000	1999	1999	2000	1998	1998	2000	1999
MIN	35.1	34.6	29.3	86.5	100	90.4	93.1	70.2	39.0	29.5	39.3	31.3
(WY)	1999	1999	1999	2000	1999	2000	2000	1999	1999	1999	1998	1998

DELAWARE RIVER BASIN

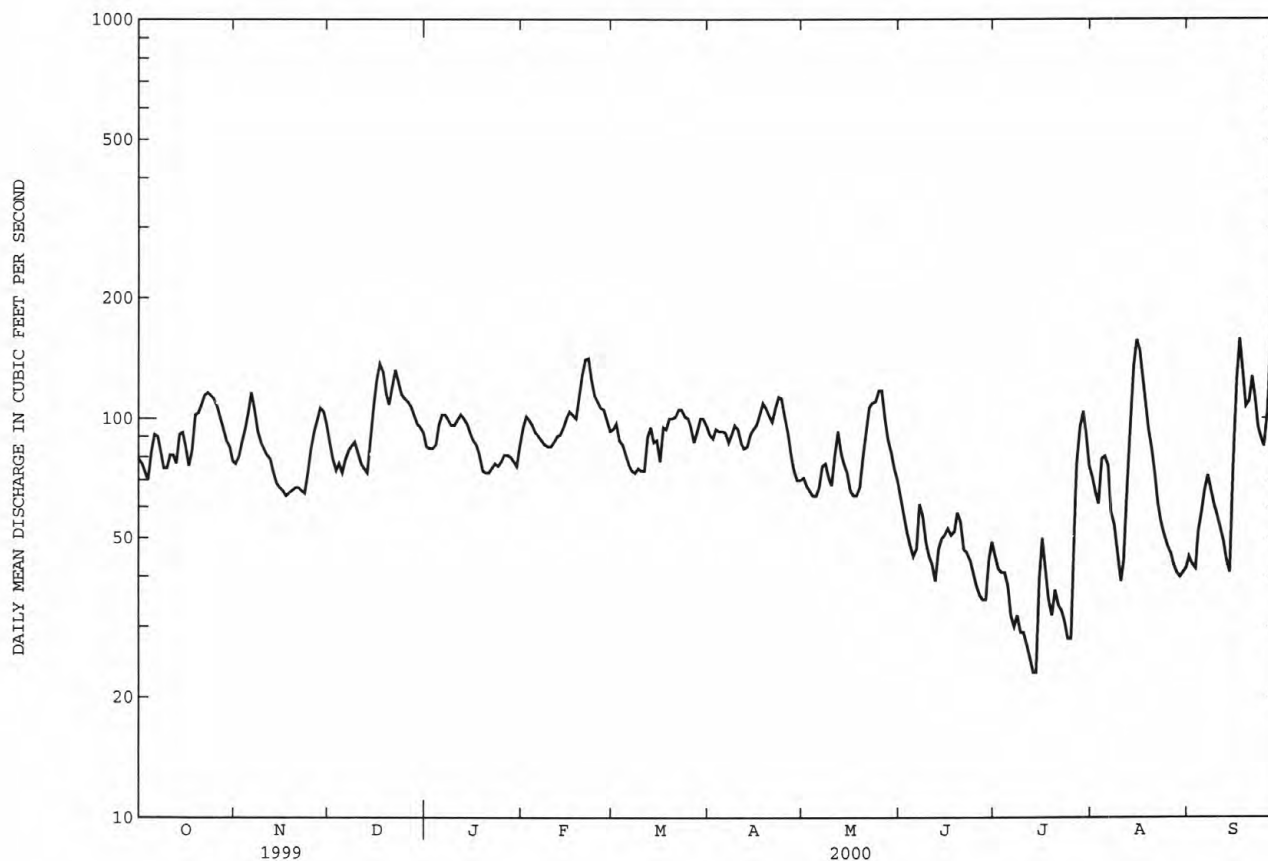
239

01466900 GREENWOOD BRANCH AT NEW LISBON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1998 - 2000	
ANNUAL TOTAL	30519		29773		75.3	
ANNUAL MEAN	83.6		81.3		81.3	
HIGHEST ANNUAL MEAN					69.2	
LOWEST ANNUAL MEAN					586	
HIGHEST DAILY MEAN	586	Sep 17	199	Sep 28	586	Sep 17 1999
LOWEST DAILY MEAN	17	Aug 4	23	Jul 13	17	Aug 4 1999
ANNUAL SEVEN-DAY MINIMUM	19	Aug 4	27	Jul 8	19	Aug 4 1999
INSTANTANEOUS PEAK FLOW			224		940a	
INSTANTANEOUS PEAK STAGE			3.37		7.78a	
INSTANTANEOUS LOW FLOW			22		17	
10 PERCENT EXCEEDS	126		112	Jul 13	115	Aug 4 1999
50 PERCENT EXCEEDS	82		84		73	
90 PERCENT EXCEEDS	31		42		30	

a Observed by field personnel before gage established.

e Estimated



DELAWARE RIVER BASIN

01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ

LOCATION.--Lat 39°58'10", long 74°41'05", Burlington County, Hydrologic Unit 02040202, on right bank at downstream side of bridge on Hanover Street in Pemberton, 12 mi upstream from confluence with South Branch Rancocas Creek.

DRAINAGE AREA.--118 mi².

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

REVISED RECORDS.--WSP 1302: 1922-23. WSP 1382: 1933. WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder above concrete dams. Datum of gage is 31.19 ft above sea level. Prior to June 9, 1923, nonrecording gage and June 9, 1923 to Aug. 9, 1951, water-stage recorder at site 600 ft downstream at datum 6.54 ft lower.

REMARKS.--Records good. Flow regulated occasionally by cranberry bogs and ponds above station. Water diverted for water supply for Fort Dix army base upstream from gage. Several measurements of water temperature were made during the year. Satellite gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	129	142	127	171	164	174	89	128	79	116	81
2	137	135	124	125	176	167	166	84	121	72	109	68
3	129	152	116	136	171	153	171	83	114	70	105	65
4	129	145	117	148	164	144	173	71	104	70	167	84
5	164	165	112	197	156	136	154	70	97	69	160	88
6	169	197	122	197	151	127	153	93	95	64	139	91
7	166	177	158	190	145	122	147	105	106	61	110	95
8	150	151	161	179	143	120	151	107	111	61	99	86
9	136	137	150	167	142	122	169	103	104	58	93	79
10	143	134	143	172	144	121	171	93	98	57	83	79
11	148	134	139	186	157	125	156	148	95	45	97	75
12	142	132	130	186	169	177	144	154	90	46	181	67
13	136	123	127	182	169	187	143	133	92	46	221	64
14	148	113	249	171	188	167	147	127	95	48	323	62
15	152	107	326	158	199	160	156	124	95	71	387	178
16	139	107	314	151	197	145	187	106	95	91	334	250
17	130	103	307	145	188	197	215	95	96	80	261	322
18	152	103	278	131	178	214	232	94	105	67	206	238
19	166	103	231	113	277	208	218	109	129	61	173	201
20	193	103	217	115	313	197	206	191	115	65	146	246
21	209	103	290	116	320	192	202	257	96	64	125	263
22	222	105	314	119	306	222	242	257	91	63	104	212
23	242	103	282	119	263	221	234	256	91	61	94	168
24	232	110	241	120	223	208	209	248	88	59	90	153
25	215	128	219	124	206	184	170	262	82	58	86	147
26	196	142	205	133	194	172	146	267	77	93	82	327
27	178	188	196	131	186	160	127	230	73	152	75	454
28	166	201	187	124	184	217	115	193	69	164	66	461
29	152	188	175	122	168	212	106	173	73	167	64	362
30	147	169	164	118	---	203	102	156	80	147	64	294
31	136	---	157	153	---	187	---	141	---	122	67	---
TOTAL	5063	4087	6093	4555	5648	5331	5086	4619	2905	2431	4427	5360
MEAN	163	136	197	147	195	172	170	149	96.8	78.4	143	179
MAX	242	201	326	197	320	222	242	267	129	167	387	461
MIN	129	103	112	113	142	120	102	70	69	45	64	62
CFSM	1.38	1.15	1.67	1.25	1.65	1.46	1.44	1.26	.82	.66	1.21	1.51
IN.	1.60	1.29	1.92	1.44	1.78	1.68	1.60	1.46	.92	.77	1.40	1.69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2000, BY WATER YEAR (WY)

	118	150	172	200	215	248	237	196	141	121	131	117
MEAN	118	150	172	200	215	248	237	196	141	121	131	117
MAX	365	430	434	479	445	472	475	475	297	401	426	341
(WY)	1928	1973	1973	1979	1939	1994	1984	1998	1968	1938	1958	1971
MIN	38.7	45.7	47.1	62.1	92.2	105	85.4	72.0	54.1	36.6	35.6	36.5
(WY)	1923	1923	1999	1981	1931	1985	1985	1992	1995	1999	1995	1995

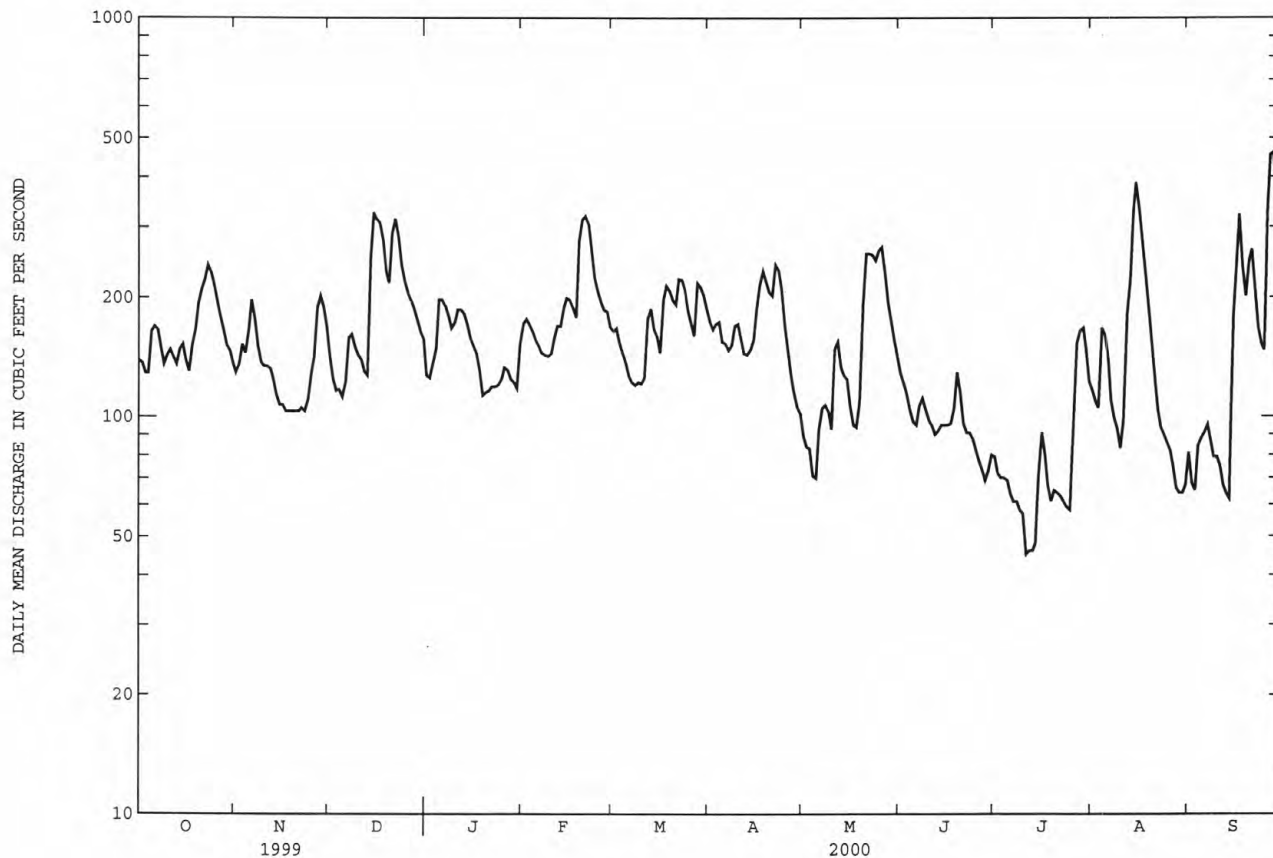
DELAWARE RIVER BASIN

241

01467000 NORTH BRANCH RANOCAS CREEK AT PEMBERTON, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1922 - 2000	
ANNUAL TOTAL	55466		55605		170	
ANNUAL MEAN	152		152		286	
HIGHEST ANNUAL MEAN					92.3	
LOWEST ANNUAL MEAN					1978	
HIGHEST DAILY MEAN	1030	Sep 18	461	Sep 28	1690	Aug 21 1939
LOWEST DAILY MEAN	25	Aug 3	45	Jul 11	9.0	Sep 29 1932
ANNUAL SEVEN-DAY MINIMUM	27	Aug 2	52	Jul 8	27	Oct 2 1922
INSTANTANEOUS PEAK FLOW			490	Sep 27	1730	Aug 21 1939
INSTANTANEOUS PEAK STAGE			2.30	Sep 27	10.77a	Aug 21 1939
INSTANTANEOUS LOW FLOW			44	Jul 11	9.0	Sep 29 1932
ANNUAL RUNOFF (CFSM)	1.29		1.29		1.44	
ANNUAL RUNOFF (INCHES)	17.49		17.53		19.63	
10 PERCENT EXCEEDS	270		235		311	
50 PERCENT EXCEEDS	137		144		140	
90 PERCENT EXCEEDS	39		74		62	

a From high-water mark, site and datum then in use.



LOCATION.--Lat 39°56'30", long 75°00'05", Camden County, Hydrologic Unit 02040202, on left bank on downstream wingwall of bridge on Mill Road in Cherry Hill, 1.1 mi south of Maple Shade and 3.8 mi upstream from confluence with the North Branch Pennsauken Creek.

PERIOD OF RECORD.--October 1967 to September 1976, October 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 8.12 ft above sea level.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 22	0645	*453	*8.29	Sep 26	0830	321	7.41
Aug 14	1530	318	7.38				

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	8.2	6.6	17	7.3	10	7.2	6.2	4.8	25	14
2	7.2	53	8.7	6.5	9.4	7.1	9.6	8.3	6.3	4.5	6.8	6.3
3	6.7	54	8.4	6.8	6.9	6.6	9.3	7.2	5.8	6.6	8.4	33
4	19	11	8.1	27	7.2	6.3	12	6.5	5.7	12	59	75
5	64	8.0	6.9	57	8.2	6.9	10	6.4	5.5	4.9	7.8	10
6	11	7.1	19	9.4	7.0	6.2	12	6.1	18	4.4	5.5	7.5
7	8.8	e6.8	29	6.6	9.1	6.0	9.7	5.9	9.0	4.4	9.5	6.2
8	8.7	e7.1	8.1	6.1	11	6.0	9.8	5.8	6.2	4.3	5.3	6.2
9	6.5	e7.1	6.1	5.6	9.4	6.0	43	5.6	5.7	4.1	4.7	5.4
10	35	e7.1	25	20	17	5.9	14	13	5.4	5.5	9.5	5.1
11	13	e6.4	18	13	28	34	10	19	5.1	4.6	25	5.0
12	7.5	e5.9	7.7	8.0	20	51	11	5.7	10	4.0	63	4.8
13	6.4	e6.6	19	8.0	8.3	11	9.4	9.2	34	4.0	19	8.2
14	6.3	e6.5	163	e6.9	67	7.6	9.3	36	11	16	132	5.5
15	6.7	e6.5	40	e7.0	21	6.8	17	6.4	7.0	16	35	84
16	6.6	e5.9	15	e7.1	10	15	86	5.2	11	15	10	9.8
17	15	e6.4	11	e6.4	8.2	98	66	6.7	6.6	13	7.2	6.2
18	29	e6.4	9.2	e6.3	43	15	25	5.3	24	5.2	7.3	5.5
19	7.3	e5.6	8.4	e6.4	95	9.2	13	38	40	12	7.9	37
20	62	e6.5	27	e7.1	26	7.8	10	36	7.8	11	5.6	71
21	21	e5.8	32	e7.1	14	45	45	18	6.2	4.9	5.4	11
22	9.9	e6.5	11	e6.4	11	260	38	13	27	8.4	5.0	7.2
23	37	e6.1	9.2	e6.8	9.9	28	13	14	7.1	4.5	4.9	6.2
24	9.5	21	8.1	e7.0	9.3	16	10	22	5.7	4.3	4.9	9.3
25	7.2	32	7.5	e8.5	8.8	13	9.1	23	5.1	4.8	4.8	17
26	7.3	28	7.2	e9.1	9.0	12	8.4	8.6	8.2	37	4.7	223
27	6.5	101	7.2	e7.8	8.1	11	8.1	7.5	5.5	24	4.6	27
28	6.7	17	7.2	e6.7	13	76	8.0	8.2	8.2	6.6	15	13
29	6.5	10	6.9	e7.0	8.0	16	7.9	7.5	14	5.3	6.0	9.0
30	6.4	8.4	6.6	11	---	12	7.3	6.5	5.6	6.6	5.7	7.9
31	7.9	---	6.8	62	---	11	---	6.3	---	40	5.2	---
TOTAL	462.6	470.7	555.5	367.2	519.8	819.7	550.9	374.1	322.9	302.7	519.7	736.3
MEAN	14.9	15.7	17.9	11.8	17.9	26.4	18.4	12.1	10.8	9.76	16.8	24.5
MAX	64	101	163	62	95	260	86	38	40	40	132	223
MIN	6.3	5.6	6.1	5.6	6.9	5.9	7.3	5.2	5.1	4.0	4.6	4.8
CFSM	1.66	1.75	2.00	1.32	2.00	2.94	2.04	1.34	1.20	1.09	1.87	2.73
IN.	1.92	1.95	2.30	1.52	2.15	3.40	2.28	1.55	1.34	1.25	2.15	3.00

MEAN	13.4	17.0	22.1	22.5	20.0	24.0	21.7	18.9	14.7	17.2	16.1	14.5
MAX	26.0	48.8	60.4	50.5	44.7	46.5	49.8	47.0	33.4	46.5	58.2	38.8
(WY)	1990	1973	1997	1979	1979	1994	1983	1989	1989	1989	1978	1975
MIN	5.83	6.01	6.38	6.55	9.19	9.29	8.08	8.24	6.50	6.30	4.17	4.71
(WY)	1995	1999	1999	1981	1968	1985	1985	1993	1995	1999	1995	1968

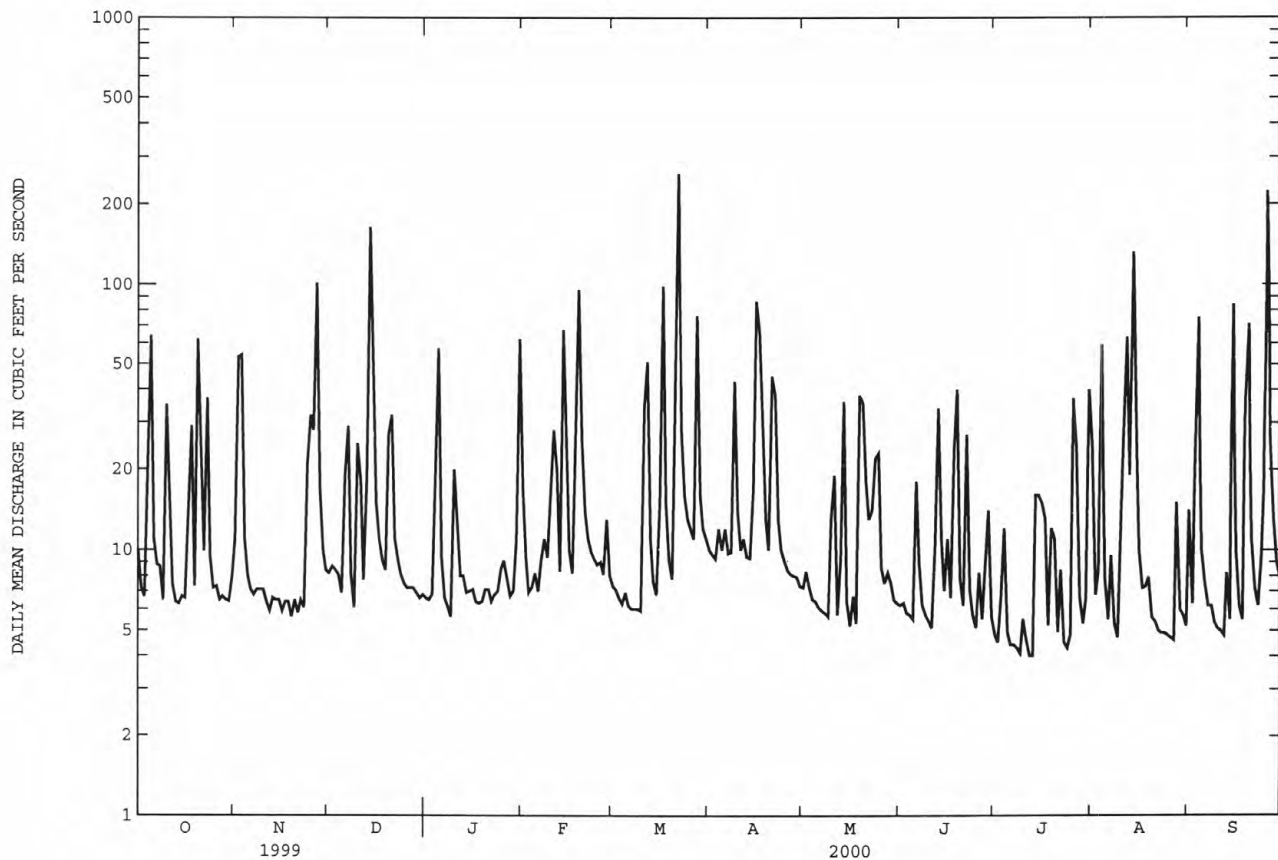
DELAWARE RIVER BASIN

243

01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1968 - 2000	
ANNUAL TOTAL	6093.0		6002.1		18.6	
ANNUAL MEAN	16.7		16.4		27.3	1978
HIGHEST ANNUAL MEAN					11.6	1995
LOWEST ANNUAL MEAN					551	Jul 5 1989
HIGHEST DAILY MEAN	464	Sep 16	260	Mar 22	2.2	Nov 14 1998
LOWEST DAILY MEAN	2.2	Aug 7	4.0	Jul 12	2.5	Aug 30 1995
ANNUAL SEVEN-DAY MINIMUM	2.6	Aug 7	4.4	Jul 7	1500	Jul 14 1994
INSTANTANEOUS PEAK FLOW			453	Mar 22	11.63	Jul 14 1994
INSTANTANEOUS PEAK STAGE			8.29	Mar 22	1.1	Aug 7 1999
INSTANTANEOUS LOW FLOW			3.6	Jul 9	2.07	
ANNUAL RUNOFF (CFSM)	1.86		1.83		28.11	
ANNUAL RUNOFF (INCHES)	25.24		24.86		36	
10 PERCENT EXCEEDS	34		36		9.6	
50 PERCENT EXCEEDS	7.1		8.2		4.9	
90 PERCENT EXCEEDS	3.5		5.5			

e Estimated



MEAN	26.0	30.4	37.3	38.6	36.6	42.3	40.3	35.5	28.2	30.6	29.1	26.8
MAX	46.8	79.6	85.3	97.8	76.1	78.9	99.4	66.7	54.9	66.8	97.6	65.8
(WY)	1976	1973	1997	1978	1979	1984	1983	1983	1972	1975	1971	1975
MIN	9.26	9.00	8.21	14.6	18.9	23.2	15.1	14.2	10.9	10.5	7.79	7.97
(WY)	1966	1999	1999	1992	1992	1981	1992	1965	1988	1999	1966	1997

DELAWARE RIVER BASIN

245

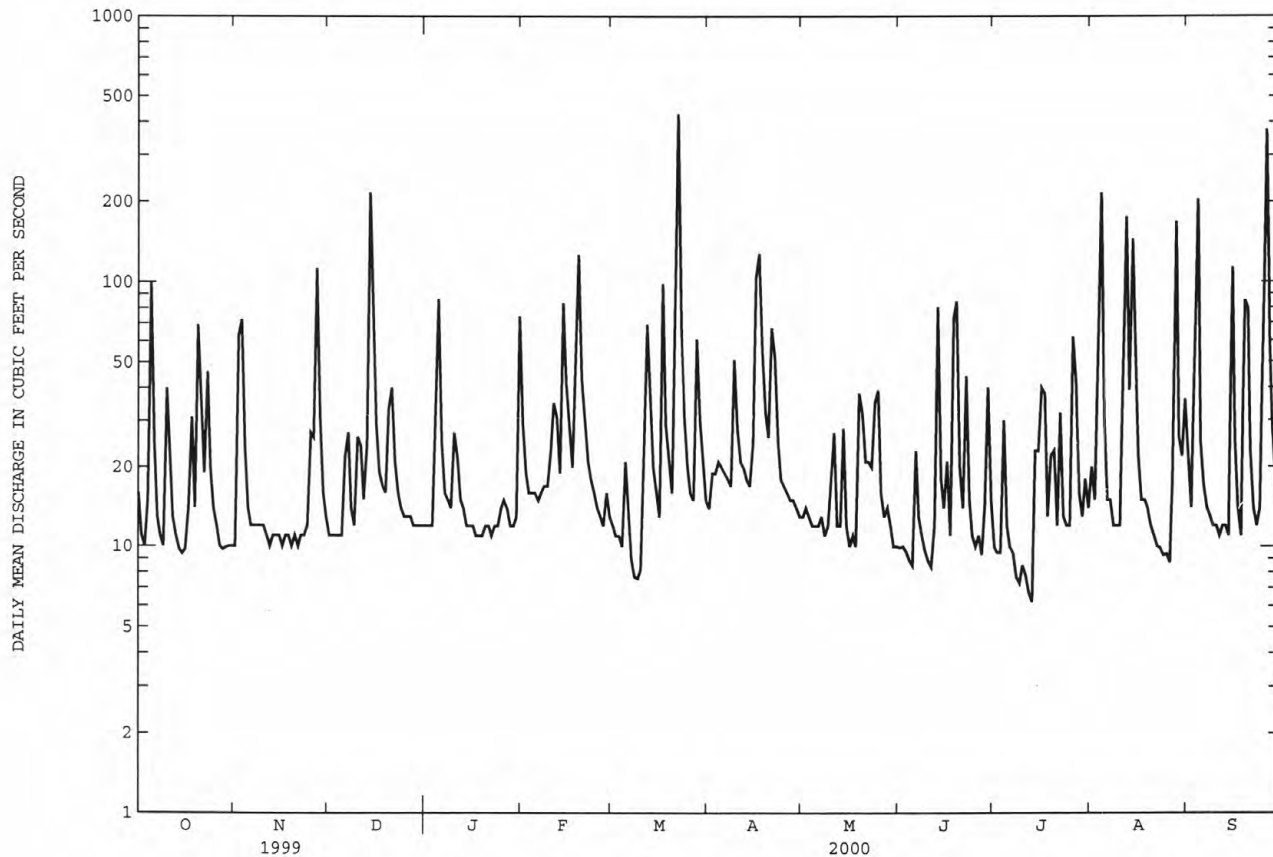
01467150 COOPER RIVER AT HADDONFIELD, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1964 - 2000
ANNUAL TOTAL	9485.5	9978.0	
ANNUAL MEAN	26.0	27.3	33.5
HIGHEST ANNUAL MEAN			50.6 1973
LOWEST ANNUAL MEAN			19.2 1995
HIGHEST DAILY MEAN	717 Sep 16	429 Mar 22	1510 Aug 28 1971
LOWEST DAILY MEAN	3.5 Aug 10	6.2 Jul 13	1.2 Jun 27 1964
ANNUAL SEVEN-DAY MINIMUM	4.0 Aug 7	7.7 Jul 7	4.0 Aug 7 1999
INSTANTANEOUS PEAK FLOW		731 Sep 4	3300 Aug 28 1971
INSTANTANEOUS PEAK STAGE		3.06 Sep 4	5.46 Aug 28 1971
INSTANTANEOUS LOW FLOW		6.1a Jul 12	.80b Nov 13 1972
ANNUAL RUNOFF (CFSM)	1.53	1.60	1.97
ANNUAL RUNOFF (INCHES)	20.76	21.83	26.75
10 PERCENT EXCEEDS	52	54	58
50 PERCENT EXCEEDS	13	15	22
90 PERCENT EXCEEDS	5.2	10	11

a Was probably lower during period of gate operation, Feb. 22 to Mar. 31, 2000

b Regulation from unknown source

e Estimated



SCHUYLKILL RIVER BASIN

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA
(National Water-Quality Assessment Station)

LOCATION.--Lat 39°58'04", long 75°11'20", Philadelphia County, Hydrologic Unit 02040203, on right bank 150 ft upstream from Fairmount Dam, 1,500 ft upstream from bridge on Spring Garden Street in Philadelphia, and 8.7 mi upstream from mouth.

DRAINAGE AREA.--1,893 mi².

PERIOD OF RECORD.--October 1931 to current year. Records for January 1898 to December 1912, published in WSP 35, 48, 65, 82, 97, 125, 166, 202, 214, 261, 301, and 381 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1936(M). WSP 1432: 1945. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 5.74 ft above sea level. Prior to Nov. 25, 1956, water-stage recorder at site on right bank just upstream from Fairmount Dam at same datum. Nov. 26, 1956, to Oct. 6, 1966, water-stage recorder at site on left bank 40 ft upstream from Fairmount Dam at same datum.

REMARKS.--Records good. Flow regulated by Still Creek Reservoir (station 01469200) since February 1933, Blue Marsh Lake (station 01470870) since April 1979, Green Lane Reservoir (station 01472200) since December 1956 and to some extent by Lake Ontelaunee. Daily mean discharges do not include diversion above station by city of Philadelphia for municipal water supply. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion provided by Philadelphia Water Department.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1869 reached a stage of 17.0 ft, discharge, about 135,000 ft³/s. Flood of Mar. 1, 1902 reached a stage of 14.8 ft, discharge, about 98,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 18,000 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Mar. 22	0830	*42,700	*11.04	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6010	1300	2930	1730	1430	7290	5040	2470	2440	2750	3310	1090
2	4610	1850	2620	1640	1440	5620	4470	2390	2220	2350	3980	1100
3	3420	4850	2400	1620	1380	4550	4170	2340	2080	2190	6220	1540
4	3010	3630	2250	1810	1290	3880	4660	2150	1950	1990	9870	1460
5	4210	2580	1960	3110	1290	3490	4970	1990	1820	1870	4670	1050
6	3990	2160	2920	2330	1300	3220	4150	1990	2060	1700	3090	956
7	3170	1920	4520	1890	1290	2780	3570	1930	3740	1470	2600	933
8	2770	1840	2850	1730	1250	2590	3370	1850	2810	1350	2580	884
9	2520	e1700	2230	1640	1190	2530	4350	1720	1980	1310	2030	857
10	3310	1610	2130	1780	1180	2370	5710	1690	1710	1410	1800	788
11	6100	1530	2430	3000	1350	2300	4550	1950	1540	1260	1610	793
12	4090	1420	2160	3680	1720	4760	4240	2580	1630	1220	1700	757
13	3360	1360	2000	3070	1640	5540	3890	2230	5550	1160	1600	1530
14	3160	1350	4440	2660	2540	4210	3440	3080	3580	1220	1820	1340
15	3090	1320	8770	2160	4930	3790	3280	3340	3250	1280	2360	3550
16	2750	1310	5930	1970	4670	3540	3480	2510	2540	1520	1680	1910
17	2510	1260	4880	1820	5350	7600	4590	2250	2290	1620	1410	1290
18	2670	1210	3940	1440	4250	6380	5150	2070	2570	1260	1210	1050
19	2320	1140	3310	1400	6100	4550	4100	2620	3240	1210	1180	1530
20	2380	1160	3110	1690	5430	4060	3360	5140	2270	1260	1130	4620
21	2550	1180	3750	1650	4380	4580	3270	5520	1940	1150	1070	2890
22	2120	1220	3430	1440	3840	35500	9180	3840	4670	1210	975	1970
23	2060	1170	2810	1490	3900	20100	5130	4560	3870	1180	926	1540
24	1970	1190	2450	1710	4110	12900	4050	6190	2790	1050	917	1270
25	1780	1250	2250	1710	5290	9890	3490	8150	2220	965	947	1270
26	1620	1340	2080	1380	6430	8190	3180	6880	2420	1920	969	4570
27	1560	7490	2090	1440	6410	6970	2980	5090	7300	3480	977	3040
28	1490	6550	1980	1270	7980	11000	2910	4100	5380	1510	1350	2000
29	1410	4060	1890	1080	9190	10000	2750	3620	3720	1190	1220	1590
30	1320	3240	1820	1230	---	7630	2600	3240	2900	1100	1080	1340
31	1280	---	1730	1440	---	6030	---	2830	---	2340	1160	---
TOTAL	88610	65190	94060	58010	102550	217840	124080	102310	88480	48495	67441	50508
MEAN	2858	2173	3034	1871	3536	7027	4136	3300	2949	1564	2176	1684
MAX	6100	7490	8770	3680	9190	35500	9180	8150	7300	3480	9870	4620
MIN	1280	1140	1730	1080	1180	2300	2600	1690	1540	965	917	757
(†)	188	181	188	104	214	201	193	208	209	209	208	198

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2000, BY WATER YEAR (WY)

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943
MEAN	1411	2327	3168	3379	3640	4882	4260	3123	2110	1626	1387	1443
MAX	5624	6272	11150	11400	8136	13320	11620	9943	11640	6434	7980	5300
(WY)	1997	1973	1997	1979	1939	1936	1983	1989	1972	1984	1933	1999
MIN	89.4	223	444	340	647	1552	1237	693	261	116	140	117
(WY)	1942	1932	1981	1981	1934	1981	1985	1965	1965	1966	1966	1932

† Diversion for municipal supply of City of Philadelphia, equivalent in cubic feet per second.

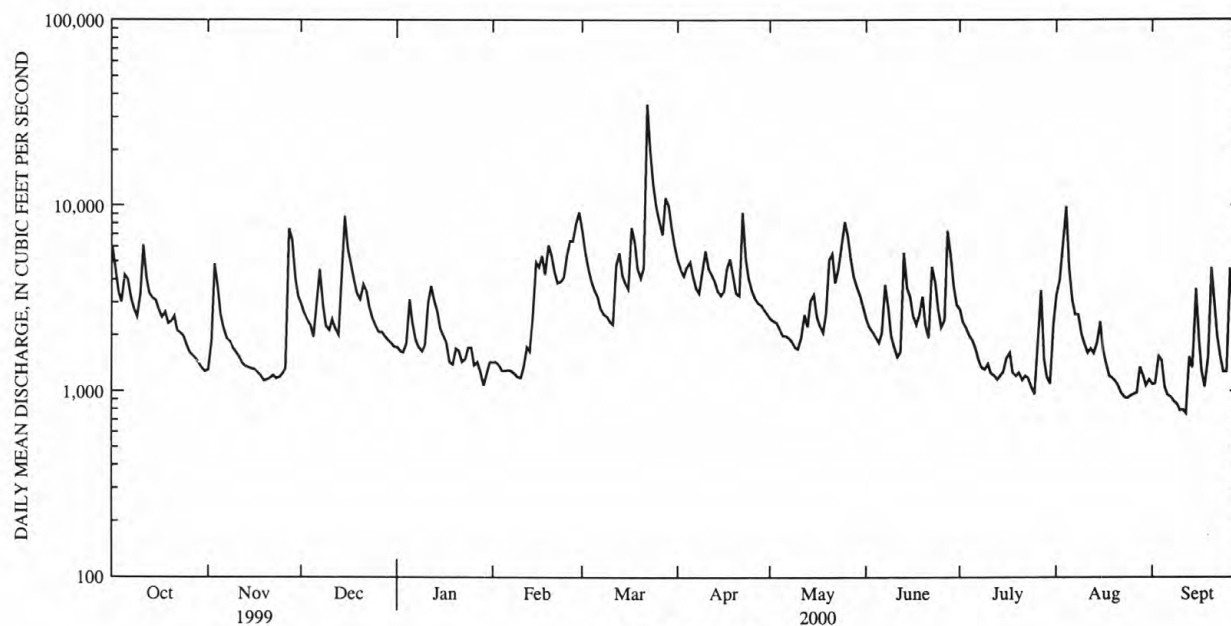
e Estimated.

SCHUYLKILL RIVER BASIN

247

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1932 - 2000	
ANNUAL TOTAL	956413		1107574		2725	
ANNUAL MEAN	2620		3026		1014	
HIGHEST ANNUAL MEAN					4791	
LOWEST ANNUAL MEAN					1014	
HIGHEST DAILY MEAN	56100	Sep 17	35500	Mar 22	93400	Jun 23 1972
LOWEST DAILY MEAN	165	Aug 4	757	Sep 12	.60	Sep 2 1966
ANNUAL SEVEN-DAY MINIMUM	231	Aug 1	853	Sep 6	24	Sep 28 1941
INSTANTANEOUS PEAK FLOW			42700	Mar 22	103000a	Jun 23 1972
INSTANTANEOUS PEAK STAGE			11.04	Mar 22	14.65	Jun 23 1972
INSTANTANEOUS LOW FLOW			630	Sep 11	.00	Sep 2 1966
10 PERCENT EXCEEDS	4580		5460		5840	
50 PERCENT EXCEEDS	1980		2310		1680	
90 PERCENT EXCEEDS	461		1190		434	

a From rating curve extended above 92,000 ft³/s.

1-YEAR HYDROGRAPH
OCTOBER 1, 1999 TO SEPTEMBER 30, 2000

DELAWARE RIVER BASIN

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ

LOCATION.--Lat 39°44'26", long 75°15'34" (revised), Gloucester County, Hydrologic Unit 02040202, on right bank 25 ft downstream from County Bridge Route 607 on Gibbstown-Harrisonville Road (Tomlin Station Road), 1.8 mi west of Mullica Hill, and 2.8 mi east of Swedesboro.

DRAINAGE AREA.--26.9 mi².

PERIOD OF RECORD.--May 1966 to current year.

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is sea level. Prior to July 28, 1969, at datum 7.96 ft higher. July 28, 1969 to Sept. 30, 1969, at datum 5.96 ft higher.

REMARKS.--Records fair. Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 14	1930	382	11.55	Sep 26	1900	328	11.27
Mar 22	1000	*1,290	*14.42				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	19	27	29	42	29	46	33	22	20	18	17
2	21	32	26	29	33	28	44	34	22	17	17	16
3	20	63	25	28	29	27	43	32	20	16	19	16
4	23	31	25	34	28	28	45	31	19	19	25	19
5	78	24	25	78	28	36	45	31	19	17	22	17
6	36	22	30	41	27	30	41	30	23	16	17	16
7	26	21	34	34	27	23	39	29	25	15	19	16
8	23	20	27	32	27	23	38	28	21	14	17	16
9	22	20	26	31	26	23	66	26	19	14	16	15
10	40	19	32	33	29	22	56	26	18	14	16	15
11	37	19	37	37	44	27	42	33	17	13	17	15
12	27	19	29	33	53	47	41	28	18	13	16	16
13	23	19	33	30	35	37	38	26	24	12	16	16
14	22	19	218	29	99	29	37	31	23	15	36	16
15	21	19	139	27	88	26	40	26	23	21	32	44
16	21	18	57	26	49	29	62	24	23	35	21	23
17	22	18	42	25	41	90	122	26	23	26	17	17
18	32	18	37	22	53	48	86	25	30	18	18	16
19	26	18	35	19	167	34	57	43	73	19	18	30
20	52	18	38	21	89	30	47	41	31	23	17	40
21	52	19	52	23	52	87	71	35	23	18	17	22
22	34	20	41	29	43	901	130	35	38	26	16	17
23	43	21	36	21	39	210	64	36	24	15	15	17
24	32	23	33	22	38	87	48	46	20	14	15	19
25	27	28	32	34	36	66	44	35	17	15	15	25
26	24	34	32	38	33	57	42	28	17	51	15	219
27	23	91	31	25	31	44	39	25	17	58	14	82
28	22	52	31	33	34	117	39	27	22	26	17	31
29	21	34	30	26	31	70	37	25	54	20	17	22
30	20	29	29	26	---	54	35	24	27	19	18	19
31	19	---	29	58	---	49	---	23	---	25	18	---
TOTAL	913	807	1318	973	1351	2408	1584	942	752	644	571	869
MEAN	29.5	26.9	42.5	31.4	46.6	77.7	52.8	30.4	25.1	20.8	18.4	29.0
MAX	78	91	218	78	167	901	130	46	73	58	36	219
MIN	19	18	25	19	26	22	35	23	17	12	14	15
CFSM	1.09	1.00	1.58	1.17	1.73	2.89	1.96	1.13	.93	.77	.68	1.08
IN.	1.26	1.12	1.82	1.35	1.87	3.33	2.19	1.30	1.04	.89	.79	1.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2000, BY WATER YEAR (WY)

	MEAN	28.0	33.8	45.8	50.6	49.1	55.9	52.8	41.3	33.2	30.8	28.5	26.1
MAX	65.2	93.9	144	123	115	132	134	72.6	77.7	112	121	71.9	
(WY)	1990	1973	1997	1978	1979	1994	1983	1989	1975	1975	1967	1971	
MIN	13.0	15.3	16.3	20.7	23.6	22.7	21.3	15.9	10.7	6.01	5.89	11.7	
(WY)	1993	1999	1999	1981	1992	1981	1985	1977	1966	1966	1966	1968	

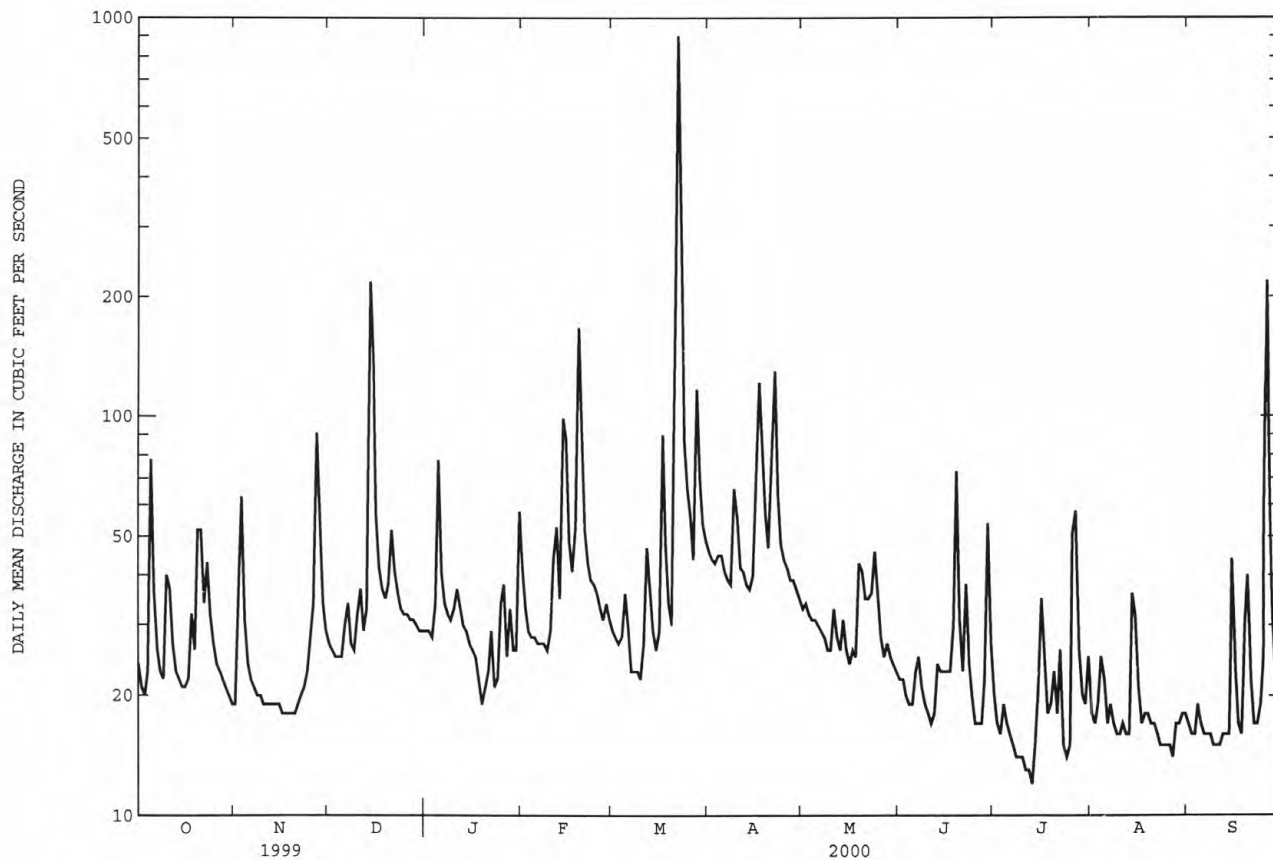
DELAWARE RIVER BASIN

249

01477120 RACCOON CREEK NEAR SWEDESBO, NJ--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1966 - 2000
ANNUAL TOTAL	11728.2	13132	
ANNUAL MEAN	32.1	35.9	39.8
HIGHEST ANNUAL MEAN			64.7 1973
LOWEST ANNUAL MEAN			22.5 1981
HIGHEST DAILY MEAN	667 Sep 16	901 Mar 22	1260 Aug 28 1971
LOWEST DAILY MEAN	6.6 Aug 4	12 Jul 13	2.9 Jul 14 1966
ANNUAL SEVEN-DAY MINIMUM	7.1 Aug 2	14 Jul 7	3.3 Aug 25 1966
INSTANTANEOUS PEAK FLOW		1290 Mar 22	3530 Aug 10 1967
INSTANTANEOUS PEAK STAGE		14.42 Mar 22	17.44 Aug 10 1967
INSTANTANEOUS LOW FLOW		12 Jul 13	2.9 Jul 14 1966
ANNUAL RUNOFF (CFSM)	1.19	1.33	1.48
ANNUAL RUNOFF (INCHES)	16.22	18.16	20.11
10 PERCENT EXCEEDS	52	53	66
50 PERCENT EXCEEDS	23	27	29
90 PERCENT EXCEEDS	9.5	17	14

a Present data.



RESERVOIRS IN DELAWARE RIVER BASIN

- 01416900 PEPACTON RESERVOIR.--Lat 42°04'38", long 74°58'04", Delaware County, NY, Hydrologic Unit 02040102, near release chamber at Downsview Dam on East Branch Delaware River, and 1.6 mi east of Downsview. DRAINAGE AREA, 372 mi². PERIOD OF RECORD, September 1954 to current year. REVISED RECORDS, WDR NY-90-1: Drainage area. GAGE, water-stage recorder. Datum of gage is sea level (levels by Board of Water Supply, City of New York).
Reservoir is formed by an earthfill rockfaced dam. Storage began Sept. 15, 1954. Usable capacity 140,190 mil gal between minimum operating level, elevation, 1,152.0 ft and crest of spillway, elevation, 1,280.0 ft. Capacity: at crest of spillway 149,799 mil gal; at minimum operating level, 9,609 mil gal; at sill of diversion tunnel, elevation, 1,143.0 ft, 6,098 mil gal; in dead storage below release outlet, elevation, 1,126.50 ft, 1,898 mil gal. Figures given herein represent total contents. Reservoir impounds water for diversion through East Delaware Tunnel to Rondout Reservoir on Rondout Creek, in Hudson River basin (see elsewhere in this section), for water supply to City of New York; for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master; and for conservation release. No diversion prior to Jan. 6, 1955. Records provided by New York City Department of Environmental Protection.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 154,027 mil gal, Apr. 5, 1960, elevation, 1,282.27 ft; minimum observed (after first filling), 9,575 mil gal, Dec. 26, 1964, elevation, 1,151.92 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 151,392 mil gal, June 8, elevation, 1,280.86 ft; minimum observed, 102,422 mil gal, Feb. 25, elevation, 1,251.54 ft.
- 01424997 CANNONVILLE RESERVOIR.--Lat 42°03'46", long 75°22'29", Delaware County, NY, Hydrologic Unit 02040101, in emergency gate tower at Cannonville Dam on West Branch Delaware River, and 1.8 mi southeast of Stilesville. DRAINAGE AREA, 454 mi². PERIOD OF RECORD, October 1963 to current year. REVISED RECORDS, WDR NY-71-1: 1966. GAGE, water-stage recorder. Datum of gage is sea level (levels by Board of Water Supply, City of New York).
Reservoir is formed by an earthfill rockfaced dam. Storage began Sept. 30, 1963. Usable capacity 95,706 mil gal between minimum operating level, elevation, 1,040.0 ft and crest of spillway, elevation, 1,150.0 ft. Capacity, at crest of spillway, 98,618 mil gal; at minimum operating level, 2,912 mil gal; at mouth of inlet channel to diversion tunnel, elevation, 1,035.0 ft, 1,892 mil gal; in dead storage below release outlet elevation, 1,020.5 ft, 328 mil gal. Figures given herein represent total contents. Impounded water is diverted for New York City water supply via West Delaware Tunnel to Rondout Reservoir in Hudson River basin (see elsewhere in this section); is released in Delaware River for downstream low flow augmentation, as directed by the Delaware River Master; and is released for conservation flow in the Delaware River. No diversion prior to January 29, 1964. Records provided by New York City Department of Environmental Protection.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 109,617 mil gal, Mar. 16, 1986, elevation, 1,156.73 ft; minimum observed (after first filling), 11,901 mil gal, Nov. 7, 1968, elevation, 1,066.24 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 103,285 mil gal, Apr. 5, elevation, 1,152.90 ft; minimum observed, 44,119 mil gal, Oct. 1, elevation, 1,107.84 ft.
- 01428900 PROMPTON RESERVOIR.--Lat 41°35'18", long 75°19'39", Wayne County, PA, Hydrologic Unit 02040103, at dam on West Branch Lackawaxen River, 0.3 mi north of Prompton, 0.4 mi upstream from highway bridge, and 0.5 mi upstream from Van Auken Creek. DRAINAGE AREA, 59.6 mi². PERIOD OF RECORD, December 1960 to current year. GAGE, data collection platform (U.S. Army Corps of Engineers datum).
REMARKS.--Reservoir formed by an earth and rockfill dam with ungated bedrock spillway at elevation 1,205.00 ft. Storage began July 1960. Capacity at elevation 1,205.00 ft is 51,700 acre-ft. Ordinary minimum (conservation) pool is 1,125.00 ft, capacity, 3,420 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Regulation is accomplished by discharge through an ungated tunnel.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,170 acre-ft, June 29, 1973, elevation, 1,138.40 ft; minimum (after first filling), 2,500 acre-ft, June 5, 1991, elevation, 1,121.46 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,720 acre-ft, Feb. 28, elevation, 1,129.37 ft; minimum contents, 3,150 acre-ft, July 26, elevation, 1,123.76 ft.
- 01429400 GENERAL EDGAR JADWIN RESERVOIR.--Lat 41°36'44", long 75°15'55", Wayne County, PA, Hydrologic Unit 02040103, at dam on Dyberry Creek, 0.4 mi upstream from unnamed tributary, 2.4 mi north of Honesdale, and 2.9 mi upstream from mouth. DRAINAGE AREA, 64.5 mi². PERIOD OF RECORD, October 1959 to current year. GAGE, data collection platform (U.S. Army Corps of Engineers datum).
REMARKS.--Reservoir formed by an earth and rockfill dam with ungated concrete spillway at elevation 1,053.00 ft. Storage began October 1959. Capacity at elevation of 1,053.00 ft is 24,500 acre-ft. Reservoir is used for flood control. Figures given herein represent total contents. Regulation is accomplished by discharge through an ungated tunnel. Since Oct. 1, 1996, pool elevations below 990 ft NGVD are not recorded.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 6,520 acre-ft, June 19, 1973, elevation, 1,017.40 ft; minimum contents, no storage many times.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 806 acre-ft, Feb. 28, elevation, 992.06 ft; minimum contents, no storage many times.
- 01431700 LAKE WALLENPAUPACK.--Lat 41°27'35", long 75°11'10", Wayne County, PA, Hydrologic Unit 02040103, at dam on Wallenpaupack Creek at Wilsonville, 1.2 mi south of Hawley, and 1.5 mi upstream from mouth. DRAINAGE AREA, 228 mi². PERIOD OF RECORD, January 1926 to current year. GAGE, vertical staff. Datum of gage is sea level (levels by Pennsylvania Power and Light Co.).
REMARKS.--Lake formed by concrete gravity-type and earthfill dam, with concrete spillway in two sections at elevation 1,176.00 ft. Spillway equipped with 14 ft high roller gate on each section. Storage began Nov. 3, 1925; water in reservoir first reached minimum pool elevation January 1926. Total capacity at elevation 1,190.00 ft (top of gates), is 209,300 acre-ft, of which 108,900 acre-ft, above elevation 1,170.00 ft (minimum pool), is controlled storage. Prior to 1984, minimum pool elevation was 1,160.00 ft. Reservoir is used for generation of hydroelectric power. Figures given herein represent usable contents. Records prior to 1984 included additional usable contents of 48,900 acre-ft.
COOPERATION.--Records provided by Pennsylvania Power and Light Co.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 129,300 acre-ft, Aug. 19-21, 1955, elevation, 1,193.45 ft; minimum (after first filling), 12,280 acre-ft (old minimum pool), Mar. 28, 1958, elevation, 1,162.60 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 94,100 acre-ft, June 8, 9, elevation, 1,187.6 ft; minimum contents, 30,720 acre-ft, Sept. 30, elevation 1,176.2 ft.
- 01433000 SWINGING BRIDGE RESERVOIR.--Lat 41°34'21", long 74°47'00", Sullivan County, NY, Hydrologic Unit 02040104, at dam on Mongaup River, and 1.8 mi northwest of Fowlersville. DRAINAGE AREA, 116 mi², excluding Cliff Lake, Lebanon Lake, and Toronto Reservoir. PERIOD OF RECORD, January 1930 to current year. REVISED RECORDS, WSP 1552: 1951-54. WDR NY-86-1: 1985. WDR NY-90-1: Drainage area. GAGE, nonrecording gage, daily readings at 0900. Datum of gage is sea level (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,010 ft.
Reservoir is formed by an earthfill dam. Storage began Jan. 19, 1930. Usable capacity, 1,436.6 mil ft³ between elevations 1,010.0 ft, minimum operating pool, and 1,071.2 ft, top of flashboards. Capacity below elevation 1,010.0 ft, minimum operating pool, about 212.7 mil ft³. Reservoir is used for storage of water for power. Figures given herein represent contents above 1,010.0 ft. Water is received from Cliff Lake, Lebanon Lake, and Toronto Reservoir. Records provided by Mirant New York, Inc.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,461.6 mil ft³, Mar. 14, 1977, elevation, 1,071.8 ft; minimum observed (after first filling), -141.4 mil ft³, Dec. 2, 1938, elevation, 987.5 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,383.3 mil ft³, Mar. 3, elevation, 1,069.9 ft; minimum observed, 693.3 mil ft³, Oct. 1, elevation, 1,050.0 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

- 01433100 TORONTO RESERVOIR.--Lat 41°37'15", long 74°49'55", Sullivan County, NY, Hydrologic Unit 02040104, at dam on Black Lake Creek, and 2.5 mi southeast of village of Black Lake. DRAINAGE AREA, 22.9 mi². PERIOD OF RECORD, January 1926 to current year. REVISED RECORDS, WSP 1552: 1951-54. WSP 1702: 1959 (M). WDR NY-85-1: 1984. WDR NY-86-1: 1985. WDR NY-90-1: Drainage area. GAGE, nonrecording gage, daily readings at 0900. Datum of gage is sea level (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,165.0 ft.
- Reservoir is formed by an earthfill dam completed July 24, 1926. Storage began Jan. 13, 1926. Usable capacity 1,098.2 mil ft³ between elevations 1,165.0 ft, minimum operating pool, and 1,220.0 ft, top of permanent flashboards. Capacity below elevation 1,165.0 ft, minimum operating pool, about 26.8 mil ft³. Reservoir is used for storage of water for power. Figures given herein represent contents above 1,165.0 ft. Records provided by Mirant New York, Inc.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,171.2 mil ft³, July 20, 1945, elevation, 1,222.0 ft; minimum observed (after first filling), -26.8 mil ft³, Nov. 15, 1928, elevation, 1,144.5 ft.
- EXTREMES OF CURRENT YEAR.--Maximum contents observed, 961.4 mil ft³, Aug. 4, elevation, 1,216.0 ft; minimum observed, 28.4 mil ft³, Oct. 1, elevation, 1,170.6 ft.
- 01433200 CLIFF LAKE RESERVOIR.--Lat 41°35'00", long 74°47'40", Sullivan County, NY, Hydrologic Unit 02040104, at dam on Black Lake Creek, and 2.5 mi northwest of Fowlersville. DRAINAGE AREA, 6.46 mi², excluding area above Toronto Reservoir. PERIOD OF RECORD, January 1939 to current year. REVISED RECORDS, WSP 1552: 1951-54. WDR NY-75-1: 1974 (m). WDR NY-86-1: 1985. GAGE, nonrecording gage, daily readings at 0900. Datum of gage is sea level (levels by Orange and Rockland Utilities, Inc.). All capacity figures given herein are based on zero storage at minimum operating pool level, 1,043.3 ft.
- Reservoir is formed by a concrete gravity-type dam. Storage began Jan. 6, 1939. Usable capacity, 136.06 mil ft³ between elevations 1,043.3 ft, minimum operating pool, and 1,072.0 ft, top of permanent flashboards. Capacity below elevation 1,043.3 ft, minimum operating pool, about 6.54 mil ft³. Reservoir is used for storage of water for power. Water is received from Toronto and Lebanon Lake reservoirs and is discharged through a tunnel into Swinging Bridge Reservoir. Figures given herein represent contents above 1,043.3 ft. Records provided by Mirant New York, Inc.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 145.44 mil ft³, July 30, 31, 1945, elevation, 1,073.1 ft; minimum observed (after first filling), about -6.54 mil ft³, Mar. 16, 1963, elevation, 1,038.0 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 131.08 mil ft³, Aug. 14, elevation, 1,071.4 ft; minimum observed, 47.92 mil ft³, Oct. 1, 4, 8, elevation, 1,058.8 ft.
- 01435900 NEVERSINK RESERVOIR.--Lat 41°49'27", long 74°38'20", Sullivan County, NY, Hydrologic Unit 02040104, at a gate-house at Neversink Dam on Neversink River, and 2 mi southwest of Neversink. DRAINAGE AREA, 92.5 mi². PERIOD OF RECORD, June 1953 to current year. REVISED RECORDS, WDR NY-85-1: Drainage area. GAGE, nonrecording gage read daily at 0900. Datum of gage is sea level (levels by Board of Water Supply, City of New York).
- Reservoir is formed by an earthfill rockfaced dam. Storage began June 2, 1953. Usable capacity 34,941 mil gal between minimum operating level, elevation, 1,319.0 ft and crest of spillway, elevation, 1,440.0 ft. Capacity at crest of spillway 37,146 mil gal; at minimum operating level, 2,205 mil gal; dead storage below diversion sill and outlet sill, elevation 1,314.0 ft, 1,680 mil gal. Figures given herein represent total contents. Reservoir impounds water for diversion through Neversink-Grahamsville Tunnel to Rondout Reservoir on Rondout Creek, in Hudson River basin, for water supply of City of New York (see elsewhere in this section); for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master; and for conservation release. No diversion prior to Dec. 3, 1953. Records provided by New York City Department of Environmental Protection.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 37,983 mil gal, Apr. 17, 1993, elevation, 1,441.68 ft; minimum observed (after first filling), 1,985 mil gal, Nov. 25, 1964, elevation, 1,316.98 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 37,634 mil gal, July 16, elevation, 1,440.98 ft; minimum observed, 13,360 mil gal, Oct. 21, elevation, 1,377.57 ft.
- 01447780 FRANCIS E. WALTER RESERVOIR (formerly published as Bear Creek Reservoir).--Lat 41°06'45", long 75°43'15", Luzerne County, PA, Hydrologic Unit 02040106, at dam on Lehigh River, 2,200 ft downstream from Bear Creek, and 5.0 mi northeast of White Haven. DRAINAGE AREA, 289 mi². PERIOD OF RECORD, February 1961 to current year. GAGE, water-stage recorder (U.S. Army Corps of Engineers datum).
- REMARKS.--Reservoir formed by an earthfill embankment covered with a rock shell, with concrete spillway at elevation 1,450.0 ft. Storage began Feb. 17, 1961; reservoir first reached conservation pool in June 1961. Total capacity (elevation 1,450.0 ft) is 110,700 acre-ft of which 108,700 acre-ft is controlled storage above elevation 1,300.0 ft, (conservation pool). Dead storage is 2,000 acre-ft. Flow regulated by three gates and low-flow by-pass system. Reservoir is used for flood control and recreation. Satellite telemetry at station.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 62,100 acre-ft, Sept. 28, 1985, elevation, 1,417.08 ft; minimum contents (after establishment of conservation pool), 980 acre-ft, July 6, 1982, elevation, 1,287.70 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 26,190 acre-ft, Oct. 1, elevation, 1,378.36 ft; minimum contents, 1,210 acre-ft, Mar. 6, elevation, 1,291.85 ft.
- 01449400 PENN FOREST RESERVOIR.--Lat 40°55'45", long 75°33'45", Carbon County, PA, Hydrologic Unit 02040106, at dam on Wild Creek, 0.7 mi upstream from hatchery, 2.6 mi upstream from Wild Creek Dam, 4.4 mi upstream from mouth, and 10.0 mi northeast of Palmerton. DRAINAGE AREA, 16.5 mi². PERIOD OF RECORD, October 1958 to current year. GAGE, water-stage recorder. Datum of gage is sea level (levels by city of Bethlehem).
- REMARKS.--Reservoir formed by a roller-compacted concrete dam with ungated concrete spillway at elevation 1,000.60 ft (capacity, 18,510 acre-ft). Storage began October 1958. Reservoir is used for municipal water supply. Regulation by valves on pipe through dam. Figures given herein represent total contents and include diversion since October 1969 from Tunkhannock Creek Basin to Wild Creek Basin.
- COOPERATION.--Records provided by city of Bethlehem.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 20,800 acre-ft, Apr. 16, 1983, elevation, 1,001.69 ft; minimum contents, 0 acre-ft, many days during 1996, 1997, 1998, and 1999 water years, elevation, 890.60 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,700 acre-ft, May 25, elevation, 1,000.97 ft; minimum contents, 8,220 acre-ft, Sept. 15, elevation, 970.51 ft.
- 01449700 WILD CREEK RESERVOIR.--Lat 40°53'50", long 75°33'50", Carbon County, PA, Hydrologic Unit 02040106, at dam on Wild Creek, 1.6 mi upstream from mouth, 2.4 mi south of hatchery, and 7.5 mi northeast of Palmerton. DRAINAGE AREA, 22.2 mi². PERIOD OF RECORD, January 1941 to current year. GAGE, nonrecording gage. Datum of gage is sea level (levels by city of Bethlehem).
- REMARKS.--Reservoir formed by earthfill dam with concrete ungated spillway at elevation 820.00 ft. Storage began January 27, 1941; reservoir first reached minimum contents pool elevation in February 1941. Total capacity at elevation 820.00 ft is 12,500 acre-ft of which 12,000 acre-ft is controlled storage. Reservoir is used for municipal water supply. Regulation by valves on pipe through dam. Figures given herein represent usable contents and include diversion since October 1969 from Tunkhannock Creek Basin to Wild Creek Basin.
- COOPERATION.--Records provided by city of Bethlehem.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 12,880 acre-ft, May 23, 1942, elevation, 822.93 ft; minimum contents (after first filling), 2,680 acre-ft, Nov. 15, 1966, elevation, 774.10 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,140 acre-ft, May 27, Aug. 4, elevation, 820.46 ft; minimum contents 8,160 acre-ft, Sept. 28, elevation 804.96 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

- 01449790 BELTZVILLE LAKE RESERVOIR.--Lat 40°50'56", long 75°38'19", Carbon County, PA, Hydrologic Unit 02040106, at dam on Pohopoco Creek, 0.4 mi upstream from gaging station on Pohopoco Creek, 0.6 mi upstream from Sawmill Run, and 2.3 mi northeast of Parryville. DRAINAGE AREA, 96.3 mi². PERIOD OF RECORD, February 1971 to current year. GAGE, water-stage recorder (U.S. Army Corps of Engineers datum).
- REMARKS.--Lake formed by an earth and rockfill dam with ungated, partially lined spillway at an elevation of 651.00 ft. Storage began Feb. 8, 1971. Capacity at elevation 651.00 ft is 68,300 acre-ft. Ordinary minimum contents (conservation) pool elevation is 628.00 ft, capacity, 41,250 acre-ft. Dead storage is 1,390 acre-ft. Lake is used for recreation, flood control, low-flow augmentation, and water supply. Figures given herein represent total contents. Regulation is accomplished by a multi-level water-quality outlet system, and two flood-control gates.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 49,730 acre-ft, Jan. 29, 1976, elevation, 636.30 ft; minimum contents, 15,110 acre-ft, Mar. 31, 1983, elevation, 588.79 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 42,290 acre-ft, July 31, elevation, 629.09 ft; minimum contents, 34,080 acre-ft, Oct. 1, elevation, 619.85 ft.
- 01455221 MERRILL CREEK RESERVOIR.--Lat 40°43'42", long 75°06'11", Warren County, Hydrologic Unit 02040105, at dam on Merrill Creek in Harmony Township, 4.5 mi northeast of Phillipsburg, and 2.8 mi upstream from mouth. DRAINAGE AREA, 3.13 mi². PERIOD OF RECORD, March 1988 to current year. GAGE, measurement from reference point. Datum of gage is sea level.
- REMARKS.--Reservoir formed by zoned, compacted, earth-rockfill dam constructed in November 1987. Storage began March 1988. Total capacity at spillway elevation, 16,617,000,000 gal, elevation 929.0 ft. Usable capacity, 15,6654,000,000 gal. Reservoir used for storage of water pumped from the Delaware River through a 57-inch diameter pipe 17,000 ft long. Releases are made into the Delaware River through the same pipe. Reservoir is used to augment low flow in the Delaware River. Conservation release of 3 ft³/s made to Merrill Creek.
- COOPERATION.--Records provided by the Merrill Creek Reservoir Project.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 16,710,000,000 gal, Jan. 15, 1990, elevation, 923.3 ft; minimum (after first filling), 14,076,000,000 gal, Jan. 23, 1992, elevation 910.40 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 15,655,000,000 gal, May 14, elevation 922.84 ft; minimum, 15,070,000,000 gal, Feb. 13, elevation 919.51 ft.
- 01455400 LAKE HOPATCONG RESERVOIR.--Lat 40°55'00", long 74°39'50", Morris County, Hydrologic Unit 02040105, in gatehouse of Lake Hopatcong Dam on Musconetcong River at Landing. DRAINAGE AREA, 25.3 mi². PERIOD OF RECORD, February 1887 to current year. Monthend contents only prior to October 1950, published in WSP 1302. REVISED RECORDS, WDR NJ-82-2: Drainage area; WDR NJ-83-2: Corrections 1981 (m/m). GAGE, staff gage. Prior to June 24, 1928, daily readings obtained by measuring from high-water mark to water surface converted to gage height, present datum. Datum of gage is 914.57 ft sea level.
- REMARKS.--Lake is formed by concrete spillway and earthfill dam completed about 1828. Crest of spillway was lowered 0.11 ft in 1925. Usable capacity, 7,459,000,000 gal between (gage height -2.6 ft, sills of gates and 9.00 ft, crest of spillway). Flow regulated by four gates (3 by 5 ft), also by one 24-inch pipe with gate valve to recreation fountain 250 ft downstream from dam. Dead storage, about 8,117,000,000 gal. Figures given herein represent usable capacity. Data collected at 0700 on the first day of the following month since Jan. 1985, previously data collected at 2400 on the last day of each month. Lake used for recreation.
- COOPERATION.--Records provided by New Jersey Department of Environmental Protection.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 9,745,000,000 gal, Aug. 13, 2000, gage height, 11.80 ft; minimum, 1,525,000,000 gal, Dec. 29, 1960, gage height, 0.65 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 9,745,000,000 gal, Aug. 13, gage height, 11.80 ft; minimum, 5,740,000,000 gal, Nov. 12, 13, 14, Dec. 22, 23, 24, 25, 31, and Jan. 1, 2, 3, gage height, 6.88 ft.
- 01459350 NOCKAMIXON RESERVOIR.--Lat 40°28'13", long 75°11'10", Bucks County, PA, Hydrologic Unit 02040105, at dam on Tohickon Creek, 6.2 mi upstream from gaging station on Tohickon Creek, 1.3 mi east of Ottsville, and 2.9 mi upstream from Mink Run. DRAINAGE AREA-- 73.3 mi². PERIOD OF RECORD.--December 1973 to current year. GAGE.--Water stage recorder. Datum of gage is sea level (levels by Pennsylvania Department of Environmental Protection).
- REMARKS.--Reservoir formed by earthfill dam with concrete spillway at elevation 395.0 ft. Storage began December 1973. Total capacity is 66,500 acre-ft at elevation 410 ft. Reservoir is used primarily for recreation, but can be used for water supply and flood control.
- COOPERATION.--Records furnished by Pennsylvania Department of Environmental Protection.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 45,390 acre-ft, Sept. 17, 1999, elevation, 398.50 ft; minimum contents (after first filling), 15,900 acre-ft, around Dec. 31, 1975, elevation, 372.78 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents 41,600 acre-ft, Jan. 20, elevation, 396.00 ft; minimum contents, 38,520 acre-ft, Dec. 15, elevation, 393.80 ft.
- 01469200 STILL CREEK RESERVOIR.--Lat 40°51'25", long 75°59'30", Schuylkill County, PA, Hydrologic Unit 02040106, at dam on Still Creek, 1.0 mi upstream from mouth, and 2.3 mi north of Hometown. DRAINAGE AREA, 7.19 mi². PERIOD OF RECORD, January 1933 to current year. GAGE, nonrecording gage. Datum of gage is sea level (levels by Panther Valley Water Co.).
- REMARKS.--Reservoir formed by earthfill dam with ungated concrete spillway at elevation 1,182.00 ft. Storage began February 1933. Capacity at elevation 1,182.00 ft is 8,290 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation by valves on pipe through dam. COOPERATION.--Records provided by the borough of Tamaqua.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,570 acre-ft, Oct. 15, 1955, elevation, 1,182.92 ft, but may have been greater during 1950 or 1951 water years; minimum contents (after first filling), 588 acre-ft, Dec. 8, 1944, elevation, 1,136.70 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,370 acre-ft, Mar. 24, elevation, 1,182.3 ft; minimum contents, 8,100 acre-ft, Oct. 1, elevation, 1,181.3 ft.
- 01470870 BLUE MARSH LAKE RESERVOIR.--Lat 40°22'45", long 76°01'59", Berks County, PA, Hydrologic Unit 02040203, at dam on Tulpehocken Creek, 0.8 mi upstream from gaging station on Tulpehocken Creek (station 01470960), 1.0 mi northeast of Blue Marsh, 1.9 mi upstream from Rebers Bridge, and 5.1 mi southeast of Bernville. DRAINAGE AREA, 175 mi². PERIOD OF RECORD, April 1979 to current year. GAGE, water-stage recorder (U.S. Army Corps of Engineers datum).
- REMARKS.--Lake formed by earthfill dam with ungated concrete spillway at elevation 307.00 ft. Storage began April 23, 1979. Capacity at elevation 307.00 ft is 50,000 acre-ft. Dead storage is 3,000 acre-ft. Lake is used for flood control, water supply, and recreation. Figures herein represent total contents. Satellite telemetry at station. COOPERATION.--Records provided by U.S. Army Corps of Engineers.
- EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,480 acre-ft, Apr. 17, 1983, elevation, 301.65 ft; minimum contents (after first filling), 13,150 acre-ft, Mar. 18, 1994, elevation, 279.88 ft.
- EXTREMES FOR CURRENT YEAR.--Maximum contents, 28,960 acre-ft, Mar. 23, elevation, 294.86 ft; minimum contents, 16,550 acre-ft, Oct. 18, elevation, 283.86 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

01472200 GREEN LANE RESERVOIR.--Lat 40°20'30", long 75°28'45", Montgomery County, PA, Hydrologic Unit 02040203, at dam on Perkiomen Creek, 0.4 mi west of Green Lane, and 2.1 mi upstream from Unami Creek. DRAINAGE AREA, 70.9 mi². PERIOD OF RECORD, December 1956 to current year. GAGE, water-stage recorder. Datum of gage is sea level (levels by Philadelphia Suburban Water Co.).

REMARKS.--Reservoir formed by concrete, gravity-type dam with ungated spillway at elevation 286.00 ft. Storage began December 21, 1956. Capacity at elevation 286.00 ft is 13,430 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation by valves on pipe through dam. COOPERATION.--Records provided by Philadelphia Suburban Water Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 17,030 acre-ft, June 23, 1972, elevation, 290.05 ft; minimum contents (after first filling), 1,270 acre-ft, Aug. 25, 1957, elevation, 251.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,920 acre-ft, March 22, elevation, 287.68 ft; minimum contents, 12,770 acre-ft, Oct. 31 elevation, 285.25 ft.

01480399 CHAMBERS LAKE RESERVOIR.--40°01'40", long 75°51'03", Chester County, PA, Hydrologic Unit 02040205, at Hibernia Dam on Birch Run, 0.6 mi upstream from gaging station on Birch Run (station 01480400), 0.9 mi upstream from mouth, and 1.4 mi northwest of Wagontown. DRAINAGE AREA, 4.5 mi². PERIOD OF RECORD, May 1997 to current year. GAGE, non-recording gage. Manual measurement from top of concrete riser at upstream flank of Hibernia Dam. Datum of gage is sea level (levels by Chester County Water Resources Authority, Chester County Parks and Recreation Department).

REMARKS.--Reservoir formed by earthfill dam with principle spillway at elevation 587.5 ft, capacity 2,000 acre-ft. Dam crest at elevation 596.5 ft. Normal elevation 580 ft, capacity 1,226 acre feet. Reservoir is used for water supply, flood control, and recreation. Figures given herein represent total contents.

COOPERATION.--Records provided by Chester County Water Resources Authority, in cooperation with City of Coatesville Authority and Chester County Parks and Recreation Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,440 acre-ft, March 22, 2000, elevation, 582.76 ft; minimum contents, 659 acre-ft, Dec. 28, 1998, elevation, 572.42 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,440 acre-ft, March 22, elevation, 582.76 ft; minimum contents, 1,140 acre-ft, Sept. 18, 25, 30, elevation, 579.5 ft.

01480684 MARSH CREEK RESERVOIR.--Lat 40°03'24", long 75°43'06", Chester County, PA, Hydrologic Unit 02040205, on right bank at dam on Marsh Creek, 0.3 mi upstream from mouth, and 3.2 mi north of Downingtown. DRAINAGE AREA, 20.1 mi². PERIOD OF RECORD, November 1973 to current year. GAGE, Water-stage recorder. Datum of gage is sea level (levels by Pennsylvania Department of Environmental Protection).

REMARKS.--Reservoir formed by earthfill dam with concrete spillway at elevation 359.5 ft. Storage began November 1973. Total capacity, 22,190 acre-ft, elevation 373 ft. Reservoir is used for water supply, flood control, and recreation. Figures given herein represent contents above lowest gate sill at elevation 289.5 ft.

COOPERATION.--Records provided by Pennsylvania Department of Environmental Protection.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 16,500 acre-ft, Sept. 18, 1999, elevation, 363.49 ft; minimum contents (after first filling), 10,410 acre-ft, Mar. 3, 1976, elevation, 351.75 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,940 acre-ft, Apr. 10, 22, elevation, 360.87 ft; minimum contents, 13,070 acre-ft, Jan. 18, elevation, 357.32 ft.

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000									
Date	Eleva- tion (feet)††	Contents (million gallons)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet)††	Contents (million gallons)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet)†	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)
	01416900 Pepacton Reservoir			01424997 Cannonsville Reservoir			01428900 Prompton Reservoir		
Sept. 30.....	1,257.73	111,867	--	1,107.84	44,119	--	1,124.81	3,450	--
Oct. 31.....	1,257.71	111,836	-1.55	1,116.09	53,221	+454	1,124.86	3,460	+0.2
Nov. 30.....	1,256.69	110,245	-82.1	1,124.60	63,400	+525	1,125.61	3,670	+3.5
Dec. 31.....	1,256.26	109,579	-33.2	1,131.84	72,693	+464	1,125.03	3,510	-2.6
CAL YR 1999	-	-	+117	-	-	+223	--	--	+0.6
Jan. 31.....	1,253.18	104,876	-235	1,137.07	79,739	+352	1,124.86	3,460	-0.8
Feb. 29.....	1,259.81	115,151	+ 548	1,150.73	99,793	+1,070	1,127.97	4,330	-2.3
Mar. 31.....	1,273.94	138,862	+1,183	1,151.69	101,338	+77.1	1,126.05	3,790	-8.8
Apr. 30.....	1,280.28	150,317	+591	1,151.24	100,613	-37.4	1,125.51	3,640	-2.5
May 31.....	1,280.33	150,410	+ 4.64	1,151.17	100,501	-5.60	1,125.50	3,640	0
June 30.....	1,279.92	149,652	-39.1	1,150.30	99,101	-72.2	1,125.08	3,520	-2.0
July 31.....	1,279.08	148,107	-77.1	1,148.44	96,245	-143	1,125.16	3,540	+0.3
Aug. 31.....	1,277.87	145,899	-110	1,144.96	90,954	-264	1,124.22	3,280	-4.2
Sept. 30.....	1,272.41	136,177	-501	1,139.66	83,317	-394	1,124.63	3,400	+2.0
WTR YR 2000	-	-	+103	-	-	+166	--	--	-0.1

DELAWARE RIVER BASIN

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Eleva- tion (feet) †	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet) †	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet) *	Contents (million ft ³)	Change in contents (equiv- alent in ft ³ /s)
01429400 General Edgar Jadwin Reservoir				01431700 Lake Wallenpaupack			01433000 Swinging Bridge Reservoir		
Sept. 30.....	--	0	---	1,182.7	66,180	---	1,058.8	969.1	--
Oct. 31.....	--	0	0	1,180.7	55,910	-167	1,060.3	1,020.8	+19.3
Nov. 30.....	--	0	0	1,183.3	69,610	+230	1,061.9	1,077.3	+21.8
Dec. 31.....	--	0	0	1,184.5	77,000	+120	1,065.2	1,198.9	+45.4
CAL YR 1999	--	--	0	--	--	+32.3	-	-	+13.2
Jan. 31.....	--	0	0	1,182.4	64,520	-203	1,064.6	1,176.3	- 8.5
Feb. 29.....	--	0	0	1,183.6	71,390	+119	1,064.9	1,187.6	+ 4.5
Mar. 31.....	--	0	0	1,185.5	82,790	+185	1,068.6	1,331.0	+53.5
Apr. 30.....	--	0	0	1,186.0	85,360	+43.2	1,068.1	1,311.1	- 7.7
May 31.....	--	0	0	1,187.2	91,840	+105	1,066.5	1,248.6	-23.3
June 30.....	--	0	0	1,186.4	87,460	-73.6	1,066.9	1,264.0	+ 5.9
July 31.....	--	0	0	1,183.0	67,870	-319	1,068.1	1,311.1	+17.6
Aug. 31.....	--	0	0	1,180.8	56,380	-187	1,065.7	1,217.9	-34.8
Sept. 30.....	--	0	0	1,176.2	30,720	-431	1,064.2	1,161.4	-21.8
WTR YR 2000	--	--	0	--	--	-48.8	-	-	+ 6.1
Date	Eleva- tion (feet) *	Contents (million ft ³)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet) *	Contents (million ft ³)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet) ††	Contents (million gallons)	Change in contents (equiv- alent in ft ³ /s)
01433100 Toronto Reservoir				01433200 Cliff Lake			01435900 Neversink Reservoir		
Sept. 30.....	1,170.6	28.4	--	1,058.8	47.92	--	1,384.80	15,417	--
Oct. 31.....	1,172.4	42.8	+ 5.4	1,060.3	55.58	+ 2.9	1,383.00	14,886	- 26.5
Nov. 30.....	1,173.6	54.1	+ 4.4	1,061.3	61.07	+ 2.1	1,393.61	18,173	+170
Dec. 31.....	1,178.6	113.5	+22.2	1,065.2	84.98	+ 8.9	1,393.58	18,163	- 0.50
CAL YR 1999	-	-	+ 1.6	-	-	+ 1.9	-	-	+ 27.4
Jan. 31.....	1,181.0	148.0	+12.9	1,064.4	79.82	- 1.9	1,391.27	17,415	- 37.3
Feb. 29.....	1,186.2	231.4	+33.3	1,064.3	79.18	- 0.3	1,401.67	20,934	+188
Mar. 31.....	1,198.6	482.4	+93.7	1,068.6	108.86	+11.1	1,426.35	30,766	+491
Apr. 30.....	1,203.5	605.2	+47.4	1,068.7	109.61	+ 0.3	1,436.00	35,200	+229
May 31.....	1,209.7	772.4	+62.4	1,067.5	100.76	- 3.3	1,439.44	36,870	+ 83.4
June 30.....	1,214.9	926.1	+59.3	1,066.9	96.47	- 1.7	1,439.43	36,865	- 0.26
July 31.....	1,215.7	951.7	+ 9.5	1,067.7	102.20	+ 2.1	1,439.64	36,969	+ 5.19
Aug. 31.....	1,212.2	844.2	-40.1	1,066.7	95.09	- 2.7	1,431.42	33,050	-196
Sept. 30.....	1,205.8	665.8	-68.8	1,065.1	84.32	- 4.2	1,432.29	33,453	+ 20.8
WTR YR 2000	-	-	+20.2	-	-	+ 1.2	-	-	+ 76.2
Date	Eleva- tion (feet) †	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet) †	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet) †	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)
01447780 Francis E. Walter Lake				01449400 Penn Forest Reservoir			01449700 Wild Creek Reservoir		
Sept. 30.....	1,377.83	25,830	---	972.93	9,740	--	805.36	8,250	---
Oct. 31.....	1,301.67	1,940	-389	971.98	8,630	-18.1	806.10	8,420	+2.8
Nov. 30.....	1,312.51	3,120	+19.8	973.75	9,120	+8.2	807.12	8,660	+4.0
Dec. 31.....	1,303.87	2,140	-15.9	980.31	10,960	+29.9	805.36	8,250	-6.7
CAL YR 1999	--	--	+0.4	--	--	+15.1	--	--	+1.4
Jan. 31.....	1,300.11	1,800	-5.5	981.71	11,420	+7.5	806.12	8,430	+2.9
Feb. 29.....	1,321.40	4,440	+45.9	985.07	12,510	+18.9	806.78	8,580	+2.6
Mar. 31.....	1,300.42	1,830	-42.4	996.03	16,570	+66.0	809.42	9,190	+9.9
Apr. 30.....	1,301.02	1,880	+0.8	1,000.75	18,590	+33.9	814.38	10,530	+22.5
May 31.....	1,303.10	2,070	+3.1	1,000.73	18,580	-0.2	820.30	12,090	+25.4
June 30.....	1,299.70	1,770	-5.0	1,000.76	18,590	+0.2	820.28	12,080	- 0.2
July 31.....	1,303.12	2,070	+4.9	1,000.73	18,580	-0.2	820.11	12,030	- 0.8
Aug. 31.....	1,300.16	1,810	-4.2	1,000.43	18,440	-2.3	819.21	11,840	-3.1
Sept. 30.....	1,300.56	1,840	+0.5	1,000.35	18,400	-0.7	816.62	11,150	-11.6
WTR YR 2000	--	--	-33.0	--	--	+11.9	--	--	+4.0

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Eleva- tion (feet)†	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet)†	Contents (million gallons)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet)**	Contents (million gallons)	Change in contents (equiv- alent in ft ³ /s)
01449790 Beltzville Lake				01455221 Merrill Creek Reservoir			01455400 Lake Hopatcong		
Sept. 30.....	619.85	34,080	--	921.09	1,5299	--	9.26	7,677	--
Oct. 31.....	622.68	36,430	+38.2	920.71	1,5222	-3.8	9.08	8,134	+22.8
Nov. 30.....	626.07	39,420	+50.2	920.50	1,5180	-2.2	7.24	6,025	-109
Dec. 31.....	628.11	41,350	+31.4	920.28	1,5136	-2.2	7.02	5,993	-1.6
CAL YR 1999	--	--	+7.9			+2.9			+1.6
Jan. 31.....	628.15	41,390	+0.7	920.10	1,5100	-1.8	6.88	5,740	-12.6
Feb. 29.....	628.50	41,720	+5.7	920.16	1,5112	+6	7.46	6,200	+24.5
Mar. 31.....	628.16	41,400	-5.2	921.55	1,5392	+14.0	8.66	7,177	+48.8
Apr. 30.....	628.12	41,360	-0.7	922.76	1,5639	+12.7	9.30	7,711	+27.5
May 31.....	627.97	41,220	-2.3	922.63	1,5612	-1.3	9.32	7,728	+8
June 30.....	628.15	41,390	+2.9	922.73	1,5633	+1.1	9.30	7,711	-9
July 31.....	628.18	41,420	+0.5	922.28	1,5541	-4.6	9.30	7,711	0
Aug. 31.....	627.97	41,220	-3.3	921.99	1,5482	-2.9	9.20	7,627	-4.2
Sept. 30.....	627.97	41,220	0	921.44	1,5370	-5.8	9.00	7,459	-8.7
WTR YR 2000	--	--	+9.8			+3			-1.0
Date	Eleva- tion (feet)†	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet)†	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet)†	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)
01459350 Nockamixon Reservoir				01469200 Still Creek Reservoir			01470870 Blue Marsh Lake		
Sept. 30.....	397.80	44,300	---	1,181.3	8,100	--	290.01	22,910	--
Oct. 31.....	394.70	39,630	-76.0	1,181.8	8,230	+2.1	285.01	17,630	-85.9
Nov. 30.....	394.05	38,870	-12.8	1,182.1	8,320	+1.5	286.55	19,160	+25.7
Dec. 31.....	394.80	39,920	+17.1	1,182.1	8,320	0	285.06	17,680	-24.1
CAL YR 1999	--	--	+0.3	--	--	+1.1	--	--	+0.2
Jan. 31.....	395.40	40,750	+13.5	1,182.0	8,290	-0.5	285.08	17,700	+0.3
Feb. 29.....	394.90	40,060	-12.0	1,182.1	8,320	+0.5	285.37	17,980	+4.9
Mar. 31.....	395.45	40,820	+12.4	1,182.2	8,340	+0.3	289.63	22,470	+73.0
Apr. 30.....	395.60	41,030	+3.5	1,182.1	8,320	-0.3	289.88	22,760	+4.9
May 31.....	395.30	40,620	+6.7	1,182.2	8,340	+0.3	289.91	22,790	+0.5
June 30.....	394.95	40,130	-8.2	1,182.2	8,340	0	290.06	22,970	+3.0
July 31.....	394.70	39,780	-5.7	1,182.1	8,320	-0.3	289.85	22,720	-4.1
Aug. 31.....	395.30	40,620	+13.7	1,182.0	8,290	-0.5	290.00	22,900	+2.9
Sept. 30.....	395.50	40,890	+4.5	1,182.0	8,290	0	289.96	22,850	-0.8
WTR YR 2000	--	--	-4.7	--	--	+0.3	--	--	-0.1
Date	Eleva- tion (feet)†	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet)†	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)	Eleva- tion (feet)†	Contents (acre- feet)	Change in contents (equiv- alent in ft ³ /s)
01472200 Green Lane Reservoir				01480399 Chambers Lake Reser- voir			01480684 Marsh Creek Reservoir		
Sept. 30.....	286.10	13,520	--	580.20	1,190	--	360.37	14,660	---
Oct. 31.....	285.25	12,770	-12.2	580.10	1,180	-2	360.12	14,530	-2.1
Nov. 30.....	286.05	13,480	+11.9	580.10	1,180	0	360.09	14,510	-0.3
Dec. 31.....	286.00	13,430	-0.8	580.10	1,180	0	357.82	13,320	-19.4
CAL YR 1999	--	--	+4.8	--	--	+7	--	--	-0.3
Jan. 31.....	286.00	13,430	0	580.10	1,180	0	357.50	13,160	-2.6
Feb. 29.....	286.27	13,670	+4.2	580.50	1,220	+7	360.05	14,490	+23.1
Mar. 31.....	286.15	13,570	-1.6	580.30	1,200	-3	360.80	14,900	+6.7
Apr. 30.....	286.08	13,500	-1.2	580.25	1,200	0	360.25	14,600	-5.0
May 31.....	286.03	13,460	-0.7	580.20	1,190	-2	359.90	14,400	-3.3
June 30.....	285.95	13,390	-1.2	580.30	1,200	+2	360.42	14,690	+4.9
July 31.....	285.90	13,340	-0.8	580.10	1,180	-3	360.01	14,460	-3.7
Aug. 31.....	285.75	13,210	-2.1	579.90	1,170	-2	359.98	14,450	-0.2
Sept. 30.....	285.95	13,390	+3.0	579.50	1,140	-5	360.22	14,580	+2.2
WTR YR 2000	--	--	-0.2	--	--	-1	--	--	-0.1

* Elevation at 0900 on the first day of the following month.

** Elevation at 0700 on the first day of the following month.

† Elevation at 2400 on the last day of each month.

†† Elevation at daily reading on the first day of the following month.

DELAWARE RIVER BASIN

DIVERSIONS AND WITHDRAWALS

WITHDRAWALS FROM THE DELAWARE RIVER BASIN

01415200 Diversion from Pepacton Reservoir (see preceding pages) on East Branch Delaware River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of City of New York. No diversion prior to Jan. 6, 1955. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.

REVISED RECORDS, WDR NY-71-1: 1970. WDR NY-81-1: 1980.

01423900 Diversion from Cannonsville Reservoir (see preceding pages) on West Branch Delaware River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of City of New York. No diversion prior to Jan. 29, 1964. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.

REVISED RECORDS, WDR NY-81-1: 1980.

01435800 Diversion from Neversink Reservoir (see preceding pages) on Neversink River to Rondout Reservoir on Rondout Creek, in Hudson River basin, for municipal supply of City of New York. No diversion prior to Dec. 3, 1953. Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.

REVISED RECORDS, WDR NY-82-1: 1976, 1977.

01436520 Village of Woodridge, NY, diverts water from East Pond Reservoir, tributary to Neversink River, for municipal supply outside of basin. Village of Woodridge has estimated that this year virtually all the withdrawal from East Pond Reservoir was returned to the Neversink River.

01437360 Diversion from Bear Swamp Reservoir, NY, tributary to Neversink River, by the New York State Training School, Otisville, NY, for water supply outside of basin. Records provided by Delaware River Basin Commission. No more diversion as of June 10, 1999; plant closed down.

01447750 Diversion from Bear Creek, PA, tributary to Lehigh River, by Pennsylvania American Water Company for water supply outside of basin. Records provided by Delaware River Basin Commission.

01448830 Diversion from Hazle Creek Watershed by Hazelton Joint Sewerage Authority for municipal water supply. Waste effluent from the municipal water system is released to the Susquehanna River. Records provided by Delaware River Basin Commission.

01460440 Diversion by Delaware and Raritan Canal from Delaware River at Raven Rock, for municipal and industrial use. Water is discharged into the Raritan River at New Brunswick. Records of discharge are collected on the Delaware and Raritan Canal at Port Mercer since Aug. 1, 1990 (see station 01460440). Prior to Aug. 1, 1990, records of discharge were collected at Kingston.

DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

MONTH	WITHDRAWALS BY CITY OF NEW YORK		
	01415200 Pepacton Reservoir	01423900 Cannonsville Reservoir	01435800 Neversink Reservoir
October	607	7.7	246
November	766	140	81.6
December	614	270	180
CAL YR 1999	501	198	165
January	650	251	155
February	556	474	.5
March	570	158	21.3
April	695	47.9	141
May	453	244	197
June	359	205	265
July	300	224	141
August	305	292	304
September	654	360	137
WTR YR 2000	543	222	157

MISCELLANEOUS WITHDRAWALS FROM BASIN, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

MONTH	01437360 Bear Swamp Reservoir	01447750 Bear Creek	01448830 Hazle Creek	01460440 Delaware and Raritan Canal
October	0	4.15	4.13	145
November	0	3.39	4.29	144
December	0	6.28	3.83	129
CAL YR 1999	0	1.33	6.69	139
January	0	2.32	4.11	130
February	0	7.49	4.91	122
March	0	12.9	4.91	130
April	0	3.21	4.53	140
May	0	0	4.62	138
June	0	0	4.90	140
July	0	0	6.35	143
August	0	0	5.72	141
September	0	0	6.05	140
WTR YR 2000	0	3.31	4.86	137

DIVERSIONS WITHIN THE DELAWARE RIVER BASIN

- 01446572 Diversion from Delaware River at Brainards, NJ to Merrill Creek Reservoir for storage to augment low flow in the Delaware River. There is a conservation release of 3 ft³/s to lower Merrill Creek, which eventually reaches the Delaware River. Releases other than the conservation release are designated by a minus (-) sign. Records provided by Merrill Creek Reservoir Project. REVISED RECORDS.--WDR NJ-00-1: 2000.
- 01459005 Diversion from the Delaware River at Point Pleasant, PA by Philadelphia Electric Company to Bradshaw Reservoir on the East Branch Perkiomen Creek, tributary to Schuylkill River, to supplement flow to Limerick Power Station. Diversion began August 1989. Records provided by the Delaware River Basin Commission. REVISED RECORDS.--WDR NJ-00-1: 2000.
- 01463480 Diversion from the Delaware River at the Morrisville Filtration Plant, by the Borough of Morrisville, PA for municipal supply. The water withdrawn at this site is returned to the basin after treatment, only slightly diminished by consumptive uses and losses in transmission. Records provided by the Borough of Morrisville, PA.
- 01463490 Diversion from the Delaware River just above the Trenton gaging station by the city of Trenton, NJ for municipal supply. The water being withdrawn is returned to the basin after treatment only slightly diminished by consumptive uses and losses in transmission. Records provided by the City of Trenton. REVISED RECORDS.--WDR NJ-82-2: Station number.
- 01466899 Diversion from the Delaware River just above New Lisbon gaging station by Fort Dix, NJ, for municipal supply. The water being withdrawn at this intake is returned to the basin after treatment only slightly diminished by consumptive uses and losses in transmission. Records provided by the Fort Dix Directorate of Public Works. Diversions started in 1935.
- 01467030 Diversion from the Delaware River at the Torresdale Intake, by the City of Philadelphia, PA for municipal supply. The water being withdrawn at this intake is returned to the basin after treatment only slightly diminished by consumptive uses and losses in transmission. Records provided by the Delaware River Basin Commission.
- 01474500 Diversion from the Schuylkill River at the Belmont and Queen Lane Intakes, by the City of Philadelphia, PA for municipal supply. The water being withdrawn at these intakes is returned after treatment within the Delaware River basin only slightly diminished by consumptive uses and losses in transmission. Records provided by the Delaware River Basin Commission.

WITHDRAWALS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

MONTH	01446572 Merrill Creek Reservoir (WY 1999)	01446572 Merrill Creek Reservoir (WY 2000)	01459005 Point Pleasant (WY 1999)	01459005 Point Pleasant (WY 2000)	01463480 Borough of Morrisville	01463490 City of Trenton
October.....	0 a	0	73.1a	56.4	3.81	41.9
November.....	0 a	0	62.6a	37.9	3.91	41.1
December.....	-28.9a	0	67.5a	33.0	3.87	40.6
CAL YR 1999	-2.67a	+4.29	52.6a	55.4	4.16	42.6
January.....	-4.39a	0	36.8a	28.2	3.95	40.2
February.....	0 a	0	12.0a	13.7	4.08	43.9
March.....	+42.6a	+12.1	12.4a	15.0	3.60	42.2
April.....	+13.0a	+7.25	47.3a	12.0	4.01	41.3
May.....	0 a	-7.18	72.4a	67.7	3.77	42.5
June.....	0 a	-1.55	95.3a	83.3	4.15	44.9
July.....	0 a	0	97.1a	90.3	4.21	48.7
August.....	-.24a	0	92.8a	79.2	3.99	47.9
September.....	0 a	0	67.5a	75.7	3.82	46.7
WTR YR 2000	+1.84a	+ .88	61.6a	49.5	3.93	43.5

WITHDRAWALS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000--Continued

City of Philadelphia				
MONTH	01466899 Greenwood Branch	01467030 Delaware River Torresdale	01474500 Schuylkill River	
			Belmont	Queen Lane
October.....	1.09	264	69.7	119
November.....	1.09	271	59.5	122
December.....	.92	271	70.9	117
CAL YR 1999	1.73	287	74.0	120
January.....	2.16	278	71.8	123
February.....	1.06	289	77.8	136
March.....	1.09	285	74.2	126
April.....	1.43	257	73.9	119
May.....	2.05	263	75.3	133
June.....	2.70	273	72.9	136
July.....	2.88	276	75.8	134
August.....	1.86	267	75.4	133
September.....	1.13	261	74.0	124
WTR YR 2000	1.63	271	72.6	127

a Corrected figures for water year 1999.

DELAWARE RIVER BASIN

DIVERSIONS AND WITHDRAWALS--Continued

DIVERSIONS IMPORTED INTO BASIN

01367630 Water diverted from Morris Lake, tributary to the Wallkill River (Hudson River basin), by the Newton Water and Sewer Authority for municipal use. After use the water is released into the Paulins Kill (Delaware River basin). Records provided by the Delaware River Basin Commission.

01578420 Water diverted from West Branch Octoraro Creek (Susquehanna River basin) at the McCray Plant of the Coatesville Water Authority (formerly Octoraro Water Co.) for municipal use. After use the water is released into the Delaware River basin. Records provided by the Delaware River Basin Commission.

01578450 Water diverted from Octoraro Lake (Susquehanna River basin) by Chester Water Authority for municipal use. After use the water is released into the Delaware River basin. Records provided by the Delaware River Basin Commission.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000--Continued			
OCTORARO CREEK			
MONTH	01367630 Morris Lake	01578420 Coatesville Water Authority	01578450 Chester Water Authority
October	1.47	1.73	49.2
November	1.43	1.64	50.9
December	1.43	1.61	48.1
CAL YR 1999	1.35	1.59	53.9
January	1.45	1.57	52.3
February	1.49	1.47	65.0
March	1.48	1.76	49.9
April	1.52	1.59	47.5
May	1.57	1.59	51.9
June	1.62	1.69	53.9
July	1.68	1.61	53.7
August .....	.55a	1.67	64.3
September	0 a	1.80	73.1
WTR YR 2000	1.31	1.64	54.9

a Flood on August 12-14, 2000, damaged the pipeline from Morris Lake to Newton. An average flow of one mgd from wells in Sparta Township (Hudson River Basin) was used to supplement Newton wells.

DISCHARGE AT PARTIAL-RECORD STATIONS

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations.

CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower stages may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined. The gage heights are heights on the upstream side of the bridge, above the dam or at the discontinued continuous-record gaging station unless otherwise noted.

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
HACKENSACK RIVER BASIN								
Pascack Brook at Montvale, NJ (01377360)	Lat 40°02'24", long 74°01'58"(revised), Bergen County, Hydrologic Unit 02030103, 250 ft upstream from bridge on Grand Avenue at entrance to fire station, 800 ft west of Montvale Memorial School, and 1,300 ft upstream from Silver Lake. Drainage area is 13.2 mi ² .	1998-2000	9-19-00	2.01	a	9-16-99	9.39	5,660
Bear Brook at Park Ridge, NJ (01377440)	Lat 41°01'40", long 74°02'49", Bergen County, Hydrologic Unit 02030103, on upstream right wingwall of bridge on Pascack Road, 0.2 mi upstream from mouth, 0.8 mi southwest of Silver Lake, and 0.8 mi south of Park Ridge. Drainage area is 2.38 mi ² .	1998-2000	8-11-00	5.32	331	9-16-99	11.05	a
Woodcliff Lake at Hillsdale, NJ (01377450)	Lat 41°00'46", long 74°02'58", Bergen County, Hydrologic Unit 02030103, at dam on Pascack Brook, 0.7 mi north of Hillsdale, and 1.5 mi north of Westwood. Datum of gage is 0.00 ft above sea level. Drainage area is 19.4 mi ² .	1998-2000	6-30-00	93.2	a	9-16-99	96.54	a
Pascack Brook at Woodcliff Lake outlet, at Hillsdale, NJ (01377451)	Lat 41°00'41", long 74°02'54", Bergen County, Hydrologic Unit 02030103, 700 ft downstream from spillway of Woodcliff Lake, 0.7 mi north of Hillsdale, and 1.5 mi northwest of Westwood. Drainage area is 19.4 mi ² .	1998-2000	8-18-00	6.60	a	9-16-99	11.25	a
Pascack Brook at Hillsdale, NJ (01377460)	Lat 41°00'06", long 74°02'36", Bergen County, Hydrologic Unit 02030103, on upstream left wingwall of at bridge on Patterson Street, 0.5 mi north of Westwood, and 1.1 mi downstream from Woodcliff Lake. Drainage area is 20.7 mi ² .	1998-2000	5-10-98 7-30-00	10.80 7.36	2,200r 454	9-16-99	15.48	7,610

CREST-STAGE PARTIAL-RECORD STATIONS

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
HACKENSACK RIVER BASIN--Continued								
Musquapsink Brook near Westwood, NJ (01377475)	Lat 40°59'41", long 74°03'42", Bergen County, Hydrologic Unit 02030103, at bridge on Pascack Road in Washington Borough, 1.5 mi west of Westwood, and 5.3 mi above mouth. Datum of gage before 1973 was 69.67 ft, datum since is 68.07 ft above sea level. Drainage area is 2.12 mi ² .	1965-86, 1999	9-16-99	3.34br	940	11-08-77	3.99b	1,060
Musquapsink Brook at Westwood, NJ (01377490)	Lat 40°59'11", long 74°01'51, Bergen County, Hydrologic Unit 02030103, on the left bank downstream side of Pros- pect Avenue bridge (in Westwood), 330 ft upstream from the railroad bridge, 1,100 ft downstream from former site at Bogert Pond Dam (prior to 1998 at datum 47.67 ft, drainage area 6.53 mi ²), and 1.0 mi upstream from mouth. Drain- age area is 6.59 mi ² .	1966-86, 1998-2000	9-19-00	2.40	a	9-16-99	7.83	465r
Tenakill Brook at Closter, NJ *(01378385)	Lat 40°58'29", long 73°58'06, Bergen County, Hydrologic Unit 02030103, at downstream left wingwall bridge on High Street in Closter, 0.7 mi upstream from mouth. Datum of gage is 23.85 ft above sea level. Drainage area is 8.56 mi ² .	1965-2000	7-30-00	2.38b	550	9-16-99	6.30b	1,650
Metzler Brook at Engle- wood, NJ (01378590)	Lat 40°54'29", long 73°59'13", Bergen County, Hydrologic Unit 02030103, at bridge on Lantana Avenue in Engle- wood, and 1.6 mi upstream from mouth. Datum of gage is 43.10 ft above sea level. Drainage area is 1.54 mi ² .	1965-2000	7-30-00	1.98b	158	9-22-66 9-16-99	3.47b 2.91bd	205 534
PASSAIC RIVER BASIN								
Passaic River near Bernards- ville, NJ (01378690)	Lat 40°44'03", long 74°32'26", Somerset County, Hydrologic Unit 02030103, on downstream right wingwall of bridge on U.S. Route 202, 1.8 mi northeast of Ber- nardsville, and 3.0 mi upstream from Great Brook. Datum of gage is 238.07 ft above sea level. Drainage area is 8.83 mi ² .	1968-76†, 1977-2000	8-15-00	13.00b	222	8-28-71	18.56b	3,850
Penns Brook tributary at Basking Ridge, NJ (01378708)	Lat 40°42'30", long 74°32'53", Somerset County, Hydrologic Unit 02030103, on upstream right wingwall of culvert on North Maple Avenue in Basking Ridge, 0.3 mi upstream of mouth, and 1.2 mi west of the Passaic River. Datum of gage is 270 ft above sea level, from topo- graphic map. Drainage area is 0.19 mi ² .	1999-2000	8-11-00	6.79	113	9-16-99	6.82	115
Passaic River tributary at Summit, NJ (01379490)	Lat 40°42'59", long 74°23'03", Union County, Hydrologic Unit 02030103, on upstream left wingwall of bridge on Pas- saic Avenue in Summit, 0.3 mi north of intersection of Passaic Avenue and Springfield Avenue, and 0.4 mi upstream of mouth. Datum of gage is 260 ft above sea level, from topographic map. Drain- age area is 0.27 mi ² .	1999-2000	8-11-00	5.19	a	9-16-99	7.75	300

CREST-STAGE PARTIAL-RECORD STATIONS

261

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
PASSAIC RIVER BASIN--Continued								
Cub Brook at Northfield, NJ (01379520)	Lat 40°46'16", long 74°18'39", Essex County, Hydrologic Unit 02030103, on upstream left wingwall of bridge on Chestnut Street in Northfield, 230 ft from intersection of Chestnut Street and Northfield Road, and 280 ft upstream of confluence with Bear Brook. Datum of gage is 280 ft above sea level from topographic map. Drainage area is 0.48 mi ² .	1999-2000	8-11-00	8.13	a	9-16-99	11.77	610
North Branch Foulerton Brook at Roseland, NJ (01379590)	Lat 40°49'11", long 74°17'22", Essex County, Hydrologic Unit 02030103, at bridge on Harrison Avenue in Roseland, 300 ft southeast of intersection of Harrison Avenue and Eagle Rock Avenue, and 0.5 mi downstream of unnamed pond. Datum of gage is 375 ft above sea level, from topographic map. Drainage area is 0.42 mi ² .	1999-2000	8-11-00	2.64	a	9-16-99	6.11	130
Rockaway River at Berkshire Valley, NJ (01379700)	Lat 40°55'51", long 74°35'42", Morris County, Hydrologic Unit 02030103, on left bank 60 ft downstream from bridge on Berkshire Valley Road in Berkshire Valley, 2.7 mi upstream from Stephens Brook, and 3.8 mi northwest of Dover.	1985-96†, 2000	8-13-00	10.86	2,500	8-13-00	10.86	2,500
Rockaway River at Warren Street, at Dover, NJ (01379845)	Lat 40°53'08", long 74°33'36", Morris County, Hydrologic Unit 02030103, on left bank, 100 ft upstream from bridge on Warren Street in Dover, 4.0 mi west of Denville, and 6 mi southeast of Lake Hopatcong. Datum of gage is 561.83 ft above sea level. Drainage area is 52.1 mi ² .	1981-94, 1999-2000	8-13-00	7.82	2,600	9-17-00	8.92	3,450
Whippany River tributary no. 5, at Boulevard Road, at Cedar Knolls, NJ (01381510)	Lat 40°49'07", long 74°26'54", Morris County, Hydrologic Unit 02030103, at culvert on Boulevard Road, in Cedar Knoll, just north of intersection with Cedar Knolls Road, 0.2 mi upstream from mouth, and 3.8 mi northeast of Morristown. Datum of gage is 266 feet above sea level, from topographic map. Drainage area is 0.06 mi ² .	1999-2000	8-11-00	5.76	32	9-16-99	7.60	63
Mahwah River near Suffern, NY (01387450)	Lat 41°08'27", long 74°07'01", Rockland County, NY, Hydrologic Unit 02030103, on left bank 13 ft upstream from bridge on U.S. Route 202, 4.8 mi upstream from mouth, and 2.5 mi northeast of Suffern. Datum of gage is 321.57 ft above sea level. Drainage area is 12.3 mi ² . Stage telemetry at station.	1959-95†, 1996-2000	5-14-00	3.52	a	11-08-77	9.91	1,840
Pond Brook at Oakland, NJ *(01387880)	Lat 41°01'36", long 74°14'04", Bergen County, Hydrologic Unit 02030103, at bridge on Interstate 287 State Route 208 in Oakland, 0.2 mi upstream from former site at Franklin Avenue (prior to October 1975), 0.6 mi upstream from mouth, and 1.5 mi northwest of Franklin Lakes. Datum of gage is 276.97 ft above sea level. Drainage area is 6.76 mi ² .	1968-71, 1976-2000	8-11-00	1.72	276	9-16-99	7.83	1,680

CREST-STAGE PARTIAL-RECORD STATIONS

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
PASSAIC RIVER BASIN--Continued								
Passaic River below Pompton River, at Two Bridges, NJ (01389005)	Lat 40°53'47", long 74°16'10", Passaic County, Hydrologic Unit 02030103, on right bank, at Two Bridges and 400 ft downstream from the Pompton River. Datum of gage is 155.00 ft above sea level. Drainage area is 734 mi ² . Stage telemetry at station.	1989-2000	6-08-00@ 1400 hrs	6.73	a	9-18-99	12.71	a
Preakness (Singac) Brook near Preakness, NJ (01389030)	Lat 40°56'55", long 74°13'25", Passaic County, Hydrologic Unit 02030103, at bridge on Ratzer Road, 1.0 mi north of Preakness, and 2.0 mi upstream from Naachpunkt Brook. Datum of gage is 230.8 ft above sea level. Drainage area is 3.24 mi ² .	1979-2000	8-11-00	<4.00bh	<599i	9-16-99	7.91b	1,920
Passaic River above Beatties Dam, at Little Falls, NJ (01389492)	Lat 40°53'04", long 74°14'05", Passaic County, Hydrologic Unit 02030103, at Little Falls, 100 ft upstream of Beatties Dam, 600 ft upstream from bridge on Union Boulevard and 1.5 mi upstream from Peckman River. Datum of gage is 150.00 ft above sea level. Drainage area is 762 mi ² .	1984, 1991-2000†	8-11-00	10.41	a	4-07-84	14.0	a
Peckman River at Ozone Avenue, at Verona, NJ (01389534)	Lat 40°50'42", long 74°14'09", Passaic County, Hydrologic Unit 02030103, at bridge on Ozone Avenue in Verona, 4.0 mi west of Clifton and 1.0 mi southwest of Cedar Grove Reservoir. Datum of gage is 300.08 ft above sea level. Drainage area is 4.45 mi ² . Stage telemetry at station.	1945, 1979-2000	5-18-00	3.34	660	7-23-45	---	3,800s
Molly Ann Brook at North Haledon, NJ (01389765)	Lat 40°57'11", long 74°11'07", Passaic County, Hydrologic Unit 02030103, at bridge on Overlook Avenue in North Haledon, 1.5 mi west of Hawthorne and 0.5 mi upstream from Oldham Pond Dam. Datum of gage is 209.68 ft above sea level. Drainage area is 3.89 mi ² . Stage telemetry at station.	1945, 1979-2000	8-11-00	6.93	569	7-23-45	---	3,100f
Fleischer Brook at Market Street, at Elmwood Park, NJ (01389900)	Lat 40°53'57", long 74°06'54", Bergen County, Hydrologic Unit 02030103, at culvert on Market Street in Elmwood Park (formerly East Paterson), and 2.0 mi upstream from mouth. Datum of gage is 33.83 ft above sea level. (Prior to 1995 at datum 1.48 ft higher.) Drainage area is 1.37 mi ² .	1967-2000	9-04-00	2.45	a	9-16-99	5.66	a
Saddle River at Upper Saddle River, NJ *(01390450)	Lat 41°03'32", long 74°05'44", Bergen County, Hydrologic Unit 02030103, at culvert on Lake Street in Upper Saddle River, and 1.3 mi downstream from Pine Brook. Datum of gage is 186.11 ft above sea level. Drainage area is 10.9 mi ² .	1966-2000	8-12-00	4.26	1,400	9-16-99	5.64b	6,290
Hohokus Brook at Allendale, NJ (01390810)	Lat 41°01'37", long 74°08'44", Bergen County, Hydrologic Unit 02030103, at bridge on Brookside Avenue in Allendale and 0.2 mi downstream from Valentine Brook. Datum of gage is 277.46 ft above sea level. Drainage area is 9.11 mi ² .	1969-2000	8-11-00	6.00	530	9-16-99	12.15	3,010

CREST-STAGE PARTIAL-RECORD STATIONS

263

Maximum discharge at crest-stage partial-record stations (Continued)

			Water year 2000 maximum			Period of record maximum		
Station name and number	Location and drainage area	Period of record	Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
PASSAIC RIVER BASIN--Continued								
Ramsey Brook at Allendale, NJ (01390900)	Lat 41°01'44", long 74°08'07", Bergen County, Hydrologic Unit 02030103, at bridge on Brookside Avenue in Allendale and 0.6 mi upstream from Hohokus Brook. Datum of gage is 270.79 ft above sea level. Drainage area is 2.55 mi ² .	1975-2000	8-11-00	1.79b	42	9-16-99	5.41b	987
Hohokus Brook at Ho-Ho-Kus, NJ (01391000)	Lat 40°59'52", long 74°06'44" (revised), Bergen County, Hydrologic Unit 02030103, on left bank 500 ft upstream from bridge on Maple Avenue in Ho-Ho-Kus, and 3.5 mi upstream from mouth. Datum of gage is 120.09 ft above sea level. Drainage area is 16.4 mi ² . Stage telemetry at station.	1954-73†, 1977-96†, 1997-2000	8-11-00	2.91	880	9-16-99	7.32	4,670
Weasel Brook at Clifton, NJ (01392000)	Lat 40°52'12", long 74°08'47", Passaic County, Hydrologic Unit 02030103, at upstream side of bridge on Jewett Street, at Clifton, 1.3 mi downstream of bridge on US Route 46, and 1.3 mi northwest of Passaic. Datum of gage is 68.52 ft above sea level. Drainage area is 4.45 mi ² . Revised records--WDR NJ-00-1 (P).	1937-62†, 1963-78, 1989-90, 1999	9-16-99	---	1,780r	8-27-90	6.65	1,900
Third River at Bloomfield, NJ (01392170)	Lat 40°47'59", long 74°11'18", Essex County, Hydrologic Unit 02030103, on downstream left wingwall of bridge on entrance ramp at Interchange 148 to the Garden State Parkway in Bloomfield 0.6 mi west of Nutley, and 5.1 mi upstream from Passaic River. Drainage area is 7.71 mi ² . Stage telemetry at station.	1988-2000	8-11-00	4.63b	508	9-16-99	9.97b	2,670
RAHWAY RIVER BASIN								
East Branch Rahway River at Maplewood, NJ (01393890)	Lat 40°44'06", long 74°16'14", Essex County, Hydrologic Unit 02030104, on downstream right wingwall of bridge on Jefferson Avenue in Maplewood, 1,100 ft west of Fielding School, and 2.5 mi upstream of confluence of West Branch River and East Branch Rahway River. Datum of gage is 114.60 ft above sea level. Drainage area is 5.11 mi ² . Stage telemetry at station.	1998-2000	8-28-71 5-24-00	7.3b a	a a	9-16-99	10.08br	3,470
East Branch Rahway River at Millburn Avenue, at Millburn, NJ (01393895)	Lat 40°22'11", long 74°17'07", Essex County, Hydrologic Unit 02030104, at bridge on Millburn Avenue at Millburn, 0.9 mi east of Millburn, and 1.5 mi upstream of confluence with West Branch Rahway River. Datum of gage is 88.9 ft above sea level. Drainage area is 7.09 mi ² . Stage telemetry at station.	1998-2000	5-18-00	7.89b	a	9-16-99	11.36b	a
West Branch Rahway River at Millburn, NJ (01394000)	Lat 40°43'51", long 74°18'26", Essex County, Hydrologic Unit 02030104, on left bank 100 ft upstream from Diamond Mill Pond dam, 1,000 ft upstream from Glen Avenue in Millburn, and 1.9 mi upstream from confluence with East Branch. Datum of gage is 173.65 ft above sea level. Drainage area is 7.10 mi ² . Stage telemetry at station.	1940-50†, 1973, 1998-2000	5-18-00	2.02	210	9-16-99	5.2r	2,840

CREST-STAGE PARTIAL-RECORD STATIONS

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
RAHWAY RIVER BASIN--Continued								
West Branch Rahway River at Millburn Avenue, at Millburn, NJ (01394100)	Lat 40°53'27", long 74°41'22", Essex County, Hydrologic Unit 02030104, on bridge on Millburn Avenue, in Millburn, just upstream of Taylor Park, 0.6 mi downstream of Diamond Mill Pond, and 0.9 mi east of Short Hills. Datum of gage is 111.87 ft above mean sea level (levels by Killam Associates). Drainage area is 7.74 mi ² .	1999-2000	5-18-00	<12.14	a	9-16-99	19.6b	a
Rahway River at Morris Avenue, at Springfield, NJ (01394200)	Lat 40°42'28", long 74°18'08", Union County, Hydrologic Unit 02030104, on upstream right bank of bridge on Morris Avenue (State Route 82), 0.7 mi east of Springfield Municipal building, 1.4 mi west of Hamilton School, and 0.7 mi upstream of unnamed tributary. Datum of gage is 66.17 ft above sea level. Drainage area is 25.5 mi ² .	1999-2000	5-18-00	11.07	a	9-17-99	16.6	a
Rahway River at Kenilworth, NJ (01394620)	Lat 40°40'59", long 74°22'23", Union County, Hydrologic Unit 02030104, on right downstream wingwall of bridge on Kenilworth Boulevard at Kenilworth, 0.9 mi west of Harding School, 1.7 mi west of Kenilworth Municipal building, and 4.7 mi northwest of confluence of Rahway River and Robinsons Branch. Drainage area is 32.0 mi ² . Stage telemetry at station.	1999-2000	8-28-71 8-02-73 5-18-00	69.0p 71.0p 8.33	a a a	9-17-99	13.3	a
Robinsons Branch at Rahway, NJ (01396000)	Lat 40°36'20", long 74°17'57", Union County, Hydrologic Unit 02030104, on right bank of Milton Lake, 0.4 mi upstream from Maple Avenue at Milton Lake in Rahway, 0.6 mi downstream from Middlesex Reservoir Dam, and 1.6 mi upstream from mouth. Datum of gage is 19.99 ft above sea level. Drainage area is 21.6 mi ² . Stage telemetry at station.	1937-96†, 1999-2000	7-27-00	4.63w	a	9-16-99	6.48	4,800
RARITAN RIVER BASIN								
Alpaugh Brook at Hampton, NJ (01396570)	Lat 40°42'13", long 74°56'52", Hunterdon County, Hydrologic Unit 02030105, at culvert on State Route 31 at Hampton, 0.1 mi upstream of mouth, 0.6 mi north of Glen Gardner. Drainage area is 0.41 mi ² .	1995-2000	6-12-00	1.94	70	10-19-96	2.83	105
Walnut Brook near Flemington, NJ (01397500)	Lat 40°30'55", long 74°52'52", Hunterdon County, Hydrologic Unit 02030105, 1.2 mi northwest of Flemington, and 2.3 mi upstream from mouth. Datum of gage is 267.33 ft above sea level. Drainage area is 2.24 mi ² .	1936-61†, 1963-2000	8-14-00	2.87	350	9-16-99	5.50	2,870
Back Brook tributary near Ringoes, NJ (01398045)	Lat 40°25'41", long 74°49'52", Hunterdon County, Hydrologic Unit 02030105, at right upstream wingwall of bridge on Wertsville Road, 2.1 mi east of Ringoes, 1.3 mi upstream from Back Brook, and 2.3 mi southwest of Wertsville. Datum of gage is 161.6 ft above sea level. Drainage area is 1.98 mi ² .	1978-88†, 1989-2000	2-14-00	<2.84h	<468i	9-16-99	5.95	1,580

CREST-STAGE PARTIAL-RECORD STATIONS

265

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
RARITAN RIVER BASIN--Continued								
South Branch Raritan River at South Branch, NJ (01398102)	Lat 40°32'48", long 74°41'48", Somerset County, Hydrologic Unit 02030105, at bridge on Studdiford Drive (South Branch Road) at village of South Branch, and 2.0 mi north of Flagtown. Drainage area is 265 mi ² . Stage telemetry at station.	1998-2000	8-14-00	11.07	a	9-16-99	20.29	a
Holland Brook at Readington, NJ (01398107)	Lat 40°33'30", long 74°43'50", Somerset County, Hydrologic Unit 02030105, on right bank 15 ft downstream from bridge on Old York Road, 0.9 mi southeast of Readington, and 2.5 mi upstream from mouth. Drainage area is 9.00 mi ² .	1978-96†, 1999-2000	9-19-00	8.33	1,200	9-16-99	10.67	4,150
Lamington (Black) River at Succasunna, NJ (01399190)	Lat 40°51'03", long 74°38'02", Morris County, Hydrologic Unit 02030105, bridge on Righter Road, 0.7 mi south of Succasunna, and 0.4 mi upstream from Succasunna Brook. Drainage area is 7.37 mi ² .	1977-87a, 1988-2000	8-12-00	4.91	150	1-24-79	5.20	176
Lamington (Black) River near Ironia, NJ (01399200)	Lat 40°50'07", long 74°38'40", Morris County, Hydrologic Unit 02030105, at bridge on Ironia Road, 1.0 mi downstream from Succasunna Brook, and 1.3 mi northwest of Ironia. Drainage area is 10.9 mi ² .	1964-72, 1976-87a, 1988-2000	8-12-00	4.86	228	7-07-84	5.15	389
Axle Brook near Pottersville, NJ (01399525)	Lat 40°41'40", long 74°43'05", Somerset County, Hydrologic Unit 02030105, on right upstream wingwall of bridge on Black River Road, 1.3 mi, south of Pottersville, and 0.3 mi upstream from mouth. Datum of gage is 172.74 ft above sea level. Drainage area is 1.22 mi ² .	1977-88†, 1989-2000	8-03-00	4.78	603	9-16-99	6.32	960
Lamington River at Burnt Mills, NJ (01399780)	Lat 40°38'04", long 74°41'13", Somerset County, Hydrologic Unit 02030105, at bridge on Walsh Road at Burnt Mills, 0.2 mi upstream of mouth, and 4.4 mi southwest of Far Hills. Drainage area is 100 mi ² . Stage telemetry at station.	1964, 1973, 1975-78, 1981-2000	8-03-00	10.41	a	7-07-84	90.0p	a
North Branch Raritan River at North Branch, NJ (01399830)	Lat 40°36'00", long 74°40'27", Somerset County, Hydrologic Unit 02030105, on right bank 5 ft upstream from bridge on State Highway 28 in village of North Branch, 0.1 mi south of River Brook, and 3.6 mi upstream from confluence with South Branch Raritan River. Datum of gage is 56.94 ft above sea level. Drainage area is 174 mi ² . Stage telemetry at station.	1977-81†, 1982-95, 1997-2000	8-03-00	11.40	6,000	9-16-99	21.53	27,800
North Branch Raritan River at South Branch, NJ (01400010)	Lat 40°33'24", long 74°41'19", Somerset County, Hydrologic Unit 02030105, at bridge on Old York Road, 0.8 mi northeast of village of South Branch, and 500 ft upstream from confluence with South Branch Raritan River. Datum of gage is 46.03 ft above sea level. Drainage area is 190 mi ² . Stage telemetry at station.	1993-2000	8-12-00	9.01	a	9-16-99	18.98	a

CREST-STAGE PARTIAL-RECORD STATIONS

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
RARITAN RIVER BASIN--Continued								
Peters Brook at Mercer Street, at Somerville, NJ (01400360)	Lat 40°34'30", long 74°37'07", Somerset County, Hydrologic Unit 02030105, on the left bank on the downstream side of the bridge on Mercer Street in Somerville, 0.4 mi downstream from Macs Brook and 0.6 mi upstream from Ross Brook. Datum of gage is 42.51 ft above sea level. Drainage area is 7.37 mi ² . Stage and rainfall telemetry at station.	1991-2000	8-15-00	7.94	a	9-16-99	13.97	a
Millstone River at Southfield Road, near Grovers Mill, NJ (01400630)	Lat 40°18'12", long 74°34'33", Mercer County, Hydrologic Unit 02030105, at bridge on Southfield Road, 0.2 mi southeast at Grovers Mill, 3.5 mi southwest of Cranbury, and 3.0 mi upstream of Bear Brook. Datum of gage is 62.63 ft above sea level. Drainage area is 41.0 mi ² .	1971, 1975, 1979-2000	5-24-00	3.25	251	9-16-99	7.37b	1,470
Millstone River at Plainsboro, NJ (01400730)	Lat 40°19'27", long 74°36'51", Mercer County, Hydrologic Unit 02030105, on left bank 30 ft upstream from railroad bridge on AMTRAK (former Penn Central) mainline, 100 ft downstream from Cranbury Brook, 0.2 mi upstream from Bear Brook, and 0.9 mi southwest of Plainsboro. Datum of gage is 53.41 ft above sea level. Drainage area is 65.8 mi ² .	1965-75†, 1976-87, 1987-89†, 1990-2000	5-24-00	3.18	579	7-21-75	8.96	3,970
Bear Brook at Route 535, near Locust Corner, NJ (01400775)	Lat 40°16'41", long 74°34'39", Mercer County, Hydrologic Unit 02030105, at bridge on County Route 535, 0.9 mi southwest of Locust Corner, 2.0 mi east of Hightstown, and 4.2 mi above mouth. Datum of gage is 73.75 ft above sea level. Drainage area is 6.69 mi ² .	1971, 1975, 1979-2000	8-14-00	4.22	174	6-10-89	7.95bd	1,550
Bear Brook at Route 571, near Grovers Mill, NJ (01400795)	Lat 40°17'41", long 74°35'34", Mercer County, Hydrologic Unit 02030105, at bridge on County Route 571 (Princeton-Hightstown Road), 1.2 mi upstream of Grovers Mill Pond and Grovers Mill, 1.4 mi east of Princeton Junction, and 2.9 mi west of U.S. Route 130 and Hightstown. Datum of gage is 62.48 ft above sea level. Drainage area is 9.28 mi ² .	1986-2000	8-14-00	8.39	192	6-10-89	11.90	1,320
Baldwins Creek at Pennington, NJ *(01400930)	Lat 40°20'18", long 74°47'50", Mercer County, Hydrologic Unit 02030105, at bridge on State Route 31, 0.8 mi north of Pennington, and 0.9 mi upstream from Baldwin Lake dam. Datum of gage is 161.69 ft above sea level. Drainage area is 1.99 mi ² .	1960-2000	8-14-00	4.54	270	9-16-99	8.95	1,430
Hart Brook near Pennington, NJ (01400950)	Lat 40°19'17", long 74°45'38", Mercer County, Hydrologic Unit 02030105, at culvert on Federal City Road, 1.6 mi upstream of mouth, and 1.7 mi southeast of Pennington. Datum of gage after July 1, 1975 is 163.32 ft above sea level. Drainage area is 0.57 mi ² .	1968-2000	5-24-00	2.22	55	7-14-87	5.27d	470

CREST-STAGE PARTIAL-RECORD STATIONS

267

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
RARITAN RIVER BASIN--Continued								
Duck Pond Run near Princeton Junction, NJ (01401160)	Lat 40°17'47", long 74°38'47", Mercer County, Hydrologic Unit 02030105, on right bank upstream from bridge on Clarksville Road, 1.5 mi southwest of Princeton Junction, and 4.0 mi south of Princeton. Datum of gage is 72.50 ft above sea level. Drainage area is 1.81 mi ² .	1980-2000	5-24-00	3.46	57	9-16-99	6.81	292
Millstone River at Carnegie Lake, at Princeton, NJ (01401301)	Lat 40°22'11", long 74°37'15", Middlesex County, Hydrologic Unit 02030105, at right end of Carnegie Lake dam, 2.5 mi northeast of Princeton. Datum of gage is 50.00 ft above sea level. Drainage area is 159 mi ² .	1971, 1973-74†, 1977-87, 1988-89†, 1990-2000	8-14-00	3.80	1,620	8-28-71	7.09	13,000
Rock Brook near Blawenburg, NJ (01401595)	Lat 40°25'47", long 74°41'05", Somerset County, Hydrologic Unit 02030105, at bridge on Burnt Hill Road, 0.7 mi upstream from mouth, 1.0 mi northeast of Blawenburg, and 2.8 mi northwest of Rocky Hill. Datum of gage is 63.45 ft above sea level. Drainage area is 9.03 mi ² .	1967-2000	8-14-00	3.68b	617	8-28-71	10.00b	4,530
Beden Brook near Rocky Hill, NJ (01401600)	Lat 40°24'52", long 74°39'02", Somerset County, Hydrologic Unit 02030105, at bridge on U.S. Route 206, 0.7 mi upstream from Pike Run, 1.2 mi northwest of Rocky Hill, and 4.6 mi north of Princeton. Datum of gage is 38.09 ft above sea level. Drainage area is 27.0 mi ² , revised.	1967-2000	8-14-00	6.34b	1,350	9-16-99	18.61b	15,300
Millstone River at Griggstown, NJ (01401750)	Lat 40°26'20", long 74°37'06", Somerset County, Hydrologic Unit 02030105, at bridge at Griggstown, 200 ft upstream from Simonson Brook, and 300 ft downstream from Griggstown Causeway. Datum of gage is 26.52 ft above sea level. Drainage area is 229 mi ² . Stage telemetry at station.	1938, 1960-61, 1971, 1997, 1999-2000	8-14-00	8.70	a	9-16-99	23.2	a
Six Mile Run near Middlebush, NJ (01401870)	Lat 40°28'12", long 74°32'42", Somerset County, Hydrologic Unit 02030105, at bridge on South Middlebush Road, 1.6 mi upstream from mouth, and 2.1 mi south of Middlebush. Datum of gage is 39.91 ft above sea level. Drainage area is 10.7 mi ² .	1966-2000	8-14-00	7.06	710	7-14-75	11.77	10,200
Millstone River at Millstone, NJ (01402500)	Lat 40°30'10", long 74°35'15", Somerset County, Hydrologic Unit 02030105, on left bank at downstream side of bridge on County Route 514 (Amwell Road), in Millstone Borough, 2.7 mi south of Manville, and 4.4 mi upstream from mouth. Datum of gage is 24.4 ft above sea level. Drainage area is 264 mi ² .	1903-04†, 1999-2000	8-13-00	a	a	9-17-99	22.30	a

CREST-STAGE PARTIAL-RECORD STATIONS

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
RARITAN RIVER BASIN--Continued								
Millstone River at Weston, NJ (01402540)	Lat 40°31'47", long 74°35'19", Somerset County, Hydrologic Unit 02030105, at downstream right bank side of Wilhouski Street bridge over bypass channel at Weston, 0.8 mi southwest of Alma White College, and 1.9 miles north of Millstone. Datum of gage is 21.9 ft above sea level. Drainage area is 271 mi ² . Stage telemetry at station.	1999-2000	8-13-00	7.78	a	9-17-99	23.21	a
Cuckels Brook at U.S. Route 22, near Somerville, NJ (01403010)	Lat 40°34'43", long 74°35'12", Somerset County, Hydrologic Unit 02030105, at culvert on U.S. Route 22, 1.5 mi north-east of Somerville, 2.7 mi upstream of mouth, 0.7 mi northwest of Adamsville School, and 3.0 mi west of Bound Brook. Datum of gage is 95 ft above sea level, from topographic map. Drainage area is 0.32 mi ² .	1999-2000	9-01-00	9.67	a	9-16-99	10.1	a
Middle Brook at Bound Brook, NJ (01403200)	Lat 40°33'38", long 74°32'56", Middlesex County, Hydrologic Unit 02030105, at bridge on Talmadge Avenue at Bound Brook, 0.6 mi downstream from bridge on State Route 28, and 0.5 mi upstream from mouth. Datum of gage is 21.53 ft above sea level. Drainage area is 17.2 mi ² . Stage and rainfall telemetry at station.	1993-2000	8-12-00	8.60	a	9-17-99	19.76m	a
Blue Brook at Seeleys Pond Dam, near Berkeley Heights, NJ (01403395)	Lat 40°40'02", long 74°24'13", Union County, Hydrologic Unit 02030105, on wall on right bank, upstream from Seeleys Pond dam, 300 ft from mouth, 1.0 mi north of Scotch Plains, 1.0 mi west of Mountainside, and 4.5 mi southeast of Berkeley Heights. Datum of gage is 202.05 ft above sea level. Drainage area is 3.59 mi ² .	1927, 1969, 1973, 1981-2000	5-18-00	a	a	8-02-73	7.55	2,080
Green Brook at Plainfield, NJ (01403500)	Lat 40°36'53", Long 74°25'55", Union County, Hydrologic Unit 02030105, on left bank at bridge on Sycamore Avenue in Plainfield and 1.0 mi upstream from Stony Brook. Datum of gage is 70.37 ft above sea level. Drainage area is 9.75 mi ² .	1938-84†, 1985-2000	8-27-00	3.97b	1,040	7-23-38	5.82b	2,890
Stony Brook at North Plainfield, NJ (01403570)	Lat 40°37'19", long 74°26'11", Somerset County, Hydrologic Unit 02030105, at bridge on Green Brook Road, in North Plainfield, 100 ft downstream of Crab Brook, and 1.4 mi upstream of mouth. Datum of gage is 71.59 ft above sea level. Drainage area is 6.88 mi ² . Stage and rainfall telemetry at station.	1938, 1975-83, 1991-2000	5-18-00	7.66	a	7-23-38 10-19-96	10.00 7.35	a 3,130
Green Brook at Rock Avenue, at Plainfield, NJ (01403600)	Lat 40°36'07", long 74°27'28", Somerset County, Hydrologic Unit 02030105, at bridge on Rock Avenue in Plainfield, 0.3 mi north of West Front Street, and 0.6 mi south of U.S. Route 22. Datum of gage is 45.70 ft above sea level. Drainage area is 18.2 mi ² . Stage and rainfall telemetry at station.	1972-79, 1992-2000	5-18-00	8.97	a	8-02-73 10-19-96 9-16-99	10.65b 11.40b 12.17b	10,400 a a

CREST-STAGE PARTIAL-RECORD STATIONS

269

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
RARITAN RIVER BASIN--Continued								
Bound Brook at Middlesex, NJ (01403900)	Lat 40°35'06", long 74°30'29", Somerset County, Hydrologic Unit 02030105, at bridge on Sebrings Mill Road at Middlesex, 0.4 mi downstream of mouth of Green Brook, and 2.3 mi upstream of mouth. Datum of gage is 26.52 ft above sea level. Drainage area is 48.4 mi ² . Stage and rainfall telemetry at station.	1972-77†, 1992-95, 1996-2000†	5-18-00	7.83	1,680	9-17-99r	13.54	7,840
Sawmill Brook at South River, NJ (01405010)	Lat 40°26'02", long 74°24'02", Middlesex County, Hydrologic Unit 02030105, at intersection of County Route 535 and Merrill Road at entrance to East Brunswick High School, 0.2 mi north of St. Mary Cemetery, 1.3 mi northwest of Duhernal Lake, and 1.6 mi southwest of South River. Drainage area is 0.49 mi ² .	1998-2000	8-12-00	1.69	81	9-16-99	2.15	130
Manalapan Brook tributary at Smithburg, NJ (01405304)	Lat 40°12'37", long 74°21'17", Monmouth County, Hydrologic Unit 02030105, at bridge on Woodville Road at Smithburg, 0.1 mi north of intersection of Woodville Road and Freehold-Mt. Holly Road, and 0.7 mi south of Pasture Pond. Datum of gage is 190 ft above sea level, from topographic map. Drainage area is 0.47 mi ² .	1999-2000	9-27-00	2.07	15	9-16-99	2.54	45
EAST CREEK BASIN								
East Creek at NJ Route 35, at South River, NJ (01407051)	Lat 40°25'00", long 74°10'09", Monmouth County, Hydrologic Unit 02030104, at bridge on State Route 35, 0.5 mi east of Bethany Road and Route 35, and 2.1 mi south of Raritan Bay. Datum of gage is 79 ft above sea level, from topographic map. Drainage area is 0.59 mi ² .	1999-2000	8-12-00	4.25	a	9-16-99	5.23	a
MANY MIND CREEK BASIN								
Many Mind Creek at Atlantic Highlands, NJ (01407130)	Lat 40°24'12", long 74°01'49", Monmouth County, Hydrologic Unit 02030104, upstream side of culvert on State Route 36 at Atlantic Highlands, 190 ft east of intersection of State Route 36 and Valley Drive, and 1.0 mi southeast of mouth. Datum of gage is 29.54 ft above sea level. Drainage area is 0.26 mi ² .	1999-2000	8-11-00	5.18	a	9-16-99	5.86	a
SHREWSBURY RIVER BASIN								
Big Brook near Marlboro, NJ (01407290)	Lat 40°19'10", long 74°12'52", Monmouth County, Hydrologic Unit 02030104, downstream side of bridge on Hillsdale Road, 1.7 mi east of Marlboro, and 3.0 mi northwest of Colts Neck. Drainage area is 6.42 mi ² .	1980-2000	8-12-00	<3.83bh	<292i	09-20-89	10.16b	1,370

CREST-STAGE PARTIAL-RECORD STATIONS

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
MANASQUAN RIVER BASIN								
Mingamahone Brook at Farmingdale, NJ (01408015)	Lat 40°11'38", long 74°09'42", Monmouth County, Hydrologic Unit 02040301, at bridge on Belmar Road, 0.3 mi east of Farmingdale, and 3.0 mi upstream from mouth. Datum of gage is 48.64 ft above sea level. Drainage area is 6.20 mi ² .	1969-2000	8-11-00	<3.54h	<70i	7-21-75	7.31	425
METEDECONK RIVER BASIN								
North Branch Metedeconk River at Smithburg, NJ (01408052)	Lat 40°12'04", long 74°21'57", Monmouth County, Hydrologic Unit 02040301, at bridge on Monmouth Road (County Route 537), at Charleston Springs, 0.8 mi southwest of Smithburg, and just downstream of unnamed pond. Datum of gage is 188 ft above sea level, from topographic map. Drainage area is 0.10 mi ² .	1999-2000	9-28-00	5.84	1.3	9-16-99	6.43	3.2
TOMS RIVER BASIN								
Michaels Branch tributary at Keswick Grove, NJ (01408582)	Lat 39°56'48", long 74°20'15", Ocean County, Hydrologic Unit 02040301, at bridge on Pinewald Road (County Route 530), 0.1 mi upstream from mouth, 1.5 mi east of intersection of Pinewald Road and Whiting Lacey Road, and 0.4 mi southeast of Keswick Grove. Datum of gage is 98 ft above sea level, from topographic map. Drainage area is 0.67 mi ² .	1999-2000	9-28-00	1.54	4.9	9-16-99	3.65	a
Wrangel Brook at Bimini Drive, near Toms River, NJ (01408590)	Lat 39°58'16", long 74°15'58", Ocean County, Hydrologic Unit 02040301, at bridge on Bimini Drive, 1.0 mi south of intersection of Bimini Drive and State Route 37, 2.6 mi west of Toms River, and 3.3 mi upstream of mouth. Datum of gage is 30 ft above sea level, from topographic map. Drainage area is 13.6 mi ² .	1998-2000	9-16-99 9-28-00	3.50b 2.67b	202r 122	5-10-98	3.58b	210r
Wrangel Brook at Mule Road, near Toms River, NJ (01408592)	Lat 39°57'39", long 74°13'42", Ocean County, Hydrologic Unit 02040301, at bridge on Mule Road in Berkeley Township, 0.5 mi upstream from mouth, and 1.7 mi west of Toms River. Datum of gage is 11 ft above sea level, from topographic map. Drainage area is 19.5 mi ² .	1998-2000	9-28-00	7.40b	a	9-28-00	7.40b	a
OYSTER CREEK BASIN								
Oyster Creek tributary at Brookville, NJ (01409088)	Lat 39°46'58", long 74°18'10" (revised), Ocean County, Hydrologic Unit 02040301, at bridge on Brookville Road, 0.1 mi east of Brookville, 0.9 mi south of intersection of Brookville Road, and Wells Mills Road, and 1.2 mi southwest of Wells Mills Lake. Datum of gage is 107 ft above sea level, from topographic map. Drainage area is 0.25 mi ² .	1999-2000	8-11-00	<5.16	a	9-16-99	4.92	10

CREST-STAGE PARTIAL-RECORD STATIONS

271

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
GREAT EGG HARBOR RIVER BASIN								
Deep Run at U.S. Route 40, at Landisville, NJ (01411120)	Lat 39°30'41", long 74°55'15", Atlantic County, Hydrologic Unit 02040302, downstream left bank of culvert on U.S. Route 40, 0.2 mi upstream of Pennsylvania-Reading-Seashore railroad tracks, 0.3 mi southeast of Buena, 1.1 mi northwest of Pancoast Lake, and 1.3 mi southeast of Landisville. Drainage area is 0.33 mi ² .	1997-2000	3-22-00	2.59b	16	8-23-97	2.83b	20
Deep Run tributary at NJ Route 54, at Landisville, NJ (01411122)	Lat 39°31'20", long 74°55'13", Atlantic County, Hydrologic Unit 02040302, upstream right bank of culvert on State Route 54, 0.4 mi southwest of Pancoast Road, 0.6 mi southeast of Landisville, and 1.0 mi northeast of Pancoast Lake. Drainage area is 1.18 mi ² .	1997-2000	8-23-97 3-09-98 1-16-99 3-22-00	4.18 2.58 3.27 3.17	300r 40r 113r 100	8-23-97	4.18	300r
COHANSEY RIVER BASIN								
Vest Branch Cohansey River at Seeley, NJ (01412500)	Lat 39°29'06", long 75°15'33", Cumberland County, Hydrologic Unit 02040206, on right bank 15 ft upstream from bridge on County Highway 31 at Seeley, 450 ft upstream from mouth, and 4.1 mi northwest of Bridgeton. Datum of gage is 42.23 ft above sea level. Drainage area is 2.58 mi ² .	1952-67+, 1968-2000	3-22-00	3.33	132	6-20-83	11.17	885
DELAWARE RIVER BASIN								
White Brook tributary at Montague, NJ (01438520)	Lat 41°18'05", long 74°47'41", Sussex County, Hydrologic Unit 02040104, at culvert on County Route 521 just north of U.S. Route 206, 0.2 mi south of Montague, 0.4 mi east of Milford Toll Bridge, and 0.5 mi upstream of mouth. Datum of gage is 515 ft above sea level, from topographic map. Drainage area is 0.23 mi ² .	1999-2000	2-28-00	2.03t	a	2-28-00	2.03t	a
Paulins Kill tributary at Ross Corner, NJ (01443305)	Lat 41°07'02, long 74°42'39", Sussex County, Hydrologic Unit 02040105, at culvert on State Route 15, 0.1 mi southeast of Ross Corner, 2.0 mi northwest of Lafayette, and 0.2 mi upstream of mouth. Datum of gage is 500 ft above sea level, from topographic map. Drainage area is 0.35 mi ² .	1999-2000	9-16-99 8-13-00	5.28r 5.94	16 29	8-13-00	5.94	29
Pequest River at Huntsville, NJ (01445000)	Lat 40°58'52, long 74°46'36", Sussex County, Hydrologic Unit 02040105, on right bank, 20 ft upstream from highway bridge in Huntsville, and 0.4 mi downstream from East Branch. Datum of gage is 553.81 ft above sea level. Drainage area is 31.0 mi ² .	1940-62, 1963-95, 1999-2000	9-16-99 8-11-00	4.97 3.64	544 242	1-25-79	5.44	640
Lapahannock Creek at Ridge Road, at Roxburg, NJ (01446564)	Lat 40°46'06", long 75°06'11", Warren County, Hydrologic Unit 02040105, at bridge on Ridge Road, 0.2 mi south of unnamed pond and 0.8 mi east of County Route 519 at Roxburg. Drainage area is 0.86 mi ² .	1995-2000	6-12-00	4.84	90	1-19-96	8.10	285

CREST-STAGE PARTIAL-RECORD STATIONS

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
DELAWARE RIVER BASIN--Continued								
Pohatcong Creek tributary near Washington, NJ (01455130)	Lat 40°46'47", long 75°04'20", Warren County, Hydrologic Unit 02040105, at culvert on County Route 628 1.0 mi southwest of Karsville, 0.3 mi upstream of Pohatcong Creek, and 0.5 mi upstream of Willever Lake. Datum of gage is 530 ft above sea level, from topographic map. Drainage area is 0.55 mi ² .	1999-2000	6-12-00	2.25	a	9-16-99	3.32	a
Pohatcong Creek at New Village, NJ (01455200)	Lat 40°42'57", long 74°39'55", Warren County, Hydrologic Unit 02040105, at bridge on Edison Road, 0.4 mi southeast of New Village, and 4.3 mi upstream from Merrill Creek. Datum of gage is 308.32 mi above sea level. Drainage area is 33.3 mi ² .	1960-69, 1970-95, 1999-2000	9-16-99 8-11-00	6.29 3.25	2,150 500	1-25-79	8.10	3,570
Musconetcong River at outlet of Lake Hopatcong, NJ (01455500)	Lat 40°55'00", long 74°47'53", Morris County, Hydrologic Unit 02040105, on left bank just upstream from highway bridge, 300 ft downstream from Lake Hopatcong Dam in Landing. Datum of gage is 904.99 ft above sea level. Drainage area is 25.3 mi ² .	1929-75, 1976-95, 2000	8-13-00	10.74	1,900	8-13-00	10.74	1,900
Musconetcong River near Hackettstown, NJ (01456000)	Lat 40°53'17", long 75°58'33", Warren County, Hydrologic Unit 02040105, on right bank 75 ft upstream from Saxton Falls Dam, 0.5 mi upstream from CONRAIL railroad bridge, and 3.0 mi northeast of Hackettstown. Datum of gage is 630.93 ft above sea level. Drainage area is 68.9 mi ² .	1921-73, 1974-95, 2000	8-14-00	3.50	1,670	8-19-55	3.97d	2,170
Delaware River at Riegelsville, NJ (01457500)	Lat 40°35'36", long 75°11'17", Warren County, Hydrologic Unit 02040105, just upstream of suspension bridge at Riegelsville, 600 ft upstream from Musconetcong River (flow of which is included in the records for this station since Oct. 1, 1931). Datum of gage is 125.12 ft above sea level. Drainage area is 6,328 mi ² . Satellite stage telemetry at station.	1906-71†, 1972-2000	2-29-00 @ 1100	14.79	59,200	8-19-55	38.85	340,000
Delaware River tributary at Byram, NJ (01459010)	Lat 40°25'23", long 75°03'42", Hunterdon County, Hydrologic Unit 02040105, at culvert on State Route 29, south of Byram, 0.1 mi east of the Delaware River, and 0.9 mi north of Bulls Island. Datum of gage is 69.7 ft above sea level. Drainage area is 1.23 mi ² .	1945, 1955, 1995-2000	2-29-00	8.79	254	7-09-45 8-20-55	18.4 28.37k	2,900 a
Moores Creek tributary at Valley Road, near Lambertville, NJ (01462197)	Lat 40°20'12", long 74°54'59", Mercer County, Hydrologic Unit 02040105, at culvert on Valley Road, 2.3 mi south of Lambertville, 0.3 mi east of Belle Mountain, and 0.7 mi upstream of mouth. Drainage area is 0.73 mi ² .	1989, 1995-2000	6-12-00	1.73	136	8-15-89	--	1,150j

CREST-STAGE PARTIAL-RECORD STATIONS

273

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
DELAWARE RIVER BASIN--Continued								
Shabakunk Creek tributary at Texas Avenue, near Lawrenceville, NJ (01463812)	Lat 40°15'36", long 74°43'38", Mercer County, Hydrologic Unit 02040105, at bridge on Texas Avenue, just upstream of Lawrence Shopping Center, 2.6 mi south of Lawrenceville, 600 ft west of Brunswick Pike, and 0.2 mi north of Colonial Lake. Drainage area is 0.27 mi ² .	1995-2000	8-14-00	4.31b	415	9-16-99	5.13b	1,780
Stony Ford Brook at New Egypt, NJ (01464405)	Lat 40°04'21", long 74°31'00", Ocean County, Hydrologic Unit 02040201, at bridge on Lakewood Road, 0.7 mi northwest of New Egypt, and 0.9 mi upstream from mouth. Drainage area is 0.99 mi ² .	1979, 1995-2000	8-14-00	6.04	69	8-31-79	--	340
Doctors Creek at Clarksburg, NJ (01464510)	Lat 40°11'37", long 74°26'43", Monmouth County, Hydrologic Unit 02040201, at bridge on Coach Road (County Routes 524 and 571), 0.2 mi north of Clarksburg, 2.2 mi upstream of Red Valley Lake, and 2.4 mi southeast of Roosevelt. Datum of gage is 194 ft above sea level. Drainage area is 0.25 mi ² .	1999-2000	8-04-00	2.01	51	9-16-99	2.02	53
Crosswicks Creek tributary at U.S. Route 206, near Bordentown, NJ (01464524)	Lat 40°10'15", long 74°41'59", Burlington County, Hydrologic Unit 02040201, at culvert on U.S. Route 206, 0.4 mi south of Sylvan Glen, and 1.9 mi northeast of Bordentown. Drainage area is 0.43 mi ² .	1995-2000	8-04-00	1.70	37	9-16-99	3.64	90
Thorton Creek at Bordentown, NJ (01464525)	Lat 40°08'50", long 74°41'46", Burlington County, Hydrologic Unit 02040201, upstream side of abandoned dam, 50 ft upstream of Thorton Lane, 0.4 mi upstream of unnamed pond, 0.9 mi east of Bordentown post office, and 2.5 mi west of Crosswicks. Drainage area is 0.84 mi ² .	1976-77†, 1995-2000	8-04-00	2.12	89	9-16-99	4.21	213
Crafts Creek at Route 68, at Georgetown, NJ (01464533)	Lat 40°04'37", long 74°39'48", Burlington County, Hydrologic Unit 02040201, at culvert on State Route 68, 0.5 mi west of Georgetown, 0.7 mi downstream of unnamed pond, and 3.1 mi east of Columbus. Drainage area is 0.58 mi ² .	1995-2000	9-15-00	3.44	24	9-16-99	4.57	43
Crafts Creek at Columbus, NJ (01464538)	Lat 40°04'44", long 74°43'07", Burlington County, Hydrologic Unit 02040201, at bridge on Columbus-Mansfield Road, 0.4 mi north of Columbus, and 6.0 mi northeast of Mount Holly. Datum of gage is 33.71 ft above sea level. Drainage area is 5.38 mi ² .	1978-2000	9-15-00	4.77b	107	7-06-89	10.25b	880
Newton Creek at Collingswood, NJ (01467305)	Lat 39°54'30", long 75°03'13", Camden County, Hydrologic Unit 02040202, at bridge on Park Avenue in Westmont, 0.3 mi east of Cuthbert Avenue, and 1.0 mi east of Collingswood. Datum of gage is 18.74 ft above sea level. Drainage area is 1.33 mi ² .	1964-2000	9-04-00	3.61	177	7-14-94	6.82	328

CREST-STAGE PARTIAL-RECORD STATIONS

Maximum discharge at crest-stage partial-record stations (Continued)

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
DELAWARE RIVER BASIN--Continued								
South Branch Newton Creek at Haddon Heights, NJ (01467317)	Lat 39°52'45", long 75°04'26", Camden County, Hydrologic Unit 02040202, at bridge on 13th Avenue in Haddon Heights, and 2.6 mi south of Collingswood. Datum of gage is 23.34 ft above sea level. Drainage area is 0.63 mi ² .	1964-2000	9-04-00	2.85	110	9-01-78	4.62	295
Gravelly Run at Somerdale, NJ (01467357)	Lat 39°46'17", long 75°01'49", Camden County, Hydrologic Unit 02040202, upstream left bank at culvert, on Warwick Road in Somerdale 0.8 mi south of Evesham Road, 0.8 mi north of Sterling High School, and 1.2 mi upstream of mouth, where it feeds Otter Brook. Drainage area is 0.35 mi ² .	1997-2000	9-04-00	4.46	164	9-26-00	4.46	164
Bees Branch at Hurffville, NJ (01475017)	Lat 39°46'17", long 75°06'21", Gloucester County, Hydrologic Unit 02040202, upstream right bank at culvert, on State Route 47, 0.4 mi south of Barnsboro Road, 0.6 mi north of Hurffville, and 0.8 mi southwest of headwater at unnamed lake. Drainage area is 0.43 mi ² .	1997-2000	3-22-00	2.63	25	9-16-99	5.99	100
Plank Run at Glassboro, NJ (01475033)	Lat 39°42'54", long 75°08'25", Gloucester County, Hydrologic Unit 02040202, upstream right bank at culvert, on U.S. Route 322. 0.4 mi southwest of intersection with State Route 55, 0.6 mi west of Glassboro, and 0.7 mi south of Alcyon Lake. Datum of gage is 106.85 ft above mean sea level. Drainage area is 0.71 mi ² .	1997-2000	3-22-00	1.93	28	9-16-99	2.60	47
Miery Run near Ewan, NJ (01477102)	Lat 39°42'52", Long 75°11'41", Gloucester County, Hydrologic Unit 02040202, downstream left bank at culvert on County Route 623, 0.3 mi southeast of mouth of Raccoon Creek, 1.2 mi northwest of Ewan, and 1.5 mi southeast of intersection with U.S. Route 322. Drainage area is 0.73 mi ² .	1997-2000	3-22-00	1.95b	a	9-16-99	2.44b	91
Raccoon Creek tributary no. 3 near Mullica Hill, NJ (01477123)	Lat 39°44'47", long 75°16'05", Gloucester County, Hydrologic Unit 02040202, downstream left bank of culvert, on Mullica Hill Road, 0.3 mi upstream of mouth, 2.0 mi east of Swedesboro, and 2.3 mi northwest of Mullica Hill. Drainage area is 0.47 mi ² .	1997-2000	10-19-96 6-14-98 5-24-99 3-22-00	1.10b --- 1.33b .87b	16r 13r 21r 8.5	5-24-99	1.33b	21r

* Also a low-flow partial-record station.

† Operated as a continuous-record gaging station.

a Discharge not determined.

b Downstream side of bridge.

c Recorded at previous site.

d Not the maximum gage height for period of record.

f Determined at Squaw Lake Dam, 0.2 mi upstream of gage.

g Gage height (NGVD 1929) from previous site location approximately 150 ft upstream of current site.

h Peak gage height for the period was less than minimum recordable gage height indicated.

i Peak discharge for the period was less than the minimum recordable discharge.

j Determined at site 0.1 mi downstream (USGS station number 01462198, drainage area 0.80 mi²), adjusted for change in drainage area.

k Due to backwater from Delaware River.

m Due to backwater from Raritan River.

n Estimated.

p Elevation above mean sea level.

r Revised.

s Determined at Bradford Avenue, 0.2 mi downstream of gage, adjusted for change in drainage area.

t Due to backwater from debris and snow at upstream side of culvert.

u Due to backwater from debris pile-up at upstream side of culvert.

v Was probably exceeded by peak of May 24 when gage was out of operation.

w Peak gage height was less than 12.14 ft.

Low-flow partial-record stations

Measurements of streamflow in New Jersey made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 2000

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
HUDSON RIVER BASIN						
01367770	Wallkill River near Sussex, NJ	Lat 41°11'38", long 74°34'32", Sussex County, Hydrologic Unit 02020007, at bridge on Glenwood Road, 0.6 mi upstream from Papakating Creek, 1.7 mi southwest of Independence Corner, and 2.0 mi southeast of Sussex.	60.8	1977-82, 1985, 1987-2000	11-09-99	54
					5-18-00	76
					8-08-00	70
					9-25-00	53
01367800	Papakating Creek at Pelletstown, NJ	Lat 41°09'45", long 74°40'31", Sussex County, Hydrologic Unit 02020007, at bridge on County Route 565 in Pelletstown, and 4.5 miles above West Branch.	15.8	1959-64, 1999-2000	11-09-99	7.8
					5-18-00	13
					8-08-00	17
HACKENSACK RIVER BASIN						
01378385	Tenakill Brook at Closter, NJ	Lat 40°58'29", long 73°58'06", Bergen County, Hydrologic Unit 02030103, at bridge on High Street in Closter, 0.7 mi upstream from mouth, and 2.7 mi downstream from former crest-stage gage on Madison Avenue in Cresskill.	8.56	1964-72, 1990, 1993, 2000	2-08-00	7.3
01378560	Coles Brook at Hackensack, NJ	Lat 40°44'55", long 74°20'14", Bergen County, Hydrologic Unit 02030103, at bridge on Main Street in Hackensack, 0.8 miles upstream from mouth and 1.9 miles northwest of Teaneck.	7.00	1965-72, 1999-2000	11-03-99	7.3
					2-23-00	6.5
					5-02-00	5.1
					8-23-00	2.6
PASSAIC RIVER BASIN						
01379200	Dead River near Millington, NJ	Lat 40°38'56", long 74°31'26", Morris County, Hydrologic Unit 02030103, at bridge on King George Road (Spur County Route 527), 100 feet upstream from mouth, 2.0 miles south of Millington, and 4.2 miles south of Basking Ridge.	20.8	1961-67, 1973-75, 1986-89, 1999-2000	5-08-00	15
					8-10-00	12
01379525	Canoe Brook near Millburn, NJ	Lat 40°44'55", long 74°20'14", Essex County, Hydrologic Unit 02030103, at bridge on Parsonage Hill Road, 0.2 mi downstream from Taylor Lake, 1.0 mi upstream from New Jersey-American Water Company pumping station, and 1.4 mi northwest of Millburn.	10.2	1989-2000	9-07-00	1.7
01381550	Malapardis Brook at Whippany, NJ	Lat 40°49'22", long 74°25'08", Morris County, Hydrologic Unit 02030103, at bridge on Parsippany Road at Whippany, 400 ft upstream from mouth, and 2.2 mi south of Parsippany.	5.07	1989-2000	9-07-00	3.0
01382450	Macopin River at Macopin Reservoir, NJ	Lat 41°01'33", long 74°24'31", Passaic County, Hydrologic Unit 02030103, at bridge on northbound lane of State Route 23, 4.0 miles northwest of its intersection with County Route 511 at west edge of Butler.	5.25	1970-73, 1999-2000	11-03-99	25
					3-01-00	22
					5-15-00	18
					8-10-00	7.0
01387490	Masonicus Brook at West Mahwah, NJ	Lat 41°05'53", long 74°08'57", Bergen County, Hydrologic Unit 02030103, at bridge on Eastview Avenue, at West Mahwah, 0.3 mi downstream from Winters Pond and 0.4 mi upstream from mouth.	3.84	1982-83, 1992-2000	8-28-00	4.4

Discharge measurements made at low-flow partial-record stations during water year 2000

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
PASSAIC RIVER BASIN--Continued						
01389100	Singac Brook at Singac, NJ	Lat 40°53'37", long 74°15'57", Passaic County, Hydrologic Unit 02030103, at bridge on Fairfield Road, between Interstate 80 and U.S. Route 46, 60 ft upstream from mouth, 1.2 mi northwest of Singac, and 1.8 mi northwest of Little Falls.	11.1	1963-67, 1983-84, 1986-2000	3-23-00	29
01389110	Passaic River at Route 46, at Singac, NJ	Lat 40°53'32", long 74°15'58", Passaic County, Hydrologic Unit 02030103 at bridge on U.S. Route 46 at Singac, and 0.6 mi downstream from Pompton River.	745	1996-2000	3-23-00	1,500
01389534	Peckman River at Ozone Avenue, at Verona, NJ	Lat 40°50'42", long 74°14'09", Passaic County, Hydrologic Unit 02030103, at bridge on Ozone Avenue in Verona, 1.0 mi southwest of Cedar Grove Reservoir, and 4.0 mi west of Clifton.	4.45	1998-2000	9-18-00 9-26-00	4.5 5.7
01389765	Molly Ann Brook at North Haledon, NJ	Lat 40°57'11", long 74°11'07", Passaic County, Hydrologic Unit 02030103, Overlook Avenue in North Haledon, 0.5 mi upstream from Oldham Pond Dam, and 1.5 mi west of Hawthorne.	3.89	1998-2000	9-26-00	2.8
01390900	Ramsey Brook at Allendale, NJ	Lat 41°01'44", long 74°08'07", Bergen County, Hydrologic Unit 02030103, at bridge on Brookside Avenue in Allendale and 0.6 mi upstream from Hohokus Brook.	2.55	1998-2000	8-28-00	11
RAHWAY RIVER BASIN						
01393890	East Branch Rahway River at Maplewood, NJ	Lat 40°44'06", long 74°16'14", Essex County, Hydrologic Unit 02030104, on bridge on Jefferson Avenue in Maplewood, 1,100 ft west of Fielding School, and 2.5 mi upstream of confluence of West Branch River and East Branch Rahway River.	5.11	1998-2000	12-01-99 5-19-00 9-07-00	3.2 44 3.4
01394000	West Branch Rahway River at Millburn, NJ	Lat 40°43'51", long 74°18'26", Essex County, Hydrologic Unit 02030104, on left bank 100 ft upstream from Diamond Mill Pond Dam, 1,000 ft upstream from Glen Avenue in Millburn, and 1.9 mi upstream from confluence with East Branch.	7.10	1939-50a, 1998-2000	12-01-99 5-19-00 9-07-00	3.7 62 1.6
01394400	Van Winkle Brook at Springfield, NJ	Lat 40°42'12", long 74°18'15", Union County, Hydrologic Unit 02030104, at railroad bridge in Springfield, 0.4 mi upstream from bridge on Mountain Avenue, and 2.3 mi west of Union.	4.85	1989-2000	9-18-00	.86
01394600	Nomahegan Brook near Mountainside, NJ	Lat 40°40'42", long 74°19'54", Union County, Hydrologic Unit 02030104, at bridge on Springfield Avenue, 0.2 mi downstream from Echo Lake, 1.1 mi upstream from mouth, and 1.4 mi northeast of Mountainside.	3.76	1989-2000	9-18-00	1.7
RARITAN RIVER BASIN						
01396240	Electric Brook at Long Valley, NJ	Lat 40°47'23", long 74°46'36", Morris County, Hydrologic Unit 02030105, at bridge on Fairview Avenue at Long Valley, 0.3 mi upstream from mouth, and 0.8 mi downstream from Camp Washington Pond	3.17	1991-2000	9-06-00	.83
01399190	Lamington (Black) River at Succasunna, NJ	Lat 40°51'03", long 74°38'02", Morris County, Hydrologic Unit 02030105, bridge on Righter Road, 0.4 mi upstream from Succasunna Brook, and 0.7 mi south of Succasunna.	7.37	1977-87a, 1988-2000	5-16-00 7-05-00 9-07-00	5.9 5.5 4.3

Discharge measurements made at low-flow partial-record stations during water year 2000

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
RARITAN RIVER BASIN--Continued						
01399200	Lamington (Black) River near Ironia, NJ	Lat 40°50'07", long 74°38'40", Morris County, Hydrologic Unit 02030105, at bridge on Ironia Road, 1.0 mi downstream from Succasunna Brook, and 1.3 mi northwest of Ironia.	10.9	1964-72, 1976-87a, 1988-2000	5-16-00	8.8
					7-05-00	9.7
					9-06-00	7.3
01399295	Tanners Brook near Milltown, NJ	Lat 40°47'17", long 74°43'33", Morris County, Hydrologic Unit 02030105, at bridge on Tanners Brook Road, 0.2 mi upstream from mouth, 0.6 mi north of Milltown, and 1.5 mi west of Chester.	2.78	1991-2000	9-06-00	1.8
01399300	Lamington River at Milltown, NJ	Lat 40°47'13", long 74°43'13", Morris County, Hydrologic Unit 02030105, at bridge on New Furnace Road, 0.1 mi downstream from Tanners Brook, and 0.6 mi north of Milltown.	23.2	1988-2000	9-06-00	8.5
01400640	Millstone River near Grovers Mill, NJ	Lat 40°18'48", long 74°35'22", Mercer County, Hydrologic Unit 02030105, at bridge on Cranbury Neck Road, 1.0 mi east of Grovers Mill, 1.8 mi upstream from Cranbury Brook, and 1.8 mi east of Princeton Junction.	42.6	1959-65, 1971, 1986-87, 1992-93, 1995, 1998-2000	11-30-99	22
					3-21-00	74
					6-20-00	31
					8-22-00	28
01401400	Heathcote Brook at Kingston, NJ	Lat 40°22'10", long 74°36'59", Middlesex County, Hydrologic Unit 02030105, at bridge on Mapleton Road, at abandoned railroad bridge, 0.3 mi south of Kingston, and 0.4 mi upstream from mouth.	9.00	1971-72, 1979-84, 1989-92, 1998-2000	11-23-99	1.8
					3-21-00	13
					6-20-00	5.2
POLLY POND BROOK BASIN						
01407780	Polly Pond Brook at South Belmar, NJ	Lat 40°10'00", long 74°01'41", Monmouth County, Hydrologic Unit 02030104, at culvert on F Street at South Belmar, 50 ft upstream from Lake Como, and 0.6 mi upstream from mouth.	.99	1989-2000	9-08-00	.48
WRECK POND BROOK BASIN						
01407806	Hannabrand Brook at Old Mill Road, near Spring Lake Heights, NJ	Lat 40°06'35", long 74°13'10", Monmouth County, Hydrologic Unit 02030104, at highway bridge on U.S. Route 9, 0.3 mile north of County Line Road in Lakewood, and 3.6 miles above Muddy Ford Brook.	3.13	1989-2000	9-08-00	3.6
METEDECONK RIVER BASIN						
01408100	North Branch Metedeconk River at Lakewood, NJ	Lat 40°06'35", long 74°13'10", Ocean County, Hydrologic Unit 02040301, at highway bridge on U.S. Route 9, 0.3 mi north of County Line Road in Lakewood, and 3.6 mi upstream from Muddy Ford Brook.	19.4	1959-63, 1966, 1999-2000	11-08-99	17
					2-09-00	20
					5-03-00	17
					8-07-00	30
TOMS RIVER BASIN						
01408592	Wrangel Brook at Mule Road, near Toms River, NJ	Lat 39°57'39", long 74°13'42", Ocean County, Hydrologic Unit 02040301, at bridge on Mule Road in Berkeley Township, 0.5 mi upstream from mouth, and 1.7 mi west of Toms River.	19.5	1993-2000	9-11-00	22
01408728	Long Swamp Creek at Toms River, NJ	Lat 39°57'14", long 74°11'19", Ocean County, Hydrologic Unit 02040301, at bridge on Washington Street in Dover Township at Toms River, and 0.3 mi upstream from mouth.	6.53	1994-2000	10-08-99	.79
					11-24-99	.38
					3-08-00	.67
					3-11-00	10
					3-11-00 7-27-00	18 5.1

Discharge measurements made at low-flow partial-record stations during water year 2000

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
MULLICA RIVER BASIN						
01409375	Mullica River near Atco, NJ	Lat 39°47'08", long 74°51'38", Camden County, Hydrologic Unit 02040301, on left bank of small lake 50 ft downstream from bridge on Jackson-Medford Road, 0.7 mi north of intersection of County Route 534 with Jackson-Medford Road, and 1.6 mi east of Atco.	3.22	1974-85b, 1991-2000	11-02-99 2-24-00 6-27-00 9-12-00	.60 2.1 .21 .97
01409387	Mullica River at outlet of Atsion Lake, at Atsion, NJ	Lat 39°44'25", long 74°43'37", Burlington County, Hydrologic Unit 20240301, at bridge on U.S. Route 206 in Atsion, at outlet of Atsion Lake, and 0.2 mi upstream from Wesickaman Creek.	26.7	1980-81, 1985-89, 2000	11-15-99 2-09-00 5-02-00 8-17-00	30 32 2.3 58
01409401	Hays Mill Creek at Atco, NJ	Lat 39°45'32", long 74°53'02", Camden County, Hydrologic Unit 02040301, at bridge on U.S. Route 30, at outlet of Atco Lake in Atco, and 3.3 mi southeast of Berlin.	3.80	1979, 1991-2000	11-02-99 2-24-00 6-27-00 9-12-00	.68 2.2 2.3 1.6
01409402	Hays Mill Creek near Chesilhurst, NJ	Lat 39°45'02", long 74°50'28", Camden County, Hydrologic Unit 02040301, at bridge on Tremont Avenue in Wharton State Forest, 0.3 mi northeast of Burnt Mill Road and 2.0 mi northeast of Chesilhurst.	7.13	1974-77b, 1991-2000	11-02-99 2-24-00 6-27-00 9-12-00	6.0 11 6.1 5.4
0140940250	Cooper Branch near Chesilhurst, NJ	Lat 39°44'44", long 74°50'25", Camden County, Hydrologic Unit 02040301, at bridge on Brurnt Mill Road, 700 ft upstream from mouth, 1.6 mi northeast of Waterford Works and 2.8 mi southeast of Atco	1.93	1991-2000	11-02-99 2-24-00 6-27-00 9-12-00	0.001 4.0 .23 .54
0140940310	Wildcat Branch near Chesilhurst, NJ	Lat 39°44'20", long 74°49'58", Camden County, Hydrologic Unit 02040301, at bridge on Burnt Mill Road, 0.1 mi downstream from outlet of Beaverdam Lake, 1.4 mi northeast of Waterford Works, and 1.9 mi east of Chesilhurst.	2.27	1991-2000	11-02-99 2-24-00 6-27-00 9-12-00	3.2 3.1 1.1 1.1
0140940365	Sleeper Branch Diversion (Saltars Ditch) near Atsion, NJ	Lat 39°43'48", long 74°46'09", Camden County, Hydrologic Unit 02040301, at bridge on Burnt House Road, 600 ft downstream from Sleeper Branch, and 2.3 mi west of Atsion.	---	1991-2000	11-02-99 2-24-00 6-27-00 9-12-00	14 7.5 0 0
0140940370	Sleeper Branch near Atsion, NJ	Lat 39°43'42", long 74°46'12", Camden County, Hydrologic Unit 02040301, at bridge on Burnt House Road, 500 ft downstream from Sleeper Branch Diversion (Saltars Ditch) and 2.3 mi west of Atsion.	16.1	1991-2000	11-02-99 2-24-00 6-27-00 9-12-00	13 20 11 9.1
0140940480	Clark Branch near Atsion, NJ	Lat 39°42'53", long 74°46'25", Camden County, Hydrologic Unit 02040301, at abandoned railroad bridge, 0.2 mi downstream from Price Branch and 2.8 mi west of Atsion.	6.42	1991-2000	11-02-99 2-24-00 6-27-00 9-12-00	3.0 7.0 1.8 .37
01409408	Pump Branch near Waterford Works, NJ	Lat 39°41'59", long 74°50'40", Camden County, Hydrologic Unit 02040301, at bridge on Old Whitehorse Pike, 0.5 mi downstream from lake at Camp Ha-Lu-Wa-Sa, and 1.6 mi south of Waterford Works.	9.78	1991-2000	11-02-99 2-20-00 6-27-00 9-12-00	6.4 1.2 7.7 7 8
0140940950	Blue Anchor Brook at Elm, NJ	Lat 39°40'11", long 74°50'06", Camden County, Hydrologic Unit 02040301, at bridge on U.S. Route 30 (Whitehorse Pike) at Elm, at outlet of unnamed lake, and 1.4 mi upstream from confluence with Pump Branch.	4.86	1991-2000	11-02-99 11-17-99 2-07-00 2-24-00 5-02-00 6-27-00 8-15-00 9-12-00	2.4 1.7 1.9 3.5 3.8 4.7 6.0 1.9

Discharge measurements made at low-flow partial-record stations during water year 2000

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
MULLICA RIVER BASIN--Continued						
0140940970	Albertson Branch near Elm, NJ	Lat 39°41'34", long 74°48'24", Camden County, Hydrologic Unit 02040301, at bridge on Fleming Pike, 0.4 mi downstream from confluence of Blue Anchor Brook and Pump Branch, and 1.6 mi northeast of Elm.	17.1	1991-2000	11-02-99	17
					2-20-00	18
					6-27-00	20
					9-12-00	13
0140941050	Great Swamp Branch at Elm, NJ	Lat 39°40'18", long 74°49'33", Camden County, Hydrologic Unit 02040301, at bridge on U.S. Route 30, 0.5 mi southeast of Elm, 1.5 mi north of Rosedale, and 2.4 mi northeast of Winslow.	2.83	1991-2000	11-02-99	.43
					2-20-00	1.3
					6-27-00	.44
					9-12-00	.45
FISHING CREEK BASIN						
01411400	Fishing Creek at Rio Grande, NJ	Lat 39°01'39", long 74°53'48" Cape May County, Hydrologic Unit 02040206, at bridge on State Route 47, at Wildwood pumping station and 1.4 miles northwest of Rio Grande.	2.29	1965-72, 1990-92, 1999-2000	11-30-99	4.8
					2-15-00	.78
					5-05-00	1.5
					5-11-00	.86
					8-23-00	1.1
DELAWARE RIVER BASIN						
01443510	Blairs Creek at Blairstown, NJ	Lat 40°59'12", long 74°57'35" Warren County, Hydrologic Unit 02040105, at bridge on Mill Brook Road, at Blairstown, 300 ft upstream from Blair Lake, 0.4 mi upstream from mouth, and 1.2 mi east of Jacksonburg.	13.1	1989-2000	12-07-98	3.7d
					8-04-99	.74d
					9-25-00	4.3
01445490	Furnace Brook at Oxford, NJ	Lat 40°48'15", long 74°59'42" Warren County, Hydrologic Unit 02040105, at bridge on State Route 31 in Oxford, 2.4 mi upstream from mouth, and 3.2 mi north of Washington.	4.29	1965-69b, 1971-72b, 1994-2000	12-07-98	2.0d
					8-04-99	.82d
					9-25-00	2.5
01445520	Mountain Lake Brook near Pequest, NJ	Lat 40°51'11", long 74°59'09", Warren County, Hydrologic Unit 02040105, at bridge on Lake Drive South, at outlet of Mountain Lake, 1.5 mi north of Pequest and 1.7 mi upstream from mouth.	4.35	1991-2000	8-28-00	1.3
01446520	Pophandusing Brook at Belvidere, NJ	Lat 40°49'14", long 75°04'37", Warren County, Hydrologic Unit 02040105, at bridge on Knowlton Street at Belvidere, 0.5 mi upstream from mouth, and 1.8 mi west of Hazen.	5.36	1991-2000	12-07-99	.61d
					9-25-00	.57
01446568	Buckhorn Creek at Hutchinson Road, at Hutchinson, NJ	Lat 40°46'18", long 75°07'53", Warren County, Hydrologic Unit 02040105, at bridge on Hutchinson Road at Hutchinson, 50 ft upstream from unnamed tributary, and 800 ft upstream from mouth.	8.38	1991-2000	9-25-00	1.8
01455100	Lopatcong Creek at Phillipsburg, NJ	Lat 40°40'38", long 75°10'13", Warren County, Hydrologic Unit 02040105, at bridge on Alternate U.S. Route 22 in Phillipsburg, 100 ft upstream from railroad bridge of CONRAIL, and 3,000 ft above mouth.	14.2	1958-64, 1991-2000	8-28-00	7.1
01456080	Mine Brook near Hackettstown, NJ	Lat 40°49'58", long 74°49'23", Morris County, Hydrologic Unit 02040105, at bridge on County Route 517 (Schooleys Mountain Road), 600 ft upstream from mouth, and 1.0 mi south of Hackettstown.	4.96	1991-2000	8-28-00	.90
01456210	Hances Brook near Beattystown, NJ	Lat 40°48'17", long 74°51'38", Warren County, Hydrologic Unit 02040105, at bridge on State Route 57, 600 ft upstream from mouth, and 1.1 mi southwest of Beattystown.	4.13	1991-2000	9-06-00	2.1

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 2000

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
DELAWARE RIVER BASIN--Continued						
01461900	Alexauken Creek near Lambertville, NJ	Lat 40°22'51", long 74°56'54", Hunterdon County, Hydrologic Unit 02040105, at bridge on State Route 29, 0.4 mi upstream from mouth, and 1.1 mi north of Lambertville.	38.3	1959-63, 1976-82, 2000	5-30-00 9-11-00	9.0 2.0
01462800	Jacobs Creek at Somerset, NJ	Lat 40°16'42", long 74°51'14", Mercer County, Hydrologic Unit 02040105, at bridge on State Route 29, 400 ft upstream from mouth, 0.3 mi north of Somerset, and 1.4 mi south of Washington Crossing Road.	13.3	1958-62, 1964, 1985-88, 2000	5-30-00 9-12-00	8.2 1.8
01464515	Doctors Creek at Allentown, NJ	Lat 40°10'37", long 74°35'57", Monmouth County, Hydrologic Unit 02040201, at bridge on Breza Road, 0.8 miles west of Allentown and 0.8 miles downstream from Conines Mill Pond.	17.2	1966, 1968-72, 1991-92, 1999-2000	11-08-99 2-09-00 5-01-00 8-09-00	13 16 14 14
01467330	South Branch Big Timber Creek at Blackwood, NJ	Lat 39°48'17", long 75°04'33" Camden County, Hydrologic Unit 02040202, at bridge on Lower Landing Road at Blackwood, 3.1 mi southwest of Lindenwold and 3.0 mi from mouth.	19.1	1964-72, 1994-2000	1-13-00	23
01477130	Basgalore Creek at Russell Mill Road, near Swedesboro, NJ	Lat 39°44'14", long 75°17'00" Gloucester County, Hydrologic Unit 02040202, at bridge on Russell Mill Road, 0.8 mi above mouth, and 1.7 mi east-southeast of Swedesboro.	3.30	1957c, 1966c, 1994-2000	9-18-00	2.9
01482510	Nichomus Run near Woodstown, NJ	Lat 39°38'22", long 75°20'59" Salem County, Hydrologic Unit 02040206, at bridge on State Route 45, 1.4 mi southwest of Woodstown, and 1.7 mi above mouth.	3.76	1966-74, 1994-2000	9-18-00	.38

* Active crest-stage partial-record station.

a Operated as a continuous-record gaging station by U.S. Geological Survey.

b Operated as a crest-stage partial-record station.

c Published as Raccoon Creek tributary.

d Not previously published.

e Estimated.

DISCHARGE MEASUREMENTS AT MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations are given in the following table.

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
HUDSON RIVER BASIN						
01367625 Wallkill River	Rondout Creek	Lat 41°02'20", long 74°37'48", Sussex County, Hydrologic Unit 02020007, 0.4 mi north- east of Sparta, 1.2 mi downstream from out- let of Lake Mohawk, and 1.8 mi east of Fox Hollow Lake.	5.88	1998-99	11-09-99	18
					2-23-00	15
					5-18-00	7.5
					8-08-00	8.6
01367633 Glen Brook	Wallkill River	Lat 41°02'16", long 74°36'47", Sussex County, Hydrologic Unit 02020007, 0.3 mi down- stream of Glen Lake, 1.3 mi east of Sparta, and 3.2 mi south of Ogdensburg.	3.68	---	8-12-00	2,520 *
01368820 Double Kill	Wawayanda Creek	Lat 41°11'13", long 74°25'13", Sussex County, Hydrologic Unit 02020007, 0.4 mi down- stream from Wawayanda Lake, 3.5 mi east of Vernon, and 4.6 mi upstream from Wawayanda Creek.	6.46	1998-99	11-09-99	9.3
					3-01-00	46
					5-18-00	7.6
					8-08-00	16
PASSAIC RIVER BASIN						
01378780 Primrose Brook	Great Brook	Lat 40°45'54", long 74°31'48", Morris County, Hydrologic Unit 02030103, at bridge on Camp Trail Road in Morristown National Historic Park, 20 ft downstream from unnamed tributary, 500 ft west of Mount Kemble, and 2.4 mi northeast of Bernards- ville.	1.07	1998-99	11-09-99	.55
					3-02-00	1.8
					5-17-00	1.2
					8-07-00	.69
01379530 Canoe Brook	Passaic River	Lat 40°44'41", long 74°21'04" (revised), Essex County, Hydrologic Unit 02030103, just downstream of New Jersey-American Water Company pumping station, 0.5 mi upstream of mouth, and 2.0 mi north of Summit	11.0	1933-60b, 1961-99c	11-05-99	8.8
					3-03-00	5.1
					4-11-00	4.5
					5-24-00	57
					7-14-00	.28
					9-01-00	1.2
01379630 Russia Brook Tributary	Russia Brook	Lat 41°01'09", long 74°32'17", Morris County, Hydrologic Unit 02030103, on left bank 500 ft from confluence with Russia Brook, 0.2 mi southwest of Milton, and 1.4 mi upstream from Lake Swannanoa.	2.51	1969-71a, 1987	8-12-00	650 *
01380100 Beaver Brook	Rockaway River	Lat 40°54'08", long 74°30'06", Morris County, Hydrologic Unit 02030103, at bridge on Gill Avenue at Rockaway, and 0.2 mi upstream from mouth.	22.2	1963, 1984-86, 1999	11-03-99	103
					5-02-00	30
					8-07-00	27
01381200 Rockaway River	Passaic River	Lat 40°51'29", long 74°20'53", Morris County, Hydrologic Unit 02030103, at bridge on U.S. Route 46, 0.9 mi west of Pine Brook, and 1.1 mi upstream of Whippany River.	136	1963-73, 1979-81, 1983-97	3-23-00	267
01387450 Mahwah River	Ramapo River	Lat 41°08'27", long 74°07'01", Rockland County, NY, Hydrologic Unit 02030103, at bridge on U.S. Highway 202, 2.5 mi north- east of Suffern, and 4.8 mi upstream from mouth.	12.3	1958-95a, 1999	3-13-00	38
					4-03-00	26
					7-11-00	3.8
01387480 Mahwah River	Ramapo River	Lat 41°06'54", long 74°08'46", Rockland County, NY, Hydrologic Unit 02030103, on right bank at bridge on State Highway 59 (Lafayette Boulevard) at Suffern, and 1.0 mi upstream from mouth.	20.8	1959-62, 1982, 1998-99	11-24-99	24
					2-18-00	34
					4-03-00	33
					7-11-00	3.9

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
PASSAIC RIVER BASIN--Continued						
01387890 Ramapo River	Pompton River	Lat 41°01'40", long 74°15'00", Bergen County, Hydrologic Unit 02030103, at Interstate 287 bridge, 0.5 mi downstream of mouth of Pond Brook, and 0.7 mi west of Oakland.	143	1998-99	10-01-99	372
					11-24-99	116
					1-19-00	138
					2-17-00	413
					4-05-00	407
					5-25-00	450
					7-10-00	50
8-22-00	118					
01389005 Passaic River	Newark Bay	Lat 40°53'47", long 74°16'10", Passaic County, Hydrologic Unit 02030103, in Two Bridges, 400 ft downstream from the Pomp- ton River.	734	1991, 1996-99	7-14-00	147
01389862 Henderson Brook	Passaic River	Lat 40°56'52", long 74°07'30", Bergen County, Hydrologic Unit 02030103, at Conrail rail- road bridge in Fair Lawn, 2.3 mi southwest of Ridgewood, 2.6 mi west of Paramus.	.44	---	9-07-00	.78
01389863 Henderson Brook	Passaic River	Lat 40°56'48", long 74°07'48", Bergen County, Hydrologic Unit 02030103, 100 ft upstream of Pullitts Drive in Fair Lawn, 0.7 mi south of Glen Rock, 1.0 mi upstream from mouth, and 2.4 mi northwest of Prospect Park.	.57	---	9-07-00	1.1
01389865 Henderson Brook	Passaic River	Lat 40°56'24", long 74°07'34", Bergen County, Hydrologic Unit 02030103, 50 ft down- stream from bridge on River Road, 1.2 mi southeast of Hawthorne, 1.6 mi east of Prospect Park.	1.25	---	9-07-00	2.3
01389873 Lyncrest Brook	Passaic River	Lat 40°55'24", long 74°07'51", Bergen County, Hydrologic Unit 02030103, at bridge on River Road, 0.7 mi north of Elmwood Park, and 2.4 mi southeast of Prospect Park.	.45	---	9-07-00	.08
01391109 Jordan Brook	Saddle River	Lat 40°56'53", long 74°06'14", Bergen County, Hydrologic Unit 02030103, at bridge on Saddle River Road, 0.1 mi upstream of mouth, 0.9 mi northeast of Fair Lawn, and 1.1 mi southeast of Glen Rock.	1.05	---	9-07-00	.38
01391200 Saddle River	Passaic River	Lat 40°56'30", long 74°05'36", Bergen County, Hydrologic Unit 02030103, at bridge on Century Road, at Fair Lawn, and 0.8 mi downstream of Hohokus Brook.	45.2	1978, 1981, 1983, 1986-89	3-22-00	84
01391250 Beaver Dam Brook	Saddle River	Lat 40°55'47", long 74°05'44", Bergen County, Hydrologic Unit 02030103, at bridge on Saddle River Road, 800 ft upstream of mouth, 0.5 mi northwest of Arcola, and 1.0 mi southeast of Fair Lawn.	.74	---	9-07-00	.12
RAHWAY RIVER BASIN						
01396018 South Branch Rahway River	Rahway River	Lat 40°34'03", long 74°19'25", Middlesex County, Hydrologic Unit 02030104, 0.5 mi south of Iselin, 0.8 mi upstream of bridge on Green Street, and 4.8 mi upstream of mouth.	6.02	---	10-13-99	2.5
					2-23-00	6.6
					5-03-00	2.8
					8-17-00	3.7
01396024 South Branch Rahway River	Rahway River	Lat 40°34'41", long 74°18'24", Middlesex County, Hydrologic Unit 02030104, 0.3 mi northwest of Colonia, 0.6 mi upstream of bridge on Dover Road, and 3.2 mi upstream of mouth.	8.08	---	10-13-99	2.5
					2-23-00	6.6
					5-03-00	3.2
					8-17-00	4.4
01396027 South Branch Rahway River tributary	South Branch Rahway River	Lat 40°34'42", long 74°18'24", Middlesex County, Hydrologic Unit 02030104, 50 upstream of mouth, 0.4 mi downstream of bridge on Lincoln Highway, and 0.4 mi northwest of Colonia.	.95	---	10-13-99	.33
					2-23-00	1.4
					5-03-00	.52
					8-17-00	.56

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
RAHWAY RIVER BASIN--Continued						
01396028 South Branch Rahway River	Rahway River	Lat 40°34'44", long 74°18'20", Middlesex County, Hydrologic Unit 02030104, 0.3 mi northwest of Colonia, 0.4 mi upstream of bridge on Dover Road, and 0.3 mi upstream of mouth	9.05	---	10-13-99	3.0
					2-23-00	8.9
					5-03-00	3.6
					8-17-00	5.5
01096029 South Branch Rahway River	Rahway River	Lat 40°34'49", long 74°18'12", Middlesex County, Hydrologic Unit 02030104, 0.3 mi upstream of bridge on Dover Road, 0.3 mi north of Colonia, and 2.8 mi upstream of mouth.	9.13	---	10-13-99	4.0
					2-23-00	8.4
					5-03-00	3.3
					8-17-00	6.3
RARITAN RIVER BASIN						
01396180 Drakes Brook	South Branch Raritan River	Lat 40°48'43", long 74°43'45", Morris County County, Hydrologic Unit 02030105, at bridge on Bartley Road, 0.3 mi upstream from mouth, 0.9 mi southwest of Bartley and 2.5 mi northwest of Chester.	16.6	1963-1969, 1971-1973, 1975, 1988-1990	11-29-99	18
					1-03-00	8.8
01396550 Spruce Run	South Branch Raritan River	Lat 40°43'29", long 74°54'34", Hunderdon County, Hydrologic Unit 02030105, at bridge on Newport Road, 1.2 mi northwest of Woodglen, and 6.4 mi upstream from Spruce Run Reservoir.	15.5	1998-99	11-04-99	9.3
					2-17-00	18
					5-08-00	7.3
					8-21-00	3.1
01398102 South Branch Raritan River	Raritan River	Lat 40°32'48", long 74°41'48", Somerset County, Hydrologic Unit 02030105, at bridge on Studdiford Drive at South Branch, 0.8 mi upstream from mouth, and 2.7 mi southeast of Readington.	265	1976-83, 1998-99	11-08-99	156
0140059950 Rocky Brook	Millstone River	Lat 40°16'50", long 74°32'12", Mercer County, Hydrologic Unit 02040105, 0.4 mi down- stream of bridge on U.S. Route 130, 0.7 mi upstream of mouth, and 1.2 miles west of Locust Corner.	---	---	5-10-00	10
01403385 Bound Brook	Raritan River	Lat 40°34'51", long 74°29'58", Middlesex County, Hydrologic Unit 02040105, at bridge on State Route 28, 0.3 mi upstream from Green Brook, 0.9 mi northeast of Mid- dlesex, 2.4 mi west of the intersection of State Route 28 and Washington Avenue in Dunellen.	23.9	1998-99	11-03-99	81
					2-17-00	24
					5-08-00	8.5
					8-10-00	12
01404302 Lawrence Brook	Raritan River	Lat 40°24'58", long 74°29'38", Middlesex County, Hydrologic Unit 02030105, at bridge on Davidson Mill Road, 1,000 ft upstream of Oakeys Brook, 1.0 mi south- west of Patricks Corner, 1.5 mi west of Paulas Corners, and 2.3 mi south of Adams.	12.4	1979-81	7-06-00	0
01405010 Sawmill Brook	Lawrence Brook	Lat 40°26'02", long 74°24'02", Middlesex County, Hydrologic Unit 02030105, at intersection of State Road 535 and Merrill Road at entrance to East Brunswick High School, 0.2 mi north of St. Mary Cemetery, and 1.3 mi northwest of Duhernal Lake.	---	1998-99	11-19-99	0
					3-01-00	0
					3-17-00	3.2
					3-26-00	0
01405150 Milford Brook	McGellairds Brook	Lat 40°20'04", long 74°16'10", Monmouth County, Hydrologic Unit 02040105, 0.5 mi upstream of bridge on State Route 18, 0.5 mi northwest of Herberts Corner, and 1.3 mi upstream of mouth.	.27	---	5-04-00	.17

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
RARITAN RIVER BASIN--Continued						
01405340 Manalapan Brook	South River	Lat 40°17'46", long 74°23'53", Middlesex County, Hydrologic Unit 02030105, at bridge on Federal Road, 2.0 mi west of Englishtown, 2.6 mi north of Manalapan, and 3.0 mi downstream from Still House Brook.	20.9	1969,1971, 1979-80, 1986-96, 1998-99	11-22-99 2-22-00 5-11-00 7-06-00 8-09-00	14 41 24 7.6 20
01405435 Cedar Brook	Manalapan Brook	Lat 40°23'26", long 74°23'31", Middlesex County, Hydrologic Unit 02030105, 50 ft upstream from mouth in Spotswood, and 4.3 mi south of South River.	3.85	1943, 1949-50, 1957-87d, 1987, 1989-91, 1993-98	7-06-00 7-20-00 9-06-00	1.6 2.0 6.8
01406040 Deep Run	South River	Lat 40°24'34", long 74°20'47", Middlesex County, Hydrologic Unit 02040105, at bridge on Matawan-Old Bridge Road, 1.1 mi east of Old Bridge, and 1.7 mi upstream of South River.	15.6	---	3-06-00	6.1
01406050 Deep Run	South River	Lat 40°24'50", long 74°20'58", Middlesex County, Hydrologic Unit 02040105, 0.5 mi downstream of bridge on County Route 516, 0.6 mi east of Old Bridge, and 1.3 mi upstream of mouth.	16.0	---	3-06-00 9-25-00	9.6 7.4
01407360 Yellow Brook	Swimming River	Lat 40°16'34", long 74°13'07", Monmouth County, Hydrologic Unit 02030104, 1.0 mi upstream of bridge on Montrose Road, 1.3 mi upstream of Bucks Pond and 3.0 mi southeast of Marlboro.	---	---	7-19-00 7-24-00	2.1 1.6
01407560 Husky Brook	Oceanport Creek	Lat 40°18'10", long 74°03'18", Monmouth County, Hydrologic Unit 02030104, 0.5 mi upstream of bridge on State Route 71, 0.6 mi northwest of Eatontown, and 1.7 mi upstream of mouth.	.85	---	4-25-00	2.2
MANASQUAN RIVER BASIN						
01407868 Long Brook	Manasquan River	Lat 40°12'33", long 74°15'49", Monmouth County, Hydrologic Unit 02040301, at bridge on Strickland Road, 0.3 mi west of intersection with U.S. Route 9, 0.6 mi north of Wyckoff Mills, and 0.6 mi upstream of mouth.	1.90	1998-99	11-04-99 2-09-00 5-03-00 8-07-00	1.6 .57 .81 1.3
01408009 Mingamahone Brook	Manasquan River	Lat 40°12'45", long 74°10'07", Monmouth County, Hydrologic Unit 02040301, at bridge on Cranberry Bog Road, 0.6 mi upstream from Branch Mingamahone Brook.	3.32	1998-99	11-08-99 2-08-00 5-11-00 8-09-00	3.9 3.6 6.5 2.2
METEDECONK RIVER BASIN						
0140811980 North Branch Metedeconk River tributary	North Branch Metedconk River	Lat 40°05'38", long 74°08'45", Ocean County, Hydrologic Unit 02040301, 0.5 mi north- east of Lanes Mills, 0.6 mi upstream of mouth, and 1.9 mi northwest of State Routes 70 and 88 intersection.	.76	---	5-04-00	0
TOMS RIVER BASIN						
01408600 Wrangel Brook	Toms River	Lat 39°57'39", long 74°13'42", Ocean County, Hydrologic Unit 02040301, at bridge on Southampton Road in Berkeley Township, 0.5 mi upstream of mouth, and 1.7 mi west of Toms River.	19.5	1992-99	10-08-99 11-24-99 3-01-00 7-27-00	38 31 57 71

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
TOMS RIVER BASIN--Continued						
01408640 Wrangel Brook	Toms River	Lat 39°57'17", long 74°13'18", Ocean County, Hydrologic Unit 02040301, at electrical substation, at Silver Ridge Park, 0.6 mi upstream from mouth, and 1.0 mi northwest of South Toms River.		1996, 1999	3-08-00	33
01408725 Long Swamp Creek	Toms River	Lat 39°59'02", long 74°11'19", Ocean County, Hydrologic Unit 02040301, at culvert on Bay Lea Road (County Route 571) in Dover Township, 2.2 mi north of Toms River , and 2.5 mi upstream from mouth.	3.54	1994, 1999	3-08-00	0
01408727 Long Swamp Creek	Toms River	Lat 39°57'23", long 74°09'59", Ocean County, Hydrologic Unit 02040301, at bridge on Bachelor Street, 0.5 mi upstream of mouth, 1.0 mi east of Toms River , and 4.6 mi north of Crystal Lake.	---	---	3-11-00	5.6
CEDAR CREEK BASIN						
01408830 Cedar Creek	Barnegat Bay	Lat 39°53'50", long 74°19'00", Ocean County, Hydrologic Unit 02040301, at bridge on Whiting-Lacey Road in Cedar Crest, 0.2 mi downstream from outlet of Bamber Lake, and 3.7 mi southeast of Keswick Grove.	20.1	1977-78, 1998-99	11-17-99 2-17-00 5-08-00 8-02-00	22 25 35 39
MULLICA RIVER BASIN						
01409416 Hammonton Creek	Mullica River	Lat 39°38'02", long 74°43'05", Atlantic County, Hydrologic Unit 02040301, at bridge on Chestnut Road, 0.4mi south of Wescoatville and 1.6 mi upstream from Norton Branch.	9.57	1974, 1978-81, 1983, 1985-99	11-29-99 2-14-00 5-22-00 8-21-00	8.4 17 10 10
01409434 Skit Branch	Batsto River	Lat 39°47'40", long 74°37'22", Burlington County, Hydrologic Unit 02040301, 2.4 mi southwest of White Horse, 5.9 mi upstream of mouth, and 7.0 mi southeast of U.S. Route 206 and County Route 532 intersec- tion.	1.10	---	4-25-00	.41
01409815 West Branch Wading River	Wading River	Lat 39°40'30", long 74°32'28", Burlington County, Hydrologic Unit 02040301, at bridge on State Hightway 563 in Maxwell, 1.6 mi southeast of Washington, 1.8 mi southwest of Jenkins, and 2.2 mi upstream from confluence with Oswego River.	85.9	1976-93, 1998-99	11-29-99 2-14-00 5-22-00 8-21-00	74 137 93 102
GREAT EGG HARBOR RIVER BASIN						
01411035 Hospitality Branch	Great Egg Harbor River	Lat 39°38'36", long 74°58'40", Gloucester County, Hydrologic Unit 02040302, at bridge on Blue Bell Road, 1.2 mi upstream from Timber Lakes, and 2.0 mi west of Cecil.	4.51	1998-99	11-16-99 2-07-00 5-10-00 8-15-00	2.1 2.6 3.5 4.1
01411110 Great Egg Harbor River	Great Egg Harbor Bay	Lat 39°30'50", long 74°46'47", Atlantic County, Hydrologic Unit 02040302, at bridge on U.S. Route 322 in Weymouth, 0.5 mi upstream from Deep Run, and 21 mi upstream from mouth.	154	1978-81, 1985-99	11-22-99 2-08-00 5-09-00 8-23-00	118 162 155 114
01411120 Deep Run	Great Egg Harbor River	Lat 39°30'41", long 74°55'15", Atlantic County, Hydrologic Unit 02040302, down- stream left bank of culvert on U.S. Route 40, 0.2 mi upstream of Pennsylvania-Read- ing-Seashore railroad tracks, 0.3 mi south- east of Buena, and 1.1 mi northwest of Pancoast Lake.	.33	1997-99	11-01-99 2-02-00 3-16-00 6-29-00	0 0 0 .03

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
GREAT EGG HARBOR RIVER BASIN-- Continued						
01411196 Babcock Creek	Great Egg Harbor River	Lat 39°28'08", long 74°41'34", Atlantic County, Hydrologic Unit 02040302, at bridge on U.S. Route 322, 1.1 mi east of intersection of State Route 50, 2.2 mi north- east of Mays Landing, and 2.8 mi upstream from Watering Race Branch.	16.3	1998-99	2-08-00 5-09-00 8-24-00	15 11 8.2
WEST CREEK BASIN						
01411444 West Creek	Delaware Bay	Lat 39°15'36", long 74°54'42", Cumberland County, Hydrologic Unit 02040206, at bridge on County Route 550, 1.3 mi upstream from Hands Mill Pond, and 3.7 mi east of Leesburg.	6.64	1999	11-30-99 2-14-00 5-16-00 8-23-00	10 10 7.7 5.6
MAURICE RIVER BASIN						
01411466 Indian Branch	Scotland Run	Lat 39°35'27", long 75°03'36", Gloucester County, Hydrologic Unit 02040206, at bridge on U.S. Route 47 (Delsea Drive), 0.4 mi upstream from Malaga Lake, and 1.4 mi north of Malaga.	6.50	1957, 1998-99	11-15-99 2-07-00 5-10-00 8-14-00	4.4 5.8 6.5 3.1
01411483 Hudson Branch	Burnt Mill Branch	Lat 39°32'02", long 75°01'56", Cumberland County, Hydrologic Unit 02040206, 0.7 mi upstream from mouth, 0.7 mi east of State Route 47, 0.9 mi southwest of Newfield, and 3.3 mi north of Vineland.	---	---	1-13-00	.34
01411955 Gravelly Run	Buckshutem Creek	Lat 39°20'14", long 75°03'04", Cumberland County, Hydrologic Unit 02040206, 0.3 mi upstream from mouth, 1.1 mi west of com- munity of Laurel Lake, and 2.5 mi southeast of Millville Municipal Airport.	3.19	1998-99	2-14-00 5-16-00 8-29-00	1.7 1.5 1.0
01412119 Muskee Creek	Maurice River	Lat 39°18'36", long 74°56'38", Cumberland County, Hydrologic Unit 02040206, 0.3 mi upstream of bridge on County Route 548, 0.7 mi upstream of mouth, and 1.9 mi southeast on Manumuskin.	1.22	---	5-09-00	.19
COHANSEY RIVER BASIN						
01412410 Cohansey River tributary No. 1	Cohansey River	Lat 39°31'22", long 75°15'28", Cumberland County, Hydrologic Unit 02040206, 0.8 mi upstream of mouth, 1.1 mi west of intersec- tion of County Route 540 and State Route 77, and 5.1 mi northwest of Deerfield.	1.09	---	4-24-00	1.2
01412800 Cohansey River	Delaware Bay	Lat 39°28'21", long 75°15'21", Cumberland County, Hydrologic Unit 02040206, on right bank just downstream from bridge on Silver Lake Road, 0.6 mi south of Seeley, 2.6 mi east of Shiloh, 4.1 mi north of Bridgeton, and 22.5 mi upstream from mouth.	28.0	1975-99	11-23-99 2-08-00 5-15-00 8-21-00	23 24 24 21
01413036 Cohansey River tributary No. 2	Cohansey River	Lat 39°23'50", long 75°18'48", Cumberland County, Hydrologic Unit 02040206, 0.6 mi upstream of mouth, 0.9 mi southeast of Dutch Neck Road and Greenwich Road intersection, and 1.5 mi east of Greenwich.	.39	---	5-09-00	.18
DELAWARE RIVER BASIN						
01442760 Dunnfield Creek	Delaware River	Lat 40°58'14", long 75°07'35", Warren County, Hydrologic Unit 02040104, 1,300 ft upstream from mouth and Delaware River, 0.6 mi northwest of Arrow Island, and 0.6 mi southeast of Delaware Water Gap Toll Bridge on Interstate 80.	3.56	1998-99	11-15-99 2-23-00 5-01-00 8-17-00	3.8 6.8 8.8 2.0

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
DELAWARE RIVER BASIN--Continued						
01446400 Pequest River	Delaware River	Lat 40°49'45", long 74°04'44", Warren County, Hydrologic Unit 02040105, at bridge on County Route 519, in Belvidere, and 1,400 ft upstream from mouth.	157	1950-53, 1974, 1977-82, 1984-99	11-15-99 3-30-00 6-28-00	128 385 319
01455135 Pohatcong Creek	Delaware River	Lat 40°47'06", long 74°57'42", Warren County, Hydrologic Unit 02040105, 0.8 mi down- stream of Willever Lake, 1.0 mi upstream of bridge on State Route 31, and 1.9 mi northeast of Washington.	9.20	---	7-13-00 8-08-00	4.3 6.8
01455137 Pohatcong Creek tributary No. 2	Pohatcong Creek	Lat 40°47'04", long 74°59'11", Warren County, Hydrologic Unit 02040105, 0.5 mi upstream of mouth, 1.7 mi north of Wash- ington, and 2.2 mi northwest of Port Colden.	1.34	---	8-08-00	.39
01455138 Pohatcong Creek tributary No. 2	Pohatcong Creek	Lat 40°46'46", long 74°59'17", Warren County, Hydrologic Unit 02040105, 500 ft upstream of mouth, 1.5 mi northwest of Washington, and 2.1 mi northwest of Port Colden.	1.53	---	7-13-00	.95
01455140 Pohatcong Creek	Delaware River	Lat 40°46'35", long 74°59'38", Warren County, Hydrologic Unit 02040105, 1.5 mi north- west of Washington, 3.2 mi downstream of Willever Lake, and 4.2 mi west of Port Murray.	12.5	---	7-13-00 8-08-00	7.7 8.6
01455142 Lannings Creek	Pohatcong Creek	Lat 40°46'21", long 74°59'57", Warren County, Hydrologic Unit 02040105, 1000 ft upstream of mouth, 0.8 mi northeast of Brass Castle, and 1.4 mi northwest of Washington.	.33	---	7-13-00 8-08-00	.13 .18
01455145 Pohatcong Creek	Delaware River	Lat 40°45'09", long 75°00'06", Warren County, Hydrologic Unit 02040105, at bridge on State Route 57, 1.5 mi west of Washington, and 5.6 mi downstream of Willever Lake.	14.7	---	7-13-00 8-08-00	9.0 10
01455147 Shabbecong Creek	Pohatcong Creek	Lat 40°46'12", long 74°57'23", Warren County, Hydrologic Unit 02040105, 0.5 mi north of Port Colden, 1.2 mi northeast of Washing- ton, and 3.5 mi upstream of mouth.	.54	---	7-13-00 8-08-00	.29 .29
01455149 Shabbecong Creek	Pohatcong Creek	Lat 40°45'34", long 74°58'24", Warren County, Hydrologic Unit 02040105, 500 ft southeast of Washington, 1.2 west of Port Colden, and 2.0 upstream of mouth.	1.86	---	7-13-00 8-08-00	.21 .28
01455151 Shabbecong Creek	Pohatcong Creek	Lat 40°45'20", long 74°59'01", Warren County, Hydrologic Unit 02040105, 0.3 mi down- stream of bridge on State Route 31, 0.5 mi southwest of Washington, and 1.2 mi upstream of mouth.	2.40	---	7-13-00 8-08-00	.34 .48
01455153 Shabbecong Creek	Pohatcong Creek	Lat 40°45'06", long 75°00'05", Warren County, Hydrologic Unit 02040105, 100 ft upstream of mouth, 0.9 miles southeast of Brass Cas- tle, and 1.4 miles southwest of Washington.	3.34	---	7-13-00 8-08-00	.56 .92
01455155 Pohatcong Creek	Delaware River	Lat 40°44'43", long 75°00'48", Warren County, Hydrologic Unit 02040105, 130 ft upstream of mouth, 0.5 miles southwest of Pleasant Valley, and 2.2 miles southwest of Wash- ington.	18.6	---	7-13-00 8-08-00	11 13
01455160 Brass Castle Creek	Pohatcong Creek	Lat 40°45'55", long 75°01'07", Warren County, Hydrologic Unit 02040105, 0.6 mi west of Brass Castle, 2.2 mi northwest of Washing- ton, and 2.5 mi upstream of mouth.	---	1963-84	7-13-00 8-08-00	2.3 2.8

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
DELAWARE RIVER BASIN--Continued						
01455165 Brass Castle Creek	Pohatcong Creek	Lat 40°44'44", long 75°00'49", Warren County, Hydrologic Unit 02040105, 150 ft upstream of mouth, 0.4 mi mi south of Pleasant Val- ley, and 2.2 mi southwest of Washington	3.93	---	7-13-00	2.2
					8-08-00	2.1
01455168 Pohatcong Creek tributary No. 3	Pohatcong Creek	Lat 40°44'01", long 75°01'59", Warren County, Hydrologic Unit 02040105, 150 ft upstream of mouth, 0.8 mi east of Broadway, and 2.5 mii northeast of New Village	.44	---	7-13-00	.07
					8-08-00	.10
01455170 Pohatcong Creek tributary No. 4	Pohatcong Creek	Lat 40°44'00", long 75°02'12", Warren County, Hydrologic Unit 02040105, 50 ft upstream of mouth, 0.8 mi east of Broadway, and 2.5 mi northeast of New Village.	.23	---	7-13-00	0
					8-08-00	.01
01455174 Pohatcong Creek tributary No. 5	Pohatcong Creek	Lat 40°44'18", long 75°02'33", Warren County, Hydrologic Unit 02040105, 0.3 mi upstream of mouth, 0.6 mi northeast of Broadway, and 2.2 mi northeast of New Vil- lage.	.88	---	7-13-00	.58
					8-08-00	.60
01455176 Pohatcong Creek tributary No. 5	Pohatcong Creek	Lat 40°44'08", long 75°02'31", Warren County, Hydrologic Unit 02040105, at mouth, 0.6 mi northeast of Broadway, and 2.1 mi northeast of New Village.	2.37	---	8-08-00	.57
01455180 Pohatcong Creek	Delaware River	Lat 40°43'46", long 75°03'01", Warren County, Hydrologic Unit 02040105, 0.2 mi south of Broadway, 1.6 mi northeast of New Vil- lage, and 3.2 mi downstream of Brass Castle Creek.	27.1	---	7-13-00	15
					8-08-00	18
01455182 Mill Brook	Pohatcong Creek	Lat 40°43'53", long 75°03'13", Warren County, Hydrologic Unit 02040105, 500 ft west of Broadway, 0.3 mi upstream of mouth, and 1.6 mi northeast of New Village.	2.53	---	7-13-00	2.3
					8-08-00	2.6
01455183 Pohatcong Creek tributary No. 9	Pohatcong Creek	Lat 40°43'43", long 75°03'07", Warren County, Hydrologic Unit 02040105, 300 ft down- stream of Mill Brook, 0.3 mi south of Broadway, and 1.6 mi northeast of New Vil- lage.	g	---	8-08-00	.21
01455185 Pohatcong Creek tributary No. 6	Pohatcong Creek	Lat 40°43'00", long 75°02'59", Warren County, Hydrologic Unit 02040105, 0.9 mi upstream of mouth, 1.1 mi south of Broad- way, and 1.6 mi east of New Village.	.25	---	7-13-00	.35
					8-08-00	.21
01455187 Pohatcong Creek tributary No. 6	Pohatcong Creek	Lat 40°43'21", long 75°03'36", Warren County, Hydrologic Unit 02040105, 100 ft upstream of mouth, 0.8 mi southwest of Broadway, and 1.1 mi east of New Village.	1.05	---	7-13-00	.48
					8-08-00	.39
01455189 Pohatcong Creek tributary No. 7	Pohatcong Creek	Lat 40°43'48", long 75°03'55", Warren County, Hydrologic Unit 02040105, 0.7 mi upstream of mouth, 0.8 mi west of Broad- way, and 1.1 mi northeast of New Village.	.22	---	7-13-00	.37
					8-08-00	.29
01455190 Pohatcong Creek tributary No. 7	Pohatcong Creek	Lat 40°43'19", long 75°03'46", Warren County, Hydrologic Unit 02040105, at mouth, 0.9 mi east of New Village, and 0.9 mi south- west of Broadway.	.57	---	7-13-00	.27
					8-08-00	.28
01455193 Pohatcong Creek tributary No. 8	Pohatcong Creek	Lat 40°42'35", long 75°03'32", Warren County, Hydrologic Unit 02040105, 1.1 mi upstream of mouth, 1.2 mi southeast of New Village, and 1.6 mi southwest of Broadway.	.15	---	7-13-00	0
					8-08-00	0

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
DELAWARE RIVER BASIN--Continued						
01455195 Pohatcong Creek tributary 8	Pohatcong Creek	Lat 40°43'09", long 75°04'01", Warren County, Hydrologic Unit 02040105, at mouth, 0.6 mi east of New Village, and 1.2 mi south- west of Broadway.	.48	---	7-13-00	0
					8-08-00	0
01455200 Pohatcong Creek	Delaware River	Lat 40°42'57", long 75°04'20", Warren County, Hydrologic Unit 02040105, at bridge on Edison Road, 0.4 mi southeast of New Vil- lage, and 1.9 mi downstream of Mill Brook.	33.3	---	7-13-00	19
					8-08-00	21
405653- 074450801 Cranberry Lake Tributary No. 2	Cranberry Lake	Lat 40°56'53", long 74°45'08", Sussex County, Hydrologic Unit 02040105, in community of Cranberry Lake, at culvert on Northshore Road, 100 ft upstream of mouth.	---	---	4-20-00	1.9
					4-21-00	6.0
					5-10-00	.82
405722- 074442301 Cranberry Lake Tributary No. 1	Cranberry Lake	Lat 40°57'22", long 74°44'23", Sussex County, Hydrologic Unit 02040105, in community of Cranberry Lake, at northern point of Cranberry Lake, at culvert on Northshore Road, 750 ft from intersection with U.S. Route 206.	---	---	4-20-00	.20
					4-21-00	.33
					5-10-00@1115	.07
					5-10-00@1415	.06
01455795 Cranberry Lake Auxillary Outlet	Dragon Brook	Lat 40°56'53", long 74°45'08", Sussex County, Hydrologic Unit 02040105, in community of Cranberry Lake, at culvert on Northshore Road, 100 ft upstream of mouth.	---	---	4-20-00	2.6
					4-21-00	6.2
					5-10-00	.57
01457400 Musconnect- cong River	Delaware River	Lat 40°35'32", long 75°11'20", Warren County, Hydrologic Unit 02040105, at bridge on County Route 627, at Riegelsville, 0.2 mi north of Mount Joy, and 0.2 mi upstream from mouth.	156	1940-55, 1973, 1977-81, 1983, 1985-86, 1988-99	11-04-99	229
					5-04-00	318
01458570 Nishisakawick Creek	Delaware River	Lat 40°32'32", long 75°02'49", Hunterdon County, Hydrologic Unit 02040105, 1.3 mi north of Frenchtown, 2.1 mi upstream from mouth, and 3.1 mi southeast of Milford.	10.1	1988, 1998-99	11-04-99	15
					2-15-00	58
					5-08-00	5.8
					8-02-00	7.8
01460398 Delaware and Raritan Canal tributary	Delaware and Raritan Canal	Lat 40°15'02", long 74°49'50", Mercer County Hydrologic Unit 02040105, at Wil- burtha, just upstream from mouth, 0.8 mi northwest of mouth of Gold Run, 1.9 mi southwest of Mercer County Airport	.29	1996-98	5-17-00	.25
01460880 Lockatong Creek	Delaware River	Lat 40°24'58", long 75°01'05", Hunterdon County, Hydrologic Unit 02040105, at bridge on Raven Rock-Rosemont Road, 0.7 mi upstream from mouth, and 0.8 mi north- east of Raven Rock.	22.9	1956, 1959-62, 1976-82	5-30-00	7.6
					9-11-00	1.2
01462930 Villa Victoria Brook	Delaware River	Lat 40°15'27", long 74°50'30", Mercer County, Hydrologic Unit 02040105, 0.9 mi south of Scudders Falls, 0.2 mi upstream from dam, 1.4 mi northwest of mouth of Gold Run, and 1.9 mi southwest of Mercer County Airport.	1.10	1996-98	5-17-00	.49
01463100 Gold Run	Delaware River	Lat 40°15'20", long 74°48'30", Mercer County, Hydrologic Unit 02040105, 0.9 mi south- east of West Trenton, 1.1 mi northeast of Wilburtha, 1.2 mi northeast of mouth of Gold Run, and 1.4 mi south of Mercer County Airport.	.93	1996-98	5-17-00	.52
01463200 Gold Run	Delaware River	Lat 40°14'41", long 74°49'14", Mercer County, Hydrologic Unit 02040105, at culvert under Delaware and Raritan Canal, 0.5 mi south- east of Wilburtha, 1.5 mi southwest of Fern- wood, and 0.3 mi northwest of Trenton.	1.98	1944, 1996-98	5-17-00	1.3

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
DELAWARE RIVER BASIN--Continued						
01463780 West Branch Shabakunk Creek	Shabakunk Creek	Lat 40°15'03", long 74°46'53", Mercer County, Hydrologic Unit 02040105, at bridge on Olden Avenue, 1.7 mi south of Ewingville, and 2.3 mi southeast of West Trenton.	2.74	1997-98	5-17-00	.98
01463810 Shabakunk Creek	Assunpink Creek	Lat 40°15'19", long 74°44'17", Mercer County, Hydrologic Unit 02040105, at bridge on Princeton Pike, 0.8 mi downstream from West Branch, 2.0 mi southwest of Franklin Corner, 2.2 mi southwest of Bakersville, and 2.8 mi south of Lawrenceville.	11.7	1976-78	6-05-00 9-12-00	4.2 1.8
01463850 Miry Run	Assunpink Creek	Lat 40°14'50", long 74°41'14", Mercer County, Hydrologic Unit 02040105, at bridge on County Route 533 (Quaker Bridge Road), 2.1 mi upstream of Assunpink Creek, 0.7 mi north of Mercerville, and 3.8 mi north- west of Robbinsville.	10.7	1998-99	11-04-99 2-09-00 5-01-00	3.6 3.4 2.9
01464020 Assunpink Creek	Delaware River	Lat 40°13'01", long 74°46'04", Mercer County, Hydrologic Unit 02040105, at bridge on Peace Street, 0.1 mi upstream from Dela- ware River, and 0.7 mi southeast of Cal- houn Street Bridge.	91.4	1963, 1966, 1998-99	11-22-99 5-03-00 8-22-00	52 90 84
01464504 Crosswicks Creek	Delaware River	Lat 40°10'02", long 74°40'40", Mercer County, Hydrologic Unit 02040201, at bridge on Groveville Road (Main Street) in Groveville, 1.2 mi upstream from Doctors Creek, and 2.2 mi northeast of Bordentown.	98.0	1966, 1998-99	11-08-99	86
01464524 Crosswicks Creek tributary No. 3	Crosswicks Creek	Lat 40°10'15", long 74°41'59", Burlington County, Hydrologic Unit 02040201, at cul- vert on U.S. Route 206, 0.4 mi south of Syl- van Glen, and 1.9 mi northeast of Bordentown.	.43	1995-97	10-15-00 6-16-00 9-25-00	0 0 0
01464583 North Branch Barkers Brook	Barkers Brook	Lat 40°01'58", long 74°40'12", Burlington County, Hydrologic Unit 02040201, at bridge on Juliustown-Georgetown Road (County Route 663), 1.3 mi east of Job- stown, 1.3 mi north of Juliustown, and 1.9 mi upstream from mouth.	1.72	1998-99	11-15-99 2-16-00 5-16-00 8-03-00	.61 2.5 .36 3.5
01465893 Little Creek	Southwest Branch Rancocas Creek	Lat 39°53'54", long 74°47'19", Burlington County, Hydrologic Unit 02040202, at bridge on State Route 70 in Chairville, 250 ft east of Skeet Road, 1.9 mi east of Med- ford, 4.6 mi south of Lumberton, and 4.7 mi upstream from mouth.	6.32	1998-99	11-18-99 2-09-00 5-01-00 5-09-00 5-17-00 8-16-00	2.6 7.2 8.8 11 4.0 19
01467002 North Branch Rancocas Creek	Rancocas Creek	Lat 39°58'44", long 74°42'36", Burlington County, Hydrologic Unit 02040202, at bridge on Birmingham Road, 0.2 mi north of Birmingham, 1.4 mi east of U.S. Route 206, and 3.4 mi upstream of Powells Run.	126	---	9-13-00	81
0146700220 North Branch Rancocas Creek tributary	North Branch Rancocas Creek	Lat 39°59'50", long 74°40'06", Burlington County, Hydrologic Unit 02040202, 1.2 mi south of Juliustown, 1.8 mi northeast of Pemberton, and 4.0 mi upstream of mouth.	---	---	4-25-00	3.0
01467003 North Branch Rancocas Creek	Rancocas Creek	Lat 39°58'55", long 74°44'11", Burlington County, Hydrologic Unit 02040202, at bridge on U.S. Route 206 in Ewansville, 0.2 mi upstream of Powells Run, and 0.9 mi north of State Route 38.	132	---	9-13-00	74

Discharge measurements made at miscellaneous sites during water year 2000

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
DELAWARE RIVER BASIN--Continued						
0146700370 Powells Run	North Branch Rancocas Creek	Lat 39°59'18", long 74°44'08",Burlington County, Hydrologic Unit 02040202, at bridge on Sikoneses Trail in Ewansville, 100 ft west of U.S. Route 206, 0.6 upstream of mouth, and 1.4 mi north of State Route 38.	---	---	9-13-00	2.8
01467004 North Branch Rancocas Creek	Rancocas Creek	Lat 39°59'08", long 74°45'05",Burlington County, Hydrologic Unit 02040202, at bridge on River Street in Smithville, 400 ft downstream of Smithville Lake, 0.8 mi west of Ewansville, and 0.8 mi downstream of Powell Run.	138	---	9-13-00	71
01467005 North Branch Rancocas Creek	Rancocas Creek	Lat 39°59'31", long 74°46'58", Burlington County, Hydrologic Unit 02040202, at Mill Dam Park in Mount Holly, 0.2 mi upstream of Pine Street bridge and 4.0 mi down- stream of Smithville Lake.	140	---	9-13-00	81
01467006 North Branch Rancocas Creek	Rancocas Creek	Lat 39°59'22", long 74°47'06", Burlington County, Hydrologic Unit 02040202, at bridge on Pine Street in Mount Holly.	140	1998-99	11-22-99 2-16-00 5-17-00 8-24-00	134 239 135 106
01467012 Rancocas Creek tributary	Rancocas Creek	Lat 39°59'50", long 74°53'40", Burlington County, Hydrologic Unit 02040202, 0.6 mi upstream of mouth, 1.1 mi west of Center- ton, and 2.7 mi southeast of Bridgeboro.	---	---	4-24-00	.68
01467314 Peter Creek	Newton Creek	Lat 39°53'40", long 75°04'43", Camden County, Hydrologic Unit 02040202, 0.7 mi south of Oaklyn, 1.0 mi northeast of State Route 168 and Kings Highway intersection, and 1.2 mi upstream of mouth.	---	---	4-24-00	.67
01467359 North Branch Big Timber Creek	Big Timber Creek	Lat 39°50'04", long 75°04'02", Camden County, Hydrologic Unit 02040202, at bridge on Chews Landing-Clementon Road (County Route 683), 0.7 mi south of Glen- dora, 1.8 mi upstream from South Branch Big Timber Creek, and 2.5 mi north of Blackwood.	18.8	1998-99	11-23-99 2-22-00 5-17-00	17 22 46
01477123 Raccoon Creek tributary No. 3	Raccoon Creek	Lat 39°44'47", long 75°16'05", Gloucester County, Hydrologic Unit 02040202, down- stream left bank of culvert, on Mullica Hill Road, 0.3 mi upstream of mouth, 2.0 mi east of Swedesboro, and 2.3 mi northwest of Mullica Hill.	.47	1996-99	3-22-00	2.8
01482555 Game Creek	Salem River	Lat 39°42'23", long 75°23'30", Salem County, Hydrologic Unit 02040206, 1.4 mi west of Auburn, 1.9 mi southeast of Interstate 295 and Perkintown Road intersection, and 2.3 mi upstream of Laytons Lake.	---	---	4-24-00	1.3

* Peak discharge.

a Operated as continuous-recording gaging station.

b Discharge records published in reports of the New Jersey Department of Environmental Protection.

c Discharge records on file in U.S. Geological Survey Office, West Trenton, New Jersey.

d Operated as continuous gaging station by Duhernal Water Company.

f Revised.

g Flow from spring drainage area cannot be determined.

The following table contains annual maximum elevations for tidal crest-stage stations. The information is obtained from a crest-stage gage or a water stage recorder located at each site. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. All stages are elevations above mean sea level unless otherwise noted. Only the maximum elevation is given. Information on some other high elevations may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum elevation has been determined.

Maximum elevation at tidal crest-stage partial-record stations

Station name and number	Location	Period of record	Water year 2000 maximum		Period of record maximum	
			Date	Elevation (ft)	Date	Elevation (ft)
Hackensack River at New Milford, NJ (01378501)	Lat 40°56'52", long 74°01'34", Bergen County, Hydrologic Unit 02030103, on right bank approx. 50 ft downstream from New Milford gaging station, on dam wingwall 10 ft downstream from dam.	1997-2000	1-10-97 4-21-00	9.96r 9.50	9-16-99	17.7d
Hackensack River at NJ Route 3 near Lynhurst, NJ (01378626)	Lat 40°48'17", long 74°03'55", Bergen County, Hydrologic Unit 02030103, on downstream side of concrete left channel pier on the westbound State Route 3 bridge, 0.5 mi east of East Rutherford, and 0.6 mi east of Lynhurst.	1997-2000	9-26-00	5.77	10-19-96	6.90a
Passaic River at Garfield, NJ (01390000)	Lat 40°51'53", long 74°06'37", Bergen County, Hydrologic Unit 02030103, on left bank downstream wingwall bridge on Passaic Street at Garfield, 0.3 mi west of intersection of Midland Avenue and Passaic Street.	1997-2000	9-26-00	<4.26c	9-16-99	14.7
Elizabeth River at Linden, NJ (01393510)	Lat 40°38'50", long 74°12'19", Union County, Hydrologic Unit 02030104, on concrete right wingwall, upstream of bridge on Atlantic Avenue in Linden, just east of Mattano Park, and 0.8 mi east of Bayway Circle.	1997-2000	9-26-00	5.24	10-19-96	6.98
Rahway River at U.S. Route 1, at Rahway, NJ (01396035)	Lat 40°35'56", long 74°16'09", Union County, Hydrologic Unit 02030104, on downstream right abutment of bridge on U.S. Route 1 (at Lawrence Street prior to 1999) in Rahway, 930 ft downstream of South Branch Rahway River, and 1.6 mi south of Linden.	1997-2000	9-26-00	6.37	10-19-96	8.57
Raritan River at State Route 18 at New Brunswick, NJ (01404171)	Lat 40°30'31", long 74°27'26", Middlesex County, Hydrologic Unit 02030104, on left bank, 100 ft downstream from bridge on State Route 18, on the downstream end of small tributary culvert headwall in Johnson Park, next to unnamed road, and 0.8 mi northwest of New Brunswick.	1997-2000	9-26-00	6.66	9-16-99	17.2
Raritan River at Perth Amboy, NJ (01406700)	Lat 40°30'31", long 74°17'30", Middlesex County, Hydrologic Unit 02030105, on upstream left bridge pier of Victory Bridge on State Route 35 in Perth Amboy, 0.5 mi downstream from Garden State Parkway bridge, and 1.5 mi upstream from mouth.	1938, 1944, 1950, 1953, 1955, 1960, 1967-70†, 1980-2000	9-26-00	6.28	12-11-92	10.4
Luppataatong Creek at Keyport, NJ (01407030)	Lat 40°26'08", long 74°12'27", Monmouth County, Hydrologic Unit 02030104, on left bank upstream side of Front Street Bridge in Keyport, 0.1 mi upstream from mouth, and 2.0 mi northwest of Matawan.	1944, 1950, 1960, 1980-2000	1-25-00	6.28	9-12-60	10.3
Navesink River at Red Bank, NJ (01407535)	Lat 40°21'14", long 74°04'00", Monmouth County, Hydrologic Unit 02030104, on wooden piling upstream side of old boat ramp at right bank, in Red Bank, 0.15 mi north of East Front Street, on the east side of Riverview Hospital.	1997-2000	1-25-00	4.81	10-19-96	5.77
Branchport Creek at Oceanport, NJ (01407590)	Lat 40°19'12", long 74°00'12", Monmouth County, Hydrologic Unit 02030104, on wooden piling at right bank bulkhead, just upstream from bridge on Monmouth Boulevard in Oceanport, and 1.2 mi north of Long Branch.	1997-2000	1-25-00	4.10b	2-24-98	5.11b

Maximum elevation at tidal crest-stage partial-record stations--Continued

Station name and number	Location	Period of record	Water year 2000 maximum		Period of record maximum	
			Date	Elevation (ft)	Date	Elevation (ft)
Metedeconk River at Laurelton, NJ (01408155)	Lat 40°03'58", long 74°08'01", Ocean County, Hydrologic Unit 02040301, on downstream right wingwall of the bridge on State Route 70, just downstream of Forge Pond, at Laurelton.	1997-2000	11-02-99	3.50	2-24-98	4.08
Toms River at Toms River, NJ (01408700)	Lat 39°57'02", long 74°11'58", Ocean County, Hydrologic Unit 02040301, on fourth piling at the left bank bulkhead, downstream from bridge on South Main Street in Toms River.	1997-2000	11-02-99	3.21	10-19-96	3.87
Manahawkin Bay near Manahawkin, NJ (01409145)	Lat 39°40'13", long 74°12'54", Ocean County, Hydrologic Unit 02040301, at west end of bridge on State Route 72 over Manahawkin Bay, 2.5 mi northwest of Ship Bottom, and 3.1 mi southeast of Manahawkin.	1965-2000	1-25-00	3.73	12-11-92	6.02
Little Egg Harbor at Beach Haven, NJ (01409285)	Lat 39°33'10", long 74°15'07", Ocean County, Hydrologic Unit 02040301, in Beach Haven at U.S. Coast Guard station, 6.0 mi east of Tuckerton and 7.4 mi southwest of Ship Bottom.	1979-2000	1-25-00	4.78	12-11-92	6.93
Patuxent River at Pleasant Mills, NJ (01409510)	Lat 39°37'55", long 74°38'40", Ocean County, Hydrologic Unit 02040301, on right bank, 1.0 mi southeast of Pleasant Mills, and 0.5 mi upstream from mouth.	1958-2000†	9-26-00	4.37	3-07-62	7.2
Mullica River near Port Republic, NJ (01410100)	Lat 39°33'12", long 74°27'46", Atlantic County, Hydrologic Unit 02040301, on right bank on bulkhead piling at south end of U.S. Route 9 and Garden State Parkway bridge over Mullica River, 2.8 mi northeast of Port Republic, and 2.8 mi south of New Gretna.	1962, 1965-2000	1-25-00	4.64	3-06-62	7.9
Absecon Creek at Absecon, NJ (01410500)	Lat 39°25'45", long 74°31'16", Atlantic County, Hydrologic Unit 02040302, on right abutment of bridge on Mill Road, 50 ft downstream of former gaging station, 1.0 mi west of Absecon, and 3.4 mi upstream from mouth.	1923-29†, 1933-38†, 1946-84†, 1985-2000	9-26-00	5.35	3-29-84	7.77
Beach Thorofare at Atlantic City, NJ (01410570)	Lat 39°21'56", long 74°26'44", Atlantic County, Hydrologic Unit 02040302, on east abutment south side of AMTRAK railroad swivel bridge in Atlantic City, 0.5 mi northeast of Bader Field airport, and 2.7 mi northeast of Ventnor City.	1944, 1950, 1960, 1962, 1978†, 1969-2000	1-25-00	5.95	3-06-62	8.3
Great Egg Harbor River at U.S. 40, at Mays Landing, NJ (01411175)	Lat 39°26'55", long 74°43'38", Atlantic County, Hydrologic Unit 02040302, at Mays Landing river access parking lot on the south side of River Drive and intersection of Faragut Road, in Mays Landing, 0.1 mi downstream of bridge on U.S. Route 40.	1997-2000	1-25-00	5.20	2-05-98	6.21
Tuckahoe River at Head of River, NJ (01411300)	Lat 39°18'25", long 74°49'15", Cape May County, Hydrologic Unit 02040302, downstream right abutment of highway bridge on State Route 49, 0.2 mi upstream from McNeals Branch, 0.4 mi southeast of Head of River, and 3.7 mi west of Tuckahoe.	1979-2000†	3-22-00	4.79	12-11-92	7.01
Great Egg Harbor Bay at Beesleys Point, NJ (01411315)	Lat 39°17'16", long 74°37'41", Cape May County, Hydrologic Unit 02040302, on upstream side of earth filled pier at Tuckahoe Inn, 250 ft east of U.S. Route 9 toll bridge over Great Egg Harbor Bay at Beesleys Point, 2.5 mi southwest of Somers Point.	1963-78†, 1979-81, 1997-2000	1-25-00	6.28	2-05-98r	7.12r
Great Egg Harbor Bay at Ocean City, NJ (01411320)	Lat 39°17'03", long 74°34'41", Cape May County, Hydrologic Unit 02040302, on bulkhead at west end of 7th Street (prior to October 1974, gage was located at 5th Street), in Ocean City, and 2.5 mi southeast of Somers Point.	1965-2000	1-25-00	6.41	12-11-92	7.89

Maximum elevation at tidal crest-stage partial-record stations--Continued

Station name and number	Location	Period of record	Water year 2000 maximum		Period of record maximum	
			Date	Elevation (ft)	Date	Elevation (ft)
Lakes Bay at Pleasantville, NJ (01411325)	Lat 39°22'54", long 74°31'08", Atlantic County, Hydrologic Unit 02040302, on west shore of Lakes Bay, at east end of East Bayview Avenue, on pier on south side of road, in Pleasantville and 5.2 mi west of Atlantic City.	1997-2000	1-25-00	4.72	2-05-98	5.97
Strathmere Bay at Strathmere, NJ (01411335)	Lat 39°12'04", long 74°39'19", Cape May County, Hydrologic Unit 02040302, on right bank upstream side of Corsons Inlet Bridge, on County Route 636, in Strathmere, 3.9 mi north of Sea Isle City, and 5.5 mi south of Ocean City.	1997-2000	1-25-00	4.86b	2-05-98r	6.47br
Grassy Sound Channel at Nummy Island, near North Wildwood, NJ (01411370)	Lat 39°01'43", long 74°48'05", Cape May County, Hydrologic Unit 02040302, on pier at Dad's Place Marina at the south end of bridge from Nummy Island, 1.0 mi west of Hereford Inlet, and 1.1 mi northwest of North Wildwood.	1993-96†, 1997-2000	1-25-00	7.01	2-05-98	8.19
Maurice River at Millville, NJ (01411900)	Lat 39°23'43", long 75°02'27", Cumberland County, Hydrologic Unit 02040206, at State Route 49 Bridge on downstream concrete wall at left bank bridge abutment in Millville, 300 ft west of intersection with High Street, and 0.4 mi south of Broad Street.	1997-2000	11-03-99	4.03b	8-22-97	4.53b
Cohansey River at Bridgeton, NJ (01413015)	Lat 39°25'45", long 75°14'13", Cumberland County, Hydrologic Unit 02040206, at County Bridge #8-1 (Commerce Street) on upstream concrete wall at right bank bridge abutment, approx. 700 ft north of bridge on Broad Street (State Route 49) in Bridgeton.	1997-2000	11-03-99	5.76	2-05-98r	6.38r
Cohansey River at Greenwich, NJ (01413038)	Lat 39°23'02", long 75°20'58", Cumberland County, Hydrologic Unit 02040206, at Greenwich Pier, 0.7 mi southwest of Greenwich, and 5.8 mi southwest of Shiloh.	1951, 1979-2000	1-25-00	6.20	11-25-50	8.8
Delaware River at Marine Terminal at Trenton, NJ (01464040)	Lat 40°11'21", long 74°45'22", Mercer County, Hydrologic Unit 02040201, on downstream left bank concrete wall near Trenton Marine Terminal on Lamberton Road, approx. 0.2 mi south of the intersection with State Route 29.	1921-46†, 1951-55†, 1957-92†, 1997-2000	11-03-99	6.72b	8-20-55	17.9b
Delaware River at Chester, PA (01477050)	Lat 39°49'52", long 75°19'58", Gloucester County, Hydrologic Unit 02040202, on left bank on floodgate at mouth of Repaupo Creek 2.2 mi northeast of Bridgeport, 5.5 mi north of Swedesboro, and at mile 84.00, prior to October 1980 located at Reynolds Aluminum Company pier in Chester, PA at river mile 82.30.	1972-77†, 1979-85, 1997-2000	11-03-99	6.58	2-26-79	7.53
Salem River at Salem NJ, (01482650)	Lat 39°34'40", long 75°28'37", Salem County, Hydrologic Unit 02040206, on downstream left bank side of bridge on State Route 49 at Salem.	1997-2000	11-03-99	4.58	2-05-98	5.53
Alloway Creek at Hancocks Bridge, NJ (01483050)	Lat 39°30'31", long 75°27'39", Salem County, Hydrologic Unit 02040206, on left bank at downstream side of bridge on Locust Island Road (County Route 658) in Hancocks Bridge, 3.7 mi southwest from Quinton, and 4.0 mi south of Salem.	1980-85, 1993, 1997-2000	1-25-00	6.01	12-11-93	7.57

† Operated as a continuous-record gaging station.

a Not previously published.

b Elevation is to North American Datum of 1988 not National Geodetic Vertical Datum of 1929.

c height indicated.

d Peak based on high water marks at the New Milford gage house, not the actual CSG.

e Peak gage-height for the period was less than minimum recordable gage.

r Revised.

Page	Page
Absecon Creek at Absecon.....293	Belvidere, Pophandusing Brook at .....279
Absecon, Absecon Creek at .....293	Berkeley Heights, Blue Brook at Seeleys Pond Dam, near .....268
Access to USGS Water Data.....19	Berkshire Valley, Rockaway River at .....261
Accuracy of the Records.....14	Bernardsville, Passaic River near .....260
Acre-foot, definition of.....20	Big Brook near Marlboro.....269
Albertson Branch near Elm.....279	Bivalve, Maurice River at.....200
Alexauken Creek near Lambertville.....280	Blackwells Mills, Millstone River at .....136
Allendale, Hohokus Brook at.....262	Blackwood, South Branch Big Timber Creek at .....280
Allendale, Ramsey Brook at .....263, 276	Blairs Creek at Blairstown.....279
Allentown, Doctors Creek at .....280	Blairstown, Blairs Creek at.....279
Allenwood, Manasquan River near .....165	Blairstown, Paulins Kill at.....211
Alloway Creek at Hancocks Bridge.....294	Blairstown, Yards Creek near .....213
Alpaugh Brook at Hampton.....264	Blawenburg, Rock Brook near .....267
Annual 7-day minimum, definition of .....20	Bloomfield, Third River at .....263
Annual runoff, definition of.....20	Bloomsbury, Musconetcong River near .....221
Assunpink Creek at Trenton .....229	Blue Anchor Brook at Elm .....278
Assunpink Creek near Clarksville .....227	Blue Brook at Seeleys Pond Dam, near Berkeley Heights.....268
Atco, Hays Mill Creek at .....278	Boonton, Rockaway River above reservoir, at .....54
Atco, Mullica River near .....278	Boonton, Rockaway River below reservoir, at .....56
Atlantic City, Beach Thorofare at .....293	Bordentown, Crosswicks Creek tributary at U.S. Route 206, near .....273
Atlantic Coastal Basins: diversions in.....170	Bordentown, Thorton Creek at .....273
reservoirs, in.....169	Bound Brook at Middlesex.....269
Atlantic Highlands, Many Mind Creek at.....269	Bound Brook, Middle Brook at .....268
Atsion, Clark Branch near .....278	Bound Brook, Raritan River below Calco Dam, at .....138
Atsion, Mullica River at outlet of Atsion Lake, at.....278	Branchport Creek at Oceanport .....292
Atsion, Sleeper Branch Diversion (Saltars Ditch) near .....278	Bridgeton, Cohansey River at.....294
Atsion, Sleeper Branch near .....278	Brookville, Oyster Creek tributary at .....270
Awosting, Wanaque River at.....68	Buckhorn Creek at Hutchinson Road, at Hutchinson.....279
Axle Brook near Pottersville.....265	Burlington, Delaware River at.....233
	Burnt Mills, Lamington River at .....265
Back Brook tributary near Ringoes .....264	Byram, Delaware River tributary at.....272
Baldwins Creek at Pennington.....266	
Barnegat Bay at Bay Shore.....172	Canoe Brook near Millburn .....275
Barnegat Bay at Loveladies .....177	Cedar Knolls, Whippany River tributary no. 5, at Boulevard Road, at.....261
Barnegat Bay at Mantoloking .....171	Cedar Creek Basin, discharge measurements at miscellaneous sites, in.....285
Barnegat Bay at Seaside Heights .....175	Chatham, Passaic River near .....46
Barnegat Bay at Waretown .....176	Cherry Hill, South Branch Pennsauken Creek at.....242
Base flow, definition of.....20	Chesilhurst, Cooper Branch near .....278
Basgalore Creek at Russell Mill Road, near Swedesboro .....280	Chesilhurst, Hays Mill Creek near.....278
Basking Ridge, Penns Brook tributary at.....260	Chesilhurst, Wildcat Branch near .....278
Batsto River at Batsto .....180	Chester, Delaware River at .....294
Batsto River at Pleasant Mills.....182	Clark Branch near Atsion .....278
Batsto River at Pleasant Mills.....293	Clarksburg, Doctors Creek at .....273
Batsto, Batsto River at .....180	Clarksville, Assunpink Creek near .....227
Batsto, Mullica River near .....178	Clayton, Little Ease Run near .....196
Bay Shore, Barnegat Bay at .....172	Clifton, Weasel Brook at.....263
Beach Haven, Little Egg Harbor at.....293	Clinton, Spruce Run at.....116
Beach Thorofare at Atlantic City.....293	Closter, Tenakill Brook at .....260, 275
Beach Thorofare at Margate .....191	Cohansey River at Bridgeton.....294
Bear Brook at Park Ridge .....259	Cohansey River at Greenwich .....294
Bear Brook at Route 535, near Locust Corner.....266	Cohansey River Basin: crest-stage partial-record stations in .....271
Bear Brook at Route 571, near Grovers Mill.....266	discharge measurements at miscellaneous sites .....286
Beattystown, Hances Brook near .....279	Coles Brook at Hackensack .....275
Beden Brook near Rocky Hill.....267	Collingswood, Newton Creek at.....273
Bees Branch at Hurffville .....274	Columbus, Crafts Creek at.....273
Beesleys Point, Great Egg Harbor Bay at.....293	
Belle Mead, Pike Run at .....134	
Belvidere, Delaware River at.....217	

	Page		Page
Contents, definition of	20	Duck Pond Run near Princeton Junction	267
Continuous-record station, definition of	20	East Branch Bass River near New Gretna	185
Control structure, definition of	20	East Branch Paulins Kill near Lafayette	209
Control, definition of	20	East Branch Rahway River at Maplewood	263, 276
Cooper Branch near Chesilhurst	278	East Branch Rahway River at Millburn Avenue, at Millburn	263
Cooper River at Haddonfield	244	East Branch Stony Brook at Best Lake, at Watchung	144
Cooperation	1	East Creek at NJ Route 35, at South River	269
Crafts Creek at Columbus	273	East Creek Basin:	
Crafts Creek at Route 68, at Georgetown	273	crest-stage partial-record stations in	269
Crosswicks Creek at Extonville	231	Electric Brook at Long Valley	276
Crosswicks Creek tributary at U.S. Route 206, near Bordentown	273	Elizabeth River at Linden	292
Cub Brook at Northfield	261	Elizabeth River at Ursino Lake, at Elizabeth	102
Cubic foot per second per square mile, definition of	20	Elizabeth, Elizabeth River at Ursino Lake, at	102
Cubic foot per second, definition of	20	Elm, Albertson Branch near	279
Cubic foot per second-day, definition of	20	Elm, Blue Anchor Brook at	278
Cuckels Brook at U.S. Route 22, near Somerville	268	Elm, Great Swamp Branch at	279
Current Water Resources Projects	15	Elmwood Park, Fleischer Brook at Market Street, at	262
Daily record station, definition of	20	Englewood, Metzler Brook at	260
Daily record, definition of	20	Ewan, Miery Run near	274
Data Collection and Computation	11	Explanation of the Records	10
Data Presentation	12	Extonville, Crosswicks Creek at	231
Data table of daily mean values	13	Far Hills, North Branch Raritan River at	122
Datum, definition of	20	Farmingdale, Mingamahone Brook at	270
Dead River near Millington	275	Fishing Creek at Rio Grande	279
Deep Run at U.S. Route 40, at Landisville	271	Fishing Creek Basin, low-flow, partial-record stations in	279
Deep Run tributary at NJ Route 54, at Landisville	271	Flat Brook near Flatbrookville	207
Definition of terms	20	Flatbrookville, Flat Brook near	207
Delaware and Raritan Canal at Port Mercer	223	Fleischer Brook at Market Street, at Elmwood Park	262
Delaware River at Belvidere	217	Flemington, Walnut Brook near	264
Delaware River at Burlington	233	Flow (see Discharge)	20
Delaware River at Chester	294	Flow-duration percentiles, definition of	20
Delaware River at Marine Terminal at Trenton	294	Folsom, Great Egg Harbor River at	187
Delaware River at Montague	205	Four Bridges, South Branch Raritan River at	108
Delaware River at Port Jervis	201	Furnace Brook at Oxford	279
Delaware River at Riegelsville	272	Gage datum, definition of	20
Delaware River at Trenton	225	Gage height, definition of	21
Delaware River Basin:		Gaging station, definition of	21
crest-stage partial-record stations in	271	Garfield, Passaic River at	292
discharge measurements at low-flow partial-record stations in	279	Georgetown, Crafts Creek at Route 68, at	273
discharge measurements at miscellaneous sites in	286	Glassboro, Plank Run at	274
diversions and withdrawals in	256	Glendon, Lehigh River at	219
reservoirs in	250	Glen Gardner, Spruce Run at	112
Delaware River tributary at Byram	272	Godeffroy, Neversink River at	203
Diel, definition of	20	Grassy Sound Channel at Nummy Island, near North Wildwood	294
Discharge, definition of	20	Grassy Sound Channel at Wildwood	194
Dishcharge at partial-record stations	259	Gravelly Run at Somerdale	274
Discontinued Crest-stage Partial-record Stations	xiii	Great Channel at Stone Harbor	193
Discontinued Low-flow Stations	xv	Great Egg Harbor Bay at Beesleys Point	293
Discontinued Surface-water Discharge Stations	x	Great Egg Harbor Bay at Ocean City	293
Discontinued Tidal Crest-stage And Tidal Gaging Stations	xxii	Great Egg Harbor River at Folsom	187
Doctors Creek at Allentown	280	Great Egg Harbor River at U.S. 40, at Mays Landing	293
Doctors Creek at Clarksburg	273	Great Egg Harbor River Basin:	
Dover, Rockaway River at Warren Street, at	261	crest-stage partial-record stations in	271
Downstream Order System	10	discharge measurements at miscellaneous sites in	285
Drainage area, definition of	20	Great Swamp Branch at Elm	279
Drainage basin, definition of	20		

Page	Page
Green Brook at Plainfield	268
Green Brook at Rock Avenue, at Plainfield.....	268
Green Brook at Seeley Mills.....	142
Green Pond Brook at Picatinny Arsenal	48
Green Pond Brook at Wharton.....	52
Green Pond Brook below Picatinny Lake, at Picatinny Arsenal	50
Greenwich, Cohansey River at	294
Greenwood Branch at New Lisbon.....	238
Griggstown, Millstone River at	267
Grovers Mill, Bear Brook at Route 571 near.....	266
Grovers Mill, Millstone River at Southfield Road, near.....	266
Grovers Mill, Millstone River near.....	277
Hackensack River at New Milford	40, 292
at NJ Route 3 near Lynhurst	292
at Rivervale.....	36
at West Nyack	34
Hackensack River basin:	
crest-stage partial-record stations in	259
diversions into and from	43
discharge measurements at low-flow sites in.....	275
reservoir and lake elevations.....	42
Hackensack, Coles Brook at	275
Hackettstown, Mine Brook near	279
Hackettstown, Musconetcong River near	272
Haddon Heights, South Branch Newton Creek at	274
Haddonfield, Cooper River at	244
Hampton, Alpaugh Brook at	264
Hances Brook near Beattystown.....	279
Hancocks Bridge, Alloway Creek at.....	294
Hannabrand Brook at Old Mill Road, near Spring Lake Heights.....	277
Harrisville, Oswego River at	183
Hart Brook near Pennington	266
Hays Mill Creek at Atco	278
Hays Mill Creek near Chesilhurst.....	278
Head of River, Tuckahoe River at.....	189, 293
Heathcote Brook at Kingston.....	277
High Bridge, South Branch Raritan River near	110
High tide, definition of.....	21
Hillsdale, Pascack Brook at	259
Hillsdale, Pascack Brook at Woodcliff Lake outlet, at	259
Hillsdale, Woodcliff Lake at	259
Hohokus Brook at Allendale.....	262
Hohokus Brook at Ho-Ho-Kus	263
Ho-Ho-Kus, Hohokus Brook at	263
Holland Brook at Readington	265
Hudson River Basin:	
discharge at low-flow sites.....	275
discharge at miscellaneous sites.....	281
Huntsville, Pequest River at.....	271
Hurffville, Bees Branch at	274
Hutchinson, Buckhorn Creek at Hutchinson Road, at	279
Hydrologic Benchmark Network.....	5
Hydrologic benchmark station, definition of.....	21
Hydrologic unit, definition of	21
Identifying Estimated Daily Discharge.....	14
Instantaneous discharge, definition of	20
Introduction.....	1
Ironia, Lamington (Black) River near	265, 277
Jacobs Creek at Somerset	280
Jumping Brook near Neptune City	161
Keansburg, Waachaack Creek at	155
Kenilworth, Rahway River at	264
Keswick Grove, Michaels Branch tributary at	270
Keyport, Luppataong Creek at.....	292
Kingston, Heathcote Brook at.....	277
Lafayette, East Branch Paulins Kill near	209
Lake Hopatcong, Musconetcong River at outlet of	272
Lakes and reservoirs:	
Beltzville Lake, PA	252
Blue Marsh Lake, PA	252
Boonton Reservoir	97
Canistear Reservoir.....	97
Cannonsville Reservoir, NY	250
Chambers Lake Reservoir.....	253
Charlotteburg Reservoir.....	97
Cliff Lake, NY	251
Clinton Reservoir.....	97
De Forest Lake.....	42
Echo Lake	97
Green Lane Reservoir, PA	253
Greenwood Lake.....	98
Hopatcong, Lake.....	252
Jadwin, General Edgar, Reservoir, PA	250
Merrill Creek Reservoir.....	252
Manasquan Reservoir	169
Marsh Creek Reservoir, PA	253
Monksville Reservoir.....	98
Neversink Reservoir, NY.....	251
Nockamixon Reservoir, PA	252
Oak Ridge Reservoir.....	97
Oradell Reservoir.....	42
Penn Forest Reservoir, PA	251
Pepacton Reservoir, NY	250
Prompton Reservoir, PA	250
Round Valley Reservoir.....	153
Splitrock Reservoir	97
Spruce Run Reservoir.....	153
Still Creek Reservoir, PA	252
Swimming River Reservoir	169
Swinging Bridge Reservoir, NY	250
Tappan, Lake.....	42
Toronto Reservoir, NY.....	251
Wallenpaupack, Lake, PA	250
Walter, Francis E., Reservoir, PA.....	251
Wanaque Reservoir	98
Wild Creek Reservoir, PA	251
Woodcliff Lake	42
Lakes Bay at Pleasantville	294
Lakewood, North Branch Metedeconk River at	277
Lakewood, North Branch Metedeconk River near	167
Lambertville, Alexauken Creek near	280
Lambertville, Moores Creek tributary at Valley Road, near.....	272

	Page		Page
Lamington (Black) River at Succasunna	265, 276	Maurice River at Bivalve	200
Lamington (Black) River near Ironia	265, 277	Maurice River at Millville	294
Lamington River at Burnt Mills	265	Maurice River at Norma	198
Lamington River at Milltown	277	Maurice River Basin:	
Lamington River near Pottersville	124	discharge measurements at miscellaneous sites	286
Landisville, Deep Run at U.S. Route 40, at	271	Mays Landing, Great Egg Harbor River at U.S. 40, at	293
Landisville, Deep Run tributary at NJ Route 54, at	271	McDonalds Branch in Lebanon State Forest	236
Lapahannock Creek at Ridge Road, at Roxburg	271	Mean discharge, definition of	20
Latitude-Longitude System	10	Metedeconk River at Laurelton	293
Laurelton, Metedeconk River at	293	Metedeconk River Basin:	
Lawrence Brook at Westons Mills	148	crest-stage partial-record stations in	270
Lawrenceville, Shabakunk Creek tributary at Texas Avenue, near	273	low-flow partial-record stations in	277
Lebanon State Forest, McDonalds Branch in	236	discharge at miscellaneous sites	284
Lehigh River at Glendon	219	Metzler Brook at Englewood	260
Linden, Elizabeth River at	292	Michaels Branch tributary at Keswick Grove	270
Little Ease Run near Clayton	196	Middle Brook at Bound Brook	268
Little Egg Harbor at Beach Haven	293	Middlebush, Six Mile Run near	267
Little Falls, Passaic River above Beatties Dam, at	262	Middlesex, Bound Brook at	269
Little Falls, Passaic River at	90	Miery Run near Ewan	274
Locust Corner, Bear Brook at Route 535, near	266	Millburn, Canoe Brook near	275
Lodi, Saddle River at	94	Millburn, East Branch Rahway River at Millburn Avenue, at	263
Long Swamp Creek at Toms River	277	Millburn, West Branch Rahway River at	263, 276
Long Valley, Electric Brook at	276	Millburn, West Branch Rahway River at Millburn Avenue, at	264
Lopatcong Creek at Phillipsburg	279	Millington, Dead River near	275
Loveladies, Barnegat Bay at	177	Millington, Passaic River near	44
Low flow, 7-day 10-year, definition of	22	Millstone River at Blackwells Mills	136
Low-flow partial-record stations	275	Millstone River at Carnegie Lake, at Princeton	267
Low tide, definition of	21	Millstone River at Griggstown	267
Ludlam Thorofare at Sea Isle City	192	Millstone River at Millstone	267
Luppataong Creek at Keyport	292	Millstone River at Plainsboro	266
Lynhurst, Hackensack River at NJ Route 3 near	292	Millstone River at Southfield Road, near Grovers Mill	266
Macopin Intake Dam, Pequannock River at	66	Millstone River at Weston	268
Macopin Reservoir, Macopin River at	275	Millstone River near Grovers Mill	277
Macopin River at Macopin Reservoir	275	Millstone, Millstone River at	267
Mahwah River near Suffern	261	Milltown, Lamington River at	277
Mahwah, Ramapo River near	80	Milltown, Tanners Brook near	277
Malapardis Brook at Whippany	275	Millville, Maurice River at	294
Manahawkin Bay near Manahawkin	293	Mine Brook near Hackettstown	279
Manahawkin, Manahawkin Bay near	293	Mingamahone Brook at Farmingdale	270
Manalapan Brook at Spotswood	150	Miscellaneous site, definition of	21
Manalapan Brook tributary at Smithburg	269	Molly Ann Brook at North Haledon	262, 276
Manasquan River at Squankum	163	Montague, Delaware River at	205
Manasquan River Basin:		Montague, White Brook tributary at	271
crest-stage partial-record stations in	270	Montvale, Pascack Brook at	259
discharge at miscellaneous sites	284	Moore's Creek tributary at Valley Road, near Lambertville	272
Manasquan River near Allenwood	165	Morristown, Whippany River at	60
Mantoloking, Barnegat Bay at	171	Morristown, Whippany River near	58
Manville, Raritan River at	130	Mountain Lake Brook near Pequest	279
Many Mind Creek at Atlantic Highlands	269	Mountainside, Nomahegan Brook near	276
Many Mind Creek Basin:		Mulhockaway Creek at Van Syckel	114
crest-stage partial-record stations in	269	Mullica Hill, Raccoon Creek tributary no. 3 near	274
Maplewood, East Branch	263	Mullica River at outlet of Atsion Lake at Atsion	278
Maplewood, East Branch Rahway River at	276	Mullica River Basin:	
Margate, Beach Thorogare at	191	discharge measurement at low-flow partial-record stations in	278
Marlboro, Big Brook near	269	discharge measurements at miscellaneous sites	285
Martinsville, West Branch Middle Brook near	140	Mullica River near Atco	278
Masonicus Brook at West Mahwah	275		

Page	Page
Mullica River near Batsto.....	178
Mullica River near Port Republic.....	293
Musconetcong River at outlet of Lake Hopatcong.....	272
Musconetcong River near Bloomsbury.....	221
Musconetcong River near Hackettstown.....	272
Musquapsink Brook at Westwood.....	260
Musquapsink Brook near Westwood.....	260
National Atmospheric Deposition Program/National Trends Network.....	5
National Geodetic Vertical Datum of 1929, definition of.....	21
National Stream-Quality Accounting Network.....	5
National Water-Quality Assessment.....	5
Navesink River at Red Bank.....	292
Neptune City, Jumping Brook near.....	161
Neptune City, Shark River near.....	159
Neshanic River at Reaville.....	120
Newark, Passaic River at.....	96
Neversink River, at Godeffroy.....	203
New Brunswick, Raritan River at State Route 18 at.....	292
New Egypt, Stony Ford Brook at.....	273
New Gretna, East Branch Bass River near.....	185
New Lisbon, Greenwood Branch at.....	238
New Milford, Hackensack River at.....	40, 292
New Village, Pohatcong Creek at.....	272
Newton Creek at Collingswood.....	273
NGVD of 1929, definition of.....	21
Nichomus Run near Woodstown.....	280
Nomahegan Brook near Mountainside.....	276
Norma, Maurice River at.....	198
North Branch Foulerton Brook at Roseland.....	261
North Branch Metedeconk River at Lakewood.....	277
North Branch Metedeconk River at Smithburg.....	270
North Branch Metedeconk River near Lakewood.....	167
North Branch Rancocas Creek at Pemberton.....	240
North Branch Raritan River at North Branch.....	265
North Branch Raritan River at South Branch.....	265
North Branch Raritan River near Far Hills.....	122
North Branch Raritan River near Raritan.....	128
North Branch, North Branch Raritan River at.....	265
North Haledon, Molly Ann Brook at.....	262, 276
North Plainfield, Stony Brook at.....	268
North Wildwood, Grassy Sound Channel at Nummy Island, near.....	294
Northfield, Cub Brook at.....	261
Oakland, Pond Brook at.....	261
Oakland, Ramapo River downstream of Pond Brook.....	82
Ocean City, Great Egg Harbor Bay at.....	293
Oceanport, Branchport Creek at.....	292
Oswego River at Harrisville.....	183
Other Records Available.....	15
Oxford, Furnace Brook at.....	279
Oyster Creek Basin: crest-stage partial-record stations in.....	270
Oyster Creek tributary at Brookville.....	270
Papakating Creek at Pelletstown.....	275
Park Ridge, Bear Brook at.....	259
Partial-record station, definition of.....	21
Pascack Brook at Hillsdale.....	259
Pascack Brook at Montvale.....	259
Pascack Brook at Westwood.....	260
Pascack Brook at Woodcliff Lake outlet, at Hillsdale.....	259
Passaic River above Beatties Dam, at Little Falls.....	262
Passaic River at Garfield.....	292
Passaic River at Little Falls.....	90
Passaic River at Newark.....	96
Passaic River at Pine Brook.....	64
Passaic River at Route 46, at Singac.....	276
Passaic River below Pompton River, at Two Bridges.....	262
Passaic River near Bernardsville.....	260
Passaic River near Chatham.....	46
Passaic River near Millington.....	44
Passaic River tributary at Summit.....	260
Passaic River Basin: crest stage gages.....	260
discharge measurements at miscellaneous sites.....	281
diversions.....	100
low flow.....	275
reservoirs.....	97
Paulins Kill at Blairstown.....	211
Paulins Kill tributary at Ross Corner.....	271
Peckman River at Ozone Avenue at Verona.....	262, 276
Pelletstown, Papakating Creek at.....	275
Pemberton, North Branch Rancocas Creek at.....	240
Pennington, Baldwins Creek at.....	266
Pennington, Hart Brook near.....	266
Penns Brook tributary at Basking Ridge.....	260
Pequannock River at Macopin Intake Dam.....	66
Pequest River at Huntsville.....	271
Pequest River at Pequest.....	215
Pequest, Mountain Lake Brook near.....	279
Pequest, Pequest River at.....	215
Periodic station, definition of.....	21
Perth Amboy, Raritan River at.....	292
Peters Brook at Mercer Street, at Somerville.....	266
Philadelphia, PA, Schuylkill River at.....	246
Phillipsburg, Lopatcong Creek at.....	279
Picatinny Arsenal, Green Pond Brook at.....	48
Picatinny Arsenal, Green Pond Brook below Picatinny Lake, at.....	50
Pike Run at Belle Mead.....	134
Pine Brook, Passaic River at.....	64
Pine Brook, Whippany River near.....	62
Plainfield, Green Brook at.....	268
Plainfield, Green Brook at Rock Avenue, at.....	268
Plainsboro, Millstone River at.....	266
Plank Run at Glassboro.....	274
Pleasant Mills, Batsto River at.....	182, 293
Pleasantville, Lakes Bay at.....	294
Pohatcong Creek at New Village.....	272
Pohatcong Creek tributary near Washington.....	272
Polly Pond Brook at South Belmar.....	277
Polly Pond Brook Basin: discharge measurements at low-flow partial-record stations in.....	277
Pompton Lakes, Ramapo River at.....	86

	Page		Page
Pompton Plains, Pompton River at	88	Ringwood Creek near Wanaque	70
Pompton River at Pompton Plains	88	Rio Grande, Fishing Creek at	279
Pond Brook at Oakland	261	River mile, definition of	21
Pophandusing Brook at Belvidere	279	River mileage, definition of	21
Port Jervis, Delaware River at	201	Rivervale, Hackensack River at	36
Port Mercer, Delaware and Raritan Canal at	223	Robinsons Branch at Rahway	264
Port Republic, Mullica River near	293	Rock Brook near Blawenburg	267
Pottersville, Axle Brook near	265	Rockaway River above reservoir, at Boonton	54
Pottersville, Lamington River near	124	Rockaway River at Berkshire Valley	261
Preakness (Singac) Brook near Preakness	262	Rockaway River at Warren Street, at Dover	261
Preakness, Preakness (Singac) Brook near	262	Rockaway River below reservoir, at Boonton	56
Precipitation and Reservoir Contents	2	Rocky Hill, Beden Brook near	267
Princeton Junction, Duck Pond Run near	267	Roseland, North Branch Foulerton Brook at	261
Princeton, Millstone River at Carnegie Lake, at	267	Ross Corner, Paulins Kill tributary at	271
Princeton, Stony Brook at	132	Roxburg, Lapahannock Creek at Ridge Road, at	271
Pump Branch near Waterford Works	278	Runoff, definition of	21
Raccoon Creek near Swedesboro	248	Saddle River at Lodi	94
Raccoon Creek tributary no. 3 near Mullica Hill	274	Saddle River at Ridgewood	92
Rahway River at Kenilworth	264	Saddle River at Upper Saddle River	262
Rahway River at Morris Avenue, at Springfield	264	Salem River at Salem	294
Rahway River at Rahway	106	Salem, Salem River at	294
Rahway River at U.S. Route 1, at Rahway	292	Sawmill Brook at South River	269
Rahway River near Springfield	104	Schuylkill River at Philadelphia, PA	246
Rahway River Basin:		Sea Bright, Shrewsbury River at	158
crest-stage partial-record stations in	263	Sea Isle City, Ludlam Thorofare at	192
discharge at miscellaneous sites	282	Sea level, definition of	21
low-flow partial-record stations in	276	Seaside Heights, Barnegat Bay at	175
Rahway, Rahway River at	106	Seeley Mills, Green Brook at	142
Rahway, Rahway River at U.S. Route 1, at	292	Seeley, West Branch Cohansey River at	271
Rahway, Robinsons Branch at	264	Selected References	22
Ramapo River at Pompton Lakes	86	Shabakunk Creek tributary at Texas Avenue, near	
Ramapo River at Sloatsburg, NY	74	Lawrenceville	273
Ramapo River at Suffern	78	Shark River near Neptune City	159
Ramapo River downstream of Pond Brook, at Oakland	82	Shrewsbury River at Sea Bright	158
Ramapo River near Mahwah	80	Shrewsbury River Basin, crest-stage partial-record stations in	269
Ramsey Brook at Allendale	263, 276	Singac Brook at Singac	276
Raritan River at Manville	130	Singac, Passaic River at Route 46, at	276
Raritan River at Perth Amboy	292	Singac, Singac Brook at	276
Raritan River at South Amboy	152	Six Mile Run near Middlebush	267
Raritan River at State Route 18 at New Brunswick	292	Sleeper Branch Diversion (Saltars Ditch) near Atsion	278
Raritan River Basin:		Sleeper Branch near Atsion	278
diversions and withdrawals in	154	Sloatsburg, NY, Ramapo River at	74
low-flow partial-record stations in	276	Sluice Creek near South Dennis	195
discharge at miscellaneous sites	283	Smithburg, Manalapan Brook tributary at	269
reservoirs in	153	Smithburg, North Branch Metedeconk River at	270
Raritan River below Calco Dam, at Bound Brook	138	Somerdale, Gravelly Run at	274
Raritan, North Branch Raritan River near	128	Somerset, Jacobs Creek at	280
Readington, Holland Brook at	265	Somerville, Cuckels Brook at U.S. Route 22, near	268
Reaville, Neshanic River at	120	Somerville, Peters Brook at Mercer Street, at	266
Records of Stage and Water Discharge	11	South Amboy, Raritan River at	152
Recurrence interval, definition of	21	South Belmar, Polly Pond Brook at	277
Red Bank, Navesink River at	292	South Branch Big Timber Creek at Blackwood	280
Red Bank, Swimming River near	156	South Branch Newton Creek at Haddon Heights	274
Reservoirs in Atlantic Coastal Basins	169	South Branch Pennsauken Creek at Cherry Hill	242
Ridgewood, Saddle River at	92	South Branch Rancocas Creek at Vincentown	234
Riegelsville, Delaware River at	272	South Branch Raritan River at Four Bridges	108
Ringoes, Back Brook tributary near	264	South Branch Raritan River at South Branch	265

Page	Page
South Branch Raritan River at Stanton.....	118
South Branch Raritan River near High Bridge.....	110
South Branch Rockaway Creek at Whitehouse Station.....	126
South Branch, North Branch Raritan River at.....	265
South Branch, South Branch Raritan River at.....	265
South Dennis, Sluice Creek near.....	195
South River, East Creek at NJ Route 35, at.....	269
South River, Sawmill Brook at.....	269
Special Networks And Programs.....	5
Spotswood, Manalapan Brook at.....	150
Spring Lake Heights, Hannabrand Brook at Old Mill Road, near.....	277
Springfield, Rahway River at Morris Avenue, at.....	264
Springfield, Rahway River near.....	104
Springfield, Van Winkle Brook at.....	276
Spruce Run at Clinton.....	116
Spruce Run at Glen Gardner.....	112
Squankum, Manasquan River at.....	163
Stage (see gage height).....	22
Stage-discharge relation, definition of.....	22
Stanton, South Branch Raritan River at.....	118
Station Identification Numbers.....	10
Station manuscript.....	12
Statistics of monthly mean data.....	13
Stone Harbor, Great Channel at.....	193
Stony Brook at North Plainfield.....	268
Stony Brook at Princeton.....	132
Stony Brook at Watchung.....	146
Stony Ford Brook at New Egypt.....	273
Strathmere Bay at Strathmere.....	294
Strathmere, Strathmere Bay at.....	294
Streamflow.....	2
Streamflow, definition of.....	22
Succasunna, Lamington (Black) River at.....	265, 276
Suffern, Mahwah River near.....	261
Suffern, Ramapo River at.....	78
Summary of Hydrologic Conditions.....	2
Summary statistics.....	13
Summit, Passaic River tributary at.....	260
Surface area, definition of.....	22
Sussex, Wallkill River near.....	275
Swedesboro, Basgalore Creek at Russell Mill Road, near.....	280
Swedesboro, Raccoon Creek near.....	248
Swimming River near Red Bank.....	156
Synoptic studies, definition of.....	22
Tanners Brook near Milltown.....	277
Techniques of Water-resources Investigations, Publications on.....	23
Tenakill Brook at Closter.....	260, 275
Third River at Bloomfield.....	263
Thorton Creek at Bordentown.....	273
Tidal crest-stage stations.....	292
Toms River at Toms River.....	293
Toms River near Toms River.....	173
Toms River Basin: crest-stage partial-record stations in.....	270
discharge measurements at miscellaneous sites.....	284
low-flow partial-record stations in.....	277
Toms River, Long Swamp Creek at.....	277
Toms River, Toms River at.....	293
Toms River, Wrangel Brook at Bimini Drive, near.....	270
Toms River, Wrangel Brook at Mule Road, near.....	270, 277
Trenton, Assunpink Creek at.....	229
Trenton, Delaware River at.....	225
Trenton, Delaware River at Marine Terminal at.....	294
Tuckahoe River at Head of River.....	189, 293
Two Bridges, Passaic River below Pompton River, at.....	262
Upper Saddle River, Saddle River at.....	262
Van Syckel, Mulhockaway Creek.....	114
Van Winkle Brook at Springfield.....	276
Verona, Peckman River at Ozone Avenue, at.....	262, 276
Vincentown, South Branch Rancocas Creek at.....	234
Waackaack Creek at Keansburg.....	155
Wallkill River near Sussex.....	275
Walnut Brook near Flemington.....	264
Wanaque River at Awosting.....	68
Wanaque River at Wanaque.....	72
Wanaque, Ringwood Creek near.....	70
Wanaque, Wanaque River at.....	72
Waretown, Barnegat Bay at.....	176
Washington, Pohatcong Creek tributary near.....	272
Watchung, East Branch Stony Brook at Best Lake, at.....	144
Watchung, Stony Brook at.....	146
Water level, definition of.....	22
Water related articles.....	18
Water related fact sheets.....	19
Water related reports.....	16
Water Temperature.....	15
Water year, definition of.....	22
Waterford Works, Pump Branch near.....	278
WDR, definition of.....	22
Weasel Brook at Clifton.....	263
Weighted average, definition of.....	22
West Branch Cohansey River at Seeley.....	271
West Branch Mille Brook near Martinsville.....	140
West Branch Rahway River at Millburn.....	263, 276
West Branch Rahway River at Millburn Avenue, at Millburn.....	264
West Creek Basin: discharge measurements at miscellaneous sites.....	286
West Mahwah, Masonicus Brook at.....	275
West Nyack, Hackensack River at.....	34
Weston, Millstone River at.....	268
Westons Mills, Lawrence Brook at.....	148
Westwood, Musquapsink Brook at.....	260
Westwood, Musquapsink Brook near.....	260
Westwood, Pascack Brook at.....	38
Wharton, Green Pond Brook at.....	52
Whippany, Malapardis Brook at.....	275
Whippany River at Morristown.....	60
Whippany River near Morristown.....	58
Whippany River near Pine Brook.....	62
Whippany River tributary no. 5, at Boulevard Road, at Cedar Knolls.....	261

INDEX

	Page		Page
White Brook tributary at Montague	271	Wrangel Brook at Mule Road near Toms River	270, 277
Whitehouse Station, South Branch Rockaway Creek at	126	Wreck Pond Brook Basin:	
Wildcat Branch near Chesilhurst	278	low-flow partial-record stations in	277
Wildwood, Grassy Sound Channel at	194	WSP, definition of	22
Woodcliff Lake at Hillsdale	259		
Woodstown, Nichomus Run near	280	Yards Creek near Blairstown	213
Wrangel Brook at Bimini Drive, near Toms River	270		

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.



U.S. DEPARTMENT OF THE INTERIOR
U.S. Geological Survey
810 Bear Tavern Road, Suite 206
West Trenton, NJ 08628-1099

