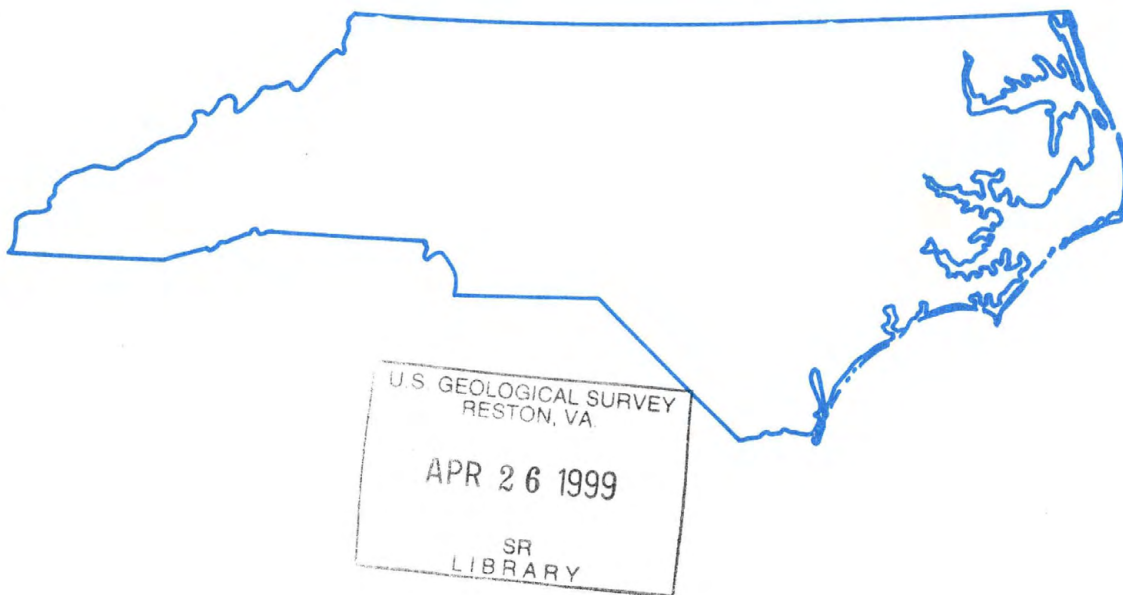


# Water Resources Data North Carolina Water Year 1998

## Volume 1. Surface-Water Records

Water-Data Report NC-98-1



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



Prepared in cooperation with the North Carolina Department of Environment, Health, and Natural Resources, and with other State, municipal, and Federal agencies

## CALENDAR FOR WATER YEAR 1998

1997

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1998

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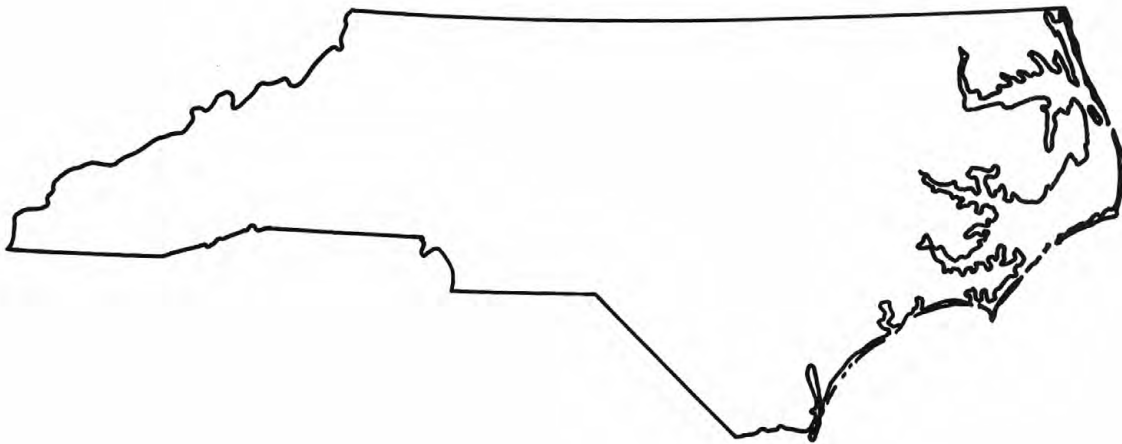


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## Volume 1. Surface-Water Records

By B.C. Ragland, D.G. Smith, R.G. Barker, and J.B. Robinson

Water-Data Report NC-98-1



Prepared in cooperation with the North Carolina Department of  
Environment, Health, and Natural Resources, and with other State,  
municipal, and Federal agencies



U. S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

GEOLOGICAL SURVEY

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Raleigh, NC 27607

1999



## PREFACE

This volume of the annual hydrologic-data report of North Carolina is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow and quality of water provide 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 North Carolina are contained in this volume.

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. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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This report was prepared in cooperation with the State of North Carolina, other agencies, and under the general supervision of Gerald L. Ryan, District Chief; and Wanda C. Meeks, Regional Hydrologist, Southeastern 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 March 31, 1999		3. REPORT TYPE AND DATES COVERED	
4. TITLE AND SUBTITLE Annual Data - Oct. 1, 1997 thru Sept. 30, 1998 Water Resources Data, North Carolina, Water Year 1998 Volume 1. Surface-Water Data				5. FUNDING NUMBERS	
6. AUTHOR(S)  B.C. Ragland, D.G. Smith, R.G. Barker, J.B. Robinson					
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  U.S. Geological Survey Water Resources Division 3916 Sunset Ridge Road				8. PERFORMING ORGANIZATION REPORT NUMBER  Raleigh, North Carolina 27607	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) USGS-WDR-NC-98-1 U.S. Geological Survey Water Resources Division 3916 Sunset Ridge Road				10. SPONSORING / MONITORING AGENCY REPORT NUMBER  Raleigh, North Carolina 27607	
11. SUPPLEMENTARY NOTES USGS-WDR-NC-98-1 Prepared in cooperation with the State of North Carolina and other agencies					
12a. DISTRIBUTION / AVAILABILITY STATEMENT  No restriction on distribution. This report may be purchased from:  National Technical Information Center				12b. DISTRIBUTION CODE  Springfield, VA	
13. ABSTRACT (Maximum 200 words) 22161  Water-resources data for the 1998 water year for North Carolina consist of records of stage, discharge, and water quality of streams; and stage and contents of lakes and reservoirs. This report contains discharge records for 176 gaging stations; stage only records for 33 gaging stations; stage and contents for 56 lakes and reservoirs; water quality for 33 gaging stations and 20 miscellaneous sites; and continuous daily tide stage at 5 sites. Additional water data were collected at 62 sites not involved in the systematic data-collection program, and are published as miscellaneous measurements in this report. The collection of water-resources data in North Carolina is part of the National Water-Data System operated by the U.S. Geological Survey in cooperation with State, municipal, and Federal agencies.					
14. SUBJECT TERMS North Carolina, Hydrologic data, Surface water, Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analysis, Sediments, Water temperature, Sampling, Water level, Water analysis, Elevation				15. NUMBER OF PAGES 708	
				16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UNCLASSIFIED		



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North Fork Swannanoa River near Walkertown (d) .....	0344894205	608-609
Mills River:		
Beetree Creek near Swannanoa (d) .....	03450000	610-611
Swannanoa River at Biltmore (d) .....	03451000	612-613
French Broad River at Asheville (d).....	03451500	614-615
Ivy River near Marshall (d) .....	03453000	616-617
French Broad River at Marshall (d).....	03453500	618-619
West Fork Pigeon River above Lake Logan near Hazelwood (d) .....	03455500	620-621
Lake Logan at Dam near Hazelwood (g).....	03455773	622-623
West Fork Pigeon River near Retreat (d).....	0345577330	624-625
West Fork Pigeon River at Bethel (d).....	03456100	626-627
East Fork Pigeon River near Canton (d).....	03456500	628-629
Pigeon River near Canton (d) .....	03456991	630-631
Pigeon River near Hepco (d) .....	03459500	632-633
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Tuckasegee River:		
Oconaluftee River at Birdtown (d) .....	03512000	654-655
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## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record streamflow stations in North Carolina have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record shown for each station.

Station number	Station name	Drainage area (mi <sup>2</sup> )	Period of record
Chowan River Basin			
02053400	Ahoskie Creek near Rich Square, NC	3.70	1964-73
02053450	Ahoskie Creek at Minton's Store, NC	24.0	1964-73
02053510	Ahoskie Creek tributary at Poortown, NC	2.60	1963-73
Roanoke River Basin			
02068000	Dan River near Asbury, NC	71.4	1924-26
02069000	Dan River at Pine Hall, NC	501	1924-26 1986-91
02071500	Dan River at Leaksville, NC	1,150	1929-49
02074218	Dan River near Mayfield, NC	1,778	1976-84
02075160	Moon Creek near Yanceyville, NC	29.90	1961-74 1988-89
02077230	South Hyco Creek near Hesters Store, NC	29.9	1964-67
02077240	Double Creek near Roseville, NC	7.47	1964-75 1977-82
02077250	South Hyco Creek near Roseville, NC	56.5	1966-80
02077300	Hyco River at McGehees Mill, NC	191	1964-73
02077660	Mayo Creek near Woodsdale, NC	52.7	1975-77
Pamlico River Basin			
02081800	Cedar Creek near Louisburg, NC	47.8	1956-75
02082000	Tar River near Nashville, NC	701	1928-71
02082500	Sapony Creek near Nashville, NC	64.8	1950-70
0208273070	Devils Cradle Creek at NC 39 near Kearney, NC	2.89	1984-85
02082731	Devils Cradle Creek nr Alert, NC	13.4	1993-97
02083833	Pete Mitchell Swamp at SR 1409 nr Penny Hill, NC	11.0	1993-97
02084070	Green Mill Run at Arlington Boulevard at Greenville, NC	9.10	1980-85
02084164	Juniper Branch near Simpson, NC	7.5	1975-86
0208423100	Flat Swamp at SR 1157 near Robersonville, NC	21.3	1986-88
02084317	Black Swamp near Batts Crossroads, NC	1.02	1982
02084500	Herring Run near Washington, NC	9.59	1950-80
02084556	North Lake Canal above Pungo Lake near Wenona, NC	.29	1976-80
02084558	Albemarle Canal near Swindell, NC	68.0	1977-81
0208463120	Outflow Ditch from Jennett Sedge at Buxton, NC	Indeterminate	1994-95
Neuse River Basin			
02084903	Sevenmile Creek tributary at SR 1120 near Buckhorn, NC	1.34	1981-82
02084904	Sevenmile Creek tributary at I-85 near Miles, NC	.004	1981-82
02084905	Sevenmile Creek tributary at SR 1144 near Miles, NC	1.57	1981-82
02084908	Sevenmile Creek tributary at I-85 near Efland, NC	.29	1981-82
02085220	Little River near Orange Factory, NC	80.4	1962-87
02086000	Dial Creek near Bahama, NC	4.76	1925-71 1989-91
0208650112	Flat River tributary near Willardsville, NC	1.14	1988-90
02086624	Knap of Reeds Creek near Butner, NC	43.0	1982-95
02086849	Ellerbee Creek nr Gorman, NC	21.9	1982-89 1991-95
02087000	Neuse River near Northside, NC	535	1927-80
0208700780	Little Lick Creek above Secondary Road 1814 near Oak Grove, NC	10.1	1982-95
0208705200	Smith Creek at Grissom, NC	6.2	1984-85

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station number	Station name	Drainage area (mi <sup>2</sup> )	Period of record
Neuse River Basin--Continued			
0208721055	Perry Creek at SR 2012 near Millbrook, NC	2.43	1986-89
0208732810	Marsh Creek at SR 2030 at Millbrook, NC	1.44	1986-89
02087570	Neuse River at Smithfield, NC	1,206	1959-90
02088315	Beaverdam Creek near Grantham, NC	5.01	1978-82
02088470	Little River near Kenly, NC	191	1964-89
02088682	Big Ditch at Retha Street at Goldsboro, NC	2.17	1980-84
02089216	Daileys Creek near Liddell, NC	3.80	1978-81
02089222	Bear Creek near Parkstown, NC	4.27	1978-82
02090500	Contentnea Creek near Wilson, NC	236	1930-54
02090512	Hominy Swamp at Phillips Street at Wilson, NC	8.20	1978-85
02090625	Turner Swamp near Eureka, NC	2.1	1968-87
02091700	Little Contentnea Creek near Farmville, NC	93.3	1956-87
02091960	Creeping Swamp near Calico, NC	9.80	1971-77
02091970	Creeping Swamp near Vanceboro, NC	27.0	1971-85
02092000	Swift Creek near Vanceboro, NC	182	1950-89
02092020	Palmetto Swamp near Vanceboro, NC	24.0	1971-76
0209257120	W. P. Brice Creek below SR 1101 near Riverdale, NC	11.2	1986-91
Hewletts Creek Basin			
02093229	Hewletts Creek at SR 102 near Wilmington, NC	1.98	1977-90
Cape Fear River Basin			
0209330990	Brooks Lake tributary near Browns Summit, NC	.06	1985-90
0209331325	Candy Creek at SR 2700 near Monticello, NC	1.10	1985-90
02093500	Haw River near Benaja, NC	168	1928-71
02094000	Horsepen Creek at Battle Ground, NC	15.9	1925-31
			1934-59
02095000	South Buffalo Creek near Greensboro, NC	33.6	1928-58
0209509100	South Buffalo Creek at SR 2821 at McLeansville, NC	43.5	1986-88
02095500	North Buffalo Creek near Greensboro, NC	37.1	1929-90
0209555450	Buffalo Creek at SR 2719 near Osceola, NC	97.4	1986-87
0209560800	Reedy Fork Creek at NC 61 near Osceola, NC	243	1986-88
02096000	Stony Creek near Burlington, NC	44.2	1952-59
02096700	Big Alamance Creek near Elon College, NC	116	1957-80
02096842	Cane Creek 0.1 mile above SR 1126 near Buckhorn, NC	.64	1979-81
02096850	Cane Creek near Teer, NC	33.7	1959-73
02097000	Haw River near Pittsboro, NC	1,310	1928-73
02097243	Third Fork Creek at Durham, NC	1.68	1968-73
02097500	Morgan Creek near Chapel Hill, NC	30.1	1923-32
0209782150	New Hope River tributary at SR 1716 near Farrington, NC	2.05	1986-88
02098000	New Hope River near Pittsboro, NC	285	1949-73
02098500	West Fork Deep River near High Point, NC	32.1	1923-26
			1928-58
02100000	Muddy Creek near Archdale, NC	16.7	1934-41
02101000	Bear Creek at Robbins, NC	134	1939-71
0210106600	Deep River nr Glendon, NC	859	1993-96
0210108450	Suck Creek tributary near Zion Grove, NC	.67	1986-88
02103000	Little River at Manchester, NC	348	1938-50
02103500	Little River at Linden, NC	459	1928-71
02104000	Cape Fear River at Fayetteville, NC	4,395	1889-1903
			1928-40
02104387	Buckhead Creek near Owens, NC	2.62	1976-80

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station number	Station name	Drainage area (mi <sup>2</sup> )	Period of record
Cape Fear River Basin--Continued			
02104500	Rockfish Creek near Hope Mills, NC	292	1929-31 1939-54
02105524	Ellis Creek tributary at SR 1325 near White Oak, NC	1.81	1979-81
02106000	Little Coharie Creek near Roseboro, NC	92.8	1950-92
02106681	Black River near Dunn, NC	48.3	1976-77
02107000	South River near Parkersburg, NC	379	1951-86
02107500	Colly Creek near Kelly, NC	103	1950-71
02107600	Northeast Cape Fear River near Seven Springs, NC	47.5	1958-75
0210782005	Nahunga Creek at SR 1301 near Warsaw, NC	8.30	1983-90
0210783273	Herrings Marsh Run Tributary at Red Hill, NC	1.14	1991-97
0210789100	Grove Creek at Kenansville, NC	22.6	1983-90
0210797940	Limestone Creek at NC 24 near Hadley, NC	1.61	1986-88
02108500	Rockfish Creek near Wallace, NC	69.3	1955-81
02108548	Little Rockfish Creek at Wallace, NC	7.8	1976-92
Pee Dee River Basin			
02112500	Fisher River near Dobson, NC	109	1920-32
02113500	Yadkin River at Siloam, NC	1,226	1976-87
02115500	Forbush Creek near Yadkinville, NC	22.1	1940-71
02115750	Muddy Creek near Lewisville, NC	82.8	1964-70
02115800	Silas Creek near Clemmons, NC	11.8	1964-70
02115842	Tar Branch tributary at First Street at Winston-Salem, NC	.04	1979-82
02115850	Salem Creek at Winston-Salem, NC	51.3	1964-70
02115854	Salem Creek tributary at Hawthorne Road, Winston-Salem, NC	.50	1979-82
02115856	Salem Creek near Atwood, NC	65.6	1971-82
02115860	Muddy Creek near Muddy Creek, NC	186	1964-79 1988-91
02115900	South Fork Muddy Creek near Clemmons, NC	42.9	1964-79 1988-91
02117030	Humpy Creek near Fork, NC	1.05	1968-83
02117500	Rocky Creek at Turnersburg, NC	101	1940-71
02119000	South Yadkin River at Cooleemee, NC	569	1928-65
02119400	Third Creek near Stony Point, NC	4.84	1956-69
02120500	Third Creek at Cleveland, NC	87.4	1940-71
02121000	Yadkin River near Salisbury, NC	3,450	1895-1927
02121180	North Potts Creek at Linwood, NC	9.62	1980-90
02121493	Leonard Creek near Bethesda, NC	5.16	1978-81
02122500	Yadkin River at High Rock, NC	4,000	1919-27
02123000	Uwharrie River near Trinity, NC	11.3	1934-41
02123500	Uwharrie River near Eldorado, NC	342	1938-71
02124471	Dutch Buffalo Creek at NC 49 near Mount Pleasant, NC	45.1	1985-87
02125500	Richardson Creek near Marshville, NC	170	1940-44
02125557	Gourdvine Creek at SR 1715 near Olive Branch, NC	8.75	1978-82
02125696	Lane Creek at SR 2115 near Trinity, NC	3.98	1969-79
02125699	Wicker Branch at SR 1940 near Trinity, NC	5.83	1978-82
02125816	Lane's Creek near Marshville, NC	87.8	1985-87
02126500	Little Brown Creek near Polkton, NC	13.5	1935-41
02127000	Brown Creek near Polkton, NC	110	1937-71
02127500	Pee Dee River near Ansonville, NC	6,330	1938-42
02129500	North Fork Jones Creek near Wadesboro, NC	9.43	1935-41
0213228795	Jordan Creek near Silver Hill, NC	0.36	1983-93
Santee River Basin			
02137000	Mill Creek at Old Fort, NC	20.7	1960-75
02138000	Catawba River near Marion, NC	172	1941-81

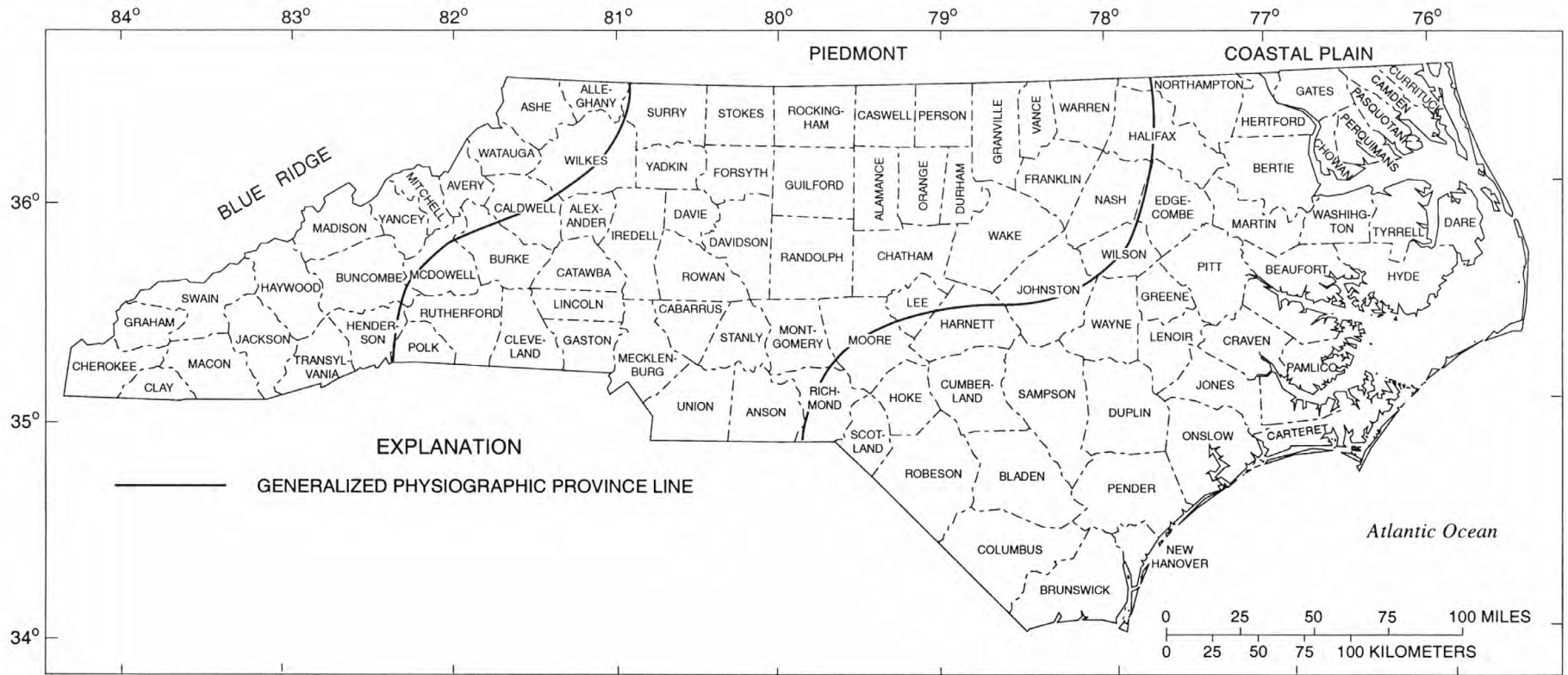
## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station number	Station name	Drainage area (mi <sup>2</sup> )	Period of record
Santee River Basin--Continued			
0213875850	High Shoals Creek near Dysartsville, NC	2.38	1986-88
02139200	Bailey Fork near Morganton, NC	7.86	1966-70
02139650	East Prong near Morganton, NC	8.94	1966-74
0214042720	North Harper Creek near Kawana, NC	1.25	1986-88
02141150	Lower Creek at Mulberry Street at Lenoir, NC	31.8	1966-78
02141245	Lower Creek at SR1501 near Morganton, NC	89.5	1993-94
0214183365	Upper Little River at SR1740 near Petra Mills, NC	33.9	1993-94
0214192500	Middle Little River at Moretz Dam near Bethlehem, NC	46.1	1993-94
02142500	Catawba River at Catawba, NC	1,535	1896-99 1935-62
02142600	Mountain Creek near Terrell, NC	42.4	1957-62
0214620760	Irwin Creek at Starita Road at Charlotte, NC	4.40	1989-94
02146450	Briar Creek at Sharon Road, Charlotte, NC	18.5	1962-73
02146500	Little Sugar Creek near Charlotte, NC	41.0	1924-78
02146579	Irvin's Creek at Lebanon Road near Mint Hill, NC	5.27	1983-90
0214678230	Walker Branch at SR1123 near Pine Harbor, NC	4.52	1991-94
02148500	Broad River near Chimney Rock, NC	97.0	1927-58
02149702	Green River near Saluda, NC	104	1972-75
02150000	Green River near Mill Spring, NC	174	1940-54
02151000	Second Broad River at Cliffside, NC	220	1925-97
02152000	Sandy Run Creek near Boiling Springs, NC	67.0	1925-28
02152500	First Broad River near Lawndale, NC	200	1940-71
02152610	Sugar Branch near Boiling Springs, NC	1.42	1968-87
Kanawha River Basin			
03161500	South Fork New River near Crumpler, NC	325	1908-16
03162500	North Fork New River at Crumpler, NC	277	1908-16 1928-58
Tennessee River Basin			
03439500	French Broad at Calvert, NC	103	1924-55
03440500	Davidson River near Davidson River, NC	31.0	1904-09
03441440	Little River above High Falls near Cedar Mountain, NC	26.8	1963-90
03441500	Little River near Penrose, NC	41.4	1942-55
03442000	Crab Creek near Penrose, NC	10.9	1942-55
03444000	Boylston Creek near Horseshoe, NC	14.8	1942-55
03444500	South Fork Mills River at the Pink Beds, NC	9.99	1926-49 1965-73
03445000	South Fork Mills River near Sitton, NC	40.0	1904-09 1925-26
03445500	North Fork Mills River at Pinkbed, NC	23.1	1904-09
03446500	Clear Creek near Hendersonville, NC	42.2	1945-55
03447000	Mud Creek at Naples, NC	109	1938-55
03447500	Cane Creek at Fletcher, NC	63.1	1942-58
03448000	French Broad River at Bent Creek, NC	676	1933-86
03448500	Hominy Creek at Candler, NC	79.8	1942-77
03448960	North Fork Swannanoa River below Burnett Reservoir near Black Mountain, NC	22.1	1976-77
03449000	North Fork Swannanoa River near Black Mountain, NC	23.8	1926-58
03449500	Swannanoa River at Swannanoa, NC	58.8	1907-09 1926-31
0345092550	Ross Creek at Beaucatcher Road at Asheville, NC	2.46	1986-89
0345112600	Nasty Branch at Asheville, NC	1.19	1986-89
03451510	Reed Creek above Barnard Avenue at Asheville, NC	2.13	1986-89
03452000	Sandymush Creek near Alexander, NC	79.5	1942-55
03452001	Sandymush Creek 1.1 mile above mouth near Alexander, NC	79.5	1975-77

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station number	Station name	Drainage area (mi <sup>2</sup> )	Period of record
Tennessee River Basin--Continued			
03454000	Big Laurel Creek near Stackhouse, NC	126	1934-71
03454500	French Broad River at Hot Springs, NC	1,567	1934-49
03456000	West Fork Pigeon River below Lake Logan near Waynesville, NC	55.3	1954-80
03457000	Pigeon River at Canton, NC	133	1907-09 1928-83
03457500	Allen Creek near Hazelwood, NC	14.4	1949-72
03458500	Pigeon River near Crabtree, NC	243	1920-29
03459000	Jonathan Creek near Cove Creek, NC	65.3	1930-72
03460500	Pigeon River near Mount Sterling, NC	460	1924-30
03462000	North Toe River at Altapass, NC	104	1938-57
03462500	North Toe River above Spruce Pine, NC	111	1934-38
03463500	South Toe River at Newdale, NC	60.8	1934-52
03464000	Cane River near Sioux, NC	157	1934-71
03464500	Nolichucky River at Poplar, NC	608	1925-55
03480500	Elk River near Banner Elk, NC	17.8	1934-40
03481000	Elk River near Elk Park, NC	42.0	1934-55
03500500	Cullasaja River at Highlands, NC	14.9	1931-71
03501000	Cullasaja River at Cullasaja, NC	86.5	1907-09 1921-71
03501500	Little Tennessee River at Franklin, NC	295	1909-10 1921-25
03502000	Little Tennessee River at Iotla, NC	323	1929-45
03502500	Little Tennessee River at Etna, NC	374	1926-29
03503500	Little Tennessee River at Almond, NC	451	1912-17
03505500	Nantahala River at Nantahala, NC	144	1942-81
03506500	Nantahala River at Almond, NC	174	1912-17 1920-43
03507000	Little Tennessee River at Judson, NC	664	1912-44
03508000	Tuckasegee River at Tuckasegee, NC	143	1934-76
03508136	Caney Fork near Cowarts, NC	32.0	1975-76
03508910	Scott Creek at Willets-Ochre Hill, NC	22.4	1993-95
03509000	Scott Creek above Sylva, NC	51.0	1941-75 1993-95
03509500	Scott Creek at Sylva, NC	55.0	1928-41
03510500	Tuckasegee River at Dillsboro, NC	347	1933-81
03511000	Oconaluftee River at Cherokee, NC	131	1921-49
03513500	Noland Creek near Bryson City, NC	13.8	1935-71
03514000	Hazel Creek at Proctor, NC	44.4	1942-52
03515000	Little Tennessee River at Fontana Dam, NC	1,571	1938-55
03516000	Snowbird Creek near Robbinsville, NC	42.0	1942-52
03517000	Cheoah River at Johnson, NC	177	1912-18 1920-26
03517500	Cheoah River at Tapoco, NC	215	1924-27
03546000	Shooting Creek near Hayesville, NC	37.6	1922-24 1942-45 1946-55
03547000	Hiwassee River below Chatuge Dam near Hayesville, NC	190	1942-74
03548000	Hiwassee River below Hayesville, NC	252	1934-45
03554000	Nottely River near Ranger, NC	272	1901-05 1914-17 1919-29 1932-45
03555000	Hiwassee River at Hiwassee Dam, NC	968	1934-43





COUNTIES AND PHYSIOGRAPHIC PROVINCES OF NORTH CAROLINA

## INTRODUCTION

Water-resources data for the 1998 water year for North Carolina consist of records of stage, discharge, and water-quality for streams; stage and contents for lakes and reservoirs; and ground water levels and water-quality of ground-water. This report contains discharge records for gaging stations; stage and contents for lakes and reservoirs; water quality for gaging stations and miscellaneous sites; and continuous daily tide stage at site. Additional water data were collected at sites not involved in the systematic data-collection program, and are published as miscellaneous measurements in this report. The collection of water-resources data in North Carolina is a part of the National Water-Data System operated by the U.S. Geological Survey in cooperation with State, municipal, and Federal agencies.

Stream-discharge records, and contents and stage for lakes or reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were published annually; beginning in 1961, these water-supply papers were published every 5 years through 1970. Records of chemical quality, water temperature, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Water-supply papers can be found in the libraries of principal cities and universities throughout the United States or can be purchased from the U.S. Geological Survey, Earth Science Information Center, Open-File Reports Section, Denver Federal Center, Box 25286, Mail Stop 517, Denver, Colorado 80225.

Streamflow data since the 1961 water year and water-quality data since the 1964 water year have been released by the U.S. Geological Survey in annual reports on a State-by-State basis. These reports provide timely release of water data in each State for each water year. Through 1970 these data also were released in the water-supply paper series mentioned above.

Publication of streamflow and water-quality data, beginning with the 1971 water year, and ground-water data, beginning with the 1975 water year currently is limited to reports on a State-by-State basis. Beginning with the 1975 water year, these Survey reports carry 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 report is identified as "U.S. Geological Survey Water-Data Report NC-98-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

Additional information for ordering specific reports, can be obtained from the District Chief at the address listed on the back of the title page of this report or by calling (919) 571-4000.

## COOPERATION

Cooperative agreements between the U.S. Geological Survey (USGS) and organizations of the State of North Carolina for the systematic collection of water-resources data began in 1895 and continued through 1909. Following a lapse of 8 years, the State of North Carolina resumed cooperation in October 1918. Organizations that assisted in collecting the data contained in this report through cooperative agreements with the USGS are:

North Carolina Cooperative Extension Service	City of Raleigh
North Carolina Department of Environment and Natural Resources	City of Rocky Mount
North Carolina Department of Transportation	Town of Bethel
City of Asheville	Town of Chapel Hill
City of Brevard	Triangle Area Water Supply Monitoring
City of Charlotte	Steering Committee
City of Danville, Virginia	Winston-Salem/Forsyth County
City of Durham	Utility Commission
City of Morganton	Mecklenburg County
City of Greensboro	Orange County

The following Federal agencies assisted in the data-collection program by furnishing funds or services:

Corps of Engineers, U.S. Army	Fort Bragg, Camp Lejeune, Department of Defense
Tennessee Valley Authority	Agriculture Research Station, U.S. Department of Agriculture
National Weather Service, NOAA,	
U.S. Department of Commerce	

The following organizations aided in collecting records:

Carolina Power and Light Co.; Champion International Corp.;  
Duke Power Co.; Yadkin, Inc.; Weyerhaeuser Co.; Virginia Power

## SUMMARY OF WATER-RESOURCES CONDITIONS

Precipitation

Total rainfall for the 1998 year was above average at six National Weather Service index stations across the State (fig. 2). Precipitation totals for the first quarter (October through December) of the 1998 water year varied from 2.63 inches below average (Greensboro) to 1.98 inches above average (Wilmington). Average precipitation amounts are based on data from the 30-year base period 1961-90.

The second quarter (January through March) rainfall totals for the 1998 water year were above average at all six index stations, with some sites reporting monthly totals more than double the average amount. Rainfall recorded at the Raleigh station for January was 7.49 inches, the second wettest January on record since 1887. Additionally, rainfall totals for the second quarter at Raleigh were almost 10 inches above normal. Wet conditions observed across the State during this quarter may have been a result of the 1997-98 El Niño weather pattern.

Third quarter (April through June) rainfall totals also were above average at all but one (Elizabeth City) of the index stations. However, monthly totals varied widely during the quarter. Three stations (Asheville, Charlotte, and Elizabeth City) reported individual monthly values more than 2 inches below average, and four stations (Asheville, Charlotte, Greensboro, and Wilmington) reported individual monthly totals more than 2 inches above average.

Rainfall during the last quarter (July through September) was generally near or below normal across the State. However, Hurricane Bonnie brought heavy rains to the eastern part of the State resulting in a monthly recorded total rainfall at Wilmington of 13.48 inches for August, or more than 6 inches above the average for that month. Conversely, dry conditions were observed in the western part of the State where Asheville recorded monthly rainfall deficits in excess of 2 inches for each month of the quarter. This resulted in the activation of the North Carolina Drought Monitoring Council, a multi-agency task force that monitors drought conditions and their impacts.

In summary, while above-average annual precipitation was reported for the year at each index station, both positive and negative monthly departures, often quite large departures, from normal were reported at most locations. Greensboro and Raleigh had the smallest monthly negative departures (monthly rainfall less than normal). Wilmington and Asheville had both the largest positive and negative monthly departures from normal.

Surface Water

Streamflow conditions in North Carolina are greatly influenced by precipitation. Excess rainfall may produce rapid responses in streamflow. Streamflow also declines following periods of deficient rainfall. The rate and magnitude of decline depend on basin size, the season (when evapotranspiration is a factor), and on the amount of ground water in storage at the onset of the dry period. The effects on streamflow of variable rainfall in North Carolina during the 1998 water year are illustrated in figures 3-8. Monthly conditions are depicted in maps (figs. 3 and 4) that show the regions of above-normal (excessive), normal, and below-normal (deficient) streamflow.

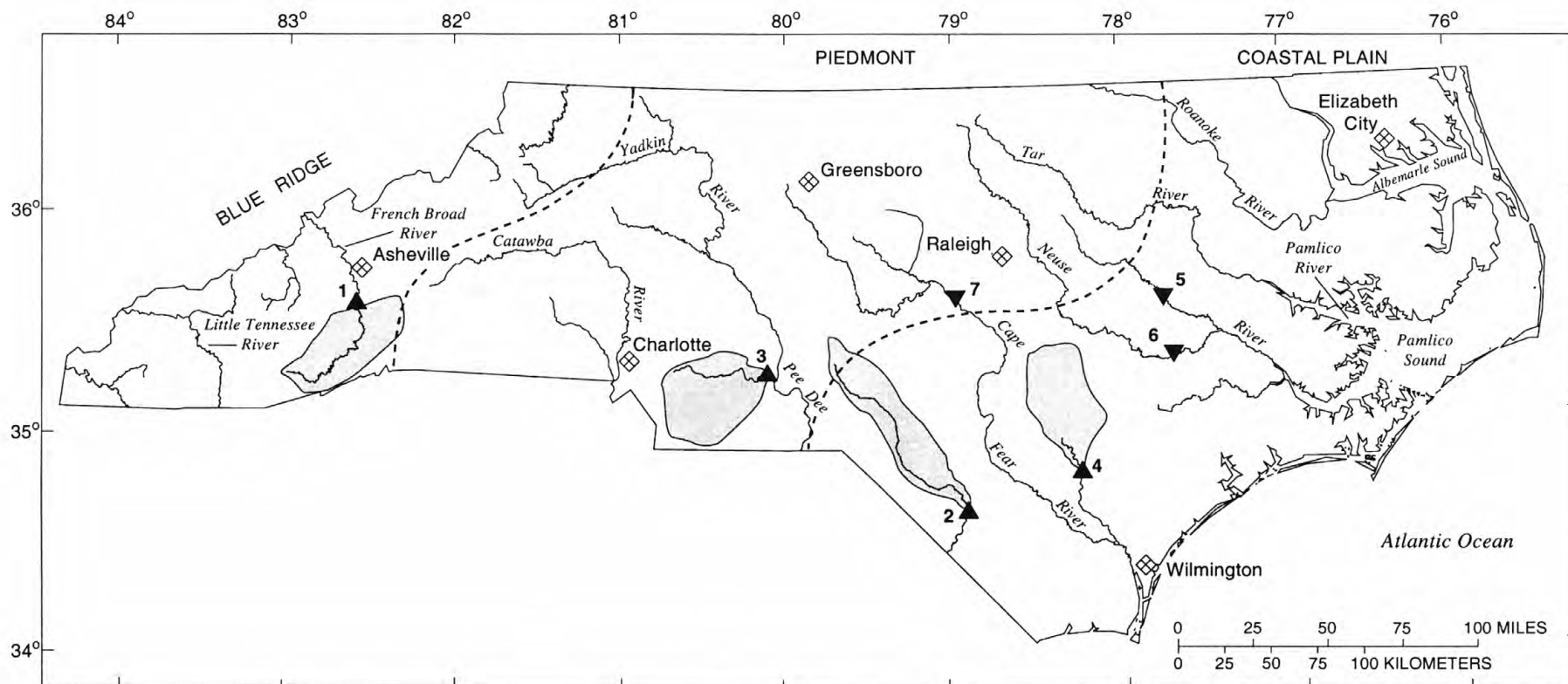
Data for the 30-year base period 1961-90 from 35 index gaging stations across the State were used to compute monthly flow statistics (figs. 3 and 4). These stations are located on streams that are free of significant regulations or diversions and range in size from about 30 to 1400 square miles. The descriptors, "above normal," "normal," and "below normal," refer to flow in the upper quartile, the middle two quartiles, and the lower quartile, respectively.

Responses of daily streamflow to basinwide weather patterns throughout the year at four long-term index stations across the State (fig. 1) are shown in figures 5-8. These figures show the daily mean discharge hydrograph for the 1998 water year superimposed on the 1961-90 median daily discharge hydrograph for each index station.

Streamflow conditions were generally in the normal range across the State during October 1997 (fig. 3A). However, three index stations in the southern Piedmont reported above-normal conditions, and several stations near the northern boundary of the State reported below-normal conditions. Potecasi Creek near Union, in the northwestern Coastal Plain, recorded the third lowest monthly flow in more than 40 years.

Greater-than-normal rainfall in the southern Coastal Plain and southern Piedmont during November 1997 resulted in above-normal streamflow conditions in those areas (fig. 3B). However, a recorded rainfall deficit of nearly 2 inches at Asheville resulted in below-normal streamflow conditions at 9 index stations in the western part of the State. Normal streamflow conditions persisted in the remainder of the State (fig. 3B). These conditions were generally the same in December 1997 (fig. 3C).

Above-average rainfall for January 1998 resulted in above-normal streamflow conditions at 34 of the 35 index stations (fig. 3D). Four index stations recorded the greatest monthly mean discharges in January for the period of record (Big Bear Creek near Richfield, 45 years; Rocky River near Norwood, 69 years; Little River near Star, 45 years; East Fork Pigeon River near Canton, 45 years). Ten additional sites



## EXPLANATION





	MAP NUMBER	STATION NUMBER	STATION NAME	
	GENERALIZED PHYSIOGRAPHIC PROVINCE LINE	1	03451500	French Broad River at Asheville
	SURFACE-WATER INDEX STATION, BASIN AND MAP NUMBER	2	02134500	Lumber River at Boardman
		3	02126000	Rocky River near Norwood
	WATER-QUALITY INDEX STATION AND MAP NUMBER	4	02106500	Black River near Tomahawk
		5	02091500	Contentnea Creek near Hookerton
		6	02089500	Neuse River at Kinston
	NATIONAL WEATHER SERVICE STATION	7	0210215985	Cape Fear River at Brickhaven

Figure 1.--Location of selected long-term index stations for precipitation, discharge, and water-quality.



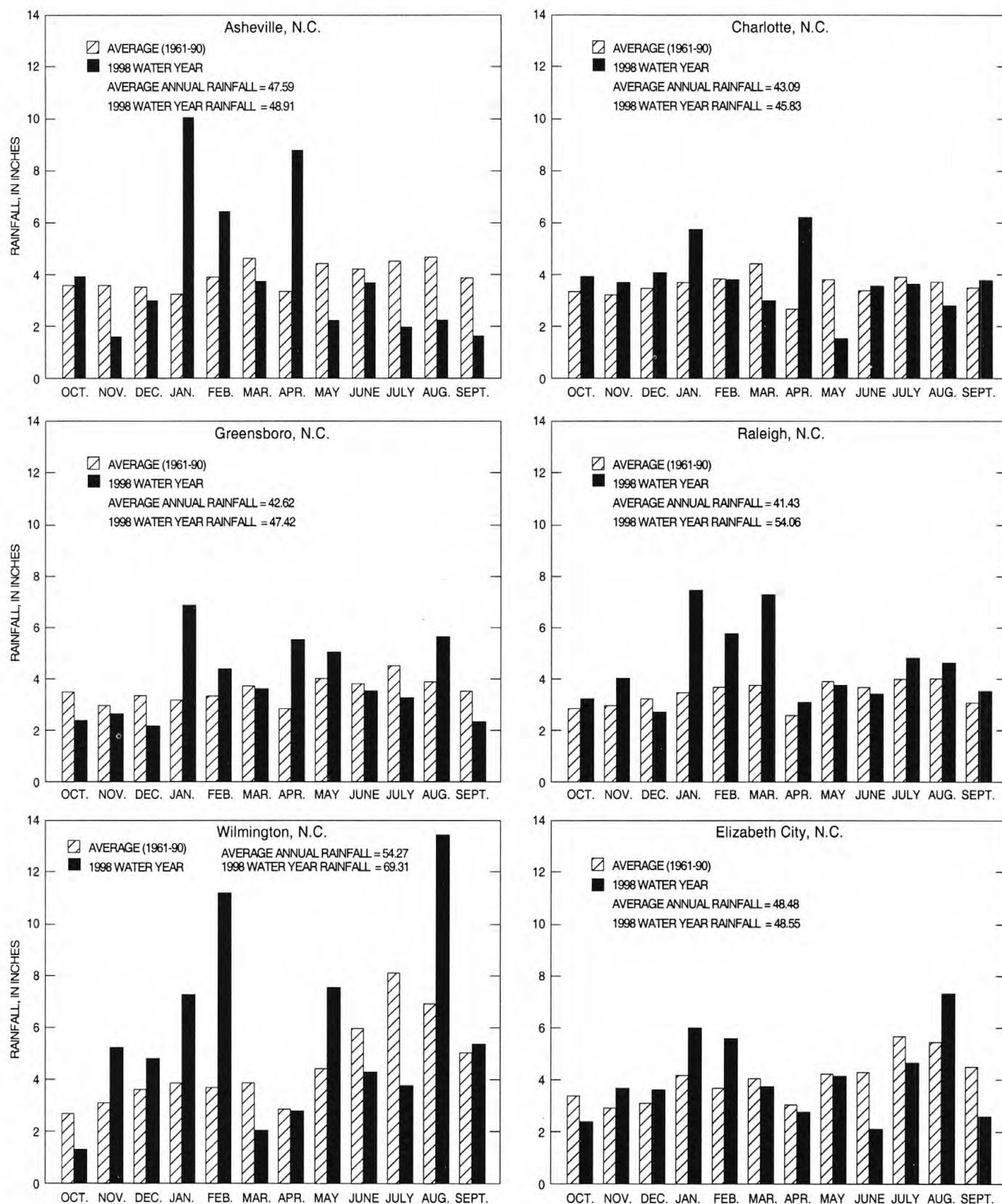


Figure 2.--Monthly rainfall at index stations for 1998 water year and average monthly rainfall for the period 1961-90 (data from National Oceanic and Atmospheric Administration reports).



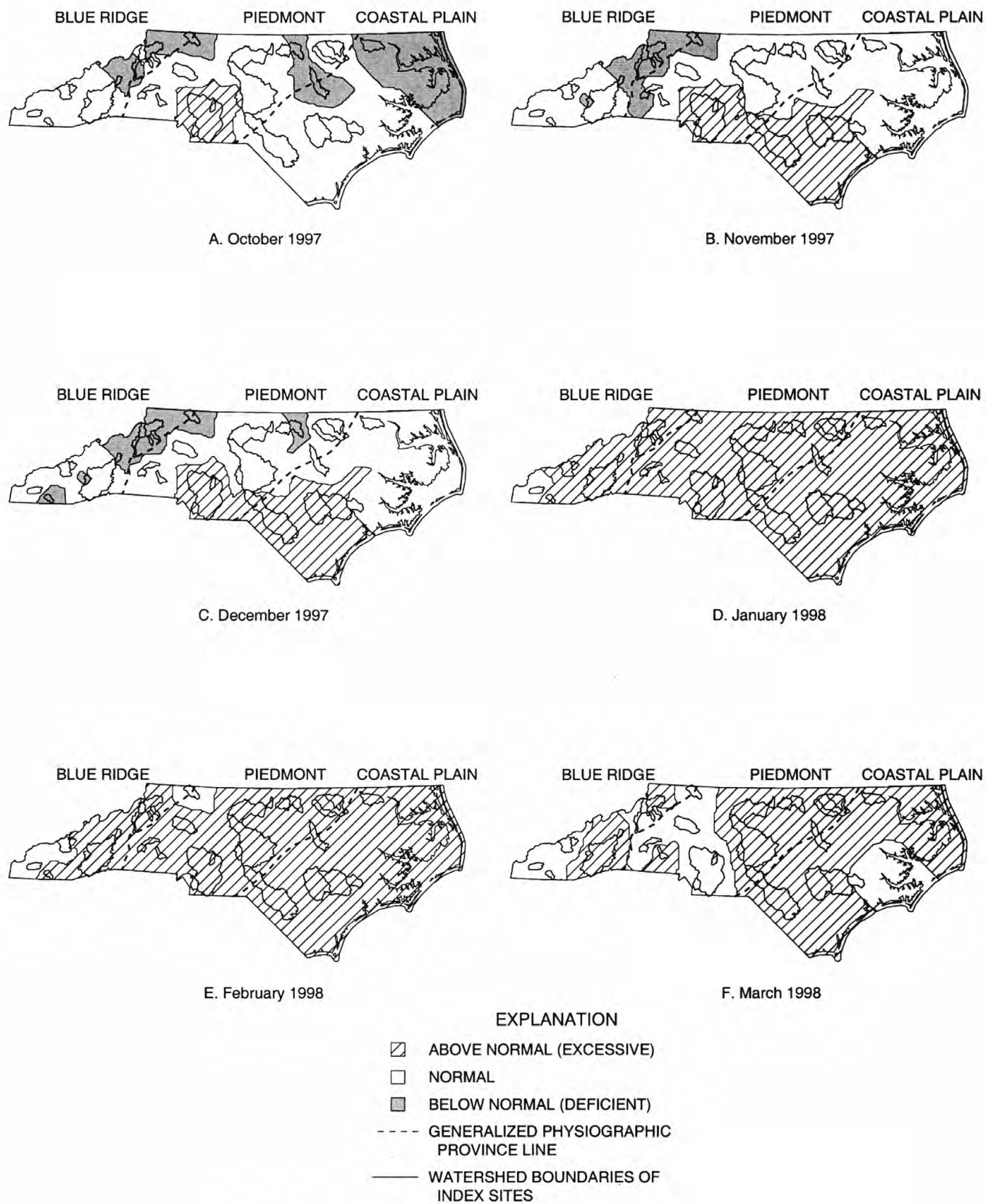


Figure 3.--Monthly streamflow during October - March 1998 water year.

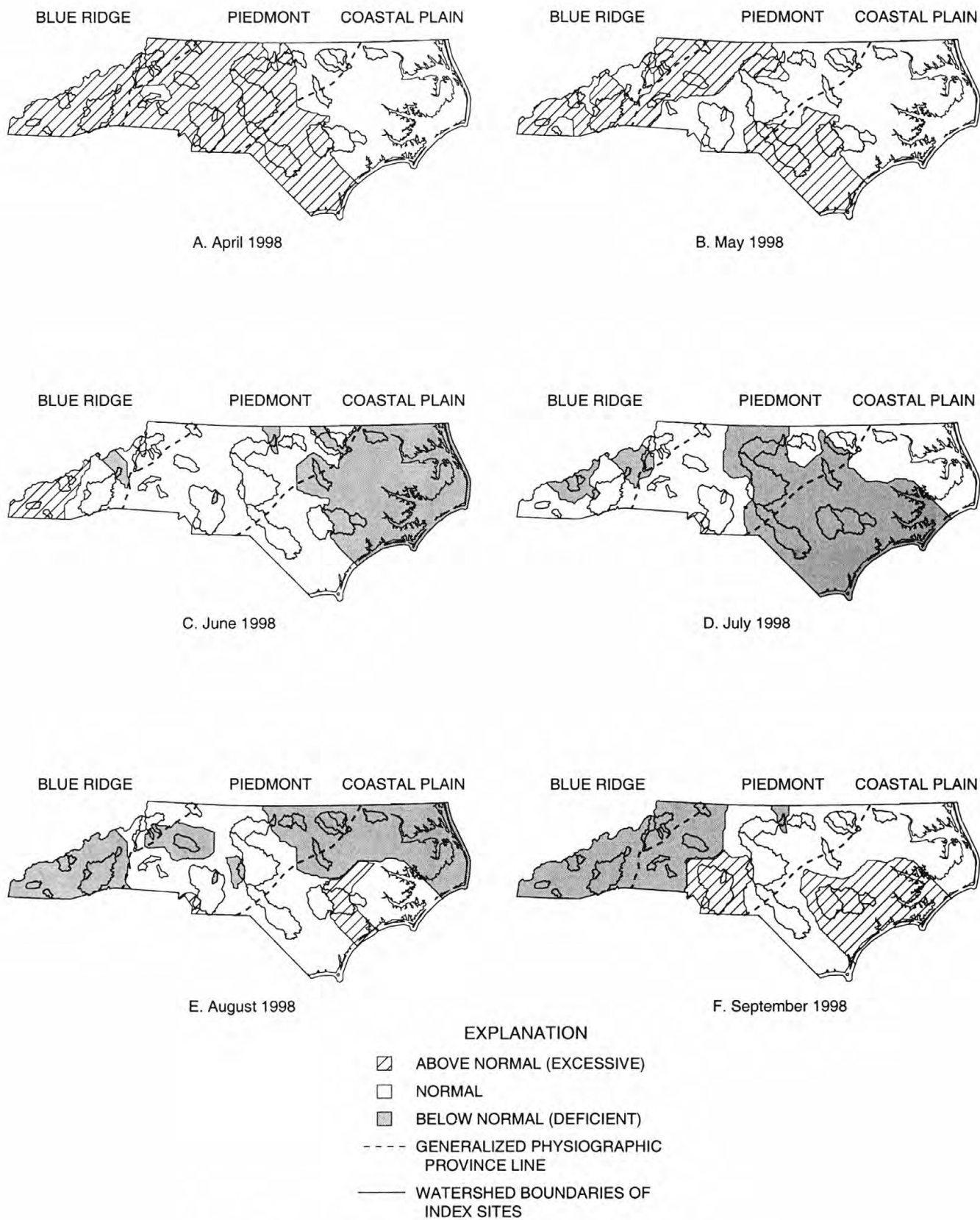


Figure 4.--Monthly streamflow during April - September 1998 water year.

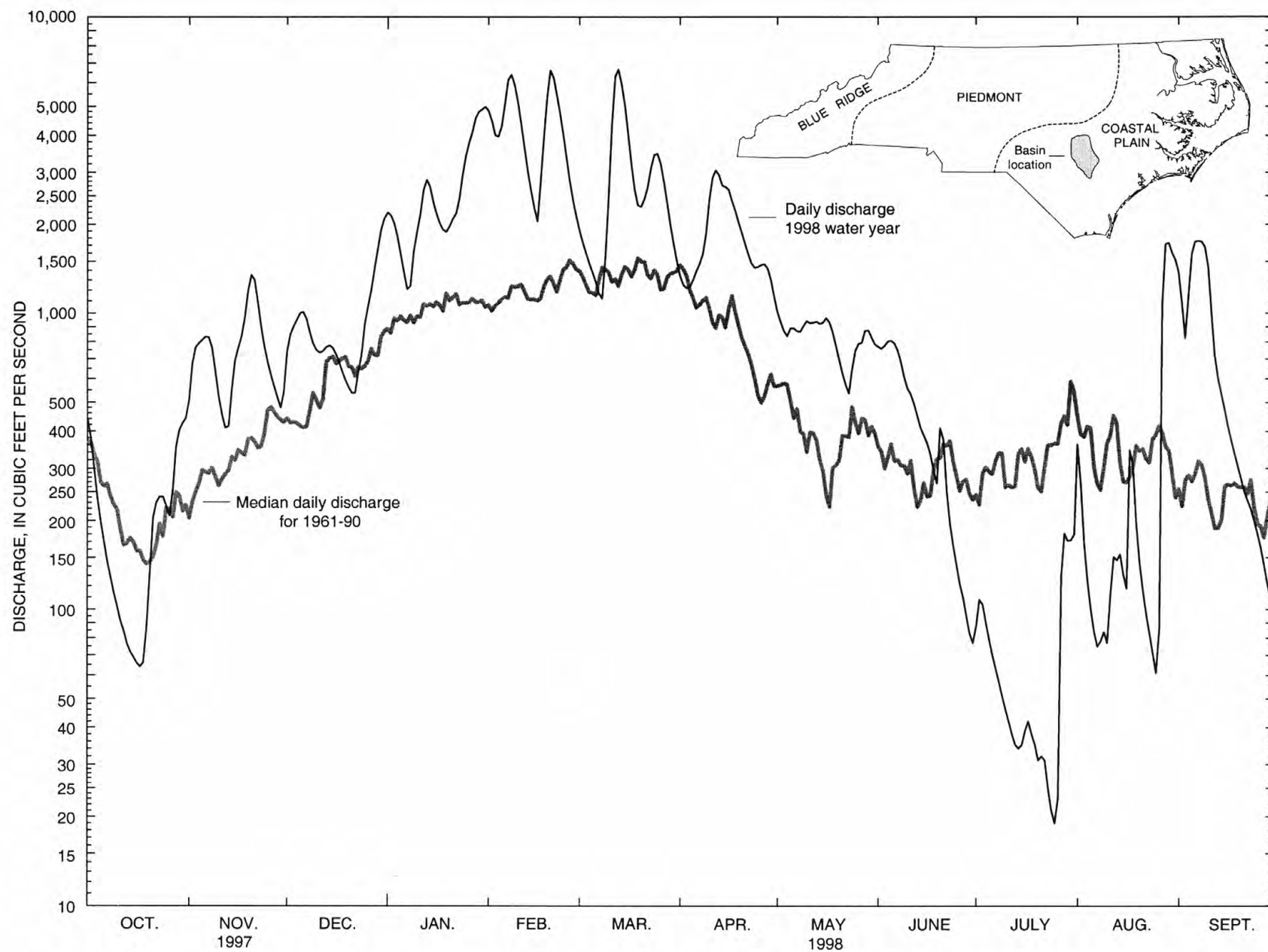


Figure 5.--Daily discharge for 1998 water year and median daily discharge for 1961-90 water years for Black River near Tomahawk (02106500). Location shown in figure 1.

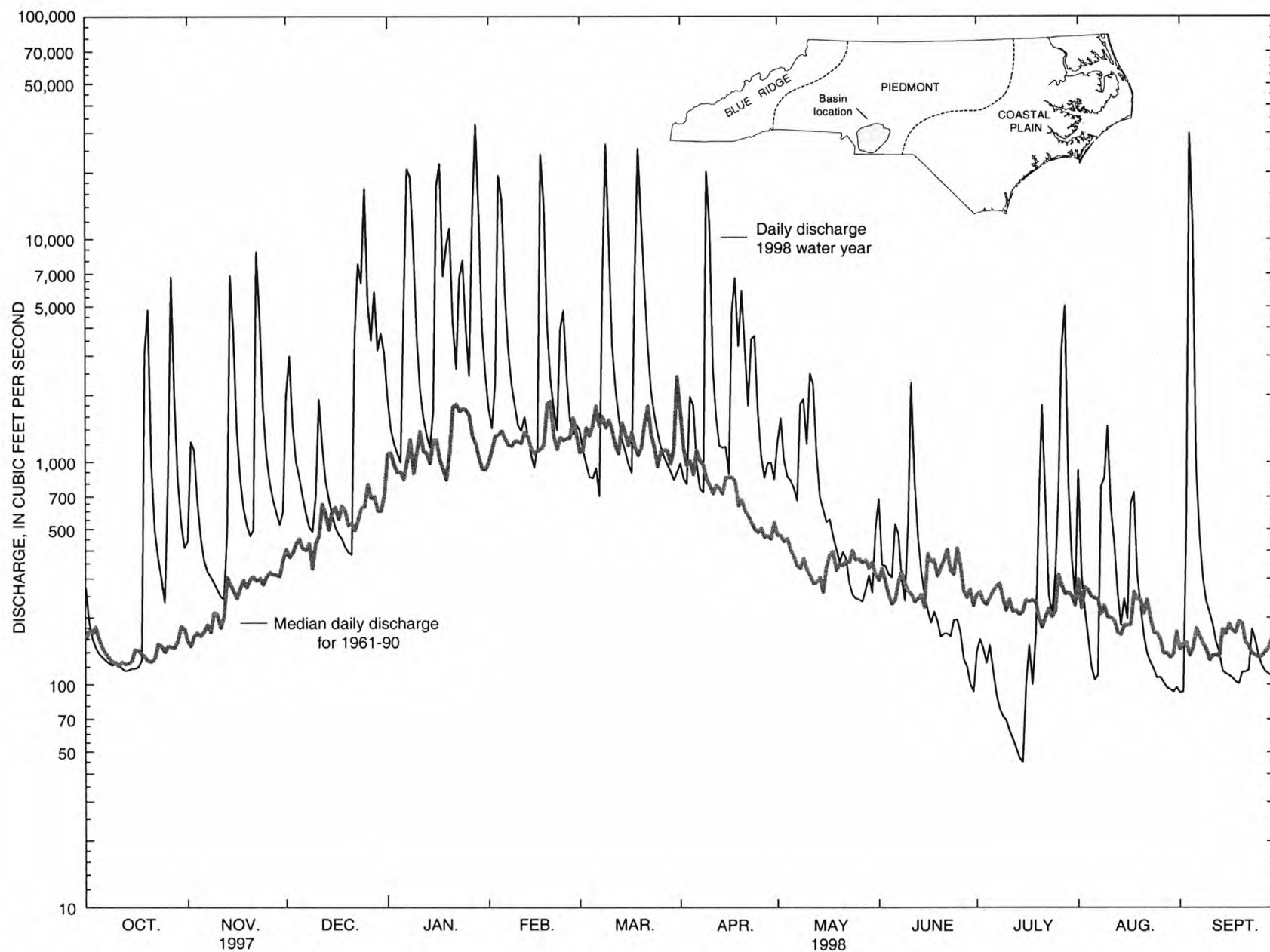


Figure 6.--Daily discharge for 1998 water year and median daily discharge for 1961-90 water years for Rocky River near Norwood (02126000). Location shown in figure 1.

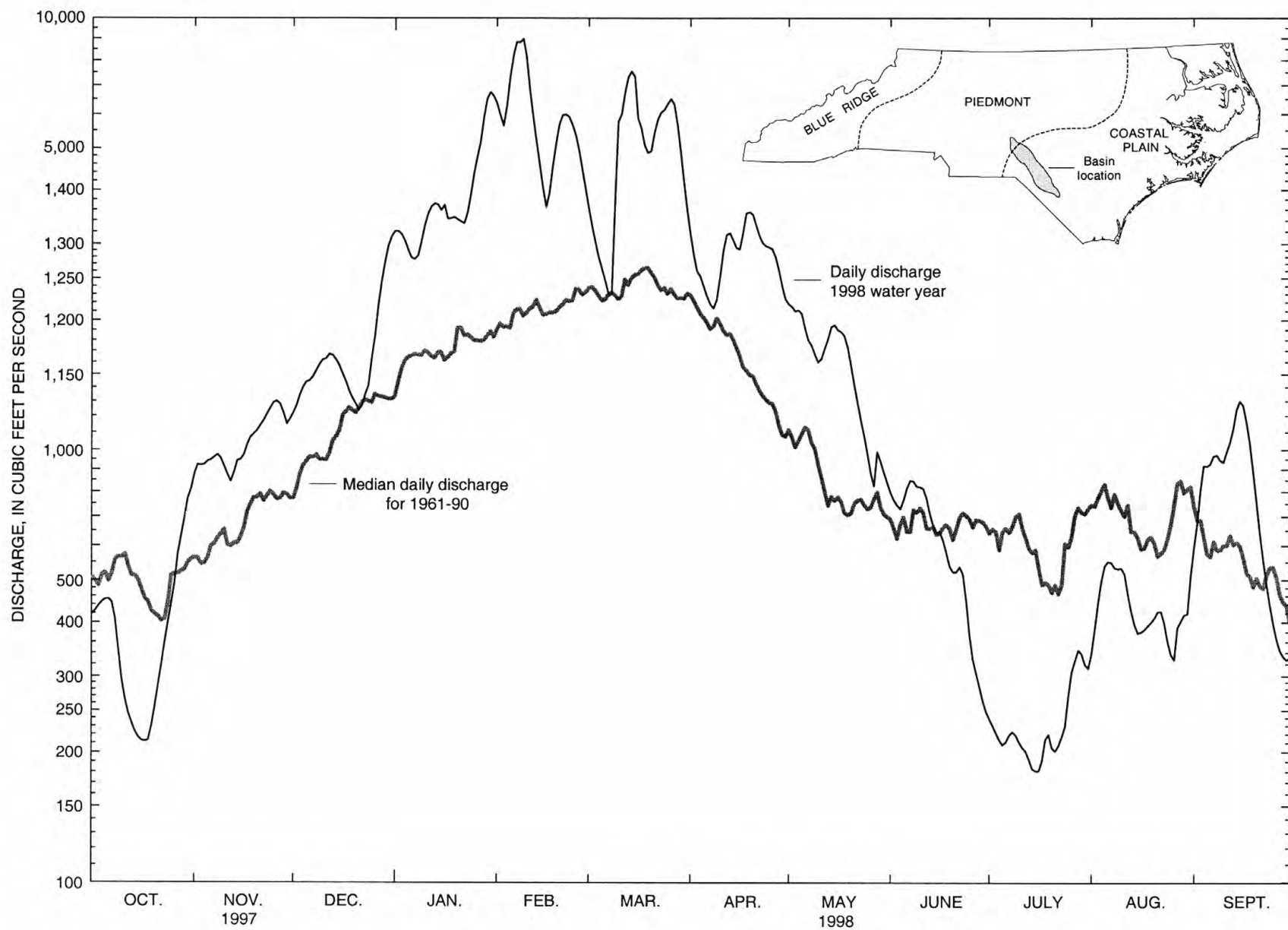


Figure 7.--Daily discharge for 1998 water year and median daily discharge for 1961-90 water years for Lumber River at Boardman (02134500). Location shown in figure 1.



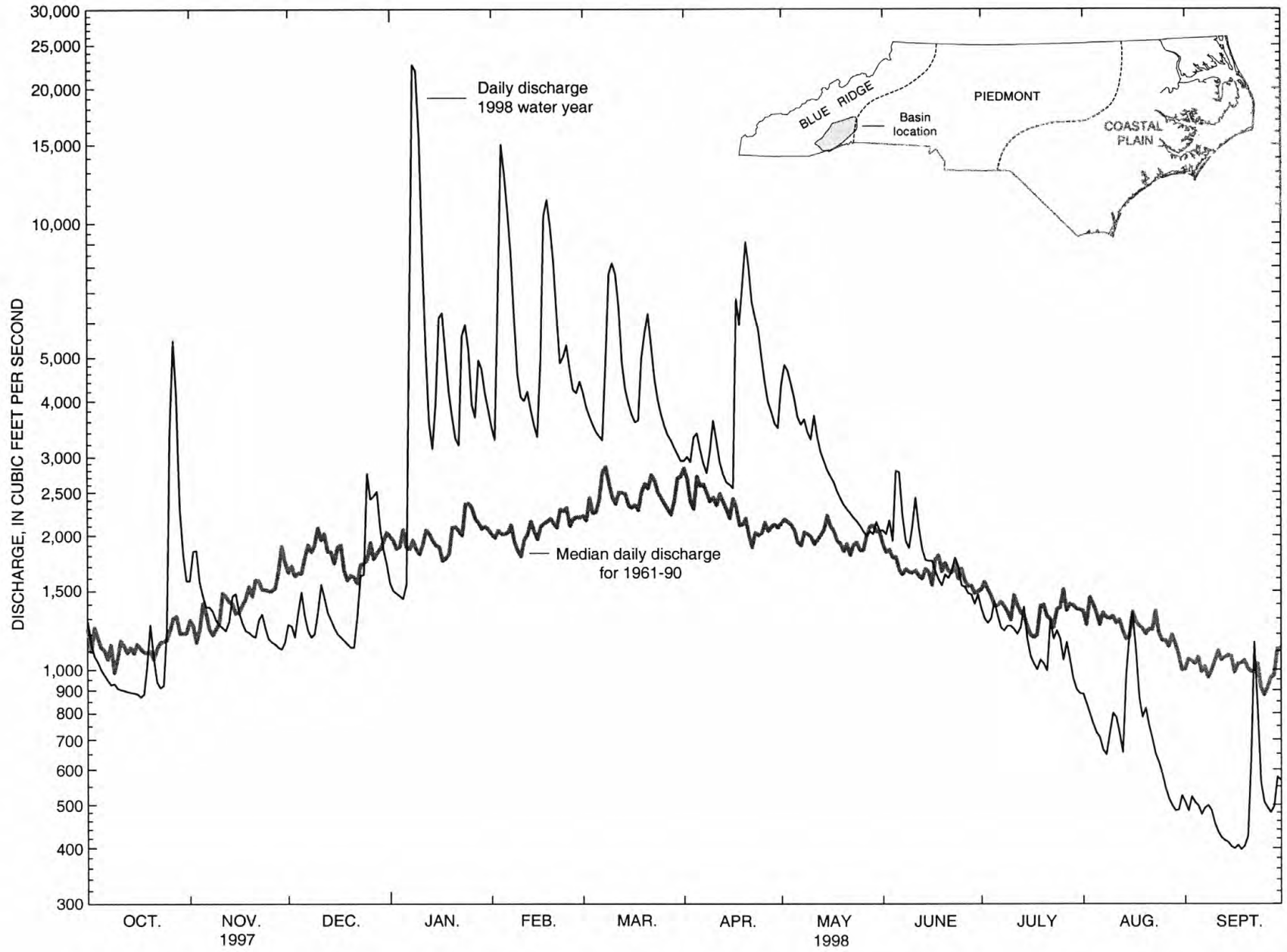


Figure 8.--Daily discharge for 1998 water year and median daily discharge for 1961-90 water years for French Broad River at Asheville (03451500). Location shown in figure 1.

recorded the second highest monthly mean discharges in January for periods longer than 35 years. Moisture from the Gulf of Mexico colliding with a large low-pressure system from the west brought heavy rains and flooding to parts of western and central North Carolina early in the month. USGS crews measured high streamflows on January 8 and 9 to document flooding at more than 20 sites. Some long-term stations reported peak streamflows that were at the 10- to 25-year recurrence interval.

Wet conditions persisted during February 1998 resulting in continued above-normal streamflow conditions at 31 of the 35 index stations (fig. 3E). Thirteen sites with records longer than 35 years reported the greatest monthly mean discharges for February during the respective periods of record. The greatest monthly mean, for February, in 103 years was reported at the French Broad River at Asheville station. Three additional sites reported the second greatest monthly discharges for February, and five sites reported the third greatest monthly discharges for February. These high values occurred throughout all parts of the State.

Twenty of the 35 index stations continued to report above-normal streamflow conditions for March 1998 (fig. 3F), although five of the six weather stations reported below-average rainfall conditions. Six index stations reported record high monthly mean discharges for March, and four index stations reported the second greatest monthly means. Wet conditions persistent through much of the winter were attributed to the 1997-98 El Niño weather pattern. Heavy rainfall on March 18 and 19 brought flooding to a number of sites in the Piedmont and Coastal Plain. River stages and lake levels at some sites exceeded those recorded after the passage of Hurricane Fran in 1996, including Tar River below the Tar River Reservoir near Rocky Mount (station 02082506) and Falls Lake (station 02087182).

Streamflow conditions returned to normal in the northern and central Coastal Plain and northeastern Piedmont during April 1998 (fig. 4A). Yet, most of the remainder of the State received above-average rainfall, and about 70 percent of the index stations continued to report above-normal streamflow conditions.

Areas of normal streamflow conditions continued to expand across the State during May 1998 (fig. 4B). Below-average rainfall recorded in Raleigh, Charlotte, and Asheville resulted in a return to normal streamflow conditions at index stations in those areas. However, more than 35 percent of the sites continued to report above-normal streamflow conditions. Five sites reported above-normal conditions for the fifth consecutive month. Above-normal streamflow conditions were concentrated in the southern Coastal Plain and Blue Ridge provinces.

Rainfall during June 1998 was near or below normal across the State, with Elizabeth City reporting more than 2 inches below normal. Streamflow responded with below-normal conditions in much of the Coastal Plain and a return to normal conditions across much of the Piedmont and Blue Ridge (fig. 4C). Four sites in the western Blue Ridge continued to report above-normal streamflow conditions.

Dry conditions persisted during July 1998, resulting in expanded areas of below-normal streamflow (fig. 4D). Black River near Tomahawk set a new record low in 47 years, for monthly mean streamflow in July. Fourteen of the 35 index stations reported below-normal streamflow conditions. Deficient rainfall and streamflow resulted in the activation of the North Carolina Drought Monitoring Council.

Conditions varied across the State during August 1998 (fig. 4E). Rainfall continued to be below average in the western part of the State with near- or above-average rainfall conditions reported in the central and eastern portions. In the Blue Ridge, a new record for low monthly mean discharge was recorded at East Fork Pigeon River near Canton, where conditions have been monitored continuously since 1954. However, Hurricane Bonnie brought heavy rains to some areas of the Coastal Plain, which resulted in above-normal streamflow conditions being reported at Northeast Cape Fear River near Chinquapin.

Dry conditions expanded in the Blue Ridge and western Piedmont during September 1998. Above-normal conditions were present in parts of the southern Piedmont and southern Coastal Plain while generally normal conditions were reported elsewhere in the State (fig. 4F). Three index stations, all located in the Blue Ridge, reported new monthly record low discharges for September (Elk Creek at Elkville, 33 years; Cataloochee Creek near Cataloochee, 55 years; South Toe River near Celo, 42 years). Three additional index stations, also located in the Blue Ridge, reported the second lowest monthly mean discharges for stations having periods of record greater than 45 years.

The 1998 water year was a year of extremes for streamflow conditions across the State. El Niño brought record high monthly mean discharges to a number of sites. Above-normal streamflow conditions were reported at the majority of index stations during January, February, March, and April 1998, with 13 of the 35 stations reporting above-normal conditions for the four consecutive months. Rainfall deficits during July, August, and September brought below-normal streamflow conditions to index stations across the State with several sites in central and western North Carolina recording new low monthly means. East Fork Pigeon River near Canton set a new record for high monthly mean in January and low monthly mean in August.

### Water Quality

Three sites were selected as water-quality index stations--Contentnea Creek near Hookerton (733 mi<sup>2</sup>), Neuse River at Kinston (2,692 mi<sup>2</sup>), and Cape Fear River near Brickhaven (3,160 mi<sup>2</sup>). These stations drain watersheds in the Piedmont (Cape Fear River), and Coastal Plain (Neuse River and Contentnea Creek) Provinces of North Carolina. The USGS collected water-quality data from water samples collected at these sites during the 1998 water year as part of the USGS National Water-Quality Assessment (NAWQA) Program (Spruill and others, 1995) and the Triangle Area Water Supply Monitoring Project (Childress and Bathala, 1997).

In addition to instantaneous discharge at the time of sample collection, concentrations of total phosphorus, nitrate plus nitrite, ammonia plus organic nitrogen, total organic carbon, total dissolved solids, and suspended-sediment are shown on hydrographs of daily mean discharge for the 1998 water year (fig. 9). Greatest total phosphorus concentrations occurred in Contentnea Creek during the summer months (fig. 9a). Decreases in total phosphorus concentrations during the winter months correspond with seasonal increases in discharge in Contentnea Creek and the Neuse River (fig. 9a and 9b). Total phosphorus concentrations in the Cape Fear and Neuse Rivers ranged from approximately 0.05 to 0.15 mg/L but were somewhat higher in Contentnea Creek. Nitrate plus nitrite concentrations were most variable in the Neuse River ranging from 0.2 to 1.4 mg/L. The median nitrate plus nitrite concentration was 0.7 mg/L for the Neuse River and Contentnea Creek. The lowest median and range in nitrate plus nitrite concentrations occurred in the Cape Fear River (fig. 9c) and may reflect the effects of Jordan Dam on water quality. Ammonia plus organic nitrogen concentration was generally less than nitrate plus nitrite concentrations in the Neuse River and Contentnea Creek, whereas ammonia plus organic nitrogen concentrations were generally greater than nitrate plus nitrite concentrations in Cape Fear River. Overall, ammonia plus organic nitrogen concentrations were less variable than nitrate concentrations.

Concentrations of total organic carbon (TOC) were greatest in Contentnea Creek ranging from 6.6 to 13.4 mg/L. The range of concentrations was similar in the Neuse River (5 to 10.6 mg/L). Concentrations of TOC were directly related to discharge in Contentnea Creek and the Neuse River. Lowest concentrations and range in concentrations (7.3 to 9.3 mg/L) occurred in the Cape Fear River where the relation of TOC to discharge was less apparent.

Suspended-sediment and dissolved solids concentrations were similar at all three index stations during the 1998 water year. The greatest suspended-sediment concentration (62 mg/L) occurred in the Neuse River and was associated with high discharge. The highest concentration of total dissolved solids occurred in Contentnea Creek (489 mg/L) near the peak of a relatively small rainfall-runoff event.

### References

- Childress, C.J.O. and Bathala, Neeti, 1997, Water-quality trends for streams and reservoirs in the Research Triangle Area of North Carolina, 1983-95: U.S. Geological Survey Water-Resources Investigations Report 97-4061, 18 p.
- Spruill, T.B., Harned, D.A., Ruhl, P.M., Eimers, J.L., McMahon, Gerard, Smith, K.E., Galeone, D.R., and Woodside, M.D., 1998, Water quality in the Albemarle-Pamlico Drainage Basin, North Carolina and Virginia, 1992-95: U.S. Geological Survey Circular 1157, 36 p.

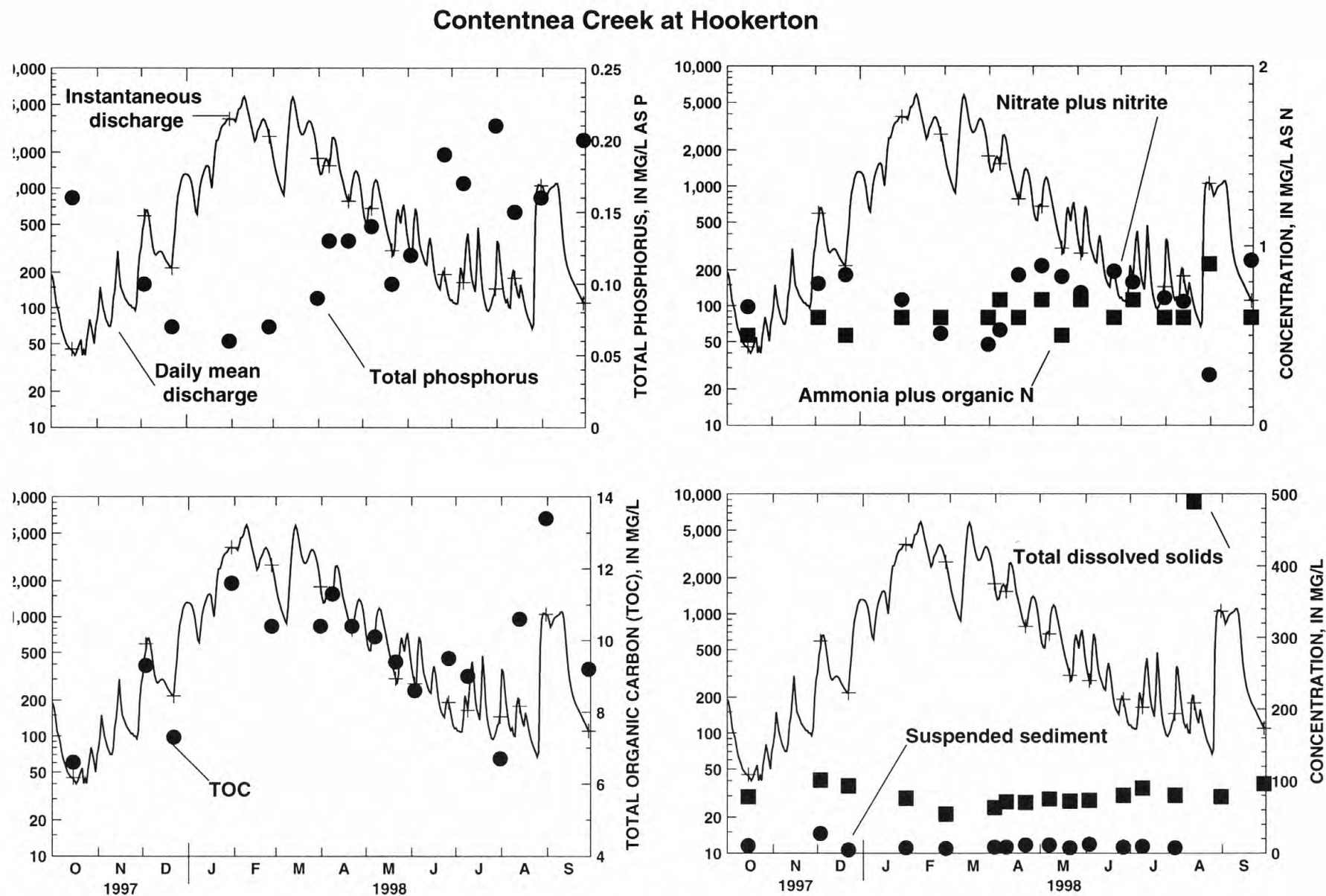


Figure 9a.--Concentration of selected constituents, the associated instantaneous discharge, and daily mean discharge for Contentnea Creek near Hookerton during the 1998 water year.



# Neuse River at Kinston

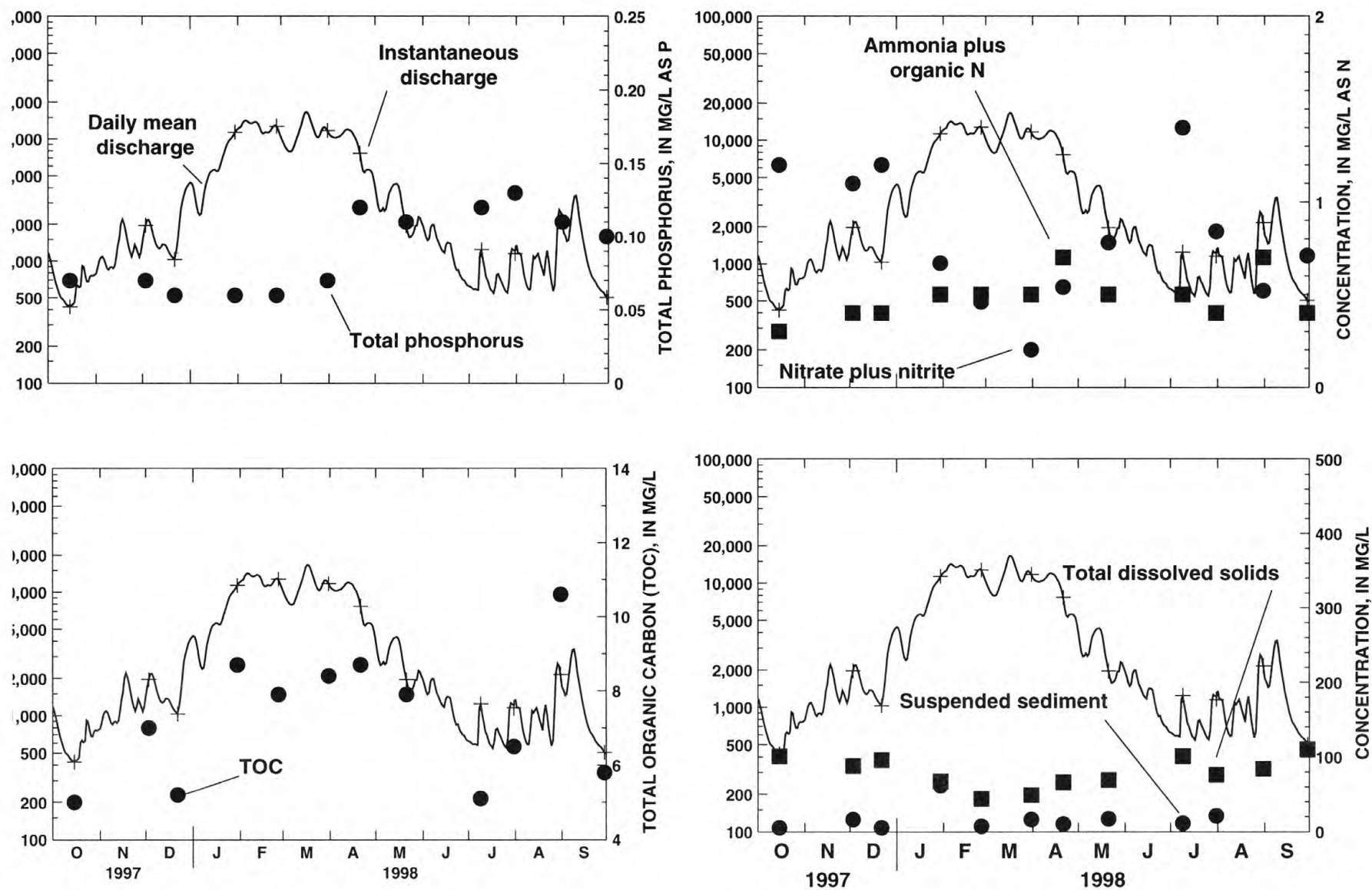


Figure 9b.--Concentration of selected constituents, the associated instantaneous discharge, and daily mean discharge for Neuse River at Kinston during the 1998 water year.

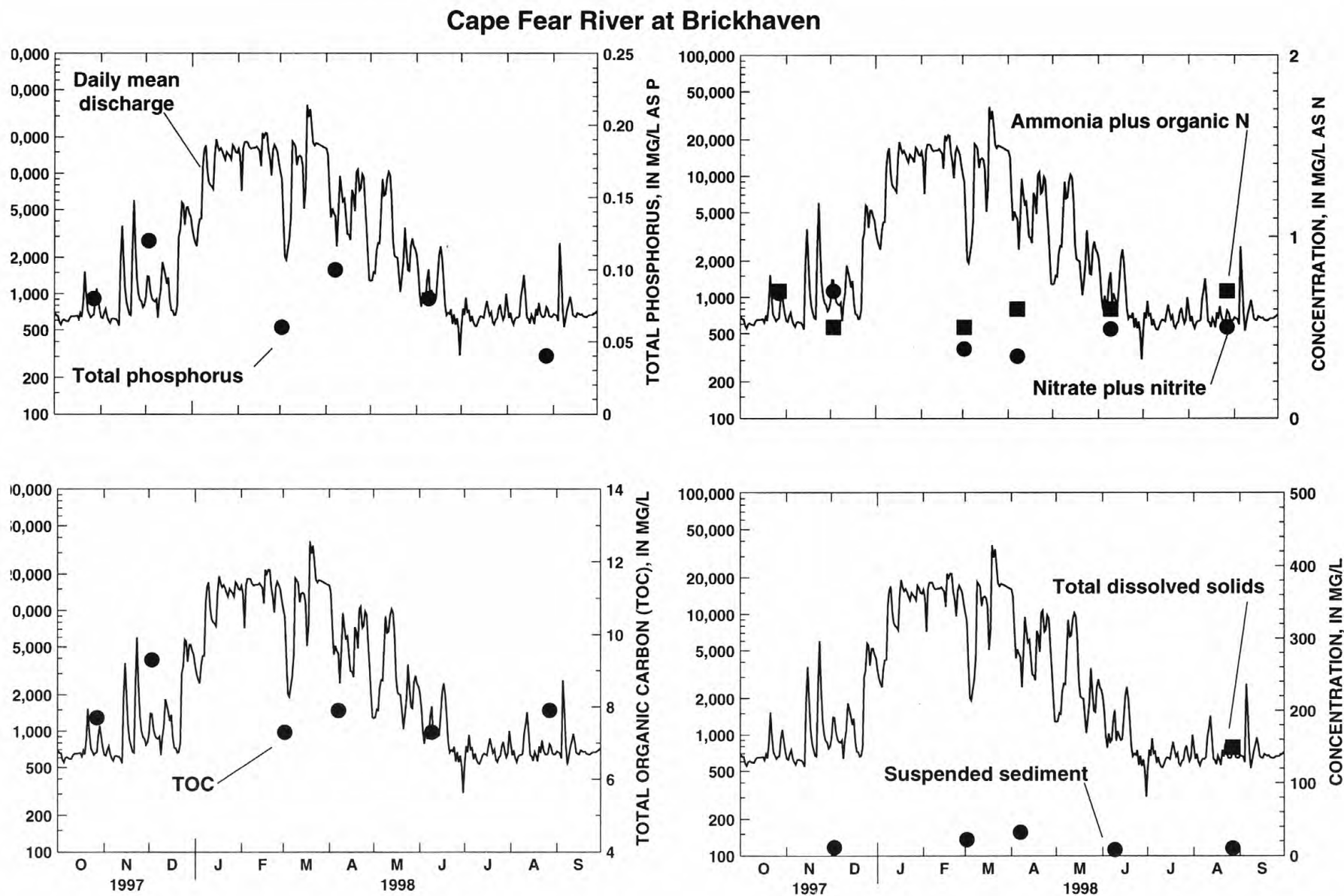


Figure 9c.--Concentration of selected constituents, the associated instantaneous discharge, and daily mean discharge for Cape Fear River near Brickhaven during the 1998 water year.

## 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 hydrology, including water quality, and related factors in 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.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 39 stations. 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.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives; (1) Provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites. (2) Provide the mechanism to evaluate the effectiveness of the significant reduction in SO<sub>2</sub> emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred. (3) Provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO<sub>2</sub> and NO<sub>x</sub> scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at:

<http://nadp.nrel.colostate.edu/NADP>

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 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 53 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 is available through the world wide web at:

[http://wwwrvares.er.usgs.gov/nawqa/nawqa\\_home.html](http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html)

## EXPLANATION OF RECORDS

The surface-water records published in this report are for the 1998 water year that began October 1, 1997, and ended September 30, 1998. 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, and water-quality data. Locations of the stations where the data were collected are shown in figures. 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

### Downstream Order System

used by the USGS to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order number" system is used for surface-water stations, and the "latitude-longitude" system is used for miscellaneous surface-water sites and wells.

Since October 1, 1950, the order of listing hydrologic-station records in USGS reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream 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 show 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- or ten-digit number for each station, such as 02053200 (0208700780), which appears just to the left of the station name, includes the two-digit part number "02" plus the six- or eight digit downstream-order number "053200." The part number designates the major river basin; for example, part "02" is the South Atlantic Slope Basin.

### 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 part 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.).

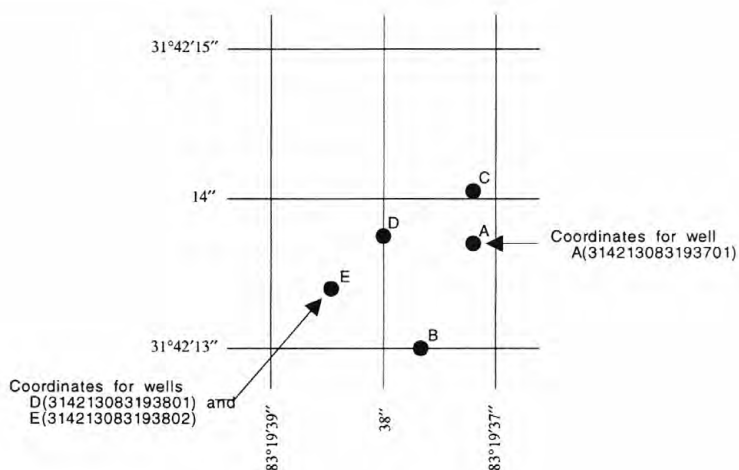


Figure 10.--System for numbering miscellaneous sites and wells.

### 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 can 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 can 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, and they are presented separately in this report.

#### Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consists of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that can 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 can affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained by analog-digital recorders that punch stage values on paper tapes at selected time intervals, or electronic data loggers that either store data electronically on site or transmit it by satellite or telephone telemetry to a computer at the office. Measurements of discharge are made with current meters using methods adapted by the USGS as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chapter A6.

In computing streamflow records, results of individual discharge measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables are prepared indicating the approximate discharge for any stage within the range of the measurements. 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 daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on 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 can 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 backwater from reservoirs, tributary streams, or other sources. This necessitates 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 surveys available from curves or tables that define the relationship of stage and content. The tables are developed from bathymetric surveys. The application of stage to stage-content curves or tables gives the contents from which daily, monthly, or yearly changes are then determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the computed contents may become increasingly in error over time, as 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, 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 can 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

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1991 wateryear. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data

## Data Presentation--Continued

table, and less information is provided in the text or station manuscript above the table. These changes were made as a result of a pilot program to reformat the annual water-data report to meet current user and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of five parts: (1) the manuscript or station description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) a summary statistics table that includes statistical data of annual, daily, and instantaneous flow as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; (5) and a hydrograph of discharge.

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 that follow clarify information presented under the various headings of the station description.

**LOCATION.--**Information on site locations is obtained from the most accurate maps available. The location of the gage is given with respect to cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name. River miles, given for only a few stations, were either 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 there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time when the present station was not, and in a location such that records from it can reasonably be considered equivalent to records from 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 of the reports in which revisions have been published for the station and the water years for 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)" means that only the instantaneous minimum was revised; and "(P)" means 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 referenced to sea level (see glossary), 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 record 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 statement 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, to conditions that affect natural flow at the station, information regarding extremes for period of record and current year data and, possibly, to other pertinent items. For reservoir stations, 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 USGS 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. This information may or may not have been obtained by the USGS.

**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 possibly would be no current or, future station manuscript published to document the revision in a "Revised Records" entry, data users who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. If the data were obtained by computer retrieval, however, the data would be current, and any published revision of data is always accompanied by revision of the corresponding data in computer storage. Manuscript information for lake or reservoir

## Data Presentation--Continued

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.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR which were included prior to the 1987 water year have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

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 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.

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 a designated period, as appropriate. The designated period selected, "FOR 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 that 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.



## Data Presentation--Continued

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 occurring 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 of 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. Note that secondary instantaneous peak discharges above a selected base discharge are stored in district computer files for stations meeting certain criteria. Those discharge values can be obtained by writing to the District office. (See address on back of title page of this report.)

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 (AC-FT).--Indicates the depth, in acre-feet, to which the drainage area would be covered if all of the runoff for the year were uniformly distributed on it.

ANNUAL RUNOFF (CFSM).--Indicates the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area for the year.

ANNUAL RUNOFF (INCHES).--Indicates the depth to which the drainage area would be covered if all the runoff for the year 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 table presents annual maximum stage and discharge at crest-stage stations, and the second table presents 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.

## 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 "e" and noting in a table footnote, "e Estimated," and/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 the true; "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.



### Accuracy of the Records--Continued

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second ( $\text{ft}^3/\text{s}$ ) for values less than  $1 \text{ ft}^3/\text{s}$ ; to the nearest tenth, between  $1.0$  and  $10 \text{ ft}^3/\text{s}$ ; to whole numbers, between  $10$  and  $1,000 \text{ ft}^3/\text{s}$ ; and to three significant figures for values more than  $1,000 \text{ ft}^3/\text{s}$ . 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 as a result of 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 affected by use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents 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 to 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, are on file in the North Carolina District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of unpublished information or on the results of statistical analyses of published records can be obtained from the District office.

### Records of Discharge Collected by Agencies Other Than the U.S. Geological Survey

Records of stream stage not published by the USGS were collected in North Carolina during the 1998 water year by the National Weather Service, NOAA, U.S. Department of Commerce, and other Federal agencies. The USGS National Water Data Exchange (NAWDEx), National Center, Reston, Virginia 22092, maintains an index of such sites. Information on records available at specific sites can be obtained upon request.

### Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

### Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency can be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing- or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in a stream basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values recorded at short intervals. Some records of water quality, such as temperature and specific conductance, can be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 14 and 15.

### Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

### On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on site measurements and for collecting, treating, and shipping samples are given in TWRI's Book 1, Chap. D2; Book

## On-Site Measurements and Sample Collection--Continued

3, Chap. C2; Book 5, Chaps. A1, A3, and A4. All of these references are listed on pages 32 through 35 of this report. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS North Carolina District office.

It is possible for one sample to adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section can vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample for use in determining an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several vertical depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) can be obtained from the USGS North Carolina District office at the address given on the back of the title page of this report.

NOTICE: Values of dissolved and total selenium exceeding 5 mg/L in samples collected prior to 1975 are probably incorrect and should only be used with caution. Values of dissolved selenium greater than 1 mg/L collected prior to 1975 should also be considered questionable, although a fair percentage of them may, in fact, be correct.

## Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. 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.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

## Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

## Laboratory Measurements

Sediment samples, and samples for biochemical oxygen demand (BOD), and indicator bacteria are analyzed locally. All other samples are

## Laboratory Measurements--Continued

analyzed in the USGS laboratory in Arvada, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the USGS laboratories are given in the TWRI's, Book 1, Chap. D2; Book 3, Chap. C2; and Book 5, Chaps. A1, A3, and A4.

In March 1990 the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1990.

MBAS determinations made from January 1, 1970 through August 29, 1993, at the National Water Quality Laboratory in Denver (Analyzing Agency Code 80020) are positively biased. These data can be corrected on the basis of the following equation, if concentrations of dissolved nitrate plus nitrite, as nitrogen, and dissolved chloride, determined concurrently with the MBAS data, are applied:

$$\text{MBASCOR} = \text{M} - 0.0088\text{N} - 0.00019\text{C}$$

where:

MBASCOR = corrected MBAS concentration, in mg/L;

M = reported MBAS concentration, in mg/L;

N = dissolved nitrate plus nitrite, as nitrogen concentration, in mg/L; and

C = dissolved chloride concentration, in mg/L.

The detection limit of the new method is 0.02 mg/L, whereas the detection limit for the old method was 0.01 mg/L. A detection limit of 0.02 mg/L should be used with corrected MBAS data from January 1, 1970 through August 29, 1993.

## Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the water-quality file in the USGS computer data system, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document these changes in the State data-report series or elsewhere, potential users of USGS water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

The surface-water quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following



## Data Presentation--Continued

the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

## Remarks Codes

The following remarks codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (nonideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
V	Analyte was detected in both the environmental sample and the associated blanks.
&	Biological organism estimated as dominant.

## Dissolved Trace-Element Concentrations

NOTE.--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (ug/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the ug/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

## Change in National Trends Network Procedures

NOTE.--Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

## Water Quality-Control Data

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

## Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured

value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sampler preservatives used for an environmental sample.

#### Reference Samples

Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

#### Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Sequential samples - a type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

#### Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

### ACCESS TO USGS WATER DATA

The USGS 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 the table for converting English units to International System of Units (SI) on the inside of the back cover.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Annual runoff indicates the total quantity of water in runoff for a drainage area for the year.

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 (ft<sup>3</sup>) or about 326,000 gallons or 1,233 cubic meters (m<sup>3</sup>).

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

Inches (IN., in.) 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.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters (mL) of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C plus or minus 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria also found in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C plus or minus 1.0°C on KF streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m<sup>3</sup>), and periphyton and benthic organisms in grams per square mile (g/m<sup>2</sup>).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

## DEFINITION OF TERMS--Continued

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 ft<sup>3</sup>, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 m<sup>3</sup>.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color unit is produced by 1 milligram per liter (mg/L) of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

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.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (FT<sup>3</sup>/s, ft<sup>3</sup>/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second (gps) or 448.8 gallons per minute (gpm) or 0.02832 cubic meters per second (m<sup>3</sup>/s).

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

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

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

Annual 7-day minimum is 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 of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

Dissolved refers to that material in a representative water sample which passes through a 0.45 micron (μm) membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Drainage area of a stream at a specific location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. 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 surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Flow-duration curve percentiles refer to interpolated values taken from a cumulative frequency curve that shows the percent of the time specified discharges were equaled or exceeded during a given period.

Gage height (G.H.) is the water-surface elevation referred to an arbitrarily selected gage datum. Gage height is often used interchangeably with the general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge 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.

Gas Chromatography/Flame Ionization Detector (GC/FID) is a laboratory analytical method used as a screening technique for semi-volatile organic compounds that are extractable from water in methylene chloride.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO<sub>3</sub>).

## DEFINITION OF TERMS--Continued

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per liter (UG/L,  $\mu\text{g/L}$ ) is a unit expressing the concentration of chemical constituents in solution as the mass (micrograms) (ug) of solute per unit volume (liter, L) of water. One thousand micrograms per liter (ug/L) is equivalent to one milligram per liter (1 mg/L).

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter, and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both 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.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area of habitat, usually square meters ( $\text{m}^2$ ), acres, or hectares. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters or liters. Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey's data system, National Water Information System (NWIS), to uniquely identify a specific constituent. The codes used in NWIS are the same as those used in the U.S. Environmental Protection Agency's data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle-size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	.004 - .062	Sedimentation
Sand	.062 - 2.0	Sedimentation or sieve
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass or volume.



## DEFINITION OF TERMS--Continued

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second. A picocurie yields 2.22 disintegrations per minute (dpm).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open waters of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to water currents. Phytoplankton growth is dependent upon solar radiation and nutrients. Because they are able to incorporate as well as release materials to the surrounding water, phytoplankton have a profound effect upon the quality of water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Sea level in this report 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.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 feet above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The entire sample is used for the analysis.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is calculated in units per day as follows: concentration (mg/L)  $\times$  discharge ( $\text{ft}^3/\text{s}$ )  $\times$  0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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.

## DEFINITION OF TERMS--Continued

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45  $\mu$ m membrane filter has been digested by a method (usually using a dilute acid solution) that results in a dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45  $\mu$ m membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata* is the following:

Kingdom .....	Animal
Phylum .....	Arthropoda
Class .....	Insecta
Order .....	Ephemeroptera
Family .....	Ephemeridae
Genus .....	Hexagenia
Species .....	Hexagenia limbata

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" has double meaning here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total load (tons) is the total quantity of any individual constituent, as measured mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge times the milligrams per liter of the constituent times the factor 0.027 times the number of days.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment; thus, the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.



## DEFINITION OF TERMS--Continued

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Water year in the 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, 1998, is called the "1998 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).

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

## PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey 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. Geological Survey, Branch of 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 sent by 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 "U.S. Geological Survey Techniques of Water-Resources Investigations."

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- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.
- 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, Chapter A6. 1998. 49 pages.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D. N. Myers and F. D. Wilde: USGS--TWRI Book 9, Chapter A7. 1997. 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, Chapter 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, Chapter A9, 1998. 60 pages.





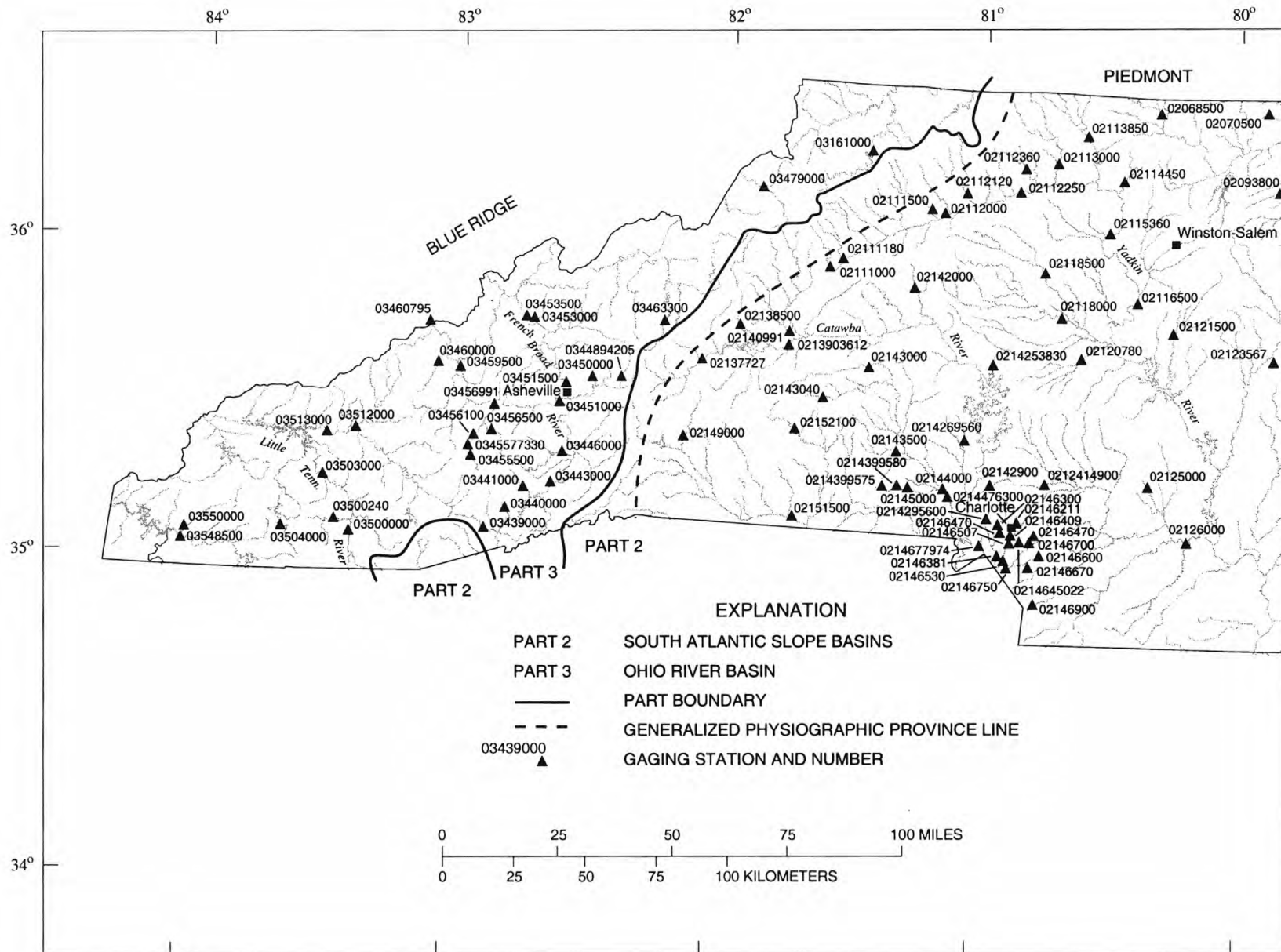
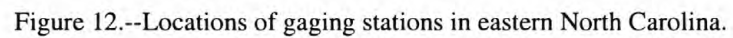


Figure 11.--Locations of gaging stations in western North Carolina.



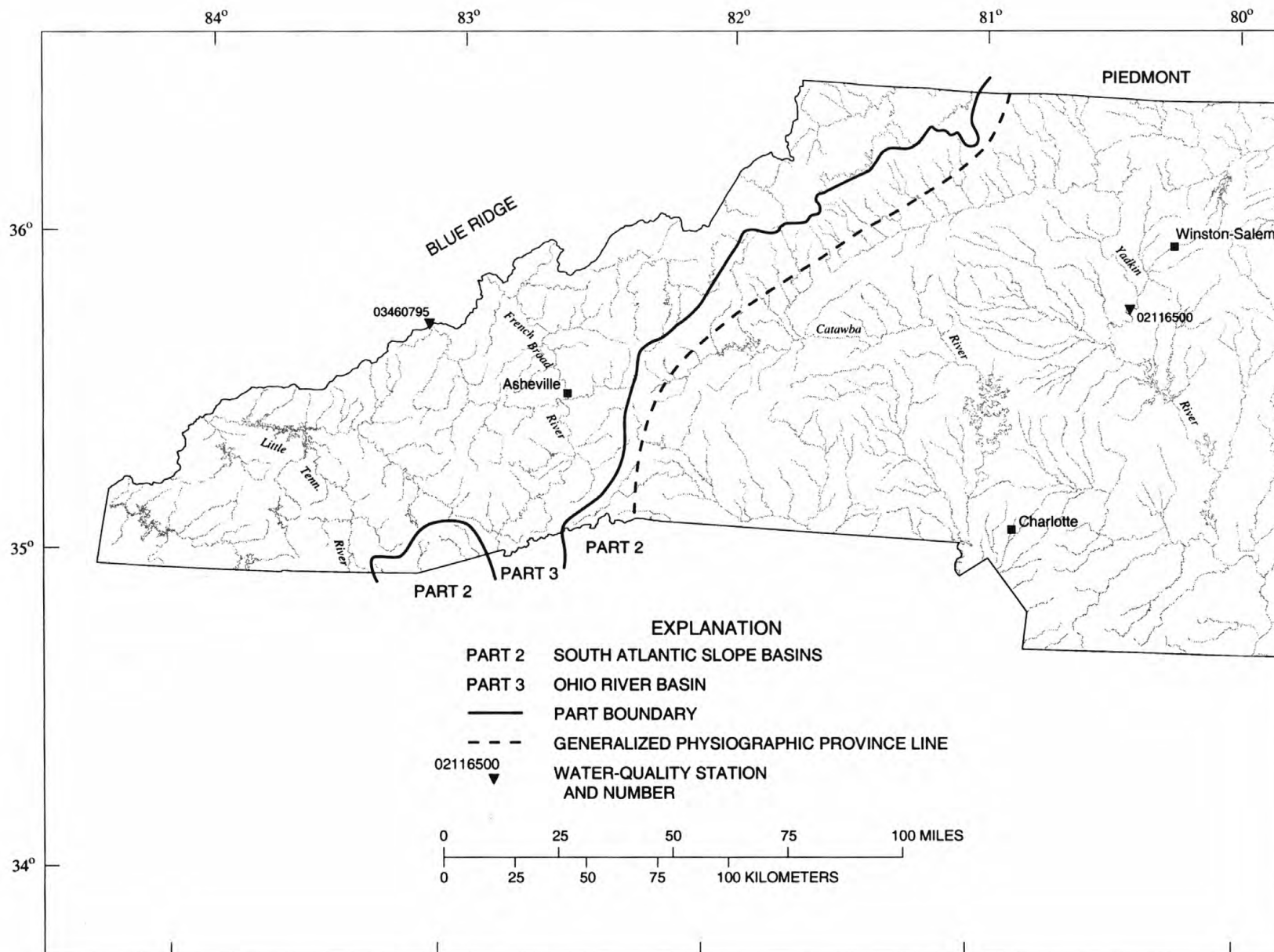


Figure 13.--Locations of water-quality stations in western North Carolina.



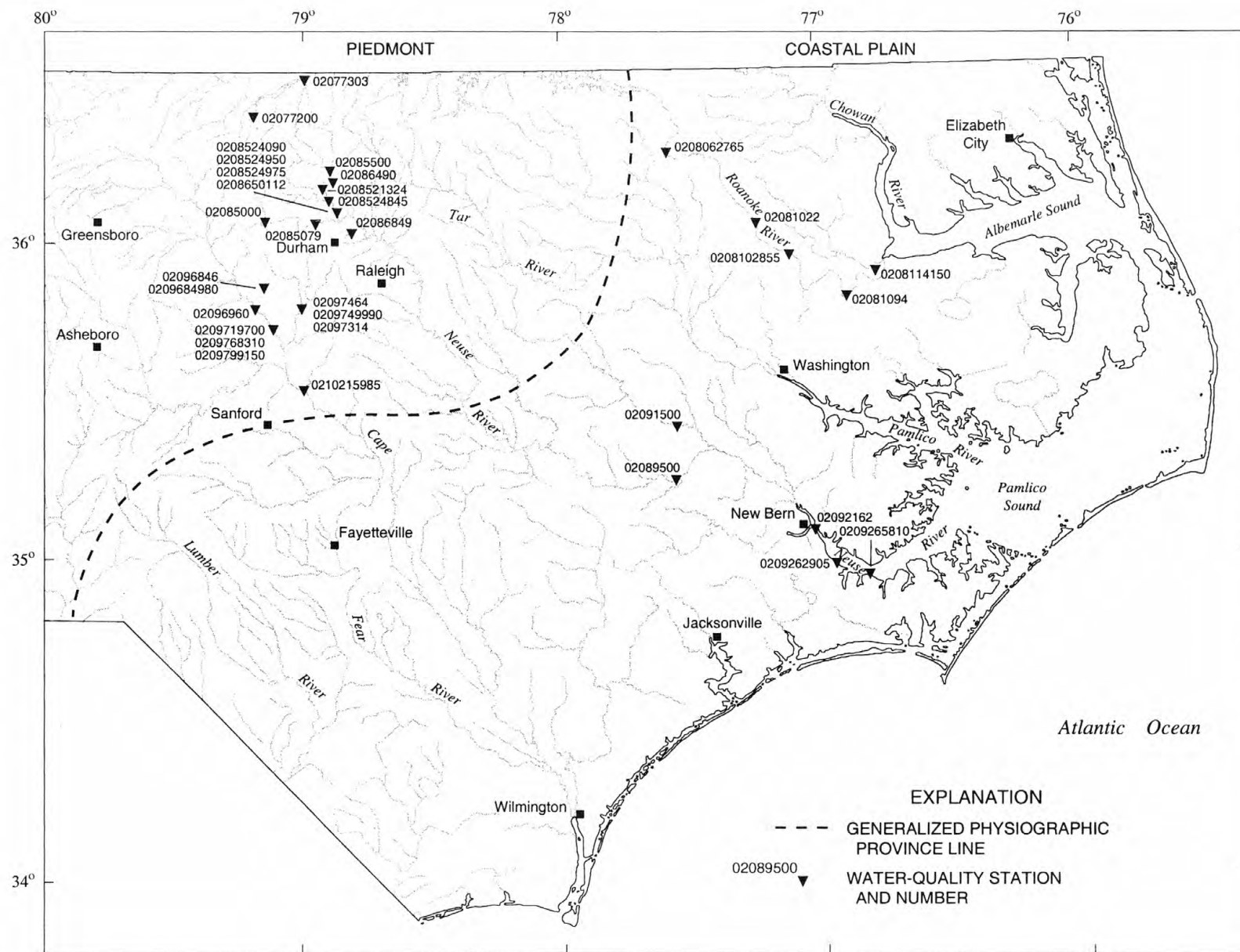


Figure 14.--Locations of water-quality stations in eastern North Carolina.

## CHOWAN RIVER BASIN

0204382800 PASQUOTANK RIVER NEAR SOUTH MILLS, NC

LOCATION.--Lat 36°25'18", long 76°20'34", Camden County, Hydrologic Unit 03020205, at bridge on US Highway 17, 1 mi below Newland Canal and 2 mi southwest of South Mills.

DRAINAGE AREA.--Approximately 64.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1995 to current year.

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 4.52 below sea level (revised) from topographic map. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	26	e105	146	257	301	207	122	70	23	e35	105
2	17	22	e99	123	237	294	216	122	51	18	e30	40
3	18	29	e90	113	226	286	223	124	62	17	e28	20
4	18	45	e82	103	362	279	231	124	61	11	e20	35
5	20	28	77	96	572	270	238	115	59	19	e18	68
6	20	24	68	94	506	263	230	158	52	18	14	35
7	16	24	64	95	424	256	216	147	46	15	17	12
8	20	31	62	100	392	265	200	150	43	9.1	17	17
9	17	39	e59	110	385	326	194	234	39	19	18	54
10	18	40	e55	98	392	381	211	231	40	16	13	26
11	19	45	e82	89	391	352	222	210	38	17	20	25
12	14	38	78	89	409	312	219	199	31	13	19	20
13	13	42	75	92	411	284	201	173	42	12	20	24
14	18	73	76	90	384	268	176	142	56	11	20	22
15	21	68	68	104	353	261	182	121	25	9.8	14	17
16	11	64	66	193	333	253	177	102	37	44	27	23
17	15	47	65	269	365	248	150	111	54	292	23	16
18	22	e45	64	270	452	268	178	120	38	345	29	20
19	20	e40	62	250	421	296	179	105	31	304	20	14
20	11	e38	65	244	378	311	176	97	30	251	18	18
21	4.5	e35	63	228	348	314	191	91	28	198	15	8.0
22	17	e40	72	202	328	306	177	82	25	171	12	20
23	20	e34	114	e200	324	288	166	77	40	126	15	17
24	7.3	e33	107	e375	346	272	142	77	34	102	13	8.2
25	22	e32	119	e350	343	260	140	75	29	84	14	9.2
26	19	e30	120	e250	326	250	133	85	26	67	4.2	15
27	-5.2	e29	125	e210	313	234	130	81	25	53	-80	15
28	44	e28	148	e380	304	229	148	89	20	e50	-21	16
29	24	e27	141	332	---	227	120	70	13	e45	31	22
30	28	e35	157	300	---	222	123	70	21	e40	63	14
31	21	---	173	275	---	215	---	66	---	e38	113	---
TOTAL	563.6	1131	2801	5870	10282	8591	5496	3770	1166	2437.9	599.2	755.4
MEAN	18.2	37.7	90.4	189	367	277	183	122	38.9	78.6	19.3	25.2
MAX	44	73	173	380	572	381	238	234	70	345	113	105
MIN	-5.2	22	55	89	226	215	120	66	13	9.1	-80	8.0

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998
MEAN	77.4	75.7	93.6	158	253	214	161	113	47.2	81.9	68.9	74.6
MAX	197	158	172	189	367	277	183	127	71.9	145	172	172
(WY)	1997	1997	1997	1998	1998	1998	1998	1996	1996	1996	1996	1996
MIN	16.8	31.8	18.2	107	190	157	126	90.1	30.7	21.8	15.6	25.2
(WY)	1996	1996	1996	1996	1996	1996	1997	1997	1997	1997	1997	1998

## SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1996 - 1998

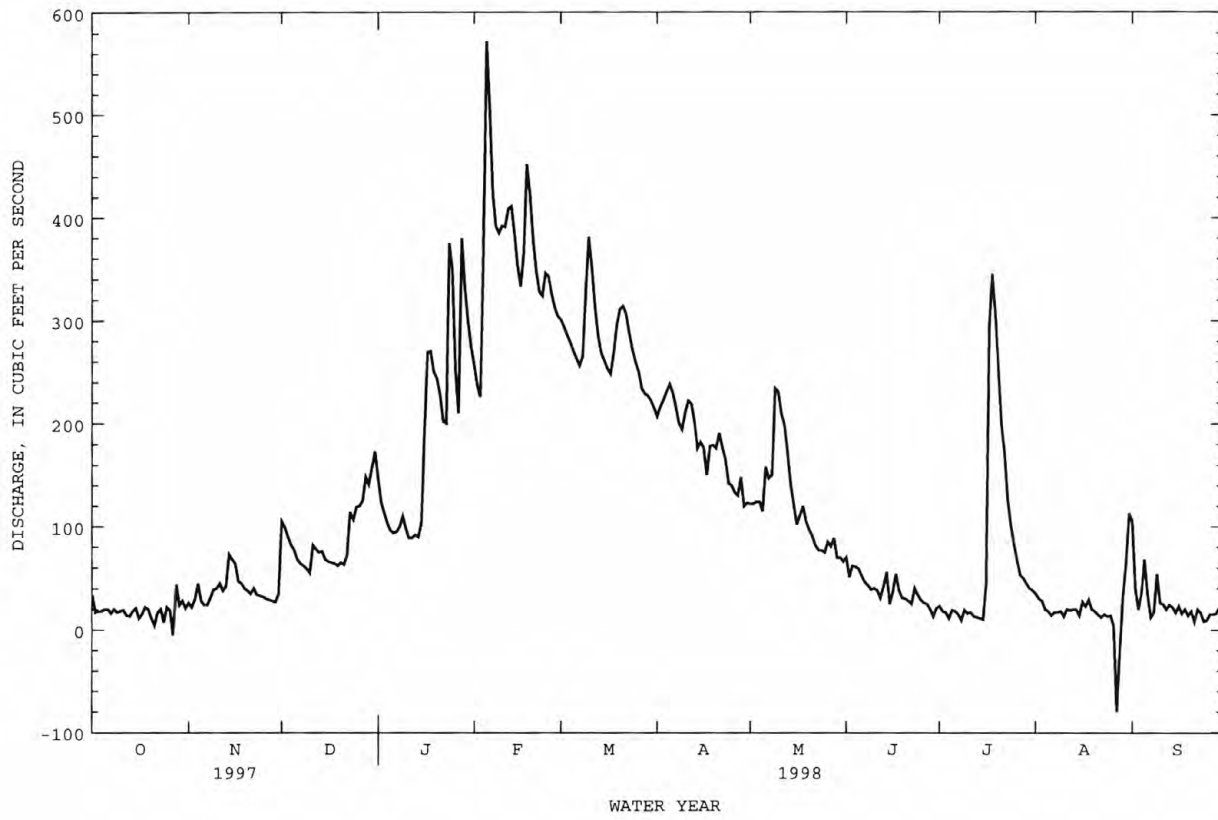
ANNUAL TOTAL	31625.2	43463.1	
ANNUAL MEAN	86.6	119	118
HIGHEST ANNUAL MEAN			119
LOWEST ANNUAL MEAN			115
HIGHEST DAILY MEAN	297 Mar 16	572 Feb 5	572 Feb 5 1998
LOWEST DAILY MEAN	-5.2 Oct 27	-80 Aug 27	-80 Aug 27 1998
ANNUAL SEVEN-DAY MINIMUM	12 Oct 21	-6.1 Aug 22	-6.1 Aug 22 1998
INSTANTANEOUS PEAK FLOW		592 Feb 5	592 Feb 5 1998
INSTANTANEOUS PEAK STAGE		8.34 Feb 5	8.34 Feb 5 1998
INSTANTANEOUS LOW FLOW		-142 Aug 27	-240 Sep 6 1996
10 PERCENT EXCEEDS	197	305	231
50 PERCENT EXCEEDS	48	68	114
90 PERCENT EXCEEDS	16	16	16

e Estimated.

Note.--Negative values indicate reverse flow.

## CHOWAN RIVER BASIN

0204382800 PASQUOTANK RIVER NEAR SOUTH MILLS, NC--Continued



## CHOWAN RIVER BASIN

02053200 POTECASI CREEK NEAR UNION, NC

LOCATION.--Lat 36°22'14", long 77°01'36", Hertford County, Hydrologic Unit 03010204, on right bank at downstream side of bridge on State Highway 11, 2.8 mi north of Union, 3 mi downstream of Cutawhiskie Swamp, and 3.5 mi upstream from Bells Branch.

DRAINAGE AREA.--225 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1953-57. March 1958 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 3.53 ft above sea level. Prior to Dec. 1, 1958, nonrecording gage at same site and datum.

REMARKS.--Records fair except those below 50 ft<sup>3</sup>/s, which are poor. Maximum gage height for period of record from floodmark. Minimum discharge for current water year also occurred Oct. 15.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1929 reached a stage of 19.1 ft; discharge, 4,050 ft<sup>3</sup>/s; and flood of August 1940 reached a stage of 24.1 ft; discharge, 7,000 ft<sup>3</sup>/s, from rating curve extended above 4,000 ft<sup>3</sup>/s, from information furnished by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	8.0	126	206	1450	262	146	120	49	32	4.0	18
2	2.3	8.3	144	183	1130	226	180	98	40	18	5.6	20
3	2.3	10	97	166	849	198	184	83	30	12	7.3	20
4	2.1	13	78	147	1010	168	160	83	26	7.9	7.0	62
5	2.2	13	76	127	2020	146	260	124	22	14	5.5	97
6	1.9	13	76	110	2680	127	245	162	17	28	4.5	47
7	1.6	28	71	100	2890	112	232	212	15	16	4.2	28
8	1.6	67	64	111	2540	126	231	254	12	9.9	5.4	16
9	1.6	38	54	250	1990	605	224	263	10	11	7.2	12
10	1.6	21	59	251	1450	1470	269	298	9.7	20	32	8.6
11	1.5	11	89	185	1030	2120	265	325	8.5	17	32	6.8
12	1.3	8.2	100	190	849	2250	219	343	9.6	9.3	23	6.0
13	1.2	8.4	85	185	783	1900	192	303	15	5.6	9.3	4.9
14	1.1	21	74	165	630	1410	170	237	60	4.0	5.9	4.2
15	1.0	63	66	153	520	979	152	166	69	3.1	4.5	4.1
16	1.3	38	58	300	438	659	135	115	37	34	4.2	3.9
17	1.4	19	50	720	544	433	114	86	29	198	5.5	3.7
18	1.8	11	43	865	1150	353	98	99	28	175	4.4	3.5
19	2.3	8.6	35	824	1270	454	87	100	28	93	3.8	3.5
20	2.6	7.9	29	893	1230	629	84	329	42	329	4.0	3.4
21	2.1	7.2	24	885	1100	792	81	449	43	430	3.8	3.3
22	2.3	12	29	773	917	1060	83	367	33	301	3.3	3.5
23	2.1	56	81	660	722	1120	169	237	36	128	3.0	4.2
24	1.9	72	103	773	569	980	277	144	35	71	2.7	3.6
25	2.0	21	120	839	472	794	365	95	26	82	2.5	3.2
26	2.2	13	138	846	406	612	487	83	19	67	2.5	3.2
27	3.6	11	119	844	359	462	448	98	13	52	6.5	3.3
28	4.0	9.4	196	1200	307	341	339	75	19	32	14	3.6
29	4.4	9.1	240	1660	---	260	235	63	44	16	16	3.6
30	4.6	20	235	1780	---	208	163	57	48	8.5	21	4.0
31	4.7	---	242	1690	---	171	---	52	---	4.8	23	---
TOTAL	69.1	646.1	3001	18081	31305	21427	6294	5520	872.8	2229.1	277.6	408.1
MEAN	2.23	21.5	96.8	583	1118	691	210	178	29.1	71.9	8.95	13.6
MAX	4.7	72	242	1780	2890	2250	487	449	69	430	32	97
MIN	1.0	7.2	24	100	307	112	81	52	8.5	3.1	2.5	3.2
CFSM	.01	.10	.43	2.59	4.97	3.07	.93	.79	.13	.32	.04	.06
IN.	.01	.11	.50	2.99	5.18	3.54	1.04	.91	.14	.37	.05	.07

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1998, BY WATER YEAR (WY)

	MEAN	117	101	206	412	503	481	305	154	108	107	160	83.5
MAX	1108	619	619	957	1135	1439	994	925	700	531	1131	809	
(WY)	1960	1986	1990	1987	1960	1989	1983	1979	1979	1975	1992	1960	
MIN	2.12	5.64	12.0	51.3	54.9	46.7	27.7	5.36	4.71	2.32	2.50	1.65	
(WY)	1995	1982	1995	1981	1991	1988	1995	1994	1986	1983	1987	1995	

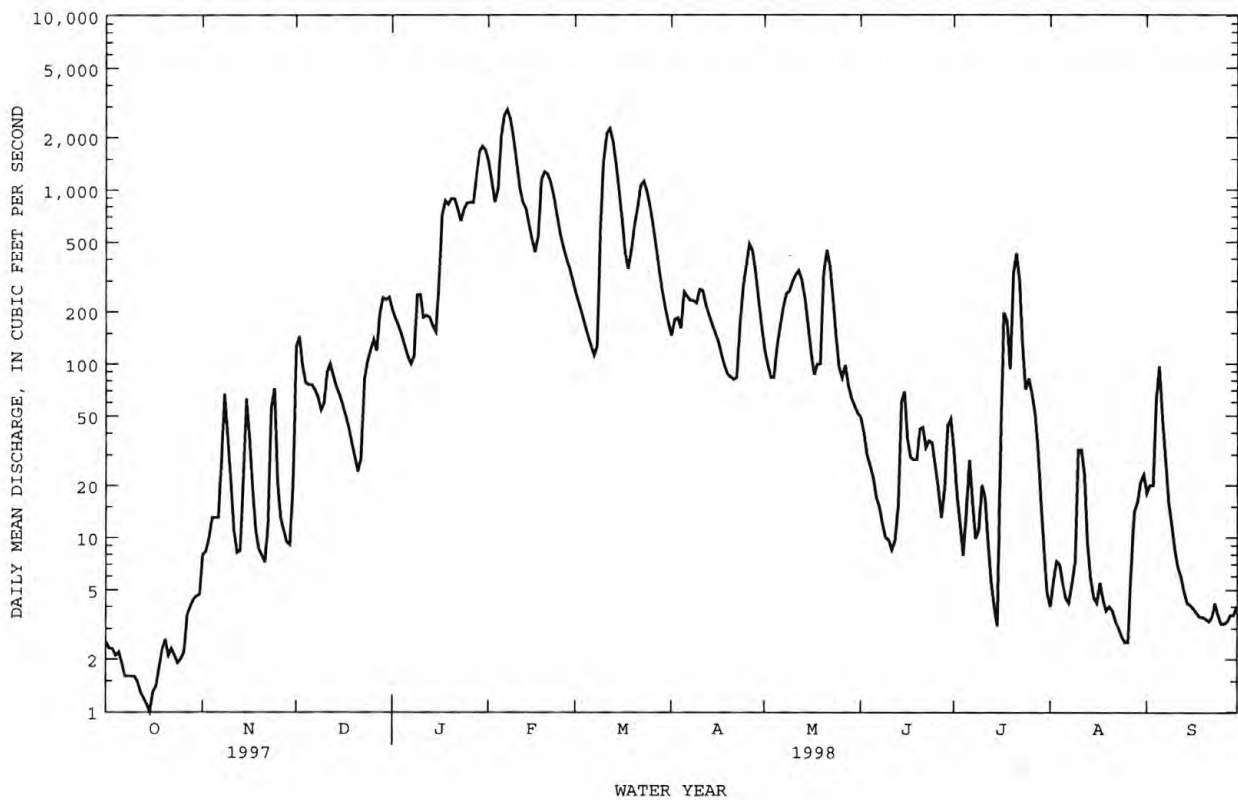


## CHOWAN RIVER BASIN

02053200 POTECAZI CREEK NEAR UNION, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1959 - 1998	
ANNUAL TOTAL	49859.1		90130.8		227	
ANNUAL MEAN	137		247		458	1979
HIGHEST ANNUAL MEAN					73.0	1981
LOWEST ANNUAL MEAN					5380	Aug 18 1992
HIGHEST DAILY MEAN	1280	May 2	2890	Feb 7	.30	Jun 30 1959
LOWEST DAILY MEAN	1.0	Oct 15	1.0	Oct 15	.51	Jun 25 1959
ANNUAL SEVEN-DAY MINIMUM	1.3	Oct 11	1.3	Oct 11	5650	Aug 19 1992
INSTANTANEOUS PEAK FLOW			2940	Feb 7	21.77*	Aug 19 1992
INSTANTANEOUS PEAK STAGE			16.68	Feb 7	.20	Jul 1 1959
INSTANTANEOUS LOW FLOW			1.0*	Oct 14	1.01	
ANNUAL RUNOFF (CFSM)	.61		1.10		13.70	
ANNUAL RUNOFF (INCHES)	8.24		14.90		652	
10 PERCENT EXCEEDS	390		830		76	
50 PERCENT EXCEEDS	36		66		5.4	
90 PERCENT EXCEEDS	2.6		3.4			

\* See REMARKS.



## CHOWAN RIVER BASIN

02053500 AHOSKIE CREEK AT AHOSKIE, NC

LOCATION.--Lat 36°16'48", long 77°00'00", Hertford County, Hydrologic Unit 03010203, on right bank 10 ft downstream of bridge on State Highways 11 and 42, 0.5 mi upstream from Seaboard Coast Line Railroad bridge, and 0.8 mi southwest of Ahoskie.

DRAINAGE AREA.--63.3 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1950 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 17.46 ft above sea level (Soil Conservation Service bench mark). Prior to Jan. 4, 1963, present site at 21.46 ft. Jan. 20, 1950, to May 24, 1951, nonrecording gage. Satellite telemetry at station.

REMARKS.--Records poor. Entire basin above station canalized since July 1964. Excavation began downstream in July 1962 and reached the station in December 1962. Reach was recanalized beginning in September 1984 and completed October 1984. Minimum discharge since canalization also occurred Oct. 9, 1988. Prior to canalization, no flow occurred periodically.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1940 reached a stage of 15.1 ft, present datum, from floodmark witnessed by local resident; discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	14	94	29	112	54	148	39	35	19	4.0	15
2	3.6	10	36	24	83	51	304	39	33	16	3.7	12
3	3.5	10	23	21	73	49	119	38	33	14	3.6	17
4	3.5	8.7	18	19	931	46	163	38	31	13	3.5	172
5	3.4	8.1	16	17	1360	43	151	41	30	15	3.5	86
6	3.4	8.0	13	16	1600	43	95	40	29	13	3.4	30
7	3.3	25	11	16	1040	42	e73	36	27	11	3.3	17
8	3.2	23	9.9	74	340	85	e70	54	27	9.9	3.2	11
9	3.2	11	9.4	68	174	815	e71	60	26	9.6	15	8.6
10	3.2	8.6	14	37	114	1010	78	50	26	13	69	7.2
11	3.2	8.0	26	28	107	611	65	44	26	20	26	6.2
12	3.1	8.0	18	24	368	210	56	40	25	12	17	5.5
13	3.1	11	14	23	190	115	50	39	37	8.4	7.6	5.1
14	3.0	35	12	23	111	87	50	37	40	7.1	5.2	4.8
15	2.9	25	11	91	82	74	49	36	30	6.1	4.3	4.6
16	2.9	12	10	425	71	67	47	35	28	8.7	6.3	4.5
17	e2.8	9.0	10	432	598	61	48	39	24	9.9	11	4.4
18	e3.0	8.3	9.5	169	917	182	48	56	23	7.0	12	4.3
19	e3.5	8.2	9.1	202	498	334	44	40	24	6.0	6.2	4.2
20	e3.2	8.0	8.8	184	208	451	49	35	27	5.1	4.6	4.1
21	e3.0	8.0	8.4	98	123	374	45	33	23	4.3	4.1	4.0
22	e3.2	18	27	72	91	238	49	31	21	4.0	3.8	3.9
23	e3.7	21	38	234	81	139	84	31	20	4.9	3.7	3.8
24	e3.5	11	33	436	85	98	65	31	19	4.6	3.5	3.7
25	e10	9.2	57	259	74	80	52	31	18	15	3.2	3.6
26	14	8.3	31	150	65	71	48	250	18	12	9.7	3.5
27	21	8.3	69	179	61	62	44	111	18	5.9	47	3.4
28	21	8.3	100	843	55	59	41	66	37	4.8	65	3.2
29	17	8.2	66	782	---	55	40	51	37	4.4	26	3.1
30	16	58	67	338	---	52	40	44	26	4.1	21	3.6
31	14	---	40	182	---	50	---	39	---	4.0	11	---
TOTAL	191.2	417.2	909.1	5495	9612	5708	2286	1554	818	291.8	410.4	459.3
MEAN	6.17	13.9	29.3	177	343	184	76.2	50.1	27.3	9.41	13.2	15.3
MAX	21	58	100	843	1600	1010	304	250	40	20	69	172
MIN	2.8	8.0	8.4	16	55	42	40	31	18	4.0	3.2	3.1
CFSM	.10	.22	.46	2.80	5.42	2.91	1.20	.79	.43	.15	.21	.24
IN.	.11	.25	.53	3.23	5.65	3.35	1.34	.91	.48	.17	.24	.27

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998\*, BY WATER YEAR (WY)

	MEAN	37.1	23.3	48.2	105	129	130	74.5	47.0	32.4	32.9	47.1	22.3
MAX	297	120	177	260	343	303	243	238	112	126	381	132	
(WY)	1972	1986	1990	1979	1998	1989	1983	1979	1979	1975	1992	1964	
MIN	3.01	3.21	3.10	7.66	18.9	17.3	8.73	4.21	5.43	3.55	3.59	3.41	
(WY)	1977	1982	1995	1981	1968	1988	1985	1986	1986	1987	1983	1980	

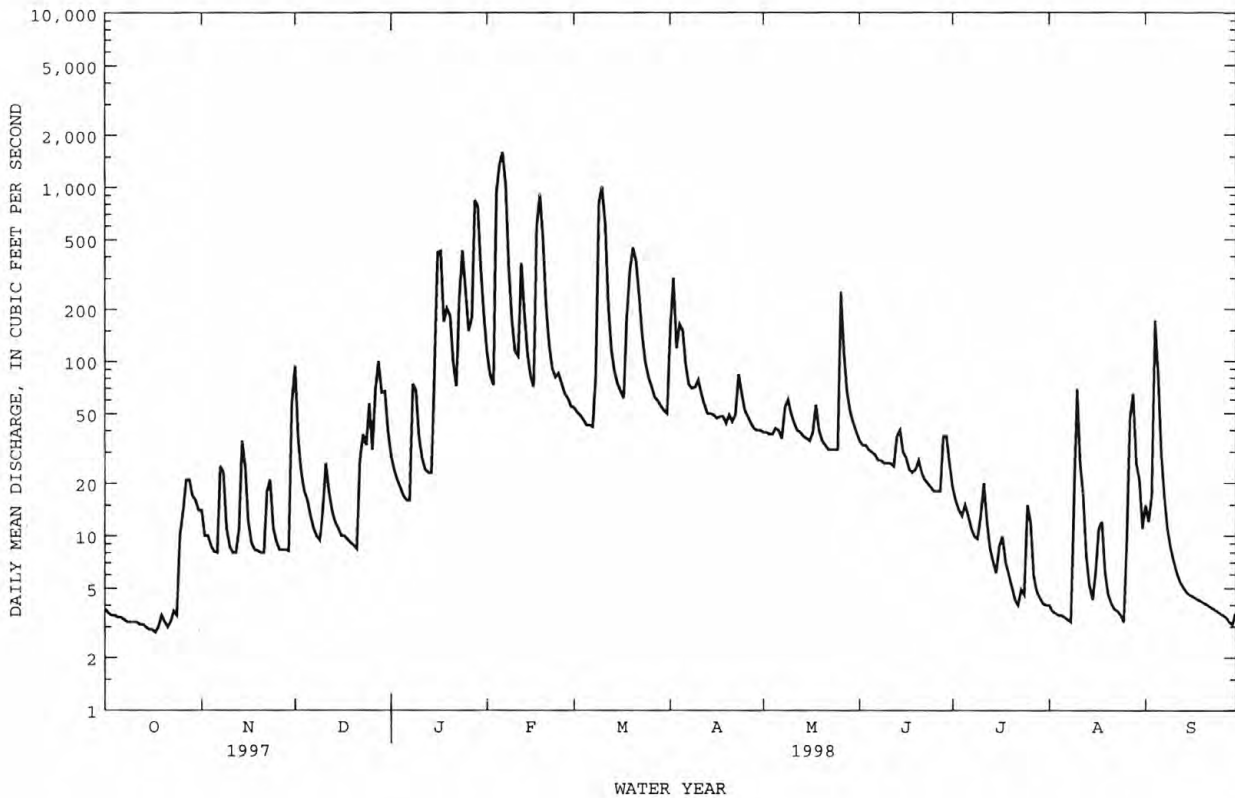
## CHOWAN RIVER BASIN

02053500 AHOSKIE CREEK AT AHOSKIE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998*	
ANNUAL TOTAL	13542.3		28152.0		60.5	
ANNUAL MEAN	37.1		77.1		109	1979
HIGHEST ANNUAL MEAN					14.7	1981
LOWEST ANNUAL MEAN					2490	Oct 6 1964
HIGHEST DAILY MEAN	750	Apr 30	1600	Feb 6	.61	Oct 8 1988
LOWEST DAILY MEAN	2.8	Oct 17	2.8	Oct 17	.85	Sep 27 1988
ANNUAL SEVEN-DAY MINIMUM	3.0	Oct 12	3.0	Oct 12	2580	Oct 5 1964
INSTANTANEOUS PEAK FLOW			1730	Feb 6	12.49	Jun 1 1984
INSTANTANEOUS PEAK STAGE			10.55	Feb 6	.45*	Oct 8 1988
INSTANTANEOUS LOW FLOW			NOT DETERMINED		.96	
ANNUAL RUNOFF (CFSM)	.59		1.22		12.99	
ANNUAL RUNOFF (INCHES)	7.96		16.54		137	
10 PERCENT EXCEEDS	71		170		17	
50 PERCENT EXCEEDS	15		26		4.4	
90 PERCENT EXCEEDS	3.9		3.7			

e Estimated.

\* Canalized period only (1964-1998). See REMARKS.



## ROANOKE RIVER BASIN

02068500 DAN RIVER NEAR FRANCISCO, NC

LOCATION.--Lat 36°30'53", long 80°18'11", Stokes County, Hydrologic Unit 03010103, on left bank 200 ft upstream from bridge on State Highway 704, 700 ft downstream of remains of Georges Mill, 0.2 mi downstream of Elk Creek, 3 mi east of Francisco, and 7.9 mi downstream of Little Dan River.

DRAINAGE AREA.--129 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1924 to September 1987. December 1991 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 1303: 1938-50 (monthly runoff). WSP 1433: 1925-26, 1928-29, 1931, 1942, 1948. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 831.99 ft above sea level. Prior to Nov. 15, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good except those for discharges above 1,000 ft<sup>3</sup>/s, and those for estimated daily discharges which are fair. Since 1938, considerable diurnal fluctuation and regulation by Talbott and Townes Reservoirs (stations 02067800 and 02067820, respectively) and Pinnacles Hydroelectric Plant in Virginia, 28 mi upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 reached a stage of about 15 ft, from information by local residents, discharge, 16,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	79	74	74	216	191	260	315	147	148	88	150
2	65	127	64	102	231	162	168	361	239	105	79	74
3	62	97	61	93	239	221	202	310	189	102	75	117
4	66	89	76	81	585	249	244	356	248	104	76	95
5	62	90	77	82	477	231	263	219	186	146	75	75
6	55	90	75	82	254	229	261	199	153	103	70	74
7	135	87	93	146	212	230	253	413	148	100	75	75
8	104	84	84	1010	198	482	213	867	173	121	111	71
9	97	78	105	457	210	982	205	545	157	119	201	60
10	80	75	81	231	218	e420	173	507	243	162	152	56
11	68	75	74	153	218	e352	157	567	258	95	163	55
12	51	71	64	141	311	288	186	419	193	93	109	50
13	58	77	61	142	252	271	214	306	167	135	105	42
14	57	117	60	131	242	288	264	235	144	97	100	48
15	62	76	70	400	224	312	248	229	169	94	98	123
16	51	73	80	393	219	320	246	285	174	e120	215	101
17	52	76	75	200	694	282	1520	290	174	e250	286	93
18	61	121	65	158	626	261	603	274	147	202	162	72
19	67	97	57	151	448	377	807	259	216	146	163	46
20	62	83	63	157	406	490	813	240	141	118	110	47
21	53	74	56	186	297	460	555	220	150	187	101	42
22	54	91	81	121	305	505	420	199	130	161	92	76
23	52	80	96	366	432	440	355	205	200	119	100	65
24	56	75	72	222	345	413	343	390	e150	118	112	58
25	78	111	102	191	370	380	333	246	e110	113	172	53
26	80	95	78	170	365	290	419	186	e120	135	159	49
27	118	78	92	739	365	281	374	264	e130	90	90	50
28	82	70	101	1030	284	275	184	275	e120	92	84	44
29	75	72	91	389	---	273	176	208	e115	85	76	43
30	74	74	99	299	---	267	177	241	108	90	73	56
31	72	---	77	246	---	260	---	218	---	91	70	---
TOTAL	2176	2582	2404	8343	9243	10482	10636	9848	4999	3841	3642	2060
MEAN	70.2	86.1	77.5	269	330	338	355	318	167	124	117	68.7
MAX	135	127	105	1030	694	982	1520	867	258	250	286	150
MIN	51	70	56	74	198	162	157	186	108	85	70	42
†	-8	-9	-3	+41	+30	-10	-4	+16	-7	-17	-5	-15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
MEAN	152	159	180	202	226	266	273	223	200	169	168	150
MAX	543	327	479	424	463	571	677	405	438	373	514	630
(WY)	1938	1980	1997	1978	1960	1993	1980	1949	1972	1938	1940	1979
MIN	49.7	61.3	77.5	76.2	94.9	94.2	120	109	78.3	54.8	52.5	50.4
(WY)	1964	1954	1998	1956	1956	1981	1967	1986	1967	1986	1981	1968



## ROANOKE RIVER BASIN

02068500 DAN RIVER NEAR FRANCISCO, NC--Continued

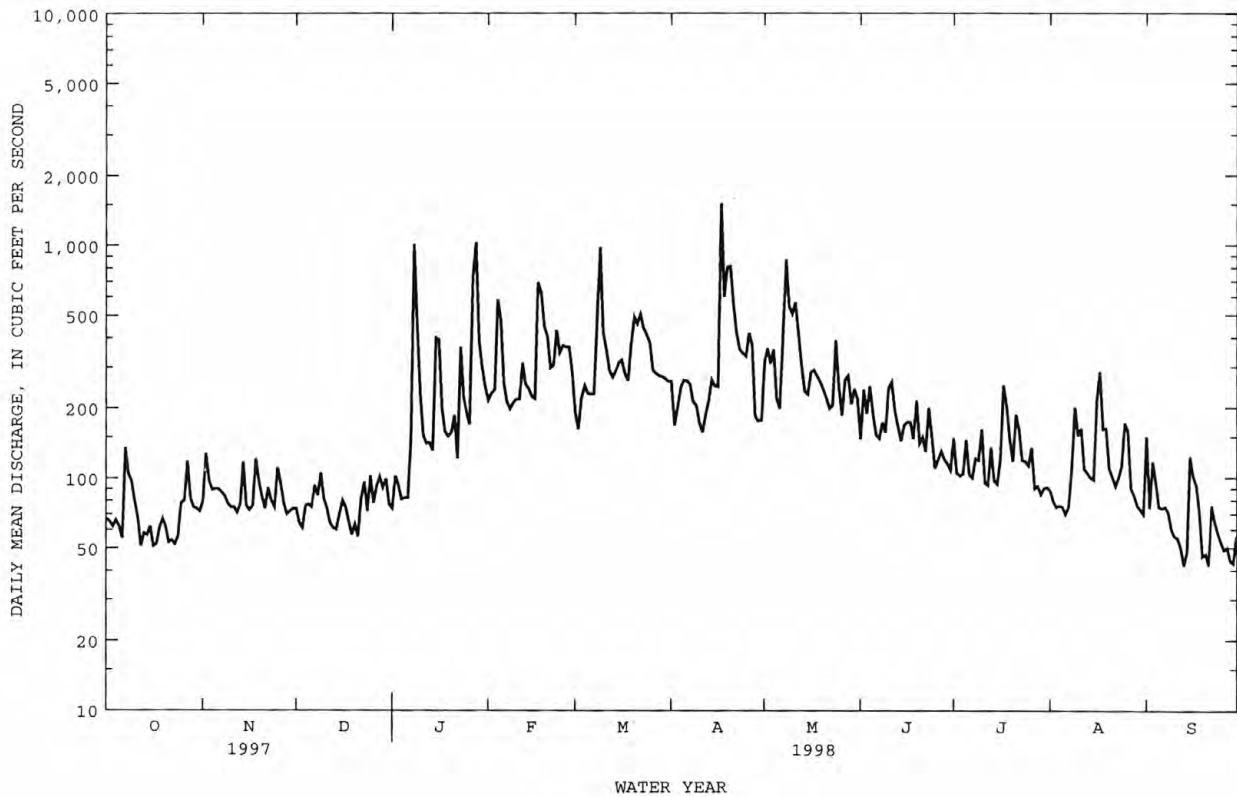
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998 <sup>a</sup>	
ANNUAL TOTAL	73799		70256		198	(UNADJUSTED)
ANNUAL MEAN	202	‡206	192	‡190	300	1960
HIGHEST ANNUAL MEAN					97.5	1956
LOWEST ANNUAL MEAN					6830	Sep 22 1979
HIGHEST DAILY MEAN	1260	Apr 29	1520	Apr 17	27	Aug 24 1981
LOWEST DAILY MEAN	51	Oct 12	42	Sep 13	28	Aug 24 1981
ANNUAL SEVEN-DAY MINIMUM	56	Oct 12	50	Sep 24	21200	Aug 17 1985
INSTANTANEOUS PEAK FLOW			3930	Apr 17	19.50	Aug 17 1985
INSTANTANEOUS PEAK STAGE			6.48	Apr 17	7.1	Sep 8 1932
INSTANTANEOUS LOW FLOW			36	Sep 26	1.53	
ANNUAL RUNOFF (CFSM)	1.57		1.49		20.82	
ANNUAL RUNOFF (INCHES)	21.28		20.26		321	
10 PERCENT EXCEEDS	381		384		158	
50 PERCENT EXCEEDS	173		141		85	
90 PERCENT EXCEEDS	69		63			

e Estimated.

† Change in contents, equivalent in cubic feet per second, in Talbott and Townes Reservoirs by City of Danville, Virginia.

‡ Adjusted for change in contents.

\* Regulated period only (1938-1998). See REMARKS.

<sup>a</sup> See PERIOD OF RECORD.

## ROANOKE RIVER BASIN

02070500 MAYO RIVER NEAR PRICE, NC

LOCATION.--Lat 36°32'05", long 79°59'30", Rockingham County, Hydrologic Unit 03010103, on right bank 350 ft downstream from Anglins Bridge on Secondary Road 1358, 0.5 mi downstream from confluence of North and South Mayo Rivers, 0.8 mi downstream from Virginia-North Carolina State line, and 4.0 mi west of Price.

DRAINAGE AREA.--242 mi<sup>2</sup>, revised.

PERIOD OF RECORD.--July 1929 to September 1971, October 1993 to current year.

REVISED RECORDS.--WSP 2104: Drainage area. WRIR 96-4154: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 689.95 ft above sea level. Prior to Oct. 29, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	175	186	197	382	357	316	449	332	229	136	134
2	138	225	171	210	338	337	318	506	365	210	125	131
3	140	236	164	205	358	321	296	393	311	206	113	130
4	142	185	193	220	2330	306	356	436	310	198	108	185
5	138	173	190	222	2170	299	321	407	317	202	104	164
6	133	168	173	218	846	290	296	367	299	193	102	140
7	129	175	165	243	573	286	288	834	281	189	99	133
8	127	174	163	1250	467	886	287	2030	314	195	168	132
9	127	169	165	647	401	2140	321	762	297	289	643	127
10	134	166	174	380	361	928	319	550	265	207	232	116
11	139	164	186	304	351	575	300	779	253	184	267	116
12	131	163	175	270	719	471	284	607	244	177	187	115
13	132	170	168	273	446	417	276	494	239	181	167	110
14	135	210	166	260	378	392	279	445	e260	179	160	105
15	151	207	163	833	341	367	281	411	e275	168	156	103
16	147	180	161	1070	362	349	277	389	e280	162	651	101
17	139	169	161	477	1960	342	3260	684	e310	251	643	100
18	143	167	161	360	1220	345	1080	406	e330	191	313	145
19	171	166	160	319	640	467	1270	361	e300	165	238	117
20	185	165	159	296	514	553	2230	344	e275	156	207	112
21	153	167	158	270	445	808	803	334	e260	149	191	112
22	146	204	186	260	393	578	598	336	e250	141	183	130
23	140	205	237	830	733	460	511	500	e230	138	177	128
24	140	179	207	632	683	410	461	378	e250	193	171	114
25	172	169	295	469	483	378	418	437	e240	162	164	109
26	202	167	255	370	416	363	393	538	230	147	158	108
27	289	168	265	1130	390	351	372	390	221	143	152	104
28	205	165	336	3780	379	340	363	353	212	156	149	98
29	174	164	266	1070	---	329	348	354	241	144	146	93
30	166	171	252	600	---	321	345	318	243	130	141	98
31	163	---	224	457	---	314	---	301	---	126	138	---
TOTAL	4776	5366	6085	18122	19079	15080	17267	15893	8234	5561	6589	3610
MEAN	154	179	196	585	681	486	576	513	274	179	213	120
MAX	289	236	336	3780	2330	2140	3260	2030	365	289	651	185
MIN	127	163	158	197	338	286	276	301	212	126	99	93
CFSM	.64	.74	.81	2.42	2.82	2.01	2.38	2.12	1.13	.74	.88	.50
IN.	.73	.82	.94	2.79	2.93	2.32	2.65	2.44	1.27	.85	1.01	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1998<sup>e</sup>, BY WATER YEAR (WY)

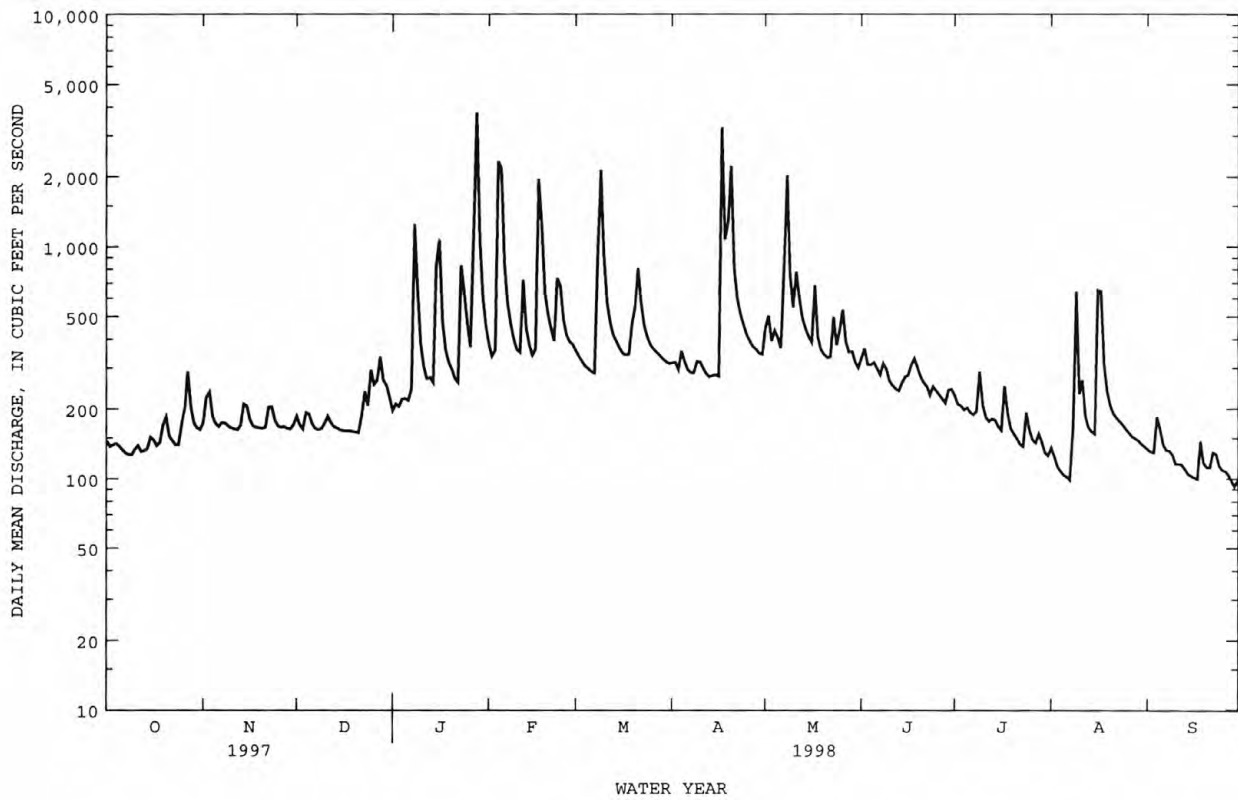
MEAN	279	249	296	367	404	434	401	330	295	258	261	247
MAX	1250	578	661	1022	900	982	694	659	654	609	943	1003
(WY)	1938	1958	1997	1936	1960	1994	1958	1949	1943	1949	1940	1945
MIN	84.5	95.9	118	112	139	221	175	157	123	103	89.9	62.0
(WY)	1932	1932	1956	1956	1931	1940	1967	1956	1956	1966	1930	1954

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1929 - 1998 <sup>e</sup>	
ANNUAL TOTAL	121321		125662			
ANNUAL MEAN	332		344		318	
HIGHEST ANNUAL MEAN					479	
LOWEST ANNUAL MEAN					170	
HIGHEST DAILY MEAN	3280		3780		11400	
LOWEST DAILY MEAN	118		93		35	
ANNUAL SEVEN-DAY MINIMUM	126		103		45	
INSTANTANEOUS PEAK FLOW			6570		30000	
INSTANTANEOUS PEAK STAGE			7.12		14.00	
INSTANTANEOUS LOW FLOW			91		32	
ANNUAL RUNOFF (CFSM)	1.37		1.42		1.31	
ANNUAL RUNOFF (INCHES)	18.65		19.32		17.84	
10 PERCENT EXCEEDS	528		603		502	
50 PERCENT EXCEEDS	271		241		239	
90 PERCENT EXCEEDS	147		132		128	

e Estimated.

<sup>e</sup> See PERIOD OF RECORD.

ROANOKE RIVER BASIN  
02070500 MAYO RIVER NEAR PRICE, NC--Continued



## ROANOKE RIVER BASIN

02071000 DAN RIVER NEAR WENTWORTH, NC

LOCATION.--Lat 36°24'45", long 79°49'35", Rockingham County, Hydrologic Unit 03010103, on right bank 600 ft downstream of Settles Bridge on Secondary Road 2150, 3.5 mi northwest of Wentworth, 7.5 mi downstream of Mayo River, and 103.7 mi upstream from mouth.

DRAINAGE AREA.--1,053 mi<sup>2</sup>, revised

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October 1939, published in WSP 1303.

REVISED RECORDS.--WDR NC-72-1: 1945(M). WDR NC-81-1: Drainage area. WRIR 96-4154: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 512.98 ft above sea level. Prior to Aug. 3, 1949, water-stage recorder at site 150 ft upstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Slight fluctuation and regulation at low flow caused by Talbott and Townes Reservoirs (stations 02067800 and 02067820). Maximum gage height for period of record, from high-water mark in gage well.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 34.9 ft, from information by North Carolina State Highway Commission, and flood in 1937 reached a stage of 29.8 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	502	537	626	691	1500	1390	1120	1350	1020	735	413	320
2	456	599	627	608	1320	1250	1110	1970	913	739	412	375
3	452	707	586	673	1530	1100	1010	1440	924	709	373	317
4	455	662	589	735	5330	1090	1110	1430	1050	689	351	440
5	455	569	650	764	8770	1080	1290	1780	1490	680	346	484
6	446	551	642	758	3190	1040	1150	1310	1230	684	360	386
7	431	554	606	777	2050	1030	1060	2470	1140	650	374	347
8	494	568	592	3110	1660	2590	1040	e6000	1050	636	384	341
9	470	578	588	3000	1460	7740	1600	e4500	943	658	1020	352
10	467	584	603	1520	1290	e4000	1720	e3200	930	671	817	338
11	509	589	626	1130	1230	e2300	1360	e2700	1040	637	795	321
12	483	595	635	934	2350	1760	1180	e2400	1070	571	654	324
13	449	603	620	877	1930	1550	1040	1910	1030	547	545	318
14	453	633	608	883	1520	1450	1030	1630	950	557	523	299
15	524	689	597	3420	1270	1310	1070	1480	890	547	511	289
16	565	709	567	6700	1260	1260	1040	1330	e920	532	764	338
17	500	602	558	2490	6250	1240	11200	1500	e1050	759	1530	350
18	495	533	554	1540	6000	1220	11400	1300	e1100	816	961	337
19	581	548	548	1300	2580	1890	4060	1230	e1000	589	653	371
20	721	565	535	1190	1910	2210	10900	1180	e900	518	572	326
21	574	558	536	984	1670	3600	3540	1120	e850	476	485	306
22	499	656	550	978	1420	2420	2510	1080	e800	500	462	356
23	481	733	655	2880	2220	1920	1960	1070	e750	486	439	406
24	469	645	714	2850	2750	1690	1680	1300	e800	524	427	414
25	492	584	861	1760	1880	1550	1510	1500	788	511	423	382
26	553	572	972	1340	1650	1460	1410	1240	777	469	451	353
27	736	589	911	2960	1550	1360	1400	1390	755	489	440	338
28	793	568	1380	15600	1530	1230	1310	1450	733	456	360	322
29	611	551	1040	5180	---	1190	1240	1220	702	456	357	305
30	551	562	888	2500	---	1160	1250	1100	718	419	339	296
31	534	---	804	1820	---	1130	---	1050	---	415	330	---
TOTAL	16201	17993	21268	71952	69070	57210	74300	55630	28313	18125	16871	10451
MEAN	523	600	686	2321	2467	1845	2477	1795	944	585	544	348
MAX	793	733	1380	15600	8770	7740	11400	6000	1490	816	1530	484
MIN	431	533	535	608	1230	1030	1010	1050	702	415	330	289
CFSM	.50	.57	.65	2.20	2.34	1.75	2.35	1.70	.90	.56	.52	.33
IN.	.57	.64	.75	2.54	2.44	2.02	2.62	1.97	1.00	.64	.60	.39

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

MEAN	915	926	1155	1427	1647	1908	1717	1323	1109	919	841	859
MAX	3676	2963	2458	3274	4308	5345	4951	3149	4220	2345	3067	3667
(WY)	1960	1958	1997	1978	1960	1975	1987	1972	1972	1949	1940	1979
MIN	237	297	422	392	771	661	592	515	333	268	218	166
(WY)	1954	1954	1956	1956	1941	1985	1985	1981	1986	1986	1981	1954

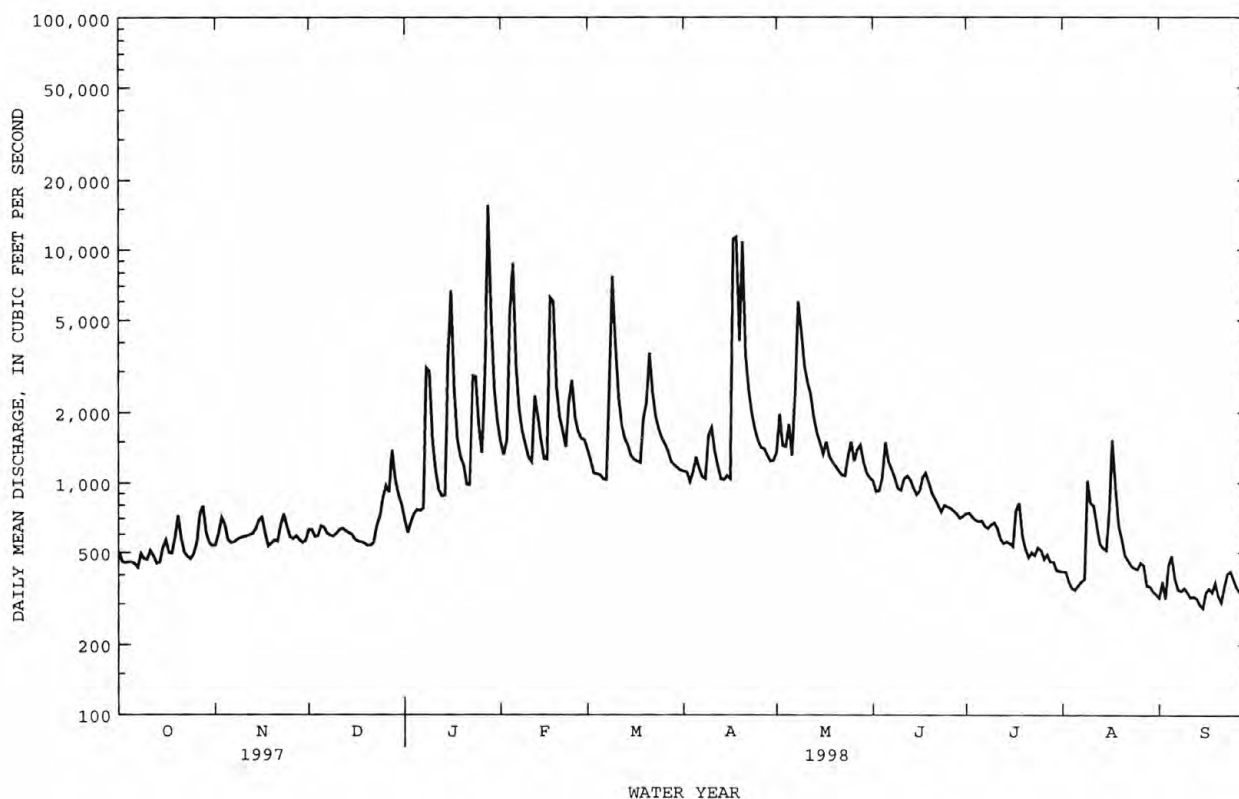
## ROANOKE RIVER BASIN

02071000 DAN RIVER NEAR WENTWORTH, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1940 - 1998	
ANNUAL TOTAL	440153		457384		1228	
ANNUAL MEAN	1206		1253		1985	
HIGHEST ANNUAL MEAN					587	
LOWEST ANNUAL MEAN					1981	
HIGHEST DAILY MEAN	15500	Apr 29	15600	Jan 28	47800	Jun 22 1972
LOWEST DAILY MEAN	330	Sep 8	289	Sep 15	107	Oct 2 1954
ANNUAL SEVEN-DAY MINIMUM	371	Sep 3	318	Sep 10	126	Oct 6 1954
INSTANTANEOUS PEAK FLOW			18100	Apr 18	54200	Jun 22 1972
INSTANTANEOUS PEAK STAGE			20.14	Apr 18	31.60*	Jun 22 1972
INSTANTANEOUS LOW FLOW			276	Sep 15	65	Oct 8 1954
ANNUAL RUNOFF (CFSM)	1.15		1.19		1.17	
ANNUAL RUNOFF (INCHES)	15.55		16.16		15.84	
10 PERCENT EXCEEDS	1940		2320		2060	
50 PERCENT EXCEEDS	972		777		840	
90 PERCENT EXCEEDS	470		398		421	

e Estimated.

\* See REMARKS.





## ROANOKE RIVER BASIN

02074000 SMITH RIVER AT EDEN, NC

LOCATION.--Lat 36°31'31", long 79°45'57", Rockingham County, Hydrologic Unit 03010103, on right bank at Eden, 0.3 mi downstream of bridge on State Highway 14, 0.8 mi upstream from bridge on Secondary Road 1714, 1.2 mi south of Virginia-North Carolina State line, 1.3 mi downstream of Stuart Creek, and 3.9 mi upstream from mouth.

DRAINAGE AREA.--538 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1970, published as "Smith River at Spray".

REVISED RECORDS.--WSP 1433: 1946.

GAGE.--Water-stage recorder. Datum of gage is 539.56 ft above sea level.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated since August 1950 by Philpott Lake, 40 mi upstream (usable capacity, 6,325,000,000 ft<sup>3</sup>). Additional regulation by hydroelectric plant at Martinsville, Virginia, 18 mi upstream. Maximum discharge prior to regulation: 45,600 ft<sup>3</sup>/s, Aug. 15, 1940, from rating curve extended above 12,000 ft<sup>3</sup>/s on the basis of computation of peak flow over dam 1.5 mi downstream; gage height: 19.28 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	420	338	380	445	643	490	718	1050	478	573	358	444
2	369	264	e400	429	800	701	749	1090	794	618	202	370
3	243	387	e420	321	1240	1190	714	506	1030	538	218	382
4	411	384	e360	327	3610	1180	693	704	903	423	393	444
5	429	384	e250	454	3060	1160	463	1360	969	307	475	353
6	563	466	e280	510	1750	1170	690	1310	821	316	370	195
7	e500	470	e330	499	1530	955	831	2060	431	588	385	186
8	e450	292	e350	2050	1470	926	836	3820	450	567	482	378
9	e400	349	e360	1110	1370	3150	876	2280	520	828	715	370
10	e350	382	e340	595	1300	1540	836	1530	598	512	388	376
11	e300	383	e300	452	1280	2080	546	1350	673	431	678	e350
12	e350	382	e270	514	2070	1960	358	756	645	265	507	e250
13	e370	391	e250	586	1470	1900	610	514	591	299	469	e170
14	e340	347	e290	532	1130	1150	749	495	387	452	393	e160
15	e300	308	e370	1450	507	463	743	471	405	451	369	e150
16	e280	348	e390	1930	799	660	729	485	600	539	220	e200
17	322	377	385	783	3440	679	4430	477	617	562	1020	e250
18	524	381	381	596	2250	549	1430	439	590	503	636	e240
19	449	379	388	649	2230	778	2900	952	547	238	532	e260
20	424	243	260	641	2040	1330	4630	888	541	270	468	e250
21	425	274	248	565	1580	2220	2370	911	346	426	397	e200
22	467	406	422	545	1180	1510	2110	897	378	408	359	e150
23	456	389	511	1710	1920	2020	2000	650	703	551	196	e130
24	456	378	457	1220	1880	1270	1430	605	705	510	240	e200
25	419	437	576	721	1480	1160	1020	576	695	444	481	e240
26	376	403	594	715	1340	1110	450	569	688	221	471	e250
27	464	259	459	1420	1310	824	630	776	630	240	464	e230
28	493	246	558	6350	1040	542	645	1060	296	501	388	e220
29	478	371	537	2000	---	421	733	898	292	496	354	e210
30	411	380	517	1510	---	506	891	793	530	475	180	e180
31	496	---	503	1070	---	754	---	426	---	392	184	---
TOTAL	12735	10798	12136	32699	45719	36348	36810	30698	17853	13944	12992	7788
MEAN	411	360	391	1055	1633	1173	1227	990	595	450	419	260
MAX	563	470	594	6350	3610	3150	4630	3820	1030	828	1020	444
MIN	243	243	248	321	507	421	358	426	292	221	180	130
†	-87	-21	-11	+335	+72	-6	-4	+21	-38	-101	-28	-136

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998\*, BY WATER YEAR (WY)

	MEAN	521	510	598	706	757	921	911	720	652	517	499	530
MAX	1572	1530	1376	1453	1633	2519	3016	1567	2026	1374	1454	2030	
(WY)	1990	1986	1997	1979	1998	1993	1987	1978	1972	1989	1985	1996	
MIN	201	211	273	291	325	331	294	266	213	214	194	248	
(WY)	1952	1982	1981	1989	1968	1967	1967	1964	1964	1981	1953	1951	

## ROANOKE RIVER BASIN

02074000 SMITH RIVER AT EDEN, NC--Continued

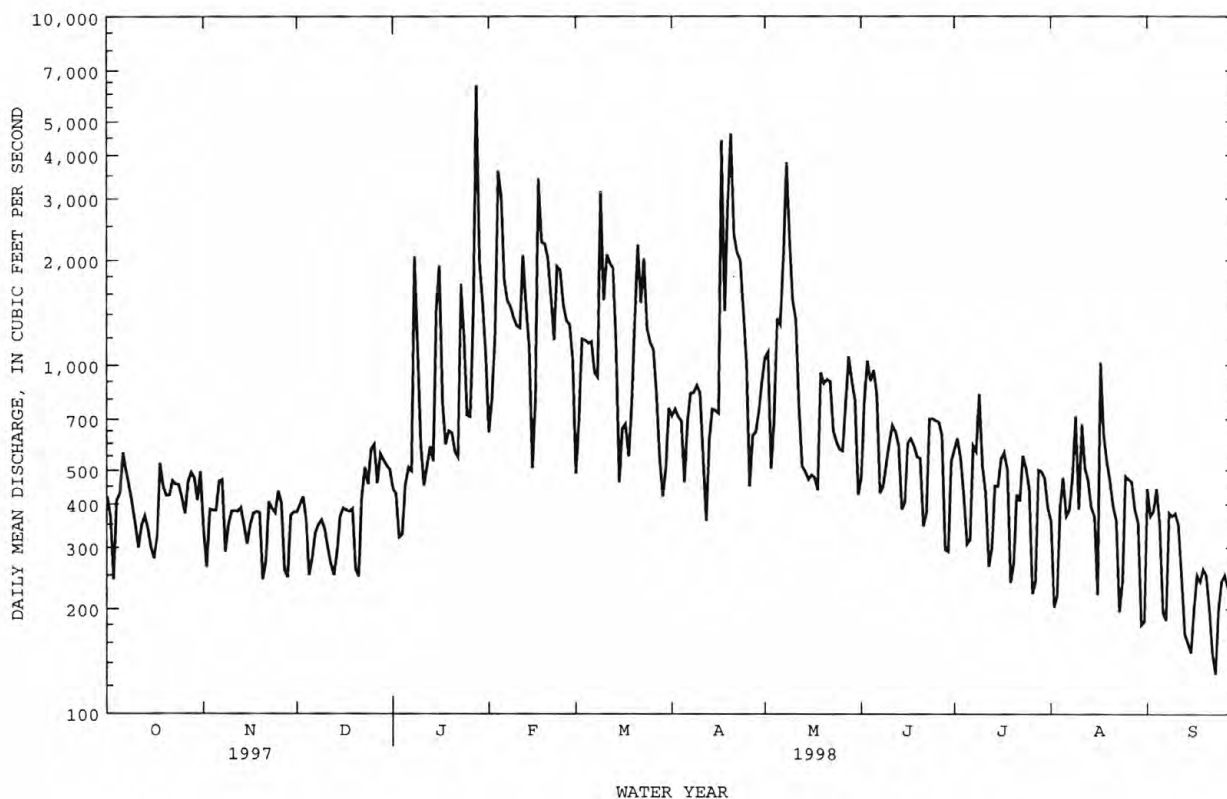
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1951 - 1998*	
ANNUAL TOTAL	269466		270520		653	(UNADJUSTED)
ANNUAL MEAN	738	‡760	741	‡741	1010	1987
HIGHEST ANNUAL MEAN					309	1981
LOWEST ANNUAL MEAN					16700	Jun 21 1972
HIGHEST DAILY MEAN	5190	Apr 28	6350	Jan 28	46	Aug 14 1967
LOWEST DAILY MEAN	212	Sep 5	130	Sep 23	130	Aug 21 1964
ANNUAL SEVEN-DAY MINIMUM	309	Dec 8	200	Sep 21	24800	Jun 21 1972
INSTANTANEOUS PEAK FLOW			8930	Jan 28	16.24	Jun 21 1972
INSTANTANEOUS PEAK STAGE			9.23	Jan 28	38	Aug 7 1967
INSTANTANEOUS LOW FLOW			137 <sup>a</sup>	Oct 16		
10 PERCENT EXCEEDS	1230		1490		1190	
50 PERCENT EXCEEDS	620		499		462	
90 PERCENT EXCEEDS	327		255		228	

e Estimated.

† Change in contents, equivalent in cubic feet per second, in Philpott Lake provided by U.S. Army Corps of Engineers.

‡ Adjusted for change in contents.

\* For regulated period (1951-1998) only. See REMARKS.

<sup>a</sup> Minimum recorded, could have been less during periods of estimated discharge.

## ROANOKE RIVER BASIN

02077200 HYCO CREEK NEAR LEASBURG, NC

LOCATION.--Lat 36°23'57", long 79°11'50", Caswell County, Hydrologic Unit 03010104, on right bank 10 ft upstream from bridge on U.S. Highway 158, 1.5 mi upstream from Kilgore Creek, and 2.5 mi west of Leasburg.

DRAINAGE AREA.--45.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1964 to current year. Prior to October 1968 published as "North Hyco Creek near Leasburg".

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 400.08 ft above sea level. Satellite telemetry at station.

REMARKS.--Records poor. Periods of no flow occur most years. Maximum gage height for period of record from floodmark; maximum discharge for period of record not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	3.9	47	51	63	e52	52	27	6.5	1.9	.76	0
2	.82	12	37	44	58	e49	53	62	5.8	1.6	.67	0
3	.61	21	26	40	56	e47	49	45	5.3	1.4	.53	0
4	.52	7.6	23	36	e1020	e45	61	38	6.8	1.3	.41	0
5	.45	5.1	20	32	e540	e44	63	38	7.4	1.3	.34	.15
6	.40	5.3	16	30	e185	e43	54	31	6.0	1.3	.26	.19
7	.36	4.5	14	41	e97	e42	50	34	5.7	1.1	.20	.01
8	.32	4.1	e13	691	e76	e135	47	52	4.7	1.3	.22	0
9	.31	4.2	e12	465	64	e640	60	40	4.3	1.5	.19	.07
10	.30	4.4	e16	114	59	e200	65	31	4.5	1.4	.20	.27
11	.31	4.5	20	79	62	e105	56	32	4.6	1.5	.49	.04
12	.28	12	16	61	103	e86	51	32	4.2	1.4	.37	0
13	.29	7.4	14	e48	72	72	47	27	4.1	1.2	.20	0
14	.27	25	13	e42	62	68	45	23	3.9	1.0	.14	0
15	1.4	26	12	79	55	64	44	20	4.7	.88	.10	0
16	6.3	21	11	174	56	62	40	17	5.5	.79	.09	0
17	4.9	18	11	118	e1440	61	124	15	4.9	e.76	.70	0
18	3.2	e11	11	76	e500	e205	124	14	3.7	e.71	.21	0
19	6.3	e8.5	10	71	e150	e2640	75	12	3.2	e.68	.09	0
20	41	7.9	10	77	e90	e580	119	11	3.0	e.63	.03	0
21	10	11	9.4	63	e71	e1500	72	11	2.8	e.60	0	0
22	4.5	185	12	57	59	e300	59	9.8	2.7	.58	0	0
23	3.0	94	22	167	65	e145	57	12	3.3	.50	0	0
24	4.2	49	22	168	71	e110	49	17	4.6	.56	0	0
25	3.4	32	53	90	62	77	44	12	3.6	1.4	0	0
26	4.0	26	52	71	57	68	39	11	2.7	1.8	0	0
27	22	18	71	101	55	66	35	11	2.3	1.7	0	0
28	7.8	15	142	309	54	62	32	10	2.0	1.5	0	0
29	4.9	14	84	140	---	59	29	8.7	1.8	1.5	0	0
30	4.8	22	69	84	---	56	28	7.8	1.8	1.1	0	0
31	4.4	---	65	70	---	53	---	7.0	---	.86	0	---
TOTAL	142.64	679.4	953.4	3689	5302	7736	1723	718.3	126.4	35.75	6.20	0.73
MEAN	4.60	22.6	30.8	119	189	250	57.4	23.2	4.21	1.15	.20	.024
MAX	41	185	142	691	1440	2640	124	62	7.4	1.9	.76	.27
MIN	.27	3.9	9.4	30	54	42	28	7.0	1.8	.50	0	0
CFSM	.10	.49	.67	2.59	4.13	5.44	1.25	.50	.09	.03	0	0
IN.	.12	.55	.77	2.99	4.30	6.27	1.40	.58	.10	.03	.01	0

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

	MEAN	25.3	28.7	48.0	86.5	93.5	97.4	61.5	34.2	25.5	24.2	22.7	22.0
MAX	131	137	144	278	244	266	188	184	233	274	264	193	193
(WY)	1996	1973	1973	1978	1979	1975	1997	1978	1995	1975	1995	1996	1996
MIN	0	2.63	4.77	6.15	19.7	23.1	8.63	4.30	1.80	.11	.026	0	0
(WY)	1969	1968	1966	1981	1968	1976	1995	1995	1986	1966	1987	1968	1968

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1964 - 1998

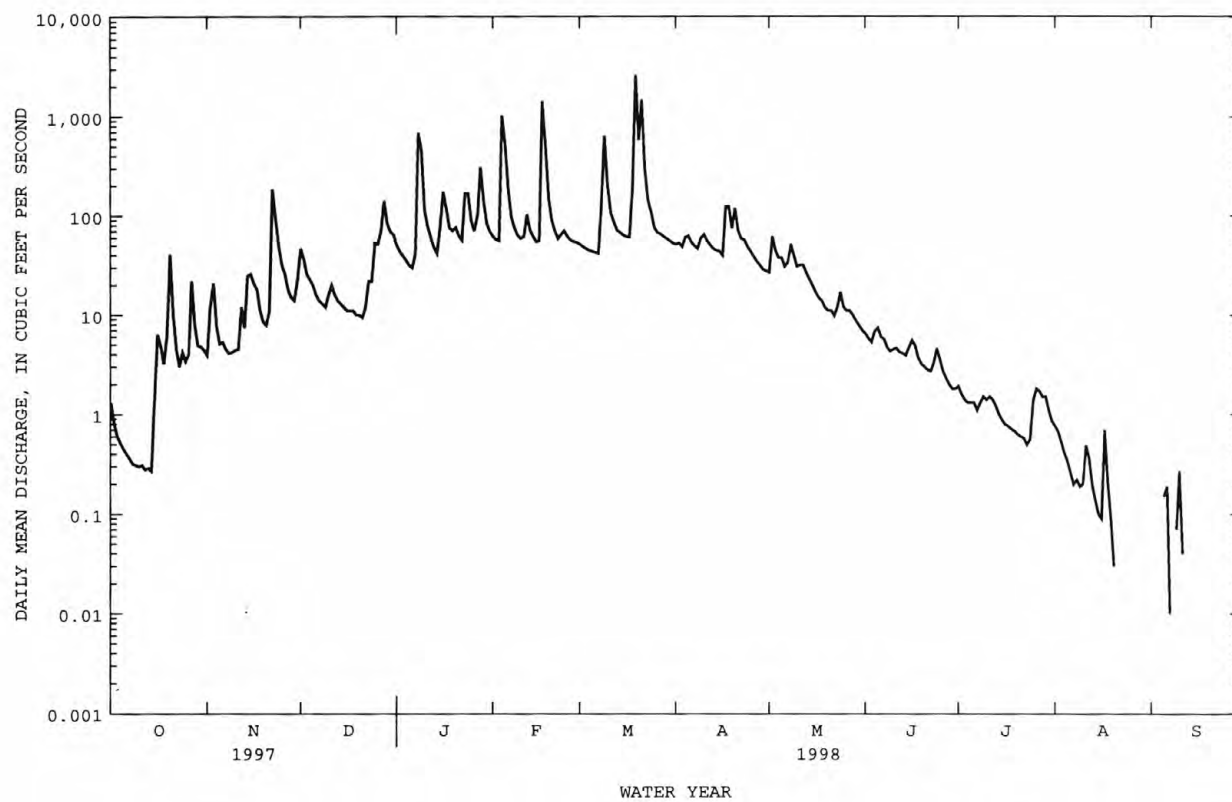
ANNUAL TOTAL	15825.42	21112.82	
ANNUAL MEAN	43.4	57.8	47.3
HIGHEST ANNUAL MEAN			92.3
LOWEST ANNUAL MEAN			15.2
HIGHEST DAILY MEAN	2230	2640	7400
LOWEST DAILY MEAN	0	0	0*
ANNUAL SEVEN-DAY MINIMUM	.01	0	0*
INSTANTANEOUS PEAK FLOW		NOT DETERMINED	NOT DETERMINED
INSTANTANEOUS PEAK STAGE		NOT DETERMINED	48.53*
INSTANTANEOUS LOW FLOW		0*	0*
ANNUAL RUNOFF (CFSM)	.94	1.26	1.03
ANNUAL RUNOFF (INCHES)	12.83	17.11	14.00
10 PERCENT EXCEEDS	81	90	90
50 PERCENT EXCEEDS	13	12	15
90 PERCENT EXCEEDS	.47	.02	.90

e Estimated.

\* See REMARKS.

## ROANOKE RIVER BASIN

02077200 HYCO CREEK NEAR LEASBURG, NC--Continued



## ROANOKE RIVER BASIN

02077200 HYCO CREEK NEAR LEASBURG, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 1964 to current year.

INSTRUMENTATION.--Water-temperature recorder since May 1964.

REMARKS.--Miscellaneous water-quality data published for water years, 1959, 1965-67; 1959 data published as "North Hyco Creek near Leasburg" (station 02077202). Prior to Oct. 1967, daily water-temperature data published as "North Hyco Creek near Leasburg". Interruptions in the record due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 31.3°C, July 17, 1996; minimum recorded, 0.0°C, several days during winter months in most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 27.7°C, June 26, 27; minimum recorded, 0.0°C, several days.

[illegible]



## ROANOKE RIVER BASIN

02077200 HYCO CREEK NEAR LEASBURG, NC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	4.9	3.2	4.1	12.3	10.3	11.4	19.5	18.4	18.9	16.1	15.2	15.6
2	4.8	2.7	3.8	11.8	10.1	10.8	19.4	16.1	17.9	15.8	13.6	14.7
3	5.6	4.6	5.2	10.1	8.0	8.8	17.9	15.0	15.7	16.8	14.6	15.7
4	5.4	4.9	5.0	8.0	5.4	6.7	15.1	12.3	13.7	17.7	16.0	16.8
5	5.4	4.6	4.9	8.0	5.1	6.7	14.0	11.2	12.5	17.8	16.1	17.0
6	5.9	5.4	5.6	7.5	5.6	6.6	14.6	10.9	12.8	17.8	15.4	16.8
7	5.8	5.0	5.3	9.6	7.0	8.2	15.4	11.3	13.4	17.4	16.3	16.8
8	5.9	4.6	5.2	11.1	9.2	10.0	18.8	14.3	16.3	17.4	15.8	16.4
9	5.4	4.0	4.8	13.6	11.1	12.2	18.1	16.6	17.4	18.3	16.6	17.5
10	5.4	3.5	4.5	12.8	8.6	10.1	17.3	13.1	15.0	18.1	16.6	17.2
11	7.3	4.0	4.8	8.6	5.6	6.7	14.2	10.8	12.6	16.8	16.1	16.4
12	8.2	6.3	7.1	6.2	4.3	5.4	14.8	11.1	13.0	16.6	15.6	16.1
13	8.0	6.0	6.8	6.0	3.2	4.7	15.4	11.4	13.5	16.0	14.8	15.4
14	7.1	6.0	6.6	8.4	4.4	6.3	15.0	13.6	14.0	18.0	15.3	16.4
15	6.2	4.4	5.5	9.4	6.3	7.8	17.2	12.7	14.8	19.6	16.0	17.7
16	5.4	4.5	4.8	8.3	6.9	7.3	19.0	16.4	17.6	21.1	17.8	19.4
17	8.8	5.2	7.2	7.0	6.0	6.3	18.5	15.6	16.7	22.8	20.0	21.3
18	9.3	7.8	8.6	6.2	5.5	5.7	16.7	14.2	15.2	23.2	20.0	21.5
19	9.5	7.9	8.8	9.7	6.2	7.3	14.2	13.1	13.6	22.6	18.9	20.8
20	9.6	8.3	9.0	9.9	7.9	9.2	15.8	13.1	14.2	22.4	20.0	21.1
21	9.1	7.6	8.3	9.3	7.9	9.0	15.7	13.2	14.2	23.9	20.6	21.9
22	8.1	6.2	7.3	8.9	7.2	8.0	14.7	12.3	13.5	22.4	20.4	21.4
23	7.9	6.7	7.4	8.3	6.5	7.6	13.9	11.6	12.6	21.1	18.1	19.4
24	8.3	6.2	7.2	9.3	7.6	8.5	15.2	12.9	14.1	19.2	17.3	18.2
25	9.4	6.8	8.1	9.0	7.3	8.4	16.6	13.5	15.1	22.6	18.9	20.5
26	9.4	7.0	8.3	12.0	7.5	9.7	18.3	15.4	16.7	23.2	20.6	21.9
27	9.0	7.8	8.4	15.8	11.6	13.6	17.6	14.1	16.1	22.7	21.3	21.7
28	11.6	8.8	10.1	17.4	14.6	16.0	15.0	11.8	13.6	22.5	20.6	21.4
29	---	---	---	18.4	14.8	16.7	16.2	13.3	14.7	23.2	20.6	21.9
30	---	---	---	19.4	16.1	17.8	15.9	14.9	15.4	24.8	21.7	23.1
31	---	---	---	20.1	17.3	18.7	---	---	---	25.3	22.1	23.6
MONTH	11.6	2.7	6.5	20.1	3.2	9.4	19.5	10.8	14.8	25.3	13.6	18.9

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	26.2	23.2	24.4	25.7	23.5	24.4	24.1	21.9	23.0	23.2	21.5	22.4
2	24.9	21.8	23.3	24.7	21.8	23.3	24.0	20.6	22.0	23.2	21.1	22.1
3	25.1	21.4	23.2	25.1	21.4	23.2	23.9	19.4	21.2	22.5	21.0	21.5
4	23.8	21.6	22.4	24.7	22.0	23.4	23.6	19.1	20.9	22.4	20.3	21.2
5	21.8	21.4	21.6	25.4	23.3	24.2	24.0	19.2	21.2	24.1	20.3	21.7
6	21.4	19.2	20.2	24.5	21.8	23.2	24.0	19.1	21.2	24.3	21.3	22.7
7	19.2	16.9	18.0	25.3	21.5	23.1	22.6	20.1	21.3	25.1	22.5	23.7
8	---	---	---	24.8	23.3	23.9	24.8	21.6	22.8	24.3	21.7	23.2
9	18.3	17.5	17.9	26.0	22.8	24.2	24.7	22.5	23.5	21.7	17.9	19.3
10	21.3	17.9	19.2	26.0	24.0	24.8	23.9	22.3	22.9	18.7	15.8	17.4
11	22.3	19.9	20.9	25.5	23.0	24.2	24.7	21.3	22.7	18.8	15.6	17.4
12	24.5	21.1	22.5	24.3	22.3	23.4	25.4	22.1	23.5	20.8	17.0	18.6
13	25.4	22.4	23.6	24.3	22.3	23.2	25.1	21.8	23.3	21.9	17.9	19.6
14	24.2	21.4	22.8	24.5	21.7	23.0	24.5	21.6	23.0	22.6	18.7	20.4
15	25.1	21.7	23.1	25.2	21.6	23.2	24.0	21.9	22.9	23.2	19.5	21.2
16	25.1	23.0	23.9	25.1	23.3	24.2	24.2	22.2	23.2	23.1	19.9	21.4
17	24.6	22.0	23.4	---	---	---	24.7	22.5	23.4	22.0	20.1	21.2
18	25.5	21.7	23.5	---	---	---	25.8	22.8	24.0	22.2	20.5	21.4
19	24.1	22.8	23.3	---	---	---	24.8	22.4	23.5	22.2	20.9	21.4
20	24.9	21.7	23.3	---	---	---	22.5	19.6	20.9	21.8	19.9	20.8
21	25.0	21.6	23.4	---	---	---	22.6	18.2	20.1	21.3	19.8	20.6
22	25.5	23.3	24.4	---	---	---	22.8	18.8	20.6	22.1	20.7	21.3
23	26.1	23.2	24.6	27.6	24.6	25.9	23.1	20.3	21.7	21.8	18.3	19.9
24	25.7	23.2	24.5	26.9	24.2	25.4	23.5	21.2	22.3	18.3	15.5	16.8
25	26.5	23.5	24.9	26.1	24.2	25.2	23.5	21.4	22.5	17.8	15.1	16.4
26	27.7	23.9	25.7	25.8	23.7	24.7	23.4	21.6	22.6	19.0	16.7	17.8
27	27.7	24.9	26.4	24.6	23.1	23.5	24.0	22.9	23.4	20.0	17.9	18.9
28	26.9	24.9	25.9	25.3	22.6	23.7	24.0	22.0	22.9	20.9	19.0	19.9
29	27.1	24.0	25.5	26.5	23.2	24.7	24.3	22.0	23.1	20.9	19.4	20.3
30	27.0	24.5	25.6	26.2	23.5	24.9	24.2	22.6	23.4	21.6	19.9	20.7
31	---	---	---	25.3	23.7	24.5	24.1	22.2	23.1	---	---	---
MONTH	---	---	---	---	---	---	25.8	18.2	22.5	25.1	15.1	20.4

## ROANOKE RIVER BASIN

02077280 HYCO LAKE AT DAM NEAR ROXBORO, NC

LOCATION.--Lat 36°30'42", long 79°02'50", Person County, Hydrologic Unit 03010104, at spillway, off dam on Hyco River, 4.5 mi above Ghents Creek and 8 mi northwest of Roxboro.

DRAINAGE AREA.--189 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 419.81 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 13.68 ft, Sept. 6, 1996; minimum, 8.07 ft, Oct. 13, 1997.

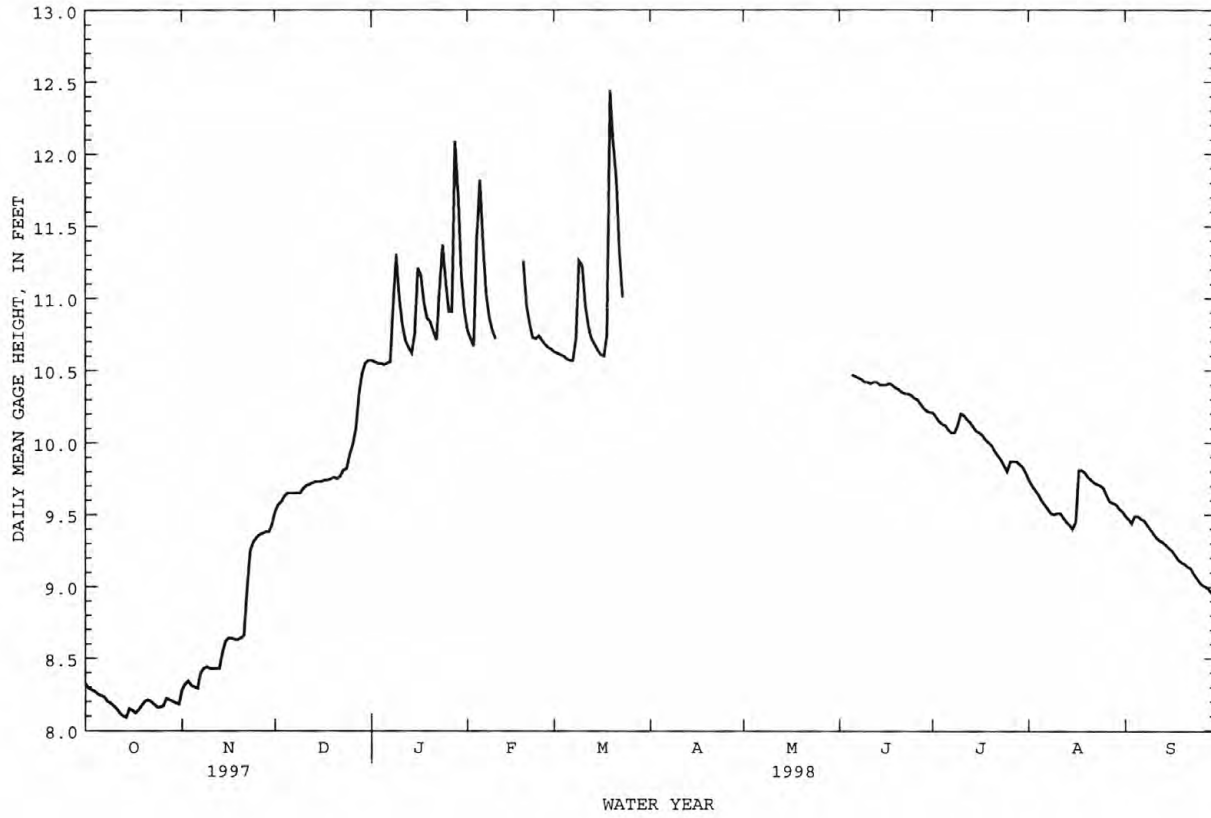
EXTREMES FOR CURRENT YEAR.--Maximum, 12.90 ft, Mar. 19, minimum; 8.07 ft, Oct. 13.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.32	8.28	9.52	10.57	10.78	10.63	---	---	---	10.21	9.74	9.49
2	8.29	8.32	9.57	10.56	10.72	10.62	---	---	---	10.18	9.70	9.47
3	8.28	8.34	9.59	10.55	10.67	10.61	---	---	---	10.15	9.67	9.44
4	8.27	8.31	9.63	10.55	11.41	10.60	---	---	---	10.13	9.64	9.49
5	8.25	8.30	9.65	10.54	11.82	10.58	---	---	10.47	10.12	9.60	9.49
6	8.24	8.29	9.65	10.55	11.37	10.57	---	---	10.46	10.09	9.57	9.47
7	8.23	8.40	9.65	10.56	11.03	10.57	---	---	10.45	10.07	9.54	9.46
8	8.20	8.43	9.65	10.97	10.87	10.73	---	---	10.44	10.07	9.51	9.43
9	8.19	8.44	9.65	11.31	10.78	11.26	---	---	10.42	10.12	9.50	9.40
10	8.17	8.43	9.68	11.01	10.72	11.23	---	---	10.42	10.20	9.51	9.37
11	8.15	8.43	9.70	10.82	---	10.95	---	---	10.41	10.19	9.51	9.34
12	8.12	8.43	9.71	10.71	---	10.80	---	---	10.42	10.16	9.48	9.32
13	8.10	8.43	9.72	10.66	---	10.72	---	---	10.42	10.14	9.45	9.31
14	8.09	8.54	9.73	10.62	---	10.68	---	---	10.40	10.11	9.43	9.29
15	8.15	8.62	9.73	10.76	---	10.64	---	---	10.40	10.08	9.40	9.27
16	8.14	8.64	9.73	11.21	---	10.61	---	---	10.40	10.07	9.45	9.25
17	8.12	8.64	9.74	11.16	---	10.60	---	---	10.41	10.05	9.81	9.22
18	8.14	8.63	9.74	10.97	---	10.74	---	---	10.40	10.02	9.81	9.19
19	8.17	8.63	9.75	10.86	11.26	12.44	---	---	10.38	10.00	9.79	9.17
20	8.20	8.64	9.76	10.84	10.95	12.09	---	---	10.37	9.98	9.76	9.16
21	8.21	8.66	9.75	10.77	10.82	11.82	---	---	10.35	9.94	9.74	9.14
22	8.20	8.99	9.77	10.71	10.73	11.33	---	---	10.34	9.91	9.72	9.13
23	8.18	9.25	9.81	11.07	10.72	11.01	---	---	10.34	9.88	9.71	9.09
24	8.16	9.31	9.82	11.37	10.74	---	---	---	10.33	9.84	9.70	9.06
25	8.16	9.34	9.92	11.12	10.71	---	---	---	10.31	9.80	9.68	9.03
26	8.17	9.36	9.99	10.91	10.68	---	---	---	10.30	9.87	9.63	9.01
27	8.22	9.37	10.10	10.91	10.66	---	---	---	10.27	9.87	9.59	9.00
28	8.21	9.38	10.34	12.09	10.65	---	---	---	10.24	9.87	9.58	8.98
29	8.20	9.38	10.48	11.72	---	---	---	---	10.22	9.85	9.57	8.95
30	8.19	9.43	10.55	11.16	---	---	---	---	10.21	9.83	9.54	8.94
31	8.18	---	10.57	10.91	---	---	---	---	---	9.79	9.52	---
MEAN	8.19	8.72	9.83	10.92	---	---	---	---	---	10.02	9.61	9.25
MAX	8.32	9.43	10.57	12.09	---	---	---	---	---	10.21	9.81	9.49
MIN	8.09	8.28	9.52	10.54	---	---	---	---	---	9.79	9.40	8.94

## ROANOKE RIVER BASIN

02077280 HYCO LAKE AT DAM NEAR ROXBORO, NC--Continued



## ROANOKE RIVER BASIN

0207730290 AFTERBAY RESERVIOR AT DAM NEAR MCGHEES MILL, NC

LOCATION.--Lat 36°31'24", long 78°59'49", Person County, Hydrologic Unit 03010104, on Afterbay Reservoir dam on Hyco River, 1.2 mi upstream of from Ghent Creek, and 1.8 mi northeast of McGhees Mill.

DRAINAGE AREA.--202 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 100.00 ft above sea level. Satellite telemetry at station.

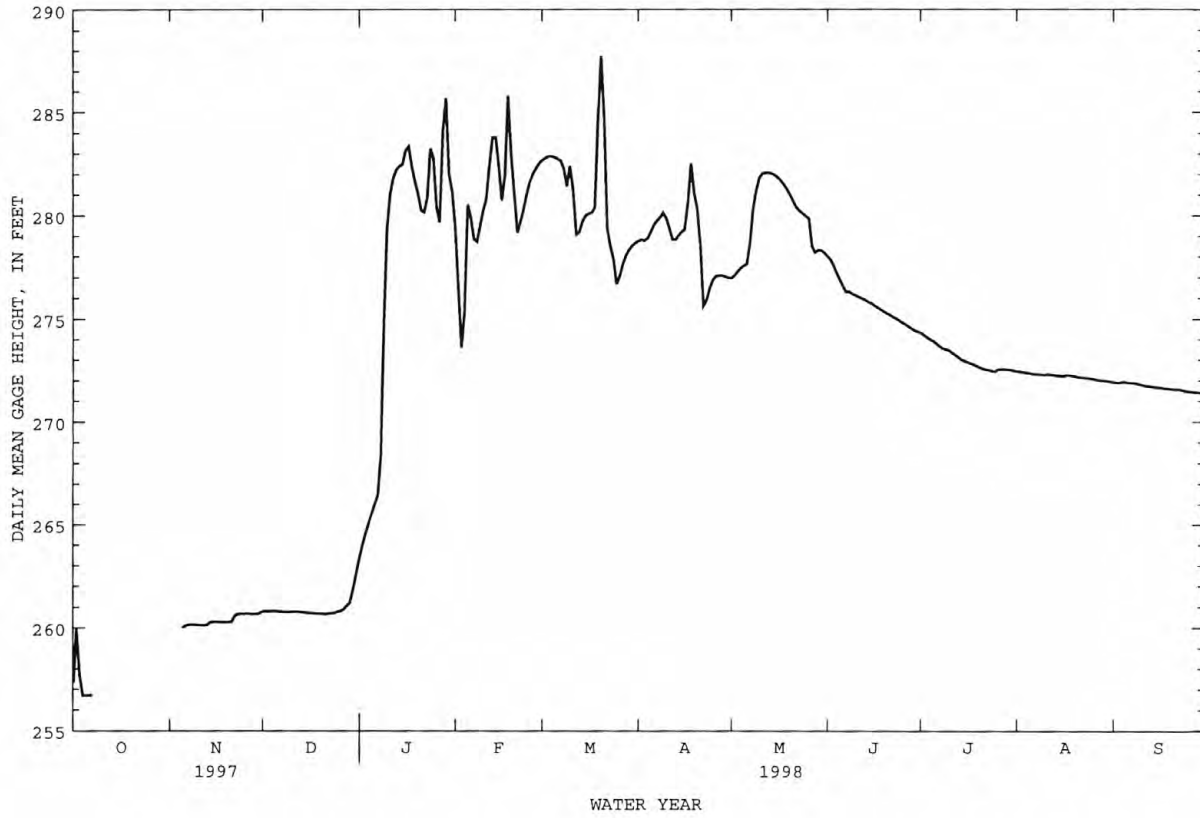
EXTREMES FOR PERIOD OF RECORD.--Maximum, 291.11 ft, Sept. 7, 1996; minimum, not determined.

EXTREMES FOR CURRENT YEAR.--Maximum, 288.56 ft, Mar. 20; minimum, not determined.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	257.34	---	260.78	263.37	279.45	282.67	278.76	276.97	278.02	274.33	272.46	271.93
2	259.92	---	260.79	264.01	276.54	282.77	278.83	277.10	277.87	274.22	272.44	271.91
3	257.73	---	260.79	264.57	273.60	282.86	278.79	277.27	277.57	274.11	272.41	271.89
4	256.69	---	260.80	265.07	275.33	282.88	278.91	277.45	277.22	274.00	272.38	271.95
5	256.70	260.01	260.80	265.52	280.52	282.83	279.21	277.56	276.91	273.92	272.36	271.92
6	256.70	260.09	260.79	265.97	279.91	282.74	279.54	277.65	276.57	273.80	272.33	271.90
7	256.71	260.15	260.77	266.45	278.85	282.66	279.75	278.65	276.30	273.68	272.31	271.88
8	---	260.15	260.76	268.36	278.74	282.28	279.91	280.35	276.31	273.58	272.31	271.87
9	---	260.15	260.75	274.87	279.48	281.44	280.13	281.23	276.21	273.52	272.30	271.84
10	---	260.14	260.77	279.31	280.24	282.39	279.85	281.82	276.14	273.48	272.29	271.79
11	---	260.13	260.77	280.99	280.79	281.31	279.38	282.03	276.07	273.37	272.31	271.76
12	---	260.12	260.77	281.78	282.48	279.09	278.83	282.06	276.00	273.26	272.29	271.74
13	---	260.14	260.76	282.19	283.81	279.21	278.83	282.07	275.93	273.15	272.27	271.72
14	---	260.27	260.74	282.39	283.82	279.72	279.05	282.03	275.84	273.03	272.25	271.69
15	---	260.29	260.73	282.48	282.41	279.97	279.21	281.95	275.77	272.96	272.23	271.67
16	---	260.29	260.72	283.15	280.73	280.09	279.33	281.83	275.67	272.90	272.23	271.66
17	---	260.28	260.71	283.35	281.94	280.13	280.64	281.67	275.57	272.84	272.26	271.64
18	---	260.27	260.70	282.40	285.80	280.37	282.53	281.48	275.48	272.78	272.25	271.62
19	---	260.27	260.69	281.68	282.87	284.64	281.08	281.25	275.38	272.71	272.23	271.60
20	---	260.27	260.68	281.07	281.02	287.73	280.33	280.98	275.29	272.64	272.20	271.58
21	---	260.30	260.66	280.26	279.18	284.68	278.57	280.67	275.20	272.58	272.17	271.57
22	---	260.59	260.68	280.17	279.70	279.39	275.63	280.38	275.11	272.54	272.15	271.57
23	---	260.66	260.71	280.88	280.31	278.51	275.89	280.21	275.02	272.51	272.13	271.54
24	---	260.68	260.71	283.25	281.03	277.91	276.49	280.09	274.94	272.48	272.12	271.50
25	---	260.67	260.78	282.77	281.60	276.68	276.87	279.96	274.83	272.45	272.10	271.48
26	---	260.68	260.80	280.41	281.99	277.07	277.06	279.84	274.75	272.55	272.07	271.46
27	---	260.67	260.89	279.67	282.28	277.65	277.09	278.50	274.64	272.55	272.03	271.44
28	---	260.67	261.06	284.13	282.51	278.06	277.09	278.21	274.54	272.55	272.01	271.43
29	---	260.66	261.21	285.68	---	278.33	277.05	278.32	274.45	272.53	272.00	271.40
30	---	260.71	261.85	282.00	---	278.52	276.99	278.30	274.38	272.52	271.98	271.39
31	---	---	262.63	281.20	---	278.66	---	278.18	---	272.49	271.95	---
MEAN	---	---	260.87	277.40	280.60	280.75	278.72	279.87	275.80	273.10	272.22	271.68
MAX	---	---	262.63	285.68	285.80	287.73	282.53	282.07	278.02	274.33	272.46	271.95
MIN	---	---	260.66	263.37	273.60	276.68	275.63	276.97	274.38	272.45	271.95	271.39

ROANOKE RIVER BASIN  
0207730290 AFTERBAY RESERVIOR AT DAM NEAR MCGHEES MILL, NC--Continued





## ROANOKE RIVER BASIN

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR MCGEHEES MILL, NC

LOCATION.--Lat 36°31'24", long 78°59'48", Person County, Hydrologic Unit 03010104, on left bank 200 ft downstream from Afterbay Reservoir dam of Carolina Power and Light Company, 1.2 mi upstream from Ghent Creek, and 1.8 mi east-northeast of McGehees Mill.

DRAINAGE AREA.--202 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1973 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 342.98 ft above sea level (levels by Carolina Power and Light Company). From August 1964 to September 1973, records published as "Hyco River at McGehees Mill, NC" at site 2.8 mi upstream, at datum 349.78 ft. Water-temperature recorder operated at site 600 ft downstream on right bank from June 1974 to Sept. 1995.

REMARKS.-- Records good except those for estimated daily discharges, and discharges above 150 ft<sup>3</sup>/s, which are poor. Flow regulated by Roxboro Steam- Electric Generating Plant Afterbay Reservoir.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	4.7	2.0	2.8	1030	113	100	91	100	22	2.6	2.9
2	30	.27	2.0	2.7	955	111	98	92	99	21	2.5	3.1
3	29	3.2	2.1	2.4	651	111	98	92	98	21	2.6	3.1
4	30	5.4	2.1	3.6	802	111	98	93	98	21	2.6	3.2
5	30	2.8	2.0	3.3	2630	111	101	93	98	24	2.6	3.4
6	30	2.2	2.2	3.4	2030	110	102	93	95	26	2.6	3.2
7	30	2.3	2.1	3.4	1130	110	103	93	74	26	2.4	3.0
8	28	2.2	2.2	11	423	656	104	112	e28	26	2.3	3.0
9	27	1.9	2.2	5.2	100	1310	188	105	e27	25	2.3	4.1
10	27	2.2	2.2	48	102	1270	306	103	26	25	2.3	4.4
11	26	2.2	2.1	103	102	1180	301	105	25	25	2.3	4.9
12	25	3.8	2.2	107	170	725	244	105	26	25	2.4	4.9
13	23	4.1	2.2	109	305	99	97	106	24	25	2.5	4.7
14	24	4.0	2.1	108	523	101	98	106	25	21	2.5	4.6
15	22	2.8	2.2	398	646	101	99	106	25	14	2.5	4.0
16	21	2.4	2.3	1120	522	101	99	106	24	13	2.5	3.8
17	21	2.2	2.3	1300	1550	102	441	105	23	13	2.5	5.7
18	21	2.2	2.2	1090	3530	203	1270	105	23	13	2.5	4.6
19	21	1.9	2.1	619	2440	3320	1410	105	22	13	2.7	5.7
20	21	1.6	2.1	601	1240	4600	1180	104	22	13	3.0	5.4
21	20	1.5	2.2	463	590	4380	1080	103	22	9.3	3.6	4.8
22	20	1.7	2.1	175	102	2910	989	102	21	3.5	3.6	5.0
23	19	1.4	2.1	640	103	838	538	101	21	3.6	3.2	4.4
24	19	1.4	2.2	1290	106	701	89	102	22	3.6	3.3	5.4
25	19	1.7	2.0	1620	106	417	90	103	24	2.7	4.3	6.4
26	19	1.9	2.1	1200	107	96	92	102	23	2.6	2.8	6.2
27	19	2.0	2.3	585	108	99	92	447	23	2.5	2.6	7.2
28	18	2.0	2.4	2380	110	99	92	462	22	2.5	2.7	4.7
29	18	1.9	2.5	3800	---	98	92	98	22	2.5	2.6	6.5
30	18	2.1	2.6	2090	---	99	91	99	22	2.5	2.6	5.9
31	16	---	2.6	706	---	99	---	101	---	2.5	2.7	---
TOTAL	723	71.97	68.0	20589.8	22213	24381	9782	3840	1204	449.8	84.2	138.2
MEAN	23.3	2.40	2.19	664	793	786	326	124	40.1	14.5	2.72	4.61
MAX	32	5.4	2.6	3800	3530	4600	1410	462	100	26	4.3	7.2
MIN	16	.27	2.0	2.4	100	96	89	91	21	2.5	2.3	2.9
CFSM	.12	.01	.01	3.29	3.93	3.89	1.61	.61	.20	.07	.01	.02
IN.	.13	.01	.01	3.79	4.09	4.49	1.80	.71	.22	.08	.02	.03

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1998, BY WATER YEAR (WY)

	MEAN	57.2	62.0	121	392	347	443	246	122	77.6	105	72.6	121
	MAX	351	334	361	1201	926	1165	692	864	456	1058	294	675
	(WY)	1996	1986	1983	1978	1979	1993	1983	1978	1982	1975	1982	1974
	MIN	6.56	2.40	2.19	18.9	11.0	18.3	12.9	7.90	3.96	9.60	1.43	1.55
	(WY)	1974	1998	1998	1981	1981	1981	1985	1981	1974	1985	1977	1977

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

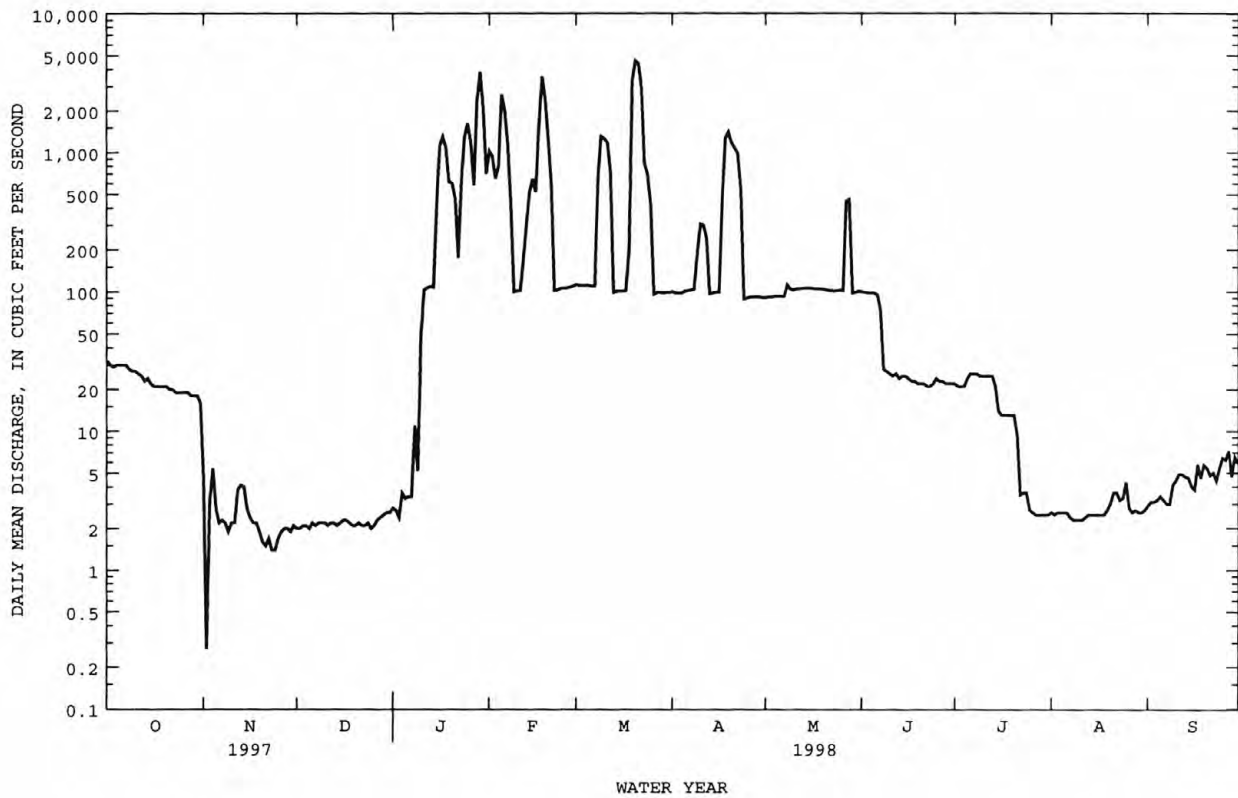
## WATER YEARS 1974 - 1998

ANNUAL TOTAL	55543.97	83544.97	
ANNUAL MEAN	152	229	180
HIGHEST ANNUAL MEAN			392
LOWEST ANNUAL MEAN			17.9
HIGHEST DAILY MEAN	3950	4600	9280
LOWEST DAILY MEAN	.27	.27	.27
ANNUAL SEVEN-DAY MINIMUM	1.6	1.6	.48
INSTANTANEOUS PEAK FLOW		4810	11300
INSTANTANEOUS PEAK STAGE		17.84	24.40
INSTANTANEOUS LOW FLOW		.11	0
ANNUAL RUNOFF (CFSM)	.75	1.13	.89
ANNUAL RUNOFF (INCHES)	10.23	15.39	12.09
10 PERCENT EXCEEDS	313	653	404
50 PERCENT EXCEEDS	66	23	35
90 PERCENT EXCEEDS	2.2	2.2	11

e Estimated.

## ROANOKE RIVER BASIN

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR MCGEHEES MILL, NC--Continued



## ROANOKE RIVER BASIN

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR MCGEHEES MILL, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1981 to September 1983.

WATER TEMPERATURE: June 1974 to current year.

INSTRUMENTATION.--Temperature recorder since June 1974. Water-quality monitor from Oct. 1981 to Sept. 1983.

REMARKS.--No temperature record July 29 to Sept. 30.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 197 microsiemens, Dec. 6, 1981; minimum, 89 microsiemens, May 16, 1983.

WATER TEMPERATURE: Maximum recorded, 33.5°C, July 20, 21, 22, 1977; minimum recorded, 1.9°C, Jan. 22, 1994.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 31.6°C, July 22; minimum recorded, 2.0°C, Dec. 16.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	21.5	20.9	21.2	18.2	12.5	14.4	12.4	7.3	10.1	6.1	2.3	3.4
2	21.0	20.2	20.6	19.7	8.8	14.3	12.9	5.7	7.8	7.2	2.6	4.0
3	20.8	19.4	20.1	18.1	6.2	11.4	12.0	6.0	8.6	8.6	2.6	4.8
4	21.6	19.9	20.7	15.1	10.8	12.9	12.3	8.2	9.9	9.2	3.8	5.5
5	22.2	20.5	21.4	15.6	9.0	11.5	10.4	6.0	7.7	8.6	4.3	5.9
6	22.4	20.8	21.6	12.5	8.8	10.6	9.4	5.1	6.1	8.5	6.3	7.4
7	22.4	21.1	21.8	11.5	10.1	11.0	9.6	4.8	6.0	12.3	8.0	9.8
8	22.0	21.1	21.4	11.8	10.6	11.1	8.6	4.4	5.8	14.8	9.6	12.0
9	21.9	20.9	21.4	15.4	9.9	11.6	6.9	5.6	6.2	11.6	8.8	10.5
10	22.8	21.8	22.3	15.0	9.0	11.2	7.3	6.3	6.8	12.8	8.5	10.5
11	23.0	21.8	22.6	14.4	9.2	11.1	8.5	5.2	6.6	13.2	12.7	12.9
12	22.0	21.1	21.5	12.5	10.5	11.2	8.9	4.6	6.3	13.1	12.8	12.9
13	21.5	20.7	21.0	10.7	7.7	9.1	7.8	3.7	5.3	13.2	12.7	12.9
14	21.7	20.7	21.2	9.8	7.2	9.0	5.9	3.0	4.3	13.0	12.3	12.7
15	21.3	18.5	20.3	13.1	7.2	9.6	9.3	2.1	4.0	12.3	11.6	12.0
16	20.2	19.2	19.6	12.8	5.7	8.2	9.7	2.0	4.1	12.1	11.9	11.9
17	19.2	15.8	18.6	12.4	5.3	7.1	9.7	2.2	4.4	11.9	11.8	11.8
18	17.5	15.8	17.3	12.4	4.9	6.8	9.7	2.5	4.7	12.2	11.8	12.0
19	17.0	15.0	16.2	13.5	3.8	6.8	10.2	2.5	4.8	12.1	11.8	11.9
20	16.6	15.5	16.1	14.7	2.5	6.6	10.0	2.8	5.4	11.9	11.6	11.7
21	16.4	15.5	16.1	9.2	4.7	6.7	8.6	3.4	5.2	11.7	11.2	11.4
22	16.8	15.7	16.3	10.7	6.9	8.5	5.6	5.0	5.3	11.4	10.9	11.3
23	15.8	14.8	15.3	13.0	6.3	9.0	10.6	5.2	6.8	10.9	10.0	10.7
24	15.3	14.5	14.9	11.3	3.7	6.4	7.1	5.5	6.3	11.0	10.8	10.9
25	15.8	14.8	15.2	11.4	3.0	5.9	9.6	6.2	7.2	11.7	10.9	11.3
26	15.8	14.5	15.3	10.6	4.7	7.3	10.9	5.2	7.0	11.6	11.4	11.5
27	15.6	14.8	15.2	12.8	5.6	8.1	5.8	3.6	5.0	11.5	10.8	11.2
28	14.9	13.6	14.3	9.9	5.4	7.6	5.8	3.6	4.4	10.9	10.6	10.7
29	14.2	13.1	13.6	11.6	6.5	8.8	3.9	2.5	3.2	11.4	10.9	11.1
30	14.2	13.2	13.6	10.9	9.2	10.0	5.8	3.2	3.7	11.8	11.4	11.5
31	13.5	12.7	13.2	---	---	---	5.9	2.7	3.6	11.5	11.2	11.3
MONTH	23.0	12.7	18.4	19.7	2.5	9.5	12.9	2.0	5.9	14.8	2.3	10.3

## ROANOKE RIVER BASIN

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR MCGEHEES MILL, NC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	11.5	10.8	11.1	12.3	11.6	11.9	18.0	16.8	17.2	---	---	---
2	11.2	10.8	11.0	12.1	11.0	11.6	18.8	16.1	17.6	---	---	---
3	10.9	9.7	10.6	12.3	11.0	11.7	17.7	16.0	16.7	---	---	---
4	10.0	9.4	9.8	12.0	10.7	11.3	16.7	15.6	16.0	---	---	---
5	10.1	9.5	9.8	12.0	10.6	11.3	17.0	15.2	16.2	---	---	---
6	10.3	10.1	10.2	11.6	10.7	11.2	17.3	15.0	16.1	---	---	---
7	10.2	9.9	10.1	11.6	11.0	11.3	16.8	15.3	16.1	---	---	---
8	10.2	9.2	9.8	11.9	11.2	11.5	18.3	16.5	17.3	---	---	---
9	9.8	8.7	9.2	12.9	11.8	12.4	19.4	17.1	18.0	---	---	---
10	10.0	8.4	9.1	13.1	12.4	12.8	19.0	17.4	18.2	---	---	---
11	9.9	8.7	9.3	13.3	12.5	12.9	18.1	17.0	17.5	---	---	---
12	10.4	9.6	10.0	12.9	10.9	12.1	17.7	15.9	17.0	---	---	---
13	10.2	9.5	9.8	12.0	10.2	11.2	17.3	15.3	16.5	---	---	---
14	10.2	9.8	10.0	12.6	11.0	11.8	17.7	16.9	17.3	---	---	---
15	10.0	9.5	9.8	12.4	10.8	11.6	18.1	17.2	17.6	---	---	---
16	9.8	9.6	9.8	11.4	11.1	11.3	18.9	18.0	18.5	---	---	---
17	10.6	9.6	10.0	11.2	10.5	10.9	19.5	17.9	18.9	---	---	---
18	11.9	10.6	11.3	11.0	9.9	10.5	19.0	18.7	18.8	---	---	---
19	12.8	11.9	12.4	12.6	10.9	11.3	19.3	18.6	19.0	---	---	---
20	13.3	12.7	12.9	14.4	12.6	13.7	19.8	19.0	19.3	---	---	---
21	13.0	11.7	12.7	14.5	14.1	14.4	19.5	19.1	19.3	---	---	---
22	12.5	11.5	12.1	14.1	13.6	13.8	19.5	---	19.0	---	---	---
23	12.1	11.1	11.6	14.0	13.3	13.6	19.2	---	---	---	---	---
24	12.0	11.1	11.5	14.1	13.3	13.6	---	---	---	---	---	---
25	12.0	10.7	11.5	13.4	12.1	12.9	---	---	---	---	---	---
26	11.8	10.8	11.3	14.0	11.8	13.1	---	---	---	---	---	---
27	11.7	10.9	11.4	14.8	13.8	14.2	---	---	---	---	---	---
28	12.2	11.6	11.9	15.9	14.8	15.3	---	---	---	---	---	---
29	---	---	---	16.2	15.4	15.9	---	---	---	---	---	---
30	---	---	---	17.2	15.2	16.0	---	---	---	---	---	---
31	---	---	---	18.1	16.1	17.1	---	---	---	---	---	---
MONTH	13.3	8.4	10.7	18.1	9.9	12.7	---	---	---	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	26.1	24.2	25.3	27.7	19.2	23.3	28.0	21.1	24.7
2	---	---	---	25.7	23.0	24.6	27.6	17.9	22.3	28.4	21.0	24.6
3	---	---	---	25.6	22.4	24.3	27.7	15.3	21.2	26.2	21.3	23.5
4	---	---	---	26.1	23.1	24.8	28.0	15.6	21.6	27.2	21.7	23.8
5	23.4	22.8	22.9	25.8	23.9	25.2	28.4	16.9	22.3	29.0	21.3	24.4
6	22.9	22.2	22.5	25.7	22.7	24.4	28.6	16.7	22.3	28.7	20.8	24.5
7	23.0	19.4	22.1	25.7	22.7	24.5	26.8	19.4	23.4	28.7	23.5	25.8
8	22.1	18.2	20.6	26.5	24.7	25.6	28.2	24.2	25.7	27.5	19.6	24.0
9	21.6	20.5	21.2	26.3	25.0	25.7	28.8	24.0	25.9	27.3	16.7	21.1
10	22.0	20.6	21.2	26.2	24.9	25.5	26.5	22.2	24.2	26.9	16.3	20.8
11	22.1	21.1	21.6	25.8	24.1	25.1	28.0	21.1	24.1	26.6	16.3	21.0
12	23.4	21.6	22.4	25.8	23.9	25.0	27.5	21.9	24.6	27.2	17.7	22.1
13	23.5	22.5	23.0	25.7	23.8	24.9	26.8	21.4	24.2	27.1	18.3	22.5
14	23.9	22.0	23.0	25.8	23.3	24.6	27.1	21.5	24.3	26.8	18.8	22.8
15	24.1	22.4	23.3	25.1	22.4	24.1	26.1	22.2	24.3	26.4	20.0	23.2
16	24.4	22.5	23.5	25.4	24.3	25.0	26.2	23.2	24.7	27.1	20.1	23.6
17	24.5	22.2	23.5	25.8	24.5	25.2	26.7	23.5	24.8	26.6	20.4	23.6
18	24.4	22.1	23.5	25.9	23.0	24.7	28.5	22.6	25.3	26.3	21.6	23.9
19	23.9	23.1	23.6	25.8	23.1	24.8	28.1	18.8	24.1	26.5	21.2	23.6
20	24.5	22.7	23.7	26.6	25.2	25.9	27.7	17.1	21.8	27.3	20.1	23.3
21	24.4	22.1	23.5	26.9	24.6	25.8	27.2	17.5	22.3	26.1	19.8	22.8
22	24.8	23.7	24.4	31.6	24.7	27.3	28.3	19.2	23.6	27.9	22.6	24.7
23	25.0	23.3	24.3	31.4	24.6	27.4	28.4	21.0	24.7	26.6	15.2	21.2
24	24.9	23.1	24.2	31.0	24.0	27.3	28.7	22.1	25.4	25.5	13.8	18.8
25	25.2	23.0	24.3	29.6	23.3	26.2	28.5	21.9	25.3	25.9	15.2	20.2
26	25.7	23.7	24.9	28.5	23.2	25.8	27.1	21.7	24.8	27.5	19.0	22.9
27	26.5	25.1	25.8	25.6	22.9	24.0	26.8	24.3	25.4	27.7	19.4	23.6
28	26.0	24.6	25.2	29.6	22.9	25.4	28.6	22.6	25.5	27.6	21.3	24.4
29	26.1	23.6	25.1	30.6	22.1	25.9	29.1	22.7	25.7	26.1	19.3	22.9
30	27.2	24.9	25.9	29.7	21.6	25.8	28.8	23.2	25.8	27.0	20.9	23.7
31	---	---	---	26.4	23.4	25.5	28.2	22.8	25.3	---	---	---
MONTH	---	---	---	31.6	21.6	25.3	29.1	15.3	24.1	29.0	13.8	23.1

## ROANOKE RIVER BASIN

02077670 MAYO CREEK NEAR BETHEL HILL, NC

LOCATION.--Lat 36°32'26", long 78°52'21" Person County, Hydrologic Unit 03010104, on right bank 0.1 mi upstream from Virginia State line, 0.3 mi downstream of Mayo Steam Electric Generating Plant Dam, 2.9 mi northeast of Bethel Hill, and 4.8 mi downstream of Spoonwater Creek.

DRAINAGE AREA.--53.5 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1977 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 338.84 ft above sea level. (levels by Carolina Power & Light Co.). Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Mayo Steam Electric Generating Plant. Minimum discharge for period of record, no flow, occurred periodically in 1977, 1980, 1981, and 1982 as a result of regulation. Minimum discharge for current water year also occurred Oct. 23, 24, 25.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 4, 1974, reached a stage of 11.11 ft, from floodmarks; discharge, 4,300 4,300 ft<sup>3</sup>/s; no flow July 31, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.2	4.2	2.2	369	96	117	50	36	3.4	2.3	3.0
2	3.0	2.3	3.9	2.2	287	87	107	52	32	3.4	2.3	3.2
3	2.8	2.6	3.7	2.1	230	81	95	47	28	3.4	2.2	3.3
4	2.8	3.0	3.3	2.1	519	72	105	44	30	3.4	2.2	3.4
5	2.6	3.2	3.2	2.1	651	64	104	40	27	3.4	2.3	3.1
6	2.5	3.6	2.9	2.1	570	58	97	36	23	3.4	2.2	3.1
7	2.5	3.9	2.7	2.2	473	54	90	37	20	3.4	2.2	3.0
8	2.4	3.9	2.6	17	377	75	86	60	17	3.4	2.3	3.2
9	2.4	4.3	2.6	38	300	156	95	64	14	3.5	2.2	3.0
10	2.4	4.4	2.6	39	240	172	99	61	14	3.1	2.2	2.9
11	2.3	4.8	2.8	39	194	147	98	56	13	3.1	2.2	2.8
12	2.2	4.6	2.8	37	177	126	91	52	12	3.0	2.1	2.8
13	2.2	4.7	2.8	37	147	111	84	46	11	2.9	2.2	2.7
14	2.1	6.4	2.8	35	125	100	80	42	8.0	2.9	2.2	2.7
15	2.1	5.6	2.8	59	110	88	73	38	7.9	2.9	2.2	2.6
16	2.1	5.8	2.6	134	101	78	69	35	7.3	2.9	2.5	2.6
17	2.0	5.1	2.5	167	451	71	114	37	6.6	2.8	2.4	2.6
18	2.0	4.8	2.4	156	632	125	181	34	5.3	2.8	2.3	2.5
19	2.0	4.8	2.3	150	529	801	169	31	4.6	2.8	2.3	2.5
20	1.9	4.8	2.3	146	422	870	170	27	4.0	2.7	2.4	2.4
21	1.9	5.8	2.4	126	331	946	150	23	3.6	2.6	2.4	2.5
22	1.8	11	2.4	110	262	803	130	20	3.4	2.7	2.4	2.4
23	1.8	5.1	2.4	227	223	671	116	20	3.3	2.6	2.5	2.4
24	1.8	4.3	2.4	345	196	538	104	24	3.3	2.5	2.5	2.3
25	1.8	4.3	2.6	323	163	420	94	24	3.2	2.5	2.5	2.2
26	1.9	4.1	2.3	269	136	328	86	24	3.2	2.6	2.6	2.2
27	2.0	4.2	3.2	300	118	263	73	46	3.2	2.4	2.6	2.2
28	2.0	4.0	2.7	725	106	217	65	56	3.3	2.4	2.7	2.2
29	2.0	3.6	2.4	718	---	174	59	54	3.4	2.4	2.8	2.1
30	2.1	3.8	2.4	596	---	148	53	48	3.4	2.3	2.9	2.1
31	2.1	---	2.3	478	---	130	---	43	---	2.3	2.9	---
TOTAL	68.7	135.0	85.3	5286.0	8439	8070	3054	1271	354.0	89.9	74.0	80.0
MEAN	2.22	4.50	2.75	171	301	260	102	41.0	11.8	2.90	2.39	2.67
MAX	3.2	11	4.2	725	651	946	181	64	36	3.5	2.9	3.4
MIN	1.8	2.2	2.3	2.1	101	54	53	20	3.2	2.3	2.1	2.1

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1998, BY WATER YEAR (WY)

	MEAN	10.6	16.0	23.2	71.6	75.1	107	71.1	40.5	17.0	17.5	12.3	25.3
MAX	62.2	76.0	80.5	254	301	260	214	210	73.4	118	56.1	350	
(WY)	1990	1980	1997	1978	1998	1998	1993	1995	1995	1995	1984	1996	
MIN	.011	.011	.016	.003	.28	.14	.20	.12	.075	.24	.038	0	
(WY)	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1980	

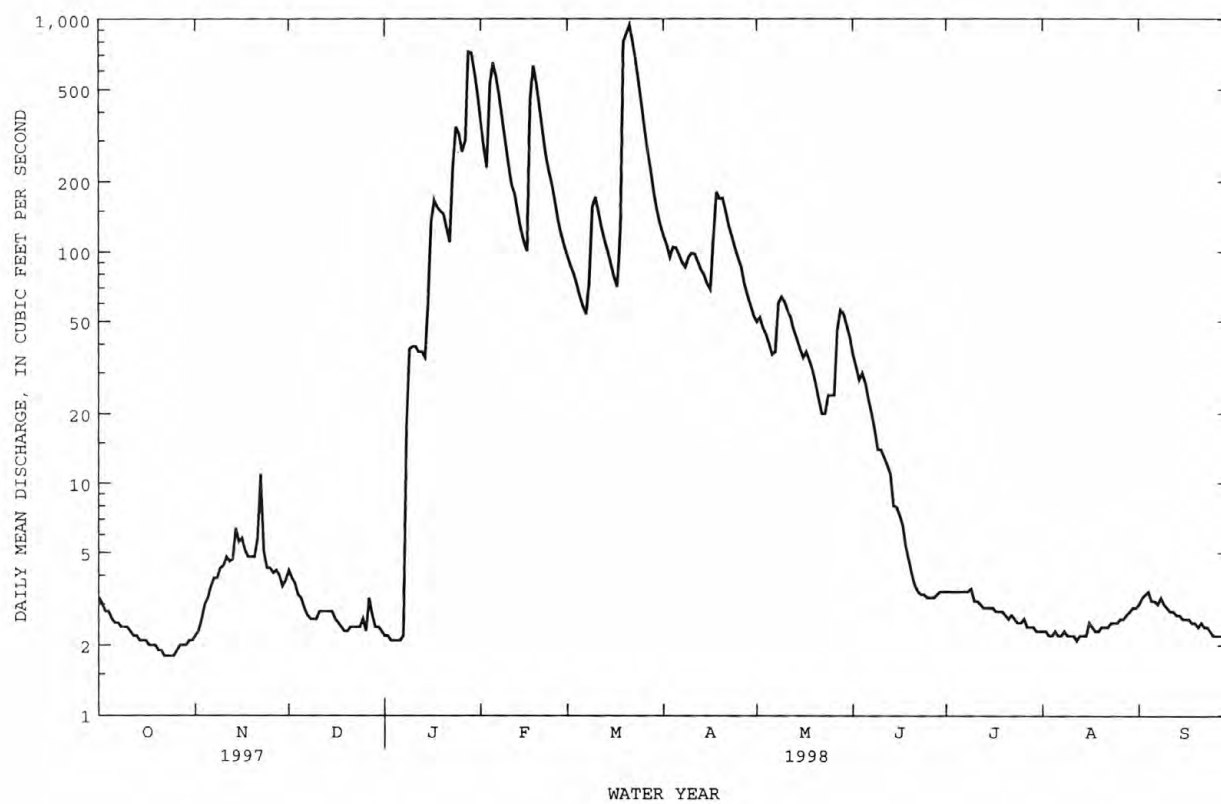
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1977 - 1998	
ANNUAL TOTAL	14028.1		27006.9		40.5	
ANNUAL MEAN	38.4		74.0		87.8	
HIGHEST ANNUAL MEAN					11	
LOWEST ANNUAL MEAN					2260	
HIGHEST DAILY MEAN	447	Apr 29	946	Mar 21	2260	Sep 7 1996
LOWEST DAILY MEAN	1.8	Oct 22	1.8	Oct 22	0	Jul 31 1977
ANNUAL SEVEN-DAY MINIMUM	1.8	Oct 20	1.8	Oct 20	0	Jul 31 1977
INSTANTANEOUS PEAK FLOW			1140	Mar 20	3950	Apr 26 1978
INSTANTANEOUS PEAK STAGE			7.97	Mar 20	10.83	Apr 26 1978
INSTANTANEOUS LOW FLOW			1.8*	Oct 22	0*	Aug 1 1977
10 PERCENT EXCEEDS	106		204		102	
50 PERCENT EXCEEDS	4.8		4.1		8.1	
90 PERCENT EXCEEDS	2.4		2.2		.43	

\* See REMARKS.



## ROANOKE RIVER BASIN

02077670 MAYO CREEK NEAR BETHEL HILL, NC--Continued



## ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC

LOCATION.--Lat 36°27'37", long 77°38'04", Halifax County, Hydrologic Unit 03010107, on right bank 1.2 mi downstream of bridge on State Highway 48 at Roanoke Rapids, 2.5 mi upstream from Chockoyotte Creek, 2.8 mi downstream of Roanoke Rapids dam, and 133.6 mi upstream from mouth in Albemarle Sound.

DRAINAGE AREA.--8,384 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1911 to current year. Prior to January 1933, published as "Roanoke River at Old Gaston". Records published for both sites February 1930 to December 1932. Gage-height records collected at site of auxiliary gage since November 1890 are contained in reports of National Weather Service, NOAA, U.S. Department of Commerce.

REVISED RECORDS.--WSP 712: 1930. WSP 822: 1936. WSP 1032: 1912, 1928(M), 1930(M), 1932-33(M). WSP 1433: 1912-23, 1925-28, 1930, 1932-33, 1935, 1937-39. WSP 1904: 1958, 1960. WDR NC-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.84 ft above sea level. Dec. 7, 1911, to Nov. 21, 1921, and Apr. 7 to Dec. 31, 1932, nonrecording gage and Nov. 21, 1921, to Apr. 7, 1932, water-stage recorder, both at site 9 mi upstream at different datum. Aug. 6, 1941, to Mar. 1, 1973, auxiliary water-stage recorder, 3.6 mi downstream of base gage. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since August 1950 by Philpott Lake on Smith River, usable capacity, 6,325,000,000 ft<sup>3</sup>; since September 1950 by John H. Kerr Reservoir, usable capacity, 101,247,000,000 ft<sup>3</sup>; since June 1955 by Roanoke Rapids Lake (station 02080100); since September 1962 by Leesville Lake; since October 1962 by Lake Gaston (station 02079964); and since September 1963 by Smith Mountain Lake. Prior to regulation, maximum discharge: 261,000 ft<sup>3</sup>/s, Aug. 18, 1940; gage height: 39.0 ft, from floodmarks; minimum discharge: about 250 ft<sup>3</sup>/s, Dec. 16, 1955. Minimum discharge for current water year also occurred Nov. 16.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877, discharge, 212,000 ft<sup>3</sup>/s, reached a stage about 2 ft lower at Old Gaston than flood in August 1940 which was 21.5 ft. Flood in August 1940 is the maximum known since at least 1771.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3220	1170	7160	7350	18700	35000	24900	18900	18500	5730	3570	2870
2	2290	1020	7290	6750	18600	35000	24700	18900	17300	7410	2850	4490
3	2290	1000	7080	2590	18600	34800	24700	18900	15800	3270	2680	2640
4	2450	2670	6810	2250	19000	32400	24600	18900	13900	3880	2630	2510
5	4060	2660	6560	1930	19000	25100	24600	18800	13400	3050	2960	2320
6	3250	2640	5840	2870	21600	24700	24600	18900	13100	3650	3290	2330
7	4030	1110	6230	7460	24000	24400	24600	18900	12700	3700	2800	2330
8	6070	1090	7050	9870	24200	24700	23700	19000	11300	3550	2850	2110
9	ea1000	1010	4180	6860	24900	25000	20400	19000	10200	4930	2840	2090
10	2210	1610	2280	4630	24700	25000	19000	18900	9220	6560	2870	2090
11	2090	1450	2220	5520	25000	24600	18900	18900	8540	3760	2410	2140
12	2390	3540	4430	12500	24800	24600	18900	19000	7090	3790	2370	4710
13	3020	4070	2240	4870	24900	24500	19000	19000	6430	3980	2990	2370
14	3560	4200	5160	10400	25000	24800	18700	18900	5110	4220	2960	2110
15	2570	8320	6630	5740	24900	24600	18100	19000	5120	3830	3080	2400
16	2260	7800	7370	14000	24900	24800	17200	19100	5130	3790	3120	2580
17	2300	7270	3050	14700	25200	24600	17200	19100	4990	3780	2970	2580
18	2240	7410	4690	6120	25100	22400	17300	19000	4690	3510	2590	2590
19	2250	7160	4370	14100	25100	19300	17300	19000	3690	5580	2870	3330
20	2250	7150	2570	18300	29000	19000	17300	19000	2480	5550	3280	3480
21	2240	7050	2050	18300	35300	19000	17900	19000	2480	7750	2780	3010
22	2260	8080	4040	18300	35300	19000	18800	19000	2500	6450	2760	3260
23	3700	7870	2880	18300	35400	21000	18900	19100	7870	6460	2780	3350
24	2310	5260	2140	18400	35500	29100	18800	19100	5940	3040	3490	3860
25	2300	6420	2210	18300	35400	35000	18800	19000	11000	3180	8260	3360
26	2310	6500	1980	18300	35300	35200	18900	19100	3080	3190	3370	4120
27	2270	6900	3870	18400	35400	35400	18900	19100	4830	3260	2580	4200
28	2030	6710	2810	18700	35500	35300	18900	19100	4410	3530	4840	3470
29	2370	7840	4470	18700	---	35300	18900	19000	4390	3410	2340	2880
30	2670	7480	6090	18700	---	35300	18800	19100	6390	3910	2280	6080
31	1640	---	6590	18700	---	28800	---	19100	---	4420	3700	---
TOTAL	85000	144460	142340	361910	750300	847700	603300	588800	241580	136120	97160	91660
MEAN	2742	4815	4592	11670	26800	27350	20110	18990	8053	4391	3134	3055
MAX	6070	8320	7370	18700	35500	35400	24900	19100	18500	7750	8260	6080
MIN	1640	1000	1980	1930	18600	19000	17200	18800	2480	3040	2280	2090
CFSM	.33	.57	.55	1.39	3.20	3.26	2.40	2.26	.96	.52	.37	.36
IN.	.38	.64	.63	1.61	3.33	3.76	2.68	2.61	1.07	.60	.43	.41
†	-125	-698	-218	+11745	+3906	-973	-2522	-6059	-3171	-1687	-494	-1511

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998\*, BY WATER YEAR (WY)

	MEAN	5756	6568	7616	10100	11020	11490	11440	10820	7630	6007	5256	5373
MAX	20360	17690	18380	17850	26800	27350	32660	31750	15260	20560	9755	25970	
(WY)	1980	1986	1973	1991	1998	1998	1993	1978	1982	1972	1975	1996	
MIN	2031	1987	3417	3540	2613	2259	2527	3974	2365	2581	2519	2186	
(WY)	1971	1987	1981	1989	1981	1981	1985	1981	1977	1970	1993	1968	

## ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC--Continued

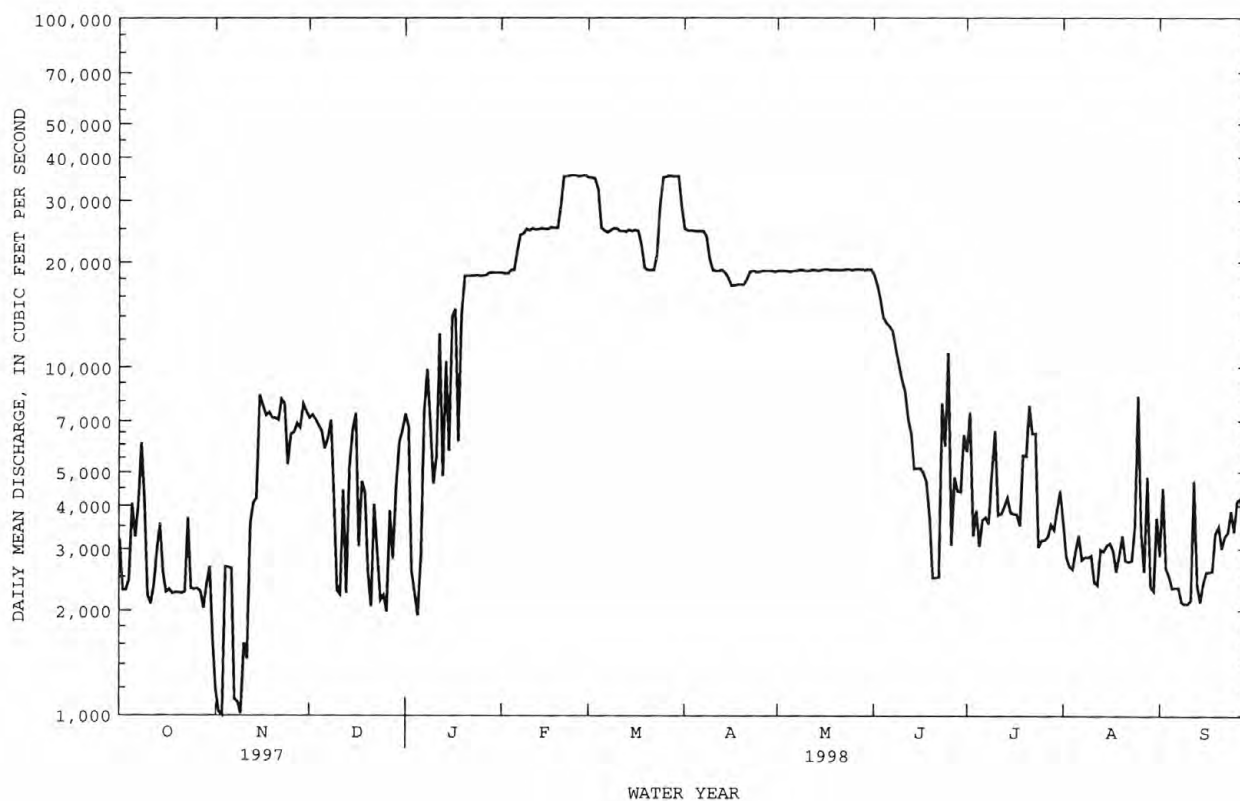
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998*	
ANNUAL TOTAL	3082940		4090330		8111	(UNADJUSTED)
ANNUAL MEAN	8446		11210		12920	1973
HIGHEST ANNUAL MEAN			†11047		3117	1981
LOWEST ANNUAL MEAN					36000	Sep 11 1996
HIGHEST DAILY MEAN	22600	May 14	35500	Feb 24	818	Nov 15 1970
LOWEST DAILY MEAN	1000	Nov 3	1000	Nov 3	989	Nov 5 1986
ANNUAL SEVEN-DAY MINIMUM	1650	Nov 5	1650	Nov 5	37700	Apr 16 1993
INSTANTANEOUS PEAK FLOW			35900	Feb 28	11.58	Feb 28
INSTANTANEOUS PEAK STAGE			11.58	Feb 28	760	Nov 23 1970
INSTANTANEOUS LOW FLOW			950*	Nov 16	5876000	
ANNUAL RUNOFF (AC-FT)	6115000		8113000		.97	
ANNUAL RUNOFF (CFSM)	1.01		1.34		13.14	
ANNUAL RUNOFF (INCHES)	13.68		18.14		19000	
10 PERCENT EXCEEDS	16400		24800		6210	
50 PERCENT EXCEEDS	7360		6500		2020	
90 PERCENT EXCEEDS	2310		2300			

e Estimated.

\* Regulated period only (1964-1998). See REMARKS.

† Change in contents, equivalent in cubic feet per second, in Leeville and Smith Mountain Lake, provided by Appalachian Power Co.; Philpott and Kerr Reservoirs, provided by U.S. Army Corps of Engineers; and Lake Gaston and Roanoke Rapids Lake, provided by North Carolina Power Company.

‡ Adjusted for change in contents.



## ROANOKE RIVER BASIN

0208062765 ROANOKE RIVER AT HALIFAX, NC

LOCATION.--Lat 36°19'59", long 77°34'58", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, approximately 0.5 mi east of Halifax on private dirt road and 119 river mi from mouth.

DRAINAGE AREA.--8,450 mi<sup>2</sup>.

## GAGE HEIGHT RECORDS

PERIOD OF RECORD.--November 1996 to current year. Records from November 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 47.24 ft, Mar. 31, 1998; minimum, 16.43 ft, Dec. 8, 1997.

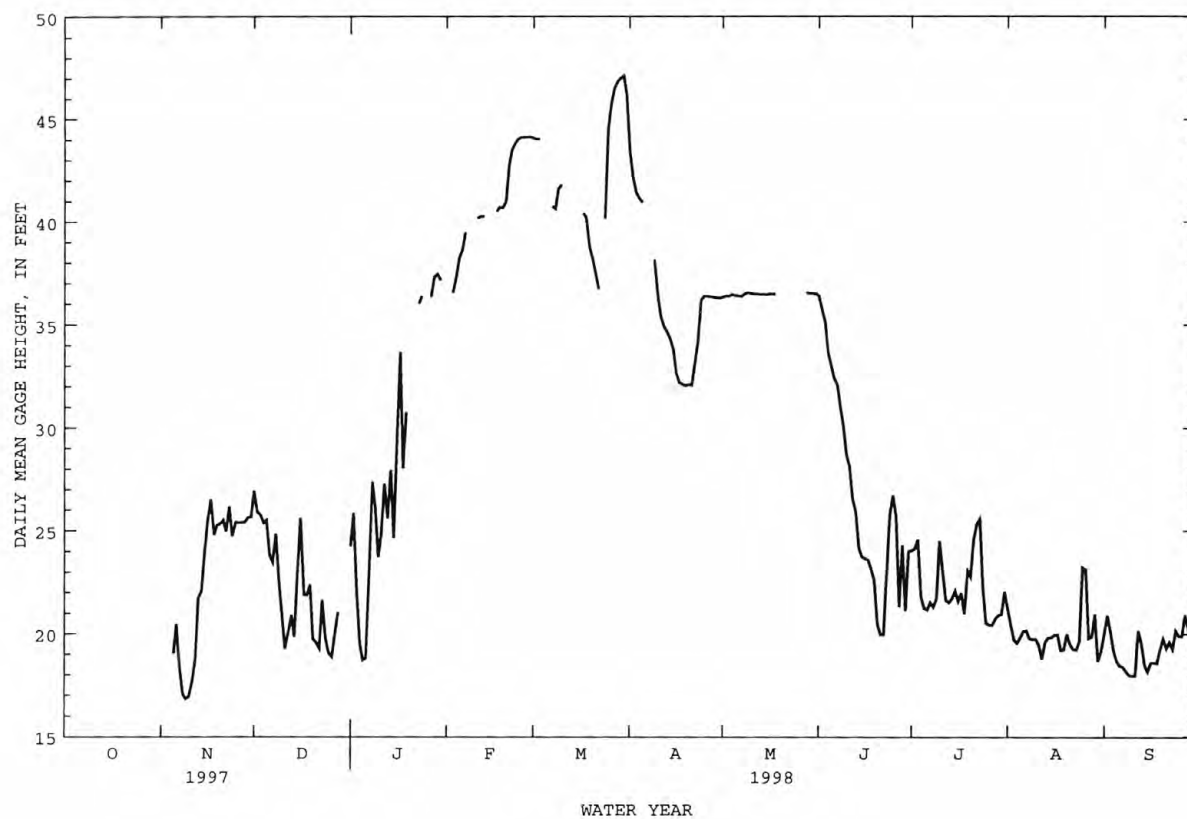
EXTREMES FOR CURRENT YEAR.--Maximum, 47.24 ft, Mar. 31; minimum, 16.43 ft, Dec. 8.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	26.95	24.26	---	44.08	43.42	36.32	36.38	24.04	21.21	20.01
2	---	---	25.91	25.85	---	44.04	42.14	36.39	35.73	24.13	20.42	20.90
3	---	---	25.77	22.12	36.55	44.04	41.42	36.38	35.15	24.57	19.71	20.13
4	---	---	25.37	19.56	37.28	---	41.15	36.45	33.65	21.80	19.56	19.20
5	---	19.03	25.50	18.72	38.26	---	40.94	36.41	33.05	21.25	19.81	18.70
6	---	20.46	23.81	18.81	38.60	---	---	36.39	32.39	21.16	20.12	18.47
7	---	18.38	23.50	22.93	39.49	40.75	---	36.36	32.10	21.53	20.16	18.40
8	---	17.08	24.85	27.38	---	40.63	---	36.49	31.01	21.31	19.78	18.20
9	---	16.83	22.55	26.23	---	41.60	38.14	36.55	30.08	21.71	19.74	18.00
10	---	16.95	20.85	23.73	---	41.80	36.34	36.52	28.70	24.51	19.75	17.97
11	---	17.66	19.28	24.81	40.19	---	35.40	36.48	28.14	23.06	19.46	17.97
12	---	18.76	20.06	27.27	40.28	---	34.90	36.49	26.57	21.63	18.79	20.17
13	---	21.73	20.89	25.59	40.27	---	34.66	36.47	25.91	21.53	19.60	19.59
14	---	22.05	19.86	27.95	---	---	34.32	36.47	24.17	21.72	19.82	18.49
15	---	23.83	23.14	24.66	---	---	33.77	36.45	23.74	22.08	19.83	18.18
16	---	25.49	25.62	29.44	---	---	32.68	36.48	23.66	21.59	19.95	18.60
17	---	26.51	21.89	33.67	40.50	40.41	32.21	36.49	23.58	21.99	19.96	18.61
18	---	24.80	21.87	28.02	40.71	40.21	32.13	36.48	23.15	20.98	19.22	18.58
19	---	25.26	22.37	30.76	40.68	38.72	32.05	---	22.59	23.06	19.24	19.24
20	---	25.34	19.75	---	40.97	38.23	32.11	---	20.46	22.79	19.99	19.76
21	---	25.50	19.58	---	42.78	37.44	32.08	---	19.97	24.57	19.51	19.32
22	---	24.96	19.30	---	43.53	36.73	33.05	---	19.96	25.34	19.27	19.61
23	---	26.17	21.63	36.02	43.84	---	34.18	---	23.04	25.58	19.24	19.28
24	---	24.74	19.79	36.37	44.05	40.17	36.18	---	25.80	22.29	19.64	20.16
25	---	25.40	19.06	---	44.12	44.43	36.37	---	26.72	20.54	23.23	19.90
26	---	25.39	18.87	---	44.12	45.78	36.37	---	25.69	20.44	23.12	19.89
27	---	25.39	19.97	36.35	44.13	46.53	36.35	---	21.30	20.43	19.79	20.93
28	---	25.40	21.03	37.30	44.14	46.88	36.33	36.55	24.29	20.74	19.86	20.31
29	---	25.63	---	37.45	---	47.04	36.30	36.52	21.11	20.90	20.96	19.08
30	---	25.65	---	37.15	---	47.15	36.28	36.51	24.00	20.96	18.67	20.99
31	---	---	---	---	---	46.22	---	36.50	---	22.05	19.18	---
MEAN	---	---	---	---	---	---	---	---	26.74	22.27	19.95	19.29
MAX	---	---	---	---	---	---	---	---	36.38	25.58	23.23	20.99
MIN	---	---	---	---	---	---	---	---	19.96	20.43	18.67	17.97

## ROANOKE RIVER BASIN

0208062765 ROANOKE RIVER AT HALIFAX, NC--Continued





## ROANOKE RIVER BASIN

0208062765 ROANOKE RIVER AT HALIFAX, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March to September 1998.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March to September 1998.

pH: March to September 1998.

WATER TEMPERATURE: March to September 1998.

DISSOLVED OXYGEN: March to September 1998.

DISSOLVED OXYGEN, PERCENT SATURATION: March to September 1998.

INSTRUMENTATION.-- Water-quality monitor with satellite telemetry from March to September 1998.

REMARKS.--Station operated in cooperation with the U.S. Fish and Wildlife Service to define water-quality characteristics in the Roanoke River Basin below Roanoke Rapids Dam.

EXTREMES FOR CURRENT WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 122 microsiemens, September 23; minimum recorded, 63 microsiemens, March 27.

pH: Maximum recorded, 7.6, March 25; minimum recorded, 6.6, May 8, July 31.

WATER TEMPERATURE: Maximum recorded, 30.9°C, July 22; minimum recorded, 8.3°C, March 14.

DISSOLVED OXYGEN: Maximum recorded, 11.8 mg/L, March 26; minimum recorded, 5.2 mg/L, July 20.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 109 percent, July 15; minimum recorded, 62 percent, July 31.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
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	---	---	---		---	---	---		---	---	---		---	---	---
MONTH	---	---	---		---	---	---		---	---	---		---	---	---

## ROANOKE RIVER BASIN

0208062765 ROANOKE RIVER AT HALIFAX, NC--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	75	74	74	74	73	74
2	---	---	---	---	---	---	---	---	---	74	73	74
3	---	---	---	---	---	---	75	74	74	75	74	74
4	---	---	---	---	---	---	74	74	74	74	74	74
5	---	---	---	---	---	---	74	73	74	75	74	74
6	---	---	---	---	---	---	---	---	---	76	75	75
7	---	---	---	---	---	---	---	---	---	79	76	76
8	---	---	---	---	---	---	---	---	---	76	76	76
9	---	---	---	---	---	---	---	---	---	76	76	76
10	---	---	---	---	---	---	75	74	75	76	76	76
11	---	---	---	---	---	---	75	74	74	76	75	75
12	---	---	---	---	---	---	74	74	74	75	75	75
13	---	---	---	---	---	---	---	---	---	76	75	76
14	---	---	---	74	74	74	---	---	---	76	75	76
15	---	---	---	74	73	74	---	---	---	76	75	76
16	---	---	---	---	---	---	---	---	---	76	75	76
17	---	---	---	---	---	---	---	---	---	75	75	75
18	---	---	---	74	73	73	---	---	---	75	75	75
19	---	---	---	73	71	72	---	---	---	76	75	75
20	---	---	---	72	71	71	---	---	---	77	76	76
21	---	---	---	73	70	72	---	---	---	77	76	77
22	---	---	---	74	73	73	---	---	---	---	---	---
23	---	---	---	74	72	73	---	---	---	---	---	---
24	---	---	---	73	72	73	---	---	---	---	---	---
25	---	---	---	73	71	72	74	73	74	---	---	---
26	---	---	---	72	65	69	74	73	73	---	---	---
27	---	---	---	---	---	---	73	72	73	---	---	---
28	---	---	---	68	64	66	73	72	72	78	77	78
29	---	---	---	---	---	---	73	72	73	78	77	78
30	---	---	---	---	---	---	74	73	73	78	77	78
31	---	---	---	74	72	73	---	---	---	78	77	78
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	78	76	77	88	77	81	101	92	98	111	91	97
2	---	---	---	88	73	78	103	98	101	112	93	104
3	---	---	---	85	72	75	107	103	104	111	91	100
4	79	78	79	87	79	82	106	101	104	115	109	112
5	79	77	78	82	78	79	106	104	105	116	111	113
6	79	78	78	82	79	80	105	102	104	116	113	115
7	78	77	77	81	78	80	106	98	102	114	112	113
8	78	77	78	---	---	---	107	104	105	112	109	110
9	79	78	79	---	---	---	106	103	104	117	112	114
10	---	---	---	101	89	94	105	100	102	118	114	116
11	---	---	---	100	89	94	---	---	---	119	116	117
12	83	81	82	101	98	99	---	---	---	119	93	111
13	83	82	82	100	98	99	---	---	---	113	93	101
14	85	82	84	99	96	98	---	---	---	117	106	112
15	85	83	84	101	97	99	---	---	---	118	112	116
16	86	84	85	103	99	101	---	---	---	116	109	111
17	87	83	86	103	98	101	---	---	---	110	108	109
18	87	85	85	111	99	102	---	---	---	111	107	109
19	90	85	86	111	95	101	---	---	---	111	102	108
20	105	90	99	102	95	98	---	---	---	111	102	107
21	110	104	107	101	92	95	---	---	---	113	105	108
22	111	108	110	98	86	91	---	---	---	115	111	113
23	113	83	105	98	86	89	---	---	---	122	112	117
24	88	80	83	101	87	93	---	---	---	118	110	113
25	90	81	84	102	97	100	---	---	---	114	110	112
26	90	80	83	102	100	101	97	84	89	117	114	115
27	96	89	93	101	98	99	---	---	---	116	106	110
28	91	79	81	100	99	99	---	---	---	112	109	110
29	90	82	88	102	98	99	---	---	---	121	111	117
30	88	79	83	103	98	100	---	---	---	121	103	115
31	---	---	---	100	92	98	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	122	91	111

## ROANOKE RIVER BASIN

0208062765 ROANOKE RIVER AT HALIFAX, NC--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
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	---	---	---		---	---	---		---	---	---		---	---	---
MONTH	---	---	---		---	---	---		---	---	---		---	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]



## ROANOKE RIVER BASIN

0208062765 ROANOKE RIVER AT HALIFAX, NC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	13.9	13.2	13.5	16.4	16.2	16.3
2	---	---	---	---	---	---	---	---	---	16.7	16.1	16.4
3	---	---	---	---	---	---	14.2	13.6	13.9	17.5	16.3	16.7
4	---	---	---	---	---	---	14.1	13.3	13.8	17.6	17.0	17.3
5	---	---	---	---	---	---	13.3	12.8	13.0	17.7	17.0	17.3
6	---	---	---	---	---	---	---	---	---	17.9	17.1	17.4
7	---	---	---	---	---	---	---	---	---	17.9	17.5	17.7
8	---	---	---	---	---	---	---	---	---	17.9	17.4	17.6
9	---	---	---	---	---	---	---	---	---	17.7	17.3	17.5
10	---	---	---	---	---	---	14.4	13.8	14.1	18.1	17.5	17.7
11	---	---	---	---	---	---	14.2	13.4	13.8	18.0	17.8	17.9
12	---	---	---	---	---	---	13.9	13.3	13.6	17.8	17.1	17.5
13	---	---	---	---	---	---	---	---	---	17.2	16.9	17.0
14	---	---	---	9.4	8.3	8.8	---	---	---	17.8	16.8	17.2
15	---	---	---	9.7	8.7	9.1	---	---	---	18.5	17.2	17.7
16	---	---	---	---	---	---	---	---	---	18.8	17.9	18.3
17	---	---	---	---	---	---	---	---	---	18.8	18.0	18.4
18	---	---	---	8.6	8.3	8.5	---	---	---	19.2	18.4	18.7
19	---	---	---	9.3	8.6	8.9	---	---	---	20.0	18.4	19.2
20	---	---	---	9.5	9.3	9.4	---	---	---	19.8	19.1	19.4
21	---	---	---	9.5	9.3	9.4	---	---	---	20.6	19.4	19.8
22	---	---	---	9.5	9.0	9.2	---	---	---	---	---	---
23	---	---	---	9.6	8.8	9.2	---	---	---	---	---	---
24	---	---	---	9.9	9.2	9.5	---	---	---	---	---	---
25	---	---	---	9.8	9.2	9.5	16.2	15.3	15.7	---	---	---
26	---	---	---	10.3	9.4	9.8	16.8	15.9	16.3	---	---	---
27	---	---	---	---	---	---	16.7	16.1	16.2	---	---	---
28	---	---	---	11.9	10.9	11.4	16.1	15.6	15.9	21.2	20.8	21.0
29	---	---	---	---	---	---	16.3	15.1	15.7	21.1	20.4	20.7
30	---	---	---	---	---	---	16.5	16.0	16.2	21.4	20.6	21.0
31	---	---	---	13.7	12.5	13.1	---	---	---	22.2	20.8	21.5
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	22.7	21.9	22.2	29.2	27.4	28.0	27.8	27.3	27.5	28.1	26.9	27.3
2	---	---	---	29.4	27.0	27.7	28.0	26.5	27.0	27.9	26.6	27.3
3	---	---	---	27.7	26.5	27.0	27.4	26.7	27.0	27.8	26.7	27.2
4	23.3	22.2	22.6	28.3	27.1	27.6	27.7	26.7	27.0	26.8	26.2	26.5
5	22.9	22.4	22.6	27.9	26.6	27.2	27.3	26.2	26.6	27.3	26.2	26.8
6	22.5	21.7	21.9	27.9	26.5	27.1	27.2	25.9	26.5	27.7	27.2	27.4
7	22.2	21.5	21.8	28.0	26.3	27.0	27.3	25.9	26.4	27.8	27.2	27.6
8	21.9	21.0	21.4	---	---	---	27.3	26.3	26.8	28.0	26.1	27.3
9	21.6	20.8	21.1	---	---	---	27.7	26.4	27.0	26.2	24.9	25.7
10	---	---	---	27.6	25.9	26.5	27.4	26.7	27.1	25.6	24.8	25.1
11	---	---	---	27.4	26.1	26.6	---	---	---	25.7	24.9	25.3
12	22.7	21.5	22.0	27.5	25.9	26.6	---	---	---	25.8	25.1	25.5
13	23.3	22.1	22.6	27.4	25.8	26.5	---	---	---	26.0	25.1	25.6
14	25.0	22.3	23.6	27.9	25.8	26.7	---	---	---	26.4	25.7	26.1
15	25.1	23.9	24.4	28.0	25.8	26.7	---	---	---	26.8	25.8	26.4
16	25.6	23.2	24.2	27.7	26.4	26.9	---	---	---	26.4	26.0	26.3
17	26.1	24.0	25.2	27.0	25.8	26.4	---	---	---	26.9	26.4	26.7
18	26.6	25.0	25.8	27.9	26.7	27.1	---	---	---	27.0	26.2	26.6
19	26.6	25.1	25.6	27.9	26.1	26.9	---	---	---	26.6	26.1	26.3
20	25.9	25.1	25.5	29.4	26.8	27.7	---	---	---	27.0	25.8	26.3
21	26.8	25.8	26.4	30.0	28.1	28.8	---	---	---	27.1	26.2	26.6
22	26.9	25.5	26.0	30.9	28.4	29.1	---	---	---	27.3	26.4	26.8
23	26.3	25.3	25.9	30.2	28.7	29.3	---	---	---	27.0	25.9	26.4
24	27.3	25.2	26.0	30.3	28.6	29.3	---	---	---	25.9	24.2	25.0
25	26.9	25.3	25.9	30.5	28.5	29.2	---	---	---	25.7	24.5	25.2
26	27.1	25.8	26.4	28.6	27.9	28.2	28.1	27.4	27.6	26.5	25.0	25.6
27	28.0	26.6	27.2	28.4	27.6	27.9	---	---	---	26.5	25.2	25.8
28	28.2	26.5	26.9	28.8	27.2	27.9	---	---	---	26.5	25.6	26.2
29	27.8	26.2	26.7	29.0	27.6	28.3	---	---	---	26.7	25.7	26.1
30	29.0	26.8	27.8	28.9	27.8	28.3	---	---	---	26.3	25.2	25.8
31	---	---	---	28.3	26.7	27.2	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	28.1	24.2	26.3





DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
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	---	---	---		---	---	---		---	---	---		---	---	---
MONTH	---	---	---		---	---	---		---	---	---		---	---	---

## ROANOKE RIVER BASIN

0208062765 ROANOKE RIVER AT HALIFAX, NC--Continued

OXYGEN DISSOLVED (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	92	90	91	83	82	82
2	---	---	---	---	---	---	---	---	---	85	82	83
3	---	---	---	---	---	---	92	90	91	86	83	84
4	---	---	---	---	---	---	92	89	90	86	82	84
5	---	---	---	---	---	---	90	88	89	85	82	83
6	---	---	---	---	---	---	---	---	---	87	82	84
7	---	---	---	---	---	---	---	---	---	86	84	85
8	---	---	---	---	---	---	---	---	---	85	82	83
9	---	---	---	---	---	---	---	---	---	84	81	83
10	---	---	---	---	---	---	87	85	86	84	81	83
11	---	---	---	---	---	---	89	84	86	84	81	83
12	---	---	---	---	---	---	88	85	86	83	78	81
13	---	---	---	---	---	---	---	---	---	82	78	80
14	---	---	---	95	92	93	---	---	---	84	80	82
15	---	---	---	95	92	93	---	---	---	84	80	82
16	---	---	---	---	---	---	---	---	---	84	81	82
17	---	---	---	---	---	---	---	---	---	82	79	80
18	---	---	---	98	93	95	---	---	---	83	79	81
19	---	---	---	96	88	93	---	---	---	87	79	83
20	---	---	---	96	93	94	---	---	---	84	80	82
21	---	---	---	98	93	94	---	---	---	88	81	84
22	---	---	---	99	94	96	---	---	---	---	---	---
23	---	---	---	101	95	96	---	---	---	---	---	---
24	---	---	---	103	97	98	---	---	---	---	---	---
25	---	---	---	103	98	99	88	83	85	---	---	---
26	---	---	---	103	96	98	88	85	86	---	---	---
27	---	---	---	---	---	---	86	83	84	---	---	---
28	---	---	---	96	93	94	85	82	84	80	78	79
29	---	---	---	---	---	---	84	80	82	79	76	77
30	---	---	---	---	---	---	84	81	83	79	76	77
31	---	---	---	95	92	93	---	---	---	81	76	78
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

OXYGEN DISSOLVED (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	82	76	80	98	76	86	80	68	72	92	79	82
2	---	---	---	100	77	81	81	66	73	93	79	84
3	---	---	---	88	75	77	87	73	78	87	78	81
4	85	77	79	94	77	84	90	77	82	90	80	84
5	81	77	79	93	78	83	89	74	80	91	82	85
6	78	73	75	92	75	82	88	72	79	96	83	88
7	84	75	79	95	74	83	87	72	77	95	83	88
8	85	81	83	---	---	---	83	74	78	97	83	89
9	87	81	84	---	---	---	86	72	77	92	85	89
10	---	---	---	97	70	77	85	74	78	96	87	91
11	---	---	---	101	74	80	---	---	---	98	87	92
12	89	82	85	102	84	91	---	---	---	101	87	93
13	88	80	83	104	85	92	---	---	---	94	83	87
14	100	81	88	108	86	93	---	---	---	99	88	92
15	100	88	92	109	81	90	---	---	---	101	88	94
16	101	83	90	104	82	91	---	---	---	103	94	98
17	105	87	94	95	79	84	---	---	---	106	93	98
18	106	91	97	108	82	90	---	---	---	107	93	99
19	105	89	93	104	78	85	---	---	---	105	86	95
20	95	86	90	106	76	84	---	---	---	103	88	93
21	102	88	94	105	84	89	---	---	---	104	90	94
22	102	86	92	101	74	82	---	---	---	105	76	89
23	102	84	93	92	77	82	---	---	---	97	85	89
24	100	85	88	92	75	79	---	---	---	98	79	86
25	94	80	85	95	74	81	---	---	---	98	82	88
26	88	81	84	87	74	79	80	72	75	101	69	87
27	100	80	88	88	75	79	---	---	---	103	80	88
28	100	83	86	88	72	77	---	---	---	103	87	93
29	103	84	90	90	69	77	---	---	---	103	85	91
30	105	87	92	88	68	76	---	---	---	99	80	88
31	---	---	---	79	62	67	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	107	69	90

## ROANOKE RIVER BASIN

02081000 ROANOKE RIVER NEAR SCOTLAND NECK, NC

LOCATION.--Lat 36°12'34", long 77°23'03", Halifax County, Hydrologic Unit 03010107, on right bank 50 ft upstream from bridge on U.S. 258, 3 mi downstream from Bridgers Creek, and 5.8 mi north of Scotland Neck.

DRAINAGE AREA.--8,671 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1974 to current year. Discharge records from August 1940 to September 1956.

GAGE.--Water-stage recorder. Datum of gage is 5.77 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 41.98 ft, Aug. 19, 1940; minimum not determined

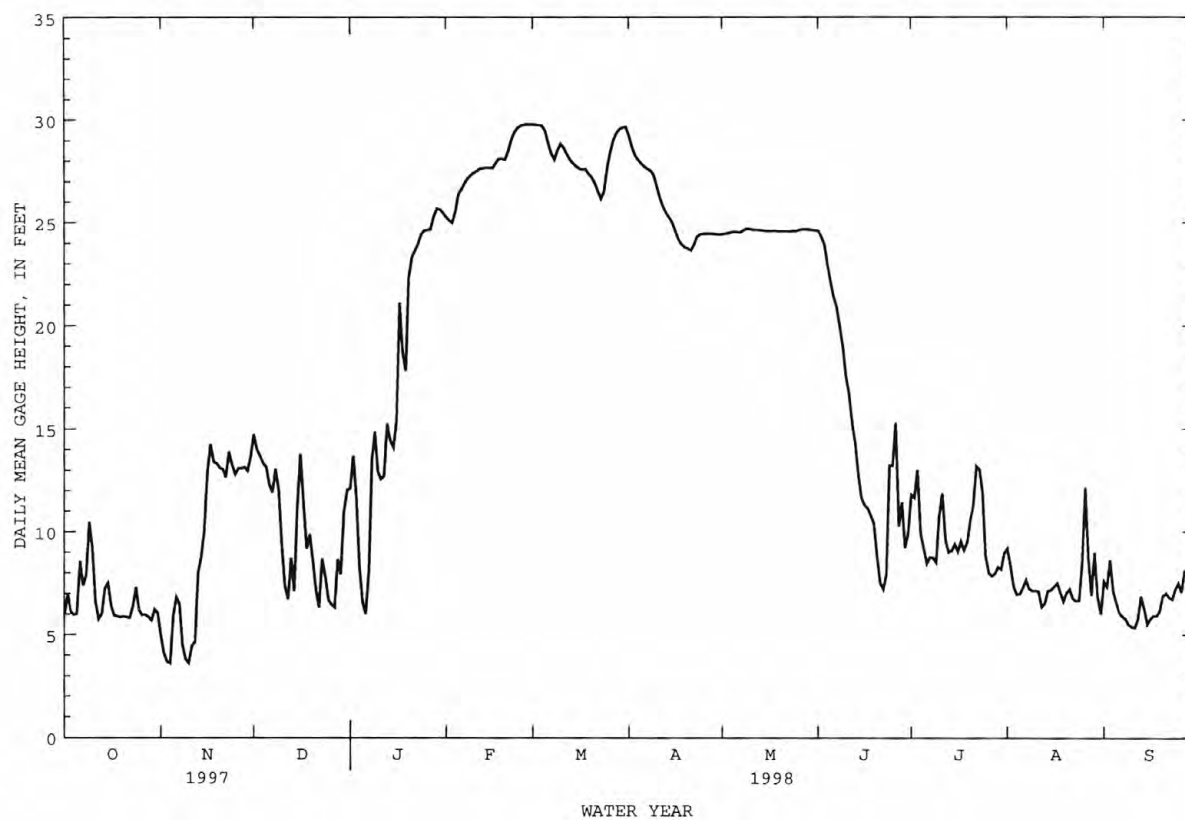
EXTREMES FOR CURRENT YEAR.--Maximum, 29.82 ft, Feb. 28; minimum, 3.53 ft, Nov. 4.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.00	4.96	14.72	12.10	25.27	29.80	29.25	24.42	24.60	11.79	9.19	7.58
2	7.02	4.10	13.98	13.70	25.10	29.77	28.70	24.46	24.30	11.65	8.30	7.33
3	6.10	3.69	13.67	11.64	24.98	29.76	28.27	24.47	23.93	13.01	7.32	8.63
4	5.97	3.60	13.31	8.29	25.50	29.73	28.05	24.52	22.97	9.91	6.96	7.12
5	6.01	5.94	13.13	6.58	26.39	29.47	27.87	24.54	22.20	9.19	6.98	6.55
6	8.56	6.80	12.29	6.00	26.61	28.87	27.72	24.53	21.39	8.46	7.29	6.06
7	7.38	6.49	11.90	8.11	26.91	28.37	27.61	24.51	20.89	8.76	7.66	5.88
8	7.90	4.48	13.03	13.53	27.15	28.07	27.53	24.63	19.95	8.73	7.23	5.76
9	10.47	3.80	11.99	14.85	27.30	28.53	27.30	24.70	18.95	8.51	7.13	5.49
10	9.17	3.62	9.30	12.89	27.43	28.83	26.72	24.67	17.53	10.76	7.14	5.38
11	6.59	4.46	7.35	12.56	27.51	28.66	26.17	24.64	16.69	11.88	7.10	5.33
12	5.74	4.63	6.71	12.71	27.63	28.33	25.75	24.64	15.29	9.60	6.35	5.74
13	6.01	7.99	8.72	15.23	27.65	28.07	25.46	24.63	14.23	9.00	6.52	6.87
14	7.27	8.76	7.11	14.41	27.66	27.88	25.23	24.61	12.72	9.09	7.13	6.24
15	7.50	10.03	11.17	14.09	27.66	27.74	24.98	24.58	11.63	9.39	7.16	5.51
16	6.42	12.86	13.77	15.36	27.65	27.63	24.54	24.58	11.31	9.05	7.34	5.76
17	5.92	14.26	11.32	21.10	27.88	27.58	24.15	24.58	11.15	9.53	7.50	5.92
18	5.89	13.39	9.17	18.68	28.10	27.60	23.93	24.59	10.79	9.11	7.04	5.91
19	5.84	13.30	9.86	17.80	28.11	27.37	23.79	24.57	10.41	9.51	6.63	6.15
20	5.88	13.09	8.58	22.32	28.07	27.20	23.73	24.57	8.78	10.57	7.03	6.87
21	5.84	13.02	7.16	23.33	28.46	26.91	23.65	24.57	7.50	11.28	7.21	7.00
22	5.81	12.62	6.31	23.64	29.00	26.52	23.92	24.56	7.21	13.17	6.76	6.81
23	6.37	13.88	8.68	23.96	29.39	26.16	24.31	24.57	7.93	13.03	6.64	6.72
24	7.30	13.26	7.81	24.42	29.60	26.51	24.42	24.59	13.20	11.92	6.67	7.21
25	6.18	12.79	6.69	24.60	29.72	27.61	24.45	24.58	13.20	8.82	8.46	7.50
26	5.94	13.06	6.45	24.63	29.77	28.46	24.46	24.64	15.28	7.99	12.13	7.06
27	5.96	13.07	6.32	24.65	29.80	29.02	24.46	24.65	10.26	7.85	8.73	8.11
28	5.85	13.13	8.66	25.28	29.80	29.36	24.45	24.65	11.44	7.97	6.90	8.10
29	5.69	12.95	7.93	25.66	---	29.55	24.43	24.65	9.22	8.27	8.99	6.99
30	6.21	13.64	10.92	25.64	---	29.65	24.41	24.63	9.92	8.18	6.85	6.43
31	6.04	---	12.02	25.47	---	29.67	---	24.62	---	8.96	5.99	---
MEAN	6.61	9.39	10.00	17.52	27.72	28.34	25.66	24.59	14.83	9.84	7.43	6.60
MAX	10.47	14.26	14.72	25.66	29.80	29.80	29.25	24.70	24.60	13.17	12.13	8.63
MIN	5.69	3.60	6.31	6.00	24.98	26.16	23.65	24.42	7.21	7.85	5.99	5.33

## ROANOKE RIVER BASIN

02081000 ROANOKE RIVER NEAR SCOTLAND NECK, NC--Continued





## ROANOKE RIVER BASIN

360533077131601 BIG SWASH TRANSECT (SITE #1)

LOCATION.--Lat 36°05'34", long 77°13'15", North American Datum of 1983, Bertie County, Hydrologic Unit 03010107, approximately 3.5 mi southwest of Lewiston and 0.5 mi from end of pavement on Weeping Mary Road.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--May 1997 to current year. Records from May 1997 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

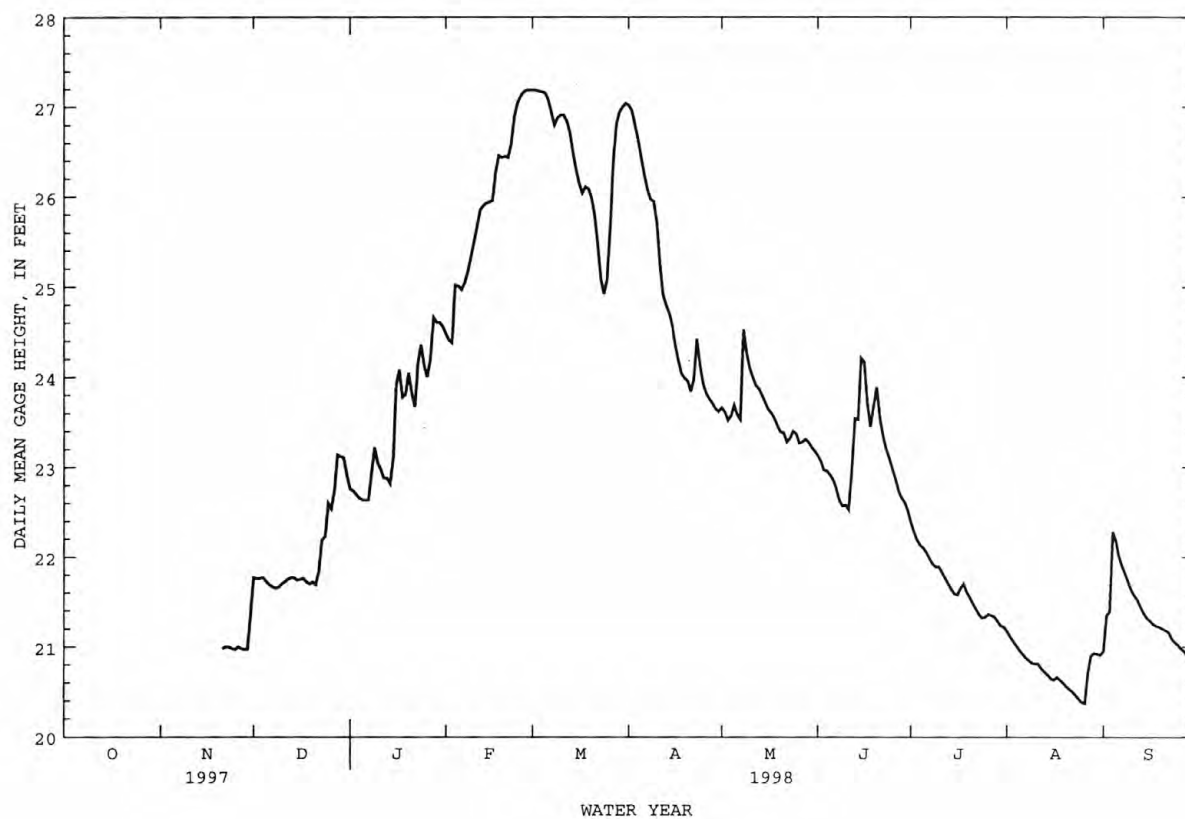
EXTREMES FOR PERIOD OF RECORD.--Maximum, 27.20 ft, Feb. 27, 28 1998; minimum, 20.35 ft, Aug. 26, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum, 27.20 ft, Feb. 27, 28; minimum, 20.35 ft, Aug. 26.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	21.77	22.76	24.48	27.19	27.02	23.66	23.13	22.39	21.17	20.95
2	---	---	21.76	22.74	24.41	27.19	26.96	23.61	23.07	22.28	21.11	21.35
3	---	---	21.76	22.70	24.38	27.18	26.79	23.52	22.97	22.19	21.06	21.39
4	---	---	21.77	22.66	25.02	27.17	26.63	23.57	22.96	22.13	21.01	22.28
5	---	---	21.73	22.64	25.01	27.16	26.43	23.69	22.92	22.10	20.96	22.19
6	---	---	21.69	22.64	24.97	27.08	26.24	23.58	22.86	22.05	20.92	22.01
7	---	---	21.67	22.64	25.04	26.94	26.08	23.53	22.76	21.98	20.88	21.90
8	---	---	21.65	22.93	25.16	26.80	25.97	24.53	22.63	21.92	20.85	21.81
9	---	---	21.66	23.22	25.32	26.88	25.95	24.27	22.57	21.89	20.82	21.72
10	---	---	21.70	23.05	25.49	26.91	25.71	24.10	22.58	21.89	20.81	21.63
11	---	---	21.72	22.98	25.66	26.91	25.25	24.00	22.53	21.83	20.81	21.57
12	---	---	21.75	22.88	25.85	26.84	24.91	23.91	22.95	21.76	20.76	21.52
13	---	---	21.77	22.88	25.90	26.71	24.80	23.87	23.54	21.70	20.72	21.44
14	---	---	21.77	22.82	25.93	26.49	24.71	23.80	23.53	21.64	20.69	21.37
15	---	---	21.74	23.10	25.94	26.30	24.58	23.72	24.21	21.59	20.65	21.32
16	---	---	21.75	23.92	25.96	26.15	24.36	23.64	24.17	21.58	20.63	21.29
17	---	---	21.76	24.08	26.27	26.04	24.18	23.60	23.71	21.65	20.66	21.25
18	---	---	21.72	23.78	26.46	26.11	24.04	23.54	23.45	21.70	20.63	21.23
19	---	---	21.70	23.81	26.44	26.09	23.99	23.46	23.67	21.61	20.60	21.22
20	---	---	21.72	24.05	26.45	25.98	23.96	23.39	23.89	21.55	20.56	21.20
21	---	20.98	21.69	23.82	26.44	25.78	23.84	23.38	23.55	21.48	20.53	21.18
22	---	21.00	21.84	23.67	26.59	25.46	23.98	23.28	23.35	21.42	20.50	21.16
23	---	21.00	22.19	24.16	26.89	25.09	24.42	23.32	23.21	21.36	20.46	21.09
24	---	20.98	22.23	24.36	27.04	24.92	24.12	23.40	23.11	21.32	20.42	21.05
25	---	20.97	22.60	24.13	27.12	25.08	23.92	23.37	22.99	21.33	20.38	21.02
26	---	21.00	22.54	24.00	27.17	25.68	23.82	23.27	22.88	21.36	20.37	20.98
27	---	20.98	22.74	24.19	27.19	26.43	23.76	23.28	22.74	21.35	20.71	20.95
28	---	20.97	23.14	24.66	27.19	26.82	23.71	23.31	22.66	21.33	20.90	20.90
29	---	20.97	23.12	24.61	---	26.95	23.65	23.28	22.61	21.28	20.93	20.87
30	---	21.35	23.11	24.61	---	27.00	23.62	23.22	22.52	21.23	20.92	20.94
31	---	---	22.91	24.56	---	27.04	---	23.18	---	21.22	20.91	---
MEAN	---	---	22.02	23.52	25.92	26.46	24.91	23.59	23.12	21.68	20.75	21.36
MAX	---	---	23.14	24.66	27.19	27.19	27.02	24.53	24.21	22.39	21.17	22.28
MIN	---	---	21.65	22.64	24.38	24.92	23.62	23.18	22.52	21.22	20.37	20.87

ROANOKE RIVER BASIN  
360533077131601 BIG SWASH TRANSECT (SITE #1)--Continued



## ROANOKE RIVER BASIN

360356077172601 BIG SWASH TRANSECT (SITE #2)

LOCATION.--Lat 36°03'57", long 77°17'25", North American Datum of 1983, Bertie County, Hydrologic Unit 03010107, approximately 2.3 mi east of Palmyra and 6.2 mi from end of pavement on Weeping Mary Road.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--May 1997 to current year. Records from May 1997 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 23.28 ft, Mar. 2, 3, 1998; minimum, 13.34 ft, Oct. 25, 26, 1997.

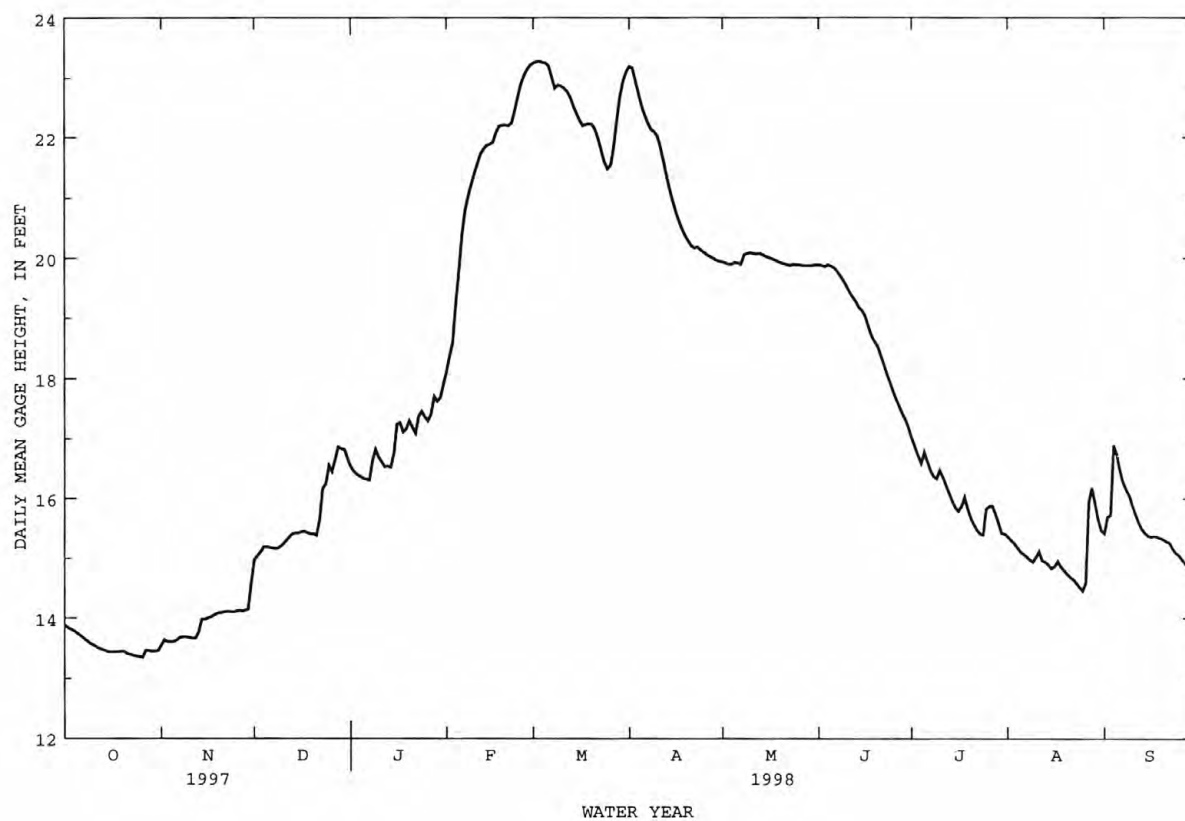
EXTREMES FOR CURRENT YEAR.--Maximum, 23.28 ft, Mar. 2, 3; minimum, 13.34 ft, Oct. 25, 26.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.88	13.55	14.98	16.53	18.12	23.25	23.19	19.94	19.89	17.01	15.36	15.42
2	13.84	13.64	15.04	16.45	18.37	23.27	23.17	19.92	19.88	16.87	15.30	15.69
3	13.82	13.61	15.11	16.40	18.59	23.28	22.94	19.90	19.86	16.72	15.25	15.72
4	13.79	13.61	15.19	16.37	19.21	23.26	22.73	19.90	19.89	16.59	15.18	16.89
5	13.75	13.61	15.19	16.34	19.79	23.25	22.53	19.93	19.87	16.77	15.11	16.74
6	13.71	13.64	15.18	16.32	20.38	23.20	22.37	19.92	19.84	16.62	15.07	16.47
7	13.67	13.68	15.17	16.31	20.79	23.02	22.24	19.90	19.78	16.47	15.03	16.27
8	13.63	13.69	15.16	16.63	21.03	22.83	22.14	20.06	19.71	16.37	14.98	16.15
9	13.59	13.69	15.18	16.82	21.22	22.88	22.10	20.08	19.63	16.33	14.94	16.05
10	13.56	13.68	15.22	16.69	21.40	22.87	22.02	20.09	19.54	16.47	15.02	15.89
11	13.53	13.67	15.28	16.61	21.56	22.83	21.84	20.08	19.44	16.36	15.11	15.75
12	13.50	13.67	15.34	16.53	21.73	22.77	21.60	20.07	19.36	16.22	14.96	15.61
13	13.48	13.77	15.40	16.54	21.81	22.67	21.36	20.08	19.28	16.09	14.94	15.50
14	13.46	13.98	15.42	16.52	21.87	22.53	21.14	20.06	19.18	15.96	14.89	15.43
15	13.44	13.98	15.42	16.76	21.89	22.40	20.95	20.03	19.13	15.85	14.83	15.38
16	13.44	14.00	15.44	17.24	21.92	22.29	20.77	20.01	19.04	15.79	14.87	15.36
17	13.44	14.02	15.45	17.26	22.08	22.20	20.61	19.99	18.88	15.87	14.95	15.37
18	13.44	14.05	15.43	17.11	22.19	22.22	20.48	19.97	18.72	16.02	14.86	15.36
19	13.45	14.08	15.41	17.16	22.21	22.23	20.37	19.94	18.62	15.82	14.80	15.34
20	13.45	14.09	15.41	17.29	22.21	22.22	20.29	19.92	18.54	15.67	14.74	15.32
21	13.41	14.10	15.38	17.18	22.20	22.13	20.21	19.91	18.39	15.56	14.69	15.28
22	13.40	14.11	15.64	17.09	22.24	21.97	20.17	19.89	18.24	15.47	14.65	15.26
23	13.38	14.11	16.16	17.37	22.44	21.78	20.19	19.88	18.08	15.41	14.59	15.16
24	13.37	14.10	16.25	17.45	22.68	21.59	20.14	19.90	17.94	15.39	14.52	15.09
25	13.36	14.11	16.55	17.36	22.89	21.48	20.10	19.89	17.80	15.82	14.46	15.05
26	13.35	14.13	16.45	17.29	23.04	21.54	20.06	19.89	17.66	15.87	14.59	14.98
27	13.46	14.12	16.65	17.40	23.14	21.86	20.03	19.88	17.53	15.87	15.94	14.92
28	13.46	14.13	16.86	17.70	23.21	22.30	20.00	19.88	17.41	15.74	16.18	14.84
29	13.45	14.15	16.83	17.62	---	22.69	19.97	19.88	17.31	15.58	15.92	14.77
30	13.45	14.59	16.82	17.68	---	22.95	19.95	19.88	17.17	15.42	15.65	15.02
31	13.46	---	16.66	17.90	---	23.10	---	19.89	---	15.41	15.46	---
MEAN	13.53	13.91	15.67	16.97	21.44	22.54	21.19	19.95	18.85	16.05	15.06	15.54
MAX	13.88	14.59	16.86	17.90	23.21	23.28	23.19	20.09	19.89	17.01	16.18	16.89
MIN	13.35	13.55	14.98	16.31	18.12	21.48	19.95	19.88	17.17	15.39	14.46	14.77

## ROANOKE RIVER BASIN

360356077172601 BIG SWASH TRANSECT (SITE #2)--Continued



## ROANOKE RIVER BASIN

360347077191401 BIG SWASH TRANSECT (SITE #3)

LOCATION.--Lat 36°03'48", long 77°19'13", North American Datum of 1983, Bertie County, Hydrologic Unit 03010107, approximately 1.3 mi southeast of Palmyra and 9.2 mi from end of pavement on Weeping Mary Road.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--May 1997 to current year. Records from May 1997 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 20.03 ft, Jun. 1, 1997 and Jun. 15, 1998; minimum, 13.03 ft, Dec. 30, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum, 20.03 ft, Jun. 15; minimum, 13.03 ft, Dec. 30.

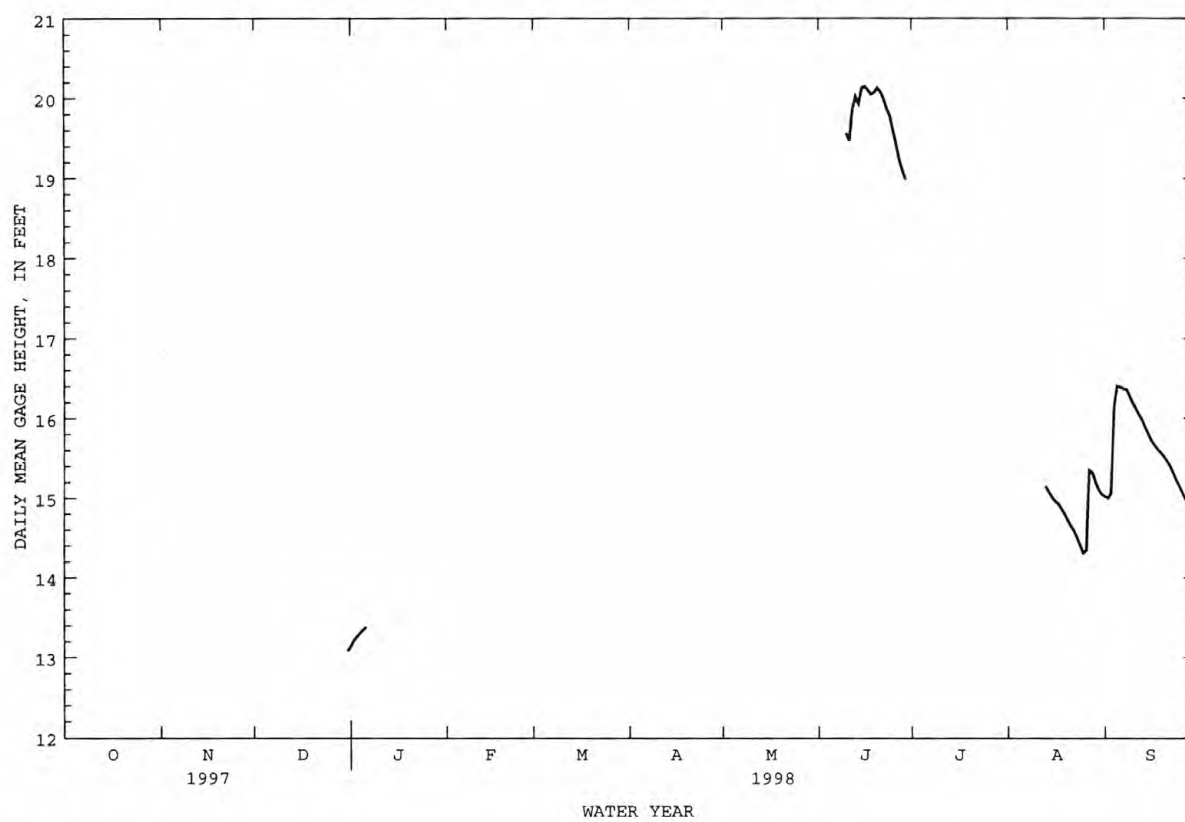
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

[illegible]



## ROANOKE RIVER BASIN

360347077191401 BIG SWASH TRANSECT (SITE #3)--Continued



## ROANOKE RIVER BASIN

0208102115 ROANOKE RIVER NEAR HILLS FERRY, NC

LOCATION.--Lat 36°03'11", long 77°18'45", North American Datum of 1983, Halifax County, Hydrologic Unit 03010107, approximately 0.8 mi east of Palmyra on private dirt road and 75 river mi from mouth.

DRAINAGE AREA.--8,780 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1996 to current year. Records from November 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

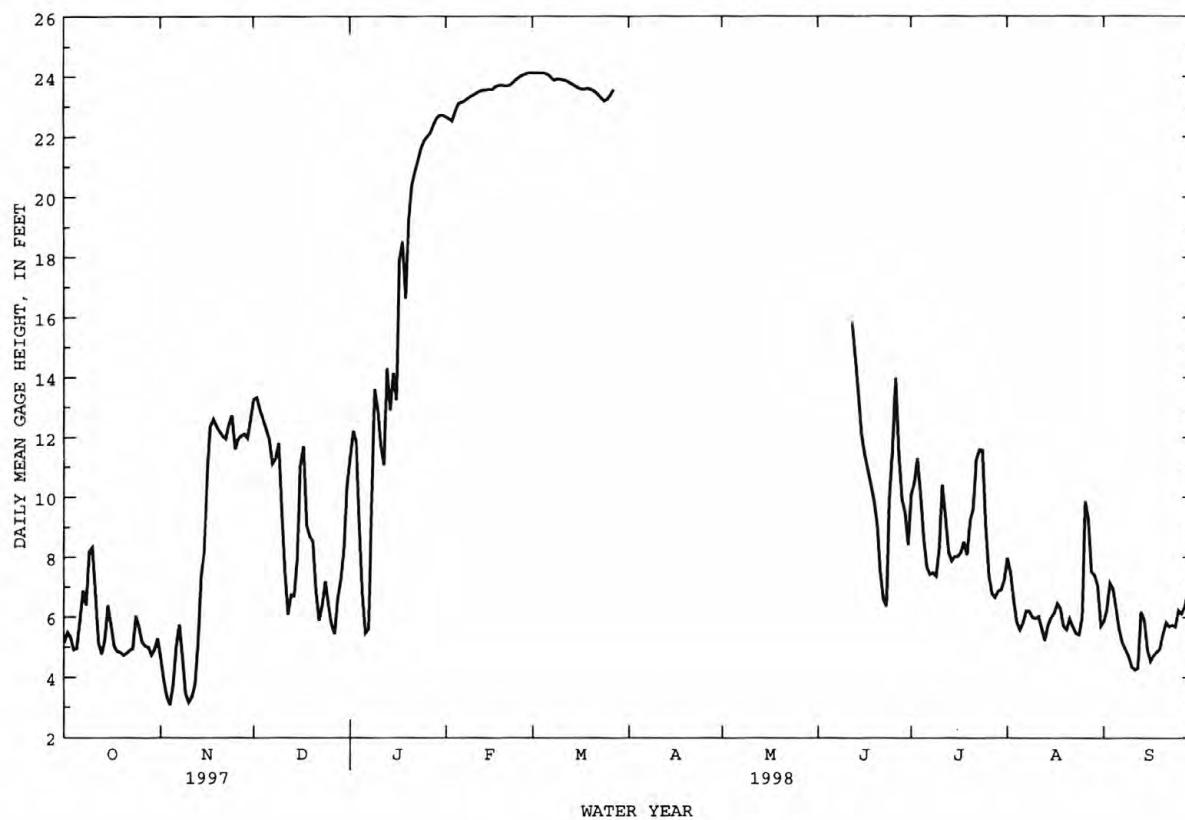
EXTREMES FOR PERIOD OF RECORD.--Maximum, 24.17 ft, Mar. 2, 1998; minimum, 2.95 ft, Nov. 4, 5, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum, 24.17 ft, Mar. 2; minimum, 2.95 ft, Nov. 4, 5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.16	4.63	13.26	11.30	22.67	24.13	---	---	---	10.08	7.97	5.85
2	5.49	3.91	13.32	12.21	22.60	24.13	---	---	---	10.48	7.46	6.25
3	5.33	3.35	12.89	11.88	22.52	24.13	---	---	---	11.29	6.54	7.14
4	4.91	3.07	12.60	9.11	22.83	24.12	---	---	---	10.04	5.83	6.95
5	4.95	3.78	12.27	6.79	23.10	24.11	---	---	---	8.60	5.58	6.28
6	5.92	5.05	11.93	5.46	23.14	24.07	---	---	---	7.67	5.81	5.59
7	6.88	5.75	11.11	5.60	23.19	23.96	---	---	---	7.43	6.20	5.14
8	6.39	4.65	11.27	9.85	23.27	23.87	---	---	---	7.49	6.20	4.92
9	8.18	3.46	11.80	13.60	23.34	23.92	---	---	---	7.37	6.00	4.70
10	8.32	3.16	9.48	12.92	23.40	23.90	---	---	---	8.26	5.96	4.35
11	6.79	3.34	7.51	11.71	23.46	23.89	---	---	---	10.41	6.02	4.25
12	5.14	3.76	6.08	11.07	23.52	23.85	---	---	15.82	9.32	5.63	4.31
13	4.76	5.18	6.74	14.30	23.55	23.79	---	---	---	14.62	8.16	6.18
14	5.25	7.38	6.71	12.90	23.56	23.73	---	---	---	13.43	7.87	5.92
15	6.38	8.15	7.94	14.15	23.57	23.67	---	---	---	12.11	8.01	5.99
16	5.74	10.71	11.06	13.23	23.57	23.61	---	---	11.43	8.02	6.14	4.54
17	5.03	12.35	11.69	17.92	23.66	23.58	---	---	10.94	8.15	6.45	4.72
18	4.86	12.60	9.07	18.51	23.71	23.59	---	---	10.43	8.52	6.29	4.84
19	4.82	12.37	8.68	16.62	23.71	23.60	---	---	9.92	8.07	5.70	4.94
20	4.73	12.19	8.52	19.17	23.70	23.57	---	---	9.12	9.22	5.59	5.42
21	4.79	12.04	6.86	20.39	23.69	23.51	---	---	7.52	9.62	5.95	5.83
22	4.89	11.94	5.88	20.83	23.74	23.42	---	---	6.60	11.26	5.69	5.69
23	4.94	12.43	6.37	21.20	23.83	23.30	---	---	6.37	11.58	5.46	5.74
24	6.03	12.72	7.19	21.61	23.92	23.19	---	---	10.05	11.57	5.42	5.68
25	5.66	11.61	6.38	21.86	24.00	23.23	---	---	11.59	9.12	6.00	6.23
26	5.17	11.94	5.74	22.00	24.06	23.38	---	---	13.98	7.41	9.86	6.12
27	5.03	12.05	5.44	22.12	24.10	23.55	---	---	11.42	6.79	9.26	6.34
28	4.99	12.10	6.61	22.40	24.12	---	---	---	9.94	6.66	7.51	6.90
29	4.73	11.97	7.24	22.61	---	---	---	---	9.48	6.87	7.41	6.46
30	4.92	12.60	8.22	22.72	---	---	---	---	8.41	6.92	7.05	5.67
31	5.28	---	10.41	22.72	---	---	---	---	---	7.25	5.70	---
MEAN	5.53	8.34	9.04	15.77	23.48	---	---	---	---	8.69	6.37	5.60
MAX	8.32	12.72	13.32	22.72	24.12	---	---	---	---	11.58	9.86	7.14
MIN	4.73	3.07	5.44	5.46	22.52	---	---	---	---	6.66	5.23	4.25

ROANOKE RIVER BASIN  
0208102115 ROANOKE RIVER NEAR HILLS FERRY, NC--Continued



## ROANOKE RIVER BASIN

02081022 ROANOKE RIVER NEAR OAK CITY, NC

LOCATION.--Lat 36°00'50", long 77°12'55", Martin County, Hydrologic Unit 03010107, on right bank at bridge on State Highway 11-42, and 5.2 mi northeast of Oak City.

DRAINAGE AREA.--8,810 mi<sup>2</sup>.

## GAGE HEIGHT RECORDS

PERIOD OF RECORD.--July 1987 to current year (gage height records only). Several miscellaneous discharge measurements during period 1986-1998.

GAGE.--Water stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929. Satellite telemetry at station.

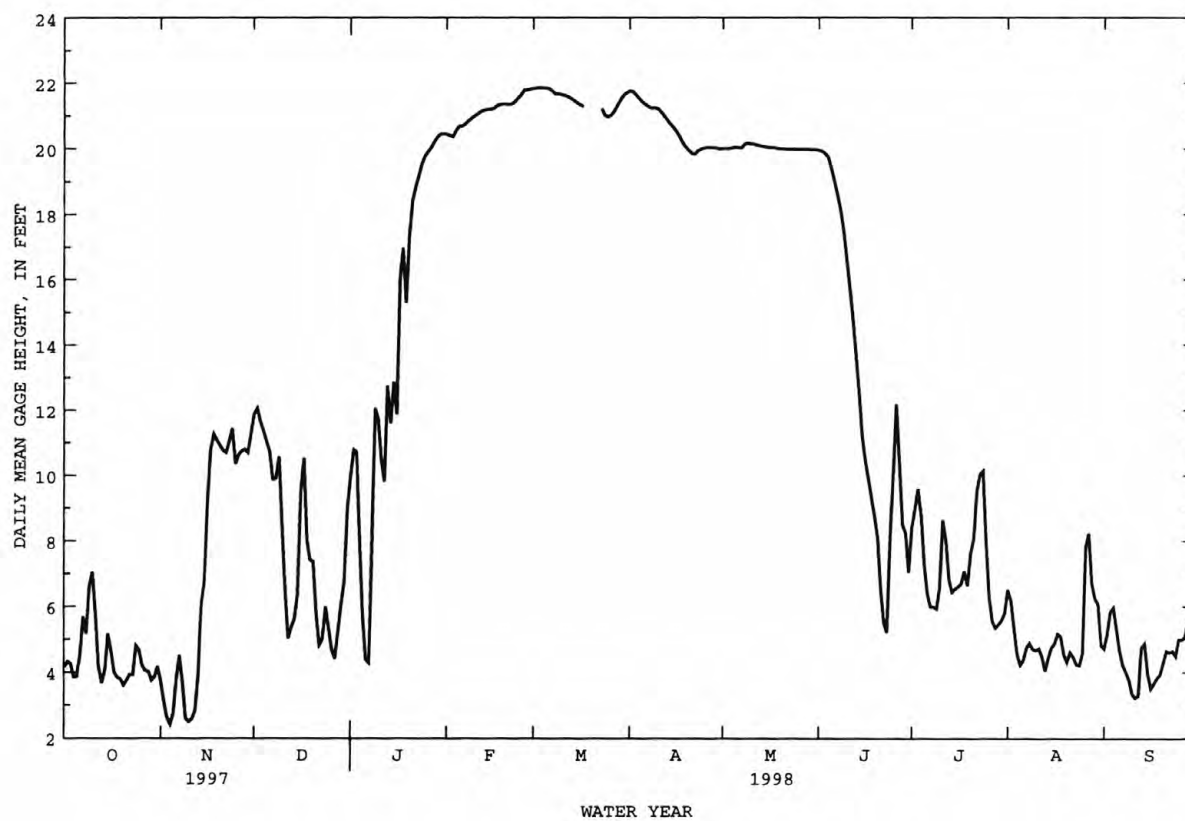
EXTREMES FOR PERIOD OF RECORD.--Maximum, 21.92 ft, Mar. 2-4, 1998; minimum, 2.31 ft, Nov. 5, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum, 21.92 ft, Mar. 2-4; minimum, 2.31 ft, Nov. 5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.16	3.72	11.87	9.98	20.44	21.84	21.76	20.00	19.95	8.40	6.51	4.72
2	4.32	3.12	12.06	10.79	20.40	21.85	21.75	20.00	19.92	8.96	6.16	5.15
3	4.26	2.63	11.64	10.72	20.36	21.86	21.64	20.00	19.85	9.59	5.32	5.83
4	3.85	2.41	11.37	8.14	20.55	21.85	21.53	20.02	19.74	8.77	4.53	5.96
5	3.87	2.75	11.04	5.80	20.68	21.85	21.42	20.05	19.41	7.29	4.22	5.33
6	4.54	3.79	10.73	4.39	20.69	21.83	21.35	20.03	19.00	6.40	4.37	4.66
7	5.69	4.50	9.88	4.28	20.76	21.76	21.28	20.02	18.59	5.99	4.74	4.21
8	5.17	3.69	9.90	8.01	20.85	21.67	21.24	20.14	18.12	5.99	4.89	4.00
9	6.62	2.59	10.58	12.06	20.93	21.68	21.25	20.17	17.49	5.93	4.70	3.76
10	7.04	2.49	8.44	11.72	21.00	21.65	21.22	20.15	16.63	6.57	4.66	3.34
11	5.78	2.58	6.51	10.46	21.06	21.63	21.12	20.14	15.76	8.63	4.72	3.22
12	4.16	2.83	5.03	9.82	21.14	21.59	21.00	20.11	14.80	7.97	4.46	3.29
13	3.67	3.91	5.37	12.75	21.17	21.54	20.88	20.09	13.65	6.81	4.04	4.74
14	4.06	6.05	5.61	11.60	21.19	21.47	20.76	20.07	12.53	6.43	4.42	4.87
15	5.16	6.75	6.35	12.86	21.20	21.40	20.66	20.05	11.21	6.53	4.74	3.95
16	4.65	9.07	9.46	11.87	21.22	21.34	20.53	20.03	10.46	6.60	4.88	3.50
17	4.00	10.76	10.53	16.03	21.30	21.29	20.37	20.03	9.91	6.69	5.17	3.65
18	3.84	11.27	8.03	16.96	21.35	---	20.19	20.02	9.34	7.08	5.08	3.81
19	3.79	11.08	7.42	15.29	21.36	---	20.05	20.00	8.78	6.64	4.53	3.92
20	3.60	10.92	7.37	17.30	21.36	---	19.95	19.99	8.09	7.61	4.31	4.26
21	3.75	10.77	5.81	18.41	21.35	---	19.85	19.99	6.54	8.05	4.60	4.64
22	3.93	10.70	4.82	18.83	21.37	---	19.83	19.98	5.53	9.52	4.47	4.60
23	3.91	11.05	4.99	19.18	21.44	21.21	19.94	19.98	5.21	10.04	4.24	4.64
24	4.81	11.44	5.99	19.53	21.55	21.01	19.99	19.99	8.03	10.14	4.21	4.49
25	4.68	10.35	5.33	19.77	21.64	20.97	20.02	19.98	9.99	8.01	4.58	5.00
26	4.21	10.63	4.68	19.90	21.79	21.02	20.03	19.98	12.19	6.27	7.81	4.99
27	4.05	10.75	4.41	20.02	21.79	21.15	20.03	19.98	10.29	5.56	8.22	5.07
28	4.02	10.80	5.23	20.21	21.82	21.33	20.03	19.98	8.50	5.35	6.70	5.62
29	3.75	10.70	6.05	20.35	---	21.50	20.02	19.98	8.24	5.46	6.25	5.35
30	3.86	11.27	6.73	20.44	---	21.63	19.99	19.97	7.04	5.58	6.08	4.59
31	4.17	---	9.01	20.45	---	21.71	---	19.97	---	5.79	4.82	---
MEAN	4.43	7.18	7.81	14.13	21.13	---	20.66	20.03	12.83	7.25	5.11	4.51
MAX	7.04	11.44	12.06	20.45	21.82	---	21.76	20.17	19.95	10.14	8.22	5.96
MIN	3.60	2.41	4.41	4.28	20.36	---	19.83	19.97	5.21	5.35	4.04	3.22

ROANOKE RIVER BASIN  
02081022 ROANOKE RIVER NEAR OAK CITY, NC--Continued





## ROANOKE RIVER BASIN

02081022 ROANOKE RIVER NEAR OAK CITY, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March to September 1998.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March to September 1998.

pH: March to September 1998.

WATER TEMPERATURE: March to September 1998.

DISSOLVED OXYGEN: March to September 1998.

DISSOLVED OXYGEN, PERCENT SATURATION: March to September 1998.

INSTRUMENTATION.-- Water-quality monitor with satellite telemetry from March to September 1998.

REMARKS.--Station operated in cooperation with U.S. Fish and Wildlife Service to define water-quality characteristics in the Roanoke River Basin below Roanoke Rapids Dam.

EXTREMES FOR CURRENT WATER YEAR. --

SPECIFIC CONDUCTANCE: Maximum recorded, 142 microsiemens, September 19; minimum recorded, 67 microsiemens, March 23.

pH: Maximum recorded, 7.2, March 26; minimum recorded, 6.2, June 5.

WATER TEMPERATURE: Maximum recorded, 30.5°C, July 24; minimum recorded, 8.5°C, March 18.

DISSOLVED OXYGEN: Maximum recorded, 10.8 mg/L, April 7; minimum recorded, 5.1 mg/L, May 30.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 110 percent, April 7; minimum recorded, 57 percent, May 30.

## SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

## ROANOKE RIVER BASIN

02081022 ROANOKE RIVER NEAR OAK CITY, NC--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	78	74	76	82	81	81
2	---	---	---	---	---	---	75	74	74	83	82	82
3	---	---	---	---	---	---	76	74	75	83	82	83
4	---	---	---	---	---	---	76	75	76	83	82	83
5	---	---	---	---	---	---	76	75	76	83	83	83
6	---	---	---	---	---	---	77	76	76	83	82	83
7	---	---	---	---	---	---	85	76	77	84	83	84
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	85	84	84
10	---	---	---	---	---	---	---	---	---	85	84	85
11	---	---	---	---	---	---	85	83	85	85	84	84
12	---	---	---	---	---	---	84	84	84	84	82	83
13	---	---	---	---	---	---	85	84	85	83	82	82
14	---	---	---	---	---	---	85	84	85	---	---	---
15	---	---	---	---	---	---	86	85	85	83	83	83
16	---	---	---	---	---	---	87	85	86	83	83	83
17	---	---	---	---	---	---	87	85	86	84	83	83
18	---	---	---	90	85	87	87	85	86	83	82	82
19	---	---	---	85	80	83	86	85	86	---	---	---
20	---	---	---	81	77	79	86	85	85	---	---	---
21	---	---	---	77	74	76	85	84	84	84	82	83
22	---	---	---	74	71	72	84	83	84	85	83	84
23	---	---	---	72	67	70	---	---	---	85	84	84
24	---	---	---	74	71	72	---	---	---	85	83	84
25	---	---	---	76	73	75	83	82	83	85	84	84
26	---	---	---	75	74	75	83	82	83	---	---	---
27	---	---	---	74	71	73	83	82	82	85	83	84
28	---	---	---	72	69	70	82	81	82	86	84	85
29	---	---	---	73	70	71	82	81	81	87	86	86
30	---	---	---	75	72	74	82	81	81	87	86	87
31	---	---	---	79	75	76	---	---	---	89	87	87
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	88	87	88	---	---	---	122	118	120	123	100	114
2	90	88	88	---	---	---	120	115	118	121	118	120
3	93	88	90	---	---	---	133	115	124	120	104	111
4	95	90	93	---	---	---	---	---	---	120	108	115
5	100	89	95	---	---	---	---	---	---	116	103	106
6	---	---	---	---	---	---	---	---	---	125	116	121
7	---	---	---	---	---	---	---	---	---	127	125	126
8	---	---	---	---	---	---	---	---	---	128	126	127
9	---	---	---	---	---	---	---	---	---	128	126	127
10	---	---	---	---	---	---	---	---	---	127	125	126
11	---	---	---	---	---	---	---	---	---	128	125	126
12	---	---	---	---	---	---	110	106	109	132	128	131
13	---	---	---	---	---	---	111	106	108	134	132	133
14	---	---	---	---	---	---	117	109	112	132	109	125
15	---	---	---	---	---	---	118	109	115	113	106	109
16	---	---	---	---	---	---	113	107	111	131	113	123
17	---	---	---	99	94	97	111	107	109	131	124	128
18	---	---	---	98	92	95	109	106	108	134	127	130
19	---	---	---	93	91	92	110	107	108	142	125	126
20	---	---	---	101	90	94	115	107	109	127	125	126
21	---	---	---	94	89	91	116	109	111	127	121	125
22	---	---	---	98	89	94	112	110	111	121	118	120
23	---	---	---	109	98	103	114	108	111	124	115	118
24	---	---	---	112	102	107	115	112	114	124	118	121
25	---	---	---	113	105	110	115	111	113	128	121	124
26	---	---	---	120	108	112	112	105	109	126	120	122
27	---	---	---	122	120	121	108	96	99	124	120	122
28	---	---	---	122	120	121	107	96	99	126	121	125
29	---	---	---	121	119	120	108	103	105	122	117	120
30	---	---	---	120	119	119	113	103	109	123	120	122
31	---	---	---	119	118	119	109	98	101	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	142	100	122

[illegible]



## ROANOKE RIVER BASIN

02081022 ROANOKE RIVER NEAR OAK CITY, NC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	14.4	14.1	14.3	16.6	16.2	16.4
2	---	---	---	---	---	---	14.9	14.3	14.6	16.7	16.3	16.5
3	---	---	---	---	---	---	14.9	14.7	14.8	17.1	16.5	16.8
4	---	---	---	---	---	---	14.7	13.9	14.2	17.5	16.8	17.1
5	---	---	---	---	---	---	13.9	13.5	13.7	17.8	17.4	17.5
6	---	---	---	---	---	---	13.5	13.0	13.2	17.9	17.4	17.7
7	---	---	---	---	---	---	13.9	13.1	13.4	17.9	17.7	17.8
8	---	---	---	---	---	---	14.6	13.7	14.1	18.1	17.8	17.9
9	---	---	---	---	---	---	15.1	14.5	14.7	18.1	17.6	17.8
10	---	---	---	---	---	---	15.1	14.4	14.6	17.9	17.6	17.7
11	---	---	---	---	---	---	14.4	14.0	14.1	17.8	17.6	17.7
12	---	---	---	---	---	---	14.2	13.6	13.9	17.8	17.6	17.7
13	---	---	---	---	---	---	14.2	13.6	13.9	17.6	17.0	17.3
14	---	---	---	---	---	---	14.1	13.6	13.8	17.3	16.8	17.0
15	---	---	---	---	---	---	14.3	13.8	14.1	17.9	17.0	17.4
16	---	---	---	---	---	---	14.8	14.3	14.5	18.8	17.5	18.0
17	---	---	---	---	---	---	15.7	14.8	15.2	18.9	18.4	18.6
18	---	---	---	8.9	8.5	8.7	15.8	15.6	15.7	19.2	18.6	18.8
19	---	---	---	9.1	8.8	8.9	15.9	15.4	15.7	19.6	18.9	19.2
20	---	---	---	9.8	9.1	9.3	15.9	15.6	15.7	20.0	19.0	19.4
21	---	---	---	9.8	9.7	9.8	15.8	15.2	15.4	20.0	19.5	19.8
22	---	---	---	9.8	9.6	9.7	15.6	15.0	15.2	20.6	19.8	20.0
23	---	---	---	9.8	9.4	9.6	15.3	14.7	15.0	20.7	20.3	20.5
24	---	---	---	9.8	9.3	9.5	15.3	15.0	15.2	20.5	20.2	20.3
25	---	---	---	10.1	9.4	9.7	15.7	14.9	15.3	20.4	20.0	20.2
26	---	---	---	10.3	9.6	10.0	16.5	15.7	16.0	21.0	19.9	20.4
27	---	---	---	11.4	10.3	10.8	16.5	16.2	16.4	21.2	20.7	21.0
28	---	---	---	12.5	11.3	11.8	16.4	15.9	16.1	21.3	21.0	21.2
29	---	---	---	13.2	12.3	12.7	16.2	15.9	16.1	21.6	21.0	21.3
30	---	---	---	13.7	13.0	13.3	16.4	15.5	15.9	21.6	21.0	21.3
31	---	---	---	14.2	13.6	13.9	---	---	---	22.0	21.3	21.6
MONTH	---	---	---	---	---	---	16.5	13.0	14.8	22.0	16.2	18.8

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	22.5	21.5	22.0	---	---	---	28.6	27.5	28.0	29.6	28.4	28.9
2	22.7	22.3	22.5	---	---	---	27.5	26.5	27.0	28.6	28.2	28.4
3	23.3	22.5	22.8	---	---	---	27.5	26.8	27.1	28.3	27.2	27.7
4	23.3	23.0	23.2	---	---	---	---	---	---	27.3	26.4	26.8
5	23.1	22.5	22.8	---	---	---	---	---	---	27.0	26.3	26.6
6	---	---	---	---	---	---	---	---	---	27.4	26.3	26.8
7	---	---	---	---	---	---	---	---	---	28.1	26.9	27.4
8	---	---	---	---	---	---	---	---	---	27.8	27.1	27.5
9	---	---	---	---	---	---	---	---	---	27.1	25.6	26.2
10	---	---	---	---	---	---	---	---	---	25.6	24.6	25.0
11	---	---	---	---	---	---	---	---	---	25.0	24.1	24.6
12	---	---	---	---	---	---	29.0	27.9	28.4	25.4	24.3	24.8
13	---	---	---	---	---	---	29.2	28.2	28.6	26.2	24.7	25.5
14	---	---	---	---	---	---	29.5	28.3	28.8	26.5	25.6	26.1
15	---	---	---	---	---	---	28.8	28.1	28.3	27.3	26.2	26.7
16	---	---	---	---	---	---	28.3	27.7	28.0	27.7	26.4	27.0
17	---	---	---	28.1	27.0	27.4	28.2	27.7	27.9	28.0	26.7	27.3
18	---	---	---	27.8	26.8	27.3	28.7	27.9	28.3	27.7	26.8	27.2
19	---	---	---	28.1	27.0	27.5	28.9	28.1	28.5	27.3	26.6	27.0
20	---	---	---	28.9	27.9	28.3	28.3	27.6	27.9	27.2	26.4	26.8
21	---	---	---	29.3	27.6	28.5	27.8	27.1	27.5	26.9	26.5	26.6
22	---	---	---	29.8	28.5	29.3	27.5	26.9	27.2	27.2	26.5	26.9
23	---	---	---	29.8	29.4	29.6	28.5	27.1	27.8	27.0	25.9	26.7
24	---	---	---	30.5	29.5	29.9	29.1	27.8	28.4	25.9	24.7	25.4
25	---	---	---	30.3	29.5	29.9	29.3	28.3	28.7	24.9	24.1	24.5
26	---	---	---	29.8	29.1	29.3	28.7	27.2	28.2	25.1	24.0	24.6
27	---	---	---	29.2	28.3	28.9	27.2	26.8	27.1	25.8	25.1	25.4
28	---	---	---	28.8	28.0	28.4	27.3	26.5	26.9	26.6	25.6	26.0
29	---	---	---	29.2	28.3	28.7	28.1	27.1	27.6	26.5	25.9	26.2
30	---	---	---	29.4	28.8	29.1	29.3	28.1	28.7	26.4	26.0	26.2
31	---	---	---	29.5	28.4	28.9	29.4	28.6	29.0	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	29.6	24.0	26.4





DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
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	---	---	---		---	---	---		---	---	---		---	---	---
MONTH	---	---	---		---	---	---		---	---	---		---	---	---



## ROANOKE RIVER BASIN

02081028 ROANOKE RIVER AT HAMILTON, NC

LOCATION.--Lat 35°55'50", long 77°12'10", Martin County, Hydrologic Unit 03010107, on downstream side of public boat ramp, 0.5 mi east of Hamilton.

DRAINAGE AREA.--8,890 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1986 to current year.

GAGE.--Water stage recorder. Datum of gage is sea level. Satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 18.09 ft, Mar. 29, 1998; minimum 1.76 ft, Nov. 4, 1998.

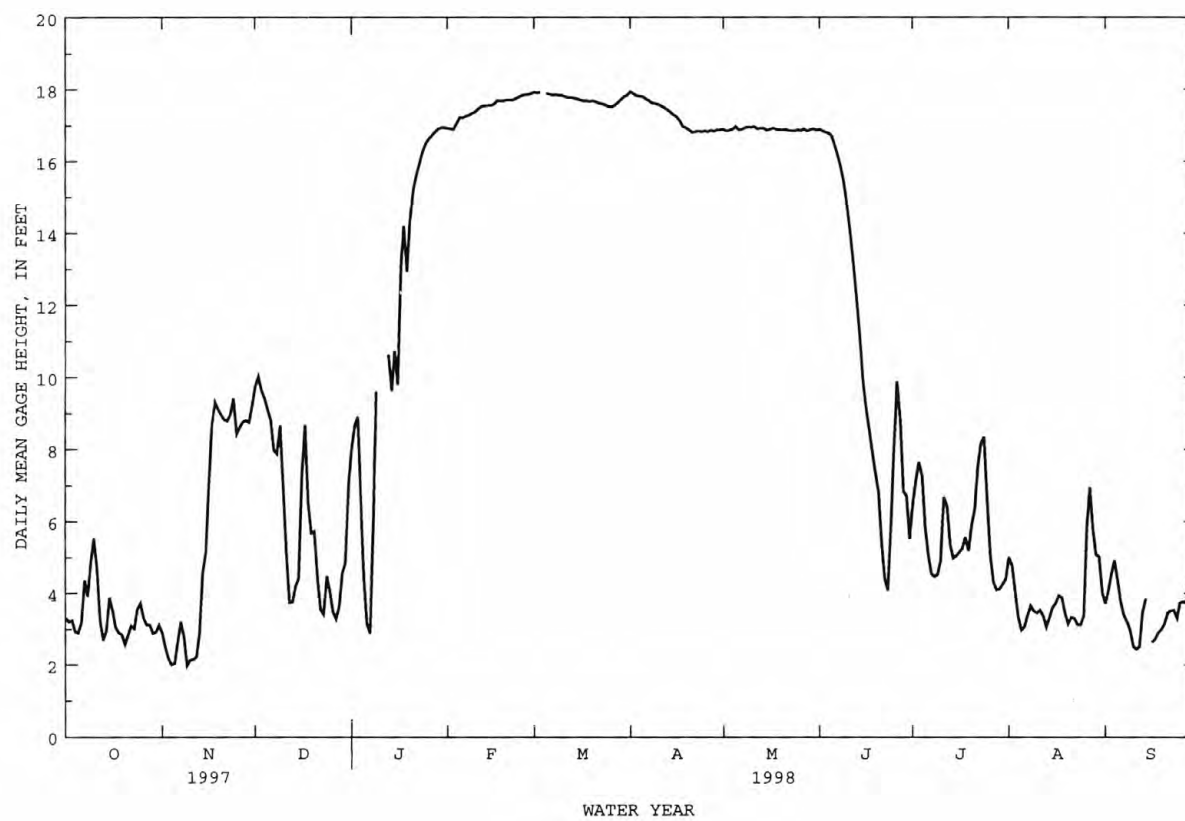
EXTREMES FOR CURRENT YEAR.--Maximum, 18.09 ft, Mar. 29; minimum, 1.76 ft, Nov. 4.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.31	2.90	9.73	8.02	16.92	17.91	17.93	16.88	16.89	6.49	5.01	3.71
2	3.20	2.51	10.02	8.66	16.91	17.89	17.88	16.84	16.84	7.14	4.78	4.07
3	3.24	2.18	9.64	8.90	16.88	17.91	17.82	16.86	16.81	7.65	4.04	4.54
4	2.93	2.00	9.41	6.69	17.05	---	17.80	16.88	16.78	7.25	3.31	4.92
5	2.90	2.04	9.10	4.49	17.22	17.89	17.80	16.96	16.70	5.85	2.98	4.37
6	3.20	2.65	8.81	3.15	17.21	17.86	17.73	16.87	16.43	5.07	3.07	3.77
7	4.37	3.20	7.98	2.89	17.25	17.84	17.69	16.88	16.14	4.55	3.39	3.37
8	3.91	2.79	7.88	5.71	17.28	17.85	17.62	16.93	15.80	4.47	3.65	3.20
9	4.85	1.98	8.66	9.60	17.33	17.83	17.61	16.95	15.35	4.53	3.50	2.96
10	5.55	2.13	6.88	---	17.37	17.83	17.58	16.94	14.73	4.92	3.46	2.52
11	4.70	2.15	5.12	---	17.46	17.79	17.54	16.96	14.00	6.67	3.53	2.44
12	3.26	2.22	3.74	---	17.53	17.77	17.49	16.90	13.16	6.44	3.37	2.51
13	2.69	2.91	3.75	10.61	17.55	17.77	17.43	16.92	12.15	5.38	3.06	3.47
14	2.96	4.56	4.21	9.63	17.56	17.75	17.36	16.92	11.15	4.99	3.31	3.85
15	3.88	5.12	4.42	10.72	17.56	17.73	17.29	16.86	9.92	5.04	3.60	---
16	3.53	6.99	7.22	9.80	17.58	17.70	17.24	16.88	9.15	5.15	3.72	2.63
17	3.05	8.63	8.68	13.07	17.68	17.67	17.12	16.92	8.56	5.25	3.94	2.72
18	2.91	9.31	6.52	14.20	17.68	17.68	16.96	16.89	7.95	5.56	3.88	2.90
19	2.85	9.11	5.69	12.93	17.68	17.66	16.93	16.87	7.37	5.19	3.44	2.99
20	2.58	8.96	5.73	14.32	17.70	17.68	16.87	16.87	6.80	5.89	3.15	3.15
21	2.84	8.83	4.46	15.21	17.71	17.65	16.80	16.88	5.39	6.35	3.32	3.45
22	3.09	8.79	3.55	15.59	17.70	17.61	16.82	16.85	4.41	7.52	3.30	3.51
23	3.02	8.97	3.41	15.93	17.74	17.60	16.84	16.85	4.08	8.18	3.13	3.53
24	3.56	9.41	4.48	16.24	17.78	17.57	16.82	16.84	5.91	8.35	3.12	3.31
25	3.72	8.43	4.04	16.48	17.82	17.52	16.84	16.87	8.06	6.67	3.36	3.73
26	3.31	8.61	3.47	16.61	17.85	17.51	16.82	16.85	9.89	5.07	5.80	3.77
27	3.13	8.76	3.28	16.70	17.85	17.56	16.86	16.90	8.78	4.33	6.95	3.73
28	3.11	8.81	3.63	16.81	17.88	17.63	16.83	16.84	6.83	4.10	5.80	4.20
29	2.88	8.75	4.55	16.89	---	17.71	16.87	16.87	6.71	4.12	5.08	4.11
30	2.92	9.20	4.84	16.93	---	17.79	16.87	16.90	5.52	4.26	5.03	3.45
31	3.11	---	7.01	16.93	---	17.83	---	16.86	---	4.40	4.00	---
TOTAL	104.56	172.90	189.91	---	489.73	---	518.06	523.49	328.26	176.83	121.08	---
MEAN	3.37	5.76	6.13	---	17.49	---	17.27	16.89	10.94	5.70	3.91	---
MAX	5.55	9.41	10.02	---	17.88	---	17.93	16.96	16.89	8.35	6.95	---
MIN	2.58	1.98	3.28	---	16.88	---	16.80	16.84	4.08	4.10	2.98	---
MED	3.13	6.05	5.69	---	17.56	---	17.26	16.88	9.91	5.25	3.50	---

## ROANOKE RIVER BASIN

02081028 ROANOKE RIVER AT HAMILTON, NC--Continued





## ROANOKE RIVER BASIN

355812077082301 BROADNECK TRANSECT (SITE #1)

LOCATION.--Lat 35°58'10", long 77°08'27", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, approximately 4.2 mi east-northeast of Hamilton.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--April 1997 to current year. Records from April 1997 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 18.28 ft, Mar. 2-4, 1998; minimum recorded, 11.86 ft, Oct. 18, 1997, gage height was probably less during the period Oct. 18 to Nov. 16, 1997 when the float was resting on the bottom of the stilling well.

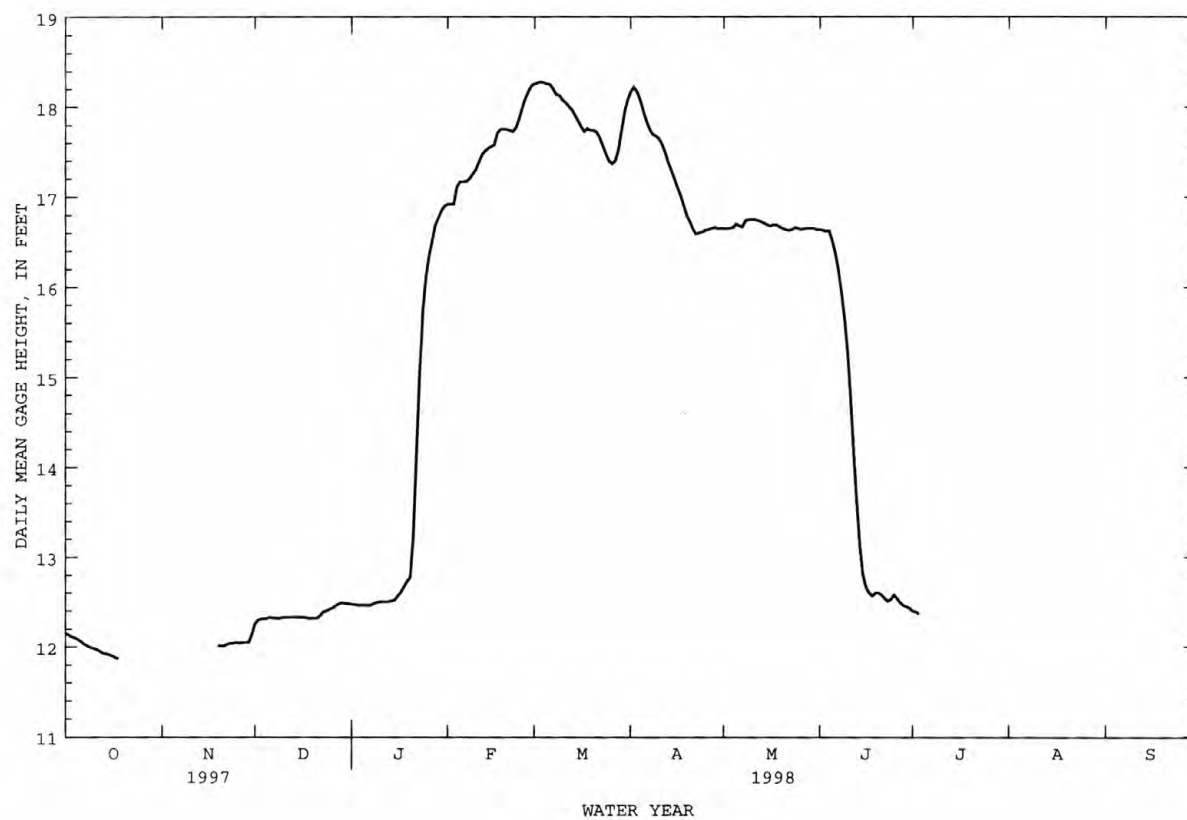
EXTREMES FOR CURRENT YEAR.--Maximum, 18.28 ft, Mar. 2-4; minimum, 11.86 ft, Oct. 18 (see EXTREMES FOR PERIOD OF RECORD).

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.15	---	12.26	12.47	16.92	18.26	18.17	16.65	16.64	12.40	---	---
2	12.13	---	12.30	12.47	16.92	18.27	18.22	16.65	16.63	12.39	---	---
3	12.11	---	12.31	12.46	16.92	18.28	18.17	16.65	16.62	12.37	---	---
4	12.10	---	12.31	12.46	17.11	18.27	18.08	16.66	16.62	---	---	---
5	12.08	---	12.32	12.46	17.17	18.26	17.96	16.70	16.51	---	---	---
6	12.06	---	12.33	12.46	17.17	18.25	17.85	16.68	16.36	---	---	---
7	12.03	---	12.32	12.46	17.17	18.20	17.76	16.67	16.17	---	---	---
8	12.01	---	12.32	12.48	17.20	18.14	17.70	16.74	15.94	---	---	---
9	11.99	---	12.32	12.49	17.25	18.13	17.68	16.75	15.65	---	---	---
10	11.98	---	12.33	12.50	17.30	18.08	17.65	16.75	15.28	---	---	---
11	11.97	---	12.33	12.50	17.38	18.05	17.59	16.75	14.77	---	---	---
12	11.95	---	12.33	12.50	17.47	18.01	17.50	16.74	14.18	---	---	---
13	11.93	---	12.33	12.50	17.51	17.97	17.39	16.73	13.59	---	---	---
14	11.92	---	12.33	12.51	17.54	17.91	17.30	16.71	13.12	---	---	---
15	11.91	---	12.33	12.52	17.56	17.85	17.21	16.69	12.80	---	---	---
16	11.90	---	12.33	12.57	17.58	17.78	17.11	16.68	12.66	---	---	---
17	11.88	---	12.33	12.61	17.71	17.73	17.02	16.69	12.60	---	---	---
18	11.87	---	12.32	12.67	17.75	17.76	16.91	16.69	12.57	---	---	---
19	---	12.01	12.32	12.73	17.75	17.74	16.80	16.67	12.60	---	---	---
20	---	12.01	12.32	12.77	17.75	17.74	16.73	16.65	12.60	---	---	---
21	---	12.01	12.32	13.24	17.74	17.72	16.65	16.64	12.58	---	---	---
22	---	12.03	12.35	14.12	17.73	17.66	16.59	16.63	12.54	---	---	---
23	---	12.04	12.39	15.03	17.77	17.57	16.60	16.64	12.51	---	---	---
24	---	12.04	12.40	15.72	17.87	17.48	16.61	16.66	12.53	---	---	---
25	---	12.05	12.42	16.10	17.99	17.40	16.63	16.65	12.58	---	---	---
26	---	12.04	12.43	16.34	18.10	17.37	16.64	16.64	12.54	---	---	---
27	---	12.05	12.46	16.51	18.18	17.40	16.65	16.65	12.49	---	---	---
28	---	12.05	12.48	16.69	18.24	17.52	16.66	16.65	12.46	---	---	---
29	---	12.05	12.49	16.77	---	17.73	16.65	16.65	12.45	---	---	---
30	---	12.14	12.48	16.85	---	17.94	16.65	16.65	12.43	---	---	---
31	---	---	12.48	16.90	---	18.08	---	16.64	---	---	---	---
MEAN	---	---	12.36	13.71	17.53	17.89	17.24	16.68	13.97	---	---	---
MAX	---	---	12.49	16.90	18.24	18.28	18.22	16.75	16.64	---	---	---
MIN	---	---	12.26	12.46	16.92	17.37	16.59	16.63	12.43	---	---	---

## ROANOKE RIVER BASIN

355812077082301 BROADNECK TRANSECT (SITE #1)--Continued



## ROANOKE RIVER BASIN

355722077082801 BROADNECK TRANSECT (SITE #2)

LOCATION.--Lat 35°57'21", long 77°17'25", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, approximately 3.85 mi east of Hamilton.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--November 1996 to current year. Records from November 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

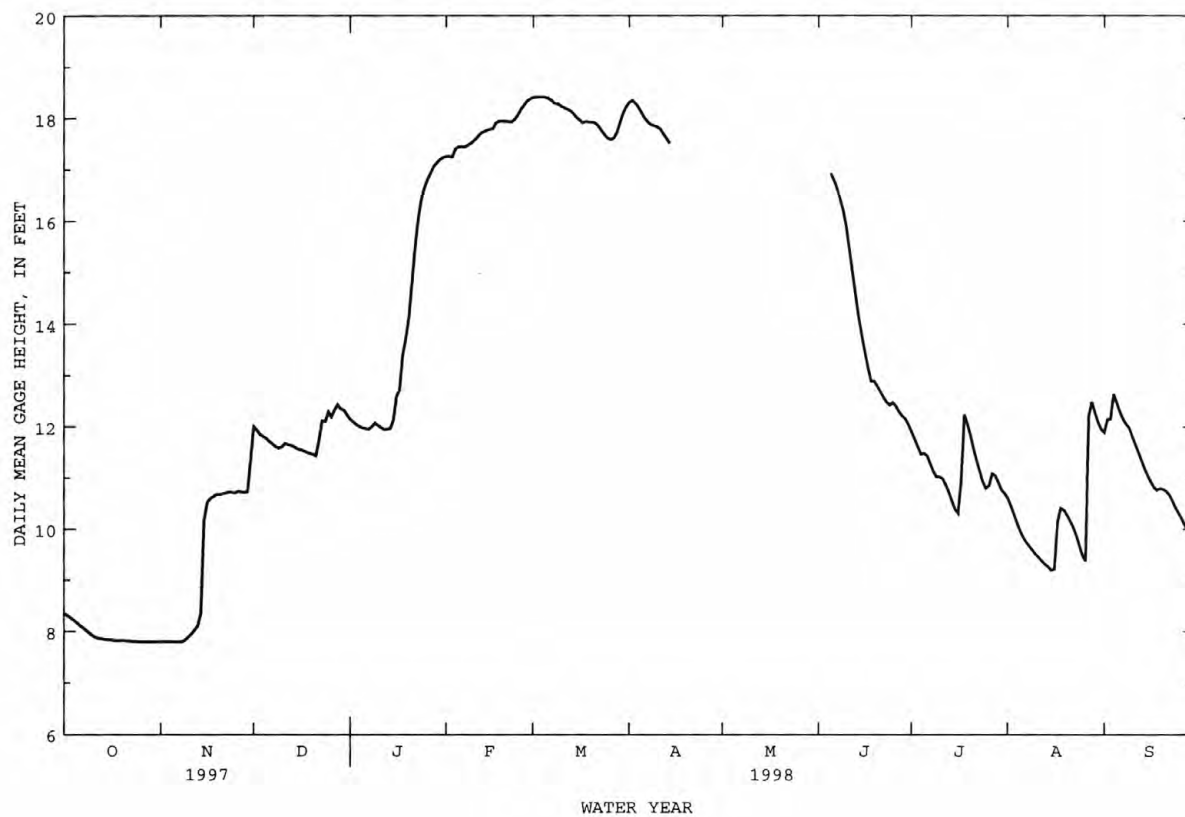
EXTREMES FOR PERIOD OF RECORD.--Maximum, 18.43 ft, Mar. 2, 3, 1998; minimum recorded, 7.79 ft, Oct. 25, 1997, minimum gage height was probably less during the period Oct. 25 to Nov. 8, 1997 when the float was resting on the bottom of the stilling well.

EXTREMES FOR CURRENT YEAR.--Maximum, 18.43 ft, Mar. 2, 3; minimum, 7.79 ft, Oct. 25 (see EXTREMES FOR PERIOD OF RECORD).

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.35	7.79	12.00	12.14	17.26	18.41	18.31	---	---	11.90	10.61	11.89
2	8.31	7.79	11.93	12.09	17.26	18.41	18.35	---	---	11.76	10.46	12.14
3	8.26	7.79	11.85	12.04	17.25	18.42	18.29	---	---	11.61	10.29	12.15
4	8.22	7.79	11.81	12.00	17.41	18.41	18.21	---	---	11.46	10.12	12.64
5	8.17	7.79	11.77	11.97	17.45	18.41	18.10	---	16.93	11.48	9.97	12.47
6	8.12	7.79	11.71	11.96	17.45	18.39	18.00	---	16.79	11.43	9.84	12.30
7	8.07	7.79	11.66	11.95	17.45	18.35	17.93	---	16.62	11.28	9.74	12.15
8	8.02	7.79	11.61	12.00	17.48	18.29	17.88	---	16.43	11.13	9.66	12.05
9	7.97	7.83	11.58	12.07	17.52	18.29	17.86	---	16.20	11.02	9.58	11.98
10	7.92	7.89	11.60	12.02	17.57	18.24	17.84	---	15.89	11.02	9.50	11.82
11	7.88	7.95	11.67	11.98	17.63	18.21	17.79	---	15.46	10.99	9.44	11.66
12	7.86	8.03	11.65	11.94	17.71	18.18	17.70	---	15.01	10.87	9.37	11.51
13	7.85	8.11	11.63	11.95	17.74	18.15	17.61	---	14.56	10.72	9.31	11.35
14	7.84	8.37	11.61	11.96	17.77	18.09	17.52	---	14.13	10.55	9.26	11.18
15	7.83	10.17	11.57	12.13	17.79	18.02	---	---	13.79	10.39	9.19	11.05
16	7.83	10.52	11.55	12.60	17.80	17.97	---	---	13.46	10.31	9.22	10.93
17	7.82	10.60	11.53	12.73	17.91	17.92	---	---	13.16	10.95	10.14	10.82
18	7.82	10.64	11.50	13.40	17.95	17.94	---	---	12.89	12.24	10.41	10.76
19	7.82	10.68	11.48	13.72	17.95	17.93	---	---	12.89	12.04	10.38	10.79
20	7.82	10.68	11.46	14.12	17.95	17.93	---	---	12.79	11.81	10.28	10.78
21	7.81	10.69	11.43	14.83	17.94	17.91	---	---	12.68	11.55	10.17	10.74
22	7.81	10.71	11.73	15.51	17.93	17.86	---	---	12.57	11.32	10.05	10.67
23	7.80	10.73	12.11	16.05	17.98	17.77	---	---	12.48	11.12	9.88	10.55
24	7.80	10.72	12.10	16.42	18.06	17.69	---	---	12.42	10.93	9.68	10.42
25	7.79	10.71	12.29	16.65	18.17	17.62	---	---	12.47	10.80	9.48	10.31
26	7.79	10.74	12.19	16.81	18.26	17.59	---	---	12.40	10.85	9.37	10.20
27	7.79	10.73	12.33	16.94	18.34	17.62	---	---	12.29	11.08	12.21	10.08
28	7.79	10.72	12.43	17.07	18.38	17.73	---	---	12.21	11.04	12.49	9.95
29	7.79	10.73	12.35	17.14	---	17.92	---	---	12.15	10.92	12.28	9.81
30	7.79	11.32	12.33	17.20	---	18.10	---	---	12.04	10.77	12.09	9.71
31	7.79	---	12.23	17.24	---	18.23	---	---	---	10.70	11.95	---
MEAN	7.92	9.39	11.83	13.83	17.76	18.06	---	---	---	11.16	10.21	11.16
MAX	8.35	11.32	12.43	17.24	18.38	18.42	---	---	---	12.24	12.49	12.64
MIN	7.79	7.79	11.43	11.94	17.25	17.59	---	---	---	10.31	9.19	9.71

ROANOKE RIVER BASIN  
355722077082801 BROADNECK TRANSECT (SITE #2)--Continued



## ROANOKE RIVER BASIN

355540077083401 BROADNECK TRANSECT (SITE #3)

LOCATION.--Lat 35°55'41", long 77°08'35", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, approximately 3.9 mi east-southeast of Hamilton and 0.4 mi north of SR 1416 on private dirt road.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 16.66 ft, Mar. 2-4, 1998; minimum recorded, 9.40 ft, Oct. 14, 1997, minimum gage height was probably less during the period Oct. 14 to Oct. 18, 1997 when the float was resting on the bottom of the stilling well.

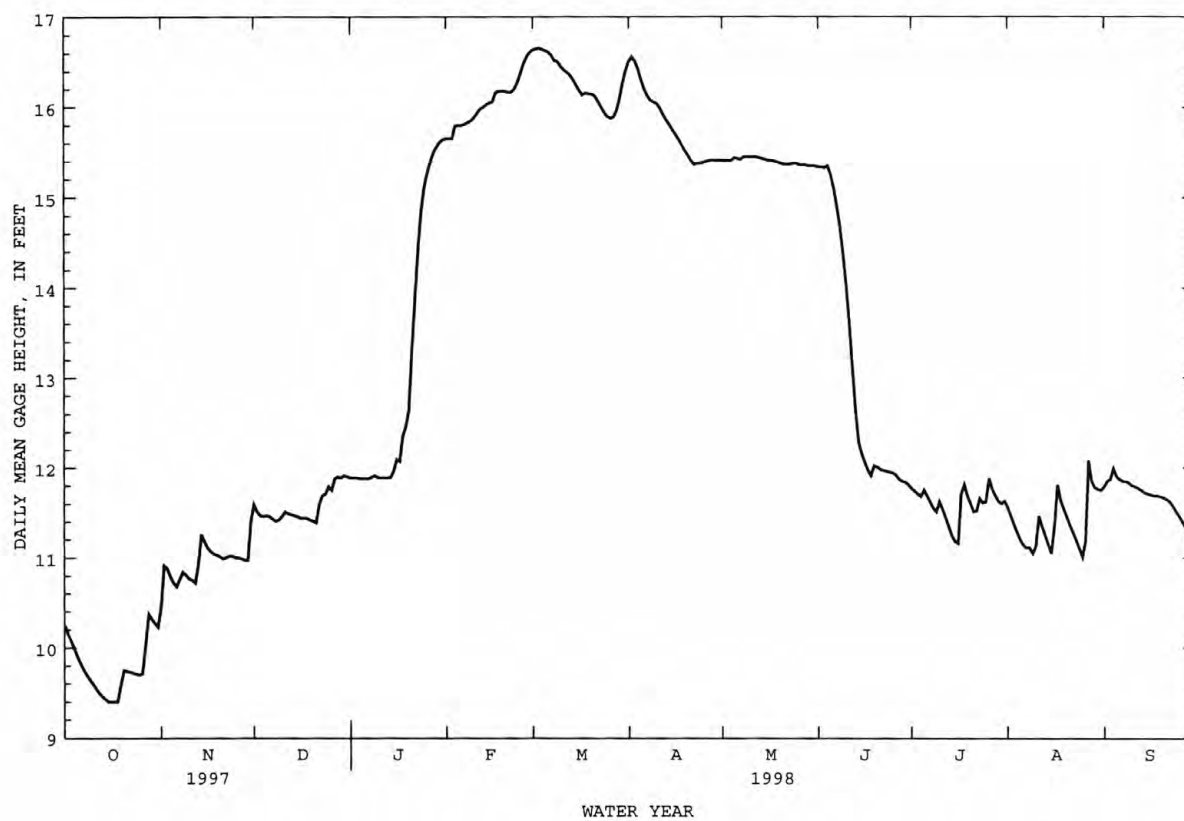
EXTREMES FOR CURRENT YEAR.--Maximum, 16.66 ft, Mar. 2-4; minimum, 9.40 ft, Oct. 14 (see EXTREMES FOR PERIOD OF RECORD).

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.25	10.45	11.59	11.89	15.65	16.64	16.51	15.41	15.34	11.77	11.56	11.79
2	10.15	10.91	11.51	11.89	15.65	16.65	16.56	15.41	15.34	11.74	11.46	11.85
3	10.08	10.88	11.47	11.89	15.65	16.66	16.51	15.41	15.33	11.71	11.37	11.87
4	10.00	10.79	11.46	11.88	15.79	16.65	16.42	15.41	15.35	11.68	11.28	11.99
5	9.91	10.72	11.47	11.88	15.80	16.63	16.30	15.44	15.26	11.75	11.20	11.90
6	9.83	10.68	11.46	11.88	15.80	16.62	16.20	15.43	15.11	11.69	11.14	11.87
7	9.76	10.76	11.43	11.88	15.81	16.58	16.13	15.42	14.91	11.62	11.11	11.85
8	9.70	10.84	11.41	11.90	15.83	16.52	16.08	15.45	14.69	11.55	11.11	11.85
9	9.65	10.81	11.42	11.91	15.85	16.51	16.06	15.45	14.40	11.51	11.05	11.83
10	9.60	10.77	11.46	11.89	15.88	16.46	16.04	15.45	14.06	11.62	11.13	11.80
11	9.55	10.75	11.51	11.89	15.93	16.42	15.99	15.45	13.64	11.54	11.46	11.79
12	9.50	10.72	11.49	11.89	15.98	16.39	15.92	15.45	13.15	11.44	11.35	11.77
13	9.46	10.93	11.48	11.89	16.00	16.36	15.86	15.44	12.65	11.34	11.25	11.75
14	9.43	11.26	11.47	11.89	16.03	16.31	15.81	15.43	12.29	11.24	11.15	11.72
15	9.40	11.18	11.46	11.96	16.05	16.25	15.75	15.42	12.16	11.18	11.05	11.71
16	9.40	11.11	11.44	12.09	16.06	16.19	15.70	15.41	12.06	11.16	11.36	11.70
17	9.40	11.07	11.44	12.07	16.16	16.14	15.64	15.41	11.97	11.71	11.81	11.69
18	9.40	11.04	11.44	12.35	16.18	16.16	15.58	15.40	11.91	11.81	11.64	11.69
19	9.58	11.03	11.42	12.46	16.18	16.15	15.52	15.39	12.02	11.68	11.54	11.68
20	9.75	11.01	11.41	12.64	16.18	16.15	15.47	15.38	12.01	11.60	11.45	11.67
21	9.74	10.99	11.39	13.34	16.17	16.13	15.41	15.37	11.98	11.51	11.36	11.65
22	9.73	11.00	11.59	13.89	16.17	16.07	15.37	15.37	11.97	11.52	11.28	11.63
23	9.72	11.02	11.69	14.43	16.20	16.01	15.38	15.37	11.96	11.66	11.19	11.58
24	9.71	11.02	11.71	14.85	16.27	15.95	15.38	15.38	11.95	11.61	11.10	11.52
25	9.70	11.00	11.79	15.11	16.37	15.90	15.39	15.38	11.94	11.62	11.01	11.47
26	9.71	11.00	11.75	15.27	16.48	15.88	15.40	15.36	11.92	11.88	11.19	11.41
27	10.02	10.99	11.88	15.39	16.56	15.89	15.41	15.36	11.87	11.76	12.08	11.35
28	10.37	10.97	11.90	15.50	16.61	15.96	15.41	15.36	11.85	11.69	11.85	11.29
29	10.32	10.97	11.89	15.56	---	16.09	15.41	15.35	11.84	11.63	11.78	11.23
30	10.27	11.40	11.91	15.61	---	16.27	15.41	15.35	11.81	11.60	11.76	11.28
31	10.23	---	11.90	15.64	---	16.41	---	15.35	---	11.63	11.75	---
MEAN	9.78	10.94	11.57	13.05	16.05	16.29	15.80	15.40	13.09	11.60	11.38	11.67
MAX	10.37	11.40	11.91	15.64	16.61	16.66	16.56	15.45	15.35	11.88	12.08	11.99
MIN	9.40	10.45	11.39	11.88	15.65	15.88	15.37	15.35	11.81	11.16	11.01	11.23



ROANOKE RIVER BASIN  
355540077083401 BROADNECK TRANSECT (SITE #3)--Continued



## ROANOKE RIVER BASIN

0208102925 ROANOKE RIVER NEAR HAMILTON, NC

LOCATION.--Lat 35°56'03", long 77°08'23", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, approximately 3.9 mi. east-southeast of Hamilton. and 0.8 mi north of SR 1416 on private dirt road. Approximately 59 river mi from mouth.

DRAINAGE AREA.--8,890 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1997 to current year. Records from April 1997 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

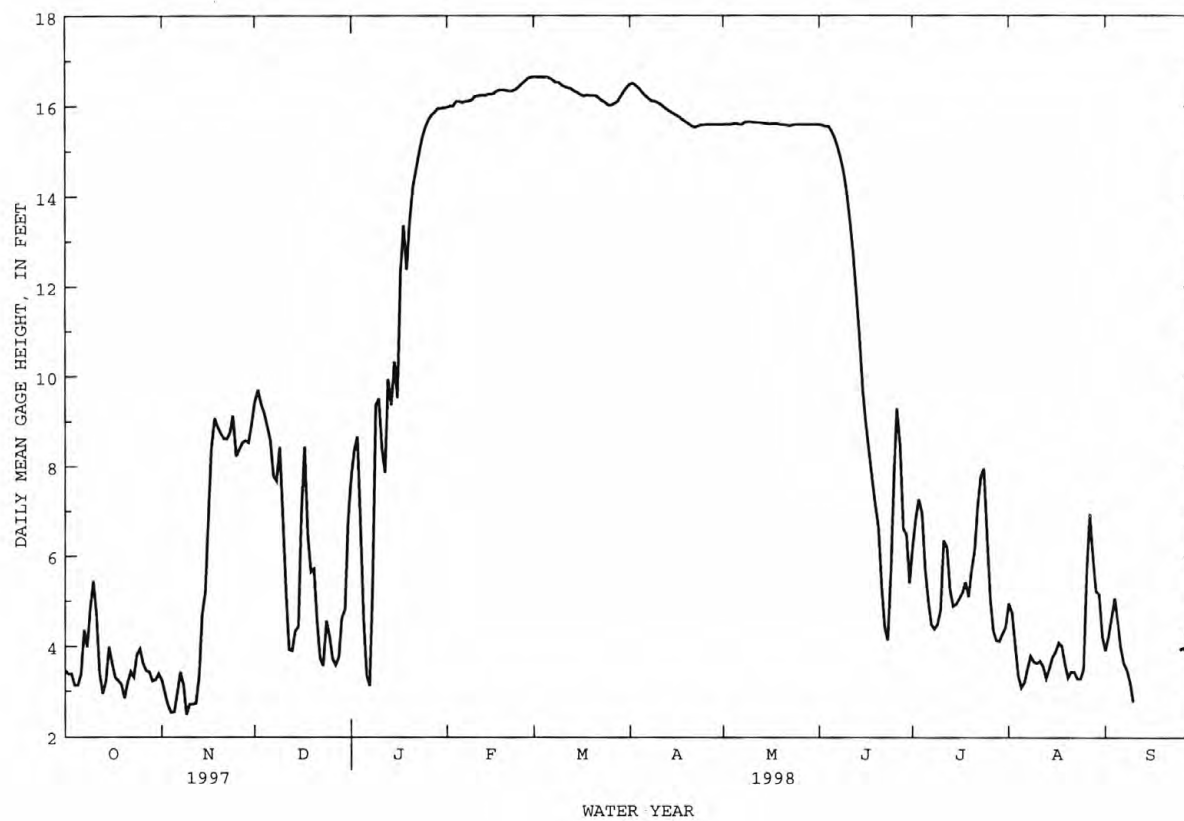
EXTREMES FOR PERIOD OF RECORD.--Maximum, 23.99 ft, Apr. 16, 1997; minimum, 1.71 ft, Sept. 11, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum, 16.77 ft, Apr. 16; minimum, 1.71 ft, Sept. 11.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.46	3.26	9.43	7.78	15.98	16.65	16.49	15.60	15.60	6.21	4.96	3.91
2	3.38	2.97	9.71	8.37	16.01	16.65	16.51	15.61	15.58	6.83	4.75	4.22
3	3.39	2.70	9.40	8.67	16.01	16.65	16.45	15.60	15.56	7.27	4.05	4.64
4	3.13	2.53	9.20	6.64	16.11	16.65	16.39	15.61	15.56	6.97	3.36	5.07
5	3.13	2.55	8.90	4.58	16.11	16.65	16.30	15.62	15.45	5.71	3.09	4.55
6	3.39	2.97	8.60	3.35	16.09	16.63	16.23	15.61	15.29	5.02	3.20	3.98
7	4.36	3.43	7.79	3.12	16.11	16.59	16.17	15.60	15.08	4.49	3.51	3.62
8	3.98	3.15	7.68	5.57	16.12	16.53	16.12	15.65	14.81	4.39	3.79	3.48
9	4.85	2.49	8.44	9.36	16.14	16.53	16.11	15.66	14.48	4.49	3.66	3.21
10	5.45	2.72	6.84	9.51	16.22	16.47	16.08	15.66	14.01	4.81	3.63	2.78
11	4.69	2.72	5.20	8.39	16.23	16.43	16.04	15.65	13.42	6.35	3.68	---
12	3.40	2.74	3.93	7.87	16.25	16.41	15.98	15.64	12.72	6.21	3.56	---
13	2.95	3.33	3.90	9.94	16.24	16.39	15.93	15.64	11.80	5.25	3.30	---
14	3.23	4.71	4.34	9.37	16.26	16.34	15.88	15.63	10.86	4.90	3.51	---
15	3.99	5.20	4.43	10.33	16.27	16.31	15.84	15.62	9.72	4.94	3.76	---
16	3.63	6.87	6.97	9.53	16.28	16.26	15.80	15.61	8.97	5.06	3.89	---
17	3.31	8.40	8.44	12.32	16.34	16.23	15.76	15.62	8.36	5.19	4.08	---
18	3.24	9.07	6.48	13.36	16.36	16.25	15.70	15.62	7.74	5.43	4.01	---
19	3.16	8.88	5.65	12.38	16.36	16.24	15.66	15.61	7.17	5.10	3.62	---
20	2.85	8.74	5.71	13.47	16.35	16.24	15.61	15.59	6.65	5.70	3.31	---
21	3.20	8.63	4.57	14.22	16.34	16.24	15.56	15.59	5.34	6.13	3.44	---
22	3.44	8.61	3.74	14.59	16.34	16.18	15.54	15.58	4.44	7.13	3.44	---
23	3.32	8.74	3.57	14.97	16.37	16.13	15.57	15.58	4.13	7.78	3.29	---
24	3.82	9.13	4.57	15.30	16.42	16.09	15.59	15.60	5.65	7.96	3.29	---
25	3.94	8.23	4.22	15.53	16.49	16.03	15.59	15.60	7.67	6.49	3.50	3.93
26	3.62	8.38	3.72	15.70	16.55	16.03	15.60	15.60	9.30	5.05	5.68	3.97
27	3.46	8.53	3.59	15.80	16.62	16.07	15.60	15.60	8.46	4.35	6.94	3.91
28	3.43	8.58	3.76	15.87	16.64	16.11	15.60	15.60	6.61	4.13	5.97	4.34
29	3.23	8.54	4.64	15.95	---	16.22	15.60	15.60	6.50	4.12	5.22	4.29
30	3.26	8.94	4.81	15.96	---	16.33	15.60	15.60	5.40	4.29	5.16	3.69
31	3.39	---	6.84	15.97	---	16.42	---	15.60	---	4.43	4.22	---
MEAN	3.58	5.86	6.10	11.09	16.27	16.35	15.90	15.61	10.41	5.55	4.03	---
MAX	5.45	9.13	9.71	15.97	16.64	16.65	16.51	15.66	15.60	7.96	6.94	---
MIN	2.85	2.49	3.57	3.12	15.98	16.03	15.54	15.58	4.13	4.12	3.09	---

ROANOKE RIVER BASIN  
0208102925 ROANOKE RIVER NEAR HAMILTON, NC--Continued



LOCATION.--Lat 35°56'50", long 77°12'10", Bertie County, Hydrologic Unit 03010107, on left bank, .1 mi downstream of Coniott Creek, and .65 mi south-southeast of Quitsna.

PERIOD OF RECORD.--January to September 1998.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January to September 1998.

pH: January to September 1998.

WATER TEMPERATURE: January to September 1998.

DISSOLVED OXYGEN: January to September 1998.

DISSOLVED OXYGEN, PERCENT SATURATION: January to September 1998.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry from January to September 1998.

REMARKS.--Station operated in cooperation with U.S. Fish and Wildlife Service to define water-quality characteristics in the Roanoke River Basin below Roanoke Rapids Dam.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 141 microsiemens, January 13; minimum recorded, 84 microsiemens, June 26, July 1, August 4.

pH: Maximum recorded, 7.9, March 8; minimum recorded, 6.1, June 12, June 13.

WATER TEMPERATURE: Maximum recorded, 30.5°C, July 25; minimum recorded, 6.6°C, February 10.

DISSOLVED OXYGEN: Maximum recorded, 11.3 mg/L, January 9; minimum recorded, 4.9 mg/L, February 6.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 102 percent, July 3; minimum recorded, 40 percent February 10.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

## ROANOKE RIVER BASIN

0208102855 ROANOKE RIVER ABOVE SECONDARY ROAD 1100 NEAR GRABTOWN, NC--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	120	116	118	92	88	90	92	88	90	92	88	90
2	121	117	119	92	88	90	93	89	91	92	87	89
3	121	117	119	92	88	90	93	90	92	92	88	90
4	120	113	117	92	88	90	93	91	92	92	88	90
5	117	110	114	91	87	89	93	91	92	91	87	90
6	114	107	110	89	88	88	93	91	92	91	87	90
7	110	106	108	90	88	89	93	91	92	93	88	91
8	110	106	108	91	88	89	94	90	92	93	89	90
9	110	106	108	91	87	88	96	90	93	93	88	90
10	109	106	107	89	86	88	94	91	93	93	89	91
11	110	104	107	89	87	88	95	91	93	92	89	90
12	108	103	106	88	86	87	94	91	93	92	88	90
13	106	101	103	89	86	87	94	89	92	91	88	89
14	104	98	101	88	85	87	94	90	92	91	88	89
15	102	97	99	88	86	87	94	90	92	90	88	89
16	100	95	97	88	86	87	94	90	92	90	87	89
17	98	91	95	88	86	87	96	91	93	91	88	89
18	95	91	93	89	86	87	96	92	94	91	88	90
19	94	90	92	88	85	86	97	92	94	92	88	90
20	93	90	92	88	85	86	95	92	94	92	88	90
21	92	89	91	87	85	86	95	92	94	92	87	90
22	93	90	92	87	86	86	95	91	93	92	88	90
23	93	90	92	87	85	86	94	90	92	92	88	90
24	93	90	92	88	86	87	93	89	91	92	88	90
25	92	90	91	89	86	87	93	89	91	92	88	90
26	91	88	90	89	87	88	94	90	92	93	89	91
27	91	88	90	89	88	89	94	89	91	93	89	91
28	91	87	89	90	88	89	93	89	91	93	90	91
29	---	---	---	90	88	89	92	88	90	93	89	91
30	---	---	---	90	88	89	92	87	90	93	89	91
31	---	---	---	91	88	89	---	---	---	93	89	91
MONTH	121	87	101	92	85	88	97	87	92	93	87	90

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	94	89	91	95	84	87	95	93	94	113	98	106
2	94	89	92	97	86	93	97	92	94	119	98	106
3	94	89	91	95	85	89	92	88	91	119	111	115
4	93	89	91	98	87	92	92	84	88	111	96	102
5	94	89	91	99	88	93	93	90	92	110	103	106
6	94	89	92	95	86	89	95	92	94	106	92	96
7	94	90	92	98	93	96	97	93	95	108	93	102
8	93	90	92	97	94	95	95	93	94	111	108	110
9	94	91	92	98	95	97	93	90	92	113	110	112
10	96	91	93	98	94	97	92	86	90	---	---	---
11	96	93	95	100	97	99	93	87	91	114	110	112
12	98	95	97	100	92	96	94	90	92	---	---	---
13	99	96	98	100	90	95	93	91	92	112	107	110
14	101	98	100	---	---	---	94	92	93	113	110	112
15	102	99	101	---	---	---	99	93	96	111	108	110
16	103	100	102	---	---	---	102	97	100	---	---	---
17	105	101	103	---	---	---	98	95	97	---	---	---
18	105	100	103	---	---	---	98	95	97	---	---	---
19	105	97	100	---	---	---	98	96	97	---	---	---
20	101	97	99	---	---	---	100	97	99	---	---	---
21	102	97	99	---	---	---	102	100	100	---	---	---
22	104	98	101	---	---	---	105	102	104	123	120	121
23	103	99	101	99	89	93	106	103	105	120	113	116
24	110	102	107	96	87	89	106	104	105	117	110	114
25	105	94	102	95	86	90	110	105	109	120	112	116
26	94	84	89	94	87	90	111	105	109	123	112	118
27	98	88	93	98	87	90	106	97	102	123	116	119
28	92	88	90	101	98	100	100	93	95	118	115	116
29	99	88	91	101	95	100	103	95	97	120	117	119
30	101	89	98	99	96	98	107	103	105	118	110	114
31	---	---	---	96	94	95	113	103	108	---	---	---
MONTH	110	84	96	---	---	---	113	84	97	---	---	---

## ROANOKE RIVER BASIN

0208102855 ROANOKE RIVER ABOVE SECONDARY ROAD 1100 NEAR GRABTOWN, NC--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	7.6	7.5	7.5
11	---	---	---	---	---	---	---	---	---	7.6	7.4	7.5
12	---	---	---	---	---	---	---	---	---	7.6	7.5	7.5
13	---	---	---	---	---	---	---	---	---	7.7	7.6	7.6
14	---	---	---	---	---	---	---	---	---	7.7	7.4	7.5
15	---	---	---	---	---	---	---	---	---	7.7	7.6	7.7
16	---	---	---	---	---	---	---	---	---	7.6	7.4	7.5
17	---	---	---	---	---	---	---	---	---	7.7	7.6	7.7
18	---	---	---	---	---	---	---	---	---	7.8	7.6	7.7
19	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6
20	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6
21	---	---	---	---	---	---	---	---	---	7.8	7.7	7.7
22	---	---	---	---	---	---	---	---	---	7.8	7.6	7.7
23	---	---	---	---	---	---	---	---	---	7.6	7.2	7.5
24	---	---	---	---	---	---	---	---	---	7.4	7.2	7.3
25	---	---	---	---	---	---	---	---	---	7.4	7.3	7.4
26	---	---	---	---	---	---	---	---	---	7.5	7.3	7.4
27	---	---	---	---	---	---	---	---	---	7.5	7.3	7.4
28	---	---	---	---	---	---	---	---	---	7.5	7.4	7.4
29	---	---	---	---	---	---	---	---	---	7.5	7.4	7.4
30	---	---	---	---	---	---	---	---	---	7.4	7.4	7.4
31	---	---	---	---	---	---	---	---	---	7.4	7.4	7.4
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.5	7.4	7.4	7.5	7.5	7.5	7.2	7.1	7.1	6.8	6.6	6.7
2	7.5	7.4	7.4	7.5	7.5	7.5	7.2	6.9	7.0	6.8	6.6	6.7
3	7.5	7.4	7.4	7.5	7.5	7.5	7.0	6.9	7.0	6.7	6.6	6.7
4	7.5	7.4	7.5	7.6	7.5	7.5	7.0	6.9	7.0	6.9	6.6	6.7
5	7.5	7.4	7.5	7.6	7.5	7.5	7.1	6.9	7.0	6.8	6.7	6.7
6	7.5	7.4	7.5	7.6	7.5	7.6	7.0	6.9	7.0	6.7	6.6	6.7
7	7.5	7.5	7.5	7.6	7.6	7.6	7.0	6.9	7.0	6.9	6.6	6.7
8	7.5	7.5	7.5	7.9	7.6	7.7	7.1	6.9	7.0	6.8	6.6	6.7
9	7.5	7.5	7.5	7.8	7.6	7.7	7.3	7.0	7.1	6.8	6.6	6.7
10	7.6	7.5	7.5	7.7	7.5	7.6	7.1	7.0	7.1	6.7	6.6	6.7
11	7.6	7.5	7.5	7.8	7.5	7.6	7.1	7.1	7.1	6.6	6.5	6.6
12	7.5	7.5	7.5	7.5	7.4	7.5	7.2	7.0	7.1	6.6	6.5	6.5
13	7.5	7.5	7.5	7.6	7.5	7.5	7.1	6.8	6.9	6.6	6.5	6.5
14	7.5	7.5	7.5	7.6	7.5	7.5	7.0	6.8	6.9	6.6	6.5	6.6
15	7.5	7.4	7.5	7.6	7.5	7.5	6.9	6.8	6.9	6.6	6.5	6.6
16	7.6	7.4	7.5	7.6	7.5	7.5	6.9	6.8	6.9	6.6	6.5	6.6
17	7.6	7.5	7.5	7.6	7.5	7.5	7.2	6.8	6.9	6.6	6.5	6.6
18	7.5	7.5	7.5	7.6	7.5	7.5	7.2	6.9	6.9	6.6	6.5	6.5
19	7.5	7.5	7.5	7.6	7.4	7.5	7.1	6.9	6.9	6.6	6.5	6.5
20	7.5	7.5	7.5	7.6	7.4	7.5	6.9	6.8	6.9	6.5	6.4	6.4
21	7.5	7.5	7.5	7.5	7.4	7.5	7.0	6.9	6.9	6.5	6.4	6.4
22	7.5	7.5	7.5	7.4	7.3	7.4	7.0	6.8	6.8	6.5	6.4	6.4
23	7.5	7.4	7.5	7.5	7.3	7.4	6.8	6.8	6.8	6.5	6.4	6.4
24	7.5	7.5	7.5	7.5	7.3	7.5	6.9	6.7	6.8	6.5	6.4	6.4
25	7.5	7.5	7.5	7.6	7.4	7.5	6.8	6.7	6.8	6.5	6.4	6.5
26	7.5	7.4	7.5	7.6	7.4	7.5	6.9	6.7	6.8	6.5	6.4	6.4
27	7.5	7.4	7.5	7.7	7.5	7.6	6.8	6.7	6.8	6.5	6.4	6.4
28	7.5	7.5	7.5	7.6	7.5	7.5	6.9	6.8	6.8	6.5	6.4	6.4
29	---	---	---	7.5	7.4	7.4	6.9	6.8	6.8	6.4	6.3	6.4
30	---	---	---	7.4	7.2	7.3	7.0	6.8	6.8	6.4	6.3	6.3
31	---	---	---	7.3	7.1	7.2	---	---	---	6.4	6.3	6.3
MONTH	7.6	7.4	7.5	7.9	7.1	7.5	7.3	6.7	6.9	6.9	6.3	6.5





## ROANOKE RIVER BASIN

0208102855 ROANOKE RIVER ABOVE SECONDARY ROAD 1100 NEAR GRABTOWN, NC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.3	7.0	7.1	11.1	10.3	10.7	17.1	16.6	16.8	16.6	16.0	16.3
2	7.3	6.6	7.0	11.3	10.8	11.1	17.2	16.4	16.8	17.0	16.5	16.8
3	7.4	7.0	7.2	11.2	10.3	10.7	17.0	16.3	16.7	17.4	16.7	17.1
4	8.2	7.4	7.9	10.4	9.6	9.9	16.5	15.1	15.8	17.7	17.2	17.4
5	8.3	8.0	8.2	9.8	9.1	9.5	15.1	14.1	14.6	18.0	17.4	17.7
6	8.1	7.5	7.8	9.7	9.3	9.5	14.3	13.7	14.0	18.2	17.6	17.9
7	7.6	7.1	7.3	9.7	9.4	9.5	14.6	13.8	14.2	18.4	17.9	18.1
8	7.1	6.8	7.0	10.4	9.7	10.0	15.5	14.3	14.9	18.5	18.1	18.3
9	7.0	6.6	6.8	11.7	10.3	11.1	16.2	15.4	15.8	18.4	18.2	18.3
10	7.2	6.6	7.0	11.9	11.4	11.7	16.0	15.3	15.8	18.3	18.1	18.2
11	7.9	7.2	7.4	11.4	10.0	10.6	15.3	14.8	15.0	18.1	17.6	17.9
12	8.6	7.8	8.2	10.0	9.1	9.5	14.9	14.3	14.6	17.6	17.1	17.4
13	8.9	8.4	8.5	9.1	8.6	8.8	14.9	14.2	14.5	17.1	16.5	16.8
14	8.5	8.0	8.3	9.0	8.3	8.7	14.6	14.3	14.4	16.7	16.1	16.4
15	8.1	7.5	7.8	9.6	8.9	9.2	15.1	14.3	14.7	17.1	16.2	16.7
16	7.6	7.3	7.4	9.4	8.9	9.3	15.9	14.9	15.4	17.9	16.9	17.3
17	8.7	7.5	8.1	8.9	8.4	8.7	16.6	15.6	16.1	18.4	17.8	18.1
18	9.5	8.6	9.1	9.2	8.4	8.7	16.5	16.2	16.4	19.0	18.3	18.7
19	10.1	9.2	9.6	10.0	9.2	9.6	16.5	16.0	16.2	19.6	18.8	19.2
20	10.3	9.7	9.9	10.7	10.0	10.3	16.6	16.1	16.4	19.8	19.5	19.6
21	10.3	9.9	10.0	10.9	10.5	10.7	16.5	16.0	16.2	20.4	19.7	20.0
22	10.3	9.6	9.9	10.7	10.3	10.5	16.0	15.3	15.6	20.4	19.9	20.1
23	10.1	9.5	9.7	10.7	10.1	10.4	15.3	15.0	15.1	20.3	20.1	20.2
24	9.5	9.1	9.3	10.6	10.2	10.4	15.4	14.8	15.1	20.1	19.8	19.9
25	9.5	8.9	9.2	10.8	9.9	10.3	15.7	15.0	15.3	20.4	19.7	20.0
26	9.7	9.2	9.5	11.5	10.3	10.9	16.5	15.6	16.0	20.9	20.2	20.5
27	9.9	9.3	9.6	12.8	11.3	12.0	16.5	16.2	16.4	21.4	20.8	21.1
28	10.4	9.7	10.1	14.0	12.6	13.3	16.3	15.8	16.0	21.5	21.1	21.3
29	---	---	---	15.1	13.9	14.5	16.2	15.4	15.8	21.6	21.0	21.3
30	---	---	---	16.1	15.0	15.6	16.1	15.6	15.9	21.9	21.4	21.6
31	---	---	---	16.8	16.0	16.4	---	---	---	22.2	21.6	21.9
MONTH	10.4	6.6	8.4	16.8	8.3	10.7	17.2	13.7	15.6	22.2	16.0	18.8

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	22.6	22.1	22.3	28.5	27.8	28.2	29.0	28.5	28.7	29.4	29.0	29.2
2	22.9	22.4	22.6	28.6	27.7	28.3	28.5	27.3	27.8	29.3	28.6	29.0
3	23.2	22.6	22.9	28.9	28.4	28.6	27.3	26.5	27.0	29.3	27.8	28.5
4	23.1	22.8	22.9	28.7	28.2	28.4	27.5	26.9	27.2	27.8	26.9	27.2
5	23.0	22.5	22.8	28.7	27.8	28.3	27.5	26.7	27.1	27.0	26.6	26.8
6	22.6	22.0	22.2	28.0	27.5	27.8	27.5	26.7	27.1	27.3	26.6	27.0
7	22.0	21.3	21.7	28.1	27.9	28.1	27.6	27.0	27.3	27.5	26.8	27.2
8	21.3	20.7	21.0	28.3	27.7	28.0	28.0	27.1	27.6	27.5	26.8	27.2
9	21.0	20.7	20.8	28.4	28.0	28.1	28.7	27.5	28.1	26.8	26.2	26.6
10	21.1	20.5	20.8	28.6	28.0	28.2	28.9	28.1	28.5	---	---	---
11	21.5	20.8	21.1	28.7	27.9	28.3	29.1	28.2	28.7	25.7	25.1	25.4
12	22.2	21.3	21.7	28.5	27.4	28.0	29.0	28.3	28.7	---	---	---
13	23.1	22.2	22.6	27.9	27.2	27.5	29.0	28.1	28.6	25.5	24.8	25.2
14	23.3	22.5	22.9	27.9	27.0	27.5	29.1	28.4	28.8	26.5	25.4	25.8
15	23.9	23.0	23.4	28.0	27.4	27.7	29.4	28.4	28.9	27.0	26.1	26.5
16	24.7	23.4	24.0	28.2	27.4	27.8	29.3	28.5	28.9	---	---	---
17	26.0	24.3	25.0	28.1	27.4	27.7	28.7	28.0	28.4	---	---	---
18	26.0	25.1	25.6	28.3	27.2	27.7	28.9	28.1	28.5	---	---	---
19	26.0	25.1	25.6	28.3	27.5	27.9	28.8	28.3	28.5	---	---	---
20	26.3	25.2	25.6	28.9	27.7	28.2	28.4	27.7	28.1	---	---	---
21	26.5	25.7	26.1	29.3	28.4	28.8	28.3	27.4	27.9	---	---	---
22	27.3	26.5	26.9	29.6	28.5	29.0	28.1	27.2	27.7	27.4	26.6	27.1
23	28.2	27.1	27.5	30.2	29.1	29.8	28.1	27.3	27.8	27.1	26.4	26.7
24	28.7	27.7	28.1	30.2	29.5	29.9	28.7	27.4	28.1	26.5	25.6	26.1
25	28.0	26.8	27.4	30.5	29.8	30.0	29.2	28.1	28.7	25.9	25.0	25.4
26	28.0	26.6	27.1	29.8	29.5	29.7	29.2	28.2	28.6	25.1	24.4	24.8
27	28.0	27.1	27.4	29.5	29.0	29.2	28.3	26.7	27.5	25.3	24.7	25.0
28	28.2	27.5	27.9	29.3	28.8	29.1	27.5	26.6	27.0	26.1	25.2	25.7
29	28.7	27.6	28.0	29.4	28.5	28.9	28.0	27.1	27.5	26.5	25.9	26.2
30	28.8	27.5	28.2	29.5	28.9	29.2	28.5	27.7	28.1	26.5	26.0	26.2
31	---	---	---	29.3	29.0	29.1	29.2	28.4	28.8	---	---	---
MONTH	28.8	20.5	24.4	30.5	27.0	28.5	29.4	26.5	28.1	---	---	---

## ROANOKE RIVER BASIN

0208102855 ROANOKE RIVER ABOVE SECONDARY ROAD 1100 NEAR GRABTOWN, NC--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	11.1	9.4	10.4
11	---	---	---	---	---	---	---	---	---	9.7	7.9	8.6
12	---	---	---	---	---	---	---	---	---	8.3	5.9	7.0
13	---	---	---	---	---	---	---	---	---	8.9	7.2	8.3
14	---	---	---	---	---	---	---	---	---	8.6	6.9	7.7
15	---	---	---	---	---	---	---	---	---	7.9	7.2	7.6
16	---	---	---	---	---	---	---	---	---	7.7	7.0	7.2
17	---	---	---	---	---	---	---	---	---	9.3	7.7	8.7
18	---	---	---	---	---	---	---	---	---	9.1	8.2	8.7
19	---	---	---	---	---	---	---	---	---	8.7	8.2	8.4
20	---	---	---	---	---	---	---	---	---	9.1	8.3	8.6
21	---	---	---	---	---	---	---	---	---	9.5	8.8	9.1
22	---	---	---	---	---	---	---	---	---	9.2	8.1	8.6
23	---	---	---	---	---	---	---	---	---	8.8	7.2	8.0
24	---	---	---	---	---	---	---	---	---	7.6	6.4	7.3
25	---	---	---	---	---	---	---	---	---	6.5	5.7	6.1
26	---	---	---	---	---	---	---	---	---	6.4	5.3	5.9
27	---	---	---	---	---	---	---	---	---	7.0	5.7	6.4
28	---	---	---	---	---	---	---	---	---	6.9	6.1	6.5
29	---	---	---	---	---	---	---	---	---	6.9	6.2	6.6
30	---	---	---	---	---	---	---	---	---	7.0	5.9	6.4
31	---	---	---	---	---	---	---	---	---	6.7	6.1	6.3
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.0	6.0	6.3	---	---	---	7.3	6.2	6.7	7.0	6.6	6.8
2	6.7	6.0	6.3	---	---	---	6.8	6.1	6.4	6.8	6.2	6.5
3	6.4	5.8	6.0	---	---	---	6.9	6.2	6.5	6.7	6.1	6.4
4	6.2	5.6	5.9	---	---	---	7.0	6.4	6.7	6.8	5.9	6.5
5	5.8	4.9	5.4	8.0	7.4	7.8	7.6	6.6	7.2	6.8	6.0	6.4
6	5.3	4.9	5.0	8.1	7.6	7.9	8.2	7.1	7.7	6.7	6.3	6.5
7	5.3	4.9	5.1	8.3	7.8	8.0	8.4	7.7	8.1	6.8	6.1	6.4
8	5.3	4.9	5.1	8.3	6.8	7.8	8.6	7.5	8.1	6.7	6.0	6.3
9	5.2	4.9	5.1	8.1	6.7	7.4	8.1	6.0	7.3	6.5	6.0	6.3
10	5.2	4.9	5.0	7.8	6.9	7.4	7.4	6.5	6.9	6.6	6.0	6.2
11	---	---	---	8.0	7.1	7.6	7.5	6.4	6.9	6.5	6.1	6.3
12	---	---	---	8.5	7.5	8.1	7.9	6.7	7.2	6.5	6.1	6.3
13	---	---	---	8.8	7.8	8.5	7.8	6.5	7.3	6.8	6.1	6.5
14	---	---	---	9.3	8.4	8.9	7.8	6.3	7.3	7.1	6.4	6.8
15	---	---	---	9.4	8.9	9.2	7.6	6.8	7.3	7.2	6.6	6.9
16	---	---	---	9.4	8.9	9.3	7.4	6.7	7.1	7.4	6.7	7.0
17	---	---	---	9.4	9.0	9.2	7.3	5.5	6.8	7.1	6.6	6.9
18	---	---	---	9.4	8.6	9.1	6.8	6.1	6.5	6.9	6.3	6.7
19	---	---	---	9.4	8.8	9.1	7.0	5.6	6.3	6.8	6.4	6.6
20	---	---	---	9.1	8.0	8.7	6.8	6.3	6.6	6.9	6.3	6.6
21	---	---	---	8.6	8.1	8.4	6.9	6.2	6.5	6.9	6.1	6.6
22	---	---	---	8.6	8.0	8.3	7.0	6.4	6.7	6.7	6.2	6.5
23	---	---	---	8.9	8.0	8.5	7.0	6.4	6.7	6.8	6.2	6.5
24	---	---	---	8.9	8.0	8.5	7.2	6.4	6.9	6.9	6.2	6.6
25	---	---	---	9.1	8.4	8.8	7.2	6.6	6.9	6.9	6.2	6.6
26	---	---	---	9.3	8.8	9.0	7.3	6.5	6.8	6.9	6.2	6.6
27	---	---	---	9.4	8.7	9.0	6.9	6.4	6.7	6.7	6.1	6.4
28	---	---	---	9.3	8.3	8.7	6.9	6.3	6.6	6.7	6.1	6.4
29	---	---	---	8.8	7.7	8.2	7.2	6.5	6.8	6.6	6.1	6.3
30	---	---	---	8.3	7.3	7.7	7.1	6.4	6.9	6.6	6.1	6.4
31	---	---	---	7.8	6.8	7.2	---	---	---	6.7	6.0	6.3
MONTH	---	---	---	---	---	---	8.6	5.5	6.9	7.4	5.9	6.5

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		
OCTOBER					NOVEMBER					DECEMBER					JANUARY		
1	---	---	---		---	---	---		---	---	---		---	---	---		
2	---	---	---		---	---	---		---	---	---		---	---	---		
3	---	---	---		---	---	---		---	---	---		---	---	---		
4	---	---	---		---	---	---		---	---	---		---	---	---		
5	---	---	---		---	---	---		---	---	---		---	---	---		
6	---	---	---		---	---	---		---	---	---		---	---	---		
7	---	---	---		---	---	---		---	---	---		---	---	---		
8	---	---	---		---	---	---		---	---	---		---	---	---		
9	---	---	---		---	---	---		---	---	---		---	---	---		
10	---	---	---		---	---	---		---	---	---		98	84	92		
11	---	---	---		---	---	---		---	---	---		86	70	76		
12	---	---	---		---	---	---		---	---	---		74	52	62		
13	---	---	---		---	---	---		---	---	---		78	63	73		
14	---	---	---		---	---	---		---	---	---		75	59	67		
15	---	---	---		---	---	---		---	---	---		67	62	65		
16	---	---	---		---	---	---		---	---	---		66	59	61		
17	---	---	---		---	---	---		---	---	---		78	66	74		
18	---	---	---		---	---	---		---	---	---		76	69	73		
19	---	---	---		---	---	---		---	---	---		73	68	70		
20	---	---	---		---	---	---		---	---	---		76	69	72		
21	---	---	---		---	---	---		---	---	---		79	73	76		
22	---	---	---		---	---	---		---	---	---		77	67	72		
23	---	---	---		---	---	---		---	---	---		74	60	67		
24	---	---	---		---	---	---		---	---	---		64	54	61		
25	---	---	---		---	---	---		---	---	---		55	48	51		
26	---	---	---		---	---	---		---	---	---		53	44	49		
27	---	---	---		---	---	---		---	---	---		58	47	53		
28	---	---	---		---	---	---		---	---	---		58	51	55		
29	---	---	---		---	---	---		---	---	---		58	52	55		
30	---	---	---		---	---	---		---	---	---		59	50	54		
31	---	---	---		---	---	---		---	---	---		56	50	53		
MONTH	---	---	---		---	---	---		---	---	---		---	---	---		



## ROANOKE RIVER BASIN

02081054 ROANOKE RIVER AT WILLIAMSTON, NC

LOCATION.--Lat 35°51'40", long 77°02'20", Martin County, Hydrologic Unit 03010107, on right bank 175 ft upstream of U.S. Highway 17 bridge, .75 mi above Sweetwater Creek, and 1 mi northeast of Williamston.

DRAINAGE AREA.--9,070 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1985 to current year.

GAGE.--Water stage recorder. Gage is set to sea level. Satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 9.00 ft, Mar. 8, 1998; minimum, -0.35 ft, Jan. 4, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum, 9.00 ft, Mar. 8; minimum, 0.99 ft, Oct. 20.

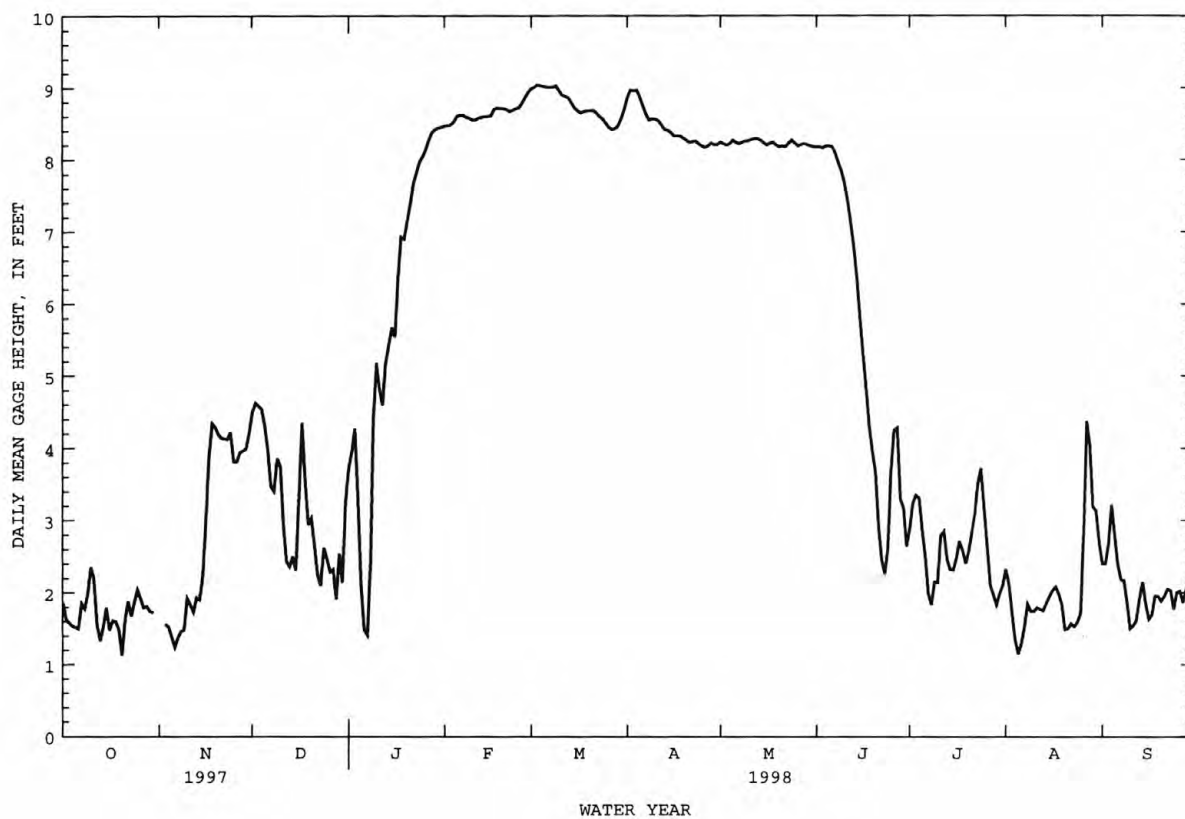
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.86	---	4.49	3.72	8.47	8.99	8.86	8.24	8.18	2.88	2.32	2.40
2	1.63	---	4.62	3.95	8.47	9.01	8.97	8.22	8.18	3.23	2.12	2.40
3	1.58	1.56	4.58	4.27	8.48	9.04	8.96	8.20	8.16	3.35	1.71	2.67
4	1.54	1.52	4.54	3.30	8.52	9.03	8.97	8.22	8.19	3.31	1.34	3.22
5	1.52	1.38	4.31	2.11	8.60	9.02	8.87	8.27	8.19	2.87	1.15	2.80
6	1.50	1.24	3.97	1.49	8.62	9.01	8.75	8.24	8.18	2.50	1.29	2.39
7	1.85	1.37	3.47	1.41	8.62	9.01	8.63	8.22	8.10	1.98	1.52	2.18
8	1.78	1.46	3.40	2.40	8.59	9.01	8.55	8.24	7.96	1.83	1.84	2.17
9	1.98	1.48	3.86	4.44	8.58	9.03	8.57	8.26	7.85	2.15	1.74	1.87
10	2.35	1.92	3.75	5.18	8.55	8.96	8.56	8.26	7.69	2.14	1.74	1.50
11	2.21	1.83	2.93	4.82	8.55	8.90	8.54	8.28	7.45	2.79	1.79	1.54
12	1.55	1.73	2.43	4.59	8.58	8.88	8.48	8.29	7.15	2.85	1.77	1.61
13	1.33	1.93	2.36	5.16	8.59	8.86	8.42	8.29	6.79	2.46	1.75	1.91
14	1.54	1.90	2.50	5.43	8.60	8.79	8.41	8.27	6.37	2.32	1.85	2.15
15	1.79	2.23	2.31	5.67	8.60	8.72	8.38	8.23	5.81	2.31	1.94	1.84
16	1.48	2.95	3.28	5.54	8.61	8.68	8.33	8.20	5.30	2.47	2.03	1.63
17	1.61	3.86	4.35	6.34	8.70	8.65	8.33	8.23	4.83	2.71	2.08	1.69
18	1.60	4.34	3.54	6.93	8.72	8.67	8.33	8.24	4.31	2.59	1.98	1.95
19	1.49	4.29	2.94	6.90	8.71	8.68	8.30	8.20	3.97	2.40	1.83	1.95
20	1.13	4.19	3.03	7.14	8.71	8.68	8.27	8.18	3.66	2.58	1.49	1.88
21	1.64	4.14	2.66	7.39	8.70	8.69	8.24	8.19	2.90	2.83	1.50	1.95
22	1.88	4.13	2.25	7.67	8.67	8.65	8.25	8.18	2.45	3.10	1.57	2.05
23	1.67	4.12	2.10	7.82	8.69	8.60	8.26	8.23	2.26	3.51	1.53	2.03
24	1.86	4.22	2.62	7.97	8.71	8.57	8.22	8.27	2.62	3.72	1.59	1.77
25	2.04	3.81	2.47	8.04	8.72	8.51	8.19	8.23	3.67	3.19	1.71	2.00
26	1.91	3.81	2.29	8.14	8.79	8.45	8.17	8.19	4.25	2.63	2.83	2.02
27	1.79	3.94	2.32	8.27	8.87	8.42	8.19	8.21	4.28	2.10	4.37	1.86
28	1.81	3.96	1.91	8.38	8.94	8.43	8.23	8.22	3.29	1.97	4.05	2.05
29	1.74	3.99	2.54	8.42	---	8.47	8.21	8.21	3.18	1.83	3.19	2.17
30	1.72	4.20	2.14	8.44	---	8.57	8.21	8.19	2.64	1.98	3.14	1.90
31	---	---	3.27	8.45	---	8.70	---	8.18	---	2.10	2.69	---
MEAN	---	---	3.14	5.80	8.64	8.76	8.45	8.23	5.60	2.60	2.05	2.05
MAX	---	---	4.62	8.45	8.94	9.04	8.97	8.29	8.19	3.72	4.37	3.22
MIN	---	---	1.91	1.41	8.47	8.42	8.17	8.18	2.26	1.83	1.15	1.50



## ROANOKE RIVER BASIN

02081054 ROANOKE RIVER AT WILLIANSTON, NC--Continued



## ROANOKE RIVER BASIN

0208108600 CONINE CREEK AT US HIGHWAY 17 NR WILLAMSTON, NC

LOCATION.--Lat 35°53'25", long 77°01'10", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, on bridge at U.S. Highway 17 and 3 mi northwest of Williamston.

DRAINAGE AREA.--8,940 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 10.69 ft, Sept. 21, 1996; minimum, 1.30 ft, Oct. 20, 1997.

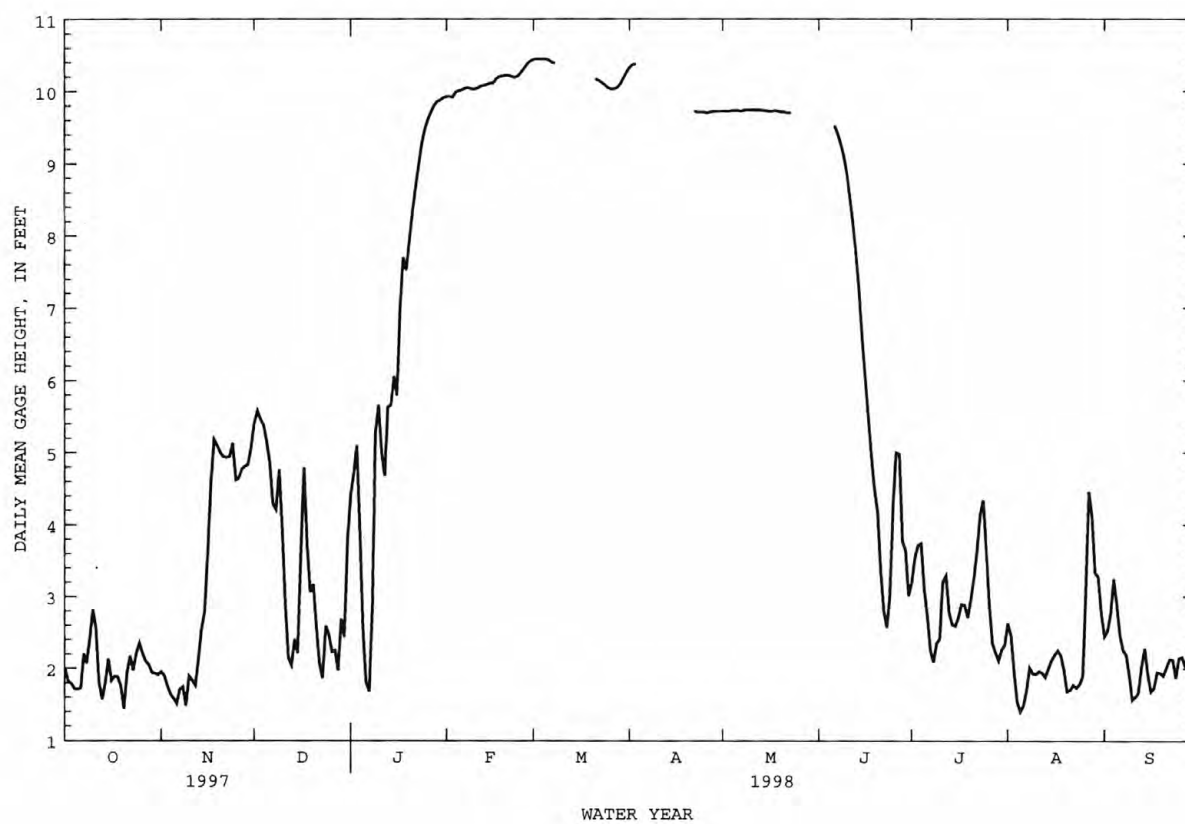
EXTREMES FOR CURRENT YEAR.--Maximum, 10.60 ft, Mar. 2; minimum, 1.30 ft, Oct. 20.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.99	1.95	5.40	4.40	9.93	10.44	10.33	9.72	---	3.19	2.63	2.45
2	1.82	1.90	5.58	4.71	9.93	10.45	10.37	9.72	---	3.53	2.45	2.52
3	1.79	1.76	5.46	5.10	9.92	10.45	10.38	9.72	---	3.71	1.94	2.76
4	1.72	1.64	5.38	3.91	9.99	10.45	---	9.73	---	3.74	1.53	3.25
5	1.71	1.58	5.15	2.54	10.01	10.45	---	9.73	---	3.10	1.40	2.89
6	1.73	1.51	4.86	1.80	10.02	10.43	---	9.73	9.52	2.74	1.48	2.47
7	2.20	1.71	4.29	1.68	10.04	10.40	---	9.72	9.42	2.25	1.69	2.25
8	2.07	1.74	4.21	2.90	10.05	10.39	---	9.74	9.28	2.09	2.01	2.19
9	2.40	1.48	4.76	5.28	10.03	---	---	9.74	9.11	2.35	1.93	1.90
10	2.82	1.89	3.92	5.66	10.03	---	---	9.74	8.88	2.41	1.92	1.56
11	2.56	1.83	2.88	4.99	10.04	---	---	9.74	8.56	3.20	1.96	1.60
12	1.81	1.76	2.14	4.68	10.07	---	---	9.74	8.21	3.29	1.94	1.66
13	1.57	2.13	2.04	5.63	10.08	---	---	9.74	7.75	2.78	1.88	2.02
14	1.80	2.55	2.40	5.66	10.09	---	---	9.73	7.26	2.61	2.00	2.28
15	2.13	2.79	2.21	6.06	10.11	---	---	9.73	6.61	2.59	2.11	1.92
16	1.83	3.61	3.59	5.79	10.11	---	---	9.72	6.06	2.71	2.19	1.68
17	1.89	4.56	4.79	6.97	10.17	---	---	9.72	5.52	2.89	2.25	1.73
18	1.88	5.18	3.72	7.70	10.20	---	---	9.73	4.98	2.88	2.18	1.95
19	1.76	5.10	3.06	7.52	10.21	---	---	9.72	4.51	2.71	1.98	1.94
20	1.44	5.00	3.17	7.92	10.22	---	---	9.71	4.18	2.96	1.68	1.90
21	1.94	4.94	2.58	8.34	10.22	10.17	---	9.71	3.36	3.26	1.70	2.02
22	2.17	4.93	2.07	8.67	10.20	10.15	9.72	9.70	2.81	3.65	1.77	2.13
23	1.97	4.94	1.86	8.98	10.19	10.12	9.71	9.70	2.57	4.14	1.73	2.12
24	2.21	5.13	2.59	9.27	10.21	10.09	9.71	---	3.02	4.34	1.78	1.87
25	2.35	4.62	2.47	9.47	10.26	10.05	9.71	---	4.25	3.64	1.89	2.14
26	2.21	4.65	2.23	9.61	10.32	10.03	9.70	---	5.00	2.88	3.05	2.16
27	2.10	4.77	2.25	9.71	10.38	10.03	9.71	---	4.98	2.35	4.46	2.03
28	2.05	4.81	1.97	9.81	10.42	10.05	9.72	---	3.77	2.22	4.12	2.25
29	1.94	4.83	2.69	9.86	---	10.10	9.72	---	3.65	2.11	3.33	2.31
30	1.93	5.07	2.44	9.88	---	10.18	9.72	---	3.01	2.26	3.28	1.94
31	1.91	---	3.80	9.91	---	10.26	---	---	---	2.33	2.76	---
MEAN	1.99	3.35	3.42	6.59	10.12	---	---	---	---	2.93	2.23	2.13
MAX	2.82	5.18	5.58	9.91	10.42	---	---	---	---	4.34	4.46	3.25
MIN	1.44	1.48	1.86	1.68	9.92	---	---	---	---	2.09	1.40	1.56

## ROANOKE RIVER BASIN

0208108600 CONINE CREEK AT US HIGHWAY 17 NR WILLAMSTON, NC--Continued



## ROANOKE RIVER BASIN

355326076565301 DEVILS GUT TRANSECT (SITE #1)

LOCATION.--Lat 35°53'27", long 76°56'52", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, approximately 7 mi south of Windsor and 8.1 mi north-northwest of Jamesville.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 6.20 ft, Sept. 22, 23, 1996; minimum, -0.79 ft, Oct. 16-20, 1997.

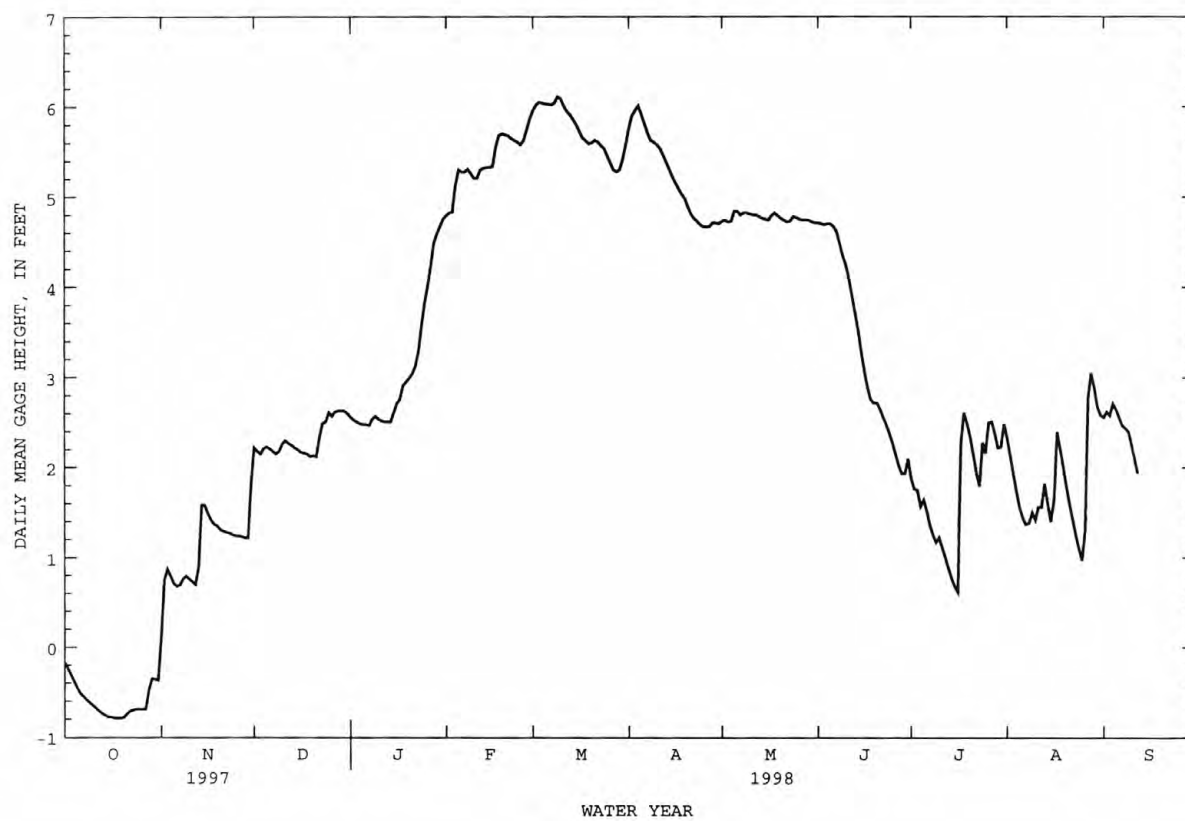
EXTREMES FOR CURRENT YEAR.--Maximum, 6.20 ft, Sept. 22, 23; minimum, 2.39 ft, Sept 3, 4.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-.18	.12	2.22	2.56	4.79	5.96	5.76	4.73	4.71	1.88	2.33	2.56
2	-.25	.75	2.18	2.53	4.82	6.02	5.90	4.74	4.70	1.76	2.12	2.62
3	-.32	.87	2.15	2.51	4.83	6.05	5.96	4.72	4.69	1.75	1.92	2.58
4	-.39	.79	2.21	2.49	5.12	6.04	6.01	4.73	4.70	1.57	1.72	2.71
5	-.46	.71	2.23	2.48	5.30	6.03	5.92	4.84	4.70	1.64	1.55	2.65
6	-.52	.68	2.21	2.48	5.28	6.03	5.81	4.84	4.67	1.52	1.44	2.56
7	-.55	.69	2.18	2.47	5.28	6.02	5.71	4.80	4.61	1.36	1.37	2.47
8	-.59	.76	2.15	2.54	5.31	6.04	5.63	4.82	4.48	1.25	1.38	2.44
9	-.62	.79	2.18	2.57	5.26	6.11	5.61	4.82	4.35	1.17	1.50	2.40
10	-.65	.76	2.26	2.54	5.21	6.09	5.58	4.81	4.25	1.22	1.42	2.25
11	-.68	.73	2.30	2.52	5.21	6.01	5.54	4.80	4.10	1.11	1.56	2.10
12	-.71	.70	2.27	2.51	5.30	5.95	5.47	4.80	3.91	1.00	1.56	1.94
13	-.74	.89	2.25	2.51	5.32	5.91	5.39	4.78	3.71	.88	1.82	---
14	-.76	1.58	2.22	2.51	5.33	5.86	5.31	4.76	3.52	.77	1.60	---
15	-.78	1.58	2.20	2.61	5.33	5.80	5.23	4.75	3.28	.68	1.40	---
16	-.78	1.49	2.17	2.71	5.34	5.73	5.16	4.74	3.07	.62	1.64	---
17	-.79	1.42	2.16	2.76	5.55	5.66	5.09	4.79	2.89	2.25	2.40	---
18	-.79	1.37	2.15	2.91	5.68	5.63	5.03	4.82	2.76	2.61	2.21	---
19	-.79	1.35	2.12	2.95	5.70	5.59	4.98	4.79	2.72	2.49	2.01	---
20	-.78	1.31	2.13	2.99	5.69	5.60	4.89	4.76	2.72	2.34	1.79	---
21	-.74	1.29	2.12	3.04	5.68	5.63	4.81	4.74	2.65	2.15	1.60	---
22	-.71	1.28	2.33	3.12	5.65	5.61	4.76	4.72	2.56	1.94	1.43	---
23	-.70	1.27	2.49	3.28	5.63	5.57	4.73	4.73	2.48	1.79	1.25	---
24	-.69	1.25	2.51	3.56	5.61	5.54	4.69	4.78	2.38	2.28	1.10	---
25	-.69	1.24	2.61	3.82	5.58	5.46	4.67	4.77	2.28	2.16	.97	---
26	-.69	1.24	2.57	4.00	5.63	5.38	4.67	4.75	2.15	2.50	1.30	---
27	-.69	1.23	2.62	4.22	5.75	5.30	4.67	4.74	2.02	2.51	2.77	---
28	-.47	1.22	2.63	4.49	5.87	5.28	4.71	4.74	1.93	2.38	3.05	---
29	-.35	1.22	2.63	4.59	---	5.30	4.71	4.74	1.93	2.22	2.89	.57
30	-.36	1.82	2.63	4.67	---	5.42	4.70	4.72	2.10	2.23	2.68	.53
31	-.37	---	2.60	4.75	---	5.58	---	4.71	---	2.49	2.58	---
MEAN	-.60	1.08	2.31	3.09	5.39	5.75	5.24	4.77	3.37	1.76	1.82	---
MAX	-.18	1.82	2.63	4.75	5.87	6.11	6.01	4.84	4.71	2.61	3.05	---
MIN	-.79	.12	2.12	2.47	4.79	5.28	4.67	4.71	1.93	.62	.97	---

## ROANOKE RIVER BASIN

355326076565301 DEVILS GUT TRANSECT (SITE #1)--Continued



## ROANOKE RIVER BASIN

355024076562301 DEVILS GUT TRANSECT (SITE #2)

LOCATION.--Lat 35°50'25", long 76°56'18", North American Datum 1983, Martin County, Hydrologic Unit 03010107, on Devils Gut approximately 3.15 mi upstream of confluence with Roanoke River and 3.1 mi north west of Jamesville.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 5.87 ft, Sept. 22, 23, 1996; minimum, 0.43 ft, Sept. 9, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum, 5.75 ft, Apr. 4; minimum, 0.54 ft, Oct. 15.

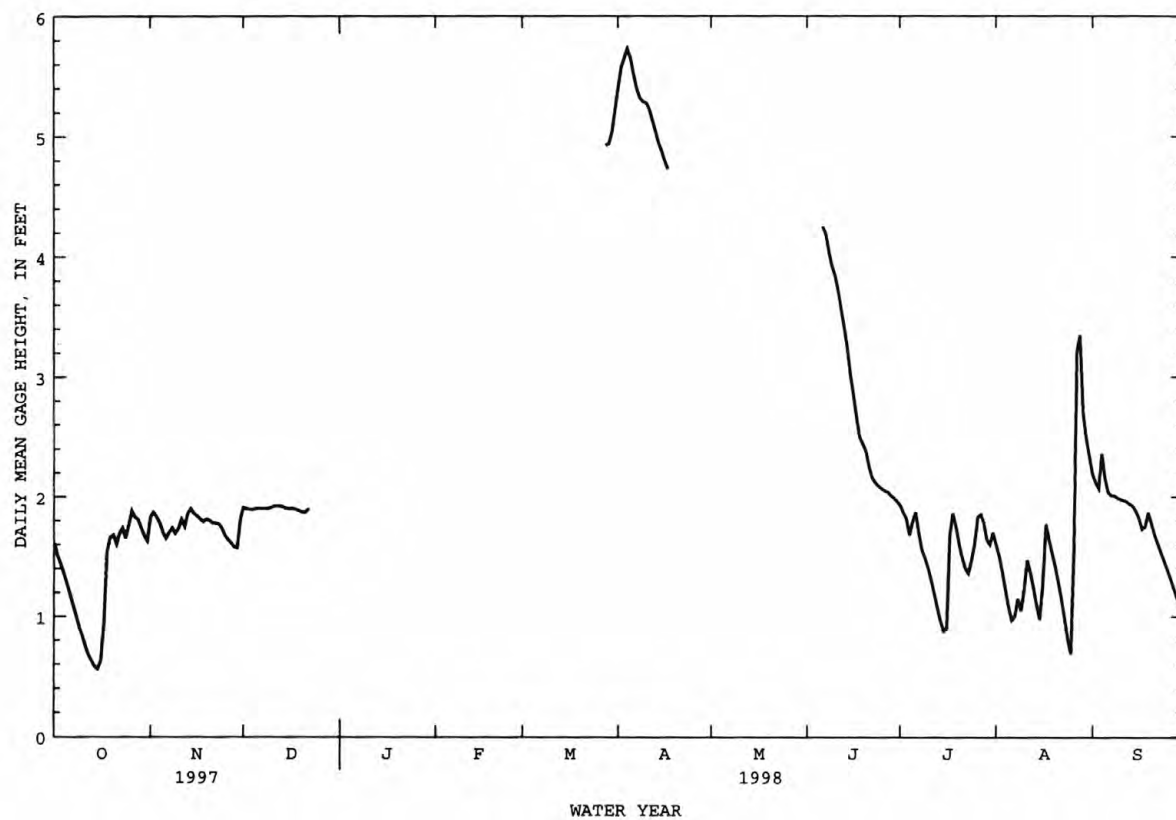
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.61	1.83	1.91	---	---	---	5.40	---	---	1.93	1.60	2.19
2	1.51	1.87	1.90	---	---	---	5.58	---	---	1.87	1.50	2.12
3	1.44	1.83	1.89	---	---	---	5.66	---	---	1.82	1.37	2.07
4	1.36	1.78	1.89	---	---	---	5.73	---	---	1.68	1.22	2.36
5	1.28	1.70	1.90	---	---	---	5.65	---	---	1.79	1.08	2.16
6	1.19	1.65	1.90	---	---	---	5.51	---	4.25	1.87	.97	2.04
7	1.09	1.70	1.90	---	---	---	5.40	---	4.19	1.70	1.00	2.01
8	1.00	1.74	1.90	---	---	---	5.32	---	4.04	1.56	1.15	2.01
9	.91	1.69	1.90	---	---	---	5.29	---	3.92	1.49	1.05	1.99
10	.84	1.73	1.91	---	---	---	5.28	---	3.84	1.41	1.23	1.98
11	.76	1.81	1.92	---	---	---	5.23	---	3.72	1.31	1.47	1.97
12	.68	1.75	1.92	---	---	---	5.14	---	3.57	1.19	1.37	1.96
13	.63	1.86	1.92	---	---	---	5.05	---	3.41	1.07	1.24	1.94
14	.58	1.90	1.91	---	---	---	4.95	---	3.24	.96	1.10	1.92
15	.56	1.86	1.90	---	---	---	4.88	---	3.02	.88	.98	1.88
16	.63	1.84	1.90	---	---	---	4.80	---	2.85	.90	1.28	1.82
17	.96	1.81	1.90	---	---	---	4.73	---	2.66	1.67	1.77	1.73
18	1.54	1.79	1.89	---	---	---	---	---	2.50	1.86	1.64	1.75
19	1.66	1.81	1.88	---	---	---	---	---	2.44	1.75	1.53	1.87
20	1.68	1.80	1.87	---	---	---	---	---	2.38	1.60	1.42	1.78
21	1.60	1.78	1.87	---	---	---	---	---	2.25	1.49	1.29	1.68
22	1.69	1.78	1.90	---	---	---	---	---	2.16	1.40	1.15	1.61
23	1.74	1.77	---	---	---	---	---	---	2.12	1.36	.98	1.54
24	1.65	1.74	---	---	---	---	---	---	2.09	1.47	.81	1.47
25	1.76	1.67	---	---	---	---	---	---	2.07	1.60	.69	1.40
26	1.88	1.64	---	---	---	---	---	---	2.05	1.83	1.56	1.33
27	1.83	1.61	---	---	---	---	---	---	2.04	1.85	3.21	1.25
28	1.81	1.58	---	---	---	4.93	---	---	2.01	1.78	3.35	1.17
29	1.74	1.57	---	---	---	4.94	---	---	1.99	1.64	2.70	1.10
30	1.67	1.81	---	---	---	5.04	---	---	1.96	1.60	2.49	1.17
31	1.63	---	---	---	---	5.21	---	---	---	1.70	2.33	---
MEAN	1.32	1.76	---	---	---	---	---	---	---	1.55	1.50	1.78
MAX	1.88	1.90	---	---	---	---	---	---	---	1.93	3.35	2.36
MIN	.56	1.57	---	---	---	---	---	---	---	.88	.69	1.10



## ROANOKE RIVER BASIN

355024076562301 DEVILS GUT TRANSECT (SITE #2)--Continued



## ROANOKE RIVER BASIN

354900076554101 DEVILS GUT TRANSECT (SITE #3)

LOCATION.--Lat 35°49'03", long 76°55'28", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, approximately 1.85 mi west-northwest of Jamesville on US Hwy 64 and 0.3 mi north of US Hwy 64 on private dirt road.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

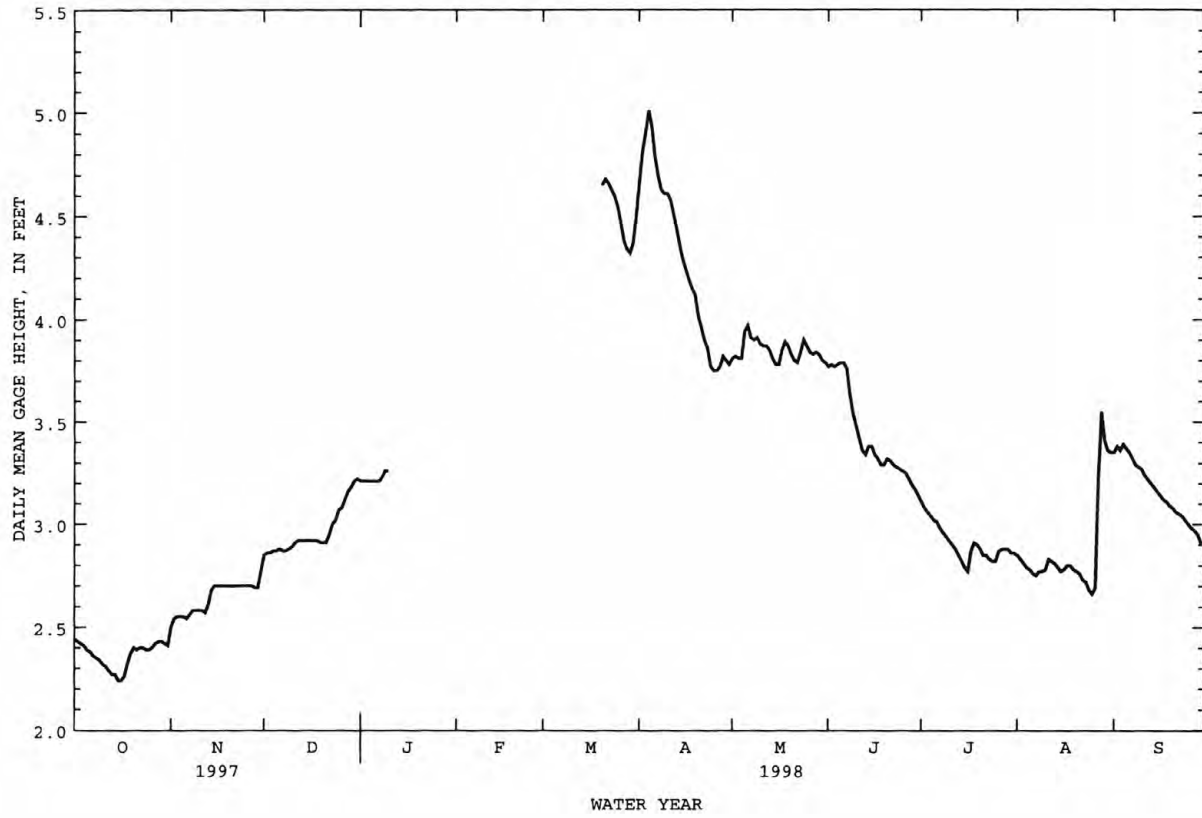
EXTREMES FOR PERIOD OF RECORD.--Maximum, 5.28 ft, Sept. 22, 1996; minimum, 2.22 ft, Oct. 15, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum, 5.02 ft, Apr. 4; minimum, 2.22 ft, Oct. 15.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.44	2.50	2.85	3.21	---	---	4.66	3.81	3.77	3.11	2.85	3.35
2	2.43	2.54	2.86	3.21	---	---	4.81	3.82	3.78	3.08	2.83	3.38
3	2.42	2.55	2.86	3.21	---	---	4.91	3.81	3.77	3.06	2.81	3.36
4	2.41	2.55	2.87	3.21	---	---	5.01	3.81	3.78	3.04	2.79	3.39
5	2.39	2.55	2.87	3.21	---	---	4.93	3.94	3.79	3.02	2.78	3.37
6	2.38	2.54	2.88	3.21	---	---	4.79	3.97	3.79	3.01	2.76	3.35
7	2.36	2.56	2.87	3.21	---	---	4.70	3.91	3.76	2.98	2.75	3.32
8	2.35	2.58	2.87	3.23	---	---	4.63	3.90	3.63	2.96	2.77	3.29
9	2.34	2.58	2.88	3.26	---	---	4.61	3.91	3.54	2.94	2.77	3.28
10	2.32	2.58	2.89	3.26	---	---	4.61	3.88	3.48	2.92	2.78	3.27
11	2.31	2.58	2.91	---	---	---	4.58	3.87	3.42	2.90	2.83	3.24
12	2.29	2.57	2.92	---	---	---	4.51	3.87	3.36	2.88	2.82	3.22
13	2.27	2.61	2.92	---	---	---	4.44	3.85	3.34	2.85	2.81	3.20
14	2.27	2.68	2.92	---	---	---	4.36	3.81	3.38	2.82	2.79	3.18
15	2.24	2.70	2.92	---	---	---	4.29	3.78	3.38	2.79	2.77	3.16
16	2.24	2.70	2.92	---	---	---	4.24	3.78	3.34	2.77	2.78	3.14
17	2.26	2.70	2.92	---	---	---	4.19	3.85	3.32	2.87	2.80	3.12
18	2.32	2.70	2.92	---	---	---	4.15	3.89	3.29	2.91	2.80	3.11
19	2.37	2.70	2.91	---	---	---	4.12	3.87	3.29	2.90	2.78	3.09
20	2.40	2.70	2.91	---	---	4.65	4.02	3.83	3.32	2.88	2.77	3.08
21	2.39	2.70	2.91	---	---	4.68	3.96	3.80	3.31	2.85	2.76	3.06
22	2.40	2.70	2.95	---	---	4.66	3.90	3.79	3.29	2.85	2.73	3.05
23	2.40	2.70	3.00	---	---	4.63	3.86	3.84	3.28	2.83	2.72	3.04
24	2.39	2.70	3.02	---	---	4.60	3.77	3.90	3.27	2.82	2.68	3.02
25	2.39	2.70	3.07	---	---	4.55	3.75	3.87	3.26	2.82	2.66	3.00
26	2.40	2.70	3.08	---	---	4.47	3.75	3.84	3.25	2.87	2.69	2.98
27	2.42	2.70	3.12	---	---	4.38	3.77	3.83	3.22	2.88	3.23	2.97
28	2.43	2.69	3.16	---	---	4.34	3.82	3.84	3.19	2.88	3.55	2.95
29	2.43	2.69	3.18	---	---	4.32	3.80	3.83	3.17	2.88	3.41	2.91
30	2.42	2.77	3.21	---	---	4.37	3.78	3.80	3.14	2.86	3.36	2.90
31	2.41	---	3.22	---	---	4.50	---	3.79	---	2.86	3.35	---
MEAN	2.36	2.64	2.96	---	---	---	4.29	3.85	3.43	2.91	2.87	3.16
MAX	2.44	2.77	3.22	---	---	---	5.01	3.97	3.79	3.11	3.55	3.39
MIN	2.24	2.50	2.85	---	---	---	3.75	3.78	3.14	2.77	2.66	2.90

ROANOKE RIVER BASIN  
354900076554101 DEVILS GUT TRANSECT (SITE #3)--Continued



## ROANOKE RIVER BASIN

0208108650 ROANOKE RIVER NR WOODARD, NC

LOCATION.--Lat 35°53'51", long 76°55'12", North American Datum of 1983, Bertie County, Hydrologic Unit 03010107, on left bank of river at private fishing pier, approximately 6.0 mi north-northwest of Jamesville.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 5.79 ft, Sept. 22, 23, 1996; minimum, 0.49 ft, Dec. 30, 1997.

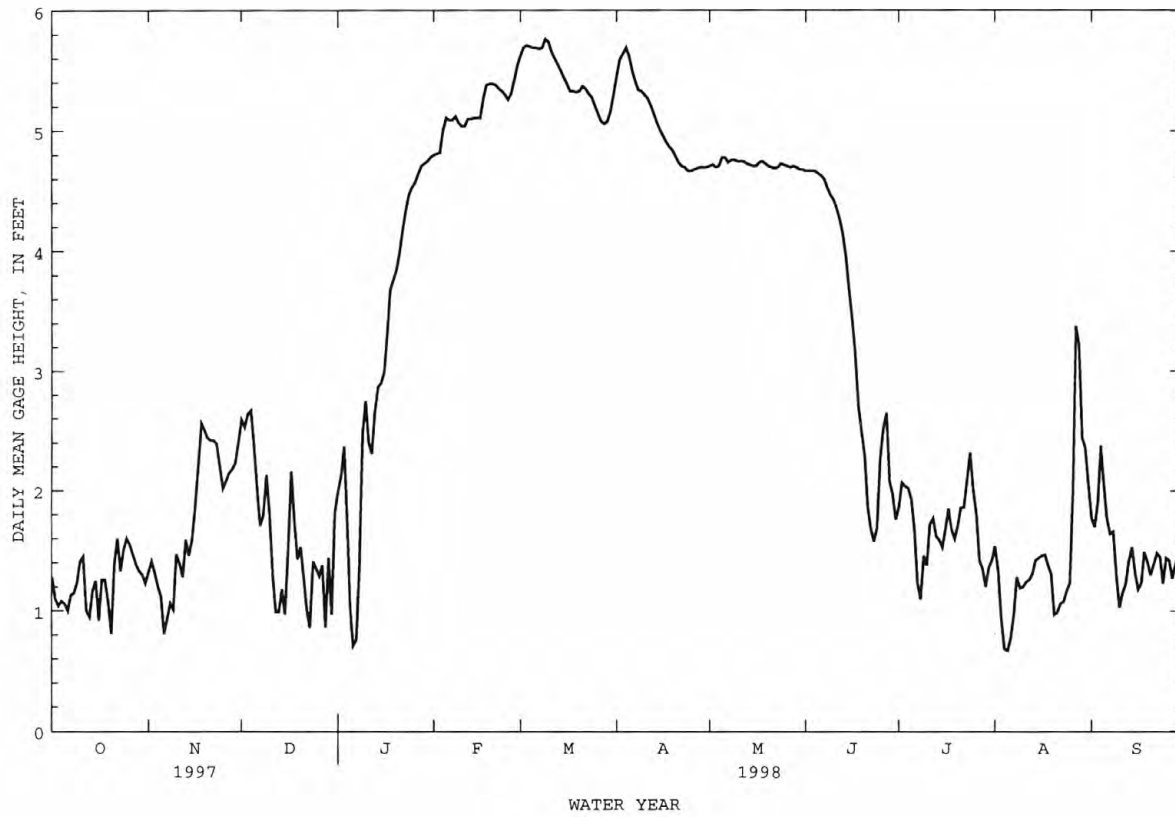
EXTREMES FOR CURRENT YEAR.--Maximum, 5.78 ft, Mar. 9; minimum, 0.49 ft, Dec. 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.28	1.32	2.59	1.99	4.80	5.62	5.45	4.71	4.67	1.86	1.54	1.77
2	1.10	1.41	2.53	2.12	4.81	5.69	5.59	4.72	4.67	2.07	1.33	1.70
3	1.04	1.32	2.64	2.37	4.82	5.71	5.64	4.70	4.67	2.04	.93	1.90
4	1.08	1.20	2.67	1.74	5.00	5.70	5.69	4.71	4.67	2.02	.68	2.38
5	1.06	1.12	2.38	1.03	5.11	5.69	5.62	4.78	4.65	1.93	.67	2.06
6	1.00	.81	2.02	.71	5.09	5.69	5.50	4.78	4.63	1.68	.77	1.77
7	1.13	.93	1.71	.76	5.09	5.68	5.41	4.74	4.60	1.23	.96	1.64
8	1.15	1.06	1.79	1.38	5.12	5.69	5.34	4.76	4.53	1.10	1.28	1.66
9	1.23	1.01	2.13	2.47	5.07	5.76	5.33	4.76	4.47	1.46	1.19	1.30
10	1.41	1.47	1.80	2.75	5.04	5.74	5.30	4.75	4.43	1.38	1.20	1.03
11	1.45	1.39	1.30	2.40	5.04	5.66	5.27	4.75	4.36	1.72	1.24	1.15
12	1.00	1.28	.99	2.31	5.10	5.60	5.21	4.75	4.27	1.77	1.26	1.22
13	.95	1.59	.99	2.66	5.10	5.55	5.14	4.73	4.14	1.62	1.31	1.41
14	1.17	1.46	1.18	2.87	5.11	5.50	5.07	4.72	3.95	1.59	1.42	1.53
15	1.25	1.59	.97	2.90	5.11	5.44	5.01	4.71	3.68	1.53	1.44	1.32
16	.92	1.85	1.50	2.99	5.11	5.39	4.96	4.71	3.44	1.68	1.46	1.18
17	1.26	2.19	2.16	3.31	5.27	5.33	4.91	4.74	3.14	1.85	1.47	1.23
18	1.26	2.56	1.74	3.68	5.38	5.33	4.87	4.75	2.71	1.68	1.38	1.49
19	1.08	2.51	1.43	3.76	5.39	5.32	4.84	4.73	2.50	1.60	1.31	1.41
20	.81	2.44	1.53	3.84	5.39	5.33	4.79	4.71	2.29	1.71	.97	1.30
21	1.39	2.42	1.28	3.99	5.38	5.37	4.74	4.70	1.86	1.86	.99	1.39
22	1.60	2.42	1.01	4.18	5.35	5.35	4.71	4.69	1.68	1.86	1.06	1.48
23	1.33	2.39	.86	4.34	5.33	5.31	4.70	4.70	1.58	2.09	1.08	1.45
24	1.51	2.21	1.41	4.47	5.30	5.28	4.67	4.73	1.69	2.32	1.17	1.23
25	1.60	2.02	1.35	4.53	5.26	5.21	4.67	4.72	2.26	2.01	1.23	1.44
26	1.55	2.08	1.29	4.57	5.31	5.14	4.68	4.71	2.52	1.80	1.99	1.42
27	1.47	2.15	1.38	4.64	5.42	5.08	4.69	4.70	2.65	1.42	3.38	1.27
28	1.38	2.18	.86	4.71	5.54	5.06	4.70	4.71	2.08	1.35	3.22	1.39
29	1.33	2.23	1.44	4.73	---	5.08	4.70	4.70	1.97	1.20	2.44	1.48
30	1.30	2.40	.97	4.75	---	5.16	4.70	4.68	1.76	1.36	2.36	1.25
31	1.23	---	1.82	4.78	---	5.30	---	4.68	---	1.42	2.04	---
MEAN	1.24	1.77	1.60	3.15	5.17	5.44	5.06	4.72	3.35	1.68	1.44	1.48
MAX	1.60	2.56	2.67	4.78	5.54	5.76	5.69	4.78	4.67	2.32	3.38	2.38
MIN	.81	.81	.86	.71	4.80	5.06	4.67	4.68	1.58	1.10	.67	1.03

## ROANOKE RIVER BASIN

0208108650 ROANOKE RIVER NR WOODARD, NC--Continued



## ROANOKE RIVER BASIN

02081094 ROANOKE RIVER AT JAMESVILLE, NC

LOCATION.--Lat 35°48'49", long 76°53'37", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, at private pier on right bank, 50 ft downstream of boat ramp at end of Water Street, approximately 19.2 mi upstream from mouth, and 0.5 mi northeast of Jamesville.

DRAINAGE AREA.--9,250 mi<sup>2</sup>.

## TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--October 1990 to September 1993. August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4.62 ft, Mar. 9, 1998; minimum elevation, -1.14 ft, Sept. 1, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4.62 ft, Mar. 9; minimum elevation, 0.38 ft, Aug. 29.

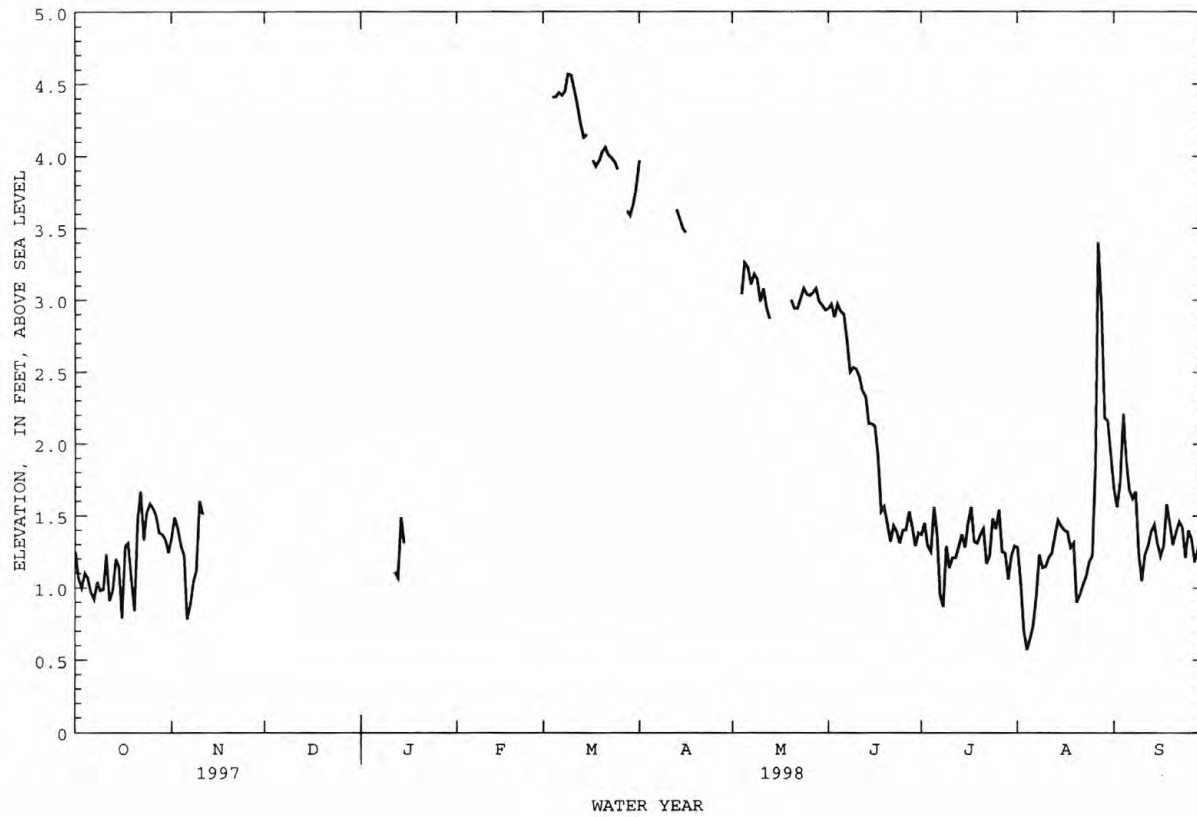
ELEVATION, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.25	1.35	---	---	---	---	3.97	---	2.94	1.37	1.28	1.68
2	1.07	1.49	---	---	---	---	---	---	2.97	1.45	1.03	1.56
3	1.00	1.41	---	---	---	---	---	---	2.88	1.29	.70	1.74
4	1.10	1.29	---	---	---	4.41	4.34	3.04	2.97	1.25	.57	2.21
5	1.07	1.22	---	---	---	4.41	---	3.26	2.92	1.56	.65	1.89
6	.97	.78	---	---	---	4.44	---	3.23	2.90	1.37	.74	1.68
7	.92	.88	---	---	---	4.42	---	3.11	2.72	.95	.94	1.62
8	1.04	1.04	---	---	---	4.45	---	3.18	2.50	.87	1.23	1.67
9	.98	1.12	---	---	---	4.57	---	3.15	2.53	1.29	1.14	1.24
10	.99	1.60	---	---	---	4.56	---	2.99	2.52	1.14	1.15	1.05
11	1.23	1.51	---	---	---	4.46	---	3.08	2.47	1.21	1.21	1.23
12	.91	---	---	1.11	---	4.35	---	2.95	2.37	1.21	1.24	1.29
13	.98	---	---	1.07	---	4.23	3.63	2.87	2.33	1.29	1.36	1.39
14	1.20	---	---	1.49	---	4.13	3.57	---	2.14	1.37	1.47	1.44
15	1.15	---	---	1.31	---	4.15	3.50	---	2.14	1.28	1.43	1.31
16	.79	---	---	---	---	---	3.47	---	2.12	1.45	1.40	1.22
17	1.29	---	---	---	---	3.97	---	---	1.91	1.56	1.39	1.29
18	1.31	---	---	---	---	3.93	---	---	1.53	1.32	1.28	1.58
19	1.06	---	---	---	---	3.97	---	---	1.56	1.31	1.31	1.45
20	.84	---	---	---	---	4.03	---	3.00	1.44	1.37	.90	1.30
21	1.48	---	---	---	---	4.06	---	2.94	1.32	1.41	.95	1.39
22	1.67	---	---	---	---	4.01	---	2.94	1.43	1.17	1.02	1.46
23	1.33	---	---	---	---	3.99	---	3.01	1.39	1.22	1.08	1.42
24	1.52	---	---	---	---	3.96	---	3.08	1.31	1.48	1.18	1.21
25	1.58	---	---	---	---	3.91	---	3.04	1.40	1.41	1.22	1.40
26	1.55	---	---	---	---	---	---	3.03	1.40	1.54	1.84	1.34
27	1.50	---	---	---	---	---	---	3.05	1.53	1.25	3.40	1.18
28	1.38	---	---	---	---	3.62	---	3.08	1.42	1.24	2.97	1.27
29	1.37	---	---	---	---	3.59	---	2.99	1.29	1.06	2.18	1.36
30	1.33	---	---	---	---	3.67	---	2.96	1.38	1.22	2.16	1.19
31	1.24	---	---	---	---	3.78	---	2.93	---	1.29	1.91	---
MEAN	1.20	---	---	---	---	---	---	---	2.06	1.30	1.37	1.44
MAX	1.67	---	---	---	---	---	---	---	2.97	1.56	3.40	2.21
MIN	.79	---	---	---	---	---	---	---	1.29	.87	.57	1.05



## ROANOKE RIVER BASIN

02081094 ROANOKE RIVER AT JAMESVILLE, NC--Continued



## ROANOKE RIVER BASIN

02081094 ROANOKE RIVER AT JAMESVILLE, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.-- March to September 1998.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March to September 1998.

pH: March to September 1998.

WATER TEMPERATURE: March to September 1998.

DISSOLVED OXYGEN: March to September 1998.

DISSOLVED OXYGEN, PERCENT SATURATION: March to September 1998.

INSTRUMENTATION.-- Water-quality monitor with satellite telemetry from March to September 1998.

REMARKS.--Station operated in cooperation with U.S. Fish and Wildlife Service to define water-quality characteristics in the Roanoke River Basin below Roanoke Rapids Dam.

EXTREMES FOR CURRENT WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 168 microsiemens, August 27; minimum recorded, 74 microsiemens, June 5, 6.

pH: Maximum recorded, 6.9, August 14 September 26, 27, 29, 30; minimum recorded, 5.6, May 3.

WATER TEMPERATURE: Maximum recorded, 30.1°C, July 24; minimum recorded, 8.0°C, March 14.

DISSOLVED OXYGEN: Maximum recorded, 11.1 mg/L, March 26; minimum recorded, 2.5 mg/L, September 1.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 105 percent, March 28; minimum recorded, 31 percent, September 1.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

## ROANOKE RIVER BASIN

02081094 ROANOKE RIVER AT JAMESVILLE, NC--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	78	77	78	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	82	79	80	78	77	78	78	76	77
5	---	---	---	81	80	81	---	---	---	---	---	---
6	---	---	---	82	81	81	---	---	---	---	---	---
7	---	---	---	82	81	82	---	---	---	---	---	---
8	---	---	---	82	81	82	---	---	---	---	---	---
9	---	---	---	82	80	80	---	---	---	---	---	---
10	---	---	---	81	80	80	---	---	---	---	---	---
11	---	---	---	81	80	81	---	---	---	77	76	77
12	---	---	---	81	81	81	---	---	---	78	76	77
13	---	---	---	81	80	80	83	83	83	---	---	---
14	---	---	---	80	79	80	85	83	84	---	---	---
15	---	---	---	80	79	79	84	83	84	---	---	---
16	---	---	---	---	---	---	84	83	83	---	---	---
17	---	---	---	83	80	80	---	---	---	---	---	---
18	---	---	---	86	78	80	---	---	---	---	---	---
19	---	---	---	79	77	78	---	---	---	---	---	---
20	---	---	---	78	78	78	---	---	---	---	---	---
21	---	---	---	78	78	78	---	---	---	---	---	---
22	---	---	---	78	78	78	---	---	---	---	---	---
23	---	---	---	78	77	78	---	---	---	87	80	82
24	---	---	---	77	77	77	---	---	---	87	81	82
25	---	---	---	85	75	77	---	---	---	82	81	82
26	---	---	---	---	---	---	---	---	---	83	82	82
27	---	---	---	---	---	---	---	---	---	85	82	83
28	---	---	---	83	77	79	---	---	---	91	84	86
29	---	---	---	80	79	79	---	---	---	86	85	85
30	---	---	---	79	78	79	---	---	---	86	85	86
31	---	---	---	79	78	78	---	---	---	96	84	85
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	85	85	85	100	79	87	105	104	104	110	101	106
2	85	85	85	92	82	87	112	101	103	102	98	100
3	86	85	85	94	81	89	107	101	102	108	102	106
4	85	84	84	89	82	85	103	101	102	113	99	103
5	87	84	85	93	82	87	101	99	101	116	112	114
6	91	83	85	96	84	87	100	94	98	113	103	108
7	84	84	84	94	86	89	104	95	99	114	103	110
8	85	84	85	96	86	88	104	100	102	114	110	111
9	97	85	85	103	96	98	107	104	106	111	104	106
10	91	85	85	99	97	98	111	104	106	118	105	112
11	87	85	86	101	98	99	106	104	104	124	118	121
12	91	87	87	116	99	102	115	102	103	126	123	124
13	91	85	88	102	100	102	104	101	102	130	126	128
14	95	85	88	100	96	97	110	102	105	133	130	131
15	99	88	90	101	95	98	106	104	106	133	132	132
16	92	90	91	104	95	100	106	104	105	139	133	136
17	97	92	93	106	103	104	108	103	105	142	137	139
18	99	94	97	106	103	104	111	106	108	141	139	139
19	95	94	94	108	105	106	111	106	109	140	122	135
20	94	93	93	109	107	108	108	107	107	124	118	121
21	95	92	93	109	106	107	107	106	107	138	124	133
22	95	94	94	108	103	107	107	106	107	140	132	137
23	96	95	95	107	94	99	109	107	108	137	133	135
24	99	95	97	99	91	95	112	108	109	135	133	134
25	112	97	101	97	90	93	113	112	112	135	130	134
26	105	95	102	97	90	93	115	111	113	130	127	127
27	95	83	86	96	90	92	168	109	120	128	123	125
28	91	86	88	96	90	94	153	105	110	127	125	126
29	91	85	87	96	92	93	106	103	105	131	125	128
30	87	79	83	106	96	103	107	100	102	126	122	123
31	---	---	---	108	105	106	105	101	102	---	---	---
MONTH	112	79	89	116	79	97	168	94	106	142	98	123

## ROANOKE RIVER BASIN

02081094 ROANOKE RIVER AT JAMESVILLE, NC--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
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	---	---	---		---	---	---		---	---	---		---	---	---
MONTH	---	---	---		---	---	---		---	---	---		---	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	FEBRUARY				MARCH				APRIL				MAY		
1	---	---	---		---	---	---		6.3	6.1	6.2		---	---	---
2	---	---	---		---	---	---		---	---	---		---	---	---
3	---	---	---		---	---	---		---	---	---		---	---	---
4	---	---	---		6.3	6.1	6.2		6.4	6.0	6.0		5.8	5.7	5.7
5	---	---	---		6.2	6.1	6.1		---	---	---		---	---	---
6	---	---	---		6.3	6.2	6.2		---	---	---		---	---	---
7	---	---	---		6.3	6.3	6.3		---	---	---		---	---	---
8	---	---	---		6.3	6.2	6.2		---	---	---		---	---	---
9	---	---	---		6.2	6.2	6.2		---	---	---		---	---	---
10	---	---	---		6.2	6.2	6.2		---	---	---		---	---	---
11	---	---	---		6.3	6.2	6.2		---	---	---		5.7	5.7	5.7
12	---	---	---		6.3	6.2	6.3		---	---	---		5.8	5.7	5.7
13	---	---	---		6.3	6.3	6.3		5.9	5.9	5.9		---	---	---
14	---	---	---		6.3	6.3	6.3		5.9	5.8	5.8		---	---	---
15	---	---	---		6.4	6.3	6.3		5.9	5.8	5.8		---	---	---
16	---	---	---		---	---	---		5.9	5.8	5.8		---	---	---
17	---	---	---		6.3	6.1	6.2		---	---	---		---	---	---
18	---	---	---		6.3	6.2	6.3		---	---	---		---	---	---
19	---	---	---		6.3	6.3	6.3		---	---	---		---	---	---
20	---	---	---		6.3	6.2	6.2		---	---	---		6.3	6.3	6.3
21	---	---	---		6.2	6.2	6.2		---	---	---		6.3	6.2	6.3
22	---	---	---		6.3	6.2	6.2		---	---	---		6.5	6.2	6.2
23	---	---	---		6.3	6.1	6.2		---	---	---		6.3	6.2	6.3
24	---	---	---		6.2	6.1	6.1		---	---	---		6.4	6.2	6.3
25	---	---	---		6.2	6.1	6.1		---	---	---		6.4	6.3	6.3
26	---	---	---		---	---	---		---	---	---		6.4	6.3	6.3
27	---	---	---		---	---	---		---	---	---		6.4	6.3	6.3
28	---	---	---		6.8	6.2	6.4		---	---	---		6.4	6.3	6.4
29	---	---	---		6.8	6.6	6.7		---	---	---		6.4	6.3	6.4
30	---	---	---		6.6	6.4	6.5		---	---	---		6.5	6.4	6.4
31	---	---	---		6.4	6.3	6.3		---	---	---		6.6	6.5	6.6
MONTH	---	---	---		---	---	---		---	---	---		---	---	---



## ROANOKE RIVER BASIN

02081094 ROANOKE RIVER AT JAMESVILLE, NC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	17.5	17.1	17.3	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	10.6	9.8	10.1	16.6	15.2	16.0	18.3	17.7	18.0
5	---	---	---	10.3	9.4	9.9	---	---	---	---	---	---
6	---	---	---	10.1	9.5	9.8	---	---	---	---	---	---
7	---	---	---	10.1	9.7	9.8	---	---	---	---	---	---
8	---	---	---	10.8	10.0	10.3	---	---	---	---	---	---
9	---	---	---	12.4	10.8	11.7	---	---	---	---	---	---
10	---	---	---	12.2	11.4	11.8	---	---	---	---	---	---
11	---	---	---	11.4	10.1	10.5	---	---	---	18.5	17.5	18.0
12	---	---	---	10.1	9.1	9.5	---	---	---	17.5	16.8	17.1
13	---	---	---	9.1	8.2	8.7	15.2	14.1	14.7	16.8	16.3	16.4
14	---	---	---	9.4	8.0	8.7	15.0	14.4	14.6	---	---	---
15	---	---	---	10.0	8.9	9.4	16.0	14.4	15.1	---	---	---
16	---	---	---	---	---	---	16.7	15.6	16.1	---	---	---
17	---	---	---	8.7	8.3	8.4	---	---	---	---	---	---
18	---	---	---	10.0	8.3	9.0	---	---	---	---	---	---
19	---	---	---	10.6	10.0	10.3	---	---	---	---	---	---
20	---	---	---	10.9	10.4	10.6	---	---	---	20.4	19.8	20.1
21	---	---	---	11.4	10.7	11.0	---	---	---	20.8	19.9	20.3
22	---	---	---	11.2	10.5	10.9	---	---	---	20.9	20.3	20.5
23	---	---	---	11.4	10.3	10.9	---	---	---	20.5	19.9	20.2
24	---	---	---	11.0	10.2	10.6	---	---	---	19.9	19.4	19.6
25	---	---	---	11.1	9.7	10.3	---	---	---	21.0	19.7	20.2
26	---	---	---	---	---	---	---	---	---	21.8	20.8	21.2
27	---	---	---	---	---	---	---	---	---	21.8	21.4	21.6
28	---	---	---	15.1	13.4	14.2	---	---	---	21.7	21.4	21.5
29	---	---	---	16.3	14.5	15.3	---	---	---	22.0	21.1	21.5
30	---	---	---	17.1	15.6	16.3	---	---	---	22.5	21.6	22.0
31	---	---	---	17.7	16.5	17.0	---	---	---	22.8	22.0	22.4
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.1	22.5	22.8	29.0	28.1	28.5	29.0	28.6	28.8	28.1	27.7	27.9
2	23.0	22.5	22.7	28.6	28.2	28.4	28.7	28.2	28.4	28.1	27.6	27.9
3	23.6	22.7	23.1	28.6	28.1	28.3	28.3	27.7	27.9	28.2	27.8	28.1
4	23.5	22.8	23.0	29.0	28.3	28.6	27.9	27.2	27.4	27.8	27.4	27.6
5	22.8	22.6	22.7	28.8	28.4	28.6	27.3	26.8	27.0	27.4	26.8	27.1
6	22.6	21.7	22.1	28.5	27.9	28.2	27.1	26.9	27.0	27.0	26.6	26.8
7	21.7	21.1	21.3	28.4	28.1	28.2	27.2	27.0	27.1	27.1	26.6	26.8
8	21.1	20.4	20.7	28.3	27.7	28.0	27.2	27.2	27.4	27.0	26.4	26.7
9	20.8	20.5	20.6	28.4	28.2	28.3	28.0	27.5	27.8	26.4	25.7	25.9
10	21.3	20.5	20.8	28.7	28.1	28.4	28.4	28.0	28.2	25.7	25.2	25.3
11	21.7	21.0	21.3	28.8	28.2	28.5	28.6	28.1	28.3	25.2	24.9	25.0
12	22.4	21.5	21.9	28.5	27.9	28.3	29.0	28.6	28.8	25.1	24.8	25.0
13	23.1	22.2	22.6	28.7	27.9	28.3	29.0	28.8	28.9	25.5	24.9	25.2
14	23.4	22.6	23.0	28.6	27.6	27.8	29.0	28.7	28.8	25.6	25.1	25.3
15	23.7	23.0	23.3	28.0	27.5	27.7	29.0	28.5	28.8	25.8	25.3	25.5
16	24.5	23.6	24.0	28.1	27.6	27.9	29.1	28.6	28.8	26.0	25.6	25.8
17	25.1	24.2	24.6	28.1	27.7	27.9	29.1	28.7	28.9	26.5	26.0	26.1
18	26.0	24.7	25.2	28.4	27.3	27.8	29.4	28.9	29.1	27.3	26.4	26.7
19	26.0	25.3	25.6	28.6	27.6	28.1	29.2	28.6	28.9	26.9	26.7	26.8
20	25.7	24.8	25.2	29.0	28.0	28.5	28.6	28.0	28.2	27.2	26.9	27.0
21	26.1	25.5	25.8	29.0	28.2	28.6	28.1	27.8	27.9	27.3	27.0	27.2
22	26.7	26.0	26.3	29.6	28.7	29.1	28.1	27.7	27.9	27.5	27.3	27.4
23	27.0	26.3	26.6	29.9	28.8	29.3	28.2	27.9	28.0	27.4	26.6	27.0
24	27.5	27.0	27.2	30.1	29.3	29.7	28.4	28.0	28.2	26.6	26.0	26.2
25	28.5	27.3	27.9	30.0	29.7	29.8	28.5	28.1	28.3	26.0	25.7	25.8
26	28.5	27.5	28.1	29.9	29.4	29.6	28.5	27.8	28.1	25.8	25.5	25.7
27	28.0	27.1	27.5	29.8	29.2	29.4	27.8	27.2	27.5	25.8	25.6	25.7
28	28.1	27.5	27.9	29.7	29.0	29.3	27.4	26.6	26.9	25.7	25.2	25.4
29	28.3	27.2	27.7	29.7	29.2	29.5	27.3	26.7	27.0	25.5	25.2	25.4
30	28.5	27.9	28.2	29.9	29.4	29.6	27.8	27.2	27.5	25.8	25.4	25.6
31	---	---	---	29.6	29.0	29.2	27.9	27.5	27.7	---	---	---
MONTH	28.5	20.4	24.3	30.1	27.3	28.6	29.4	26.6	28.0	28.2	24.8	26.3





DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
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	---	---	---		---	---	---		---	---	---		---	---	---
MONTH	---	---	---		---	---	---		---	---	---		---	---	---

## ROANOKE RIVER BASIN

02081094 ROANOKE RIVER AT JAMESVILLE, NC--Continued

OXYGEN DISSOLVED (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	92	80	84	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	80	75	77	79	69	74
5	---	---	---	82	75	77	---	---	---	---	---	---
6	---	---	---	86	81	83	---	---	---	---	---	---
7	---	---	---	87	85	86	---	---	---	---	---	---
8	---	---	---	88	86	87	---	---	---	---	---	---
9	---	---	---	89	87	87	---	---	---	---	---	---
10	---	---	---	88	84	86	---	---	---	---	---	---
11	---	---	---	89	84	87	---	---	---	70	59	64
12	---	---	---	91	86	89	---	---	---	65	52	60
13	---	---	---	93	88	90	97	88	92	---	---	---
14	---	---	---	96	90	92	96	88	90	---	---	---
15	---	---	---	97	92	94	94	85	89	---	---	---
16	---	---	---	---	---	---	93	85	89	---	---	---
17	---	---	---	93	91	92	---	---	---	---	---	---
18	---	---	---	97	91	94	---	---	---	---	---	---
19	---	---	---	97	93	94	---	---	---	---	---	---
20	---	---	---	93	90	91	---	---	---	85	70	76
21	---	---	---	93	89	91	---	---	---	77	66	71
22	---	---	---	95	88	92	---	---	---	77	62	71
23	---	---	---	97	90	94	---	---	---	75	64	69
24	---	---	---	97	92	94	---	---	---	68	55	62
25	---	---	---	100	90	94	---	---	---	70	56	64
26	---	---	---	---	---	---	---	---	---	69	59	64
27	---	---	---	---	---	---	---	---	---	69	58	62
28	---	---	---	105	96	101	---	---	---	63	57	60
29	---	---	---	104	95	100	---	---	---	66	59	61
30	---	---	---	101	91	97	---	---	---	66	59	63
31	---	---	---	97	88	92	---	---	---	65	59	62
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

OXYGEN DISSOLVED (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	63	58	60	73	67	70	81	75	77	46	31	38
2	61	57	59	76	69	73	83	75	79	46	39	43
3	63	56	59	78	75	76	83	77	80	54	44	48
4	63	57	59	80	75	77	82	75	79	61	46	55
5	58	55	56	78	75	77	82	70	79	57	49	53
6	56	53	55	79	74	77	82	68	79	57	50	53
7	60	54	56	78	74	76	82	77	80	57	48	53
8	62	59	60	78	76	77	84	78	81	62	48	55
9	62	60	61	78	72	75	84	75	81	60	51	57
10	61	58	60	79	76	77	84	77	81	59	55	57
11	61	59	60	82	77	79	84	79	82	61	49	57
12	60	58	59	83	79	81	84	75	80	61	53	58
13	61	57	59	84	79	81	79	72	76	67	57	61
14	61	55	56	82	77	79	79	73	76	75	65	69
15	55	50	52	82	79	80	78	72	76	81	74	77
16	51	48	50	82	79	81	80	73	77	81	74	79
17	51	49	50	85	80	82	79	76	78	82	68	77
18	53	49	50	83	79	81	79	75	77	87	70	78
19	56	51	53	84	79	81	81	73	77	81	68	75
20	58	54	56	86	80	82	81	73	78	83	75	79
21	61	57	60	81	76	78	80	77	79	82	64	76
22	61	56	59	84	75	79	81	76	78	73	65	70
23	59	54	57	79	75	77	82	77	80	76	71	73
24	63	56	59	77	64	76	84	78	81	76	73	74
25	71	60	66	75	73	74	85	80	82	77	75	76
26	77	70	74	75	72	73	84	81	83	79	76	77
27	78	74	77	73	70	72	90	77	85	80	77	79
28	75	71	74	73	70	71	82	53	64	81	77	79
29	76	70	73	74	70	72	57	48	50	82	79	81
30	75	70	73	74	70	73	53	44	49	82	80	81
31	---	---	---	77	72	75	47	38	41	---	---	---
MONTH	78	48	60	86	64	77	90	38	76	87	31	66

## ROANOKE RIVER BASIN

355312076533601 COW CREEK TRANSECT (SITE #1)

LOCATION.--Lat 35°53'44", long 76°55'56", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, approximately 2.1 mi southwest of Woodard on SR 1518.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--May 1997 to current year. Records from May 1997 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

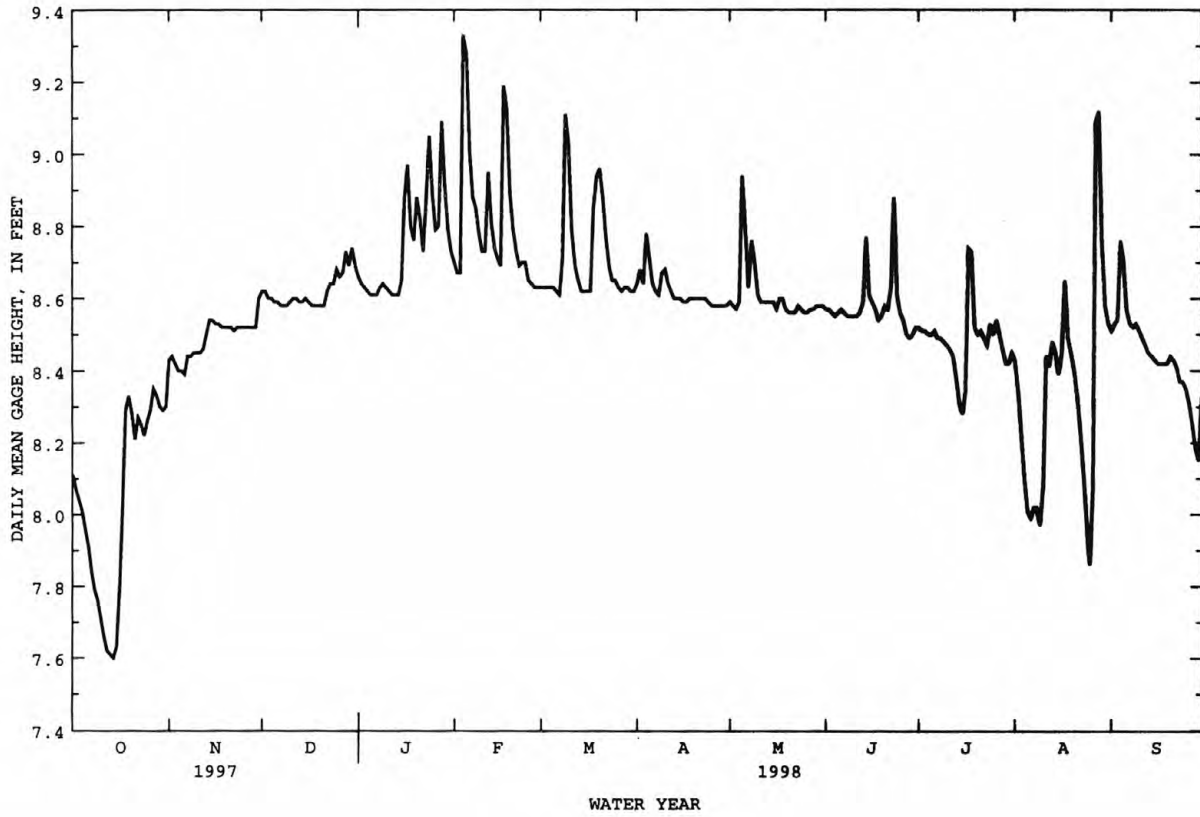
EXTREMES FOR PERIOD OF RECORD.--Maximum, 9.54 ft, Feb. 4, 1998; minimum, 6.93 ft, Aug. 17, 18, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum, 9.54 ft, Feb. 4; minimum, 7.57 ft, Oct. 14, 15.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.11	8.43	8.62	8.66	8.70	8.63	8.64	8.59	8.57	8.52	8.43	8.51
2	8.07	8.44	8.62	8.64	8.67	8.63	8.68	8.58	8.57	8.51	8.34	8.53
3	8.04	8.42	8.60	8.63	8.67	8.63	8.64	8.57	8.56	8.51	8.22	8.54
4	8.01	8.40	8.60	8.62	9.33	8.63	8.78	8.59	8.55	8.50	8.10	8.76
5	7.96	8.40	8.59	8.61	9.28	8.63	8.71	8.94	8.56	8.50	8.01	8.70
6	7.91	8.39	8.59	8.61	9.01	8.62	8.64	8.80	8.57	8.51	7.99	8.57
7	7.84	8.44	8.58	8.61	8.88	8.61	8.62	8.63	8.56	8.49	8.02	8.53
8	7.79	8.44	8.58	8.63	8.85	8.71	8.61	8.76	8.55	8.49	8.02	8.52
9	7.76	8.45	8.58	8.64	8.78	9.11	8.67	8.70	8.55	8.48	7.97	8.53
10	7.71	8.45	8.59	8.63	8.73	9.03	8.68	8.61	8.55	8.47	8.08	8.51
11	7.66	8.45	8.60	8.62	8.73	8.79	8.64	8.59	8.55	8.46	8.44	8.49
12	7.62	8.46	8.60	8.61	8.95	8.69	8.62	8.59	8.56	8.44	8.42	8.47
13	7.61	8.50	8.59	8.61	8.81	8.65	8.60	8.59	8.59	8.38	8.48	8.45
14	7.60	8.54	8.59	8.61	8.74	8.62	8.60	8.59	8.77	8.31	8.45	8.44
15	7.63	8.54	8.60	8.65	8.71	8.62	8.60	8.59	8.61	8.28	8.39	8.43
16	7.79	8.53	8.59	8.88	8.69	8.62	8.59	8.57	8.59	8.34	8.45	8.42
17	8.02	8.53	8.58	8.97	9.19	8.62	8.59	8.60	8.57	8.74	8.65	8.42
18	8.29	8.52	8.58	8.80	9.13	8.85	8.60	8.60	8.54	8.73	8.49	8.42
19	8.33	8.52	8.58	8.76	8.89	8.94	8.60	8.57	8.55	8.52	8.45	8.42
20	8.28	8.52	8.58	8.88	8.79	8.96	8.60	8.56	8.58	8.50	8.40	8.44
21	8.21	8.52	8.58	8.82	8.73	8.88	8.60	8.56	8.57	8.51	8.33	8.43
22	8.27	8.51	8.62	8.73	8.69	8.77	8.60	8.56	8.63	8.49	8.23	8.41
23	8.25	8.52	8.64	8.88	8.70	8.69	8.60	8.58	8.88	8.47	8.11	8.37
24	8.22	8.52	8.64	9.05	8.70	8.65	8.59	8.57	8.61	8.53	7.97	8.37
25	8.26	8.52	8.68	8.89	8.65	8.65	8.58	8.56	8.56	8.50	7.86	8.35
26	8.29	8.52	8.66	8.79	8.64	8.63	8.58	8.56	8.54	8.54	8.07	8.31
27	8.35	8.52	8.67	8.80	8.63	8.62	8.58	8.57	8.50	8.50	9.09	8.25
28	8.33	8.52	8.73	9.09	8.63	8.63	8.58	8.57	8.49	8.46	9.12	8.18
29	8.30	8.52	8.69	8.91	---	8.63	8.58	8.58	8.50	8.42	8.76	8.15
30	8.29	8.60	8.74	8.79	---	8.62	8.58	8.58	8.52	8.42	8.58	8.33
31	8.30	---	8.69	8.73	---	8.62	---	8.58	---	8.45	8.53	---
MEAN	8.04	8.49	8.62	8.75	8.82	8.71	8.62	8.61	8.58	8.48	8.34	8.44
MAX	8.35	8.60	8.74	9.09	9.33	9.11	8.78	8.94	8.88	8.74	9.12	8.76
MIN	7.60	8.39	8.58	8.61	8.63	8.61	8.58	8.56	8.49	8.28	7.86	8.15

ROANOKE RIVER BASIN  
355312076533601 COW CREEK TRANSECT (SITE #1)--Continued



## ROANOKE RIVER BASIN

## 355205076522501 COW CREEK TRANSECT (SITE #2)

LOCATION.--Lat 35°52'04", long 76°52'24", North American Datum of 1983, Bertie County, Hydrologic Unit 03010107, on Charleston Creek approximately 1.2 mi upstream of confluence with Broad Creek and 6.7 mi west of Plymouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 4.21 ft, Aug. 27, 1998; minimum, 0.90 ft, Aug. 7, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum, 4.21 ft, Aug. 27; minimum elevation, 0.90 ft, Aug. 7.

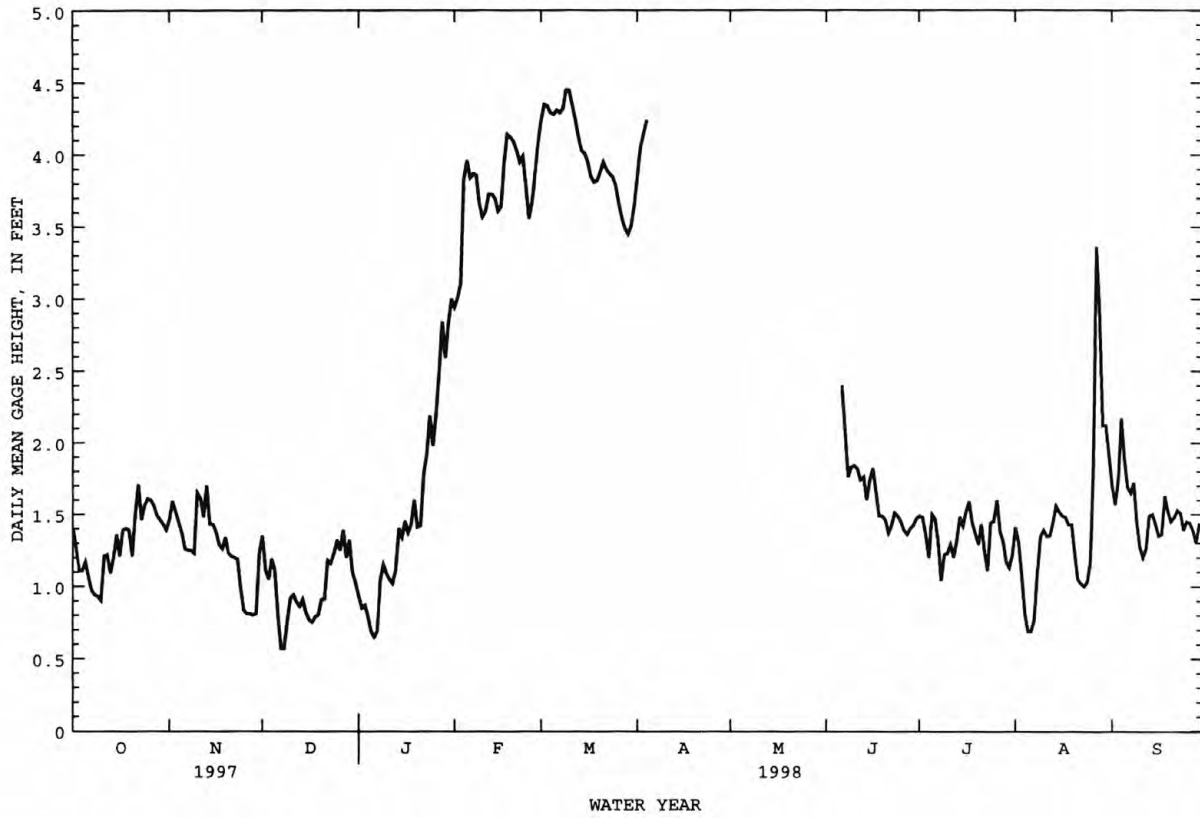
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.40	1.46	1.35	.93	2.94	4.24	3.85	---	---	1.49	1.41	1.70
2	1.25	1.59	1.11	.85	3.01	4.35	4.05	---	---	1.48	1.30	1.57
3	1.11	1.52	1.05	.87	3.11	4.34	4.15	---	---	1.36	1.07	1.74
4	1.11	1.44	1.19	.79	3.83	4.29	4.24	---	---	1.20	.81	2.17
5	1.17	1.37	1.11	.69	3.96	4.28	---	---	---	1.50	.69	1.88
6	1.06	1.26	.80	.65	3.84	4.31	---	---	2.40	1.47	.69	1.69
7	.97	1.25	.57	.69	3.87	4.29	---	---	2.10	1.31	.77	1.65
8	.94	1.25	.57	1.04	3.86	4.32	---	---	1.76	1.04	1.09	1.72
9	.93	1.23	.76	1.15	3.66	4.45	---	---	1.83	1.22	1.35	1.44
10	.90	1.65	.92	1.09	3.57	4.45	---	---	1.84	1.23	1.39	1.27
11	1.21	1.61	.94	1.05	3.61	4.35	---	---	1.82	1.29	1.35	1.20
12	1.22	1.48	.89	1.02	3.73	4.24	---	---	1.74	1.20	1.35	1.26
13	1.09	1.70	.86	1.11	3.73	4.12	---	---	1.76	1.32	1.44	1.49
14	1.20	1.43	.91	1.40	3.70	4.03	---	---	1.60	1.48	1.56	1.50
15	1.36	1.43	.82	1.34	3.61	4.01	---	---	1.74	1.42	1.52	1.43
16	1.21	1.38	.77	1.45	3.64	3.95	---	---	1.82	1.52	1.49	1.35
17	1.39	1.29	.75	1.37	3.95	3.85	---	---	1.66	1.59	1.48	1.36
18	1.40	1.26	.79	1.43	4.14	3.81	---	---	1.49	1.44	1.43	1.63
19	1.39	1.34	.80	1.60	4.12	3.82	---	---	1.49	1.36	1.43	1.52
20	1.21	1.23	.91	1.41	4.09	3.88	---	---	1.46	1.29	1.23	1.45
21	1.50	1.21	.91	1.42	4.03	3.95	---	---	1.37	1.43	1.05	1.48
22	1.71	1.20	1.18	1.78	3.95	3.90	---	---	1.42	1.24	1.02	1.53
23	1.46	1.19	1.16	1.92	3.99	3.87	---	---	1.51	1.11	1.00	1.51
24	1.56	.99	1.23	2.19	3.78	3.85	---	---	1.49	1.44	1.03	1.39
25	1.61	.83	1.32	1.98	3.56	3.79	---	---	1.45	1.45	1.16	1.45
26	1.60	.81	1.25	2.19	3.68	3.66	---	---	1.39	1.60	1.84	1.44
27	1.56	.81	1.39	2.48	3.88	3.56	---	---	1.36	1.38	3.36	1.39
28	1.49	.80	1.20	2.84	4.09	3.49	---	---	1.40	1.31	2.94	1.30
29	1.46	.81	1.32	2.59	---	3.45	---	---	1.42	1.17	2.12	1.43
30	1.43	1.23	1.10	2.83	---	3.51	---	---	1.47	1.13	2.12	1.42
31	1.39	---	1.02	3.00	---	3.65	---	---	---	1.22	1.91	---
MEAN	1.30	1.27	1.00	1.52	3.75	4.00	---	---	---	1.34	1.43	1.51
MAX	1.71	1.70	1.39	3.00	4.14	4.45	---	---	---	1.60	3.36	2.17
MIN	.90	.80	.57	.65	2.94	3.45	---	---	---	1.04	.69	1.20



## ROANOKE RIVER BASIN

355205076522501 COW CREEK TRANSECT (SITE #2)--Continued



## ROANOKE RIVER BASIN

355149076504001 COW CREEK TRANSECT (SITE #3)

LOCATION.--Lat 35°51'50", long 76°50'39", North American Datum of 1983, Bertie County, Hydrologic Unit 03010107, on Cow Creek approximately 0.5 mi upstream of confluence with Broad Creek and 5.2 mi west of Plymouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 4.21 ft, Aug. 27, 1998; minimum, 0.90 ft, Aug. 7, 1998.

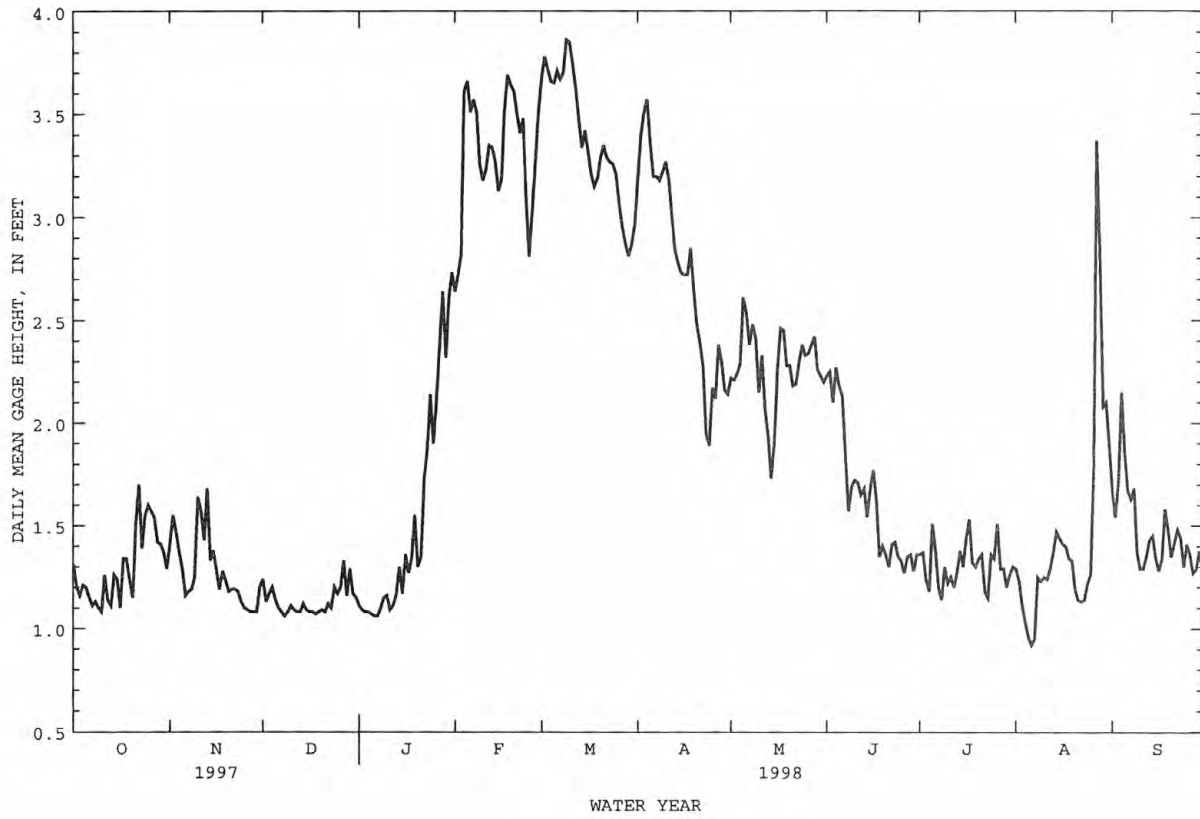
EXTREMES FOR CURRENT YEAR.--Maximum, 4.21 ft, Aug. 27; minimum elevation, 0.90 ft, Aug. 7.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.31	1.41	1.24	1.11	2.64	3.67	3.18	2.22	2.23	1.36	1.29	1.66
2	1.20	1.55	1.13	1.09	2.72	3.78	3.39	2.21	2.25	1.37	1.23	1.54
3	1.16	1.47	1.17	1.08	2.82	3.72	3.51	2.24	2.10	1.24	1.11	1.71
4	1.21	1.37	1.20	1.08	3.61	3.66	3.57	2.29	2.27	1.18	1.03	2.15
5	1.20	1.29	1.14	1.07	3.66	3.65	3.36	2.61	2.18	1.51	.96	1.86
6	1.15	1.16	1.10	1.06	3.51	3.71	3.20	2.54	2.13	1.38	.92	1.67
7	1.11	1.18	1.08	1.06	3.57	3.67	3.20	2.38	1.84	1.20	.95	1.63
8	1.13	1.19	1.06	1.10	3.51	3.70	3.18	2.48	1.57	1.14	1.25	1.68
9	1.10	1.25	1.08	1.15	3.26	3.86	3.22	2.41	1.69	1.30	1.23	1.37
10	1.08	1.64	1.11	1.16	3.18	3.85	3.27	2.15	1.72	1.22	1.25	1.29
11	1.26	1.57	1.09	1.09	3.23	3.75	3.18	2.33	1.71	1.25	1.24	1.29
12	1.14	1.43	1.08	1.11	3.35	3.62	3.00	2.07	1.65	1.20	1.29	1.35
13	1.11	1.68	1.08	1.16	3.34	3.47	2.84	1.94	1.68	1.28	1.37	1.43
14	1.26	1.33	1.12	1.30	3.27	3.34	2.78	1.73	1.54	1.38	1.47	1.45
15	1.24	1.38	1.09	1.17	3.13	3.42	2.73	1.91	1.68	1.30	1.44	1.34
16	1.10	1.29	1.08	1.36	3.18	3.32	2.72	2.26	1.77	1.44	1.41	1.28
17	1.34	1.19	1.08	1.27	3.52	3.21	2.72	2.46	1.62	1.53	1.40	1.34
18	1.34	1.28	1.07	1.34	3.69	3.15	2.85	2.45	1.35	1.32	1.34	1.58
19	1.24	1.23	1.08	1.55	3.64	3.19	2.65	2.28	1.40	1.30	1.33	1.48
20	1.15	1.18	1.09	1.30	3.61	3.29	2.48	2.28	1.36	1.34	1.19	1.35
21	1.51	1.19	1.08	1.35	3.50	3.35	2.39	2.18	1.30	1.36	1.14	1.42
22	1.70	1.19	1.12	1.73	3.41	3.29	2.28	2.19	1.41	1.18	1.13	1.48
23	1.39	1.18	1.10	1.87	3.48	3.27	1.95	2.30	1.42	1.15	1.14	1.44
24	1.55	1.13	1.20	2.14	3.10	3.26	1.89	2.38	1.35	1.36	1.22	1.30
25	1.60	1.10	1.17	1.90	2.81	3.21	2.17	2.33	1.33	1.34	1.26	1.41
26	1.57	1.09	1.20	2.11	3.04	3.06	2.12	2.34	1.27	1.51	1.80	1.36
27	1.54	1.08	1.33	2.37	3.27	2.95	2.38	2.38	1.35	1.29	3.37	1.27
28	1.42	1.08	1.16	2.64	3.51	2.87	2.30	2.42	1.36	1.29	2.84	1.29
29	1.41	1.08	1.29	2.32	---	2.81	2.16	2.26	1.28	1.20	2.08	1.38
30	1.37	1.20	1.17	2.61	---	2.87	2.14	2.23	1.36	1.26	2.10	1.29
31	1.29	---	1.15	2.73	---	2.96	---	2.20	---	1.30	1.88	---
MEAN	1.30	1.28	1.13	1.53	3.31	3.38	2.76	2.27	1.64	1.31	1.44	1.47
MAX	1.70	1.68	1.33	2.73	3.69	3.86	3.57	2.61	2.27	1.53	3.37	2.15
MIN	1.08	1.08	1.06	1.06	2.64	2.81	1.89	1.73	1.27	1.14	.92	1.27

## ROANOKE RIVER BASIN

355149076504001 COW CREEK TRANSECT (SITE #3)--Continued



## ROANOKE RIVER BASIN

355140076484201 COW CREEK TRANSECT (SITE #4)

LOCATION.--Lat 35°51'41", long 76°48'40", North American Datum of 1983, Martin County, Hydrologic Unit 03010107, on Highland Prong approximately 1.4 mi upstream of confluence with Roanoke River and 3.35 mi west of Plymouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

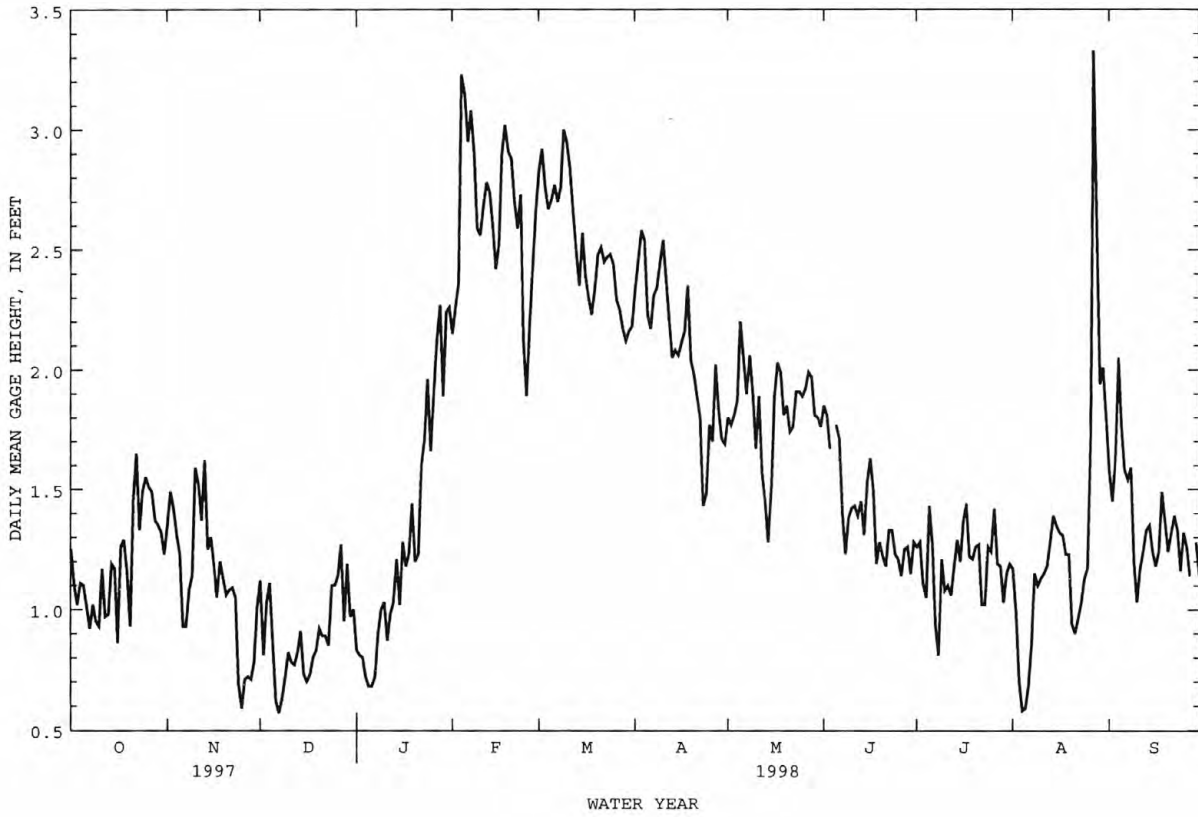
EXTREMES FOR PERIOD OF RECORD.--Maximum, 4.26 ft, Aug. 27, 1998; minimum, 0.48 ft, Apr. 19, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum, 4.26 ft, Aug. 27; minimum, 0.51 ft, Aug. 5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.25	1.35	1.12	.83	2.15	2.83	2.33	1.80	1.85	1.26	1.17	1.57
2	1.10	1.49	.81	.81	2.26	2.92	2.45	1.77	1.81	1.28	.99	1.45
3	1.02	1.42	1.03	.80	2.36	2.76	2.58	1.81	1.67	1.11	.70	1.63
4	1.11	1.31	1.11	.72	3.23	2.67	2.54	1.87	---	1.05	.58	2.05
5	1.10	1.23	.86	.68	3.15	2.71	2.23	2.20	1.77	1.43	.59	1.76
6	1.01	.93	.62	.68	2.95	2.77	2.17	2.05	1.71	1.27	.68	1.58
7	.92	.93	.57	.72	3.08	2.70	2.31	1.90	1.40	.93	.85	1.54
8	1.02	1.08	.63	.90	2.91	2.76	2.34	2.06	1.23	.81	1.15	1.59
9	.95	1.14	.72	1.00	2.59	3.00	2.44	1.90	1.38	1.21	1.10	1.20
10	.93	1.59	.82	1.03	2.56	2.95	2.54	1.67	1.42	1.08	1.13	1.03
11	1.17	1.52	.78	.87	2.68	2.84	2.37	1.89	1.43	1.10	1.15	1.17
12	.97	1.37	.77	.98	2.78	2.65	2.20	1.57	1.39	1.06	1.18	1.24
13	.98	1.62	.82	1.03	2.74	2.49	2.05	1.45	1.18	1.18	1.28	1.33
14	1.19	1.25	.91	1.21	2.60	2.35	2.08	1.28	1.31	1.29	1.39	1.35
15	1.17	1.30	.73	1.02	2.42	2.57	2.06	1.51	1.53	1.20	1.35	1.24
16	.86	1.19	.70	1.28	2.52	2.39	2.11	1.89	1.63	1.37	1.32	1.18
17	1.26	1.05	.73	1.18	2.90	2.30	2.16	2.03	1.49	1.44	1.31	1.24
18	1.29	1.20	.80	1.23	3.02	2.23	2.35	1.99	1.19	1.22	1.23	1.49
19	1.16	1.13	.83	1.44	2.91	2.34	2.04	1.81	1.28	1.21	1.23	1.37
20	.93	1.06	.92	1.20	2.88	2.48	1.98	1.85	1.22	1.26	.94	1.24
21	1.46	1.08	.89	1.23	2.70	2.51	1.89	1.74	1.18	1.27	.90	1.32
22	1.65	1.09	.89	1.60	2.59	2.45	1.80	1.76	1.33	1.02	.96	1.39
23	1.33	1.05	.85	1.71	2.73	2.47	1.43	1.91	1.33	1.02	1.03	1.33
24	1.49	.69	1.10	1.96	2.12	2.48	1.48	1.91	1.23	1.26	1.13	1.16
25	1.55	.59	1.10	1.66	1.89	2.44	1.77	1.89	1.21	1.24	1.17	1.32
26	1.51	.71	1.14	1.90	2.20	2.29	1.70	1.92	1.14	1.42	1.73	1.26
27	1.49	.72	1.27	2.12	2.44	2.25	2.02	1.99	1.25	1.19	3.33	1.14
28	1.37	.71	.95	2.27	2.67	2.17	1.83	1.97	1.26	1.18	2.59	---
29	1.35	.78	1.19	1.89	---	2.12	1.71	1.81	1.15	1.03	1.94	1.28
30	1.32	1.01	.97	2.24	---	2.16	1.69	1.80	1.28	1.15	2.01	1.14
31	1.23	---	1.00	2.26	---	2.18	---	1.76	---	1.19	1.79	---
MEAN	1.20	1.12	.89	1.30	2.64	2.52	2.09	1.83	---	1.18	1.29	---
MAX	1.65	1.62	1.27	2.27	3.23	3.00	2.58	2.20	---	1.44	3.33	---
MIN	.86	.59	.57	.68	1.89	2.12	1.43	1.28	---	.81	.58	---

ROANOKE RIVER BASIN  
355140076484201 COW CREEK TRANSECT (SITE #4)--Continued



## ROANOKE RIVER BASIN

0208111310 CASHIE RIVER AT SECONDARY ROAD 1257 NEAR WINDSOR, NC

LOCATION.--Lat 36°02'51", long 76°59'07", Bertie County, Hydrologic Unit 03010107, at downstream side of bridge on Secondary Road 1257, 2.0 mi upstream from State Highway 13 near Windsor.

DRAINAGE AREA.--108 mi<sup>2</sup>.

PERIOD OF RECORD.--1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 15 ft above sea level, from topographic map.

REMARKS.--Records fair except those below 10 ft<sup>3</sup>/s, which are poor. Periods of no flow occur periodically.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.05	62	141	481	127	69	31	1.5	.56	0	13
2	.01	.26	109	114	337	115	69	28	.91	.27	0	74
3	.01	.24	93	93	254	103	78	18	1.5	.14	0	98
4	.01	.13	91	80	574	87	101	11	2.8	.04	0	123
5	.01	.09	81	66	2490	75	138	14	2.4	.03	0	162
6	.01	.10	61	56	2870	67	166	16	2.1	.02	0	161
7	.01	.47	45	49	1750	63	149	18	1.3	.02	0	120
8	.01	.84	34	46	961	74	139	40	.76	.02	0	86
9	.01	.69	30	47	601	200	133	97	.43	.02	0	54
10	.01	1.2	28	45	421	658	124	134	.41	.04	0	28
11	0	2.6	29	42	322	992	117	153	.32	.02	0	14
12	0	3.9	28	59	313	797	106	140	12	.01	0	6.6
13	0	7.3	26	72	365	483	96	115	12	.01	0	3.0
14	0	16	23	67	364	309	90	85	28	.01	0	1.2
15	0	39	20	70	330	220	83	58	32	0	0	.64
16	0	45	20	134	274	169	71	41	60	0	0	.39
17	.01	29	19	335	362	137	59	42	57	.04	0	.19
18	.01	19	18	425	922	166	48	83	45	.03	0	.18
19	.01	15	17	413	1150	296	41	80	45	.02	0	.23
20	.01	15	15	399	913	458	39	45	43	.01	0	.21
21	.01	13	13	386	577	621	33	26	29	.01	0	.22
22	.01	13	18	332	379	678	29	15	18	.01	0	.19
23	.01	12	38	312	285	555	31	10	12	0	0	.14
24	.01	8.6	63	446	242	400	42	10	8.9	0	0	.06
25	.01	6.8	83	577	215	291	55	7.5	7.0	.01	0	.04
26	.01	6.8	106	558	182	218	53	6.1	5.5	.01	0	.03
27	.02	6.0	109	466	156	169	58	5.0	4.5	.01	1.5	.03
28	.02	5.7	129	554	139	137	58	4.8	2.4	.01	2.3	.02
29	.02	5.3	159	847	---	115	45	3.1	1.5	.01	9.3	.02
30	.03	17	159	898	---	96	33	2.3	.88	.01	15	.04
31	.03	---	170	704	---	81	---	2.0	---	.01	8.1	---
TOTAL	0.33	290.07	1896	8833	18229	8957	2353	1340.8	438.11	1.40	36.20	946.43
MEAN	.011	9.67	61.2	285	651	289	78.4	43.3	14.6	.045	1.17	31.5
MAX	.03	45	170	898	2870	992	166	153	60	.56	15	162
MIN	0	.05	13	42	139	63	29	2.0	.32	0	0	.02
CFSM	0	.09	.57	2.64	6.03	2.68	.73	.40	.14	0	.01	.29
IN.	0	.10	.65	3.04	6.28	3.09	.81	.46	.15	0	.01	.33

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1998, BY WATER YEAR (WY)

	MEAN	40.6	41.8	87.7	197	224	272	142	66.4	46.7	30.6	90.9	45.1
MAX	200	158	254	509	651	663	326	321	129	102	488	369	
(WY)	1997	1993	1990	1993	1998	1989	1989	1989	1992	1991	1992	1996	
MIN	0	.065	1.70	52.6	64.1	58.3	5.25	1.07	.010	0	.009	0	
(WY)	1995	1995	1995	1995	1991	1988	1995	1994	1994	1994	1993	1994	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1987 - 1998

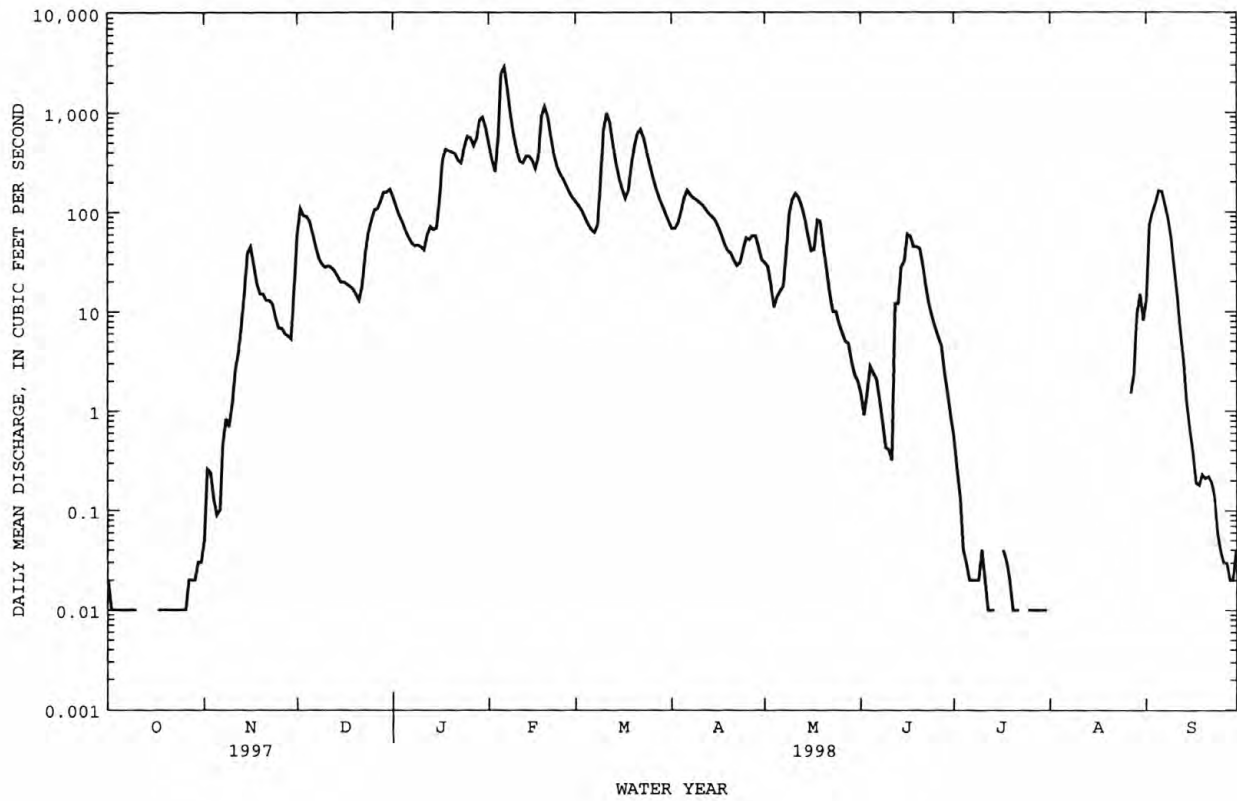
ANNUAL TOTAL	24942.22	43321.34	
ANNUAL MEAN	68.3	119	108
HIGHEST ANNUAL MEAN			156
LOWEST ANNUAL MEAN			57.1
HIGHEST DAILY MEAN	668	2870	3000
LOWEST DAILY MEAN	0	0	0
ANNUAL SEVEN-DAY MINIMUM	0	0	0
INSTANTANEOUS PEAK FLOW		3130	3150
INSTANTANEOUS PEAK STAGE		11.49	11.51
INSTANTANEOUS LOW FLOW		0*	0*
ANNUAL RUNOFF (CFSM)	.63	1.10	1.00
ANNUAL RUNOFF (INCHES)	8.59	14.92	13.61
10 PERCENT EXCEEDS	192	363	285
50 PERCENT EXCEEDS	18	19	26
90 PERCENT EXCEEDS	.04	.01	.05

\* See REMARKS.



## ROANOKE RIVER BASIN

0208111310 CASHIE RIVER AT SECONDARY ROAD 1257 NEAR WINDSOR, NC--Continued



## ROANOKE RIVER BASIN

0208114055 ROANOKE RIVER AT PLYMOUTH, NC

LOCATION.--Lat 35°53'00", long 76°45'18", North American Datum, 1983, Washington County, Hydrologic Unit 03010107, at pier on right bank, 250 ft upstream of city boat ramp, approximately 8 mi upstream from mouth, at Plymouth.

DRAINAGE AREA.--9,350 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

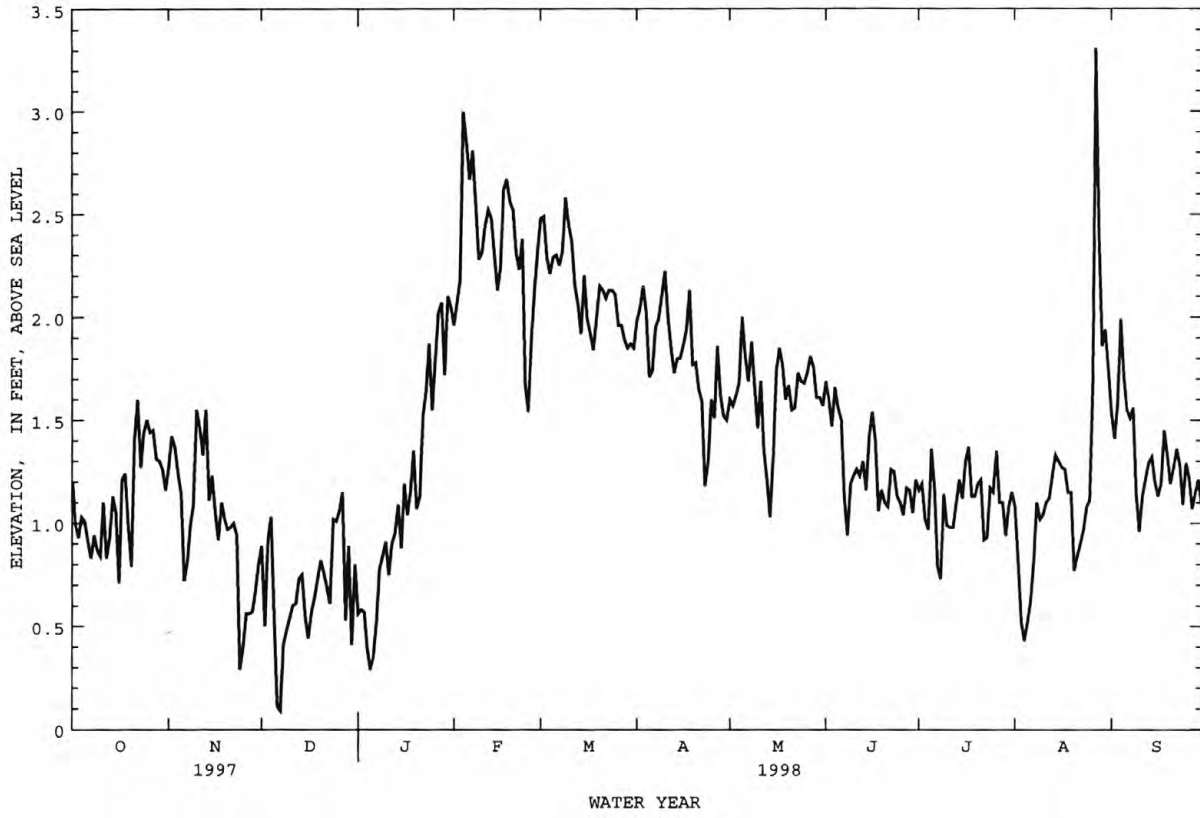
EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4.38 ft, Aug. 27, 1998; minimum elevation, -0.42 ft, Dec. 30, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4.38 ft, Aug. 27; minimum elevation, -0.42 ft, Dec. 30.

ELEVATION, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.20	1.27	.89	.56	1.96	2.48	1.98	1.60	1.69	1.16	1.08	1.53
2	.99	1.42	.50	.58	2.07	2.49	2.04	1.57	1.60	1.19	.81	1.41
3	.93	1.37	.92	.57	2.18	2.29	2.15	1.62	1.47	1.02	.52	1.59
4	1.03	1.24	1.03	.39	3.00	2.21	2.02	1.68	1.66	.97	.43	1.99
5	1.01	1.14	.55	.29	2.85	2.29	1.71	2.00	1.56	1.36	.52	1.71
6	.91	.72	.11	.35	2.67	2.30	1.74	1.81	1.50	1.17	.62	1.55
7	.83	.81	.09	.52	2.81	2.25	1.95	1.69	1.12	.79	.81	1.51
8	.94	.99	.41	.78	2.55	2.32	1.99	1.88	.94	.73	1.10	1.56
9	.87	1.09	.48	.84	2.28	2.58	2.10	1.66	1.19	1.14	1.02	1.14
10	.84	1.55	.54	.91	2.31	2.45	2.22	1.46	1.23	.99	1.04	.96
11	1.10	1.46	.60	.75	2.44	2.37	2.00	1.69	1.26	.98	1.10	1.13
12	.83	1.33	.61	.90	2.52	2.15	1.85	1.35	1.23	.98	1.12	1.21
13	.93	1.55	.73	.95	2.48	2.06	1.73	1.21	1.30	1.10	1.23	1.29
14	1.13	1.11	.75	1.09	2.30	1.92	1.80	1.03	1.16	1.21	1.33	1.32
15	1.05	1.23	.55	.88	2.13	2.20	1.80	1.33	1.42	1.12	1.30	1.20
16	.71	1.05	.44	1.19	2.24	1.99	1.86	1.74	1.54	1.30	1.27	1.13
17	1.21	.92	.57	1.04	2.62	1.92	1.94	1.85	1.40	1.37	1.26	1.19
18	1.24	1.10	.64	1.15	2.67	1.84	2.13	1.77	1.06	1.13	1.15	1.45
19	.99	1.02	.73	1.35	2.56	2.00	1.77	1.60	1.16	1.13	1.15	1.33
20	.79	.97	.82	1.07	2.52	2.15	1.78	1.67	1.10	1.19	.77	1.19
21	1.41	.98	.76	1.13	2.31	2.13	1.65	1.55	1.08	1.21	.84	1.27
22	1.60	1.00	.69	1.52	2.23	2.09	1.59	1.56	1.26	.92	.90	1.36
23	1.27	.94	.61	1.64	2.38	2.13	1.18	1.73	1.25	.93	.97	1.28
24	1.44	.29	1.02	1.87	1.67	2.13	1.30	1.69	1.13	1.17	1.08	1.09
25	1.50	.40	1.01	1.55	1.54	2.11	1.60	1.68	1.10	1.15	1.11	1.29
26	1.44	.56	1.06	1.79	1.89	1.96	1.51	1.73	1.04	1.35	1.70	1.22
27	1.45	.56	1.15	2.02	2.13	1.96	1.86	1.81	1.17	1.10	3.31	1.07
28	1.31	.57	.53	2.07	2.32	1.89	1.62	1.76	1.16	1.10	2.39	1.15
29	1.30	.67	.89	1.72	---	1.85	1.52	1.61	1.05	.94	1.86	1.21
30	1.26	.80	.41	2.10	---	1.87	1.50	1.61	1.21	1.08	1.94	1.08
31	1.16	---	.80	2.05	---	1.85	---	1.57	---	1.15	1.74	---
MEAN	1.12	1.00	.67	1.15	2.34	2.14	1.80	1.63	1.27	1.10	1.21	1.31
MAX	1.60	1.55	1.15	2.10	3.00	2.58	2.22	2.00	1.69	1.37	3.31	1.99
MIN	.71	.29	.09	.29	1.54	1.84	1.18	1.03	.94	.73	.43	.96

ROANOKE RIVER BASIN  
0208114055 ROANOKE RIVER AT PLYMOUTH, NC--Continued



## ROANOKE RIVER BASIN

0208113400 CASHIE RIVER AT SAN SOUCI FERRY, NC

LOCATION.--Lat 35°54'43", long 76°49'03", North American Datum of 1983, Bertie County, Hydrologic Unit 03010107, on pier at San Souci ferry near SR 1500 and 9.5 mi southeast of Windsor.

DRAINAGE AREA.--293 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to September 1993. August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4.05 ft, Aug. 27, 1998; minimum elevation, -0.34 ft, Dec. 30, 1997.

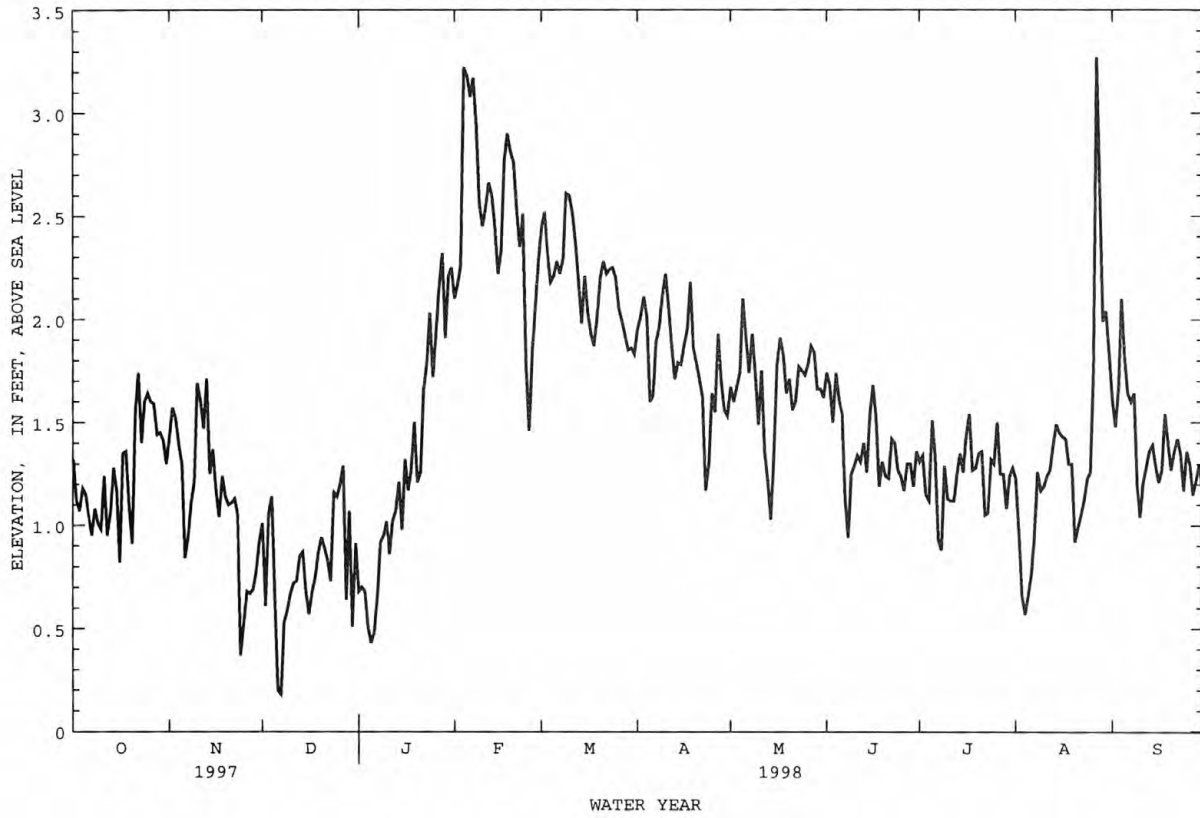
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4.05 ft, Aug. 27; minimum elevation, -0.34 ft, Dec. 30.

ELEVATION, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.32	1.43	1.01	.68	2.10	2.44	1.95	1.67	1.74	1.31	1.23	1.61
2	1.12	1.57	.61	.70	2.17	2.52	2.01	1.60	1.68	1.34	.96	1.48
3	1.07	1.52	1.06	.68	2.26	2.32	2.11	1.67	1.50	1.15	.66	1.66
4	1.18	1.39	1.14	.51	3.22	2.18	2.01	1.74	1.74	1.12	.57	2.10
5	1.15	1.30	.65	.43	3.18	2.21	1.60	2.10	1.61	1.51	.66	1.81
6	1.04	.84	.20	.48	3.08	2.28	1.63	1.91	1.54	1.33	.76	1.64
7	.95	.94	.18	.66	3.17	2.22	1.89	1.74	1.13	.93	.95	1.60
8	1.08	1.11	.53	.92	2.94	2.29	1.96	1.93	.94	.88	1.26	1.64
9	1.01	1.21	.59	.95	2.56	2.61	2.11	1.73	1.25	1.29	1.17	1.20
10	.98	1.69	.67	1.02	2.45	2.60	2.22	1.49	1.29	1.13	1.19	1.04
11	1.24	1.60	.72	.86	2.54	2.52	2.06	1.75	1.34	1.12	1.24	1.21
12	.95	1.47	.73	1.02	2.66	2.37	1.87	1.36	1.31	1.12	1.27	1.28
13	1.06	1.71	.85	1.07	2.60	2.18	1.71	1.22	1.40	1.25	1.39	1.36
14	1.28	1.25	.87	1.21	2.44	1.98	1.79	1.03	1.26	1.35	1.49	1.39
15	1.17	1.37	.68	.98	2.22	2.21	1.78	1.36	1.54	1.26	1.45	1.29
16	.82	1.17	.57	1.32	2.33	2.03	1.87	1.78	1.68	1.44	1.43	1.21
17	1.35	1.04	.68	1.17	2.76	1.93	1.95	1.91	1.52	1.54	1.42	1.27
18	1.36	1.24	.75	1.27	2.90	1.87	2.18	1.83	1.19	1.27	1.30	1.54
19	1.10	1.14	.87	1.50	2.81	2.02	1.86	1.64	1.31	1.28	1.30	1.40
20	.91	1.10	.94	1.21	2.76	2.20	1.79	1.71	1.24	1.35	.92	1.27
21	1.55	1.11	.89	1.26	2.53	2.28	1.71	1.56	1.23	1.36	.99	1.36
22	1.74	1.13	.83	1.66	2.35	2.22	1.62	1.60	1.42	1.05	1.05	1.42
23	1.40	1.05	.73	1.78	2.51	2.24	1.17	1.77	1.40	1.06	1.13	1.35
24	1.60	.37	1.16	2.03	1.78	2.25	1.30	1.75	1.27	1.32	1.23	1.17
25	1.64	.53	1.14	1.72	1.46	2.20	1.64	1.73	1.24	1.30	1.26	1.36
26	1.60	.68	1.20	1.93	1.84	2.05	1.55	1.78	1.17	1.50	1.81	1.30
27	1.59	.67	1.29	2.15	2.06	1.99	1.93	1.87	1.30	1.25	3.27	1.15
28	1.44	.69	.64	2.32	2.28	1.92	1.70	1.84	1.30	1.25	2.63	1.22
29	1.45	.78	1.07	1.91	---	1.85	1.56	1.66	1.19	1.08	1.99	1.30
30	1.41	.92	.51	2.21	---	1.86	1.53	1.66	1.36	1.24	2.04	1.17
31	1.30	---	.91	2.25	---	1.83	---	1.62	---	1.28	1.83	---
MEAN	1.25	1.13	.80	1.29	2.50	2.18	1.80	1.68	1.37	1.25	1.35	1.39
MAX	1.74	1.71	1.29	2.32	3.22	2.61	2.22	2.10	1.74	1.54	3.27	2.10
MIN	.82	.37	.18	.43	1.46	1.83	1.17	1.03	.94	.88	.57	1.04

## ROANOKE RIVER BASIN

0208113400 CASHIE RIVER AT SAN SOUCI FERRY, NC--Continued



## ROANOKE RIVER BASIN

0208114150 ROANOKE RIVER AT NC 45 NR WESTOVER, NC

LOCATION.--Lat 35°54'54", long 76°43'22", North American Datum of 1983, Bertie County, Hydrologic Unit 03010107, near center of river on south bridge fender of shipping channel, 10 ft upstream from State Highway 45 bridge, approximately 1.6 mi upstream from mouth, and 2.7 mi northwest of Westover.

DRAINAGE AREA.--9,660 mi<sup>2</sup>.

## GAGE HEIGHT RECORDS

PERIOD OF RECORD.--October 1990 to September 1993. August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is sea level, National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 4.58 ft, Aug. 27, 1998; minimum elevation, -1.20 ft, Sept. 1, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 4.58 ft, Aug. 27; minimum elevation, -0.35 ft, Dec. 29.

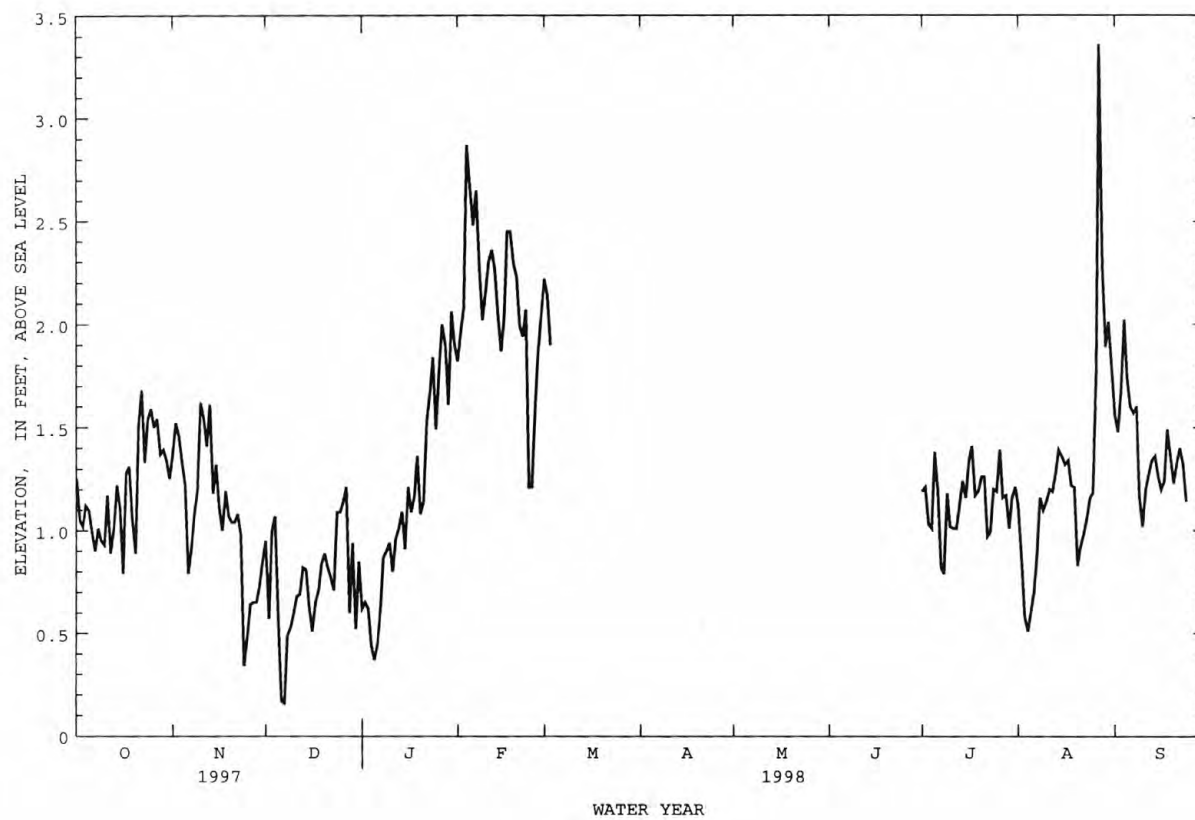
ELEVATION, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.25	1.37	.95	.62	1.82	2.22	---	---	---	1.19	1.12	1.56
2	1.05	1.52	.57	.65	1.96	2.14	---	---	---	1.21	.85	1.48
3	1.02	1.46	1.00	.62	2.08	1.90	---	---	---	1.03	.58	1.67
4	1.12	1.33	1.07	.44	2.87	---	---	---	---	1.01	.51	2.02
5	1.10	1.22	.58	.37	2.66	---	---	---	---	1.38	.60	1.74
6	.99	.79	.17	.44	2.48	---	---	---	---	1.19	.70	1.60
7	.90	.91	.16	.62	2.65	---	---	---	---	.82	.89	1.57
8	1.01	1.08	.49	.87	2.28	---	---	---	---	.79	1.16	1.60
9	.95	1.19	.53	.90	2.02	---	---	---	---	1.18	1.10	1.17
10	.93	1.62	.60	.94	2.15	---	---	---	---	1.02	1.14	1.02
11	1.17	1.54	.68	.80	2.30	---	---	---	---	1.01	1.20	1.20
12	.89	1.41	.69	.96	2.36	---	---	---	---	1.01	1.19	1.27
13	1.01	1.61	.82	1.01	2.26	---	---	---	---	1.13	1.28	1.34
14	1.22	1.18	.81	1.09	2.04	---	---	---	---	1.24	1.39	1.36
15	1.11	1.32	.63	.91	1.87	---	---	---	---	1.16	1.36	1.26
16	.79	1.11	.51	1.21	2.03	---	---	---	---	1.34	1.32	1.20
17	1.28	1.00	.65	1.09	2.45	---	---	---	---	1.41	1.34	1.24
18	1.31	1.19	.71	1.16	2.45	---	---	---	---	1.17	1.22	1.49
19	1.05	1.07	.84	1.36	2.29	---	---	---	---	1.19	1.21	1.36
20	.89	1.04	.89	1.08	2.23	---	---	---	---	1.26	.83	1.23
21	1.51	1.04	.82	1.14	1.99	---	---	---	---	1.26	.92	1.33
22	1.68	1.08	.77	1.53	1.94	---	---	---	---	.97	.98	1.40
23	1.33	.98	.71	1.66	2.07	---	---	---	---	.99	1.06	1.32
24	1.54	.34	1.09	1.84	1.21	---	---	---	---	1.20	1.16	1.14
25	1.59	.48	1.09	1.49	1.21	---	---	---	---	1.19	1.18	---
26	1.50	.64	1.14	1.77	1.62	---	---	---	---	1.39	1.79	---
27	1.54	.65	1.21	2.00	1.88	---	---	---	---	1.16	3.36	---
28	1.37	.65	.60	1.90	2.05	---	---	---	---	1.17	2.28	---
29	1.39	.73	.94	1.61	---	---	---	---	---	1.01	1.89	---
30	1.34	.85	.52	2.06	---	---	---	---	---	1.16	2.01	---
31	1.25	---	.85	1.90	---	---	---	---	---	1.21	1.79	---
MEAN	1.20	1.08	.74	1.16	2.12	---	---	---	---	1.14	1.27	---
MAX	1.68	1.62	1.21	2.06	2.87	---	---	---	---	1.41	3.36	---
MIN	.79	.34	.16	.37	1.21	---	---	---	---	.79	.51	---



## ROANOKE RIVER BASIN

0208114150 ROANOKE RIVER AT NC 45 NR WESTOVER, NC--Continued



## ROANOKE RIVER BASIN

0208114150 ROANOKE RIVER AT NC 45 NEAR WESTOVER, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1997 to September 1998.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1997 to September 1998.

pH: November 1997 to September 1998.

WATER TEMPERATURE: November 1997 to September 1998.

DISSOLVED OXYGEN: November 1997 to September 1998.

DISSOLVED OXYGEN, PERCENT SATURATION: November 1997 to September 1998.

INSTRUMENTATION.-- Water-quality monitor with satellite telemetry from March to September 1998.

REMARKS.--Station operated in cooperation with U.S. Fish and Wildlife Service to define water-quality characteristics in the Roanoke River Basin below Roanoke Rapids Dam.

EXTREMES FOR CURRENT WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2970 microsiemens, September 18; minimum recorded, 60 microsiemens, May 27.

pH: Maximum recorded, 7.4, November 26, December 10, 14; minimum recorded, 5.8, March 4.

WATER TEMPERATURE: Maximum recorded, 31.0°C, July 30; minimum recorded, 7.9°C, December 15.

DISSOLVED OXYGEN: Maximum recorded, 11.8 mg/L, March 15; minimum recorded, 1.0 mg/L, September 2.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 103 percent, March 19; minimum recorded, 13 percent September 2.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
1	---	---	---		---	---	---		130	115	121		---	---	---
2	---	---	---		---	---	---		128	118	121		---	---	---
3	---	---	---		---	---	---		129	123	126		---	---	---
4	---	---	---		---	---	---		129	122	124		---	---	---
5	---	---	---		---	---	---		129	117	122		---	---	---
6	---	---	---		---	---	---		128	119	125		---	---	---
7	---	---	---		---	---	---		136	127	130		---	---	---
8	---	---	---		---	---	---		139	129	134		---	---	---
9	---	---	---		---	---	---		142	127	132		---	---	---
10	---	---	---		---	---	---		158	125	135		---	---	---
11	---	---	---		---	---	---		182	128	143		---	---	---
12	---	---	---		---	---	---		172	144	155		---	---	---
13	---	---	---		---	---	---		168	146	154		---	---	---
14	---	---	---		---	---	---		181	150	166		---	---	---
15	---	---	---		---	---	---		167	137	149		---	---	---
16	---	---	---		---	---	---		172	136	147		---	---	---
17	---	---	---		---	---	---		---	---	---		---	---	---
18	---	---	---		---	---	---		---	---	---		---	---	---
19	---	---	---		---	---	---		---	---	---		---	---	---
20	---	---	---		---	---	---		---	---	---		---	---	---
21	---	---	---		---	---	---		---	---	---		---	---	---
22	---	---	---		---	---	---		---	---	---		---	---	---
23	---	---	---		---	---	---		---	---	---		---	---	---
24	---	---	---		---	---	---		---	---	---		---	---	---
25	---	---	---		---	---	---		---	---	---		---	---	---
26	---	---	---		131	123	126		---	---	---		---	---	---
27	---	---	---		144	114	127		---	---	---		---	---	---
28	---	---	---		126	114	122		---	---	---		---	---	---
29	---	---	---		132	115	123		---	---	---		---	---	---
30	---	---	---		129	115	122		---	---	---		---	---	---
31	---	---	---		---	---	---		---	---	---		---	---	---
MONTH	---	---	---		---	---	---		---	---	---		---	---	---

## ROANOKE RIVER BASIN

0208114150 ROANOKE RIVER AT NC 45 NEAR WESTOVER, NC--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	95	87	90	95	90	92
2	---	---	---	---	---	---	92	85	88	93	90	92
3	---	---	---	---	---	---	91	86	89	95	92	93
4	---	---	---	---	---	---	90	86	88	98	93	95
5	---	---	---	---	---	---	90	87	89	98	91	94
6	---	---	---	---	---	---	92	88	90	93	91	92
7	---	---	---	---	---	---	93	89	91	---	---	---
8	---	---	---	---	---	---	94	88	91	---	---	---
9	---	---	---	---	---	---	91	85	89	---	---	---
10	---	---	---	---	---	---	89	85	87	---	---	---
11	---	---	---	---	---	---	89	87	88	---	---	---
12	---	---	---	---	---	---	90	88	89	---	---	---
13	---	---	---	---	---	---	92	88	90	---	---	---
14	---	---	---	---	---	---	92	90	91	---	---	---
15	---	---	---	---	---	---	93	91	92	---	---	---
16	---	---	---	---	---	---	94	91	92	---	---	---
17	---	---	---	---	---	---	94	92	93	---	---	---
18	---	---	---	---	---	---	97	94	95	---	---	---
19	---	---	---	---	---	---	96	94	95	---	---	---
20	---	---	---	---	---	---	98	94	96	---	---	---
21	---	---	---	---	---	---	97	94	96	---	---	---
22	---	---	---	---	---	---	98	95	96	---	---	---
23	---	---	---	---	---	---	96	95	96	---	---	---
24	---	---	---	92	87	89	97	95	96	---	---	---
25	---	---	---	92	86	90	98	95	96	---	---	---
26	---	---	---	92	88	90	97	94	95	---	---	---
27	---	---	---	93	88	91	99	93	96	71	60	66
28	---	---	---	95	91	92	94	92	93	64	63	63
29	---	---	---	97	91	94	95	92	93	69	63	66
30	---	---	---	96	89	93	94	92	93	71	68	69
31	---	---	---	96	91	92	---	---	---	72	70	71
MONTH	---	---	---	---	---	---	99	85	92	---	---	---

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	75	72	73	127	106	113	147	101	130	147	94	117
2	75	72	73	120	101	108	143	116	128	160	129	139
3	74	72	74	117	111	114	163	120	136	146	133	138
4	79	67	74	113	104	106	156	124	141	167	134	305
5	74	72	73	123	109	116	162	134	147	167	128	140
6	75	73	74	160	102	120	167	140	155	147	137	140
7	76	75	76	129	111	121	169	112	146	171	143	157
8	78	76	77	134	124	130	159	131	145	1640	153	540
9	80	78	79	161	126	139	143	120	129	218	131	171
10	81	79	79	147	113	130	129	113	122	165	132	150
11	83	80	81	142	114	132	156	129	140	171	149	158
12	84	81	82	129	113	117	169	130	146	725	169	204
13	86	83	84	134	114	123	144	92	128	726	163	300
14	91	84	86	140	116	128	154	91	127	183	151	173
15	93	87	89	151	117	131	173	110	145	163	138	155
16	96	89	93	136	117	127	148	116	131	1730	157	342
17	101	94	98	147	114	123	140	120	128	2950	1730	2640
18	106	98	102	131	109	117	137	122	129	2970	197	2350
19	115	101	105	130	118	125	138	114	126	216	164	192
20	107	99	101	132	123	127	159	120	139	180	156	165
21	109	101	104	134	121	127	151	116	130	197	168	181
22	115	102	109	132	118	123	146	133	142	214	179	194
23	119	105	111	130	116	123	143	131	135	821	173	276
24	116	107	112	132	115	123	205	131	148	195	168	188
25	119	103	110	124	108	117	213	133	165	1730	167	432
26	117	107	111	142	102	121	502	107	175	1790	383	1650
27	113	109	111	145	112	123	898	459	594	1840	543	1690
28	109	102	105	140	122	131	563	111	269	2230	1640	1850
29	113	100	103	138	130	135	113	93	100	2410	163	1130
30	120	105	112	138	115	126	123	93	103	185	161	169
31	---	---	---	138	127	130	100	93	97	---	---	---
MONTH	120	67	92	161	101	123	898	91	154	2970	94	548

## ROANOKE RIVER BASIN

0208114150 ROANOKE RIVER AT NC 45 NEAR WESTOVER, NC--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	7.4	7.3	7.4	---	---	---
2	---	---	---	---	---	---	7.4	7.3	7.3	---	---	---
3	---	---	---	---	---	---	7.4	7.3	7.4	---	---	---
4	---	---	---	---	---	---	7.4	7.3	7.4	---	---	---
5	---	---	---	---	---	---	7.3	7.3	7.3	---	---	---
6	---	---	---	---	---	---	7.4	7.3	7.3	---	---	---
7	---	---	---	---	---	---	7.4	7.3	7.4	---	---	---
8	---	---	---	---	---	---	7.4	7.4	7.4	---	---	---
9	---	---	---	---	---	---	7.4	7.4	7.4	---	---	---
10	---	---	---	---	---	---	7.4	7.4	7.4	---	---	---
11	---	---	---	---	---	---	7.4	7.4	7.4	---	---	---
12	---	---	---	---	---	---	7.4	7.4	7.4	---	---	---
13	---	---	---	---	---	---	7.4	7.4	7.4	---	---	---
14	---	---	---	---	---	---	7.4	7.4	7.4	---	---	---
15	---	---	---	---	---	---	7.4	7.4	7.4	---	---	---
16	---	---	---	---	---	---	7.4	7.4	7.4	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	7.4	7.4	7.4	---	---	---	---	---	---
27	---	---	---	7.4	7.4	7.4	---	---	---	---	---	---
28	---	---	---	7.4	7.4	7.4	---	---	---	---	---	---
29	---	---	---	7.4	7.4	7.4	---	---	---	---	---	---
30	---	---	---	7.4	7.4	7.4	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	6.9	6.8	6.8	7.2	7.1	7.2
2	---	---	---	---	---	---	6.8	6.7	6.7	7.2	7.1	7.1
3	---	---	---	---	---	---	6.8	6.7	6.7	7.2	7.2	7.2
4	---	---	---	5.9	5.8	5.9	6.8	6.7	6.7	7.2	7.1	7.2
5	---	---	---	6.1	5.8	5.9	6.8	6.7	6.7	7.2	7.1	7.2
6	---	---	---	6.1	5.8	5.9	6.8	6.8	6.8	7.1	7.1	7.1
7	---	---	---	6.1	5.9	5.9	6.9	6.8	6.8	---	---	---
8	---	---	---	6.1	5.9	5.9	6.9	6.8	6.9	6.9	6.9	6.9
9	---	---	---	6.2	6.0	6.0	7.0	6.9	6.9	6.9	6.8	6.8
10	---	---	---	6.3	5.9	6.0	7.1	6.9	7.0	6.9	6.8	6.8
11	---	---	---	6.3	5.9	6.0	7.1	7.0	7.0	6.9	6.8	6.9
12	---	---	---	6.0	5.9	5.9	7.2	7.1	7.1	---	---	---
13	---	---	---	6.2	5.9	6.0	7.2	7.1	7.1	---	---	---
14	---	---	---	6.2	6.0	6.0	7.2	7.1	7.2	6.8	6.7	6.7
15	---	---	---	6.3	6.1	6.2	7.2	7.2	7.2	6.7	6.6	6.7
16	---	---	---	6.3	6.1	6.2	7.2	7.1	7.2	6.7	6.6	6.6
17	---	---	---	6.4	6.2	6.2	7.2	7.1	7.2	6.6	6.5	6.5
18	---	---	---	6.6	6.2	6.3	7.1	7.0	7.1	6.5	6.4	6.4
19	---	---	---	6.5	6.4	6.4	7.1	7.0	7.1	---	---	---
20	---	---	---	6.8	6.5	6.5	7.1	7.0	7.1	---	---	---
21	---	---	---	6.9	6.5	6.6	7.1	7.1	7.1	---	---	---
22	---	---	---	6.9	6.6	6.7	7.2	7.1	7.1	---	---	---
23	---	---	---	7.0	6.7	6.8	7.3	7.1	7.1	---	---	---
24	---	---	---	7.0	6.9	7.0	7.3	7.3	7.3	---	---	---
25	---	---	---	7.0	6.9	6.9	7.3	7.2	7.3	---	---	---
26	---	---	---	7.0	6.9	7.0	7.2	7.2	7.2	---	---	---
27	---	---	---	7.0	6.9	7.0	7.2	7.2	7.2	6.7	6.6	6.7
28	---	---	---	7.0	6.9	7.0	7.2	7.1	7.2	6.7	6.6	6.7
29	---	---	---	7.0	6.9	6.9	7.2	7.2	7.2	6.7	6.6	6.7
30	---	---	---	7.0	6.9	6.9	7.2	7.2	7.2	6.7	6.7	6.7
31	---	---	---	6.9	6.8	6.9	---	---	---	6.7	6.7	6.7
MONTH	---	---	---	---	---	---	7.3	6.7	7.0	---	---	---



## ROANOKE RIVER BASIN

0208114150 ROANOKE RIVER AT NC 45 NEAR WESTOVER, NC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	18.0	17.8	17.9	17.2	16.5	16.8
2	---	---	---	---	---	---	18.3	17.6	17.9	17.9	17.1	17.4
3	---	---	---	---	---	---	18.3	17.2	17.8	18.3	17.5	17.9
4	---	---	---	11.0	10.2	10.4	17.2	15.6	16.5	18.8	18.1	18.4
5	---	---	---	10.5	9.8	10.1	15.6	14.6	14.9	18.5	18.2	18.4
6	---	---	---	10.5	9.7	10.1	14.7	14.2	14.5	19.0	18.2	18.6
7	---	---	---	10.6	9.8	10.1	15.0	14.5	14.7	---	---	---
8	---	---	---	11.2	10.0	10.6	16.3	15.0	15.7	19.5	18.7	19.1
9	---	---	---	12.9	11.1	11.9	17.0	16.3	16.7	19.3	18.9	19.1
10	---	---	---	12.8	11.8	12.2	16.9	15.8	16.5	18.9	18.5	18.7
11	---	---	---	11.9	10.2	10.9	15.8	15.0	15.2	18.7	17.9	18.3
12	---	---	---	10.6	9.2	9.7	15.2	14.9	15.1	---	---	---
13	---	---	---	10.0	8.5	8.9	15.1	14.8	15.0	---	---	---
14	---	---	---	9.4	8.2	8.7	15.1	14.7	14.9	16.6	15.9	16.2
15	---	---	---	10.0	9.1	9.5	15.8	14.7	15.1	17.4	16.4	16.8
16	---	---	---	10.6	8.5	9.5	16.8	15.8	16.3	18.4	17.0	17.7
17	---	---	---	9.1	8.2	8.5	17.6	16.8	17.2	18.6	18.1	18.3
18	---	---	---	9.8	8.1	8.8	17.6	17.2	17.5	19.3	18.4	18.8
19	---	---	---	10.8	9.6	10.3	17.2	16.6	16.9	---	---	---
20	---	---	---	11.8	10.6	10.9	17.6	17.0	17.3	---	---	---
21	---	---	---	11.7	10.9	11.3	17.4	16.8	17.2	---	---	---
22	---	---	---	12.8	11.0	11.3	16.8	15.8	16.4	---	---	---
23	---	---	---	11.6	10.1	11.1	15.8	15.3	15.5	---	---	---
24	---	---	---	11.3	10.5	11.0	15.9	15.3	15.6	---	---	---
25	---	---	---	10.7	10.2	10.4	16.5	15.6	16.0	---	---	---
26	---	---	---	12.1	10.7	11.3	17.1	16.3	16.7	---	---	---
27	---	---	---	13.8	12.1	12.9	17.1	16.6	17.0	22.4	21.8	22.1
28	---	---	---	15.0	13.8	14.4	16.6	16.0	16.3	22.4	21.8	22.1
29	---	---	---	16.2	15.0	15.6	16.5	15.9	16.2	22.4	21.6	22.0
30	---	---	---	17.1	16.2	16.7	16.6	16.1	16.4	22.9	22.0	22.4
31	---	---	---	17.9	17.1	17.5	---	---	---	23.3	22.5	22.9
MONTH	---	---	---	---	---	---	18.3	14.2	16.2	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.6	23.0	23.2	29.2	28.4	28.8	29.7	28.6	29.2	28.5	28.0	28.1
2	23.6	23.0	23.3	29.2	28.9	29.0	29.0	27.8	28.4	28.5	28.0	28.2
3	24.0	23.0	23.5	29.2	28.8	29.0	28.1	27.2	27.7	28.3	27.9	28.1
4	23.9	23.4	23.7	29.2	28.6	28.9	28.1	27.1	27.5	28.0	26.7	27.3
5	23.4	23.0	23.1	29.0	28.5	28.7	28.3	26.9	27.4	27.6	26.8	27.1
6	23.0	22.2	22.6	29.0	28.3	28.6	28.2	27.4	27.7	27.9	27.3	27.5
7	22.2	21.5	21.8	28.8	28.3	28.5	27.9	27.4	27.6	28.0	27.1	27.4
8	21.5	21.0	21.2	29.0	28.4	28.6	28.0	27.7	27.8	27.9	26.4	27.2
9	21.1	20.9	21.0	29.1	28.7	28.8	28.1	27.9	28.0	26.6	25.7	26.1
10	21.5	20.8	21.1	29.1	28.5	28.8	29.2	28.1	28.7	25.7	24.7	25.1
11	22.0	21.3	21.6	29.5	28.9	29.1	28.8	28.5	28.6	25.3	24.6	24.9
12	22.6	21.8	22.2	29.1	28.5	28.7	29.2	28.5	28.9	25.2	24.5	25.0
13	23.5	22.5	22.9	28.9	28.3	28.5	29.7	29.1	29.3	25.5	24.5	25.2
14	23.8	23.0	23.4	28.7	28.3	28.5	29.6	29.0	29.3	26.0	25.4	25.8
15	24.3	23.5	23.9	28.8	28.3	28.5	29.4	28.8	29.0	26.1	25.9	25.9
16	24.9	24.0	24.4	29.0	28.5	28.8	29.9	29.2	29.4	26.1	25.4	25.9
17	25.7	24.7	25.1	28.8	28.2	28.4	29.9	29.1	29.4	25.6	25.1	25.2
18	26.1	25.2	25.5	28.6	28.0	28.3	29.8	29.2	29.5	27.1	25.1	25.5
19	26.1	25.7	25.8	29.4	28.5	28.9	29.8	29.1	29.6	27.3	26.8	26.9
20	26.2	25.5	25.8	29.7	28.6	29.1	29.2	28.6	28.8	27.1	26.5	26.7
21	26.3	26.0	26.1	29.8	29.1	29.5	29.0	27.9	28.3	27.2	26.9	27.0
22	26.9	26.1	26.4	30.0	29.4	29.7	28.7	28.0	28.2	27.2	27.0	27.1
23	27.0	26.7	26.8	30.3	29.5	29.8	28.8	28.0	28.3	27.3	26.4	26.8
24	27.9	26.9	27.2	30.1	29.8	29.9	28.6	27.3	28.1	26.7	26.0	26.3
25	28.2	27.4	27.7	30.2	29.7	29.9	29.0	27.4	28.1	26.4	24.1	25.6
26	29.2	28.0	28.5	30.2	29.5	29.8	29.0	27.1	28.4	25.8	24.1	24.3
27	29.3	28.8	29.1	29.8	29.4	29.6	27.1	26.1	26.5	25.9	24.1	24.3
28	29.1	28.2	28.5	29.6	29.2	29.4	27.1	26.2	26.6	24.4	23.9	24.0
29	28.9	28.2	28.4	30.3	29.5	29.9	27.6	26.9	27.2	26.7	24.0	25.3
30	28.9	28.2	28.6	31.0	29.9	30.2	28.2	27.3	27.7	26.7	26.1	26.3
31	---	---	---	30.4	29.6	30.0	28.1	27.8	27.9	---	---	---
MONTH	29.3	20.8	24.7	31.0	28.0	29.1	29.9	26.1	28.3	28.5	23.9	26.2



## ROANOKE RIVER BASIN

0208114150 ROANOKE RIVER AT NC 45 NEAR WESTOVER, NC--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	10.5	10.2	10.4	---	---	---
2	---	---	---	---	---	---	10.5	10.2	10.4	---	---	---
3	---	---	---	---	---	---	10.5	10.3	10.4	---	---	---
4	---	---	---	---	---	---	10.4	10.2	10.4	---	---	---
5	---	---	---	---	---	---	10.4	10.1	10.2	---	---	---
6	---	---	---	---	---	---	10.7	10.3	10.5	---	---	---
7	---	---	---	---	---	---	11.0	10.7	10.8	---	---	---
8	---	---	---	---	---	---	10.9	10.6	10.8	---	---	---
9	---	---	---	---	---	---	11.0	10.6	10.8	---	---	---
10	---	---	---	---	---	---	11.1	10.9	11.0	---	---	---
11	---	---	---	---	---	---	11.3	10.7	11.1	---	---	---
12	---	---	---	---	---	---	11.2	10.7	11.0	---	---	---
13	---	---	---	---	---	---	11.0	10.7	10.9	---	---	---
14	---	---	---	---	---	---	11.3	10.6	10.9	---	---	---
15	---	---	---	---	---	---	11.5	10.9	11.2	---	---	---
16	---	---	---	---	---	---	11.6	11.0	11.4	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	10.4	9.8	10.0	---	---	---	---	---	---
27	---	---	---	10.3	9.8	10.1	---	---	---	---	---	---
28	---	---	---	10.5	10.1	10.3	---	---	---	---	---	---
29	---	---	---	10.5	10.4	10.4	---	---	---	---	---	---
30	---	---	---	10.6	10.4	10.5	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	8.6	7.0	7.7	---	---	---
2	---	---	---	---	---	---	7.4	6.0	6.5	---	---	---
3	---	---	---	---	---	---	7.5	6.3	6.8	---	---	---
4	---	---	---	9.6	8.7	9.0	7.0	6.4	6.7	---	---	---
5	---	---	---	10.0	9.0	9.4	8.0	6.5	6.9	---	---	---
6	---	---	---	10.3	9.4	9.7	8.5	7.7	7.9	---	---	---
7	---	---	---	10.4	9.5	9.8	8.8	7.9	8.3	---	---	---
8	---	---	---	10.1	9.3	9.6	8.8	7.9	8.4	7.4	7.0	7.2
9	---	---	---	9.9	9.0	9.4	8.7	7.1	7.9	7.0	6.6	6.8
10	---	---	---	10.2	8.8	9.2	7.5	6.8	7.1	6.9	6.5	6.8
11	---	---	---	10.5	9.2	9.8	7.8	6.7	7.0	7.3	6.8	7.1
12	---	---	---	11.1	9.8	10.3	8.3	7.7	8.0	---	---	---
13	---	---	---	11.5	10.3	10.8	8.6	7.9	8.2	---	---	---
14	---	---	---	11.7	10.6	11.2	8.8	7.9	8.4	8.1	7.7	7.9
15	---	---	---	11.8	10.8	11.2	8.1	7.6	7.8	8.4	8.0	8.2
16	---	---	---	11.6	10.4	11.1	8.4	7.5	8.0	8.3	7.9	8.1
17	---	---	---	11.1	10.7	10.9	8.2	7.0	7.7	8.1	7.1	7.7
18	---	---	---	11.6	10.6	11.0	7.4	6.2	7.0	7.1	6.6	6.8
19	---	---	---	11.7	10.4	10.9	6.9	6.2	6.4	---	---	---
20	---	---	---	10.6	9.9	10.2	7.1	6.5	6.8	---	---	---
21	---	---	---	10.4	9.6	10.0	7.3	6.5	6.7	---	---	---
22	---	---	---	10.6	9.3	10.1	7.2	6.8	7.0	---	---	---
23	---	---	---	10.8	9.7	10.3	7.0	6.5	6.7	---	---	---
24	---	---	---	10.8	9.9	10.2	7.3	6.9	7.1	---	---	---
25	---	---	---	10.7	9.8	10.0	7.4	7.0	7.2	---	---	---
26	---	---	---	10.9	10.2	10.6	7.1	6.8	7.0	---	---	---
27	---	---	---	10.9	9.9	10.4	7.0	6.4	6.8	5.5	5.0	5.2
28	---	---	---	10.5	9.5	10.0	6.4	5.8	6.1	5.2	4.8	5.0
29	---	---	---	10.1	9.1	9.6	6.4	6.2	6.3	5.2	4.8	5.0
30	---	---	---	9.7	8.4	9.0	6.6	6.2	6.4	5.4	5.1	5.2
31	---	---	---	9.1	7.8	8.4	---	---	---	5.3	5.0	5.1
MONTH	---	---	---	---	---	---	8.8	5.8	7.2	---	---	---

## ROANOKE RIVER BASIN

0208114150 ROANOKE RIVER AT NC 45 NEAR WESTOVER, NC--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	5.2	5.0	5.1	5.1	4.3	4.8	6.2	5.4	5.7	2.4	1.3	1.8
2	5.1	4.7	4.9	5.0	4.5	4.7	6.5	5.7	6.0	2.0	1.0	1.5
3	5.1	4.7	4.9	5.1	4.5	4.7	6.9	6.2	6.5	2.8	1.4	2.0
4	5.1	4.8	5.0	5.7	4.9	5.2	6.8	6.3	6.5	6.5	2.2	3.5
5	4.9	4.7	4.8	5.6	4.5	5.2	7.0	6.1	6.4	3.6	2.7	3.2
6	4.9	4.6	4.8	5.8	4.9	5.3	7.0	6.0	6.3	3.8	3.1	3.4
7	5.3	4.7	4.9	5.8	4.6	5.1	7.1	5.9	6.4	3.9	3.2	3.4
8	5.7	5.3	5.5	5.4	4.5	4.9	6.9	5.8	6.1	5.0	3.7	4.4
9	5.7	5.5	5.5	5.4	4.3	4.9	6.7	5.9	6.3	4.9	3.6	4.1
10	5.6	5.3	5.4	5.3	4.8	5.1	7.0	5.8	6.3	4.7	4.3	4.5
11	5.5	5.3	5.4	5.7	5.0	5.3	6.5	5.1	5.7	5.0	4.2	4.6
12	5.5	5.2	5.3	5.7	5.2	5.3	5.6	4.4	5.0	5.3	3.7	4.2
13	5.5	5.1	5.3	6.1	5.3	5.5	6.7	4.7	5.6	4.6	3.4	4.1
14	5.4	4.9	5.1	6.1	5.4	5.7	6.7	5.1	5.9	4.3	3.5	3.8
15	5.1	4.8	4.9	6.2	5.0	5.7	6.5	4.7	5.2	4.3	3.6	4.0
16	5.0	4.6	4.8	6.2	5.3	5.7	5.6	4.7	5.2	5.3	3.6	4.3
17	4.9	4.4	4.7	6.2	5.4	5.8	5.7	4.8	5.3	5.4	4.4	4.9
18	4.7	4.2	4.4	5.9	5.4	5.7	5.8	4.8	5.3	5.9	3.9	4.4
19	4.7	4.3	4.5	6.1	5.4	5.8	6.5	4.8	5.6	6.0	5.0	5.5
20	4.9	4.4	4.6	6.0	5.4	5.8	6.3	5.0	5.5	5.9	4.3	5.2
21	4.8	4.6	4.6	6.1	5.6	5.7	6.0	4.6	5.2	5.3	3.4	4.2
22	4.8	4.4	4.6	6.2	5.3	5.9	5.7	4.4	5.0	3.8	2.8	3.4
23	4.7	3.9	4.5	5.9	5.1	5.3	5.9	4.4	5.2	5.8	2.6	4.5
24	4.6	3.9	4.2	5.8	5.4	5.6	5.7	4.1	5.0	5.2	4.4	4.7
25	4.6	3.9	4.2	5.8	5.1	5.5	5.3	3.5	4.4	5.9	4.8	5.3
26	4.9	4.1	4.4	6.0	5.2	5.5	7.2	3.8	5.0	6.0	5.1	5.5
27	5.5	4.8	5.1	5.5	4.8	5.2	7.2	6.1	6.9	5.6	4.8	5.3
28	6.0	5.4	5.6	5.4	4.9	5.1	6.3	3.7	4.6	5.8	4.8	5.3
29	5.8	5.3	5.6	5.2	4.4	4.8	3.8	2.5	2.9	6.8	4.4	5.4
30	5.7	4.3	5.0	6.2	4.2	5.3	3.0	2.4	2.7	6.7	5.6	6.1
31	---	---	---	5.6	4.7	5.1	2.8	2.3	2.5	---	---	---
MONTH	6.0	3.9	4.9	6.2	4.2	5.3	7.2	2.3	5.4	6.8	1.0	4.2

OXYGEN DISSOLVED (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

## ROANOKE RIVER BASIN

0208114150 ROANOKE RIVER AT NC 45 NEAR WESTOVER, NC--Continued

OXYGEN DISSOLVED (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	91	74	81	---	---	---
2	---	---	---	---	---	---	78	63	69	---	---	---
3	---	---	---	---	---	---	79	66	72	---	---	---
4	---	---	---	85	78	81	73	65	68	---	---	---
5	---	---	---	89	81	84	79	64	68	---	---	---
6	---	---	---	91	84	87	84	75	78	---	---	---
7	---	---	---	92	85	87	87	78	82	---	---	---
8	---	---	---	89	84	87	88	80	84	81	76	78
9	---	---	---	90	84	87	89	73	81	76	70	73
10	---	---	---	94	82	86	77	69	73	74	70	73
11	---	---	---	94	84	88	78	67	69	78	72	75
12	---	---	---	97	87	91	83	77	79	---	---	---
13	---	---	---	99	89	93	85	79	82	---	---	---
14	---	---	---	101	92	96	88	78	83	82	77	80
15	---	---	---	102	95	98	81	76	77	87	82	85
16	---	---	---	102	92	97	85	78	82	88	84	86
17	---	---	---	95	91	93	85	74	80	85	75	82
18	---	---	---	102	92	95	77	65	73	75	70	72
19	---	---	---	103	94	98	71	64	66	---	---	---
20	---	---	---	95	90	92	74	68	70	---	---	---
21	---	---	---	96	89	92	75	68	70	---	---	---
22	---	---	---	97	88	92	73	70	71	---	---	---
23	---	---	---	98	88	94	71	65	67	---	---	---
24	---	---	---	99	89	93	73	69	71	---	---	---
25	---	---	---	96	88	89	74	71	73	---	---	---
26	---	---	---	101	94	97	73	70	72	---	---	---
27	---	---	---	102	95	99	72	66	70	63	57	60
28	---	---	---	102	94	98	66	60	62	60	56	58
29	---	---	---	101	92	96	65	63	64	61	54	58
30	---	---	---	99	87	93	67	63	65	63	59	61
31	---	---	---	95	82	88	---	---	---	62	59	61
MONTH	---	---	---	---	---	---	91	60	73	---	---	---

OXYGEN DISSOLVED (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	61	60	60	68	56	62	81	70	75	32	17	24
2	61	56	59	65	59	62	84	73	78	25	13	19
3	62	56	59	67	58	62	87	79	82	35	18	26
4	62	58	60	76	64	69	87	79	83	82	28	45
5	58	56	57	73	59	68	88	76	80	46	34	40
6	59	55	57	76	65	70	89	77	80	49	40	44
7	63	56	58	76	61	67	89	75	81	50	40	44
8	65	61	63	71	59	65	87	73	78	62	49	55
9	65	64	64	71	58	65	85	75	80	61	46	50
10	65	61	63	69	64	67	91	74	81	58	53	55
11	64	62	63	76	67	70	84	65	74	60	51	56
12	65	62	63	76	68	71	71	56	65	64	46	52
13	66	61	63	81	70	74	87	61	74	57	43	50
14	65	59	61	81	72	76	88	66	77	52	44	48
15	62	59	60	82	67	76	84	61	68	54	45	50
16	62	58	60	82	71	76	73	61	68	66	46	54
17	60	56	58	82	72	77	75	63	70	67	55	60
18	59	53	56	78	72	75	76	64	70	74	50	55
19	59	55	56	82	72	77	85	64	74	77	64	70
20	61	56	58	82	73	78	81	66	71	74	54	65
21	60	57	59	83	75	77	79	60	68	67	42	53
22	61	55	58	85	70	79	75	58	66	48	36	43
23	61	51	57	78	67	71	78	58	68	72	32	56
24	60	51	54	77	71	73	75	54	65	65	54	58
25	60	51	54	77	68	72	69	46	57	71	59	65
26	65	53	58	78	68	72	91	49	66	72	63	66
27	72	63	68	72	64	69	91	78	87	69	58	63
28	79	70	73	70	64	66	80	48	58	69	58	64
29	76	69	73	69	58	64	48	33	38	85	54	67
30	75	56	65	83	55	70	39	31	35	83	69	76
31	---	---	---	74	62	67	37	30	33	---	---	---
MONTH	79	51	61	85	55	71	91	30	69	85	13	52

## PAMLICO RIVER BASIN

02081500 TAR RIVER NEAR TAR RIVER, NC

LOCATION.--Lat 36°11'41", long 78°35'00", Granville County, Hydrologic Unit 03020101, on right bank 90 ft upstream from bridge on State Highway 96, 1.2 mi upstream from Fishing Creek, 2.5 mi east of town of Tar River, and 8 mi south of Oxford.

DRAINAGE AREA.--167 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 972: 1940-41. WSP 1112: 1941 (calendar year figures). WSP 1273: 1941(M). WSP 1723:

GAGE.--Water-stage recorder with satellite telemetry and concrete control with sharp-crested weir. Datum of gage is 287.25 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Occasional intermittent diversion for irrigation. Maximum discharge for period of record from rating curve extended above 11,500 ft<sup>3</sup>/s, by logarithmic plotting. Minimum discharge for current water year also occurred Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	7.4	29	91	196	115	100	63	40	13	9.2	3.2
2	1.5	7.1	33	70	155	103	258	277	36	12	7.9	3.3
3	1.4	6.3	37	58	131	95	152	167	32	11	7.1	4.2
4	1.3	7.9	35	50	2390	88	243	162	30	10	6.4	162
5	1.3	6.9	32	44	3260	82	322	114	32	13	5.7	138
6	1.2	6.4	28	41	936	78	180	80	32	13	5.2	42
7	1.3	7.9	24	40	431	76	134	67	31	13	4.8	21
8	1.4	8.1	22	398	322	365	106	171	30	11	3.9	13
9	1.3	7.2	20	1030	258	2170	266	340	26	11	6.0	8.8
10	1.1	9.4	22	319	192	1310	462	165	26	50	6.9	7.4
11	1.2	8.3	28	160	161	328	324	102	28	50	5.8	5.7
12	1.2	7.1	29	105	162	214	211	92	27	24	4.5	4.6
13	1.1	8.6	29	84	155	167	147	80	26	17	3.7	3.7
14	1.1	58	29	77	120	139	121	71	24	14	3.3	2.7
15	1.6	131	26	203	101	118	114	61	23	11	3.7	2.2
16	1.2	62	23	1650	93	101	104	52	22	9.6	4.2	1.6
17	1.4	37	21	1380	2380	92	772	85	20	8.6	5.2	1.2
18	1.3	25	20	425	4470	1430	1750	99	19	8.4	7.0	.99
19	1.9	18	19	309	583	9590	484	57	19	7.8	11	1.0
20	3.0	16	18	564	296	5170	422	43	18	7.4	7.8	.87
21	2.4	15	17	273	216	6540	265	36	17	7.4	6.3	.74
22	2.8	299	21	175	171	2190	179	34	17	7.3	5.1	.70
23	1.8	283	46	902	325	488	156	52	16	100	3.8	.68
24	1.6	96	58	1880	498	312	131	98	15	169	3.9	.50
25	1.9	59	89	570	254	233	102	75	22	57	3.4	.38
26	2.6	41	121	297	177	187	87	60	19	32	3.2	.28
27	4.8	35	103	381	142	168	79	113	16	23	2.9	.33
28	3.2	28	345	2950	125	148	72	168	15	21	3.1	.38
29	4.0	24	212	2000	---	130	68	88	14	17	3.2	.35
30	6.9	23	147	502	---	117	63	63	13	13	3.1	.56
31	5.6	---	126	281	---	102	---	48	---	11	3.3	---
TOTAL	66.1	1348.6	1809	17309	18700	32446	7874	3183	705	772.5	160.6	432.36
MEAN	2.13	45.0	58.4	558	668	1047	262	103	23.5	24.9	5.18	14.4
MAX	6.9	299	345	2950	4470	9590	1750	340	40	169	11	162
MIN	1.1	6.3	17	40	93	76	63	34	13	7.3	2.9	.28
CFSM	.01	.27	.35	3.34	4.00	6.27	1.57	.61	.14	.15	.03	.09
IN.	.01	.30	.40	3.86	4.17	7.23	1.75	.71	.16	.17	.04	.10

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

MEAN	65.8	114	149	261	326	340	216	122	77.9	79.7	77.7	72.3
MAX	565	599	558	819	798	1047	676	475	488	677	542	825
(WY)	1972	1973	1973	1978	1960	1998	1978	1978	1982	1975	1955	1996
MIN	.41	.28	4.39	7.04	62.6	61.0	33.1	16.9	4.30	.92	1.39	.28
(WY)	1971	1942	1942	1942	1968	1981	1995	1941	1970	1966	1976	1968

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

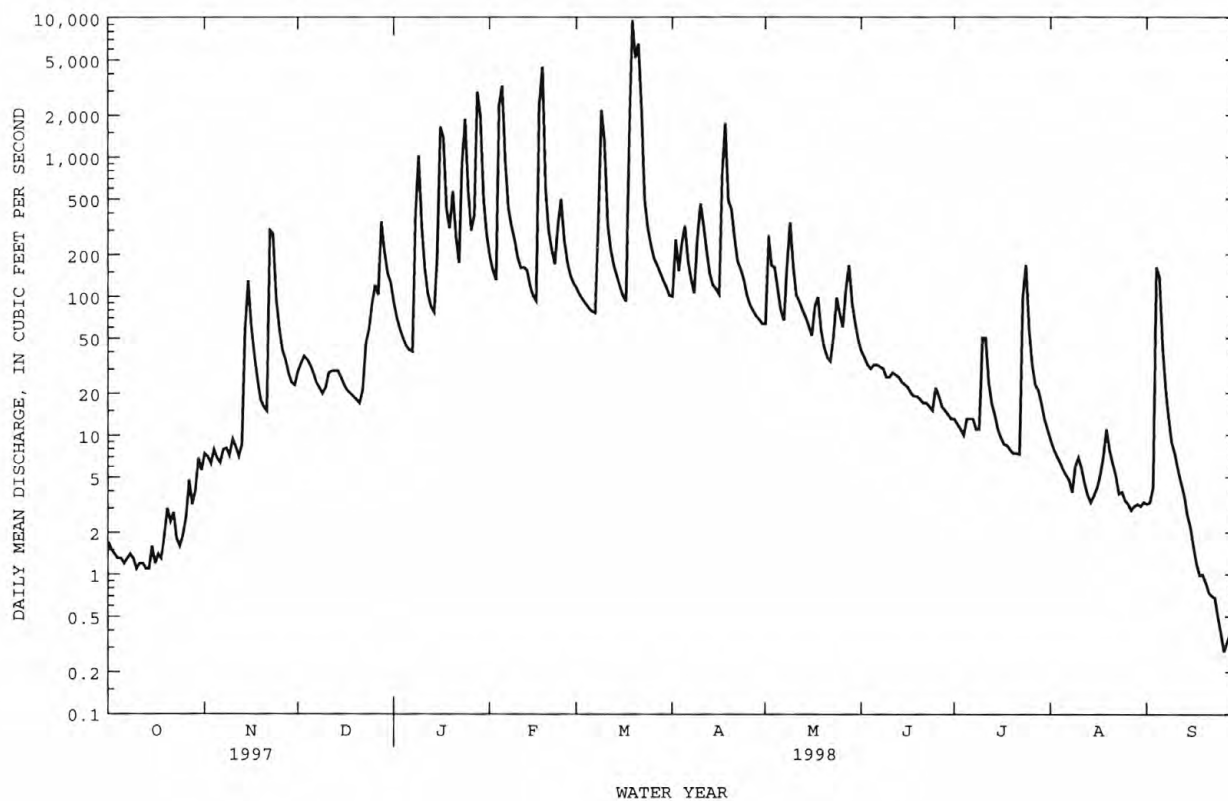
## FOR 1998 WATER YEAR

## WATER YEARS 1940 - 1998

ANNUAL TOTAL	45064.3	84806.16	
ANNUAL MEAN	123	232	158
HIGHEST ANNUAL MEAN			336
LOWEST ANNUAL MEAN			51.0
HIGHEST DAILY MEAN	3380	Apr 29	10800
LOWEST DAILY MEAN	1.1	Oct 10	.02
ANNUAL SEVEN-DAY MINIMUM	1.2	Oct 8	.40
INSTANTANEOUS PEAK FLOW			13200
INSTANTANEOUS PEAK STAGE			19.36
INSTANTANEOUS LOW FLOW			.26*
ANNUAL RUNOFF (CFSM)	.74	1.39	.94
ANNUAL RUNOFF (INCHES)	10.04	18.89	12.82
10 PERCENT EXCEEDS	294	342	328
50 PERCENT EXCEEDS	37	33	45
90 PERCENT EXCEEDS	2.6	1.9	3.6

\* See REMARKS.

PAMLICO RIVER BASIN  
02081500 TAR RIVER NEAR TAR RIVER, NC--Continued



## PAMLICO RIVER BASIN

02081747 TAR RIVER AT U.S. 401 AT LOUISBURG, NC

LOCATION.--Lat 36°05'34", long 78°17'48", Franklin County, Hydrologic Unit 03020101, on left bank 0.1 mi downstream of bridge on U.S. Highway 401 (Bickett Boulevard) at Louisburg, and 0.2 mi upstream from Fox Creek.

DRAINAGE AREA.--427 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year. Published as "Tar River at Louisburg, NC" (02081740) October 1963 to September 1973. Prior to October 1972, medium- and high-water discharges only.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 176.71 ft above sea level. Prior to Nov. 21, 1973, nonrecording gage at bridge 0.4 mi upstream at 178.53 ft; Nov. 22, 1973, to June 24, 1980, at site 0.1 mi upstream at same datum. National Weather Service telephone telemetry at station.

REMARKS.--Records good except for those estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of December 1934, September 1945, and August 1955 reached stages of 26, 24, and 24 ft, respectively, at site and datum 0.4 mi upstream, from U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	55	195	328	792	499	558	318	169	67	46	25
2	46	84	188	248	638	466	658	447	136	69	43	22
3	43	91	150	204	567	455	683	713	122	60	38	26
4	43	65	139	184	2550	413	625	553	121	54	34	170
5	42	53	135	165	6800	370	895	520	212	81	31	641
6	40	47	122	154	8280	333	714	394	171	196	29	292
7	40	52	105	151	4610	315	579	312	159	88	27	120
8	39	53	94	300	1450	587	527	357	132	63	26	82
9	39	51	92	1780	949	4180	607	697	116	60	26	74
10	39	48	107	1400	770	6010	1200	666	119	78	49	68
11	40	47	141	590	663	4500	918	458	126	372	59	59
12	39	47	147	412	651	1150	762	397	125	137	51	50
13	38	66	122	300	613	729	598	349	116	80	41	44
14	39	272	110	249	552	627	543	292	116	61	34	40
15	e250	468	102	272	495	561	550	244	121	51	30	37
16	e185	331	96	1920	466	508	509	213	119	48	34	35
17	e115	153	93	4410	1580	475	504	194	105	95	163	34
18	e135	99	91	4590	4970	1240	2240	256	88	148	100	32
19	e82	78	84	1590	7720	6020	2600	233	83	60	58	34
20	e110	67	81	1420	3400	16600	1280	168	82	55	42	35
21	e205	63	79	1110	898	13600	1010	151	79	68	37	33
22	e265	442	102	699	698	10400	702	139	74	57	33	31
23	e180	1090	204	982	673	7070	606	224	81	47	30	30
24	e105	539	256	3320	1280	2200	562	469	104	216	28	29
25	e52	271	279	4390	940	1010	502	385	125	370	26	27
26	31	184	368	1900	669	851	443	259	90	131	24	26
27	46	143	376	874	571	767	392	251	79	90	32	24
28	56	120	610	3120	529	708	358	458	68	77	36	23
29	51	106	744	5430	---	658	331	402	61	66	32	22
30	40	118	525	5580	---	616	311	247	60	57	28	21
31	35	---	429	2010	---	578	---	286	---	50	26	---
TOTAL	2519	5303	6366	50082	54774	84496	22767	11052	3359	3152	1293	2186
MEAN	81.3	177	205	1616	1956	2726	759	357	112	102	41.7	72.9
MAX	265	1090	744	5580	8280	16600	2600	713	212	372	163	641
MIN	31	47	79	151	466	315	311	139	60	47	24	21
CFSM	.19	.41	.48	3.78	4.58	6.38	1.78	.83	.26	.24	.10	.17
IN.	.22	.46	.55	4.36	4.77	7.36	1.98	.96	.29	.27	.11	.19

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

MEAN	164	302	407	841	819	1025	630	385	255	231	157	216
MAX	605	1192	1108	1845	1956	2726	1557	984	1451	1692	512	2140
(WY)	1997	1986	1984	1978	1998	1998	1993	1989	1982	1975	1986	1996
MIN	28.5	47.2	86.5	78.0	202	214	127	104	35.4	43.3	26.8	19.7
(WY)	1987	1992	1981	1981	1977	1988	1995	1995	1986	1986	1988	1980

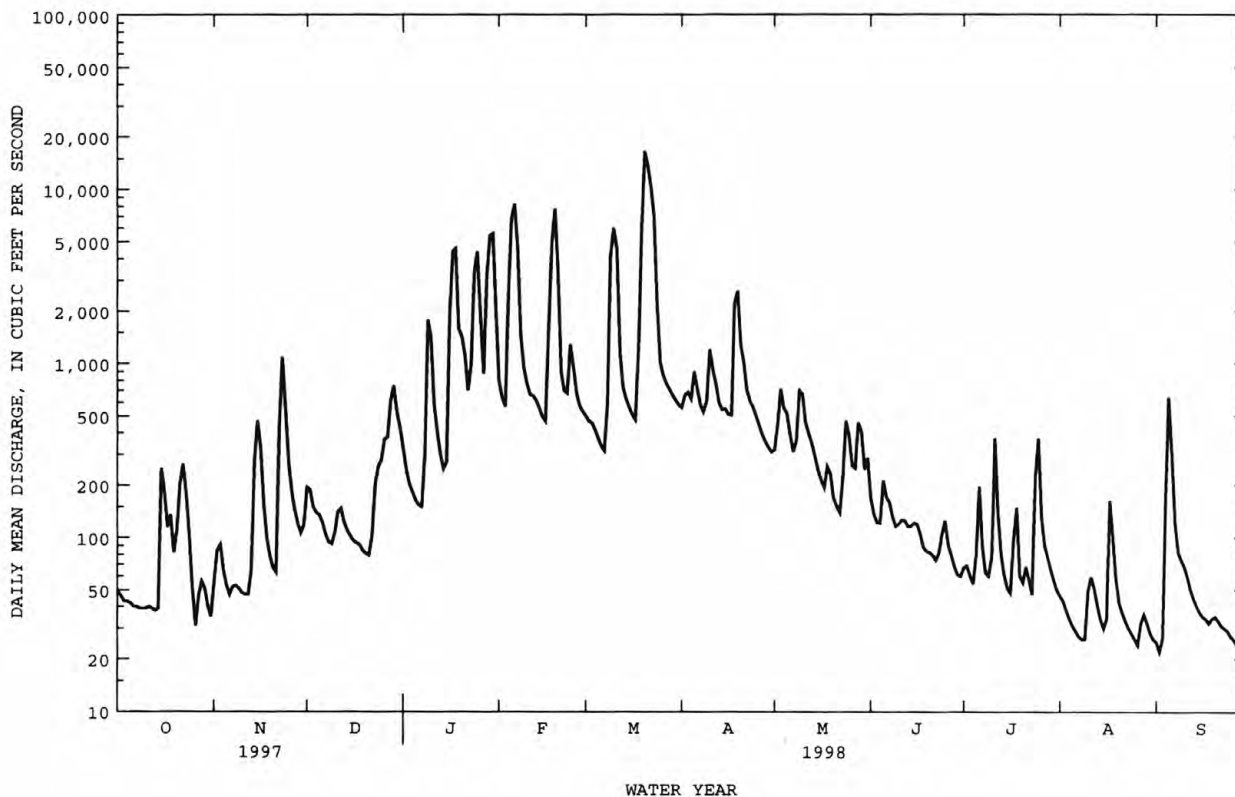


## PAMLICO RIVER BASIN

02081747 TAR RIVER AT U.S. 401 AT LOUISBURG, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998	
ANNUAL TOTAL	132033		247349		453	
ANNUAL MEAN	362		678		729	
HIGHEST ANNUAL MEAN					131	
LOWEST ANNUAL MEAN					18200	
HIGHEST DAILY MEAN	6500	Apr 30	16600	Mar 20	8.1	Sep 8 1996
LOWEST DAILY MEAN	31	Oct 26	21	Sep 30	9.2	Aug 14 1977
ANNUAL SEVEN-DAY MINIMUM	37	Aug 14	25	Sep 24	21100	Sep 16 1985
INSTANTANEOUS PEAK FLOW			18500	Mar 20	25.34	Sep 7 1996
INSTANTANEOUS PEAK STAGE			24.62	Mar 20	7.3	Sep 7 1996
INSTANTANEOUS LOW FLOW			21	Sep 30	1.06	Aug 14 1977
ANNUAL RUNOFF (CFSM)	.85		1.59		14.40	
ANNUAL RUNOFF (INCHES)	11.50		21.55		1030	
10 PERCENT EXCEEDS	737		1260		207	
50 PERCENT EXCEEDS	177		159		41	
90 PERCENT EXCEEDS	45		35			

e Estimated.



## PAMLICO RIVER BASIN

02082506 TAR RIVER BELOW TAR RIVER RESERVOIR NEAR ROCKY MOUNT, NC

LOCATION.--Lat 35°53'58", long 77°51'57", Nash County, Hydrologic Unit 03020101, near center of span on downstream side of bridge on Secondary Road 1544, 1.8 mi downstream of Tar River Reservoir, 2.8 mi downstream of Sapony Creek, 2.9 mi upstream from Grape Branch, and 5.0 mi southwest of Rocky Mount.

DRAINAGE AREA.--777 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 85.9 ft above sea level (levels by North Carolina State Highway Commission). Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. The city of Rocky Mount diverted an average of 9.5 ft<sup>3</sup>/s for municipal water supply, most of which was returned downstream of station as treated effluent. Minimum discharge for period of record also occurred Oct. 29, 30, 1993.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	100	363	1070	5190	752	927	e420	407	132	114	96
2	124	97	353	783	5390	693	1010	e440	356	129	95	97
3	126	103	354	649	3610	490	1070	543	321	132	84	98
4	121	105	320	509	1410	456	1190	871	294	139	91	104
5	118	110	286	431	e2600	419	1160	797	269	153	93	93
6	119	106	265	380	e4700	273	1340	e685	259	152	103	123
7	122	104	241	358	e6150	258	1180	600	258	155	150	330
8	122	104	216	367	7190	569	925	e745	253	162	97	261
9	120	105	201	417	7070	5010	939	e585	248	155	98	186
10	114	105	203	e870	3060	7360	1170	865	242	222	98	138
11	121	106	220	e1700	1400	7130	1710	937	202	170	96	113
12	120	104	e255	2140	1220	6660	1520	697	158	e146	96	111
13	122	105	e295	1300	1120	5660	1190	568	194	e178	96	115
14	123	105	e245	784	1040	2360	960	527	195	e173	96	116
15	123	139	217	e580	900	1650	843	492	238	e142	95	95
16	122	439	206	e495	752	1450	833	467	235	e143	95	78
17	110	500	e240	651	1470	1320	777	451	225	e162	94	68
18	126	351	e205	1780	3260	1650	780	439	217	e116	93	75
19	118	255	185	e3400	4240	3550	2020	429	198	e103	101	89
20	114	204	e165	e4750	4720	e6150	2700	e410	186	e102	105	90
21	114	179	e255	5250	5490	e8050	1990	e390	179	e99	103	89
22	118	184	e340	4010	4600	e9200	1530	e360	172	e90	103	90
23	118	361	396	2470	1530	e11500	1160	e320	170	e86	103	94
24	119	1100	e490	1810	1240	13300	936	e355	175	e91	101	95
25	122	779	e520	e2400	e1450	10900	797	e430	178	e92	99	96
26	119	448	597	3110	e1360	5660	710	598	185	e150	102	107
27	117	305	621	e4000	1040	1670	604	559	185	e194	99	124
28	112	260	e675	4310	848	1310	555	e475	179	e177	94	e122
29	115	224	754	3870	---	1290	534	536	164	e155	97	e124
30	114	321	939	4330	---	1040	e480	511	153	154	95	126
31	109	---	1230	5050	---	934	---	e545	---	163	97	---
TOTAL	3668	7508	11852	64024	84050	118714	33540	17047	6695	4417	3083	3543
MEAN	118	250	382	2065	3002	3829	1118	550	223	142	99.5	118
MAX	126	1100	1230	5250	7190	13300	2700	937	407	222	150	330
MIN	106	97	165	358	752	258	480	320	153	86	84	68

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1998, BY WATER YEAR (WY)

	MEAN	326	553	753	1394	1453	1810	1139	738	543	456	353	340
MAX	1201	1876	2406	2794	3002	3829	2864	2123	2064	2321	1045	3258	
(WY)	1997	1973	1973	1978	1998	1998	1987	1989	1982	1975	1973	1996	
MIN	60.2	66.2	109	186	456	358	284	192	101	67.9	77.9	75.4	
(WY)	1994	1981	1992	1981	1991	1981	1981	1995	1991	1986	1988	1993	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1972 - 1998

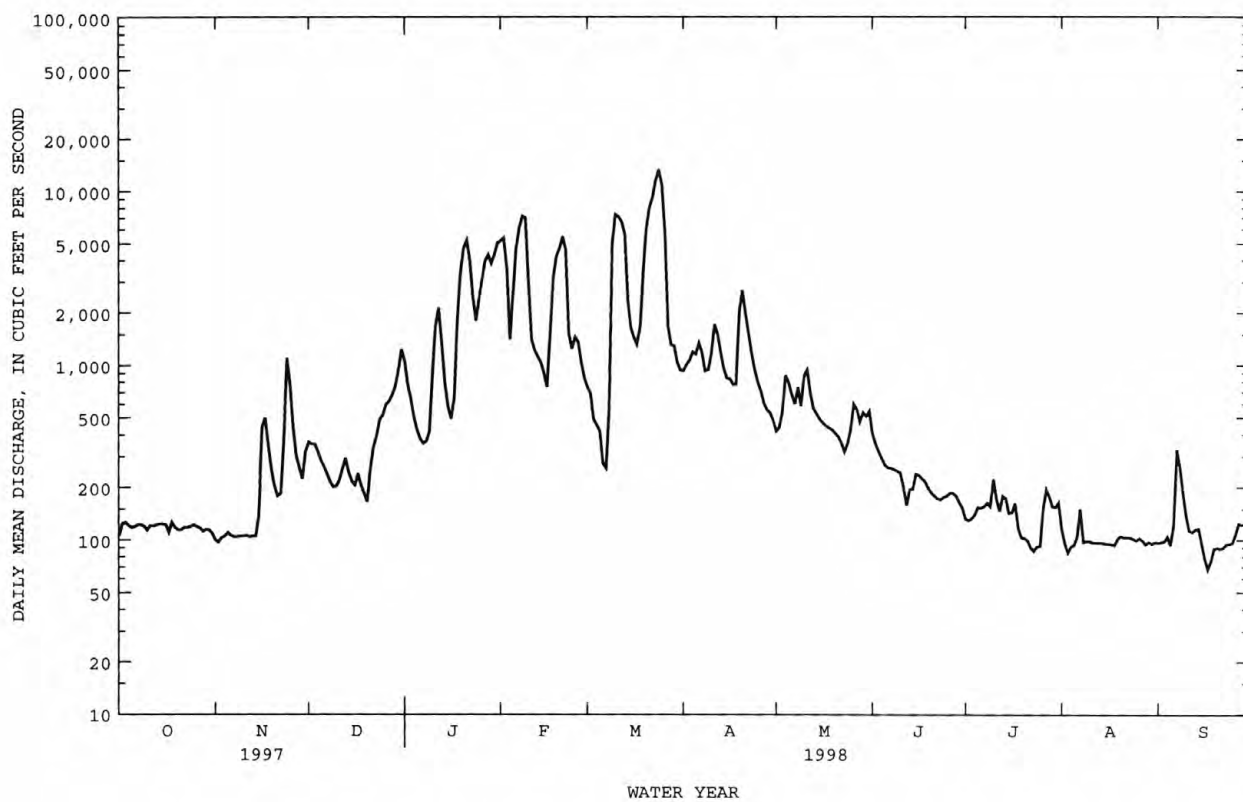
ANNUAL TOTAL	245904	358141	
ANNUAL MEAN	674	981	819
HIGHEST ANNUAL MEAN			1471
LOWEST ANNUAL MEAN			211
HIGHEST DAILY MEAN	7160	May 3	13400
LOWEST DAILY MEAN	97	Nov 2	68
ANNUAL SEVEN-DAY MINIMUM	104	Nov 1	83
INSTANTANEOUS PEAK FLOW			14700
INSTANTANEOUS PEAK STAGE			23.67
INSTANTANEOUS LOW FLOW			66
10 PERCENT EXCEEDS	1460	2840	28*
50 PERCENT EXCEEDS	363	261	380
90 PERCENT EXCEEDS	120	98	97

e Estimated.

\* See REMARKS.

## PAMLICO RIVER BASIN

02082506 TAR RIVER BELOW TAR RIVER RESERVOIR NEAR ROCKY MOUNT, NC--Continued



## PAMLICO RIVER BASIN

02082585 TAR RIVER AT NC 97 AT ROCKY MOUNT, NC

LOCATION.--Lat 35°57'15", long 77°47'15", Edgecombe County, Hydrologic Unit 03020101, on left bank 20 ft downstream of bridge on State Highway 97, 0.5 mi upstream from Cowlick Branch, and 1.0 mi north-northeast of Rocky Mount.

DRAINAGE AREA.--925 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1976 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 53.88 ft above sea level. City of Rocky Mount telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Prior to October 1996, some regulation at low flow caused by mill above station. The city of Rocky Mount diverted an average of 21.4 ft<sup>3</sup>/s for municipal water supply, most of which was returned downstream of station as treated effluent. Minimum discharge for period of record, result of regulation. Minimum discharge for current water year also occurred on Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	128	576	848	5920	984	1060	474	410	145	143	147
2	104	133	428	672	3570	921	1090	484	408	114	111	139
3	105	127	522	571	1470	872	1110	565	307	97	106	144
4	105	125	466	531	5460	581	1350	914	360	106	105	443
5	105	125	371	439	8620	812	1280	902	252	126	104	181
6	105	138	335	436	9320	728	1370	776	265	108	96	124
7	120	127	325	456	8380	724	1260	701	315	111	118	268
8	120	114	299	844	8150	1410	1010	866	311	128	106	304
9	113	108	215	1050	8110	6170	1060	727	258	144	105	215
10	113	134	260	1810	4400	9450	1230	933	315	240	101	144
11	113	116	285	2050	1700	9650	1660	1020	256	250	99	142
12	113	113	284	1180	1510	8220	1600	822	187	153	95	121
13	113	135	320	844	1380	6990	1240	629	162	151	90	107
14	113	189	357	675	1280	2860	1030	585	255	198	91	106
15	122	142	321	666	1150	1410	917	496	319	162	89	104
16	127	440	249	1100	995	1190	903	475	308	159	105	99
17	126	644	237	2870	2420	1080	866	344	255	286	103	87
18	114	460	265	4670	4220	1470	802	437	255	151	90	88
19	112	313	220	5950	5430	4060	1650	371	248	129	88	81
20	107	257	194	6130	5640	7280	2600	344	190	121	91	79
21	107	222	243	4330	6060	9230	2060	346	163	119	87	85
22	126	274	279	2660	5520	10600	1600	298	162	117	93	91
23	133	252	407	2270	1910	12900	1270	235	157	112	95	89
24	133	1040	526	3100	1460	13100	1030	404	150	105	87	97
25	130	887	763	4230	1740	11700	903	515	148	98	86	87
26	131	579	772	4860	1620	8160	778	690	176	101	154	90
27	136	384	855	4910	1250	2440	703	602	164	131	260	102
28	128	319	1030	5150	1070	1380	564	543	156	247	162	97
29	127	245	1170	5730	---	1210	543	555	168	171	108	98
30	126	515	1330	6480	---	1110	517	597	159	136	106	102
31	125	---	1050	6090	---	1020	---	645	---	191	122	---
TOTAL	3676	8785	14954	83602	109755	139712	35056	18295	7239	4607	3396	4061
MEAN	119	293	482	2697	3920	4507	1169	590	241	149	110	135
MAX	136	1040	1330	6480	9320	13100	2600	1020	410	286	260	443
MIN	104	108	194	436	995	581	517	235	148	97	86	79
CFSM	.13	.32	.52	2.92	4.24	4.87	1.26	.64	.26	.16	.12	.15
IN.	.15	.35	.60	3.36	4.41	5.62	1.41	.74	.29	.19	.14	.16

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1998, BY WATER YEAR (WY)

	MEAN	369	607	799	1607	1675	2192	1353	890	643	387	385	358
MAX	1418	1905	1720	3230	3920	4507	3447	2725	2238	1316	977	3878	
(WY)	1996	1980	1984	1978	1998	1998	1987	1989	1982	1984	1989	1996	
MIN	70.4	74.5	125	254	546	477	332	210	128	54.1	79.7	70.6	
(WY)	1981	1981	1992	1981	1977	1981	1995	1995	1986	1986	1987	1993	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

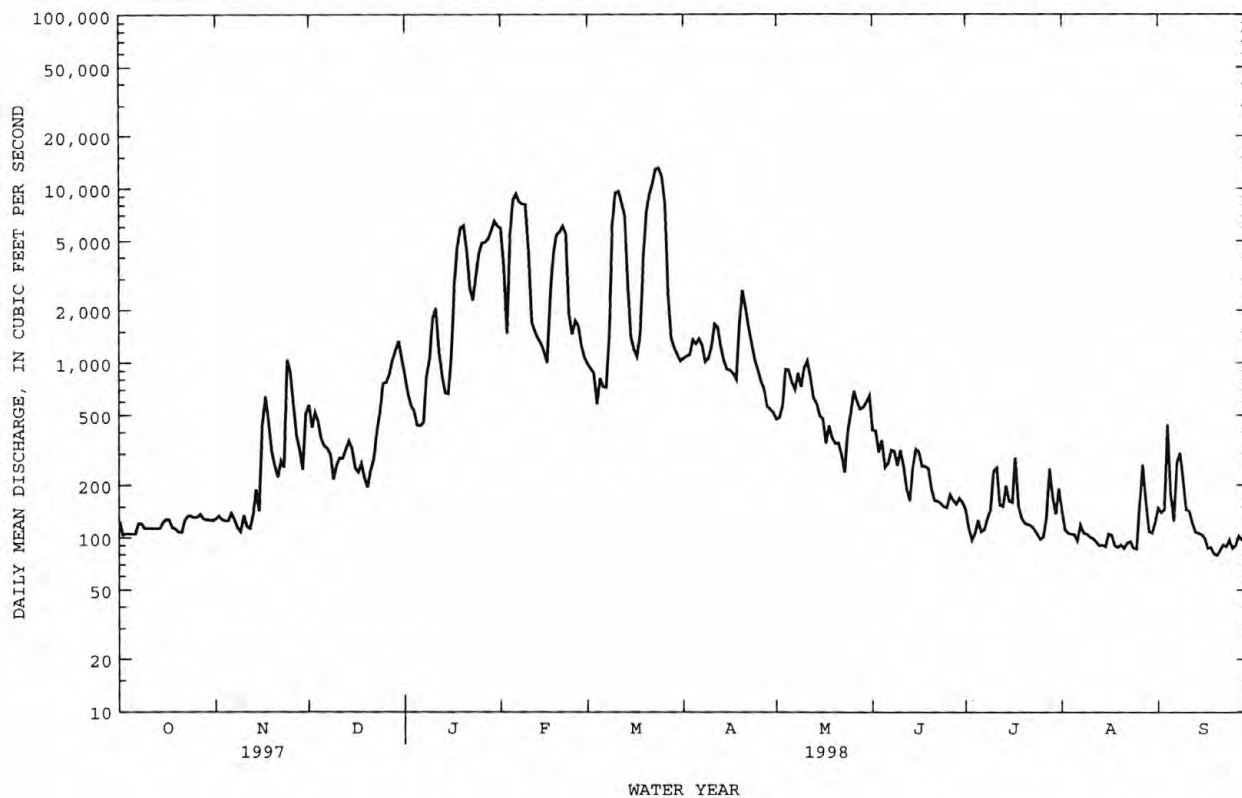
## WATER YEARS 1977 - 1998

ANNUAL TOTAL	264461	433138	
ANNUAL MEAN	725	1187	956
HIGHEST ANNUAL MEAN			1500
LOWEST ANNUAL MEAN			262
HIGHEST DAILY MEAN	7360	May 3	15000
LOWEST DAILY MEAN	94	Aug 3	6.6
ANNUAL SEVEN-DAY MINIMUM	102	Aug 13	31
INSTANTANEOUS PEAK FLOW			15100
INSTANTANEOUS PEAK STAGE		24.69	25.88
INSTANTANEOUS LOW FLOW		35*	5.7*
ANNUAL RUNOFF (CFSM)	.78	1.28	1.03
ANNUAL RUNOFF (INCHES)	10.64	17.42	14.04
10 PERCENT EXCEEDS	1500	4120	2230
50 PERCENT EXCEEDS	394	315	441
90 PERCENT EXCEEDS	111	104	97

\* See REMARKS.

## PAMLICO RIVER BASIN

02082585 TAR RIVER AT NC 97 AT ROCKY MOUNT, NC--Continued



## PAMLICO RIVER BASIN

02082770 SWIFT CREEK AT HILLIARDSTON, NC

LOCATION.--Lat 36°06'42", long 77°55'16", Nash County, Hydrologic Unit 03020101, near left bank at downstream side of bridge on Secondary Road 1310, 0.7 mi northeast of Hilliardston, and 2.8 mi downstream of Gideon Swamp.

DRAINAGE AREA.--166 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1963 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 130.42 ft above sea level. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1924 reached a stage of 14.5 ft, from information by North Carolina State Highway Commission, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	38	109	123	437	167	213	86	99	25	24	e31
2	34	43	127	103	305	162	256	101	72	25	22	e27
3	32	59	113	91	243	170	189	109	57	24	21	e24
4	29	57	97	85	1240	163	279	140	55	22	20	e78
5	26	53	86	81	2100	145	269	150	85	25	18	130
6	24	46	80	86	2070	135	221	122	77	26	e17	e99
7	23	42	75	99	2050	131	186	102	67	41	e16	e74
8	22	42	71	156	1220	343	159	118	60	65	e15	e57
9	22	47	69	352	497	1760	228	112	53	47	e14	e42
10	21	46	74	284	310	2200	299	108	49	38	e16	e35
11	21	44	107	233	258	1970	259	111	54	33	e20	e30
12	20	42	101	141	259	1360	220	96	52	38	e30	e27
13	22	42	91	113	240	435	170	88	52	74	e23	e25
14	20	96	83	101	212	273	157	83	55	48	e20	e23
15	25	201	79	107	184	232	181	79	62	34	e18	e22
16	273	161	72	422	170	200	163	75	78	29	e16	e21
17	153	110	69	1160	607	184	150	70	59	29	e20	e20
18	86	74	67	1030	823	468	162	67	45	33	e29	e19
19	62	60	66	922	773	1230	179	63	38	34	e39	e22
20	59	54	65	740	846	1930	293	58	34	28	e28	e21
21	61	50	66	437	431	2740	253	55	33	25	e21	e20
22	53	79	70	331	261	2450	224	54	31	27	e18	e19
23	47	169	118	406	265	1210	198	54	38	27	e21	e19
24	42	230	128	732	300	578	158	74	120	24	e17	e18
25	39	211	165	652	261	337	134	88	79	23	e16	e17
26	36	109	150	691	231	272	114	85	43	25	e14	e17
27	37	88	155	600	187	241	100	81	37	59	e21	e16
28	46	80	248	1180	171	219	92	77	33	46	e32	e15
29	48	74	209	1130	---	204	89	72	29	33	e50	e15
30	48	79	205	1010	---	189	85	78	27	27	e39	e14
31	42	---	158	858	---	175	---	75	---	26	e34	---
TOTAL	1511	2526	3373	14456	16951	22273	5680	2731	1673	1060	709	997
MEAN	48.7	84.2	109	466	605	718	189	88.1	55.8	34.2	22.9	33.2
MAX	273	230	248	1180	2100	2740	299	150	120	74	50	130
MIN	20	38	65	81	170	131	85	54	27	22	14	14
CFSM	.29	.51	.66	2.81	3.65	4.33	1.14	.53	.34	.21	.14	.20
IN.	.34	.57	.76	3.24	3.80	4.99	1.27	.61	.37	.24	.16	.22

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1998, BY WATER YEAR (WY)

MEAN	86.4	118	151	245	289	312	222	152	128	95.5	83.2	71.9
MAX	420	436	382	500	605	718	774	466	468	470	326	544
(WY)	1972	1986	1973	1987	1998	1998	1987	1984	1979	1975	1986	1996
MIN	9.65	27.8	37.3	59.5	92.6	77.6	72.9	47.5	26.4	12.3	10.2	4.90
(WY)	1971	1982	1966	1981	1968	1988	1981	1995	1981	1981	1993	1968

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

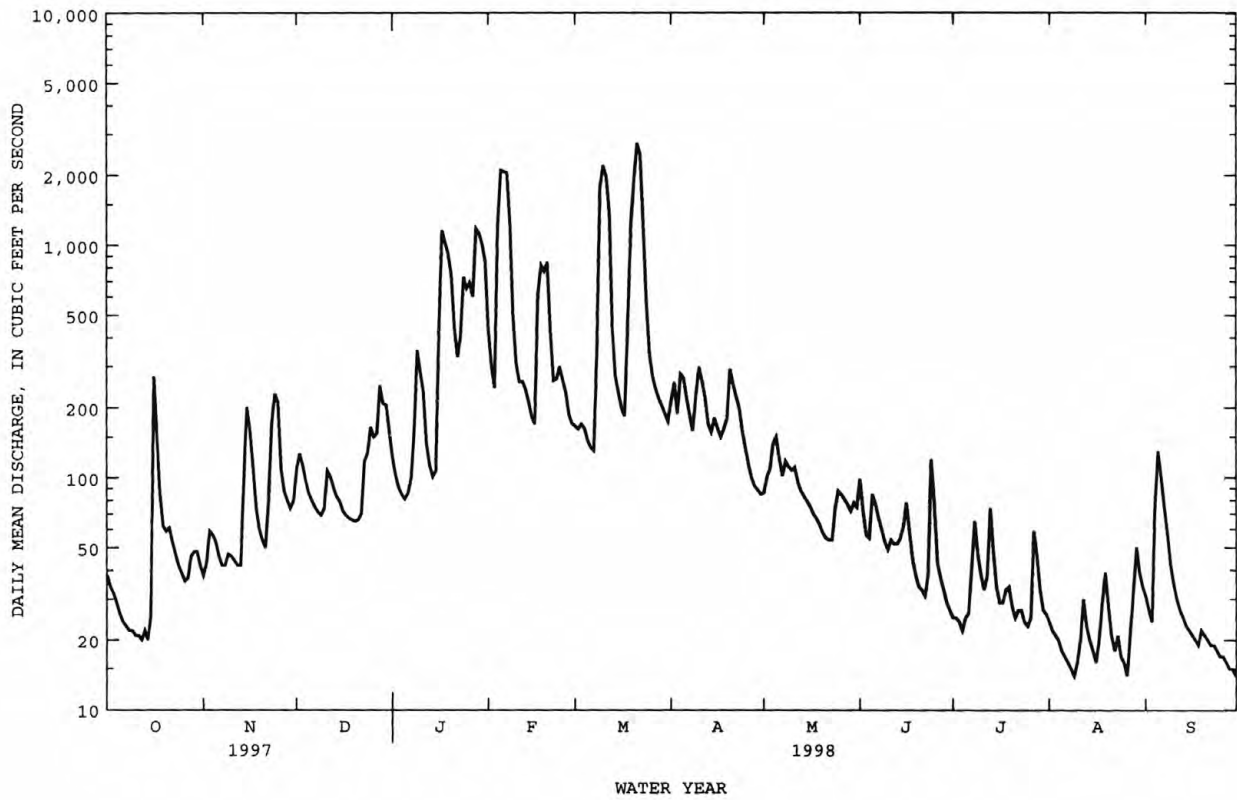
## WATER YEARS 1963 - 1998

ANNUAL TOTAL	53824	73940	
ANNUAL MEAN	147	203	161
HIGHEST ANNUAL MEAN			290
LOWEST ANNUAL MEAN			51.0
HIGHEST DAILY MEAN	1490	May 2	4790
LOWEST DAILY MEAN	15	Aug 19	.60
ANNUAL SEVEN-DAY MINIMUM	21	Aug 26	1.1
INSTANTANEOUS PEAK FLOW			6030
INSTANTANEOUS PEAK STAGE			14.27
INSTANTANEOUS LOW FLOW			.60
ANNUAL RUNOFF (CFSM)	.89		.97
ANNUAL RUNOFF (INCHES)	12.06		16.57
10 PERCENT EXCEEDS	264	433	347
50 PERCENT EXCEEDS	101	77	92
90 PERCENT EXCEEDS	29	21	24

e Estimated.



PAMLICO RIVER BASIN  
02082770 SWIFT CREEK AT HILLIARDSTON, NC--Continued



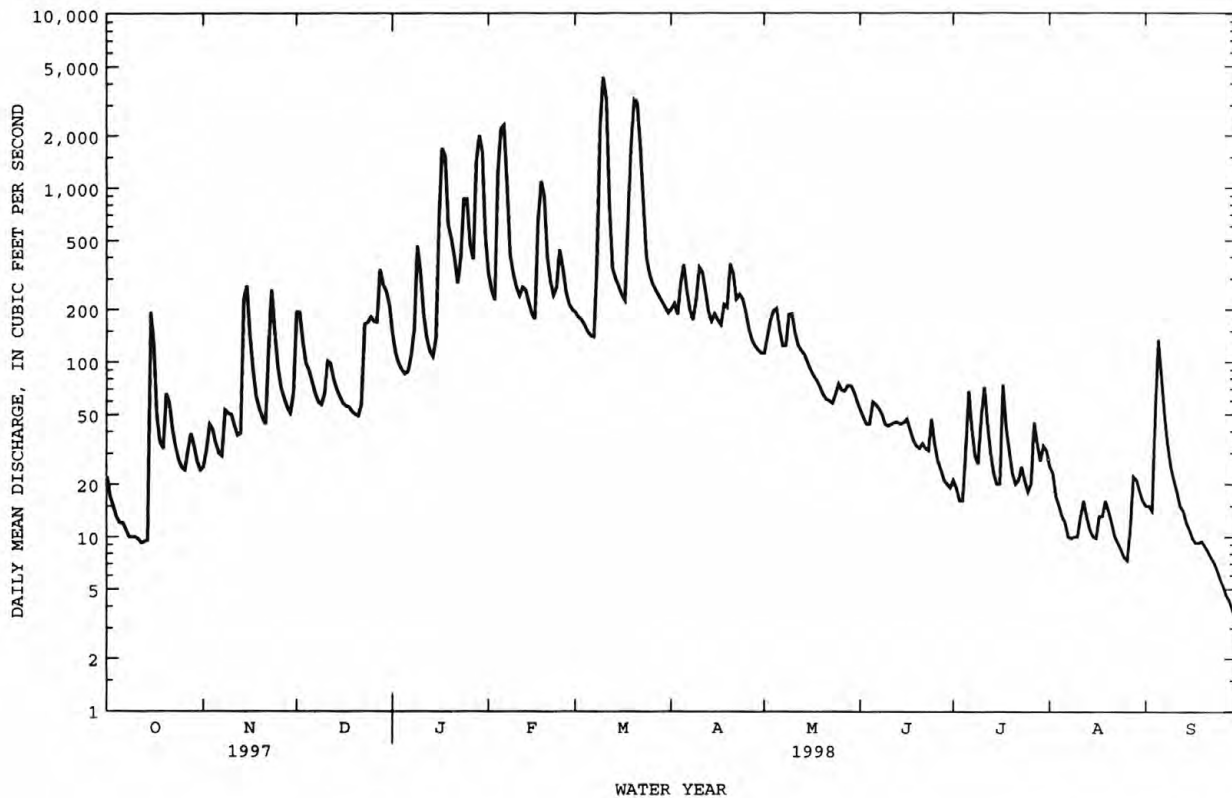


## PAMLICO RIVER BASIN

02082950 LITTLE FISHING CREEK NEAR WHITE OAK, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1960 - 1998	
ANNUAL TOTAL	56914.1		79124.7		167	
ANNUAL MEAN	156		217		327	
HIGHEST ANNUAL MEAN					47.2	
LOWEST ANNUAL MEAN					15000	
HIGHEST DAILY MEAN	2670	Feb 16	4350	Mar 10	15000	Oct 7 1972
LOWEST DAILY MEAN	8.2	Aug 30	3.5	Sep 30	.78	Sep 4 1980
ANNUAL SEVEN-DAY MINIMUM	9.7	Oct 8	4.8	Sep 24	1.1	Sep 26 1968
INSTANTANEOUS PEAK FLOW			4800	Mar 10	18000*	Oct 7 1972
INSTANTANEOUS PEAK STAGE			18.31	Mar 10	24.80*	Oct 7 1972
INSTANTANEOUS LOW FLOW			3.3	Sep 30	.72	Sep 5 1980
ANNUAL RUNOFF (CFSM)	.88		1.22		.94	
ANNUAL RUNOFF (INCHES)	11.96		16.63		12.81	
10 PERCENT EXCEEDS	299		390		357	
50 PERCENT EXCEEDS	70		66		78	
90 PERCENT EXCEEDS	12		11		16	

\* See REMARKS.



## PAMLICO RIVER BASIN

02083000 FISHING CREEK NEAR ENFIELD, NC

LOCATION.--Lat 36°09'03", long 77°41'35", Edgecombe County, Hydrologic Unit 03020102, on right bank 15 ft downstream of bridge on U.S. Highway 301, 2,000 ft downstream of Seaboard Coast Line Railroad bridge, 2 mi southwest of Enfield, 4.8 mi downstream of Rocky Creek, and 40 mi upstream from mouth.

DRAINAGE AREA.--526 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1923 to current year. Figures of daily discharge below 250 ft<sup>3</sup>/s, Oct 1, 1923, to July 3, 1924; below 350 ft<sup>3</sup>/s, May 30, 1925, to May 31, 1926; below 150 ft<sup>3</sup>/s, June 1 to Nov. 16, 1926; and below 100 ft<sup>3</sup>/s, Nov. 17, 1926, to Sept. 30, 1928; published in WSP 622, 642, and 662 are unreliable and should not be used. Gage-height records collected at site 2,000 ft upstream at different datum July 1, 1910, to Apr. 30, 1914, and at present site and datum since May 1, 1914, are contained in reports of National Weather Service, NOAA, U.S. Department of Commerce.

REVISED RECORDS.--WSP 872: 1935(M). WSP 1333: 1928(M), 1932-33, 1935. WDR NC-81-1: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 74.26 ft above sea level. Prior to Oct. 28, 1932, nonrecording gage and from Oct. 29, 1932, to Sept. 30, 1992, recording gage in operatin at same site at datum of 76.26 ft. National Weather Service telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Slight diurnal fluctuation and some regulation at low flow caused by upstream mills.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Apr. 19, 1910, reached a stage of 20.1 ft, at datum 76.26 ft (from floodmarks of Seaboard Coast Line Railroad Co.) at site 2,000 ft upstream. Flood of July 24, 1919, reached a stage of 19.6 ft at datum 76.26 ft; discharge, 20,300 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	122	366	524	2550	553	543	334	191	95	102	57
2	92	120	548	417	1140	536	619	376	176	92	88	54
3	78	146	499	355	713	520	602	475	163	88	85	54
4	69	180	387	324	1410	509	635	509	161	84	82	78
5	63	169	328	305	3450	481	884	593	160	86	76	198
6	59	147	299	294	4270	448	815	509	175	91	71	365
7	56	142	269	314	4370	432	642	410	174	199	66	285
8	53	153	242	363	4090	487	551	451	167	161	58	175
9	52	182	227	710	2810	2460	573	468	159	127	53	121
10	51	183	224	1020	1240	4700	830	533	149	125	50	92
11	50	172	285	759	765	5670	877	544	147	215	47	79
12	49	157	357	532	745	6150	741	449	163	194	52	71
13	49	151	338	419	772	4300	600	378	169	159	62	65
14	48	214	292	370	704	1740	526	349	161	130	64	61
15	70	676	260	355	619	789	529	325	170	102	63	58
16	778	649	237	649	560	654	543	296	177	89	61	56
17	603	437	222	2150	811	595	499	270	167	93	58	54
18	306	302	214	3090	2330	916	514	250	150	136	59	53
19	201	234	209	3360	2630	2340	575	235	135	129	61	52
20	190	203	204	2770	2480	3830	708	220	129	109	70	53
21	244	185	198	1810	1740	5130	903	206	123	94	72	52
22	212	208	200	1070	940	6150	735	194	122	88	65	51
23	168	497	272	807	693	5580	663	188	118	88	60	49
24	138	688	478	1630	866	3800	636	196	116	107	54	48
25	122	559	515	2170	983	1860	576	217	165	99	50	46
26	111	386	531	2150	780	902	491	238	174	101	48	45
27	113	284	498	1640	638	741	414	227	140	104	52	43
28	134	244	623	2210	574	684	374	221	114	126	48	41
29	161	221	791	3200	---	645	354	235	105	113	50	39
30	147	225	694	3620	---	605	339	238	100	100	56	37
31	128	---	631	3620	---	570	---	216	---	113	60	---
TOTAL	4706	8236	11438	43007	45673	64777	18291	10350	4520	3637	1943	2532
MEAN	152	275	369	1387	1631	2090	610	334	151	117	62.7	84.4
MAX	778	688	791	3620	4370	6150	903	593	191	215	102	365
MIN	48	120	198	294	560	432	339	188	100	84	47	37
CFSM	.29	.52	.70	2.64	3.10	3.97	1.16	.63	.29	.22	.12	.16
IN.	.33	.58	.81	3.04	3.23	4.58	1.29	.73	.32	.26	.14	.18

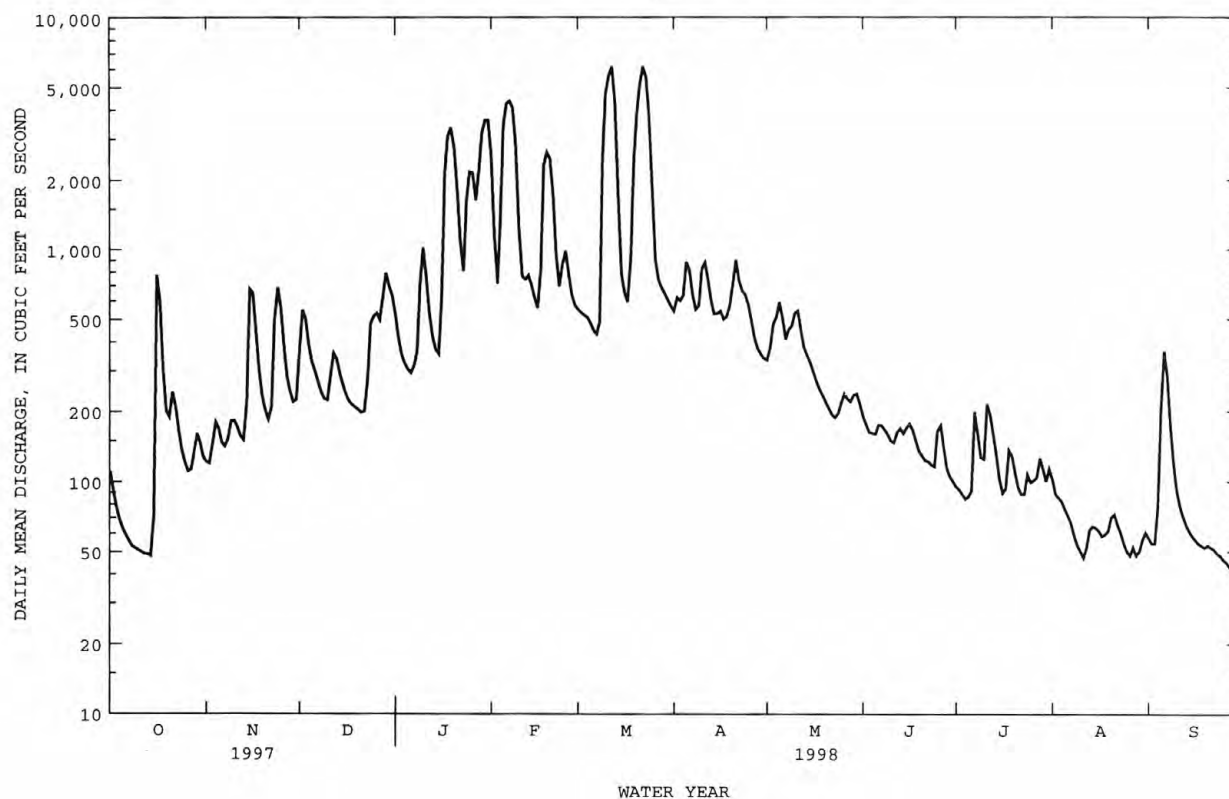
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1998, BY WATER YEAR (WY)

MEAN	263	333	482	725	878	911	695	437	318	299	322	254
MAX	2035	1948	1391	2303	2145	2158	2049	2174	1255	1483	1828	2080
(WY)	1930	1986	1935	1936	1960	1989	1987	1958	1938	1975	1940	1928
MIN	14.0	26.0	46.0	60.4	198	248	170	128	70.6	42.8	26.8	14.2
(WY)	1934	1934	1934	1934	1934	1981	1967	1995	1986	1981	1993	1980

## PAMLICO RIVER BASIN

02083000 FISHING CREEK NEAR ENFIELD, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1927 - 1998	
ANNUAL TOTAL	159073		219110		491	
ANNUAL MEAN	436		600		871	
HIGHEST ANNUAL MEAN					148	
LOWEST ANNUAL MEAN					12100	
HIGHEST DAILY MEAN	4510	May 2	6150	Mar 12	6.9	Aug 18 1940
LOWEST DAILY MEAN	41	Aug 21	37	Sep 30	8.1	Oct 5 1968
ANNUAL SEVEN-DAY MINIMUM	50	Oct 8	43	Sep 24	12600	Sep 30 1968
INSTANTANEOUS PEAK FLOW			6350	Mar 22	17.72	Dec 2 1934
INSTANTANEOUS PEAK STAGE			17.56	Mar 22	17.72	Aug 18 1940
INSTANTANEOUS LOW FLOW			36	Sep 30	NOT DETERMINED	
ANNUAL RUNOFF (CFSM)	.83		1.14		.93	
ANNUAL RUNOFF (INCHES)	11.25		15.50		12.69	
10 PERCENT EXCEEDS	784		1500		1090	
50 PERCENT EXCEEDS	282		227		271	
90 PERCENT EXCEEDS	68		57		69	



## PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, NC

LOCATION.--Lat 35°53'38", long 77°32'00", Edgecombe County, Hydrologic Unit 03020103, near right bank on downstream end of pier of bridge on U.S. Highway 64 in Tarboro, 6.5 mi downstream of Fishing Creek, and 49.2 mi upstream from Pamlico River at Washington.

DRAINAGE AREA.--2,183 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1896 to December 1900, October 1931 to current year. Gage-height records at various datums collected at same site since 1905 are contained in reports of National Weather Service, NOAA, U.S. Department of Commerce.

REVISED RECORDS.--WSP 1273: 1899-1900, 1933. WSP 1503: 1932. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 10.37 ft above sea level. July 1896 to December 1900, nonrecording gage at Seaboard Coast Line Railroad bridge 600 ft downstream at different datum; Oct. 1 to Dec. 8, 1931, nonrecording gage at site 100 ft upstream at present datum. National Weather Service telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Some diurnal fluctuation at low flow caused by mills upstream from station. Town of Tarboro diverted 5.0 ft<sup>3</sup>/s for municipal water supply. Minimum discharge for period of record also occurred Oct. 22, 1933, and Oct. 6, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 27, 1919, reached a stage of 34.0 ft, present datum, from flood marks; discharge, 52,800 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	310	340	1340	2520	12800	3160	3200	1510	1050	380	377	327
2	299	361	1410	2210	13300	2860	3350	1420	845	346	357	378
3	278	361	1320	1890	12800	2670	3310	1390	770	315	292	450
4	269	330	1430	1630	11700	2500	3230	1540	692	280	268	610
5	261	324	1280	1490	12800	2160	3500	1960	709	311	250	1220
6	251	343	1090	1310	15600	2220	3550	2030	653	338	241	853
7	240	358	1000	1240	17700	2100	3650	1900	638	310	228	690
8	236	357	952	1320	19100	2120	3380	2200	646	302	234	807
9	245	344	895	2190	19600	5720	3030	2900	639	372	264	834
10	229	339	804	2590	19300	9740	3090	2750	603	441	279	644
11	221	354	769	3450	18300	13400	3310	2570	630	585	288	493
12	215	382	813	3800	13900	17400	3750	2510	584	564	241	430
13	211	370	850	3010	9920	19100	3620	2140	513	520	221	378
14	208	422	900	2390	7260	19900	3110	1740	459	459	204	317
15	203	467	904	2060	5250	18800	2740	1530	552	451	201	289
16	205	555	861	2220	4050	14000	2490	1360	714	407	207	271
17	294	956	800	3560	4500	9720	2370	1230	772	578	258	255
18	670	1170	726	5250	6930	7060	2220	1050	706	618	328	236
19	602	965	750	6460	8130	6180	2120	1030	712	439	264	225
20	472	780	699	7810	9060	7370	3220	931	752	404	226	227
21	418	658	624	9480	9770	9680	3900	851	655	376	221	215
22	407	621	702	10200	10400	12600	3870	808	521	335	224	212
23	432	590	835	10200	10500	15800	4110	784	473	310	223	214
24	418	642	981	9490	8860	19300	3910	779	478	291	215	207
25	381	1490	1320	8990	6620	22200	3380	877	518	291	201	208
26	353	1600	1700	8780	5270	23500	2850	962	442	316	227	204
27	351	1250	1770	8870	4600	22300	2390	1140	452	306	542	198
28	349	949	2040	9530	3710	18400	2060	1070	471	342	846	203
29	337	864	2310	10500	---	10800	1780	988	419	448	584	204
30	320	855	2650	11400	---	6840	1620	979	404	419	421	205
31	330	---	2810	12000	---	4100	---	1020	---	333	353	---
TOTAL	10015	19397	37335	167840	301730	333700	92110	45949	18472	12187	9285	12004
MEAN	323	647	1204	5414	10780	10760	3070	1482	616	393	300	400
MAX	670	1600	2810	12000	19600	23500	4110	2900	1050	618	846	1220
MIN	203	324	624	1240	3710	2100	1620	779	404	280	201	198
CFSM	.15	.30	.55	2.48	4.94	4.93	1.41	.68	.28	.18	.14	.18
IN.	.17	.33	.64	2.86	5.14	5.69	1.57	.78	.31	.21	.16	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN
(WY)	1047	6591	1960	1272	5049	1948	2025	6195	1949	3342	11050	1936
(WY)	1960	1948	1934	1949	1899	1989	1899	1989	1958	1871	8553	1987
(WY)	56.7	115	191	253	497	1116	688	451	243	1341	4873	1979
(WY)	1934	1934	1934	1934	1934	1981	1995	1995	1986	1306	6291	1975
										1411	8260	1940
										192	180	63.8
										1993	1968	



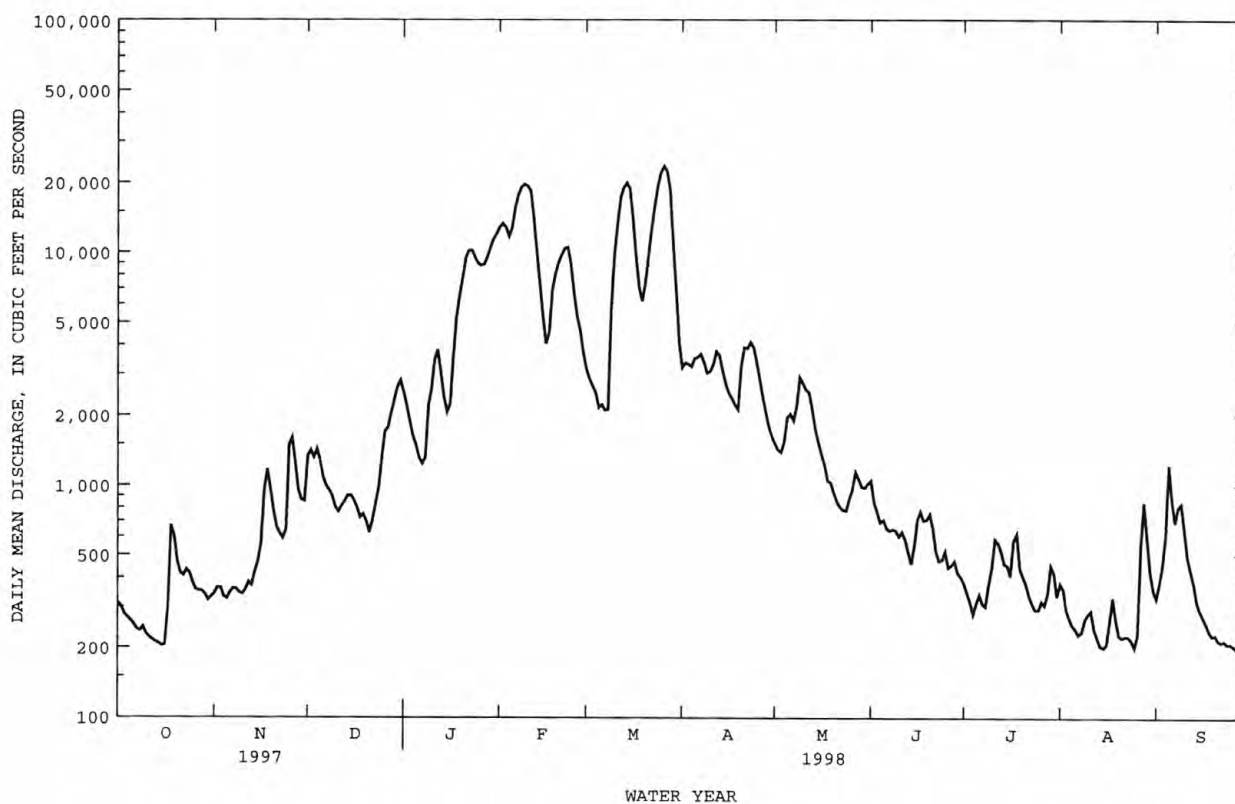
## PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1896 - 1998 <sup>a</sup>	
ANNUAL TOTAL	629507		1060024		2241	
ANNUAL MEAN	1725		2904		4057	1960
HIGHEST ANNUAL MEAN					594	1981
LOWEST ANNUAL MEAN					36100	Aug 20 1940
HIGHEST DAILY MEAN	12200	May 5	23500	Mar 26	36	Oct 17 1933
LOWEST DAILY MEAN	203	Oct 15	198	Sep 27	40	Sep 26 1932
ANNUAL SEVEN-DAY MINIMUM	213	Oct 10	204	Sep 24	37200	Aug 20 1940
INSTANTANEOUS PEAK FLOW			23700	Mar 26	31.77	Aug 20 1940
INSTANTANEOUS PEAK STAGE			27.64	Mar 26	36*	Oct 17 1933
INSTANTANEOUS LOW FLOW			187	Aug 26	1.03	
ANNUAL RUNOFF (CFSM)	.79		1.33		13.95	
ANNUAL RUNOFF (INCHES)	10.73		18.06		5630	
10 PERCENT EXCEEDS	3690		9730		1220	
50 PERCENT EXCEEDS	901		845		285	
90 PERCENT EXCEEDS	275		241			

<sup>a</sup> See PERIOD RECORD.

\* See REMARKS.



## PAMLICO RIVER BASIN

02083800 CONETOE CREEK NEAR BETHEL, NC

LOCATION.--Lat 35°46'33", long 77°27'45", Pitt County, Hydrologic Unit 03020103, on right bank 5 ft downstream of bridge on Secondary Road 1409, 5.5 mi downstream of Crisp Creek, and 5.5 mi west of Bethel.

DRAINAGE AREA.--78.1 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1956 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 30 ft above sea level, from topographic map. Telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record also occurred Aug. 29, Sept. 3, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1955 reached a stage of 16.7 ft, from information by local resident; discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	2.8	87	34	139	89	69	44	14	4.8	7.1	28
2	7.2	2.6	59	27	119	84	92	42	19	5.2	4.2	27
3	6.4	2.8	39	22	109	78	77	37	16	4.8	3.6	28
4	5.8	2.7	31	22	591	72	81	35	15	3.5	3.5	68
5	5.4	2.1	29	20	908	67	82	40	17	7.1	3.1	70
6	5.0	2.0	25	19	998	63	70	37	15	7.2	2.9	44
7	4.5	3.4	20	18	942	60	62	32	19	5.7	2.8	33
8	4.6	6.0	24	27	487	79	56	72	14	5.0	2.9	27
9	4.4	2.8	18	46	251	557	65	68	12	4.7	3.0	25
10	3.9	2.8	17	35	199	731	84	52	12	17	6.2	21
11	3.7	2.2	17	27	176	503	71	44	12	9.1	40	18
12	3.5	2.4	11	23	301	228	60	39	11	5.3	11	16
13	3.1	5.8	9.2	20	217	167	52	35	9.6	4.2	11	14
14	3.0	17	8.5	20	169	141	48	32	9.9	4.7	6.6	13
15	2.9	19	7.9	24	141	120	49	29	12	4.2	4.1	11
16	2.7	12	7.0	128	126	102	45	26	12	4.0	4.7	10
17	2.5	10	6.7	224	475	93	43	24	9.6	3.9	78	9.6
18	2.2	8.5	6.3	124	768	220	41	23	8.3	43	15	8.4
19	2.3	8.8	5.4	143	664	356	39	22	8.5	11	7.9	7.4
20	2.2	7.8	5.3	275	294	594	40	20	18	6.0	5.4	7.6
21	1.8	7.2	4.9	186	199	454	38	19	11	4.6	4.5	7.2
22	1.9	9.4	7.0	120	156	310	42	18	8.6	3.9	3.6	6.7
23	2.0	6.7	19	205	145	212	202	20	37	3.1	3.1	6.5
24	1.6	7.1	19	446	144	165	167	32	15	3.0	2.8	5.7
25	1.5	8.5	53	259	120	136	121	23	10	3.1	2.6	5.0
26	1.7	8.9	37	180	105	120	88	21	7.3	4.3	13	4.9
27	2.2	14	53	169	96	110	70	20	6.0	19	295	4.8
28	1.8	14	93	546	91	97	60	20	5.9	9.4	190	4.7
29	1.6	15	59	411	---	85	52	17	6.1	10	75	4.9
30	2.0	51	60	236	---	76	47	16	5.6	5.8	47	6.4
31	3.9	---	46	175	---	69	---	15	---	12	34	---
TOTAL	105.2	265.3	884.2	4211	9130	6238	2113	974	376.4	238.6	893.6	542.8
MEAN	3.39	8.84	28.5	136	326	201	70.4	31.4	12.5	7.70	28.8	18.1
MAX	7.9	51	93	546	998	731	202	72	37	43	295	70
MIN	1.5	2.0	4.9	18	91	60	38	15	5.6	3.0	2.6	4.7
CFSM	.04	.11	.37	1.74	4.18	2.58	.90	.40	.16	.10	.37	.23
IN.	.05	.13	.42	2.01	4.35	2.97	1.01	.46	.18	.11	.43	.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1998, BY WATER YEAR (WY)

	MEAN	50.9	36.3	60.6	119	154	155	93.3	59.9	41.9	37.2	66.4	38.1
MAX	462	181	218	296	327	282	282	251	274	210	452	329	
(WY)	1972	1978	1958	1978	1960	1983	1959	1978	1979	1962	1967	1960	
MIN	2.82	3.14	3.77	9.96	22.5	17.5	13.2	9.91	3.80	3.16	1.32	2.67	
(WY)	1979	1987	1969	1981	1981	1981	1981	1981	1994	1993	1993	1980	

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

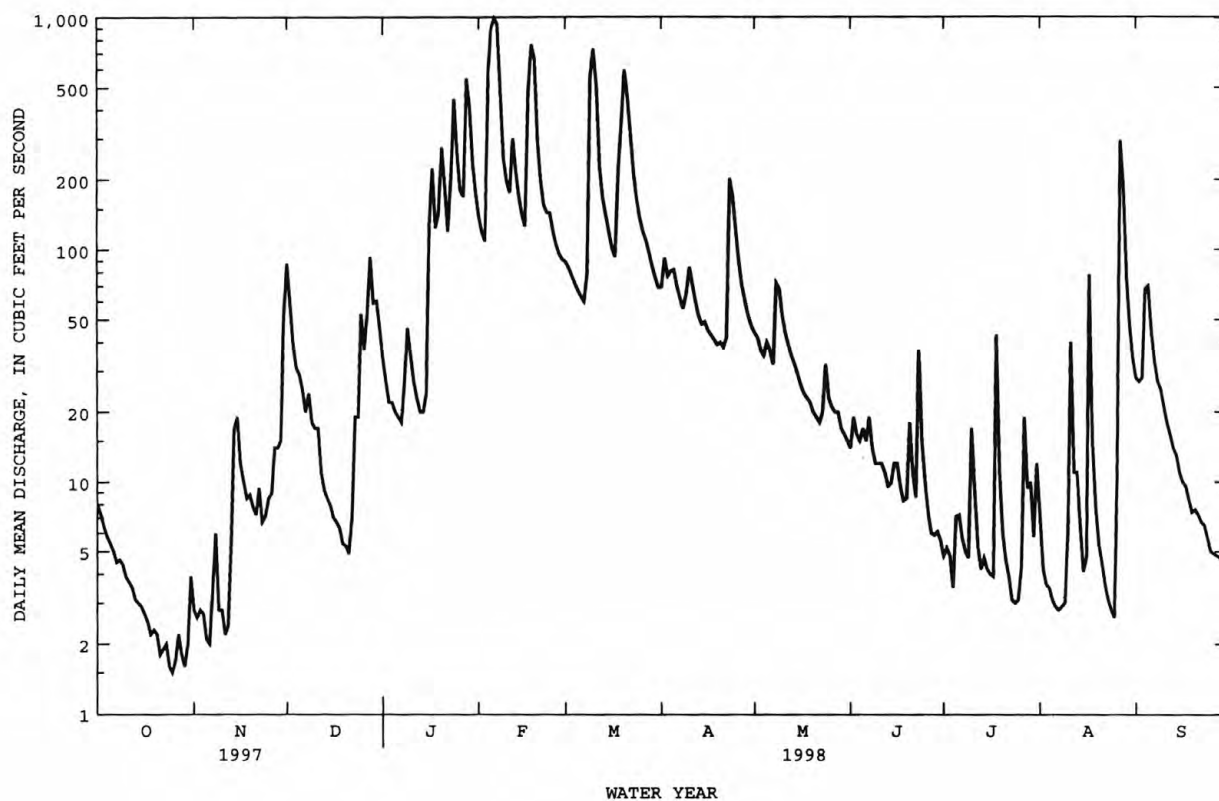
WATER YEARS 1957 - 1998

ANNUAL TOTAL	16037.7	25972.1	77.0
ANNUAL MEAN	43.9	71.2	148
HIGHEST ANNUAL MEAN			12.0
LOWEST ANNUAL MEAN			1960
HIGHEST DAILY MEAN	364	Feb 15	2480
LOWEST DAILY MEAN	1.5	Oct 25	.74
ANNUAL SEVEN-DAY MINIMUM	1.8	Oct 23	.79
INSTANTANEOUS PEAK FLOW			2580
INSTANTANEOUS PEAK STAGE			15.74
INSTANTANEOUS LOW FLOW			.40*
ANNUAL RUNOFF (CFSM)	.56		.99
ANNUAL RUNOFF (INCHES)	7.64		13.39
10 PERCENT EXCEEDS	120		180
50 PERCENT EXCEEDS	18		32
90 PERCENT EXCEEDS	3.5		5.1

\* See REMARKS.

## PAMLICO RIVER BASIN

02083800 CONETOE CREEK NEAR BETHEL, NC--Continued



## PAMLICO RIVER BASIN

02084000 TAR RIVER AT GREENVILLE, NC.

LOCATION.--Lat 35°37'00", long 77°22'30", Pitt County, Hydrologic Unit 03020103, on right bank 200 ft downstream of State Highway 11,800 ft downstream from railroad bridge, and 21 mi upstream from Pamlico River at Washington.

DRAINAGE AREA.--2,620 mi<sup>2</sup>.

PERIOD OF RECORD:--May 1997 to September 1997. Gage height records collected at site 800 ft upstream from 1905 to 1935 and at site 200 ft upstream from 1935 to 1984, are in reports of the National Weather Service. Unpublished records of gage height for the period October 1984 to September 1990 are available in files of U.S. Geological Survey.

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 2.36 ft below sea level. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 22, 1940 reached a stage of 22.07 ft at site 200 ft upstream at present datum; discharge 36,500 ft<sup>3</sup>/s. Maximum observed stage during period 1905-39 (National Weather Service Records) 24.5 ft July 28, 1919.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	475	491	1390	e3020	13900	3270	5420	1610	983	430	350	709
2	e351	466	1750	e2650	14200	2850	4020	1490	982	353	407	745
3	e392	525	1700	e2290	14400	2620	3740	1420	836	352	400	759
4	e341	529	1690	e1910	15600	2470	3550	1430	770	391	350	976
5	e329	400	1650	e1720	17600	2220	3540	1750	718	489	e263	1470
6	e319	470	1420	e1500	18800	2100	3600	1970	778	412	e298	1500
7	e297	470	1250	e1390	20300	2090	3590	1930	744	428	e248	1090
8	289	483	1140	e1480	21500	2060	3510	2020	698	372	e247	996
9	337	e436	1080	e2360	21900	3360	3280	2560	695	e360	327	1200
10	e319	e458	1050	e2900	21700	6560	3210	2840	688	438	374	1050
11	e251	453	944	e3830	21300	11500	3300	2650	650	504	422	811
12	e252	464	984	e4180	20500	15400	3490	2510	704	590	347	676
13	e277	448	1010	e3280	18200	18000	3660	2260	644	576	e309	593
14	e279	620	1020	e2610	14500	19800	3340	1900	555	533	277	506
15	e285	660	1010	2240	10100	20700	2890	1620	581	509	e270	433
16	e260	782	1000	2290	6310	20400	2570	1470	677	484	e299	422
17	e244	890	965	3070	4400	17800	2370	1310	803	557	316	e353
18	464	1220	881	3890	5750	14000	2230	1170	773	721	e301	e345
19	779	1200	876	4550	8420	10200	2080	1050	699	653	e320	330
20	602	1000	883	5340	10100	8470	2290	1020	792	523	e274	309
21	561	837	e802	7430	11000	9150	3210	921	780	468	e296	e322
22	e519	819	e800	9400	11300	11400	3640	865	658	e410	e260	315
23	517	732	1050	11200	11700	14100	4160	846	576	e332	e242	e274
24	522	771	1190	12100	11600	16900	4530	849	561	e339	e267	277
25	516	e1000	1530	12000	10300	19600	4240	910	532	e307	e258	e290
26	444	1540	1900	e10900	7760	22300	3550	966	585	e387	e271	306
27	502	1470	e2000	e11000	4900	24000	2870	1050	518	452	2100	e256
28	457	1170	e2350	e11500	3940	23300	2370	1110	493	395	2750	e255
29	466	992	e2680	12000	---	20800	2030	1070	513	412	1740	e246
30	419	954	e3130	12900	---	15600	1780	981	482	499	1060	308
31	395	---	e3340	13600	---	9730	---	999	---	447	800	---
TOTAL	12460	22750	44465	180530	371980	372750	98060	46547	20468	14123	16443	18122
MEAN	402	758	1434	5824	13290	12020	3269	1502	682	456	530	604
MAX	779	1540	3340	13600	21900	24000	5420	2840	983	721	2750	1500
MIN	244	400	800	1390	3940	2060	1780	846	482	307	242	246
CFSM	.15	.29	.55	2.22	5.07	4.59	1.25	.57	.26	.17	.20	.23
IN.	.18	.32	.63	2.56	5.28	5.29	1.39	.66	.29	.20	.23	.26

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

[illegible]

## PAMLICO RIVER BASIN

02084000 TAR RIVER AT GREENVILLE, NC.--Continued

## SUMMARY STATISTICS

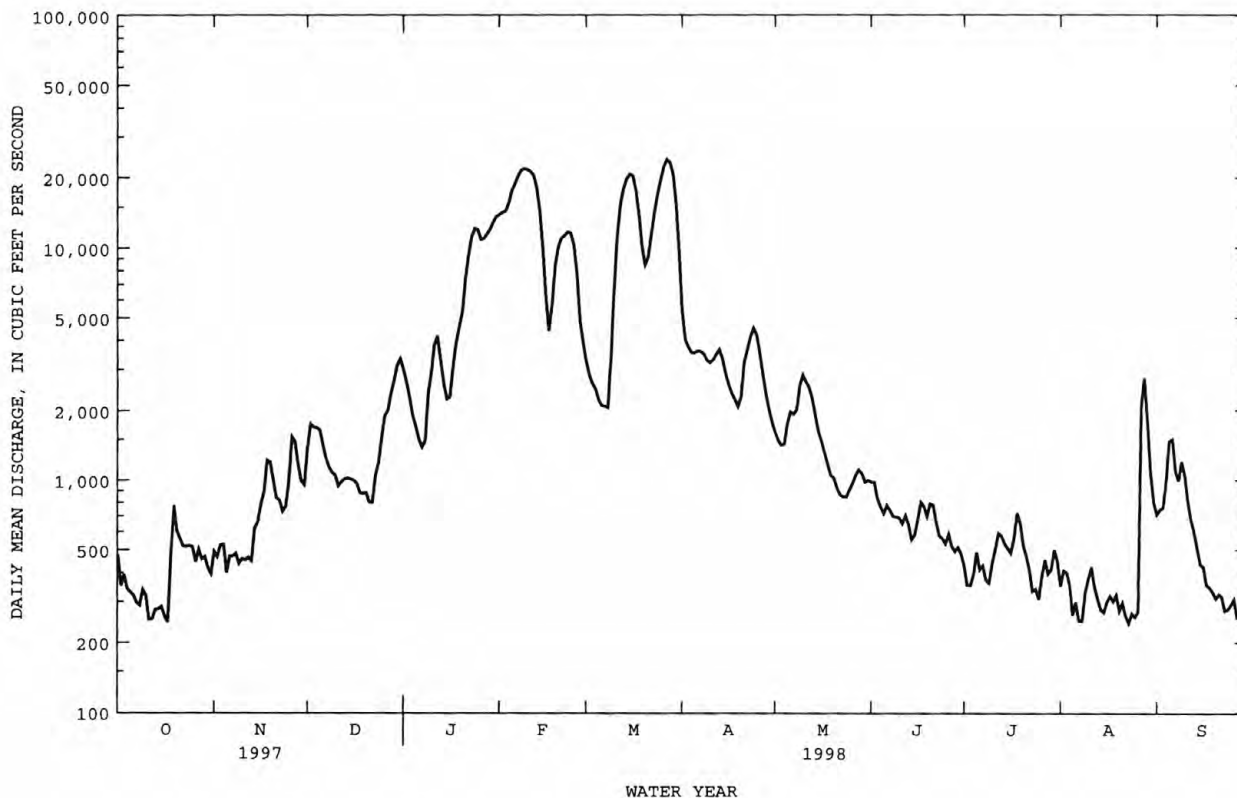
## FOR 1998 WATER YEAR

## WATER YEARS 1997 - 1998

ANNUAL TOTAL	1218698			
ANNUAL MEAN	3339			
HIGHEST ANNUAL MEAN				3339 1998
LOWEST ANNUAL MEAN				3339 1998
HIGHEST DAILY MEAN	24000	Mar 27		24000 Mar 27 1998
LOWEST DAILY MEAN	242	Aug 23		213 Aug 19 1997
ANNUAL SEVEN-DAY MINIMUM	264	Oct 11		264 Oct 11 1997
INSTANTANEOUS PEAK FLOW	25500	Mar 28		25500 Mar 28 1998
INSTANTANEOUS PEAK STAGE	18.08	Mar 28		18.08 Mar 28 1998
INSTANTANEOUS LOW FLOW	-304	Aug 26		-2380 Jul 12 1997
ANNUAL RUNOFF (CFSM)	1.27			1.27
ANNUAL RUNOFF (INCHES)	17.30			17.32
10 PERCENT EXCEEDS	11500			9500
50 PERCENT EXCEEDS	999			871
90 PERCENT EXCEEDS	316			328

e Estimated.

Note.--Negative values indicate reverse flow.



## PAMLICO RIVER BASIN

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC

LOCATION.--Lat 35°33'47", long 77°13'43", Pitt County, Hydrologic Unit 03020103, on left bank at downstream side of bridge on Secondary Road 1760, 0.6 mi upstream from Juniper Branch, and 2.8 mi east-southeast of Simpson.

DRAINAGE AREA.--45 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1975 to March 1987. May 1992 to current year.

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

REMARKS.--Records poor. No flow occurs at times during most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.0	1.4	141	37	53	10	6.2	4.0	4.9	0	0	39
2	e2.0	2.8	85	18	33	10	79	6.2	3.8	0	0	15
3	e1.0	1.6	28	14	25	7.8	62	3.6	4.0	0	0	10
4	e.50	.94	17	11	1370	6.3	119	4.2	12	0	0	33
5	e.20	.75	13	9.5	1340	5.7	145	24	107	2.9	0	77
6	e.10	.82	11	9.3	502	5.2	82	13	68	3.9	0	48
7	e.05	.95	10	9.9	266	5.2	34	6.2	65	.31	0	18
8	0	1.1	10	18	173	12	16	144	31	0	0	21
9	0	1.1	12	56	119	448	652	176	12	0	.13	110
10	0	1.0	13	37	79	364	1160	96	6.8	4.2	.29	30
11	0	1.0	15	22	54	123	332	37	4.9	4.9	.06	8.4
12	0	1.2	17	16	145	54	148	17	4.4	.38	0	3.5
13	0	3.3	17	15	145	28	86	9.4	6.7	.05	0	1.8
14	0	25	16	15	75	17	37	6.0	11	.08	0	1.4
15	0	35	15	17	42	12	19	4.4	39	0	0	1.6
16	.02	8.7	13	109	27	9.1	11	2.4	67	0	0	1.6
17	.04	3.8	13	254	662	8.5	6.7	1.8	21	5.9	.21	1.6
18	.06	2.1	12	136	865	12	6.1	5.2	9.6	4.7	.06	1.6
19	.13	1.4	10	135	329	146	5.0	5.4	5.4	.13	0	1.5
20	.16	1.2	10	522	172	619	5.6	6.3	4.7	.07	0	1.2
21	.15	1.2	9.8	332	110	434	5.2	5.3	3.7	0	0	1.0
22	.17	1.2	17	173	66	276	4.7	4.6	2.1	0	0	.88
23	.17	1.7	72	195	56	144	9.4	4.6	1.6	0	0	.68
24	.16	2.3	48	652	62	83	9.2	12	1.8	0	0	.54
25	.16	2.6	192	346	41	48	6.4	10	1.1	0	0	.49
26	.22	3.0	126	175	23	29	5.2	9.2	.53	0	167	.44
27	.43	3.2	73	116	14	26	3.2	8.1	.30	0	2680	.38
28	.47	3.2	174	375	11	21	3.0	14	.22	0	1520	.36
29	.43	3.5	107	280	---	15	2.7	7.7	.11	0	565	.33
30	.41	31	99	150	---	6.2	2.5	5.3	.05	0	274	.35
31	.39	---	71	90	---	5.8	---	4.7	---	.01	112	---
TOTAL	11.42	148.06	1466.8	4344.7	6859	2990.8	3063.1	657.6	499.71	27.53	5318.75	430.65
MEAN	.37	4.94	47.3	140	245	96.5	102	21.2	16.7	.89	172	14.4
MAX	4.0	35	192	652	1370	619	1160	176	107	5.9	2680	110
MIN	0	.75	9.8	9.3	11	5.2	2.5	1.8	.05	0	0	.33
CFSM	.01	.11	1.05	3.11	5.44	2.14	2.27	.47	.37	.02	3.81	.32
IN.	.01	.12	1.21	3.59	5.67	2.47	2.53	.54	.41	.02	4.40	.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1998<sup>g</sup>, BY WATER YEAR (WY)

MEAN	21.5	35.4	50.2	103	95.1	101	53.5	33.1	36.2	20.4	41.9	43.3
MAX	112	219	94.2	244	245	201	144	139	192	120	238	412
(WY)	1997	1978	1978	1978	1998	1980	1978	1978	1995	1996	1992	1996
MIN	.27	1.23	4.57	15.2	19.7	18.0	4.49	.65	.001	.89	0	.22
(WY)	1977	1982	1982	1986	1977	1981	1981	1985	1985	1998	1976	1995

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1976 - 1998 <sup>g</sup>
ANNUAL TOTAL	10594.78	25818.12	
ANNUAL MEAN	29.0	70.7	51.9
HIGHEST ANNUAL MEAN			90.5
LOWEST ANNUAL MEAN			22.1
HIGHEST DAILY MEAN	540	Mar 15	2680
LOWEST DAILY MEAN	0	Oct 8	0
ANNUAL SEVEN-DAY MINIMUM	0	Oct 8	0
INSTANTANEOUS PEAK FLOW		3150	3150
INSTANTANEOUS PEAK STAGE		13.45	13.45
INSTANTANEOUS LOW FLOW		0*	0*
ANNUAL RUNOFF (CFSM)	.65	1.57	1.15
ANNUAL RUNOFF (INCHES)	8.76	21.34	15.67
10 PERCENT EXCEEDS	72	149	124
50 PERCENT EXCEEDS	9.7	6.3	13
90 PERCENT EXCEEDS	1.1	0	.38

e Estimated.

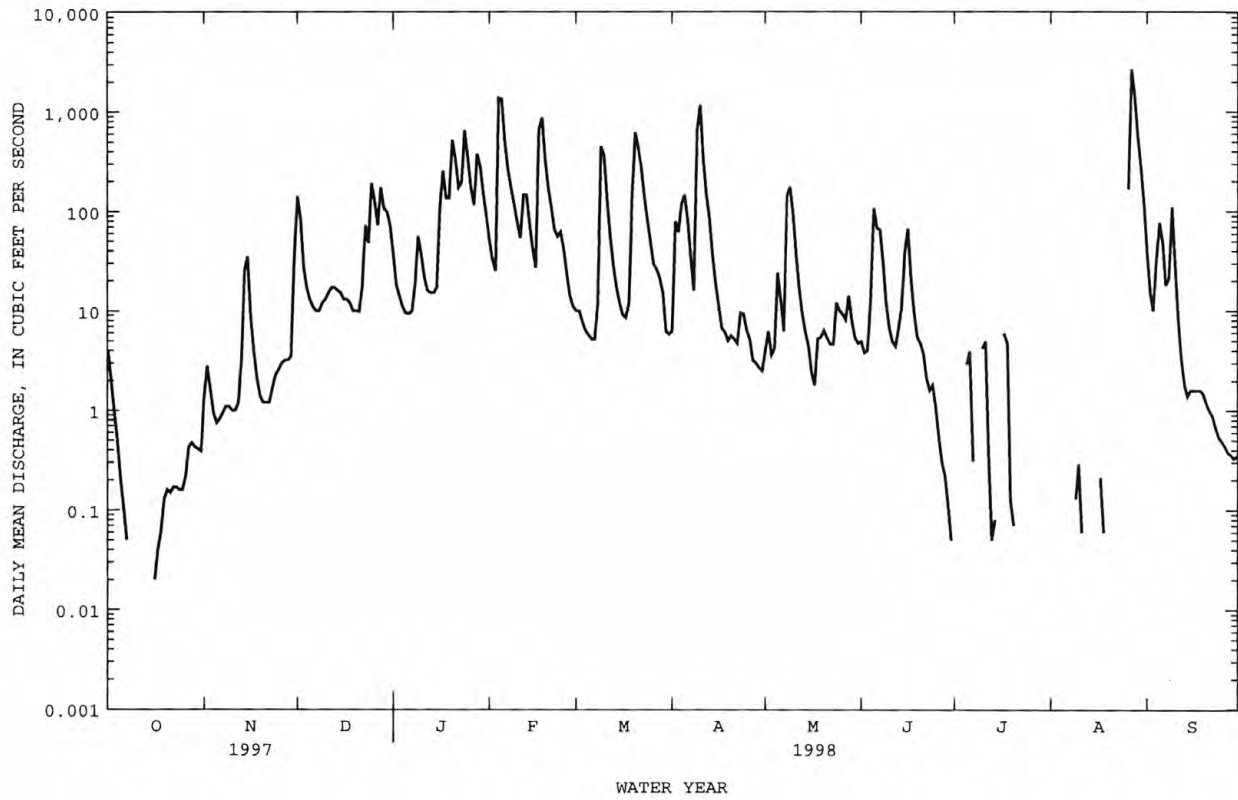
<sup>g</sup> See PERIOD OF RECORD.

\* See REMARKS.



## PAMLICO RIVER BASIN

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC--Continued



## PAMLICO RIVER BASIN

02084557 VAN SWAMP NEAR HOKE, NC

LOCATION.--Lat 35°43'49", long 76°44'49", Washington County, Hydrologic Unit 03020104, on left bank at upstream side of culvert on State Highway 32, and 4.8 mi east of Hoke.

DRAINAGE AREA.--23 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1977 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above sea level, from topographic map.

REMARKS.--Records poor. No flow occurs periodically.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.31	3.6	10	130	e31	61	8.9	5.2	e1.8	e0	e.66
2	.07	.69	3.7	8.9	118	e30	61	9.8	4.4	e1.4	e0	e2.1
3	.06	.61	3.0	8.9	106	e29	58	8.4	4.0	e.94	e0	e12
4	.04	.47	2.5	7.9	160	e28	64	6.9	3.9	e.70	e0	e18
5	.04	.33	2.2	6.9	195	e27	75	28	3.8	e.45	e0	e7.0
6	.04	.23	1.9	6.1	190	e25	69	50	3.6	e.28	e0	e3.9
7	.04	.21	1.8	5.4	187	e25	60	50	3.4	e.17	e0	e2.4
8	.03	.20	1.6	5.4	184	e33	52	53	3.1	e.10	e0	e1.8
9	.02	.17	1.6	7.2	178	e52	57	58	2.8	e.08	e.02	e1.3
10	.01	.16	1.6	7.3	172	e90	86	54	2.6	e.30	e.10	e.98
11	.01	.15	1.6	6.7	e160	e110	88	48	2.4	e.14	e1.0	e.79
12	0	.15	1.6	6.1	e155	e105	82	44	2.1	e.08	e.31	e.68
13	0	.31	1.6	5.8	e145	e74	73	40	2.8	e.05	e.14	e.60
14	0	.93	1.6	5.6	e140	e53	64	37	17	e.03	e.08	e.52
15	0	1.3	1.6	6.3	e135	e40	57	33	17	e.02	e.05	e.47
16	0	1.2	1.5	16	e130	e33	50	28	15	e.06	e.02	e.41
17	0	.92	1.4	31	e145	e31	44	26	10	e.21	e.11	e.33
18	0	.75	1.3	32	e160	e30	39	34	6.7	e.15	e.16	e.30
19	.04	.68	1.2	30	e155	e38	36	30	6.5	e.08	e.05	e.28
20	.07	.61	1.2	41	e100	e90	32	24	21	e.05	e.03	e.26
21	.08	.56	1.1	52	e71	e105	28	20	21	e.02	e.02	e.24
22	.09	.59	1.4	54	e55	e100	25	16	16	e.01	e.02	e.23
23	.08	.60	3.3	64	e47	e85	24	15	12	e.01	e.01	e.22
24	.06	.59	3.7	104	e49	e69	22	24	e9.0	e0	e.01	e.21
25	.08	.56	6.9	114	e46	e66	19	24	e5.6	e.14	e0	e.18
26	.08	.56	6.8	114	e42	e64	17	19	e4.6	e.07	e0	e.17
27	.10	.54	6.2	113	e37	e62	14	15	e3.7	e.03	e.06	e.17
28	.11	.52	9.7	145	e33	e62	13	13	e3.0	e.02	e1.4	e.17
29	.11	.49	9.4	146	---	e62	11	10	e2.4	e.02	e.80	e.17
30	.10	1.3	13	144	---	e62	9.6	8.3	e2.1	e.01	e.62	e.16
31	.10	---	13	138	---	e63	---	6.4	---	e.01	e.58	---
TOTAL	1.63	16.69	112.6	1442.5	3425	1774	1390.6	841.7	216.7	7.43	5.59	56.70
MEAN	.053	.56	3.63	46.5	122	57.2	46.4	27.2	7.22	.24	.18	1.89
MAX	.17	1.3	13	146	195	110	88	58	21	1.8	1.4	18
MIN	0	.15	1.1	5.4	33	25	9.6	6.4	2.1	0	0	.16
CFSM	0	.02	.16	2.02	5.32	2.49	2.02	1.18	.31	.01	.01	.08
IN.	0	.03	.18	2.33	5.54	2.87	2.25	1.36	.35	.01	.01	.09

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1998, BY WATER YEAR (WY)

	MEAN	13.3	14.8	16.7	44.6	49.6	61.0	42.9	26.4	9.12	6.01	11.8	12.2
MAX	115	121	56.6	124	122	142	101	122	29.8	55.2	64.8	92.5	
(WY)	1997	1978	1990	1978	1998	1983	1983	1978	1995	1989	1986	1996	
MIN	.018	.052	.033	.72	10.2	8.78	4.68	.58	.29	.011	0	.034	
(WY)	1979	1979	1989	1989	1989	1992	1985	1985	1985	1997	1997	1995	

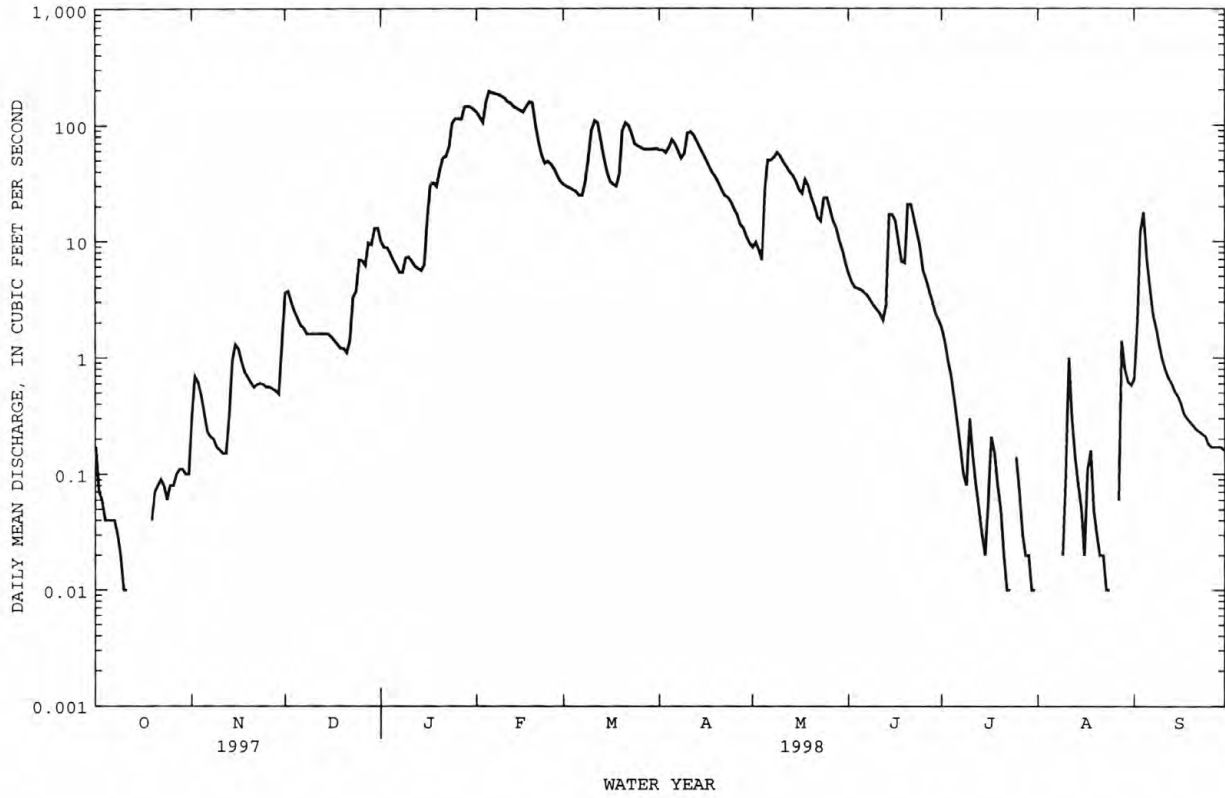
## SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1977 - 1998

ANNUAL TOTAL	4960.59	9291.14	
ANNUAL MEAN	13.6	25.5	25.9
HIGHEST ANNUAL MEAN			51.7
LOWEST ANNUAL MEAN			7.76
HIGHEST DAILY MEAN	92 Feb 17	195 Feb 5	385 Nov 7 1977
LOWEST DAILY MEAN	0 Jun 29	0 Oct 12	0 Aug 21 1983
ANNUAL SEVEN-DAY MINIMUM	0 Jun 29	0 Oct 12	0 Sep 12 1985
INSTANTANEOUS PEAK FLOW		198 Feb 5	409 Nov 6 1977
INSTANTANEOUS PEAK STAGE		5.04 Feb 5	5.98 Oct 8 1996
INSTANTANEOUS LOW FLOW		0* Oct 10	0* Oct 1 1978
ANNUAL RUNOFF (CFSM)	.59	1.11	1.12
ANNUAL RUNOFF (INCHES)	8.02	15.03	15.27
10 PERCENT EXCEEDS	41	85	73
50 PERCENT EXCEEDS	1.6	3.7	7.7
90 PERCENT EXCEEDS	0	.03	.11

e Estimated.

\* See REMARKS.

PAMLICO RIVER BASIN  
02084557 VAN SWAMP NEAR HOKE, NC--Continued



## NEUSE RIVER BASIN

02084909 SEVENMILE CREEK NEAR EFLAND, NC

LOCATION.--Lat 36°03'56", long 79°08'39", Orange County, Hydrologic Unit 03020201, at upstream side of culvert on I-85, 1 mi upstream from mouth, and 1.5 mi southeast of Efland.

DRAINAGE AREA.--14.1 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1981 to July 1982. June 1987 to current year.

REVISED RECORDS.--WRD NC-96-1: 1988-95(M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 560 ft above sea level, from topographic map.

REMARKS.--Records poor. Maximum discharge for period of record from rating curve extended above 5,500 ft<sup>3</sup>/s, on the basis of computation of peak flow through culvert; maximum gage height 15.47 ft, from floodmark. No flow occurs periodically most years. Minimum discharge for the current water year also occurred on Sept. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	e5.8	8.3	2.5	20	14	14	7.2	3.3	.98	.52	.03
2	1.4	e3.3	6.7	1.8	18	13	13	7.6	3.0	.95	.49	.03
3	1.1	e1.7	5.2	1.5	20	13	12	6.7	3.0	.90	.41	.16
4	1.0	e1.4	4.9	1.1	343	12	20	6.8	4.6	.83	.39	33
5	.83	e1.2	4.4	1.0	188	12	14	5.8	4.8	.79	.31	.85
6	.58	e1.9	3.5	.91	59	12	12	5.2	6.4	.74	.27	.24
7	.60	e4.3	3.2	2.9	38	12	11	5.2	7.1	.66	.25	.12
8	.41	e1.6	4.2	.68	28	69	11	7.4	3.9	.64	.42	1.6
9	.23	e1.4	3.3	.36	22	223	101	7.2	3.0	.65	1.4	1.1
10	.24	e1.2	4.0	8.2	20	53	37	5.5	3.3	.62	.88	.17
11	.25	e.80	4.0	3.7	19	25	21	30	3.1	.62	.67	.10
12	.23	e1.0	4.2	2.6	25	20	15	11	2.8	.57	.37	.08
13	.32	e5.1	3.9	2.3	19	17	12	7.4	2.6	.59	.31	.07
14	.48	e21	3.5	1.9	17	16	12	6.6	2.2	.56	.25	.07
15	3.9	e4.9	3.3	.69	15	14	12	5.8	2.5	.47	.20	.07
16	1.3	e2.8	3.1	175	23	13	10	5.0	2.2	.45	.20	.07
17	1.2	e2.1	2.9	86	559	13	108	4.7	2.1	.42	1.0	.07
18	1.1	e1.6	2.7	24	100	343	35	4.4	1.9	.40	.38	.06
19	11	e1.4	2.5	32	52	683	20	4.0	1.8	.39	.25	.06
20	6.5	e1.7	2.4	32	30	227	21	3.9	1.8	.44	.25	.07
21	2.5	e7.2	2.2	10	23	313	14	3.5	1.5	.41	.18	.06
22	1.5	57	7.1	5.7	19	73	14	3.4	1.4	.44	.13	.06
23	1.4	13	8.4	131	21	45	15	5.5	1.9	.53	.13	.06
24	1.9	8.0	4.9	64	20	29	11	6.5	2.0	.57	.09	.04
25	2.6	7.2	15	25	17	21	9.8	4.7	1.4	.58	.08	.04
26	5.1	5.1	5.3	11	15	18	8.5	5.0	1.3	.61	.07	.04
27	6.1	4.4	22	161	15	17	7.7	15	1.2	.54	.06	.04
28	4.4	4.1	23	259	15	15	7.5	7.4	1.0	.52	.06	.04
29	e2.3	3.9	6.3	58	---	14	7.3	5.1	.96	.49	.05	.04
30	e1.5	5.6	5.4	33	---	13	6.5	4.3	.93	.52	.05	.04
31	e1.8	---	3.8	24	---	13	---	3.6	---	.48	.03	---
TOTAL	65.47	181.70	183.6	1334.11	1760	2375	612.3	211.4	78.99	18.36	10.15	38.48
MEAN	2.11	6.06	5.92	43.0	62.9	76.6	20.4	6.82	2.63	.59	.33	1.28
MAX	11	57	23	259	559	683	108	30	7.1	.98	1.4	33
MIN	.23	.80	2.2	.91	15	12	6.5	3.4	.93	.39	.03	.03
CFSM	.15	.43	.42	3.05	4.46	5.43	1.45	.48	.19	.04	.02	.09
IN.	.17	.48	.48	3.52	4.64	6.27	1.62	.56	.21	.05	.03	.10

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	7.34	9.46	9.71	27.0	26.5	34.7	19.0	11.1	8.56	3.79	3.46	8.19
MAX	24.9	28.9	17.6	58.2	62.9	76.6	36.3	36.3	30.6	14.4	8.27	54.4
(WY)	1996	1996	1991	1991	1998	1998	1993	1989	1995	1989	1989	1996
MIN	.17	1.74	2.90	7.63	9.22	4.39	.99	1.26	.53	.21	.33	.027
(WY)	1995	1992	1992	1989	1991	1988	1995	1995	1994	1988	1998	1990

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

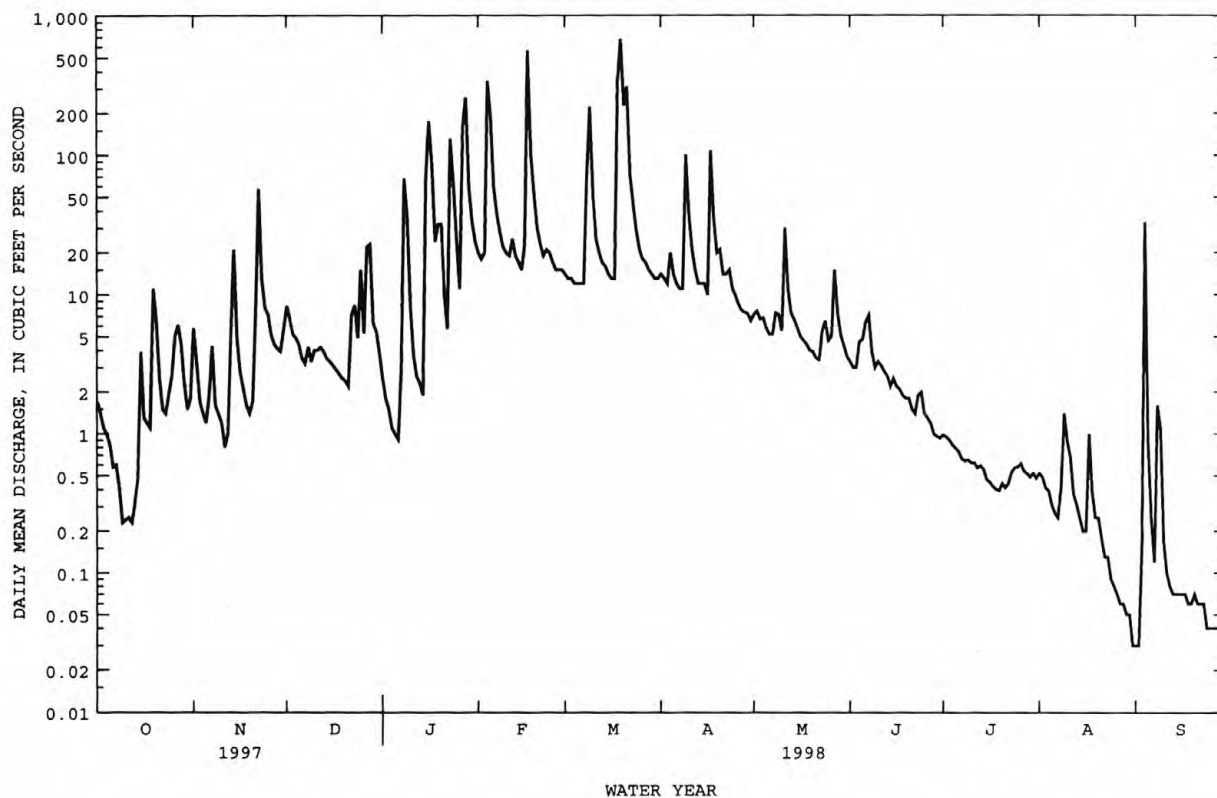
## WATER YEARS 1988 - 1998

ANNUAL TOTAL	4188.13	6869.56	
ANNUAL MEAN	11.5	18.8	14.0
HIGHEST ANNUAL MEAN			20.7
LOWEST ANNUAL MEAN			5.92
HIGHEST DAILY MEAN	349	683	1080
LOWEST DAILY MEAN	.17	.03	0*
ANNUAL SEVEN-DAY MINIMUM	.25	.04	0*
INSTANTANEOUS PEAK FLOW		1520	3440*
INSTANTANEOUS PEAK STAGE		11.58	15.47*
INSTANTANEOUS LOW FLOW		.02*	0*
ANNUAL RUNOFF (CFSM)	.81	1.33	.99
ANNUAL RUNOFF (INCHES)	11.05	18.12	13.49
10 PERCENT EXCEEDS	23	30	25
50 PERCENT EXCEEDS	4.4	3.9	5.2
90 PERCENT EXCEEDS	.47	.19	.33

e Estimated.

\* See REMARKS.

NEUSE RIVER BASIN  
02084909 SEVENMILE CREEK NEAR EFLAND, NC--Continued



## NEUSE RIVER BASIN

02085000 ENO RIVER AT HILLSBOROUGH, NC

LOCATION.--Lat 36°04'18", long 79°05'49", Orange County, Hydrologic Unit 03020201, on left bank 900 ft downstream of bridge on State Highway 86 at Hillsborough, and 2 mi downstream of Sevenmile Creek.

DRAINAGE AREA.--66.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to September 1971, October 1985 to current year.

REVISED RECORD.--WDR NC-96-1: 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 487.44 ft above sea level. Telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station of 1.3 ft<sup>3</sup>/s by Orange-Alamance Water System, Inc. and 2.6 ft<sup>3</sup>/s by town of Hillsborough for municipal supply, part of which is returned downstream of station as treated effluent. Maximum gage height for period of record, 21.13 ft, from high-water mark in gage shelter.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	21	23	40	79	57	63	43	19	6.9	3.3	2.2
2	4.1	14	20	31	67	53	82	52	16	7.5	2.8	1.4
3	3.5	9.4	14	27	70	52	68	50	15	6.0	2.5	6.2
4	3.8	6.3	14	23	1590	48	102	45	23	4.5	1.8	269
5	4.8	5.0	12	21	1170	46	90	39	28	5.9	1.5	46
6	3.4	5.7	11	20	298	44	68	34	40	5.2	1.4	19
7	2.3	10	9.4	31	151	43	56	35	41	3.6	1.9	10
8	3.4	5.5	9.0	420	114	241	53	46	24	3.2	20	22
9	3.7	4.9	8.7	304	91	955	323	47	19	3.0	18	21
10	2.9	3.6	11	104	78	265	196	38	22	3.0	15	9.7
11	3.0	2.7	13	63	73	116	113	107	23	2.4	21	7.6
12	3.5	2.8	13	45	94	87	82	67	19	2.3	9.2	6.9
13	3.5	10	12	40	78	74	67	48	17	2.1	6.8	6.4
14	4.7	80	10	37	66	68	64	40	14	2.2	e4.7	5.4
15	13	34	9.5	248	59	63	66	34	15	2.2	e4.0	4.9
16	6.8	17	9.1	883	71	57	57	30	16	1.8	5.1	5.1
17	4.6	8.9	8.8	548	2880	56	672	28	14	1.7	41	4.2
18	5.3	8.0	8.4	150	675	1070	301	25	12	1.6	14	4.3
19	31	6.8	8.0	138	255	3870	133	23	10	2.0	7.6	3.7
20	32	7.0	8.3	168	127	880	140	21	9.5	1.8	4.9	4.5
21	11	15	8.9	93	98	1610	98	20	8.8	1.2	3.0	3.3
22	6.9	302	23	69	83	383	85	19	11	1.7	2.5	3.1
23	4.7	80	44	605	91	174	85	36	17	2.1	2.7	3.5
24	3.6	33	33	426	91	123	69	55	25	1.6	1.6	2.6
25	3.1	20	73	165	74	101	60	38	12	2.3	2.3	2.6
26	5.6	15	47	102	65	89	53	31	9.4	4.2	2.2	2.6
27	11	13	95	472	61	83	47	67	8.0	3.0	2.0	2.4
28	8.6	11	149	1860	59	77	45	44	7.0	4.9	2.1	e2.6
29	5.5	11	67	356	---	74	42	31	5.6	3.7	2.2	e2.8
30	4.6	15	64	146	---	66	40	25	5.6	2.9	1.8	2.6
31	3.4	---	55	99	---	61	---	23	---	2.9	2.8	---
TOTAL	211.0	777.6	891.1	7734	8708	10986	3420	1241	505.9	99.4	211.7	487.6
MEAN	6.81	25.9	28.7	249	311	354	114	40.0	16.9	3.21	6.83	16.3
MAX	32	302	149	1860	2880	3870	672	107	41	7.5	41	269
MIN	2.3	2.7	8.0	20	59	43	40	19	5.6	1.2	1.4	1.4
CFSM	.10	.39	.44	3.78	4.71	5.37	1.73	.61	.26	.05	.10	.25
IN.	.12	.44	.50	4.36	4.91	6.19	1.93	.70	.29	.06	.12	.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	29.2	45.1	56.1	92.3	114	121	94.0	51.8	38.5	38.1	33.3	34.8
MAX	181	213	166	326	311	354	264	165	210	359	256	342	
(WY)	1930	1986	1946	1936	1998	1998	1936	1931	1995	1938	1939	1945	
MIN	.63	.82	3.64	5.16	21.8	29.9	14.8	9.67	1.75	1.28	.85	.28	
(WY)	1987	1942	1942	1942	1931	1988	1995	1986	1986	1986	1987	1954	

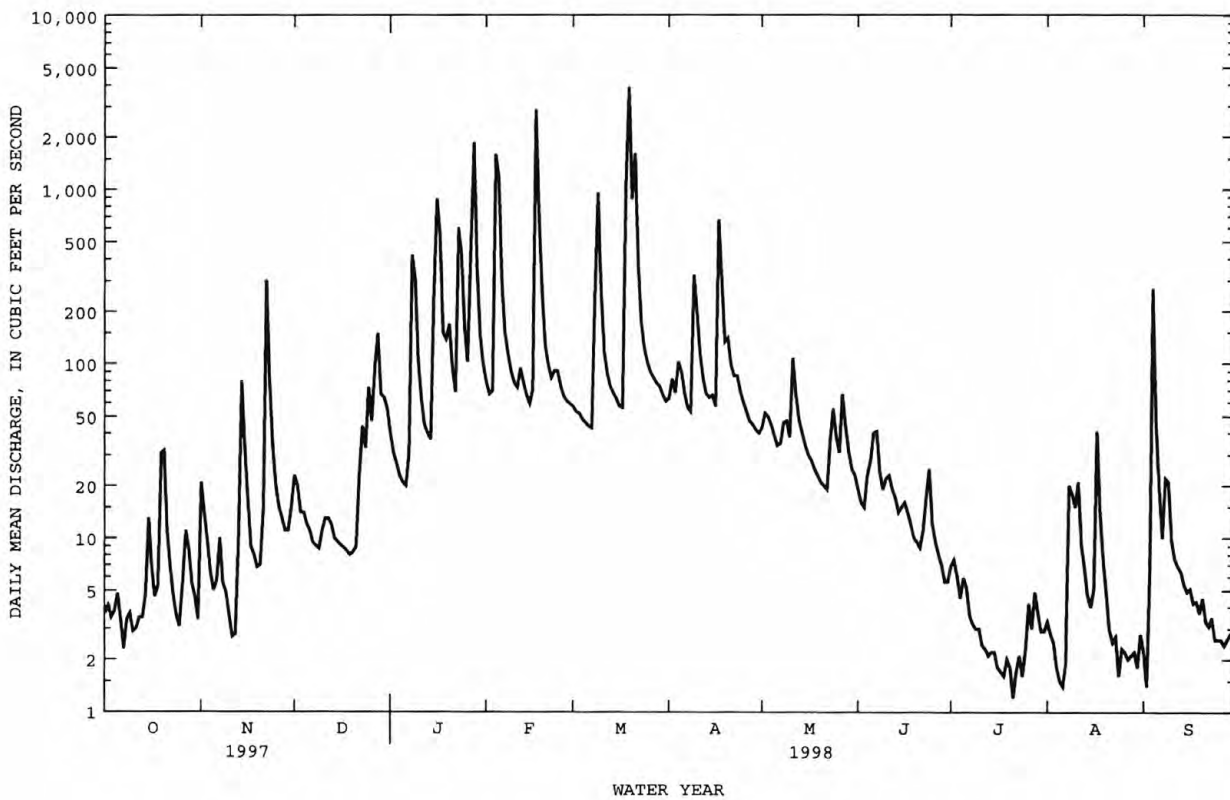


## NEUSE RIVER BASIN

02085000 ENO RIVER AT HILLSBOROUGH, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1928 - 1998 <sup>e</sup>
ANNUAL TOTAL	20500.74	35273.3	62.1
ANNUAL MEAN	56.2	96.6	108
HIGHEST ANNUAL MEAN			26.3
LOWEST ANNUAL MEAN			1960
HIGHEST DAILY MEAN	2220 Apr 29	3870 Mar 19	4600 Sep 6 1996
LOWEST DAILY MEAN	.84 Sep 23	1.2 Jul 21	.02 Jul 10 1986
ANNUAL SEVEN-DAY MINIMUM	1.5 Sep 17	1.7 Jul 16	.10 Oct 6 1954
INSTANTANEOUS PEAK FLOW		5600 Mar 19	10800 Sep 6 1996
INSTANTANEOUS PEAK STAGE		17.46 Mar 19	21.13* Sep 6 1996
INSTANTANEOUS LOW FLOW		.89 Jul 21	.01 Jul 10 1986
ANNUAL RUNOFF (CFSM)	.85	1.46	.94
ANNUAL RUNOFF (INCHES)	11.55	19.88	12.78
10 PERCENT EXCEEDS	101	147	117
50 PERCENT EXCEEDS	20	20	26
90 PERCENT EXCEEDS	2.6	2.6	4.3

e Estimated.  
 See PERIOD OF RECORD.  
 \* See REMARKS.



## NEUSE RIVER BASIN

02085000 ENO RIVER AT HILLSBOROUGH, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1990 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT 09...	1000	4.4	130	7.0	18.5	27	755	6.5	70	36	9.0	3.4
DEC 18...	1030	8.7	120	6.9	3.3	36	755	12.7	96	35	8.5	3.3
FEB 12...	1100	99	66	6.8	8.0	65	742	11.2	97	20	4.7	2.1
APR 14...	1230	62	72	6.8	14.2	55	754	8.6	85	23	5.5	2.2
24...	1130	69	64	7.0	15.0	--	755	9.6	97	--	--	--
JUN 19...	0845	10	84	6.7	24.9	55	748	6.1	75	30	7.2	2.9
AUG 25...	0945	2.8	94	6.8	23.6	65	751	5.6	67	30	7.0	3.0

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE IT-FLD (MG/L AS HCO3) (99440)	ANC UNFLTRD CARBON-ATE IT-FLD (MG/L - CAC03) (99430)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT 09...	8.8	33	.6	2.0	23	19	--	--	--	--	--	.002
DEC 18...	6.3	27	.5	1.5	38	31	--	--	--	--	--	.002
FEB 12...	4.1	29	.4	1.1	17	14	--	--	--	--	--	.004
APR 14...	4.0	26	.4	.97	23	19	--	--	--	--	--	.001
24...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 19...	5.7	29	.5	1.2	--	--	4.4	4.9	.10	13	68	.004
AUG 25...	5.6	27	.4	2.1	39	32	6.1	5.0	.13	10	68	<.001

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)
OCT 09...	.207	.019	.30	.32	.53	<.010	.002	110	<1	<1	<1
DEC 18...	.242	<.002	--	.21	.45	<.010	.001	--	--	--	--
FEB 12...	.418	.003	.20	.20	.62	.027	.005	--	--	--	--
APR 14...	.168	.003	.29	.29	.46	.027	.001	250	<1	<1	<1
24...	--	--	--	--	--	--	--	--	--	--	--
JUN 19...	.214	.023	.21	.23	.44	.030	.005	--	--	--	--
AUG 25...	.228	.023	.32	.34	.57	.029	.003	--	--	--	--



## NEUSE RIVER BASIN

02085000 ENO RIVER AT HILLSBOROUGH, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible]



## NEUSE RIVER BASIN

02085070 ENO RIVER NEAR DURHAM, NC

LOCATION.--Lat 36°04'20", long 78°54'30", Durham County, Hydrologic Unit 03020201, on right bank 275 ft downstream of bridge on U.S. Highway 501, 0.2 mi downstream of Crooked Creek, and 5 mi north of Durham.

DRAINAGE AREA.--141 mi<sup>2</sup>

PERIOD OF RECORD.--Occasional low-flow measurements, water year 1955. August 1963 to current year.

REVISED RECORDS.--WDR NC-72-1: 1968-71(M), 1971(P).

GAGE.--Water-stage recorder. Datum of gage is 270 ft above sea level, from topographic map. Prior to Nov. 19, 1966, at site 275 ft upstream, at datum 272.35 ft. Nov. 20, 1966, to Sept. 30, 1967, water-stage recorder at present site, at datum 270.94 ft. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Some regulation during periods of low flow caused by mill 600 ft upstream. Maximum gage height for period of record, 23.58 ft, from floodmark. Minimum discharge for period of record also occurred on Aug. 15, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	37	37	63	178	117	140	85	46	12	7.1	4.9
2	7.6	45	37	50	145	110	147	94	42	11	6.4	4.4
3	7.0	35	30	44	165	106	135	92	39	13	5.9	14
4	6.8	28	27	40	2770	100	167	86	44	11	5.4	633
5	7.4	21	26	37	1980	94	181	80	55	9.9	4.3	127
6	6.4	17	23	34	798	91	135	72	80	8.4	4.1	49
7	6.6	26	22	38	448	89	113	69	90	8.8	3.8	30
8	6.0	40	19	865	298	502	104	79	64	8.0	12	31
9	4.9	26	19	798	210	1810	642	85	49	7.2	36	43
10	4.5	20	28	273	169	788	588	75	49	6.9	78	35
11	5.4	16	31	139	149	345	285	205	50	6.6	43	22
12	5.4	15	29	101	188	215	179	161	47	6.4	29	17
13	5.0	32	26	85	162	170	138	96	41	6.0	19	13
14	6.8	170	24	83	133	147	129	79	37	5.5	13	12
15	28	109	23	228	118	132	133	70	42	5.4	11	10
16	28	59	21	1660	165	120	115	63	36	5.3	33	9.2
17	20	43	20	1260	5440	117	709	59	34	6.7	91	8.5
18	13	33	20	433	1900	1780	767	55	30	6.1	48	8.6
19	32	28	19	342	663	8300	365	51	28	5.7	25	7.9
20	71	26	18	472	354	1720	303	47	25	7.9	16	8.1
21	43	40	17	235	234	3840	221	46	24	5.4	11	7.4
22	27	561	32	156	182	958	158	44	22	9.2	8.4	8.2
23	19	181	65	1090	232	549	160	68	33	33	6.8	8.0
24	14	65	64	1040	229	358	135	108	50	28	5.8	7.1
25	11	41	103	480	165	253	115	82	41	12	5.8	8.2
26	15	31	91	258	138	208	101	64	28	8.3	4.7	7.7
27	19	26	102	856	126	185	93	93	22	7.1	3.9	7.4
28	28	23	312	3280	123	166	89	96	18	8.2	4.2	7.7
29	21	22	131	891	---	152	84	68	18	8.1	4.5	8.5
30	16	28	95	445	---	139	81	59	15	10	4.2	7.6
31	13	---	80	255	---	127	---	52	---	8.1	4.6	---
TOTAL	508.8	1844	1591	16031	17862	23788	6712	2483	1199	295.2	554.9	1165.4
MEAN	16.4	61.5	51.3	517	638	767	224	80.1	40.0	9.52	17.9	38.8
MAX	71	561	312	3280	5440	8300	767	205	90	33	91	633
MIN	4.5	15	17	34	118	89	81	44	15	5.3	3.8	4.4
CFSM	.12	.44	.36	3.67	4.52	5.44	1.59	.57	.28	.07	.13	.28
IN.	.13	.49	.42	4.23	4.71	6.28	1.77	.66	.32	.08	.15	.31

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1998, BY WATER YEAR (WY)

	MEAN	58.8	78.6	110	210	256	288	182	126	90.2	69.8	52.8	58.1
MAX	456	462	406	517	638	767	424	429	411	452	282	526	
(WY)	1972	1986	1973	1998	1998	1998	1983	1978	1982	1975	1985	1996	
MIN	4.77	11.0	19.4	21.4	64.7	67.4	34.9	26.1	6.86	6.35	3.34	.84	
(WY)	1964	1970	1995	1981	1968	1988	1995	1986	1986	1977	1977	1968	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1963 - 1998

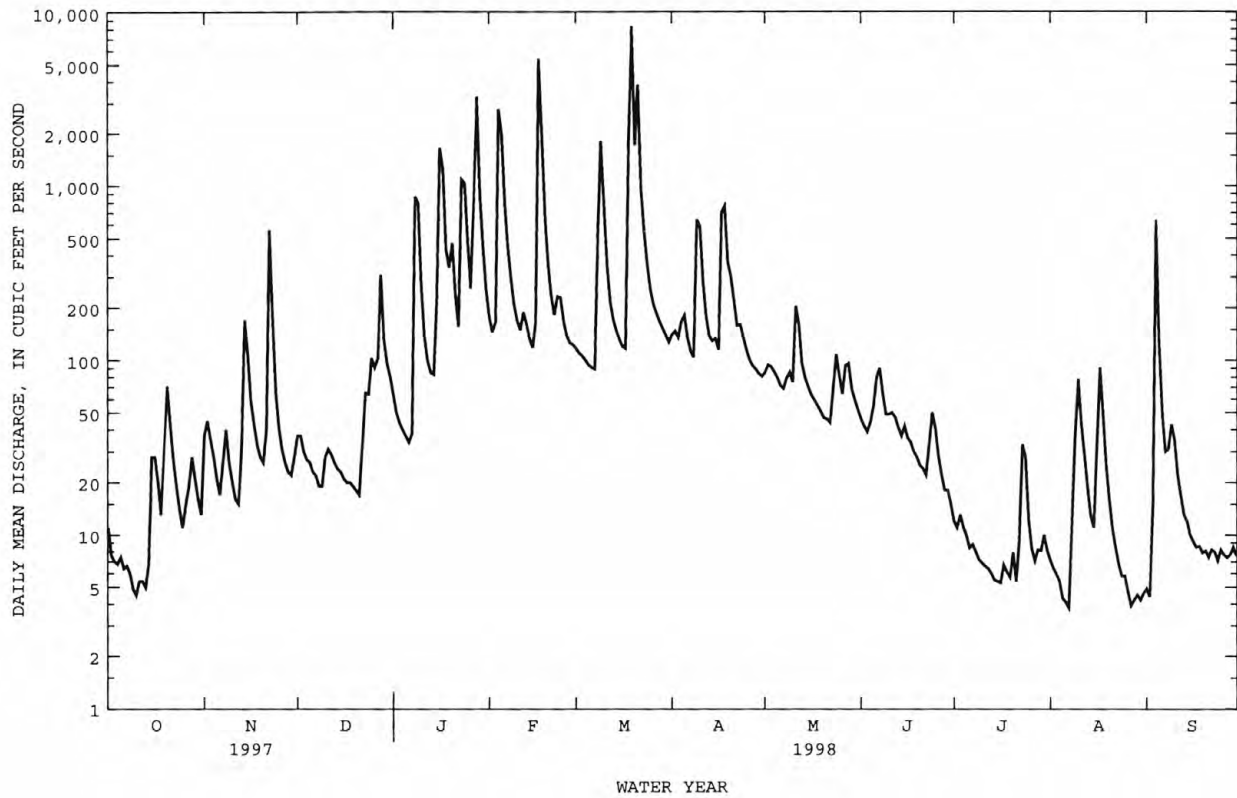
ANNUAL TOTAL	41565.5	74034.3	
ANNUAL MEAN	114	203	131
HIGHEST ANNUAL MEAN			244
LOWEST ANNUAL MEAN			60.4
HIGHEST DAILY MEAN	2830	Apr 29	8300
LOWEST DAILY MEAN	2.3	Sep 7	3.8
ANNUAL SEVEN-DAY MINIMUM	3.4	Sep 2	4.4
INSTANTANEOUS PEAK FLOW			10800
INSTANTANEOUS PEAK STAGE			20.76
INSTANTANEOUS LOW FLOW			2.8
ANNUAL RUNOFF (CFSM)	.81		1.44
ANNUAL RUNOFF (INCHES)	10.97		19.53
10 PERCENT EXCEEDS	230		361
50 PERCENT EXCEEDS	54		43
90 PERCENT EXCEEDS	6.8		6.8
			6.9

\* See REMARKS.



## NEUSE RIVER BASIN

02085070 ENO RIVER NEAR DURHAM, NC--Continued



## NEUSE RIVER BASIN

02085079 ENO RIVER NEAR WEAVER, NC

LOCATION.--Lat 36°04'19", long 78°51'47", Durham County, Hydrologic Unit 03020201, at bridge on Secondary Road 1004, 1.3 mi above Little River, and 1.5 mi northeast of Weaver.

DRAINAGE AREA.--148 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1983 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1982 to September 1985.

WATER TEMPERATURE: October 1982 to September 1985.

INSTRUMENTATION.--Water-quality monitor from October 1982 to September 1985.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment. Instantaneous discharge is from gage located at Eno River near Durham (02085070).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 293 microsiemens, July 11, 1984, minimum, 32 microsiemens, Aug. 18, 1984.

WATER TEMPERATURE: Maximum recorded, 30.5°C, Aug. 23, 1983; minimum recorded, 0.0°C, on several days during winter months.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
OCT 27...	1230	16	520	7.0	14.9	45	755	8.1	81	41
DEC 03...	1230	6.3	205	7.1	7.3	55	755	11.7	98	36
APR 07...	1400	110	101	6.9	15.0	41	761	8.5	84	26
JUN 09...	1245	49	189	7.4	20.5	33	764	8.3	92	33
AUG 26...	0900	4.8	318	6.9	25.7	65	753	5.6	70	38

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE IT-FLD (MG/L AS HCO3) (99440)	ANC UNFLTRD CARBON-ATE IT-FLD (MG/L AS CAC03) (99430)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT 27...	9.9	4.0	86	80	6	5.2	54	44	--	--
DEC 03...	8.8	3.4	25	57	2	3.0	32	26	--	--
APR 07...	6.3	2.5	8.9	41	.8	1.4	28	23	--	--
JUN 09...	8.1	3.0	23	58	2	2.7	--	--	--	--
AUG 26...	9.3	3.6	45	69	3	3.8	56	46	72	10

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
OCT 27...	--	--	--	.005	1.08	.006	.38	.38	1.5	.049
DEC 03...	--	--	--	.002	.602	.002	.29	.29	.89	.025
APR 07...	--	--	--	.001	.126	<.002	--	.27	.40	--
JUN 09...	--	--	--	.004	.764	.025	.25	.28	1.0	.016
AUG 26...	.19	6.5	188	.003	.051	.033	.40	.43	.48	.024

## NEUSE RIVER BASIN

02085079 ENO RIVER NEAR WEAVER, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
OCT 27...	.023	120	<1	<1	<1	<1	2	420	<1	77
DEC 03...	.010	--	--	--	--	--	--	--	--	--
APR 07...	.003	170	<1	<1	<1	<1	2	590	<1	42
JUN 09...	.016	--	--	--	--	--	--	--	--	--
AUG 26...	.008	--	--	--	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 27...	<.10	1	<1	<1	<1	<10	5.8	7	.29
DEC 03...	--	--	--	--	--	--	5.6	--	--
APR 07...	<.10	<1	<1	<1	<1	10	4.4	10	3.0
JUN 09...	--	--	--	--	--	--	4.0	9	1.2
AUG 26...	--	--	--	--	--	--	5.2	16	.21

## NEUSE RIVER BASIN

0208521324 LITTLE RIVER AT SECONDARY ROAD 1461 NEAR ORANGE FACTORY, NC

LOCATION.--Lat 36°08'30", long 78°55'10", Durham County, Hydrologic Unit 03020201, on left bank, 80 feet downstream from bridge on Secondary Road 1461, and 1.8 mi northwest of Orange Factory.

DRAINAGE AREA.--78.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year. Prior to October 1987, equivalent records published as "Little River near Orange Factory, NC" (02085220), September 1961 to September 1987.

GAGE.--Water-stage recorder. Datum of gage is 380 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum discharge for period of record from extension of rating curve above 2,300 ft<sup>3</sup>/s, based on contracted-opening measurement of peak flow; maximum gage height, 13.26 ft, from high-water mark in gage shelter. Minimum discharge for period of record, no flow, also occurred Aug. 19-29, 1988. Minimum discharge for the current water year also occurred Sept. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	15	33	51	96	94	81	46	18	7.2	3.1	.69
2	3.5	34	37	41	84	87	100	e250	16	6.6	2.6	.63
3	3.3	20	28	36	80	85	79	e100	15	5.8	2.8	.80
4	3.3	15	24	33	1500	77	118	e65	16	4.9	2.6	341
5	3.3	11	22	30	1030	69	129	e46	19	5.6	2.3	67
6	3.0	8.6	21	29	320	63	86	38	20	5.4	2.1	18
7	2.8	9.4	19	32	205	59	72	e36	21	5.3	1.9	9.9
8	2.8	29	18	510	160	336	65	e67	17	4.9	1.9	6.8
9	2.7	18	18	317	124	1010	210	e64	14	4.8	1.9	6.9
10	2.6	13	19	114	104	317	247	e44	15	21	2.0	e7.1
11	2.4	10	22	69	95	164	143	e50	18	12	2.5	e5.3
12	2.3	9.1	23	52	121	123	100	65	16	6.7	3.2	3.9
13	2.2	11	21	45	102	105	80	45	15	5.0	3.2	3.2
14	2.4	113	19	41	87	94	76	37	13	4.3	e2.9	2.9
15	3.2	69	19	163	77	85	77	33	13	3.9	e2.6	2.6
16	4.6	32	18	768	94	78	68	29	15	3.6	e2.5	2.5
17	6.9	21	19	461	3560	75	e850	28	14	3.5	e6.9	2.2
18	6.1	17	18	154	992	1020	e250	25	12	3.2	e17	2.1
19	7.4	15	17	147	335	5320	e160	23	11	2.9	e6.5	1.9
20	32	13	17	203	241	1140	e165	21	10	2.9	e4.2	1.9
21	18	15	16	104	191	2210	114	21	9.6	3.2	3.1	1.9
22	9.6	342	20	75	157	377	93	19	9.3	e2.8	2.5	1.9
23	7.0	114	45	723	186	225	107	49	9.9	e3.4	e2.2	1.7
24	6.0	52	43	461	202	168	83	72	13	e8.0	e1.9	1.6
25	5.4	35	86	197	146	135	69	40	13	e5.4	1.7	1.4
26	5.7	27	70	118	122	119	59	28	11	e4.7	1.4	1.4
27	7.9	23	110	486	110	108	54	40	9.1	e11	1.2	1.4
28	15	21	211	1850	102	97	50	42	8.5	e4.5	1.0	1.2
29	11	19	97	366	---	88	47	27	6.8	3.6	.87	e1.1
30	8.7	21	79	182	---	81	45	22	7.2	3.6	.78	1.2
31	7.1	---	69	122	---	75	---	20	---	3.5	.76	---
TOTAL	202.1	1152.1	1278	7980	10623	14084	3877	1492	405.4	173.2	92.11	502.12
MEAN	6.52	38.4	41.2	257	379	454	129	48.1	13.5	5.59	2.97	16.7
MAX	32	342	211	1850	3560	5320	850	250	21	21	17	341
MIN	2.2	8.6	16	29	77	59	45	19	6.8	2.8	.76	.63
CFSM	.08	.49	.53	3.29	4.85	5.81	1.65	.62	.17	.07	.04	.21
IN.	.10	.55	.61	3.80	5.05	6.70	1.84	.71	.19	.08	.04	.24

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1998, BY WATER YEAR (WY)

	MEAN	35.2	45.6	64.0	145	147	201	111	61.4	42.1	32.0	24.7	38.3
MAX	97.7	120	162	257	379	456	236	165	194	104	114	329	
(WY)	1996	1996	1997	1998	1998	1993	1993	1990	1995	1989	1989	1996	
MIN	.14	4.26	8.10	29.0	50.7	30.9	17.1	12.2	5.53	1.59	2.97	1.27	
(WY)	1994	1992	1995	1989	1991	1988	1995	1995	1994	1988	1998	1990	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1987 - 1998

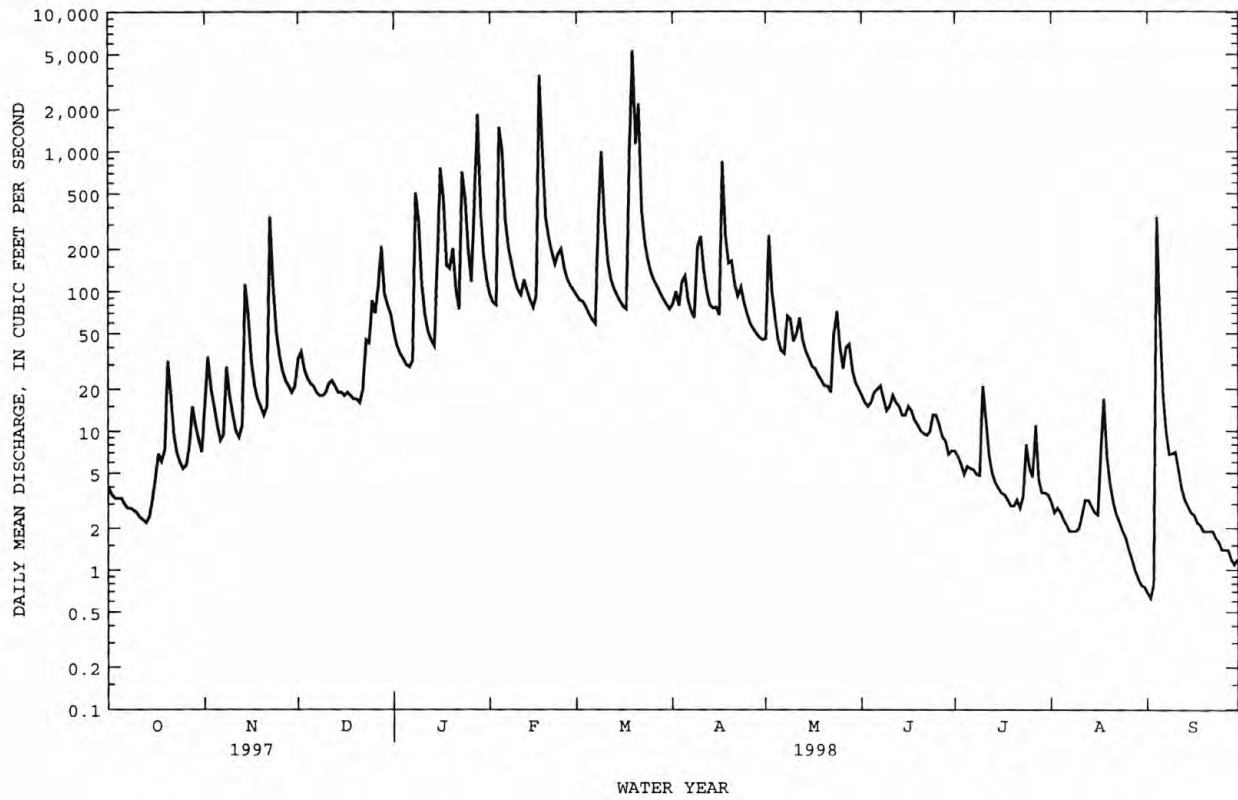
ANNUAL TOTAL	22883.16	41861.03	
ANNUAL MEAN	62.7	115	78.7
HIGHEST ANNUAL MEAN			115
LOWEST ANNUAL MEAN			30.8
HIGHEST DAILY MEAN	1580	5320	6500
LOWEST DAILY MEAN	.64	.63	0*
ANNUAL SEVEN-DAY MINIMUM	.98	.79	0*
INSTANTANEOUS PEAK FLOW		8320	11600*
INSTANTANEOUS PEAK STAGE		10.31	13.26*
INSTANTANEOUS LOW FLOW		.35*	0*
ANNUAL RUNOFF (CFSM)	.80	1.47	1.01
ANNUAL RUNOFF (INCHES)	10.89	19.91	13.67
10 PERCENT EXCEEDS	127	199	161
50 PERCENT EXCEEDS	25	21	26
90 PERCENT EXCEEDS	2.9	2.5	2.1

e Estimated.

\* See REMARKS.

## NEUSE RIVER BASIN

0208521324 LITTLE RIVER AT SECONDARY ROAD 1461 NEAR ORANGE FACTORY, NC--Continued



## NEUSE RIVER BASIN

0208521324 LITTLE RIVER AT SECONDARY ROAD 1461 NEAR ORANGE FACTORY, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--WATER YEARS 1988 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment.

COOPERATION.--For the period February 1988 through June 1989 the inorganic-chemical data and trace-metal data were analyzed by the city of Durham's Brown Water Treatment Laboratory. Samples for October 1994 and April 1995 were collected by the North Carolina Department of Environment, Health, and Natural Resources. A GC/FID scan for trace organic compounds was performed on these samples by the U.S. Geological Survey National Water Quality Lab. Results may be obtained from the District office in Raleigh.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)
FEB 17...	1130	4920	47	6.6	10.5	160	741	10.7	99	11

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE IT-FLD (MG/L AS HCO3) (99440)	ANC UNFLTRD CARBON-ATE IT-FLD (MG/L - CAC03) (99430)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	
FEB 17...	2.6	1.1	1.5	20	.2	1.6	15	12	.004	.116

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
FEB 17...	.009	.54	.55	.67	.094	.033	14	106	1410





## NEUSE RIVER BASIN

0208524090 MOUNTAIN CREEK AT SECONDARY ROAD 1617 NEAR BAHAMA, NC

LOCATION.--Lat 36°08'58", long 78°53'49", Durham County, Hydrologic Unit 03020201, on right bank at bridge on Secondary Road 1617 and 1.6 mi southwest of Bahama.

DRAINAGE AREA.--8.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 370 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum gage height for period of record from floodmarks. Maximum gage height for period of record occurred Sept. 6, 1996, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	1.4	2.8	e4.0	e5.0	9.5	10	3.6	1.1	.34	.11	.05
2	.12	1.0	1.8	e3.0	e4.0	9.3	8.7	9.5	.93	.23	.09	.04
3	.11	.76	1.5	e2.6	8.2	9.6	6.9	5.5	.81	.18	.08	.25
4	.09	.71	1.6	2.2	173	8.8	14	5.3	1.3	.15	.07	34
5	.09	.50	e1.0	1.8	83	8.3	9.9	3.8	1.5	.22	.07	3.3
6	.09	.44	e.75	1.7	22	7.9	7.3	3.0	1.7	.19	.07	.61
7	.11	.53	e.70	2.9	15	7.9	6.3	2.9	1.7	.14	.07	.27
8	.11	.57	e.70	82	12	61	5.8	4.1	1.1	.11	.08	.28
9	.11	.46	.94	36	e9.2	122	24	3.4	.91	.13	.09	.25
10	.10	.39	1.4	10	e9.0	30	17	2.7	.98	.63	.61	.13
11	.09	.42	1.8	5.8	e8.9	16	11	5.3	.84	.24	.20	.09
12	.08	.42	1.4	4.1	8.8	13	7.8	3.7	.78	.15	.09	.08
13	.08	1.7	e1.1	3.6	e8.0	13	6.5	2.8	2.2	.11	.08	.08
14	.09	9.3	e1.0	2.8	e7.2	12	7.0	2.4	1.1	.09	.07	.08
15	.27	4.9	e.90	27	e7.0	11	6.7	2.0	.79	.09	.07	.08
16	.21	2.2	e.80	106	11	10	5.5	1.8	.61	.09	.26	.08
17	.24	e1.0	e.70	42	436	10	69	1.6	.49	.08	1.2	.07
18	.20	e.80	e.60	12	51	218	20	1.4	.40	.07	.11	.08
19	.72	e.70	e.50	19	20	522	13	1.2	.34	.07	.08	.07
20	1.1	e6.0	e.60	e16	15	130	13	1.0	.34	.08	.06	.07
21	.38	2.5	.82	e10	13	e140	8.4	.96	.28	.07	.06	.08
22	.40	18	3.7	e8.0	12	e60	7.4	.86	.25	1.0	.05	.07
23	.28	5.5	4.6	103	18	e30	7.1	17	.34	1.5	.05	.06
24	.23	2.6	4.9	42	15	e21	5.8	7.7	.55	.52	.05	.05
25	.21	e1.6	9.1	e14	12	e15	4.7	3.6	.38	.21	.04	.04
26	.54	e1.2	6.0	e9.0	11	9.8	4.1	2.7	.33	.19	.04	.03
27	1.0	.97	12	e80	10	9.3	3.6	6.9	.28	.16	.05	.04
28	.38	.86	e20	147	9.4	8.8	3.4	4.1	.23	.14	.07	.04
29	.25	.89	e10	28	---	8.3	3.1	2.6	.42	.13	.06	.03
30	.29	1.7	e7.0	13	---	7.2	2.9	1.9	.35	.11	.05	.05
31	.30	---	e5.0	e7.0	---	7.1	---	1.5	---	.14	.05	---
TOTAL	8.40	70.02	105.71	845.5	1013.7	1545.8	319.9	116.82	23.33	7.56	4.13	40.45
MEAN	.27	2.33	3.41	27.3	36.2	49.9	10.7	3.77	.78	.24	.13	1.35
MAX	1.1	18	20	147	436	522	69	17	2.2	1.5	1.2	34
MIN	.08	.39	.50	1.7	4.0	7.1	2.9	.86	.23	.07	.04	.03
CFSM	.03	.29	.43	3.42	4.54	6.26	1.34	.47	.10	.03	.02	.17
IN.	.04	.33	.49	3.95	4.73	7.22	1.49	.55	.11	.04	.02	.19

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1998, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
MEAN	2.73	4.42	5.42	14.7	17.9	20.8	9.02	4.87	10.0	2.43	1.32	19.0
MAX	6.22	9.41	12.9	27.3	36.2	49.9	13.8	9.34	29.7	7.40	4.33	74.0
(WY)	1997	1996	1997	1998	1998	1998	1997	1996	1995	1995	1996	1996
MIN	.27	.36	.50	5.61	10.3	9.58	1.50	1.76	.78	.24	.13	.18
(WY)	1998	1995	1995	1995	1996	1997	1995	1995	1998	1998	1998	1995

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1995 - 1998

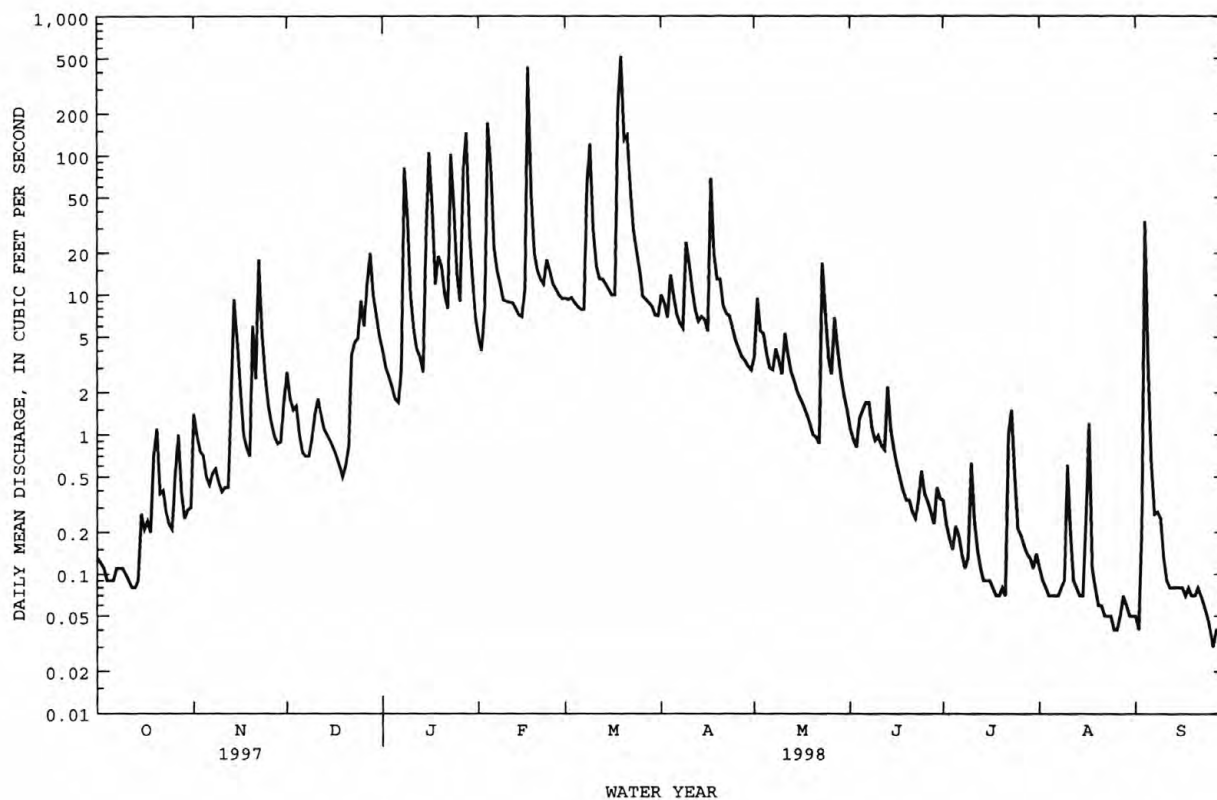
ANNUAL TOTAL	2032.52	4101.32	
ANNUAL MEAN	5.57	11.2	9.30
HIGHEST ANNUAL MEAN			13.1
LOWEST ANNUAL MEAN			5.74
HIGHEST DAILY MEAN	115	Apr 29	1000
LOWEST DAILY MEAN	.08	Sep 7	.02
ANNUAL SEVEN-DAY MINIMUM	.09	Sep 3	.02
INSTANTANEOUS PEAK FLOW			1510
INSTANTANEOUS PEAK STAGE			10.21
INSTANTANEOUS LOW FLOW			.01
ANNUAL RUNOFF (CFSM)	.70	1.41	1.17
ANNUAL RUNOFF (INCHES)	9.49	19.15	15.86
10 PERCENT EXCEEDS	11	16	15
50 PERCENT EXCEEDS	1.8	1.4	2.7
90 PERCENT EXCEEDS	.14	.08	.15

e Estimated.

\* See REMARKS.

## NEUSE RIVER BASIN

0208524090 MOUNTAIN CREEK AT SECONDARY ROAD 1617 NEAR BAHAMA, NC--Continued



## NEUSE RIVER BASIN

0208524090 MOUNTAIN CREEK AT SECONDARY ROAD 1617 NEAR BAHAMA, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988-91, 1994 to current year.

REMARKS.--Station operated to define the impacts of various land-use development on surface-water quality in the Upper Neuse River basin.

COOPERATION.--For the period February 1988 through June 1989 the inorganic chemical data and trace metal data were analyzed by the city of Durham's Brown Water Treatment Plant Laboratory.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (UNITS) (00400)	TEMPER-ATURE OF WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	
OCT 28...	1345	.37	112	6.9	13.0	760	9.6	91	<.010	<.050	<.015	--	
NOV 24...	1255	2.5	116	7.2	9.0	764	10.6	91	<.010	.141	<.020	--	
JAN 08...	1130	210	79	6.7	15.0	748	8.3	84	.017	.369	.086	1.9	
FEB 04...	1115	200	50	6.6	--	--	--	--	<.010	.234	.037	.54	
MAR 09...	1040	165	54	6.6	14.0	744	9.5	94	<.010	.180	.065	.64	
APR 24...	1420	5.9	83	7.0	17.0	758	11.1	115	.011	.406	.053	.24	
MAY 27...	1230	5.9	93	7.1	22.5	758	7.3	85	.026	.425	.069	.26	
JUN 19...	1100	.34	99	7.2	23.5	755	6.9	82	<.010	.312	.070	.24	
JUL 21...	1130	.08	121	7.4	--	--	--	--	<.010	.279	.060	.25	
AUG 20...	1130	.06	111	7.2	21.0	764	8.5	95	.012	.440	.322	--	
SEP 22...	1310	.07	117	7.3	24.5	752	9.7	118	<.010	.096	<.020	--	
DATE		NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00602)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER UNFLTDR TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)
OCT 28...	--	.28	.24	--	--	<.010	<.010	<.010	80	<1	<1	<1	<1
NOV 24...	--	.37	.26	.51	.40	.018	<.010	.022	--	--	--	--	--
JAN 08...	.58	2.0	.67	2.3	1.0	.496	.033	.025	3200	1	<1	2	2
FEB 04...	.29	.58	.33	.81	.56	.098	.037	.048	--	--	--	--	--
MAR 09...	.46	.70	.53	.88	.71	.113	.041	.040	880	<1	<1	1	1
APR 24...	.27	.29	.33	.70	.73	.010	<.010	.014	--	--	--	--	--
MAY 27...	.42	.33	.49	.75	.91	.056	.035	.023	--	--	--	--	--
JUN 19...	.32	.31	.39	.62	.70	.033	<.010	.012	90	<1	<1	<1	<1
JUL 21...	.08	.31	.14	.58	.42	.040	.034	.036	--	--	--	--	--
AUG 20...	--	.31	.30	.75	.74	.024	<.010	.014	--	--	--	--	--
SEP 22...	--	.27	<.10	.37	--	.015	<.010	.010	--	--	--	--	--

## NEUSE RIVER BASIN

0208524090 MOUNTAIN CREEK AT SECONDARY ROAD 1617 NEAR BAHAMA, NC--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible]

## NEUSE RIVER BASIN

0208524090 MOUNTAIN CREEK AT SECONDARY ROAD 1617 NEAR BAHAMA, NC--Continued

[illegible]

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]



[illegible][illegible]

## NEUSE RIVER BASIN

0208524090 MOUNTAIN CREEK AT SECONDARY ROAD 1617 NEAR BAHAMA, NC--Continued

[illegible]

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]



## NEUSE RIVER BASIN

0208524090 MOUNTAIN CREEK AT SECONDARY ROAD 1617 NEAR BAHAMA, NC--Continued

[illegible]



## NEUSE RIVER BASIN

0208524845 LITTLE RIVER RESERVOIR AT DAM NEAR BAHAMA, NC--Continued

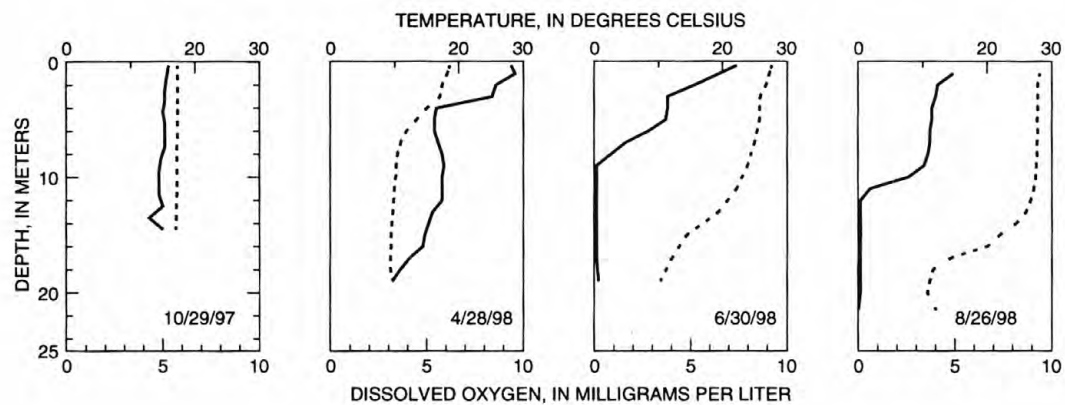
WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]



## NEUSE RIVER BASIN

0208524845 LITTLE RIVER RESERVOIR AT DAM NEAR BAHAMA, NC--Continued



## EXPLANATION

— DISSOLVED OXYGEN  
..... WATER TEMPERATURE

## NEUSE RIVER BASIN

0208524950 LITTLE RIVER TRIBUTARY AT FAIRNTOSH, NC

LOCATION.--Lat 36°06'56", long 78°51'30", Durham County, Hydrologic Unit 03020201, 0.2 mi above mouth and 0.8 mi northeast of Fairntosh.

DRAINAGE AREA.--0.86 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1994 to current year.

REMARKS.--Station operated to define the impacts of various land-use development on surface-water quality in the Upper Neuse River basin.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION) (MG/L) (00301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	
OCT 28...	1030	.14	207	6.8	12.5	763	7.8	73	<.010	.105	.025	.39	
NOV 24...	1025	.26	188	7.0	8.0	767	8.8	74	<.010	.145	<.020	--	
JAN 08...	1030	14	80	6.8	15.0	751	8.0	81	.017	.253	<.020	--	
FEB 04...	1030	28	50	6.6	--	--	--	--	<.010	.121	.024	.44	
MAR 09...	1230	15	56	6.6	14.5	747	9.4	94	<.010	.071	<.020	--	
APR 24...	1155	.43	125	7.0	16.0	758	9.6	98	<.010	<.050	.059	.16	
MAY 27...	1115	.36	143	7.0	21.0	758	6.4	72	.018	.290	.114	.36	
JUN 19...	0830	.06	216	7.2	22.0	757	6.0	69	.013	.116	.106	.26	
AUG 20...	0930	.08	198	7.1	19.5	767	7.4	80	<.010	<.050	.044	.36	
SEP 22...	1100	.02	240	7.2	--	--	--	--	<.010	.090	.054	.29	
DATE		NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)
OCT 28...	.33	.41	.35	.52	.46	.018	<.010	<.010	120	<1	<1	<1	
NOV 24...	--	.26	.23	.41	.38	.013	<.010	.023	--	--	--	--	
JAN 08...	--	1.1	.74	1.4	.99	.260	.156	.164	900	1	<1	1	
FEB 04...	.30	.47	.33	.59	.45	.113	.065	.094	--	--	--	--	
MAR 09...	--	.59	.45	.66	.52	.076	.044	.049	450	<1	<1	<1	
APR 24...	.16	.22	.22	--	--	<.010	<.010	.014	--	--	--	--	
MAY 27...	.29	.47	.40	.76	.69	.040	<.010	.019	--	--	--	--	
JUN 19...	.32	.37	.43	.49	.54	.031	<.010	<.010	90	1	<1	<1	
AUG 20...	.31	.41	.35	--	--	.036	<.010	.017	--	--	--	--	
SEP 22...	.12	.34	.17	.43	.26	.023	.127	<.010	--	--	--	--	

## NEUSE RIVER BASIN

0208524950 LITTLE RIVER TRIBUTARY AT FAIRNTOSH, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

## NEUSE RIVER BASIN

0208524950 LITTLE RIVER TRIBUTARY AT FAIRNTOSH, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]





## NEUSE RIVER BASIN

0208524975 LITTLE RIVER BELOW LITTLE RIVER TRIBUTARY AT FAIRNTOSH, NC

LOCATION.--Lat 36°06'46", long 78°51'35", Durham County, Hydrologic Unit 030200201, 125 ft downstream of the mouth of Little River tributary and 0.5 mi downstream of Little River Dam.

DRAINAGE AREA.--98.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 270 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by releases from the Little River Reservoir. Maximum discharge for period of record from extension of rating curve based on contracted-opening measurement of peak flow. Maximum gage height for period of record from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	3.2	4.6	6.3	45	25	60	22	7.1	5.8	3.5	3.1
2	2.2	3.6	4.6	6.1	621	28	79	33	3.2	4.7	3.2	3.0
3	2.1	3.6	4.5	6.2	454	24	64	56	3.4	3.9	3.1	5.7
4	2.2	3.4	5.1	6.4	1540	62	75	36	4.3	3.9	3.1	30
5	2.1	3.1	5.4	6.5	2390	11	107	32	4.7	4.8	3.1	3.5
6	2.1	3.1	5.5	6.7	401	38	84	30	5.6	3.7	3.1	2.8
7	2.1	3.3	5.6	6.9	169	3.5	59	23	4.0	3.8	3.2	2.7
8	2.0	3.1	5.7	9.9	144	177	53	22	3.4	3.9	3.7	5.3
9	2.2	3.1	5.8	5.9	338	2850	134	35	3.5	3.7	3.3	2.8
10	2.0	3.2	6.5	5.3	419	219	285	19	3.6	4.0	7.4	2.3
11	2.3	3.7	6.0	4.7	6.2	40	188	38	3.6	3.7	3.6	2.4
12	2.2	3.8	6.0	26	6.1	68	119	48	3.6	3.6	3.0	2.2
13	2.0	5.7	6.1	9.8	6.9	58	82	38	4.2	3.7	2.9	2.3
14	2.3	3.7	6.0	38	5.9	46	68	31	3.8	3.7	2.8	2.4
15	2.7	1.7	6.2	26	6.0	39	62	19	4.4	3.8	2.9	2.4
16	1.4	1.8	6.4	148	8.0	30	55	13	3.9	7.9	23	2.5
17	1.5	1.7	6.3	875	5320	24	789	12	3.8	4.1	28	2.3
18	1.6	1.8	6.5	249	1560	1810	932	12	3.6	3.4	4.4	2.3
19	3.2	2.9	6.6	92	222	8620	218	12	3.5	3.4	3.6	2.3
20	1.8	5.7	6.6	235	43	1450	167	12	3.4	3.4	3.2	2.4
21	1.6	6.9	6.7	114	92	4510	135	12	3.5	3.6	3.1	2.2
22	1.6	6.2	8.0	433	61	653	99	11	50	14	3.0	2.7
23	1.5	2.2	6.5	522	80	291	86	14	35	8.0	3.1	3.2
24	1.5	2.7	7.5	1050	116	179	75	15	3.0	4.3	5.4	3.1
25	1.8	3.7	7.3	279	74	159	56	22	2.9	3.7	3.9	2.8
26	2.3	3.6	6.8	122	46	78	53	18	3.4	4.0	3.2	3.0
27	2.1	3.8	8.8	692	34	133	47	22	3.2	3.6	3.3	3.1
28	2.0	3.7	7.6	4160	37	44	36	29	3.2	3.6	3.4	3.2
29	1.9	3.8	6.9	1110	---	108	22	19	4.2	3.5	3.2	3.1
30	2.0	4.5	6.6	32	---	26	23	13	4.0	3.7	3.4	3.3
31	2.1	---	6.5	35	---	48	---	12	---	3.6	3.1	---
TOTAL	62.7	106.3	195.2	10318.7	14245.1	21851.5	4312	730	193.0	138.5	152.2	114.4
MEAN	2.02	3.54	6.30	333	509	705	144	23.5	6.43	4.47	4.91	3.81
MAX	3.2	6.9	8.8	4160	5320	8620	932	56	50	14	28	30
MIN	1.4	1.7	4.5	4.7	5.9	3.5	22	11	2.9	3.4	2.8	2.2

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

MEAN	19.0	64.5	108	179	276	327	150	49.5	16.2	4.46	12.5	182
MAX	36.0	149	161	333	509	705	221	88.4	23.8	4.88	29.4	538
(WY)	1997	1996	1996	1998	1998	1998	1997	1996	1997	1996	1996	1996
MIN	2.02	3.54	6.30	77.6	120	113	85.3	23.5	6.43	4.04	3.09	3.07
(WY)	1998	1998	1998	1996	1996	1997	1996	1998	1998	1997	1997	1997

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

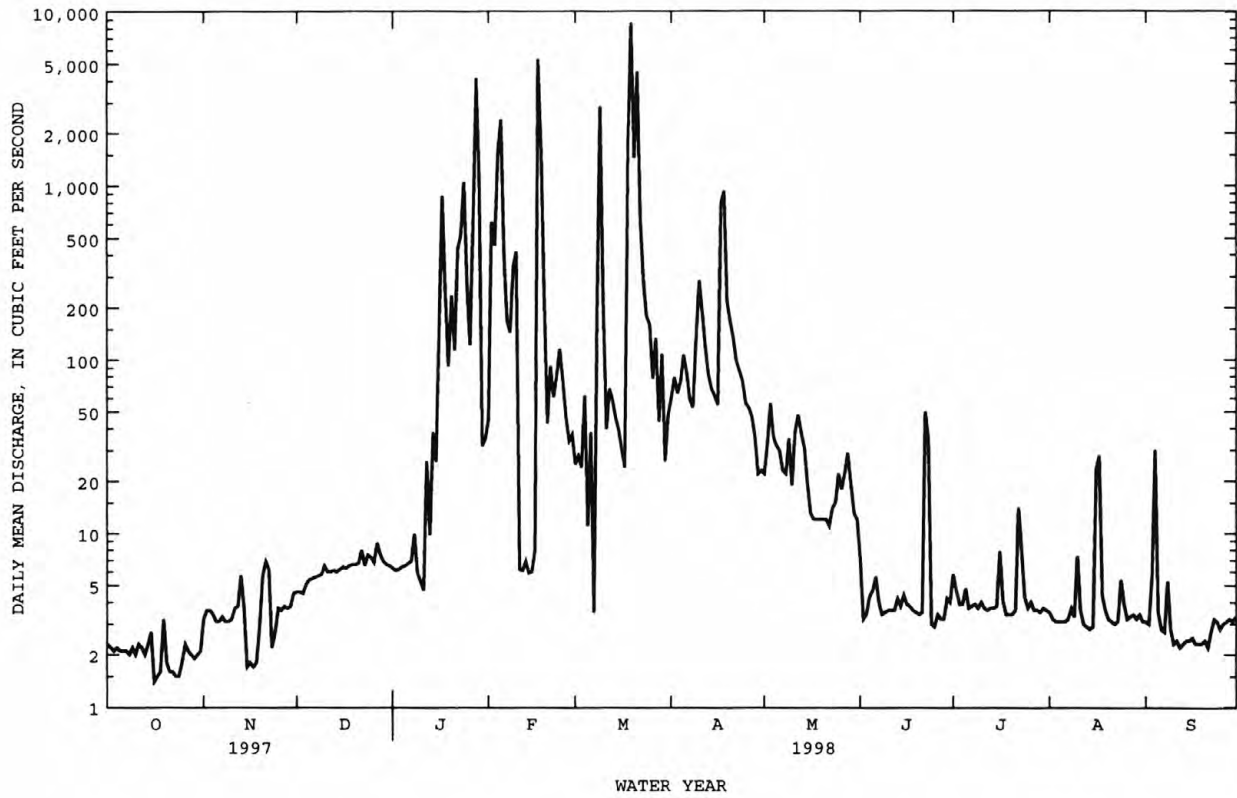
## WATER YEARS 1996 - 1998

ANNUAL TOTAL	22233.1	52419.6	
ANNUAL MEAN	60.9	144	112
HIGHEST ANNUAL MEAN			144
LOWEST ANNUAL MEAN			79.6
HIGHEST DAILY MEAN	2510	Apr 29	10300
LOWEST DAILY MEAN	1.4	Oct 16	1.4
ANNUAL SEVEN-DAY MINIMUM	1.7	Oct 20	1.7
INSTANTANEOUS PEAK FLOW			16600*
INSTANTANEOUS PEAK STAGE			17.27*
INSTANTANEOUS LOW FLOW			1.3
ANNUAL RUNOFF (CFSM)	.62	1.45	1.13
ANNUAL RUNOFF (INCHES)	8.36	19.71	15.33
10 PERCENT EXCEEDS	118	168	175
50 PERCENT EXCEEDS	6.6	5.8	21
90 PERCENT EXCEEDS	2.3	2.3	2.8

\* See REMARKS.

## NEUSE RIVER BASIN

0208524975 LITTLE RIVER BELOW LITTLE RIVER TRIBUTARY AT FAIRNTOSH, NC--Continued



## NEUSE RIVER BASIN

0208524975 LITTLE RIVER BELOW LITTLE RIVER TRIBUTARY AT FAIRNTOSH, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1995 to current year.

REMARKS.--Station operated to define the impacts of various land-use development on surface-water quality in the Upper Neuse River basin.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 28...	1215	2.0	104	6.8	15.5	762	6.8	68	<.010	.130	<.015
NOV 24...	1120	2.1	107	7.0	11.0	768	7.8	70	<.010	.232	<.020
FEB 04...	1000	951	56	6.8	--	--	--	--	<.010	.259	.083
MAR 09...	1300	3650	45	6.8	11.5	746	11.2	105	<.010	.222	.065
19...	1300	10200	50	6.5	--	--	--	--	<.010	.220	.130
APR 24...	1230	72	55	7.3	19.0	758	10.8	117	<.010	.106	.047
MAY 28...	1045	31	57	6.8	23.0	761	7.6	89	.015	.149	.031
JUN 19...	0930	3.6	69	7.2	25.5	757	5.8	71	<.010	.075	.085
JUL 21...	0945	3.6	68	6.8	--	--	--	--	<.010	.099	.050
AUG 20...	1035	3.0	71	7.0	25.0	767	5.8	70	.010	.160	.060
SEP 22...	1130	2.5	73	7.1	25.5	754	7.2	89	.011	.136	.037
DATE		NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 28...	--	--	.37	.29	.50	.42	.027	<.010	<.010	22	.12
NOV 24...	--	--	.46	.34	.69	.57	.109	.058	.097	13	.07
FEB 04...	.56	.26	.65	.35	.90	.61	.093	.030	.032	11	.28
MAR 09...	.34	.25	.40	.31	.62	.54	.046	.016	.021	6	.59
19...	.61	.27	.74	.40	.96	.62	.072	.030	.015	62	1710
APR 24...	.31	.37	.35	.42	.46	.52	.014	<.010	<.010	8	1.6
MAY 28...	.43	.23	.46	.26	.61	.41	.053	.014	<.010	11	.92
JUN 19...	.47	.20	.55	.29	.63	.37	.040	<.010	<.010	10	.10
JUL 21...	.34	.13	.39	.18	.49	.28	.021	<.010	.016	13	.13
AUG 20...	.49	.54	.55	.60	.71	.76	.051	.045	.026	27	.22
SEP 22...	.32	.37	.36	.41	.50	.54	.025	<.010	<.010	9	.06



## NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC

LOCATION.--Lat 36°10'57", long 78°52'44", Durham County, Hydrologic Unit 03020201, on right bank 0.5 mi upstream from Lake Michie, 1.2 mi upstream from bridge on Secondary Road 1616, 1.2 mi north of Bahama, and 1.5 mi upstream from Dial Creek.

DRAINAGE AREA.--149 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 1333: 1926, 1928(M), 1938, 1946. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 346.85 ft above sea level. Prior to Oct. 22, 1925, nonrecording gage at present site at 346.27 ft. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Prior to December 1962, some diurnal fluctuation and infrequent regulation at low flow caused by small mill 5 mi upstream. Maximum discharge for period of record from rating curve extended above 18,000 ft<sup>3</sup>/s, on basis of slope-conveyance measurement of peak flow; maximum gage height, 17.26 ft, from high-water mark inside gage shelter. Minimum discharge for current water year also occurred Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	18	91	139	271	187	190	102	54	19	10	2.8
2	7.6	69	110	107	231	177	285	472	50	17	9.2	2.8
3	6.6	42	77	94	212	174	194	221	48	15	8.3	3.3
4	5.9	32	66	88	3420	162	510	170	51	13	7.5	465
5	5.5	23	62	80	2090	148	406	124	63	13	7.0	123
6	5.1	19	57	76	737	135	250	105	58	13	6.1	40
7	6.2	17	52	82	478	132	203	96	53	11	5.8	22
8	3.8	52	47	1000	385	621	182	145	49	9.4	5.7	16
9	3.7	36	45	725	304	2060	437	141	45	9.7	5.7	30
10	3.8	25	46	300	253	708	444	107	44	257	5.7	32
11	3.6	21	54	195	229	368	319	105	45	67	5.9	18
12	3.3	18	63	151	277	272	232	115	43	30	5.8	13
13	3.3	18	55	130	243	224	189	98	40	21	8.4	11
14	3.4	165	50	121	204	202	174	90	36	17	8.2	8.9
15	8.3	143	46	351	185	186	175	83	37	15	6.9	7.5
16	18	62	44	1530	186	167	162	77	39	13	6.5	6.8
17	20	43	43	1060	6430	156	2060	76	37	12	20	6.4
18	12	33	42	406	1980	1330	800	82	39	11	37	6.3
19	13	28	41	357	560	11700	401	66	33	10	18	5.6
20	53	26	40	539	386	2070	451	60	29	9.5	11	5.1
21	41	26	39	291	311	4850	294	59	26	9.4	8.6	4.6
22	23	1240	44	217	261	872	216	55	25	8.9	6.9	4.5
23	15	338	78	1770	296	508	229	98	26	11	5.6	4.0
24	11	158	90	1230	388	379	185	152	29	13	5.0	3.7
25	9.8	100	157	574	280	305	156	90	27	18	4.6	3.6
26	10	78	162	352	228	266	134	76	25	15	4.1	3.4
27	25	68	213	754	205	245	120	123	20	34	3.3	2.9
28	42	59	519	4850	197	226	112	121	18	20	3.2	2.4
29	25	52	245	1120	---	206	107	79	19	14	3.2	2.1
30	18	53	205	520	---	189	102	66	17	13	3.2	2.2
31	14	---	187	352	---	177	---	58	---	12	3.1	---
TOTAL	428.2	3062	3070	19561	21227	29402	9719	3512	1125	750.9	249.5	858.9
MEAN	13.8	102	99.0	631	758	948	324	113	37.5	24.2	8.05	28.6
MAX	53	1240	519	4850	6430	11700	2060	472	63	257	37	465
MIN	3.3	17	39	76	185	132	102	55	17	8.9	3.1	2.1
CFM	.09	.69	.66	4.23	5.09	6.37	2.17	.76	.25	.16	.05	.19
IN.	.11	.76	.77	4.88	5.30	7.34	2.43	.88	.28	.19	.06	.21

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1998, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1925	65.3	561	1972	1.24	1942
1926	96.7	489	1986	.71	1934
1927	133	421	1973	1.81	1934
1928	226	761	1936	4.29	1934
1929	277	758	1998	44.4	1931
1930	290	948	1998	72.4	1967
1931	221	612	1936	31.1	1942
1932	114	573	1978	22.2	1927
1933	79.3	551	1938	7.85	1986
1934	86.7	798	1975	4.59	1991
1935	76.0	431	1939	2.93	1977
1936	80.1	984	1996	.71	1968

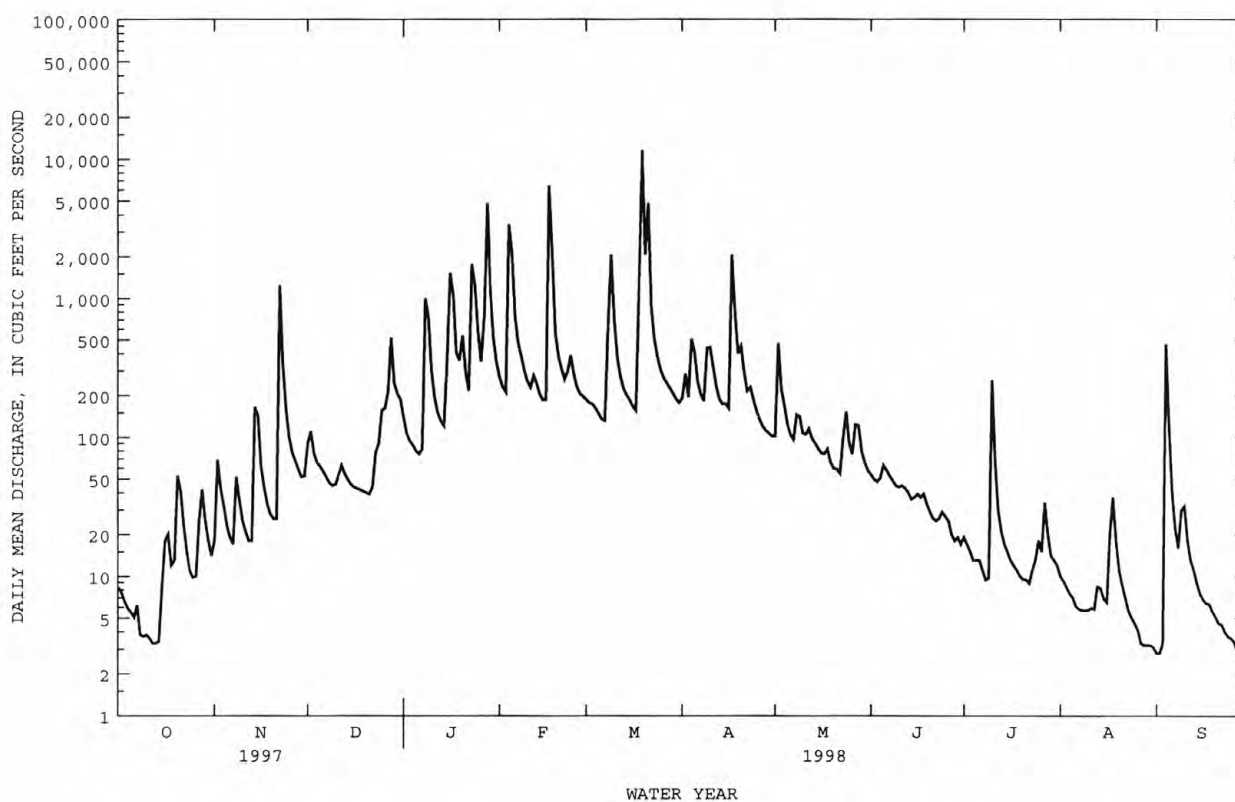


## NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1925 - 1998	
ANNUAL TOTAL	48050.3		92965.5		145	
ANNUAL MEAN	132		255		285	1973
HIGHEST ANNUAL MEAN					53.5	1981
LOWEST ANNUAL MEAN					21800	Sep 6 1996
HIGHEST DAILY MEAN	3590	Apr 29	11700	Mar 19		
LOWEST DAILY MEAN	2.2	Sep 7	2.1	Sep 29	.27	Sep 24 1968
ANNUAL SEVEN-DAY MINIMUM	2.8	Sep 3	2.9	Sep 24	.28	Sep 24 1968
INSTANTANEOUS PEAK FLOW			16700	Mar 19	33800*	Sep 6 1996
INSTANTANEOUS PEAK STAGE			12.05	Mar 19	17.26*	Sep 6 1996
INSTANTANEOUS LOW FLOW			2.0*	Sep 29	.23	Sep 26 1968
ANNUAL RUNOFF (CFSM)	.88		1.71		.97	
ANNUAL RUNOFF (INCHES)	12.00		23.21		13.22	
10 PERCENT EXCEEDS	277		447		283	
50 PERCENT EXCEEDS	55		57		50	
90 PERCENT EXCEEDS	7.3		5.8		7.1	

\* See REMARKS.



## NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment and to define the impacts of various land-use development on surface-water quality in the Upper Neuse River basin.

COOPERATION.--For the period February 1988 through June 1989 the inorganic-chemical data and trace-metal data were analyzed by the city of Durham's Brown Water Treatment Laboratory.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 28...	1415	41	92	6.9	13.5	--	759	8.8	85	--	--
NOV 24...	1330	152	70	7.3	9.0	--	762	10.7	93	--	--
JAN 08...	1300	1610	63	6.8	14.0	--	747	9.2	91	--	--
FEB 04...	1200	4550	41	6.5	--	--	--	--	--	--	--
FEB 17...	1315	9780	31	6.7	10.2	120	739	10.4	96	10	2.2
MAR 19...	1355	15700	29	6.1	--	--	--	--	--	--	--
APR 24...	1450	180	63	7.1	16.0	--	728	10.2	108	--	--
MAY 28...	1130	121	76	7.0	21.5	--	758	7.8	89	--	--
JUN 19...	1215	32	81	7.1	25.5	--	754	6.7	83	--	--
JUL 21...	1225	9.6	85	7.3	--	--	--	--	--	--	--
AUG 20...	1215	11	89	7.1	24.5	--	764	6.6	79	--	--
SEP 22...	1420	4.4	74	7.2	27.0	--	755	7.8	99	--	--

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	ANC UNFLTRD CARBON- ATE IT-FLD (MG/L - CAC03) (99430)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
OCT 28...	--	--	--	--	--	--	--	<.010	.140	<.015	--
NOV 24...	--	--	--	--	--	--	--	<.010	.334	<.020	--
JAN 08...	--	--	--	--	--	--	--	.017	.238	<.020	--
FEB 04...	--	--	--	--	--	--	--	<.010	.177	.077	.65
FEB 17...	1.0	1.5	22	.2	1.5	15	12	.005	.118	.014	.55
MAR 19...	--	--	--	--	--	--	--	<.010	.164	.123	.69
APR 24...	--	--	--	--	--	--	--	<.010	.322	.044	.24
MAY 28...	--	--	--	--	--	--	--	.017	.473	.096	.24
JUN 19...	--	--	--	--	--	--	--	<.010	.137	.068	.20
JUL 21...	--	--	--	--	--	--	--	<.010	.129	.051	.34
AUG 20...	--	--	--	--	--	--	--	.019	.143	.142	.16
SEP 22...	--	--	--	--	--	--	--	<.010	.078	.048	.34

## NEUSE RIVER BASIN

02085500 FLAT RIVER AT BAHAMA, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 28...	--	.41	.27	.56	.41	.041	<.010	<.010	--	18	2.0
NOV 24...	--	.43	.34	.77	.67	.040	<.010	.022	--	33	14
JAN 08...	--	1.1	.36	1.4	.60	.209	.023	.024	--	581	2530
FEB 04...	.46	.73	.53	.90	.71	.148	.060	.050	--	126	1550
17...	--	.57	--	.68	--	.099	--	.023	14	157	4150
MAR 19...	.30	.81	.42	.98	.58	.150	.042	.025	--	103	4370
APR 24...	.22	.28	.27	.60	.59	.025	.017	.025	--	8	3.9
MAY 28...	.18	.34	.28	.81	.75	.054	<.010	.018	--	--	--
JUN 19...	.13	.27	.20	.41	.34	.024	<.010	.011	--	9	.78
JUL 21...	.18	.39	.23	.52	.36	.041	.035	.026	--	15	.39
AUG 20...	.14	.30	.28	.44	.42	.023	.028	.019	--	15	.45
SEP 22...	--	.38	<.10	.46	--	.039	<.010	.018	--	9	.11

## NEUSE RIVER BASIN

02086490 LAKE MICHIE AT DAM NEAR BAHAMA. NC

LOCATION.--Lat 36°09'02", long 78°49'49", Durham County, Hydrologic Unit 03020201, at dam 3.0 mi southeast of Bahama.

DRAINAGE AREA.--167 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1989 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment. Samples for nutrient and chlorophyll a and b analyses were collected through a sampling zone equal to double the secchi disk depth using the depth-integration sampling technique.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	SAMPLING DEPTH (FEET) (000003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	BARO-METRIC	TRANS-PAR-ENCY	OXYGEN, DIS-SOLVED	HARD-NESS	CALCIUM DIS-SOLVED	
							SURE (MM OF HG) (00025)	(SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	(PER-CENT SATURATION) (00301)	TOTAL (MG/L AS CACO3) (00900)	(MG/L AS CA) (00915)
NOV 05...	1145	1.00	77	6.7	15.2	32	768	.85	9.1	90	24	5.4
APR 28...	1045	1.00	51	7.0	18.6	110	760	.75	9.4	101	15	3.6
JUN 30...	0915	1.00	70	7.2	30.5	35	748	.90	7.2	98	22	5.2
AUG 26...	1430	1.00	77	7.5	29.2	35	751	2.50	9.7	128	24	5.7

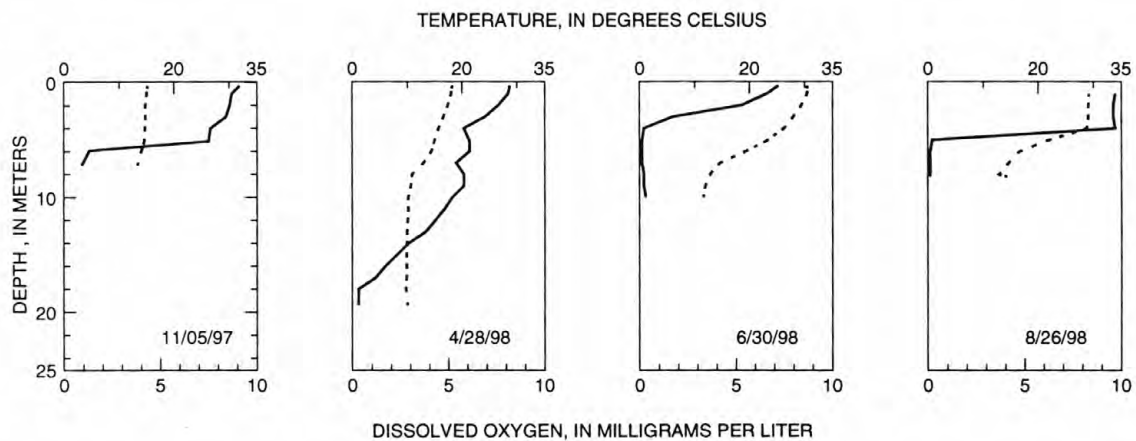
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD AS HCO3) (99440)	ANC UNFILTRD CARBON- ATE IT-FLD (MG/L - CAC03) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS STO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
NOV 05...	2.5	5.1	29	.5	2.3	29	24	--	--	--	--	--
APR 28...	1.5	3.0	28	.3	1.4	12	10	--	--	--	--	--
JUN 30...	2.2	4.5	29	.4	1.4	34	28	3.3	4.6	<.10	11	54
AUG 26...	2.3	5.1	30	.5	1.7	32	25	2.8	4.7	<.10	10	54

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
NOV 05...	<.001	.018	.059	.53	.59	.61	.021	<.001	21.0	.200	100	<1
APR 28...	--	--	--	--	--	--	--	--	5.90	E.440	190	<1
JUN 30...	.003	<.005	.007	.36	.37	--	.023	.003	5.80	<.100	--	--
AUG 26...	<.001	<.005	.012	.56	.57	--	<.010	.001	9.40	<.100	--	--

[illegible]



NEUSE RIVER BASIN  
02086490 LAKE MICHIE AT DAM NEAR BAHAMA, NC--Continued



EXPLANATION

— DISSOLVED OXYGEN, IN MILLIGRAMS PER LITER

.... WATER TEMPERATURE





## NEUSE RIVER BASIN

02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC

LOCATION.--Lat 36°08'55", long 78°49'43", Durham County, Hydrologic Unit 03020201, on right bank 900 ft downstream from Durham municipal dam, 3 mi southeast of Bahama, and 5 mi upstream from confluence with Eno River.

DRAINAGE AREA.--168 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1927 to September 1959, August 1961 to September 1966, October 1982 to current year. Discharge records August 1927 to September 1959, August 1961 to September 1966, October 1982 to September 1990.

REVISED RECORDS.-- WDR NC-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 256.60 ft above sea level. Prior to Nov. 19, 1929, gage was 1.30 ft higher. Satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 23.48 ft, Sept. 6, 1998, from flood marks inside gage well; minimum not determined.

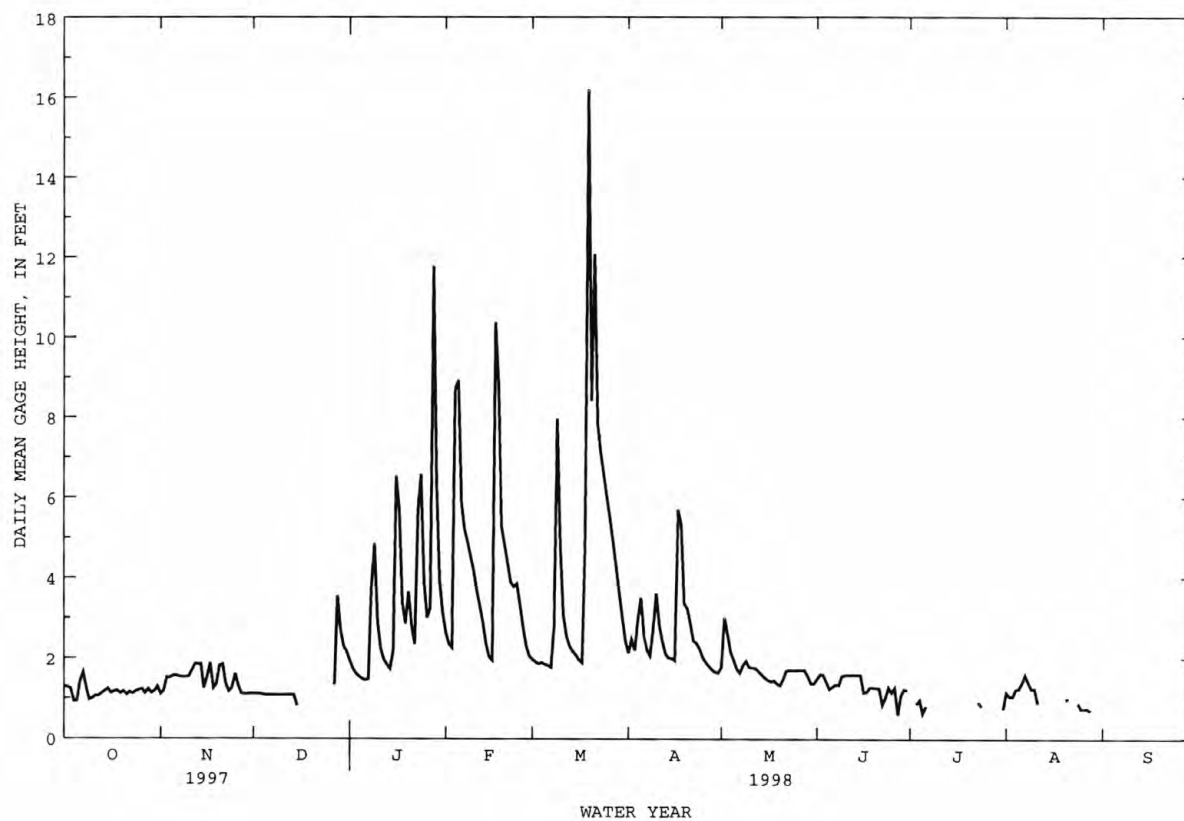
EXTREMES FOR CURRENT YEAR.--Maximum, 18.18 ft on Mar. 19; minimum not determined.

REMARKS.--Flow regulated by Lake Michie (Station 02086490).

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.29	1.10	1.11	1.94	2.64	1.97	2.13	1.77	1.49	---	1.15	---
2	1.28	1.18	1.11	1.74	2.35	1.91	2.46	3.01	1.60	---	1.06	---
3	1.23	1.52	1.11	1.62	2.26	1.86	2.20	2.61	1.59	.87	1.06	---
4	.92	1.51	1.09	1.55	8.71	1.89	2.97	2.16	1.42	.97	1.23	---
5	.93	1.56	1.08	1.49	8.92	1.84	3.50	1.96	1.24	.63	1.25	---
6	1.42	1.57	1.08	1.45	5.88	1.82	2.55	1.74	1.30	.81	1.39	---
7	1.64	1.54	1.08	1.48	5.22	1.77	2.21	1.64	1.35	---	1.58	---
8	1.24	1.53	1.08	3.78	4.90	2.80	2.06	1.83	1.34	---	1.42	---
9	.96	1.53	1.08	4.84	4.54	7.96	2.71	1.93	1.56	---	1.25	---
10	1.00	1.54	1.08	2.90	4.17	4.82	3.61	1.78	1.58	---	1.25	---
11	1.06	1.69	1.08	2.25	3.69	3.07	2.81	1.76	1.58	.67	.89	---
12	1.06	1.85	1.08	1.97	3.28	2.53	2.40	1.76	1.58	---	---	---
13	1.12	1.84	1.08	1.84	2.86	2.29	2.11	1.68	1.58	---	---	---
14	1.18	1.84	1.08	1.73	2.33	2.17	2.01	1.60	1.58	---	---	---
15	1.23	1.25	.82	2.17	2.03	2.09	2.00	1.52	1.58	---	---	---
16	1.13	1.53	---	6.53	1.94	1.96	1.94	1.46	1.16	---	---	---
17	1.17	1.87	---	5.68	10.37	1.89	5.70	1.43	1.17	---	---	---
18	1.19	1.25	---	3.37	8.84	4.85	5.34	1.45	1.28	---	---	---
19	1.12	1.34	---	2.86	5.28	16.19	3.36	1.37	1.28	---	---	---
20	1.17	1.81	---	3.65	4.83	8.41	3.24	1.33	1.27	---	.98	---
21	1.09	1.84	---	2.78	4.36	12.07	2.87	1.48	1.26	---	1.00	---
22	1.15	1.37	---	2.34	3.88	7.83	2.43	1.69	.85	---	---	---
23	1.11	1.17	---	5.68	3.78	7.12	2.38	1.70	1.02	.92	---	---
24	1.17	1.24	---	6.57	3.85	6.58	2.23	1.70	1.28	.81	.89	---
25	1.20	1.61	---	3.88	3.34	6.03	2.02	1.70	1.16	---	.74	---
26	1.22	1.32	---	3.00	2.75	5.47	1.90	1.70	1.27	---	.74	---
27	1.12	1.12	1.33	3.24	2.29	4.90	1.80	1.70	.60	---	.75	---
28	1.22	1.10	3.55	11.76	2.05	4.28	1.72	1.70	1.09	---	.70	---
29	1.13	1.10	2.69	6.30	---	3.62	1.66	1.56	1.23	---	---	---
30	1.18	1.11	2.28	3.92	---	3.01	1.64	1.38	1.21	---	---	---
31	1.29	---	2.16	3.12	---	2.43	---	1.38	---	.75	---	---
MEAN	1.17	1.46	---	3.47	4.33	4.43	2.60	1.73	1.32	---	---	---
MAX	1.64	1.87	---	11.76	10.37	16.19	5.70	3.01	1.60	---	---	---
MIN	.92	1.10	---	1.45	1.94	1.77	1.64	1.33	.60	---	---	---

NEUSE RIVER BASIN  
02086500 FLAT RIVER AT DAM NEAR BAHAMA, NC--Continued



## NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC

LOCATION.--Lat 36°07'54", long 78°50'00", Durham County, Hydrologic Unit 03020201, on left bank at culvert on Secondary Road 1680, 1.5 mi southeast of Willardville.

DRAINAGE AREA.--1.14 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1988 to September 1990, October 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 270 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No flow at times during most years. Maximum discharge for period of record, from rating curve extended above 70 ft<sup>3</sup>/s, on basis of computation of flow through culvert with road overflow. Maximum gage height for period of record from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.31	.11	.16	.90	.75	1.0	.54	.12	.07	.02	0
2	0	.26	.04	.13	.70	.72	.79	.57	.11	.02	.01	0
3	0	.21	.03	.12	1.1	.64	.69	.40	.11	.01	.01	.01
4	0	.17	.08	.11	28	.53	1.4	.35	.16	.01	0	1.4
5	0	.16	.04	.10	9.6	.51	.96	.28	.17	.09	0	.09
6	0	.17	.03	.10	3.0	.49	.78	.24	.21	.03	0	.05
7	0	.21	.03	.13	1.9	.51	.68	.32	.16	.02	0	.04
8	0	.21	.03	2.5	1.4	7.1	.65	.43	.12	.02	0	.14
9	0	.19	.04	1.3	1.1	19	5.4	.26	.12	.03	0	.05
10	0	.19	.13	.56	.86	4.6	3.2	.24	.14	.05	.05	.03
11	0	.19	.12	.34	.79	2.5	2.3	.71	.13	.01	.03	.03
12	0	.20	.10	.22	.81	1.7	1.7	.39	.12	0	.01	.03
13	0	.38	.10	.23	.65	1.4	1.3	.31	.09	0	0	.03
14	0	.37	.10	.18	.56	1.2	1.4	.24	.07	0	0	.02
15	.03	.12	.10	4.1	.50	1.0	1.2	.20	.12	0	0	.03
16	0	.07	.10	13	1.5	.85	.92	.19	.10	.03	.25	.03
17	0	.04	.10	4.8	e78	.94	3.1	.18	.08	.04	.60	.03
18	.01	.03	.05	1.6	e6.0	30	2.1	.17	.06	.01	.04	.03
19	.10	.03	.04	2.8	2.5	121	1.8	.15	.08	0	.02	.02
20	.01	.03	.09	2.5	1.6	20	1.6	.15	.07	0	.01	.02
21	0	.12	.10	1.2	1.2	23	1.2	.14	.04	0	.01	0
22	0	.90	.24	.87	.98	5.2	1.2	.13	.04	.23	.01	.01
23	0	.18	.21	12	2.1	3.3	1.0	.59	.08	.16	.01	0
24	0	.10	.23	5.5	1.8	2.3	.85	.34	.08	.06	0	0
25	.01	.04	.58	2.1	1.3	1.7	.65	.20	.05	.03	0	0
26	.08	.03	.32	1.3	1.0	1.4	.56	.18	.03	.06	0	0
27	.06	.03	.76	14	.88	1.2	.52	.25	.02	.03	0	0
28	.02	.03	1.1	19	.81	1.1	.48	.18	.02	.05	0	0
29	.03	.03	.49	4.0	---	.97	.45	.16	.04	.02	0	0
30	.03	.15	.39	2.0	---	.85	.47	.14	.04	.02	0	0
31	.03	---	.25	1.2	---	.81	---	.13	---	.02	0	---
TOTAL	0.41	5.15	6.13	98.15	151.54	257.27	40.35	8.76	2.78	1.12	1.08	2.09
MEAN	.013	.17	.20	3.17	5.41	8.30	1.34	.28	.093	.036	.035	.070
MAX	.10	.90	1.1	19	.78	121	5.4	.71	.21	.23	.60	1.4
MIN	.00	.03	.03	.10	.50	.49	.45	.13	.02	.00	.00	.00
CFSM	.01	.15	.17	2.78	4.75	7.28	1.18	.25	.08	.03	.03	.06
IN.	.01	.17	.20	3.20	4.94	8.40	1.32	.29	.09	.04	.04	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1998<sup>a</sup>, BY WATER YEAR (WY)

MEAN	.42	.52	.96	2.17	2.95	2.86	1.45	.87	.74	.32	.11	1.27
MAX	1.46	1.27	3.26	3.17	5.41	8.30	2.46	2.20	4.07	1.26	.50	8.60
(WY)	1990	1996	1990	1998	1998	1998	1997	1989	1995	1989	1989	1996
MIN	.013	.079	.014	.47	1.60	.45	.064	.20	.052	.003	.001	.000
(WY)	1998	1995	1989	1989	1996	1988	1995	1995	1988	1988	1988	1990

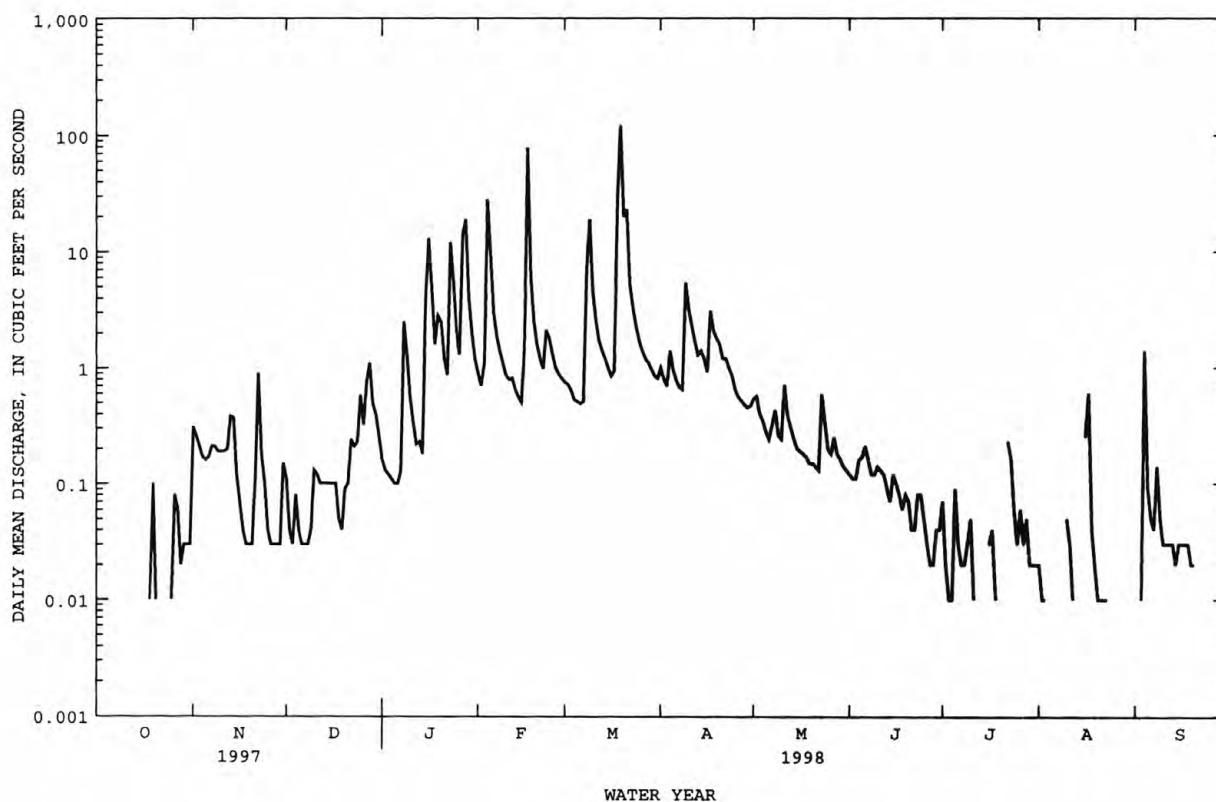
## NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1987 - 1998 <sup>e</sup>	
ANNUAL TOTAL	260.19		574.83		1.29	
ANNUAL MEAN	.71		1.57		1.58	
HIGHEST ANNUAL MEAN					.87	
LOWEST ANNUAL MEAN					1996	
HIGHEST DAILY MEAN	30	Apr 29	121	Mar 19	225	Sep 6 1996
LOWEST DAILY MEAN	0	Aug 15	0	Oct 1	0	Jun 22 1988
ANNUAL SEVEN-DAY MINIMUM	0	Sep 3	0	Oct 1	0	Jul 2 1988
INSTANTANEOUS PEAK FLOW			357	Mar 19	1410*	Sep 6 1996
INSTANTANEOUS PEAK STAGE			6.49	Mar 19	7.77*	Sep 6 1996
INSTANTANEOUS LOW FLOW			0	Oct 1	0	Jun 15 1988
ANNUAL RUNOFF (CFSM)	.63		1.38		1.13	
ANNUAL RUNOFF (INCHES)	8.49		18.76		15.36	
10 PERCENT EXCEEDS	1.4		1.9		2.2	
50 PERCENT EXCEEDS	.20		.13		.25	
90 PERCENT EXCEEDS	0		0		0	

<sup>e</sup> Estimated.<sup>e</sup> See PERIOD OF RECORD.

\* See REMARKS.



## NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988-91, 1994 to current year

REMARKS.--Station operated to define the impacts of various land-use development on surface-water quality in the Upper Neuse River basin.

COOPERATION.--For the period February 1988 through June 1989 the inorganic chemical data and trace metal data were analyzed by the city of Durham's Brown Water Treatment Plant Laboratory.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	
OCT 28...	0930	.04	109	6.8	10.0	763	7.4	65	<.010	.124	<.015	--	
NOV 24...	1000	.10	100	7.5	7.5	766	9.1	75	<.010	<.050	<.020	--	
JAN 08...	0930	2.0	89	6.9	14.0	751	8.2	81	.013	.112	<.020	--	
FEB 04...	0910	34	34	6.4	--	--	--	--	<.010	<.050	<.020	--	
MAR 09...	0950	25	36	6.4	13.0	748	10.3	100	<.010	<.050	<.020	--	
APR 24...	1000	.91	62	6.9	13.0	758	9.8	93	<.010	.094	.037	--	
MAY 27...	0945	.24	83	7.0	20.0	759	7.7	85	.013	.260	.078	.06	
JUN 19...	0745	.10	93	7.0	21.5	756	6.8	78	<.010	.319	.112	.04	
AUG 20...	0855	.01	94	7.1	19.0	766	5.6	60	.013	.082	.121	.08	
SEP 22...	1005	.02	111	6.9	22.0	755	2.2	25	<.010	.069	.020	.23	
DATE		NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)
OCT 28...	--	<.20	<.20	--	--	.018	<.010	<.010	40	<1	<1	<1	
NOV 24...	--	<.10	<.10	--	--	<.010	<.010	.014	--	--	--	--	
JAN 08...	--	.30	<.10	.41	--	.028	.012	.013	240	<1	<1	<1	
FEB 04...	--	.35	.26	--	--	.025	<.010	.010	--	--	--	--	
MAR 09...	--	.35	.26	--	--	.020	<.010	.018	560	<1	<1	1	
APR 24...	--	<.10	<.10	--	--	<.010	<.010	.010	--	--	--	--	
MAY 27...	--	.13	<.10	.39	--	.037	.022	.117	--	--	--	--	
JUN 19...	.00	.15	.11	.47	.43	<.010	<.010	.011	40	<1	<1	<1	
AUG 20...	.14	.20	.27	.28	.35	<.010	<.010	.039	--	--	--	--	
SEP 22...	--	.25	<.10	.32	--	.016	<.010	<.010	--	--	--	--	



## NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

## NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]



## NEUSE RIVER BASIN

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]



## NEUSE RIVER BASIN

02087182 FALLS LAKE ABOVE DAM NEAR FALLS, NC

LOCATION.--Lat 35°56'27", long 78°34'57", Wake County, Hydrologic Unit 03020201, on intake tower 50 ft upstream from Falls dam, and 0.3 mi northwest of Falls and 235 mi upstream from mouth.

DRAINAGE AREA.--771 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is set to sea level. U.S. Corps of Engineers satellite telemetry at station.

REMARKS.--Lake used for flood control, water supply, low-flow augmentation, and recreation. Temporary filling began May 1981 for water supply for city of Raleigh during drought conditions. Gates were closed on Jan. 13, 1983 and normal pool elevation of 250.1 ft was recorded Dec. 7, 1983. Total capacity of reservoir is 4,998,074,000 ft<sup>3</sup> at elevation of 250.1 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 263.72 ft, Mar. 22, 1998; minimum, 242.78 ft, Nov. 26, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum, 263.72 ft, Mar. 22; minimum, 248.05 ft, Nov. 11-13.

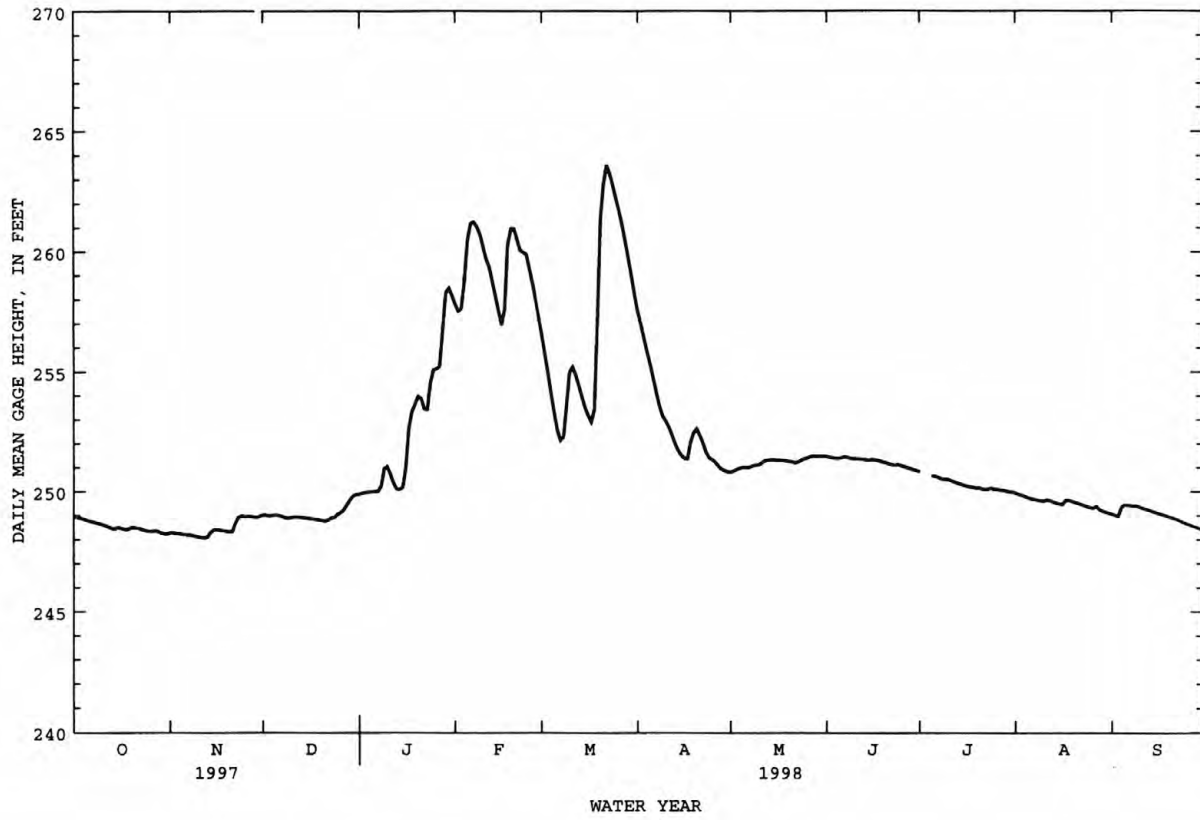
COOPERATION.--Extremes for period of record provided by U.S. Army Corps of Engineers.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	249.00	248.29	249.03	249.90	257.83	256.54	257.51	250.81	251.48	250.84	249.95	249.07
2	248.94	248.29	249.01	249.94	257.53	255.77	256.98	250.87	251.44	---	249.90	249.01
3	248.89	248.26	248.99	249.96	257.62	255.00	256.37	250.93	251.42	---	249.85	248.97
4	248.86	248.25	249.01	249.98	258.73	254.13	255.83	250.98	251.40	---	249.80	249.35
5	248.82	248.21	249.03	249.99	260.48	253.30	255.32	251.02	251.40	250.67	249.76	249.45
6	248.78	248.21	249.00	250.00	261.18	252.58	254.75	251.02	251.43	250.65	249.71	249.44
7	248.74	248.20	248.97	250.01	261.24	252.15	254.13	251.01	251.47	250.60	249.68	249.43
8	248.71	248.18	248.92	250.24	261.06	252.29	253.58	251.07	251.43	250.55	249.65	249.42
9	248.67	248.15	248.90	250.96	260.76	253.61	253.16	251.11	251.39	250.53	249.63	249.41
10	248.64	248.11	248.92	251.04	260.24	255.00	252.95	251.11	251.38	250.53	249.62	249.35
11	248.59	248.09	248.95	250.75	259.72	255.21	252.71	251.20	251.38	250.48	249.67	249.31
12	248.53	248.06	248.95	250.38	259.37	254.86	252.37	251.29	251.36	250.42	249.64	249.27
13	248.48	248.11	248.93	250.12	258.76	254.40	252.00	251.32	251.36	250.37	249.58	249.24
14	248.44	248.31	248.92	250.09	258.16	253.94	251.72	251.33	251.32	250.32	249.53	249.17
15	248.51	248.40	248.90	250.17	257.55	253.50	251.53	251.33	251.34	250.28	249.49	249.13
16	248.48	248.42	248.88	250.96	256.95	253.18	251.39	251.32	251.35	250.24	249.47	249.09
17	248.45	248.39	248.86	252.64	257.61	252.91	251.36	251.32	251.33	250.22	249.65	249.05
18	248.41	248.37	248.84	253.34	260.25	253.43	252.06	251.31	251.29	250.20	249.66	249.01
19	248.48	248.35	248.82	253.63	260.97	257.29	252.47	251.29	251.24	250.15	249.62	248.98
20	248.52	248.33	248.80	253.98	260.97	261.36	252.64	251.26	251.22	250.16	249.56	248.93
21	248.48	248.34	248.77	253.90	260.52	262.84	252.38	251.25	251.17	250.12	249.52	248.88
22	248.48	248.69	248.82	253.46	260.07	263.60	252.05	251.20	251.13	250.09	249.48	248.86
23	248.42	248.92	248.91	253.43	259.98	263.25	251.67	251.26	251.11	250.11	249.43	248.79
24	248.37	248.99	248.94	254.55	259.90	262.78	251.41	251.34	251.13	250.15	249.38	248.72
25	248.36	248.96	249.06	255.10	259.31	262.23	251.35	251.39	251.09	250.11	249.34	248.68
26	248.35	248.98	249.13	255.13	258.67	261.68	251.22	251.43	251.05	250.11	249.32	248.63
27	248.38	248.97	249.24	255.23	257.98	261.10	251.07	251.49	251.01	250.07	249.39	248.58
28	248.34	248.95	249.46	256.83	257.28	260.41	250.94	251.50	250.96	250.07	249.25	248.54
29	248.28	248.94	249.67	258.31	---	259.71	250.88	251.50	250.92	250.03	249.19	248.48
30	248.25	248.98	249.82	258.48	---	258.96	250.83	251.49	250.88	249.99	249.15	248.43
31	248.23	---	249.89	258.18	---	258.19	---	251.49	---	249.99	249.11	---
TOTAL	7704.88	7453.70	7720.34	7830.68	7260.69	7965.20	7584.63	7788.24	7537.88	---	7735.98	7470.67
MEAN	248.54	248.46	249.04	252.60	259.31	256.94	252.82	251.23	251.26	---	249.55	249.02
MAX	249.00	248.99	249.89	258.48	261.24	263.60	257.51	251.50	251.48	---	249.95	249.45
MIN	248.23	248.06	248.77	249.90	256.95	252.15	250.83	250.81	250.88	---	249.11	248.43
MED	248.48	248.33	248.95	251.04	259.54	255.21	252.21	251.29	251.33	---	249.58	249.03



NEUSE RIVER BASIN  
02087182 FALLS LAKE ABOVE DAM NEAR FALLS, NC--Continued



## NEUSE RIVER BASIN

## 02087183 NEUSE RIVER NEAR FALLS, NC

LOCATION.--Lat 35°56'25", long 78°34'56", Wake County, Hydrologic Unit 03020201, on right bank 300 ft downstream of Falls Lake Dam, and 0.3 mi northwest of Falls.

DRAINAGE AREA.--771 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1970 to current year.

REVISED RECORDS.--WDR NC-91-1: Drainage area. WRD NC 96-1: 1991-95 (M).

GAGE.--Water-stage recorder. Datum of gage is 194.69 ft above sea level. Prior to Oct. 1, 1990, water-stage recorder at site 0.4 mi downstream at 182.62 ft. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Falls Lake (station 02087182). June 5, 1980, to May 6, 1981, flows affected by incidental storage in Falls Lake, under construction; May 6, 1981, to Jan. 13, 1983, gates closed and Falls Lake partially filled to provide storage for City of Raleigh water supply; Jan. 13, 1983, gates closed and normal pool elevation, 250.1 ft, reached Dec. 7, 1983. The City of Raleigh diverted an average of 83.2 ft<sup>3</sup>/s, 1.2 mi upstream from station for municipal water supply, most of which was returned downstream as treated effluent. Prior to regulation, maximum discharge: 13,600 ft<sup>3</sup>/s, July 17, 1975; gage height: 25.21 ft; minimum discharge: 4.6 ft<sup>3</sup>/s, Sept. 24, 1980; gage height: 2.13 ft, at site then in use. Maximum gage-height and discharge for period of record may have been higher during period of estimated record, Aug. 27-Sept. 30, 1996. Minimum discharge for period of record not determined due to intermittent gate closure at dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of 216.1 ft above sea level; discharge, 23,300 ft<sup>3</sup>/s at bridge 0.4 mi upstream, from information provided by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e130	132	132	132	3700	6320	5940	346	174	122	137	127
2	e130	131	131	133	2260	6350	4970	250	178	122	134	127
3	e130	127	132	133	217	6340	4870	249	182	122	133	125
4	e130	127	132	134	221	6220	4770	249	180	122	133	129
5	e130	127	133	134	224	5730	4630	206	179	123	130	129
6	e130	127	132	135	1120	4490	4710	181	178	125	129	130
7	e130	126	132	136	2610	1810	4410	180	178	126	128	129
8	e130	125	132	137	3410	216	3840	182	177	126	129	126
9	e130	125	132	641	3720	221	3850	183	177	127	133	126
10	e130	125	133	2050	4400	223	3590	181	177	127	133	127
11	e130	125	132	2430	5200	1840	3050	182	176	127	133	128
12	e130	125	130	2440	5380	3620	3010	179	176	128	134	129
13	e130	125	129	1120	5370	3620	2540	179	174	128	132	129
14	e130	126	129	350	5360	3640	2130	179	172	131	131	129
15	e130	126	130	352	5350	2990	1490	178	173	131	131	129
16	e130	126	130	353	4530	2490	1190	178	173	131	131	127
17	e130	126	130	217	1260	1620	841	179	170	131	132	127
18	127	127	130	132	226	225	359	179	170	131	132	127
19	132	127	130	132	616	237	360	178	171	131	131	128
20	130	127	130	1200	2930	246	1510	179	171	132	132	127
21	129	128	130	3100	5110	1200	2660	183	170	132	132	127
22	129	129	131	3950	3760	4200	2640	181	170	133	135	128
23	129	129	131	2150	2360	6340	2540	185	166	132	135	127
24	129	130	131	230	3540	6430	1420	184	166	132	134	129
25	128	129	132	932	5390	6450	751	181	168	133	133	130
26	127	129	132	1790	5980	6420	1070	179	169	134	130	130
27	127	130	132	1000	6360	6510	1070	180	167	138	131	129
28	127	130	132	216	6320	6850	715	179	167	135	130	134
29	127	130	132	1120	---	6860	487	180	168	136	129	202
30	127	131	133	2970	---	6840	484	177	139	137	129	193
31	129	---	133	3710	---	6740	---	177	---	137	128	---
TOTAL	4007	3827	4070	33659	96924	123288	75897	5983	5156	4022	4084	3984
MEAN	129	128	131	1086	3462	3977	2530	193	172	130	132	133
MAX	132	132	133	3950	6360	6860	5940	346	182	138	137	202
MIN	127	125	129	132	217	216	359	177	139	122	128	125
†	-121	+124	+152	-12	+1841	-312	+232	-1666	+131	-127	-155	-113

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998\*, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	302	350	553	918	1333	1839	1196	566	315	328	268	410				
MAX	970	1535	1818	2014	3462	3992	2586	1821	735	1501	1099	3953				
(WY)	1997	1996	1986	1984	1998	1989	1984	1989	1984	1995	1989	1996				
MIN	72.6	65.2	63.3	102	287	233	118	110	126	61.7	61.0	67.8				
(WY)	1984	1984	1992	1994	1991	1988	1995	1995	1987	1983	1983	1985				

## NEUSE RIVER BASIN

02087183 NEUSE RIVER NEAR FALLS, NC--Continued

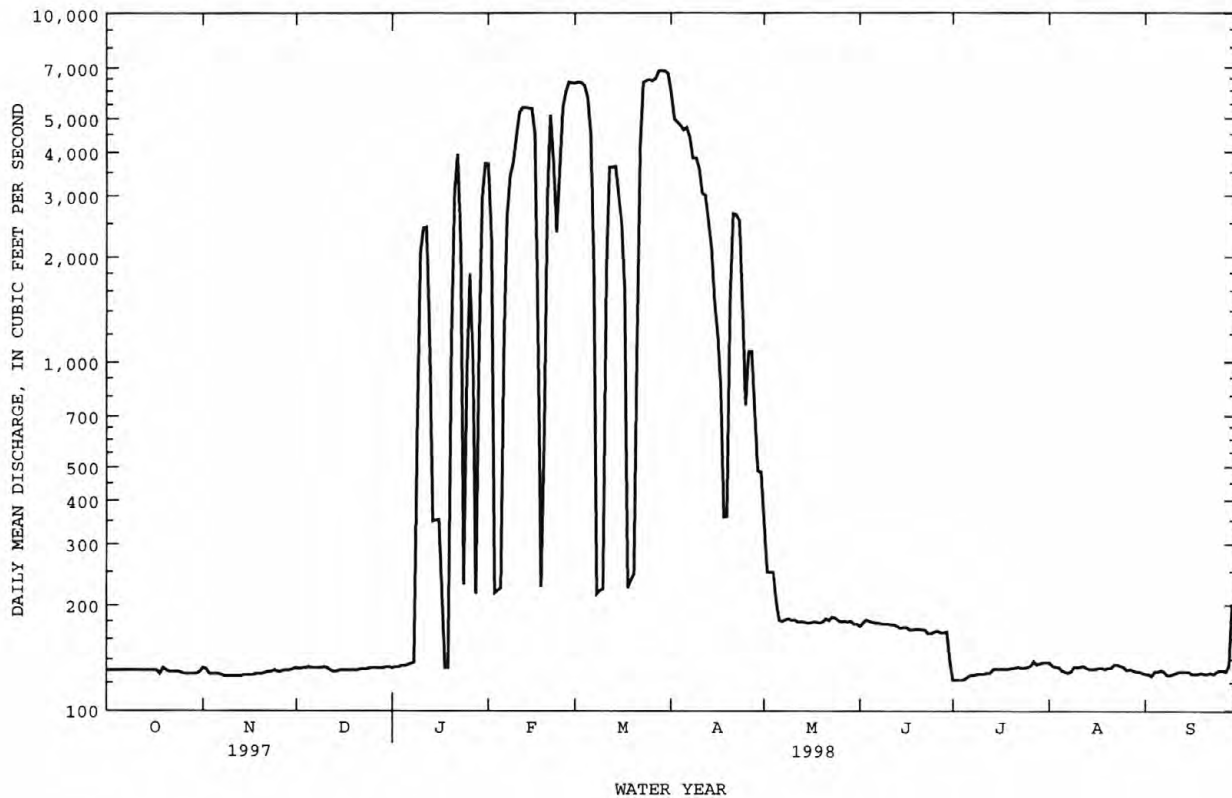
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1983 - 1998*	
ANNUAL TOTAL	189820		364901		695	UNADJUSTED
ANNUAL MEAN	520		1000		1161	1984
HIGHEST ANNUAL MEAN			‡992		205	1988
LOWEST ANNUAL MEAN					7420	Sep 16 1996
HIGHEST DAILY MEAN	3280	Feb 25	6860	Mar 29	55	Jan 10 1995
LOWEST DAILY MEAN	125	Nov 8	122	Jul 1	56	Jan 10 1995
ANNUAL SEVEN-DAY MINIMUM	125	Nov 7	123	Jul 1	7650*	Sep 16 1996
INSTANTANEOUS PEAK FLOW			6920	Mar 29	8.05*	Sep 16 1996
INSTANTANEOUS PEAK STAGE			6.73	Mar 29	NOT DETERMINED*	
INSTANTANEOUS LOW FLOW			NOT DETERMINED		NOT DETERMINED*	
ANNUAL RUNOFF (CFSM)	.67		1.29		.90	
ANNUAL RUNOFF (INCHES)	9.15		17.58		12.23	
10 PERCENT EXCEEDS	1730		3890		2420	
50 PERCENT EXCEEDS	132		135		181	
90 PERCENT EXCEEDS	129		127		85	

e Estimated.

\* Regulated period only (1983-1998). see REMARKS.

† Change in contents, equivalent in cubic feet per second, in Falls Reservoir provided by U.S. Army Corps of Engineers.

‡ Adjusted for change in contents.



## NEUSE RIVER BASIN

0208726005 CRABTREE CREEK AT EBENEZER CHURCH ROAD NEAR RALEIGH, NC

LOCATION.--Lat 35°50'43", long 78°43'29", Wake County, Hydrologic Unit 03020201, on downstream side of bridge on Secondary Road 1649, 0.1 mi upstream from Sycamore Creek, and 6.6 mi northwest of Raleigh.

DRAINAGE AREA.--76 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1987 to September 1992, May 1997 to current year. Published as Crabtree Creek at Secondary Road 2049 near Raleigh, December 1987 to September 1992.

GAGE.--Water-stage recorder. Datum of gage is 240 ft above Natinal Geodectic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Flow regulated by flood-control dams upstream. Minimum discharge for current water year and period of record, due to regulation.

DISCHARGE, CUBIC FEET PER SECOND, FOR PERIOD JUNE 1997 TO SEPTEMBER 1997  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									26	9.9	75	8.8
2									253	14	57	13
3									590	13	42	8.6
4									277	11	33	15
5									145	13	30	15
6									88	12	30	11
7									87	12	27	9.2
8									60	12	24	10
9									42	16	20	7.7
10									32	19	18	10
11									27	20	15	36
12									24	21	13	27
13									36	19	12	18
14									36	15	10	14
15									33	11	9.0	12
16									28	24	8.1	12
17									23	79	7.6	12
18									39	24	8.0	10
19									22	17	6.6	8.7
20									17	13	6.6	7.6
21									14	16	8.5	5.2
22									13	16	7.0	5.7
23									12	32	5.7	4.9
24									10	1450	5.8	22
25									11	740	6.4	58
26									11	314	5.6	35
27									16	177	5.4	24
28									13	126	5.8	25
29									9.5	99	5.2	26
30									9.0	89	4.9	e20
31									---	84	14	---
TOTAL									2003.5	3517.9	526.2	491.4
MEAN									66.8	113	17.0	16.4
MAX									590	1450	75	58
MIN									9.0	9.9	4.9	4.9
CFSM									.88	1.49	.22	.22
IN.									.98	1.72	.26	.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1997<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	59.0	63.7	47.4	93.1	103	143	81.9	69.3	51.6	58.0	43.3	16.3
MAX	90.6	104	143	127	195	341	143	144	104	113	108	22.7	
(WY)	1991	1990	1990	1988	1989	1989	1989	1989	1992	1997	1989	1992	
MIN	13.6	23.8	14.4	43.1	16.2	25.0	32.5	15.7	15.9	9.15	6.74	5.35	
(WY)	1992	1992	1991	1989	1991	1988	1992	1992	1988	1988	1990	1990	

## SUMMARY STATISTICS

WATER YEARS 1988 - 1997<sup>a</sup>

ANNUAL MEAN	74.4	
HIGHEST ANNUAL MEAN	109	1989
LOWEST ANNUAL MEAN	46.6	1992
HIGHEST DAILY MEAN	1450	Jul 24 1997
LOWEST DAILY MEAN	2.1	Dec 18 1990
ANNUAL SEVEN-DAY MINIMUM	2.6	Dec 12 1990
INSTANTANEOUS PEAK FLOW	2110	Mar 29 1990
INSTANTANEOUS PEAK STAGE	10.11	Mar 29 1990
INSTANTANEOUS LOW FLOW	1.8*	Dec 17 1990
ANNUAL RUNOFF (CFSM)	.98	
ANNUAL RUNOFF (INCHES)	13.31	
10 PERCENT EXCEEDS	169	
50 PERCENT EXCEEDS	28	
90 PERCENT EXCEEDS	7.3	

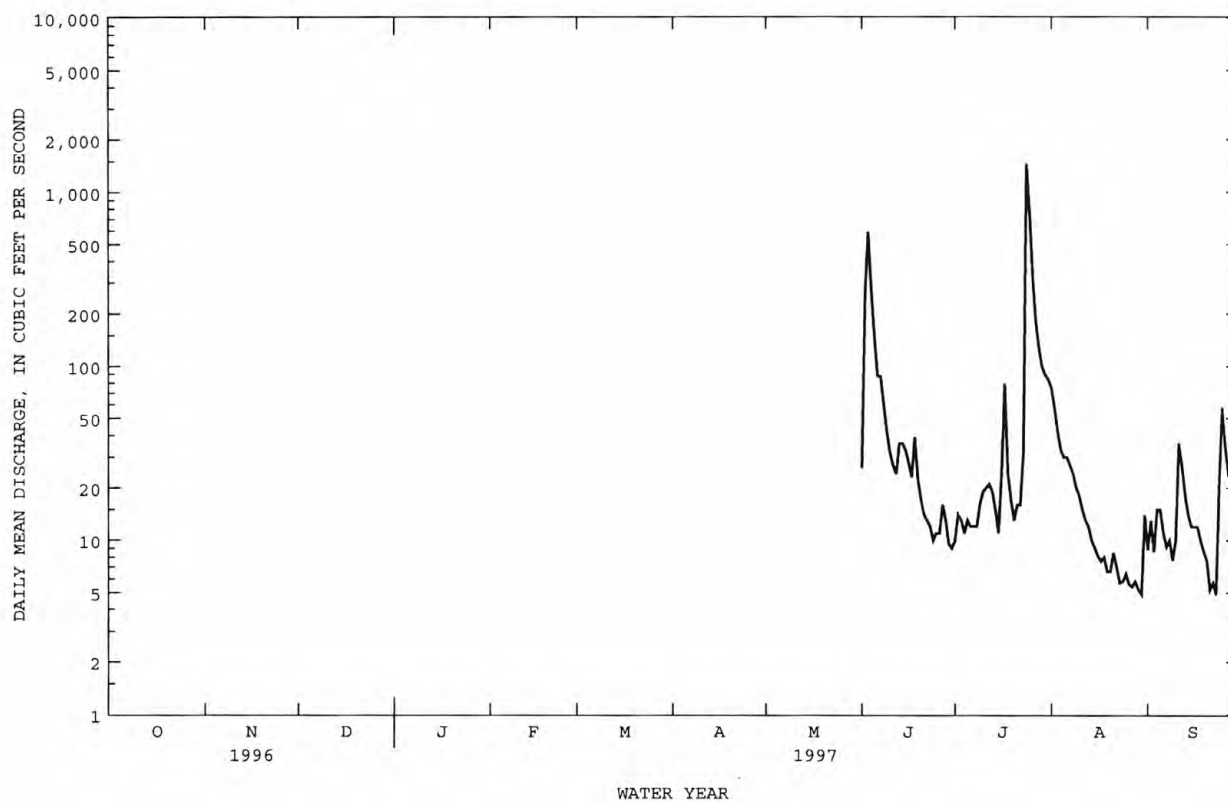
e Estimated.

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.

## NEUSE RIVER BASIN

0208726005 CRABTREE CREEK AT EBENEZER CHURCH ROAD NEAR RALEIGH, NC--Continued



## NEUSE RIVER BASIN

0208726005 CRABTREE CREEK AT EBENEZER CHURCH ROAD NEAR RALEIGH, NC--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e16	23	90	86	172	84	70	23	21	16	52	12
2	14	32	63	75	130	79	74	26	18	13	33	11
3	11	31	47	61	126	74	68	27	18	10	25	18
4	8.7	25	42	50	1680	66	123	35	40	9.8	19	282
5	8.3	21	35	44	1390	59	107	30	90	152	19	129
6	8.5	18	27	48	772	55	88	26	81	52	21	73
7	7.0	18	23	59	414	53	76	24	70	33	22	45
8	6.4	19	20	e340	253	363	66	86	55	27	77	37
9	e7.3	e18	19	279	175	1320	168	83	39	36	30	39
10	e7.7	17	35	169	139	625	170	67	35	28	34	25
11	e6.3	16	55	127	132	308	119	175	32	22	49	20
12	e6.1	16	37	e115	140	186	89	153	27	19	38	16
13	e6.5	79	30	e100	114	136	75	104	24	17	29	14
14	e9.0	e306	26	e90	103	111	65	81	19	15	23	12
15	e40	e200	23	130	86	93	60	59	101	14	19	11
16	e25	e120	20	890	103	81	54	42	83	13	61	9.6
17	17	e87	19	1070	1410	76	66	34	53	17	517	8.7
18	15	62	18	462	938	580	71	28	35	35	181	10
19	177	44	17	435	480	2410	63	24	27	32	97	16
20	151	33	16	513	278	1480	77	21	22	31	62	20
21	78	28	15	329	184	1300	60	19	18	24	45	22
22	57	179	67	206	145	890	52	17	16	19	36	20
23	41	124	113	646	188	516	55	44	14	16	32	16
24	37	97	102	749	185	360	49	50	15	13	28	12
25	37	86	161	423	142	248	39	34	14	30	22	9.8
26	38	81	114	245	121	164	33	28	13	52	19	8.3
27	49	64	184	569	103	126	29	45	11	28	48	7.6
28	37	45	215	1530	89	103	27	38	10	47	24	7.6
29	26	36	132	874	---	90	24	36	11	31	16	6.7
30	22	63	128	474	---	84	23	30	11	45	16	8.0
31	18	---	104	272	---	74	---	25	---	90	14	---
TOTAL	987.8	1988	1997	11460	10192	12194	2140	1514	1023	986.8	1708	926.3
MEAN	31.9	66.3	64.4	370	364	393	71.3	48.8	34.1	31.8	55.1	30.9
MAX	177	306	215	1530	1680	2410	170	175	101	152	517	282
MIN	6.1	16	15	44	86	53	23	17	10	9.8	14	6.7
CFSM	.42	.87	.85	4.86	4.79	5.18	.94	.64	.45	.42	.72	.41
IN.	.48	.97	.98	5.61	4.99	5.97	1.05	.74	.50	.48	.84	.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	53.6	64.2	50.2	133	146	184	80.1	65.9	49.1	54.2	45.0	18.4
	MAX	90.6	104	143	370	364	393	143	144	104	113	108	30.9
	(WY)	1991	1990	1990	1998	1998	1998	1989	1989	1992	1997	1989	1998
	MIN	13.6	23.8	14.4	43.1	16.2	25.0	32.5	15.7	15.9	9.15	6.74	5.35
	(WY)	1992	1992	1991	1989	1991	1988	1992	1992	1988	1988	1990	1990

## SUMMARY STATISTICS

## FOR 1998 WATER YEAR

WATER YEARS 1988 - 1998<sup>a</sup>

ANNUAL TOTAL	47116.9	
ANNUAL MEAN	129	85.4
HIGHEST ANNUAL MEAN		129
LOWEST ANNUAL MEAN		46.6
HIGHEST DAILY MEAN	2410	Mar 19 1998
LOWEST DAILY MEAN	6.1	Oct 12
ANNUAL SEVEN-DAY MINIMUM	6.8	Oct 7
INSTANTANEOUS PEAK FLOW	3340	Mar 19 1998
INSTANTANEOUS PEAK STAGE	16.34	Mar 19 1998
INSTANTANEOUS LOW FLOW	1.5*	Oct 12 1997
ANNUAL RUNOFF (CFSM)	1.70	
ANNUAL RUNOFF (INCHES)	23.06	
10 PERCENT EXCEEDS	278	177
50 PERCENT EXCEEDS	45	30
90 PERCENT EXCEEDS	14	7.7

e Estimated.

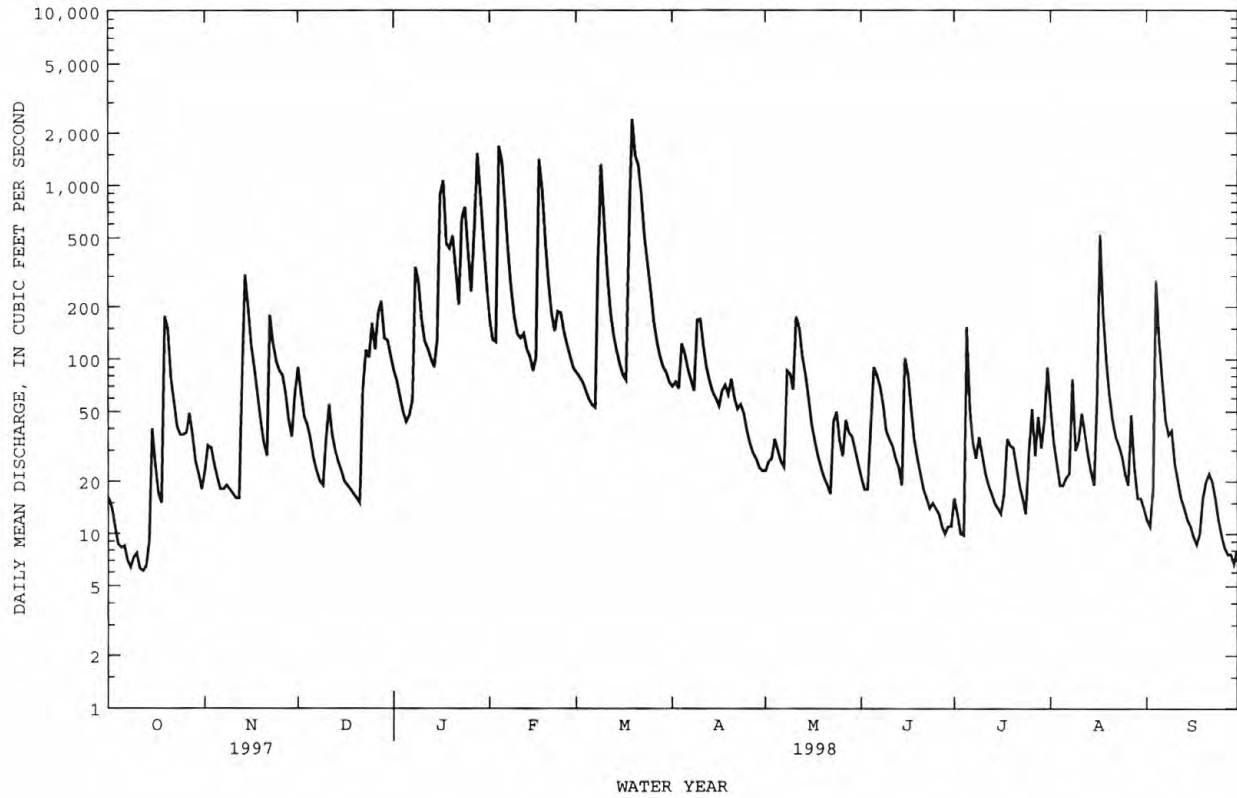
<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.



## NEUSE RIVER BASIN

0208726005 CRABTREE CREEK AT EBENEZER CHURCH ROAD NEAR RALEIGH, NC--Continued



## NEUSE RIVER BASIN

02087275 CRABTREE CREEK AT HIGHWAY 70 AT RALEIGH, NC

LOCATION.--Lat 35°50'15", long 78°40'26", Wake County, Hydrologic Unit 030200201, on left bank on upstream side of bridge on U.S. Highway 70, 0.6 mi upstream from Mine Creek, 4.4 mi northwest of Raleigh.

DRAINAGE AREA.--97.6 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1997 to current year. Unpublished records of gage height for water years 1988 to 1997 are available in the files of U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 203.72 ft above sea level. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1973, reached a stage of about 27.69 ft, discharge, about 11,700 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	37	107	97	192	93	98	35	34	25	85	23
2	17	48	76	87	140	88	97	45	26	18	56	19
3	13	39	58	75	173	81	90	50	37	14	39	63
4	12	30	53	63	1950	73	181	61	89	30	28	400
5	11	24	46	58	1530	66	143	50	126	296	27	172
6	9.9	21	35	70	835	61	116	41	109	86	30	109
7	8.9	21	31	86	455	60	98	46	93	54	33	78
8	8.6	21	27	412	291	461	87	122	75	45	174	74
9	8.4	20	26	335	198	1560	233	114	57	61	55	71
10	8.5	18	55	189	154	708	208	92	53	44	56	47
11	8.2	17	73	134	147	348	152	236	53	31	76	36
12	8.0	17	53	109	154	210	116	192	46	24	62	28
13	8.1	124	42	105	125	150	95	136	40	20	46	26
14	7.9	426	37	92	111	123	86	106	31	17	35	23
15	85	197	33	174	93	103	80	81	175	16	28	20
16	30	123	29	1080	134	90	72	63	116	16	111	16
17	23	92	28	1200	1640	93	95	52	78	28	524	14
18	18	73	26	531	1050	678	92	44	55	58	230	16
19	283	56	25	512	533	3010	86	36	43	51	135	25
20	199	44	24	576	320	1440	95	30	34	49	101	33
21	97	42	22	376	213	1160	78	27	27	37	81	38
22	73	243	105	236	164	785	71	24	23	27	68	36
23	55	146	136	771	228	480	73	97	21	21	60	26
24	49	108	130	841	215	356	68	89	21	17	53	19
25	48	95	186	469	157	266	56	60	19	49	44	16
26	56	88	130	281	131	188	48	49	17	93	51	14
27	63	71	237	704	112	150	43	82	15	50	93	13
28	48	53	253	1660	100	127	41	61	14	85	48	13
29	36	44	154	936	---	112	36	56	17	56	30	11
30	29	86	144	510	---	101	33	48	20	74	35	17
31	25	---	116	305	---	93	---	42	---	136	24	---
TOTAL	1368.5	2424	2497	13074	11545	13314	2867	2267	1564	1628	2518	1496
MEAN	44.1	80.8	80.5	422	412	429	95.6	73.1	52.1	52.5	81.2	49.9
MAX	283	426	253	1660	1950	3010	233	236	175	296	524	400
MIN	7.9	17	22	58	93	60	33	24	14	14	24	11
CFSM	.45	.83	.83	4.32	4.22	4.40	.98	.75	.53	.54	.83	.51
IN.	.52	.92	.95	4.98	4.40	5.07	1.09	.86	.60	.62	.96	.57

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

	1997	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998
MEAN	44.1	80.8	80.5	422	412	429	95.6	73.1	55.9	109	52.5	36.6
MAX	44.1	80.8	80.5	422	412	429	95.6	73.1	59.6	166	81.2	49.9
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1997	1997	1998	1998
MIN	44.1	80.8	80.5	422	412	429	95.6	73.1	52.1	52.5	23.7	23.3
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1997	1997

## SUMMARY STATISTICS

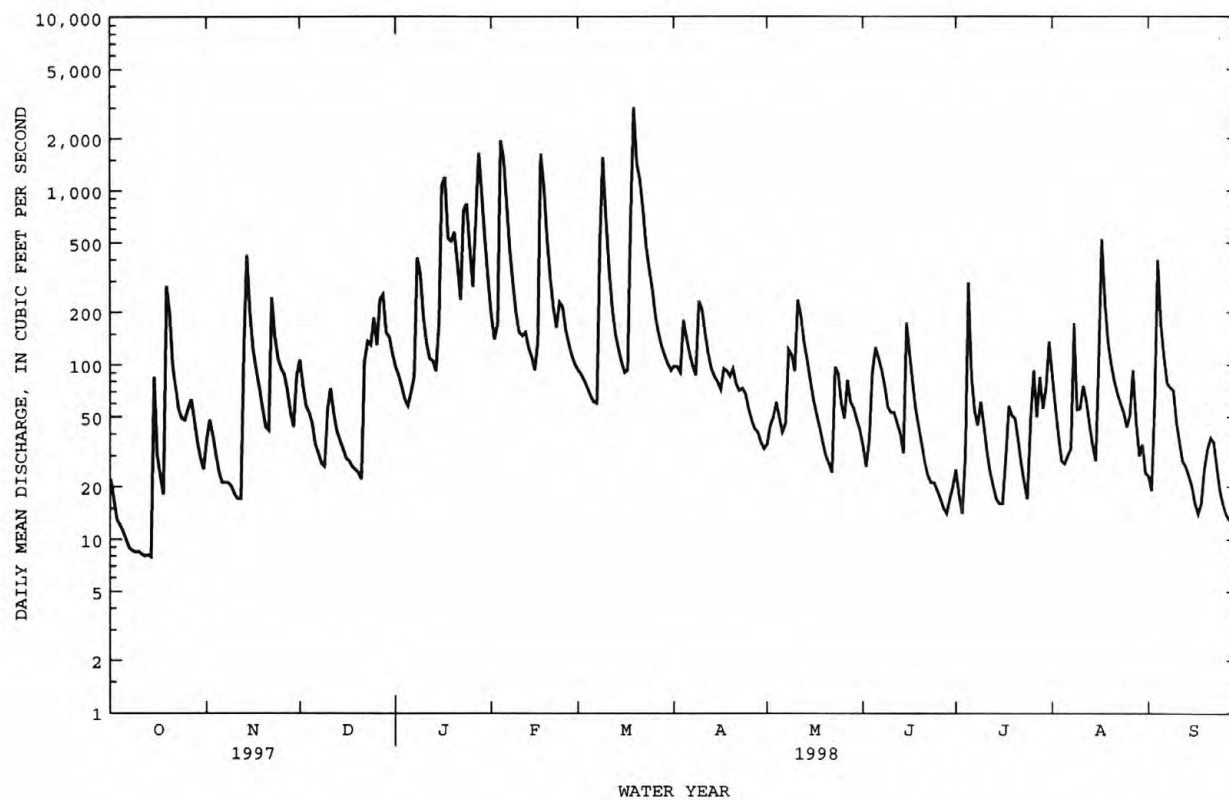
## FOR 1998 WATER YEAR

## WATER YEARS 1997 - 1998

ANNUAL TOTAL	56562.5	
ANNUAL MEAN	155	155
HIGHEST ANNUAL MEAN		155
LOWEST ANNUAL MEAN		155
HIGHEST DAILY MEAN	3010	Mar 19 1998
LOWEST DAILY MEAN	7.9	Oct 14 1997
ANNUAL SEVEN-DAY MINIMUM	8.2	Oct 8 1997
INSTANTANEOUS PEAK FLOW	4410	Mar 19 1998
INSTANTANEOUS PEAK STAGE	17.48	Mar 19 1998
INSTANTANEOUS LOW FLOW	5.1	Oct 13 1997
ANNUAL RUNOFF (CFSM)	1.59	1.59
ANNUAL RUNOFF (INCHES)	21.56	21.57
10 PERCENT EXCEEDS	326	244
50 PERCENT EXCEEDS	66	51
90 PERCENT EXCEEDS	19	15

## NEUSE RIVER BASIN

02087275 CRABTREE CREEK AT HIGHWAY 70 AT RALEIGH, NC--Continued



## NEUSE RIVER BASIN

0208731190 CRABTREE CREEK AT ANDERSON DRIVE AT RALEIGH, NC

LOCATION.--Lat 35°49'16", long 78°37'34", Wake County, Hydrologic Unit 03020201, on the downstream side of Anderson Drive bridge and 2.3 mi north of Raleigh.

DRAINAGE AREA.--111 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1990 to May 1991, October 1991 to April 1993, June 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage is 187.29 ft above sea level. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1996 reached a stage of 23.1 ft from flood marks.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 18.58 ft, Mar. 19, 1998; minimum not determined.

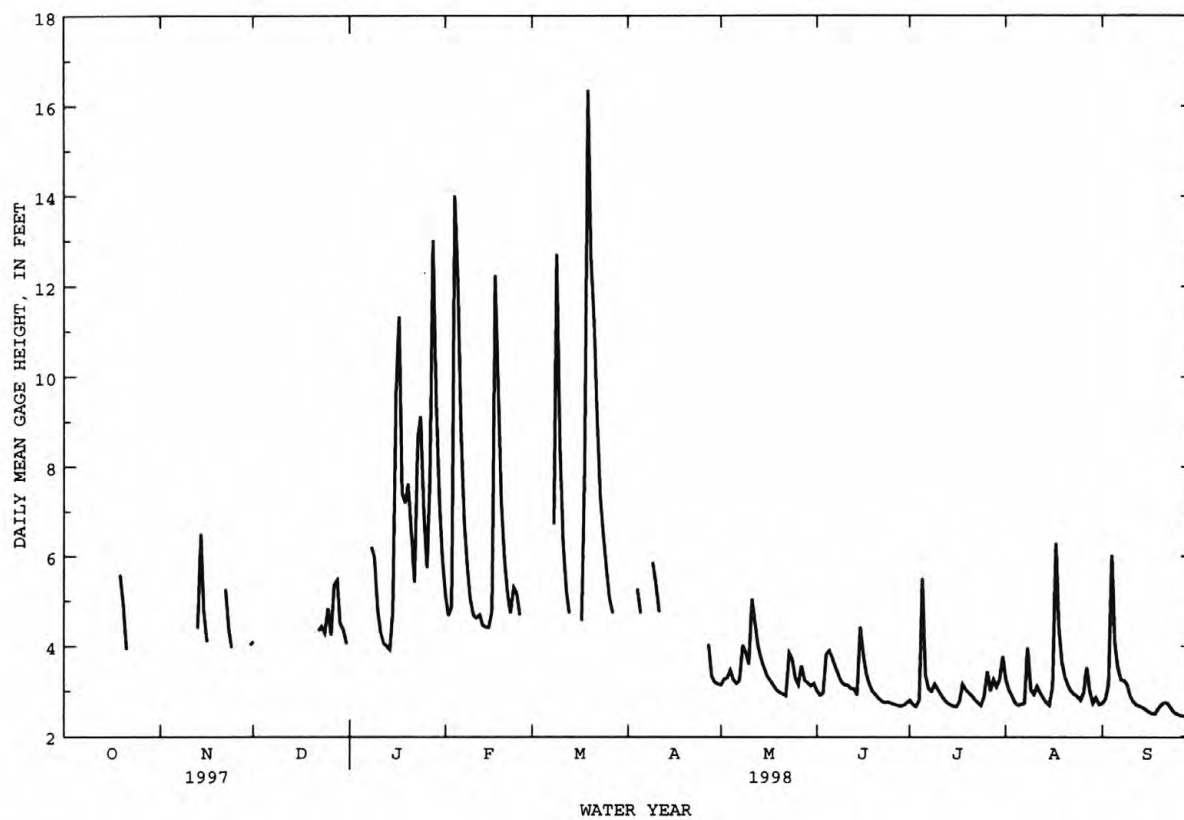
EXTREMES FOR CURRENT YEAR.--Maximum, 18.58 ft, Mar. 19; minimum not determined.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	4.10	---	5.12	---	---	3.14	3.01	2.80	3.26	2.73
2	---	---	---	---	4.68	---	---	3.27	2.91	2.71	3.02	2.82
3	---	---	---	---	4.87	---	---	3.29	2.96	2.66	2.89	3.15
4	---	---	---	---	14.01	---	5.28	3.47	3.82	2.80	2.74	6.02
5	---	---	---	---	12.11	---	4.73	3.26	3.90	5.50	2.69	4.09
6	---	---	---	---	8.86	---	---	3.17	3.73	3.37	2.71	3.53
7	---	---	---	---	6.81	---	---	3.23	3.54	3.06	2.73	3.25
8	---	---	---	6.20	5.76	6.72	---	4.02	3.36	3.00	3.96	3.24
9	---	---	---	5.97	5.06	12.72	5.87	3.86	3.20	3.16	3.03	3.15
10	---	---	---	4.81	4.69	8.44	5.32	3.60	3.14	3.05	2.93	2.90
11	---	---	---	4.33	4.63	6.27	4.76	5.05	3.14	2.93	3.11	2.78
12	---	---	---	4.07	4.70	5.24	---	4.51	3.06	2.82	2.97	2.70
13	---	4.40	---	4.00	4.46	4.73	---	3.99	3.05	2.75	2.85	2.67
14	---	6.50	---	3.92	4.42	---	---	3.72	2.92	2.70	2.75	2.64
15	4.56	4.79	---	4.77	4.41	---	---	3.50	4.43	2.67	2.69	2.60
16	---	4.10	---	9.62	4.78	---	---	3.32	3.83	2.65	3.11	2.55
17	---	---	---	11.33	12.25	4.57	---	3.23	3.38	2.77	6.29	2.51
18	---	---	---	7.40	9.89	8.00	---	3.13	3.15	3.16	4.42	2.50
19	5.59	---	---	7.19	7.21	16.36	---	3.03	3.00	3.04	3.65	2.61
20	4.92	---	---	7.62	5.94	12.64	---	2.97	2.92	2.97	3.32	2.70
21	3.93	---	---	6.41	5.15	11.22	---	2.94	2.84	2.90	3.13	2.75
22	---	5.26	4.34	5.42	4.74	9.14	---	2.90	2.78	2.81	3.01	2.74
23	---	4.37	4.43	8.60	5.31	7.31	---	3.85	2.75	2.74	2.93	2.64
24	---	3.96	4.28	9.12	5.19	6.44	---	3.71	2.76	2.68	2.88	2.55
25	---	---	4.84	6.97	4.70	5.75	---	3.29	2.73	2.88	2.80	2.50
26	---	---	4.24	5.75	---	5.06	---	3.14	2.71	3.44	2.97	2.47
27	---	---	5.35	7.73	---	4.74	4.04	3.57	2.69	3.01	3.53	2.46
28	---	---	5.47	13.02	---	---	3.33	3.25	2.67	3.26	3.00	2.45
29	---	---	4.50	9.43	---	---	3.20	3.19	2.69	3.10	2.73	2.43
30	---	4.03	4.36	7.20	---	---	3.16	3.12	2.74	3.26	2.86	2.55
31	---	---	4.06	5.96	---	---	---	3.17	---	3.77	2.70	---
MEAN	---	---	---	---	---	---	---	3.45	3.13	3.05	3.15	2.89
MAX	---	---	---	---	---	---	---	5.05	4.43	5.50	6.29	6.02
MIN	---	---	---	---	---	---	---	2.90	2.67	2.65	2.69	2.43

## NEUSE RIVER BASIN

0208731190 CRABTREE CREEK AT ANDERSON DRIVE AT RALEIGH, NC--Continued



## NEUSE RIVER BASIN

02087322 CRABTREE CREEK AT OLD WAKE FOREST ROAD AT RALEIGH, NC

LOCATION.--Lat 35°48'57", long 78°37'33", Wake County, Hydrologic Unit 030200201, on right bank on upstream side of bridge at Old Wake Forest Rd (SR 2030) and 2.8 mi northeast of Raleigh.

DRAINAGE AREA.--119 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1988 to September 1989, discharge records, October 1989 to October 1991, discharge measurements and unpublished, fragmentary gage-height and discharge records, June 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 186.51 ft above sea level, from topographic map. Satellite telemetry at site.

EXTREMES FOR PERIOD OF RECORD.-- Maximum, 17.42 ft, Mar. 19, 1998; minimum, 1.34 ft, Oct. 13, 1997.

EXTREME OUTSIDE PERIOD OF RECORD.--Flood of Sept. 1996 reached a stage of 21.6 ft from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum, 17.42 ft, Mar. 19; minimum, 1.34 ft, Oct. 13.

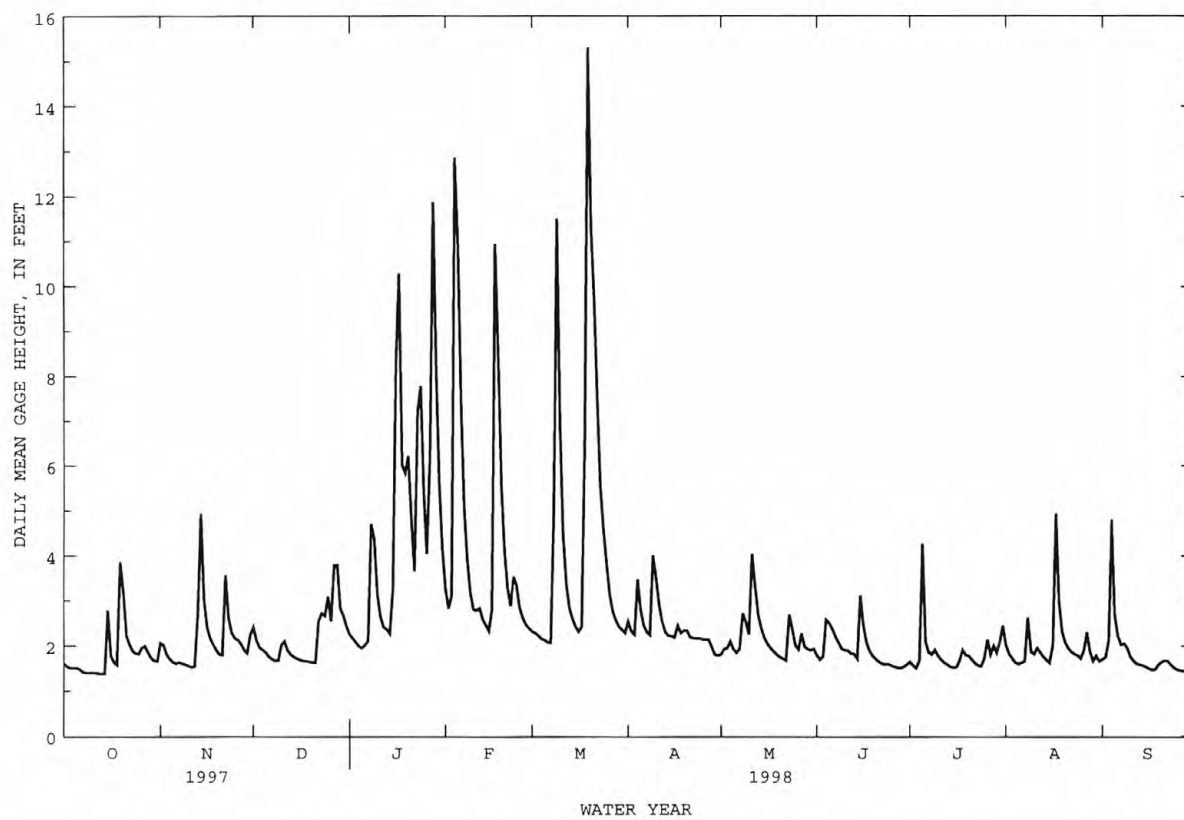
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.60	2.06	2.41	2.25	3.26	2.32	2.54	1.81	1.79	1.65	2.01	1.71
2	1.54	2.01	2.11	2.17	2.83	2.29	2.33	1.93	1.70	1.57	1.82	1.75
3	1.51	1.81	1.96	2.08	3.12	2.23	2.25	1.95	1.76	1.51	1.72	2.11
4	1.51	1.71	1.91	1.99	12.86	2.16	3.48	2.10	2.58	1.68	1.63	4.81
5	1.51	1.64	1.85	1.95	10.90	2.13	2.80	1.93	2.51	4.27	1.60	2.70
6	1.48	1.61	1.76	2.01	7.39	2.08	2.46	1.85	2.37	2.09	1.63	2.24
7	1.42	1.63	1.71	2.11	5.11	2.07	2.31	1.93	2.21	1.86	1.66	2.03
8	1.40	1.61	1.67	4.71	3.94	4.97	2.24	2.73	2.07	1.81	2.63	2.05
9	1.40	1.59	1.68	4.37	3.19	11.51	4.01	2.53	1.94	1.91	1.87	1.96
10	1.40	1.56	2.02	3.15	2.82	6.93	3.48	2.26	1.90	1.79	1.82	1.77
11	1.40	1.53	2.10	2.66	2.79	4.51	2.88	4.05	1.90	1.70	1.95	1.68
12	1.39	1.54	1.90	2.42	2.84	3.38	2.53	3.33	1.83	1.63	1.86	1.61
13	1.38	2.69	1.81	2.37	2.59	2.85	2.31	2.70	1.82	1.59	1.76	1.59
14	1.39	4.93	1.76	2.27	2.46	2.61	2.23	2.39	1.72	1.54	1.69	1.57
15	2.79	3.04	1.72	3.25	2.33	2.43	2.22	2.18	3.12	1.52	1.63	1.54
16	1.78	2.42	1.69	8.30	2.82	2.32	2.19	2.04	2.45	1.53	2.01	1.50
17	1.64	2.17	1.67	10.30	10.95	2.42	2.45	1.95	2.08	1.68	4.94	1.47
18	1.58	2.03	1.66	6.02	8.54	6.51	2.29	1.88	1.89	1.91	2.98	1.48
19	3.86	1.91	1.65	5.85	5.56	15.30	2.34	1.81	1.78	1.80	2.32	1.58
20	3.19	1.81	1.64	6.22	4.14	11.32	2.34	1.75	1.71	1.78	2.08	1.64
21	2.23	1.80	1.63	4.78	3.29	9.73	2.20	1.72	1.65	1.70	1.95	1.68
22	2.03	3.57	2.55	3.66	2.89	7.53	2.18	1.68	1.61	1.62	1.87	1.67
23	1.89	2.62	2.72	7.24	3.54	5.56	2.17	2.70	1.59	1.57	1.82	1.59
24	1.83	2.29	2.67	7.79	3.35	4.62	2.17	2.37	1.60	1.55	1.79	1.52
25	1.82	2.17	3.10	5.41	2.85	3.87	2.15	2.01	1.57	1.72	1.72	1.48
26	1.95	2.13	2.55	4.05	2.62	3.14	2.15	1.92	1.54	2.14	1.90	1.46
27	1.99	2.04	3.79	6.18	2.47	2.77	2.14	2.28	1.52	1.81	2.30	1.45
28	1.85	1.91	3.80	11.88	2.39	2.57	1.98	1.98	1.51	2.00	1.87	1.44
29	1.73	1.84	2.83	8.04	---	2.43	1.81	1.93	1.54	1.85	1.67	1.42
30	1.67	2.24	2.68	5.57	---	2.36	1.79	1.90	1.59	2.09	1.78	1.52
31	1.66	---	2.42	4.16	---	2.29	---	1.93	---	2.45	1.66	---
MEAN	1.80	2.13	2.17	4.68	4.42	4.49	2.41	2.18	1.89	1.85	2.00	1.80
MAX	3.86	4.93	3.80	11.88	12.86	15.30	4.01	4.05	3.12	4.27	4.94	4.81
MIN	1.38	1.53	1.63	1.95	2.33	2.07	1.79	1.68	1.51	1.51	1.60	1.42



## NEUSE RIVER BASIN

02087322 CRABTREE CREEK AT OLD WAKE FOREST ROAD AT RALEIGH, NC--Continued



## NEUSE RIVER BASIN

02087324 CRABTREE CREEK AT US 1 AT RALEIGH, NC

LOCATION.--Lat 35°48'40", long 78°36'43", Wake County, Hydrologic Unit 03020201, on downstream side of bridge on U.S. Highway 1, 2.7 mi northeast of Raleigh, and 7.2 mi upstream from mouth.

DRAINAGE AREA.--121 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 183.27 ft above sea level. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Maximum gage height for period of record from high-water mark in gage well. Minimum discharge for period of record also occurred Oct. 8, 9, 1994.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1973, reached a stage of about 17.98 ft, discharge, about 13,500 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	90	142	112	251	126	143	60	56	34	70	43
2	34	82	96	99	204	122	121	73	45	28	54	46
3	31	53	73	86	244	113	112	75	48	24	45	87
4	29	41	67	72	2350	102	247	96	142	46	40	400
5	28	35	58	66	1810	97	171	74	123	412	38	133
6	28	32	48	73	881	91	139	65	105	82	39	80
7	27	35	42	88	477	90	121	71	90	57	41	58
8	26	32	39	452	326	477	111	165	74	55	134	63
9	26	31	39	396	240	1930	312	141	66	64	57	52
10	26	28	86	228	199	768	249	112	62	55	53	37
11	27	27	93	162	196	372	180	307	61	46	62	30
12	26	28	65	130	203	236	139	224	54	41	54	28
13	26	174	52	121	171	178	118	151	54	39	46	27
14	23	504	46	109	152	151	112	116	43	36	41	26
15	188	238	41	233	135	131	106	91	196	35	38	26
16	48	148	38	1180	190	116	99	73	117	37	80	23
17	33	107	36	1700	1860	124	133	61	75	48	423	21
18	29	86	35	621	1140	647	118	52	55	64	175	22
19	336	70	34	585	538	3210	125	45	43	54	98	24
20	254	56	34	645	338	1900	127	37	38	51	73	27
21	110	54	33	425	244	1370	104	34	35	46	61	29
22	79	305	153	291	200	872	95	27	31	42	54	29
23	60	176	182	887	267	526	95	173	29	38	50	25
24	52	125	173	954	249	383	89	134	31	38	49	21
25	51	106	232	512	196	295	79	84	29	50	45	19
26	72	99	158	329	167	211	71	72	27	87	61	18
27	74	87	323	797	148	171	67	123	26	54	102	17
28	57	68	326	2090	136	146	66	79	24	70	56	17
29	43	58	196	1010	---	132	61	73	27	58	41	16
30	37	117	174	542	---	122	58	68	29	84	48	23
31	37	---	137	349	---	114	---	71	---	122	39	---
TOTAL	1956	3092	3251	15344	13512	15323	3768	3027	1835	1997	2267	1467
MEAN	63.1	103	105	495	483	494	126	97.6	61.2	64.4	73.1	48.9
MAX	336	504	326	2090	2350	3210	312	307	196	412	423	400
MIN	23	27	33	66	135	90	58	27	24	24	38	16
CFSM	.51	.84	.85	4.02	3.92	4.02	1.02	.79	.50	.52	.59	.40
IN.	.59	.94	.98	4.64	4.09	4.63	1.14	.92	.55	.60	.69	.44

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1998, BY WATER YEAR (WY)

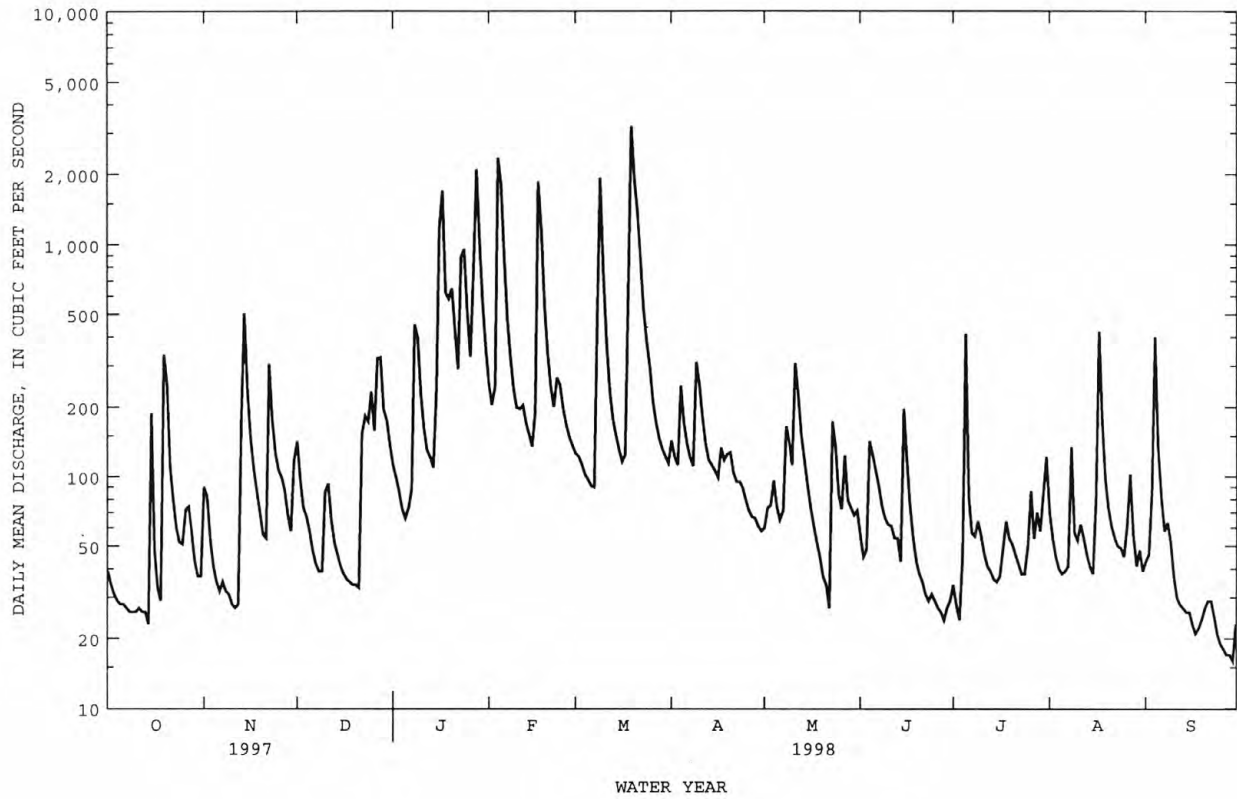
MEAN	128	113	107	266	210	258	137	85.8	122	92.4	75.7	150
MAX	370	255	176	495	483	494	355	122	257	198	163	995
(WY)	1996	1993	1997	1998	1998	1998	1993	1996	1990	1997	1992	1996
MIN	30.8	23.2	45.2	173	59.5	140	57.4	45.6	29.1	30.7	31.7	14.2
(WY)	1992	1992	1995	1994	1991	1992	1995	1995	1993	1993	1993	1990

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1990 - 1998	
ANNUAL TOTAL	47634		66839			
ANNUAL MEAN	131		183		146	
HIGHEST ANNUAL MEAN					242	
LOWEST ANNUAL MEAN					97.7	
HIGHEST DAILY MEAN	2130		3210		7730	
LOWEST DAILY MEAN	23		16		1.9	
ANNUAL SEVEN-DAY MINIMUM	26		19		2.3	
INSTANTANEOUS PEAK FLOW			4230		12700	
INSTANTANEOUS PEAK STAGE			14.08		18.23*	
INSTANTANEOUS LOW FLOW			13		1.9*	
ANNUAL RUNOFF (CFSM)	1.06		1.49		1.19	
ANNUAL RUNOFF (INCHES)	14.41		20.21		16.11	
10 PERCENT EXCEEDS	262		376		306	
50 PERCENT EXCEEDS	66		75		71	
90 PERCENT EXCEEDS	31		28		18	

\* See REMARKS.

## NEUSE RIVER BASIN

02087324 CRABTREE CREEK AT US 1 AT RALEIGH, NC--Continued



## NEUSE RIVER BASIN

0208732534 PIGEON HOUSE CREEK AT CAMERON VILLAGE AT RALEIGH, NC

LOCATION.--Lat 35°47'14", long 78°39'17", Wake County, Hydrologic Unit 03020201, on right bank, downstream of Cameron Village in Wells Park, on the upstream side of Forest Drive.

DRAINAGE AREA.--0.27 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1996 to current year. Fragmentary records, July 1987 to September 1996, are available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 320 ft above sea level from topographic map. Satellite telemetry at station.

REMARKS.--Records fair except those for the period Oct. to Jan., which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	e.09	e.37	e.22	1.0	.13	2.4	.65	.11	.84	.12	.12
2	.10	2.2	e.27	e.21	1.1	.32	.09	.20	.11	1.4	.10	.11
3	.10	e.12	e.24	e.20	4.2	.14	.17	.73	2.0	.45	.10	4.3
4	.11	e.14	e.25	e.19	7.0	.15	1.4	.16	5.1	7.0	.36	3.7
5	.13	e.10	e.28	e.18	.69	.15	.11	.13	.35	4.0	.10	.11
6	.11	e.08	e.31	e.80	.20	.14	.11	.13	.25	.18	.10	.10
7	.11	e.08	e.32	e.31	.19	.17	.11	2.6	.11	.11	.16	.10
8	.12	e.08	e.34	e2.7	.18	4.6	.11	.21	.10	.82	1.7	.80
9	.12	e.08	e.59	e.40	.12	7.5	3.0	.12	.20	.12	.10	.10
10	.12	e.08	e1.6	e.30	.12	.45	.25	.14	.13	.11	.93	.10
11	.11	e.08	e.39	e.27	.68	.15	.12	2.5	.11	.11	.12	.10
12	.12	e.18	e.20	e.23	.13	.14	.13	.12	.19	.11	.11	.10
13	.10	3.7	e.13	e.20	.12	.13	.13	.12	.11	.11	.12	.10
14	3.3	2.8	e.12	e.18	.12	.13	.25	.12	.11	.11	.10	.10
15	1.2	e.10	e.10	e6.2	.12	.12	.10	.12	2.8	.11	.10	.10
16	e.10	e.08	e.09	e2.8	2.1	.12	.20	.13	.11	.41	6.6	.10
17	e.09	e.08	e.09	e.50	7.2	1.8	.88	.11	.11	.12	.36	.10
18	.51	e.08	e.08	e.27	.32	3.5	.15	.11	.10	.11	.11	.41
19	4.6	e.08	e.08	3.7	.18	13	1.0	.11	.11	.11	.11	.10
20	e.23	e.08	e.12	e1.1	.15	4.2	.18	.11	.11	.11	.12	.10
21	e.11	e.08	e.23	e.60	.23	1.2	.13	.11	.11	.22	.40	.10
22	e.17	e2.0	e1.9	e.30	.34	.33	.31	.11	.11	.16	.11	.10
23	e.08	e.08	e.38	5.5	1.3	.22	.15	2.2	.16	.19	.11	.10
24	e.08	e.08	e1.7	e.86	.13	.17	.12	.19	.10	.12	.11	.09
25	e.08	e.08	e.46	e.45	.13	.15	.13	.12	.10	2.1	.35	.09
26	e.60	e.08	e.27	e.31	.13	.13	.12	2.1	.10	.57	1.9	.09
27	e.16	e.08	e3.0	e7.0	.13	.13	.35	.17	.10	.24	1.4	.09
28	e.13	e.08	e.50	e2.1	.32	.17	.14	.09	.10	.13	.11	.09
29	e.12	e.09	e.96	e1.1	---	.28	.13	.09	.38	.12	.13	.09
30	e.08	e.96	e.28	.96	---	.33	.13	.09	1.5	7.1	.19	.38
31	e.08	---	e.24	.85	---	.38	---	.10	---	.39	.12	---
TOTAL	13.18	13.92	15.89	40.99	28.63	40.53	12.60	13.99	15.08	27.78	16.55	12.07
MEAN	.43	.46	.51	1.32	1.02	1.31	.42	.45	.50	.90	.53	.40
MAX	4.6	3.7	3.0	7.0	7.2	13	3.0	2.6	5.1	7.1	6.6	4.3
MIN	.08	.08	.08	.18	.12	.12	.09	.09	.10	.11	.10	.09
CFSM	1.57	1.72	1.90	4.90	3.79	4.84	1.56	1.67	1.86	3.32	1.98	1.49
IN.	1.82	1.92	2.19	5.65	3.94	5.58	1.74	1.93	2.08	3.83	2.28	1.66

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

	MEAN	.29	.43	.42	.84	.75	1.00	.53	.52	.47	.74	.55	.32
MAX	.43	.46	.51	1.32	1.02	1.31	.63	.60	.50	.90	.56	.40	
(WY)	1998	1998	1998	1998	1998	1998	1997	1998	1998	1998	1997	1998	1998
MIN	.15	.40	.33	.37	.48	.70	.42	.45	.45	.58	.53	.23	
(WY)	1997	1997	1997	1997	1997	1997	1998	1998	1997	1997	1998	1997	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

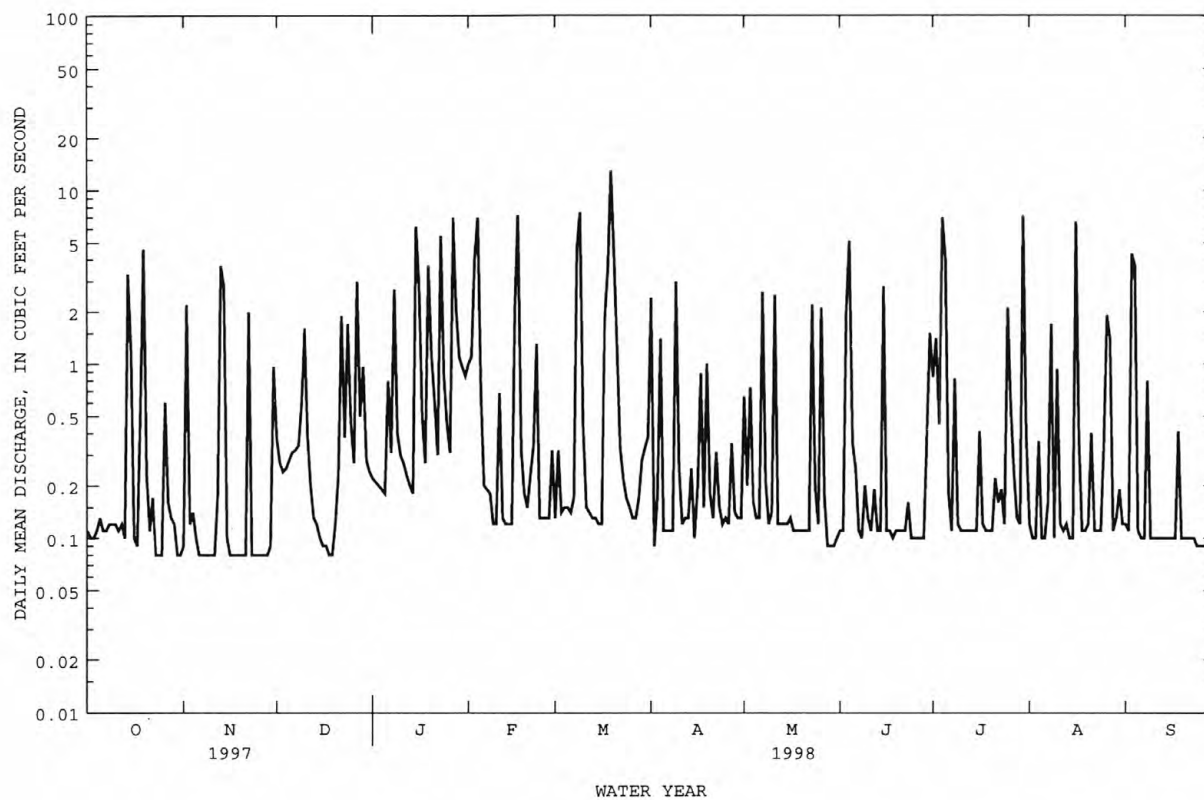
## WATER YEARS 1997 - 1998

ANNUAL TOTAL	182.68	251.21	
ANNUAL MEAN	.50	.69	.57
HIGHEST ANNUAL MEAN			.69
LOWEST ANNUAL MEAN			.46
HIGHEST DAILY MEAN	15	Aug 31	15
LOWEST DAILY MEAN	.04	Jul 19	.04
ANNUAL SEVEN-DAY MINIMUM	.04	Aug 6	.04
INSTANTANEOUS PEAK FLOW			376
INSTANTANEOUS PEAK STAGE			5.73
INSTANTANEOUS LOW FLOW			NOT DETERMINED
ANNUAL RUNOFF (CFSM)	1.85	2.55	2.12
ANNUAL RUNOFF (INCHES)	25.17	34.61	28.81
10 PERCENT EXCEEDS	1.1	2.1	1.4
50 PERCENT EXCEEDS	.12	.13	.12
90 PERCENT EXCEEDS	.05	.09	.08

e Estimated.

## NEUSE RIVER BASIN

0208732534 PIGEON HOUSE CREEK AT CAMERON VILLAGE AT RALEIGH, NC--Continued



## NEUSE RIVER BASIN

0208732885 MARSH CREEK NEAR NEW HOPE, NC

LOCATION.--Lat 35°48'59", long 78°35'37", Wake County, Hydrologic Unit 03020201, at right upstream wingwall, on bridge at Stoneybrook Road, 0.2 mi downstream of U.S. Highway 401, and 2.9 mi southwest of New Hope.

DRAINAGE AREA.--6.84 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR NC-95-1: 1995(M).

GAGE.--Water-stage recorder. Datum of gage is 198 ft above sea level, from topographic map. Satellite telemetry and rain gage at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum discharge for period of record from rating curve extension above 1,300 ft<sup>3</sup>/s, on basis of indirect measurement of peak flow. Minimum discharge for period of record also occurred Sept. 4, 1993. Minimum discharge for current water year also occurred Aug. 23, 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	38	9.9	3.4	5.7	5.2	29	4.6	1.6	2.3	3.4	15
2	1.2	18	5.1	3.0	5.1	5.9	9.4	7.9	1.3	2.2	1.7	8.7
3	1.2	5.3	3.7	2.8	34	4.9	5.6	13	8.5	1.1	1.2	45
4	1.3	3.2	3.3	2.7	199	4.4	38	10	32	17	.96	102
5	1.2	2.3	2.6	2.6	38	4.4	7.5	4.6	12	120	.77	5.4
6	1.1	2.3	2.4	6.7	13	4.3	5.0	3.0	7.7	5.1	.68	2.8
7	1.0	4.7	2.3	7.5	9.5	5.0	3.9	8.7	4.0	2.4	.98	1.8
8	1.0	2.8	2.1	65	8.0	74	3.6	21	2.2	e1.7	1.6	9.9
9	1.0	2.5	3.2	11	6.3	250	55	9.4	2.0	e1.6	8.8	3.7
10	e1.0	2.1	19	5.5	5.2	17	11	4.6	2.4	e1.5	6.3	2.3
11	e1.1	2.0	7.0	4.0	9.7	8.9	6.8	49	1.8	e1.4	4.4	1.6
12	e1.0	3.3	4.3	3.5	8.6	9.9	4.4	9.0	1.6	e1.3	1.9	1.3
13	e1.0	51	3.0	3.2	5.5	5.4	3.6	5.0	2.1	e1.2	1.1	1.0
14	e1.0	51	2.5	2.8	4.5	4.7	6.0	3.7	1.3	e1.1	.79	.89
15	20	7.1	2.2	48	4.1	4.2	4.3	3.1	56	1.0	.67	.81
16	3.6	4.6	2.2	191	29	3.8	4.4	2.7	12	2.7	8.2	.73
17	2.4	3.8	2.2	34	130	17	19	2.5	3.5	9.7	11	.71
18	1.8	3.3	2.1	11	16	90	7.2	2.2	2.1	5.6	2.8	1.4
19	45	3.3	2.1	59	9.2	253	20	2.2	1.7	2.2	1.4	.95
20	9.4	3.2	2.1	30	6.8	104	11	1.9	1.4	1.4	.85	.85
21	3.5	5.6	2.0	13	5.6	52	4.7	1.8	1.2	1.1	.62	.84
22	3.3	43	37	7.9	5.7	16	5.0	1.7	1.1	1.6	.51	.92
23	2.2	6.0	9.7	121	26	9.2	5.0	51	1.1	1.7	.40	.79
24	1.7	3.3	26	32	9.5	6.7	3.2	13	1.2	1.8	.36	.76
25	1.5	3.0	14	13	6.5	5.3	2.7	4.0	1.0	7.0	.40	.83
26	11	2.8	5.7	8.0	5.3	4.8	2.4	5.4	1.0	5.7	13	.81
27	6.4	2.6	55	143	5.0	4.6	3.6	19	.94	2.6	33	.74
28	3.0	2.3	14	71	6.2	4.2	3.8	3.6	1.0	2.2	5.5	.75
29	2.2	2.4	10	17	---	3.9	3.3	2.7	.92	1.2	3.6	.81
30	1.8	20	7.0	10	---	3.7	2.9	4.4	1.7	19	5.5	4.6
31	9.9	---	4.4	7.1	---	3.9	---	2.2	---	20	1.8	---
TOTAL	144.1	304.8	268.1	939.7	617.0	990.3	291.3	276.9	168.36	246.4	124.19	218.69
MEAN	4.65	10.2	8.65	30.3	22.0	31.9	9.71	8.93	5.61	7.95	4.01	7.29
MAX	45	51	55	191	199	253	55	51	56	120	33	102
MIN	1.0	2.0	2.0	2.6	4.1	3.7	2.4	1.7	.92	1.0	.36	.71
CFSM	.68	1.49	1.26	4.43	3.22	4.67	1.42	1.31	.82	1.16	.59	1.07
IN.	.78	1.66	1.46	5.11	3.36	5.39	1.58	1.51	.92	1.34	.68	1.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1998, BY WATER YEAR (WY)

	MEAN	7.21	8.07	6.71	12.4	12.0	14.5	9.61	9.20	8.83	8.67	9.07	8.99
MAX	23.3	15.7	10.3	30.3	22.0	31.9	19.2	25.9	20.3	25.0	38.0	56.0	
(WY)	1996	1996	1990	1998	1998	1998	1989	1984	1989	1997	1986	1996	
MIN	1.95	1.72	2.02	3.77	2.77	4.54	2.08	3.64	1.29	2.44	2.07	1.86	
(WY)	1987	1992	1995	1986	1991	1986	1985	1985	1993	1987	1993	1990	

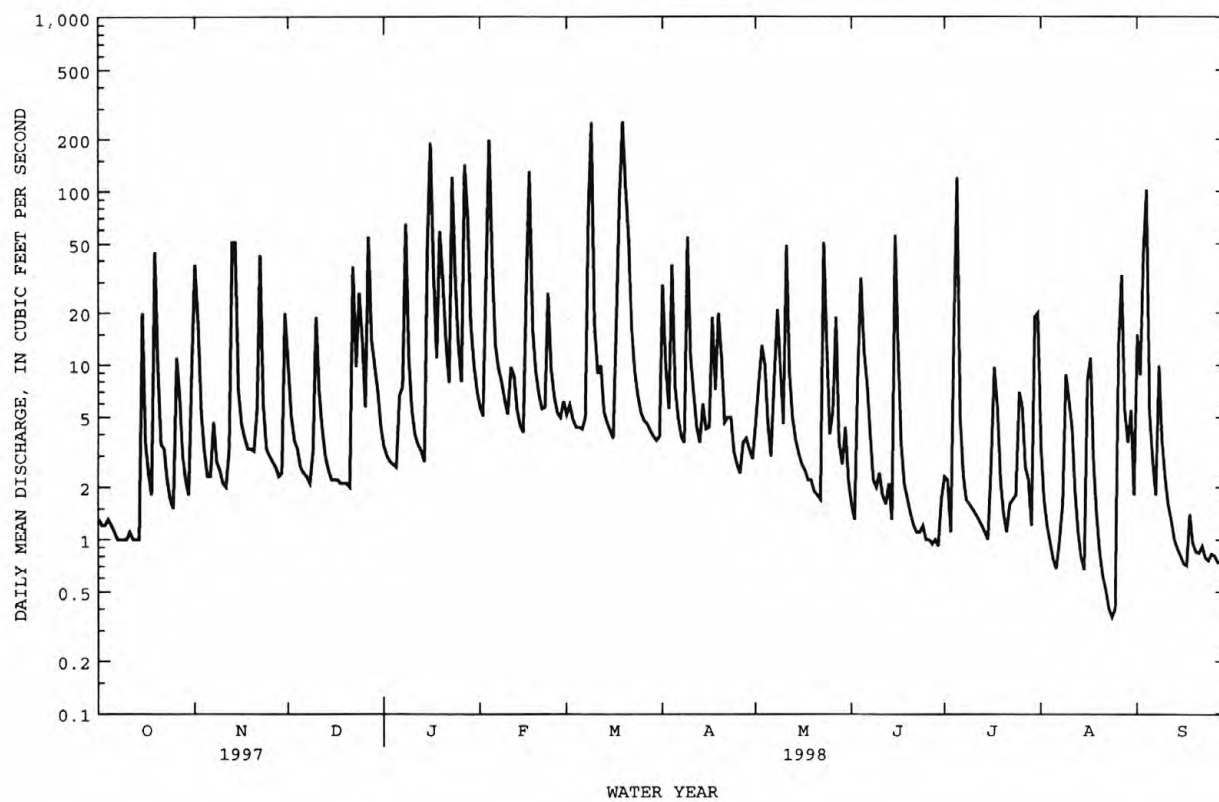
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1984 - 1998	
ANNUAL TOTAL	3319.21		4589.84		9.63	
ANNUAL MEAN	9.09		12.6		14.9	
HIGHEST ANNUAL MEAN					5.87	
LOWEST ANNUAL MEAN					1996	
HIGHEST DAILY MEAN	600	Jul 24	253	Mar 19	890	Sep 6 1996
LOWEST DAILY MEAN	.87	Sep 21	.36	Aug 24	.10	Sep 3 1993
ANNUAL SEVEN-DAY MINIMUM	.99	Sep 17	.65	Aug 19	.15	Aug 28 1993
INSTANTANEOUS PEAK FLOW			951	Mar 9	3900*	Sep 6 1996
INSTANTANEOUS PEAK STAGE			9.33	Mar 9	13.33	Sep 6 1996
INSTANTANEOUS LOW FLOW			.26*	Aug 22	.07*	Sep 3 1993
ANNUAL RUNOFF (CFSM)	1.33		1.84		1.41	
ANNUAL RUNOFF (INCHES)	18.05		24.96		19.13	
10 PERCENT EXCEEDS	15		31		18	
50 PERCENT EXCEEDS	3.5		3.9		3.5	
90 PERCENT EXCEEDS	1.3		1.0		1.3	

e Estimated.

\* See REMARKS.

## NEUSE RIVER BASIN

0208732885 MARSH CREEK NEAR NEW HOPE, NC--Continued





## NEUSE RIVER BASIN

0208735012 ROCKY BRANCH BELOW PULLEN DRIVE AT RALEIGH, NC

LOCATION.--Lat 35°46'48", long 78°39'59", Wake County, Hydrologic Unit 03020201, on right bank, 0.1 mi below Pullen Drive at Pullen Park and 1.5 mi north of Raleigh.

DRAINAGE AREA.--1.17 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1996 to current year. Fragmentary records, June 1992 to September 1996, are available in the U.S.G.S. District office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is 315 ft above sea level from topographic map. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges and also discharges below 0.5 ft<sup>3</sup>/s and those above 300 ft<sup>3</sup>/s, which are poor. Minimum discharge for the period of record occurred June 9, Aug. 30, 31 and Sept. 9, 1997, due to diversion by City of Raleigh. Minimum discharge for current year was not determined due to diversion by City of Raleigh.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	1.9	1.1	.53	.99	.99	9.2	1.1	.61	.48	.38	.42
2	.42	3.4	.53	.53	.99	1.5	1.3	.45	.64	.42	.36	.42
3	.42	.61	.55	.53	23	1.0	.89	2.2	6.1	.42	.37	16
4	.28	.81	.72	.55	48	.99	7.3	.33	27	20	.32	20
5	.15	e.51	.66	.58	3.4	.93	.81	.25	2.2	12	.32	.44
6	.23	e.25	.67	2.2	1.2	.99	.66	.26	1.3	e.39	.32	.42
7	.26	.82	.71	1.1	1.1	1.1	.53	7.6	.46	e.04	.46	.41
8	.32	.57	.77	14	1.0	23	.53	.80	.49	3.2	18	3.4
9	.31	.66	1.1	.65	.81	34	13	.26	.73	.57	.42	.37
10	.24	.76	6.6	.53	.81	1.6	1.9	.25	e.39	.50	2.9	.32
11	.26	.81	.54	.53	2.6	1.4	1.4	11	e.04	.42	.48	.33
12	.32	1.9	.51	.54	.95	1.2	1.2	.34	e.19	.42	.45	.32
13	.34	11	.53	.53	.81	1.0	1.0	.58	.37	.42	.40	.32
14	.32	12	.53	.53	.79	1.0	2.2	.32	.35	.42	e.26	.33
15	27	.47	.53	12	.69	.99	2.1	.40	11	.42	e.05	.34
16	.54	.42	.53	42	11	.99	2.0	.42	.81	2.5	e.44	.32
17	.53	.46	.53	2.2	38	7.2	5.4	.49	.81	.55	3.4	.32
18	.92	.49	.51	1.1	1.5	21	1.8	.59	.83	.42	.77	1.5
19	25	.53	.49	14	1.0	67	4.9	.53	.73	.44	.66	.33
20	.77	.53	.53	3.6	.99	23	2.0	.53	.61	.42	.66	.32
21	.59	1.3	.55	1.4	.99	6.3	1.6	.53	.53	.42	.70	.33
22	.94	11	10	1.1	1.4	1.5	1.6	.53	.48	.43	.57	.34
23	.53	.48	.55	28	5.4	.86	1.4	6.2	.55	.47	.66	.32
24	.53	.53	7.5	3.2	1.0	.62	1.4	.60	.42	.43	.63	.32
25	.53	.61	.78	1.2	.99	.54	1.4	.65	.42	7.5	.60	.33
26	3.6	.54	.53	.99	.99	.60	1.2	6.8	.39	e1.4	6.6	.42
27	.87	.59	15	44	.99	.66	1.9	2.3	.35	e.05	3.7	.42
28	.66	.75	.84	6.9	1.3	.55	2.0	.54	.35	e.05	.42	.47
29	.67	.81	1.8	1.5	---	.53	.86	.59	.52	e.18	.45	.50
30	e.30	4.5	.54	1.1	---	.53	.29	.53	3.0	19	.59	.78
31	e.99	---	.55	.99	---	.43	---	.56	---	1.3	.46	---
TOTAL	69.29	60.01	57.28	188.61	152.69	204.00	73.77	48.53	62.67	75.68	90.36	50.86
MEAN	2.24	2.00	1.85	6.08	5.45	6.58	2.46	1.57	2.09	2.44	2.91	1.70
MAX	27	12	15	44	48	67	13	11	27	20	44	20
MIN	.15	.25	.49	.53	.69	.43	.29	.25	.04	.04	.05	.32
CFSM	1.91	1.71	1.58	5.20	4.66	5.62	2.10	1.34	1.79	2.09	2.49	1.45
IN.	2.20	1.91	1.82	6.00	4.85	6.49	2.35	1.54	1.99	2.41	2.87	1.62

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
MEAN	1.78	1.76	1.75	3.90	3.82	4.08	2.55	1.64	1.82	3.83	1.81	1.30
MAX	2.24	2.00	1.85	6.08	5.45	6.58	2.65	1.71	2.09	5.22	2.91	1.70
(WY)	1998	1998	1998	1998	1998	1998	1997	1997	1998	1997	1998	1998
MIN	1.32	1.51	1.65	1.71	2.18	1.59	2.46	1.57	1.55	2.44	.71	.91
(WY)	1997	1997	1997	1997	1997	1997	1998	1998	1997	1998	1997	1997

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1997 - 1998

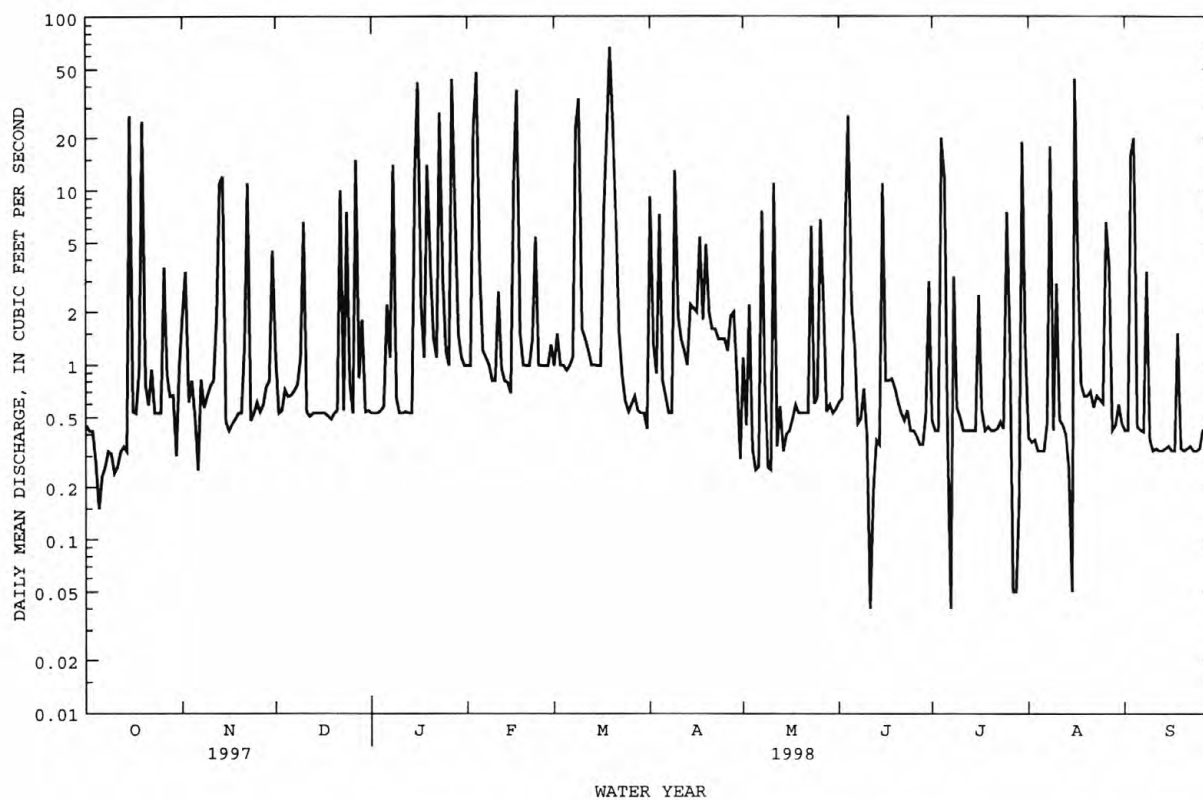
ANNUAL TOTAL	740.01	1133.75	
ANNUAL MEAN	2.03	3.11	2.50
HIGHEST ANNUAL MEAN			3.11
LOWEST ANNUAL MEAN			1.89
HIGHEST DAILY MEAN	119	67	119
LOWEST DAILY MEAN	.05	.04	.04
ANNUAL SEVEN-DAY MINIMUM	.25	.25	.25
INSTANTANEOUS PEAK FLOW		1370	2590
INSTANTANEOUS PEAK STAGE		7.83	9.23
INSTANTANEOUS LOW FLOW		NOT DETERMINED*	0*
ANNUAL RUNOFF (CFSM)	1.73	2.65	2.14
ANNUAL RUNOFF (INCHES)	23.53	36.05	29.02
10 PERCENT EXCEEDS	3.3	7.5	5.1
50 PERCENT EXCEEDS	.60	.65	.63
90 PERCENT EXCEEDS	.32	.32	.33

e Estimated.

\* See REMARKS.

## NEUSE RIVER BASIN

0208735012 ROCKY BRANCH BELOW PULLEN DRIVE AT RALEIGH, NC--Continued



## NEUSE RIVER BASIN

02087359 WALNUT CREEK AT SUNNYBROOK DRIVE AT RALEIGH, NC

LOCATION.--Lat 35°45'30", long 78°34'58", Wake County, Hydrologic Unit 03020201, at bridge on Secondary Road 2544, 0.9 mi upstream from Big Branch, and 3.5 mi southeast of Raleigh.

DRAINAGE AREA.--29.0 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 190 ft above sea level, from topographic map. Satellite telemetry and rain gage at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum discharge for period of record from computation of peak flow through culvert; maximum gage height, 17.03 ft, from high-water mark in gage shelter.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	28	28	19	26	21	107	17	12	16	23	12
2	6.5	32	18	17	24	20	41	27	11	8.2	14	12
3	5.9	20	14	16	30	27	27	25	11	6.7	11	41
4	5.5	15	12	15	818	20	93	31	65	12	9.1	445
5	5.4	13	11	17	422	24	33	20	177	252	8.0	62
6	5.4	11	11	21	66	23	25	16	36	29	7.3	22
7	4.9	16	e9.7	26	39	23	22	15	23	16	7.1	16
8	4.9	14	e9.3	129	35	180	21	86	17	15	218	26
9	4.7	11	e10	68	29	879	147	25	14	23	71	21
10	5.0	11	29	28	26	135	44	19	26	15	57	14
11	4.8	10	26	22	29	37	28	156	24	11	70	11
12	4.6	9.9	16	19	32	29	23	38	18	9.3	23	9.8
13	4.6	50	13	17	25	25	20	24	14	8.2	16	9.0
14	5.0	166	12	16	23	23	24	19	11	7.6	13	8.6
15	47	38	11	57	21	21	21	20	78	7.0	11	8.1
16	21	20	10	e220	36	19	19	15	26	7.4	e16	7.6
17	14	15	9.6	e526	537	25	42	14	16	15	e387	7.2
18	11	11	9.6	e64	223	215	27	15	12	8.1	48	7.6
19	98	11	9.6	e118	41	1050	42	12	10	6.9	21	11
20	94	10	9.6	e123	31	e400	37	11	9.5	6.4	15	7.1
21	24	9.5	9.9	47	26	e275	21	11	8.5	5.8	12	6.7
22	18	69	60	32	24	e100	20	11	8.4	5.7	10	8.2
23	14	26	45	251	56	e47	21	45	8.0	5.1	9.4	7.1
24	11	16	41	285	34	33	18	26	9.7	6.1	8.5	6.4
25	9.9	13	64	59	26	29	17	18	7.5	48	8.0	5.7
26	19	12	24	33	22	27	16	14	6.9	95	13	5.1
27	26	11	121	132	21	26	16	66	6.6	23	76	4.6
28	17	11	91	730	23	24	20	20	6.1	15	21	4.8
29	13	10	36	101	---	22	16	16	6.5	12	15	6.4
30	11	29	31	40	---	22	16	15	9.0	71	14	23
31	9.8	---	23	31	---	20	---	13	---	78	12	---
TOTAL	532.5	718.4	824.3	3279	2745	3821	1024	860	687.7	844.5	1244.4	836.0
MEAN	17.2	23.9	26.6	106	98.0	123	34.1	27.7	22.9	27.2	40.1	27.9
MAX	98	166	121	730	818	1050	147	156	177	252	387	445
MIN	4.6	9.5	9.3	15	21	19	16	11	6.1	5.1	7.1	4.6
CFSM	.58	.81	.90	3.60	3.33	4.19	1.16	.94	.78	.93	1.37	.95
IN.	.67	.91	1.04	4.15	3.47	4.83	1.30	1.09	.87	1.07	1.57	1.06

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	MEAN	31.3	25.4	30.1	69.0	72.1	80.6	49.6	24.7	30.8	38.3	23.5	76.6
MAX	45.5	26.9	33.7	106	98.0	123	65.2	27.7	45.2	48.6	40.1	191	
(WY)	1997	1997	1997	1998	1998	1998	1997	1998	1997	1997	1998	1996	
MIN	17.2	23.9	26.6	32.3	46.3	38.0	34.1	19.6	22.9	27.2	8.00	11.0	
(WY)	1998	1998	1998	1997	1997	1997	1998	1997	1998	1998	1997	1997	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1996 - 1998

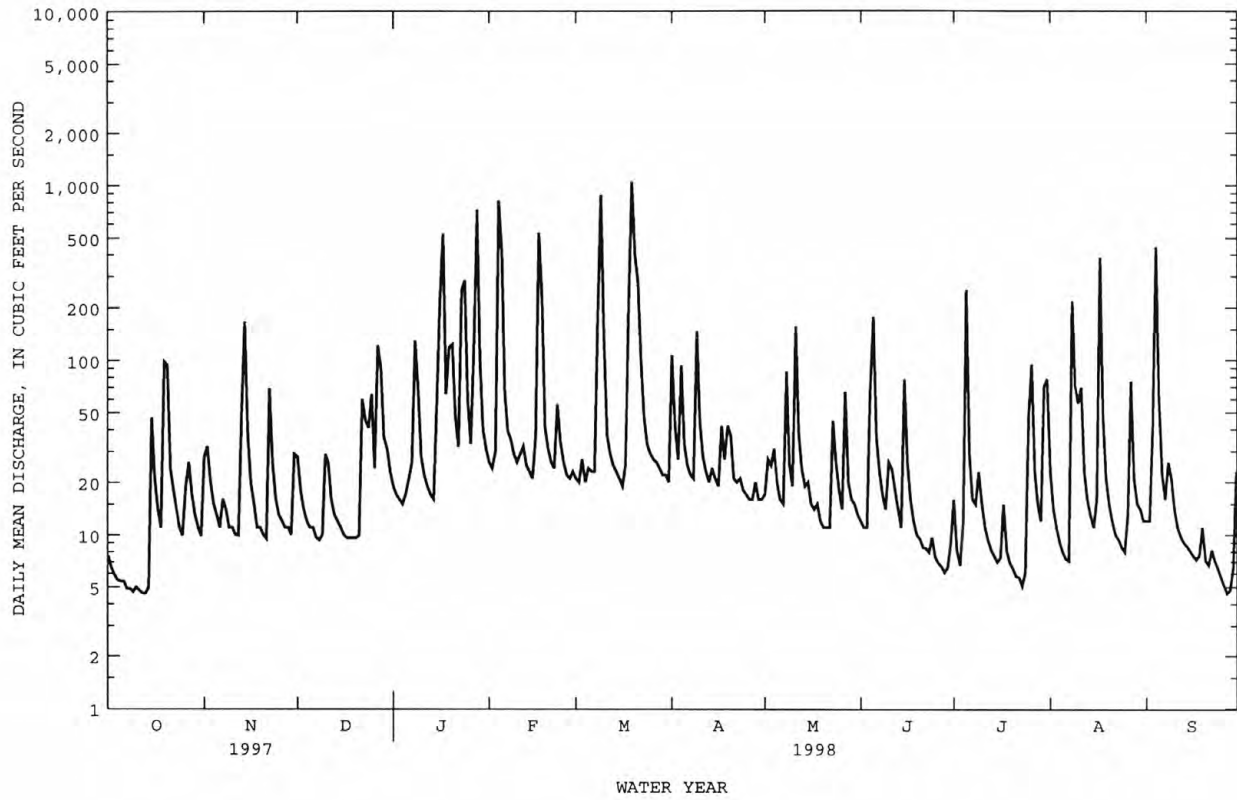
ANNUAL TOTAL	11554.2	17416.8	
ANNUAL MEAN	31.7	47.7	41.3
HIGHEST ANNUAL MEAN			47.7
LOWEST ANNUAL MEAN			34.9
HIGHEST DAILY MEAN	635	Jul 24	3600
LOWEST DAILY MEAN	2.5	Sep 8	2.5
ANNUAL SEVEN-DAY MINIMUM	4.3	Aug 9	4.1
INSTANTANEOUS PEAK FLOW			1710
INSTANTANEOUS PEAK STAGE			10.90
INSTANTANEOUS LOW FLOW			3.8
ANNUAL RUNOFF (CFSM)	1.08		1.62
ANNUAL RUNOFF (INCHES)	14.62		22.04
10 PERCENT EXCEEDS	51		92
50 PERCENT EXCEEDS	15		19
90 PERCENT EXCEEDS	5.9		7.3
			6.9

e Estimated.

\* See REMARKS.

## NEUSE RIVER BASIN

02087359 WALNUT CREEK AT SUNNYBROOK DRIVE AT RALEIGH, NC--Continued



## NEUSE RIVER BASIN

02087500 NEUSE RIVER NEAR CLAYTON, NC

LOCATION.--Lat 35°38'50", long 78°24'22", Johnston County, Hydrologic Unit 03020201, on left bank at downstream side of bridge on State Highway 42, 2.3 mi upstream from Mill Creek, and 3 mi east of Clayton.

DRAINAGE AREA.--1,150 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1927 to current year.

REVISED RECORDS.--WSP 1032: 1930, 1935(M). WSP 1333: 1935. WSP 1503: 1949. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 128.41 ft above sea level. Prior to Mar. 18, 1942, at site 1,100 ft upstream at same datum. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges which are poor. Flow regulated by Falls Lake (station 02087182), since Dec. 7, 1983. The City of Raleigh diverted an average of 83.2 ft<sup>3</sup>/s upstream from station, most of which was returned upstream from station as treated effluent. Prior to regulation, maximum discharge: 22,900 ft<sup>3</sup>/s, Sept. 19, 1945; gage height: 22.12 ft; minimum discharge: 44 ft<sup>3</sup>/s, Sept. 15, 1932; gage height: 0.28 ft, at site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1919, reached a stage of 21.15 ft, from floodmark at former site; discharge 21,200 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	274	451	647	538	4690	6820	7410	813	446	337	492	289
2	266	452	529	492	4680	6810	7320	698	416	317	370	341
3	257	386	439	469	2600	6840	6200	607	404	288	329	334
4	250	294	411	449	5090	6790	5940	717	614	279	303	2090
5	251	259	e382	433	7070	6720	5890	630	1030	1570	287	1460
6	251	244	e375	458	3400	6410	5520	527	735	778	286	597
7	247	250	e370	528	3250	5680	5380	485	611	420	283	445
8	249	261	e362	1010	3860	2930	5240	806	518	365	439	411
9	254	246	e355	1740	4320	7910	5050	719	471	397	621	484
10	262	241	e400	1830	4580	6740	5240	591	469	377	384	364
11	259	231	586	2880	5020	1920	4570	955	490	344	612	334
12	253	229	455	3070	5870	3420	3800	1130	465	313	413	308
13	253	334	396	2950	6170	4270	3550	734	438	296	345	298
14	252	1350	371	1170	6190	4270	2940	633	410	289	312	288
15	499	1100	354	814	6160	4210	2620	569	773	283	308	285
16	520	610	346	2310	6140	3530	1780	528	814	289	285	276
17	319	476	341	5750	7500	2940	1770	495	534	330	1030	270
18	292	410	336	2900	6880	2420	1170	480	453	370	1040	266
19	521	387	332	1790	2130	5400	849	455	418	335	512	274
20	1130	370	324	2570	2130	8800	1130	440	397	338	395	255
21	490	357	324	3330	4100	5090	2620	434	378	360	349	292
22	339	722	430	4120	5530	4380	3130	433	370	412	324	284
23	302	809	928	5620	5360	5120	3180	568	366	390	304	274
24	264	536	634	6420	3570	6490	2990	1060	397	389	293	260
25	253	448	1030	2370	4240	7110	1460	637	370	668	291	252
26	255	422	726	e2560	5530	7180	1310	522	356	705	325	243
27	372	409	900	e4120	6210	7070	1500	699	345	585	516	240
28	313	385	1580	e7260	6640	7000	1500	583	341	388	450	240
29	266	367	921	4310	---	7210	908	502	336	379	428	237
30	245	428	760	3490	---	7410	803	472	346	349	635	330
31	237	---	630	4230	---	7440	---	460	---	824	455	---
TOTAL	10195	13464	16974	81981	138910	176330	102770	19382	14511	13764	13416	12321
MEAN	329	449	548	2645	4961	5688	3426	625	484	444	433	411
MAX	1130	1350	1580	7260	7500	8800	7410	1130	1030	1570	1040	2090
MIN	237	229	324	433	2130	1920	803	433	336	279	283	237

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998\*, BY WATER YEAR (WY)

	MEAN	581	642	899	1508	1972	2575	1743	970	637	621	572	740
MAX	1881	2201	2013	2821	4961	5688	3426	2864	1211	1841	1539	6620	
(WY)	1997	1996	1986	1984	1998	1998	1998	1989	1995	1995	1989	1996	
MIN	212	215	237	419	520	483	290	309	314	234	204	136	
(WY)	1984	1992	1995	1986	1991	1988	1986	1995	1987	1983	1983	1985	

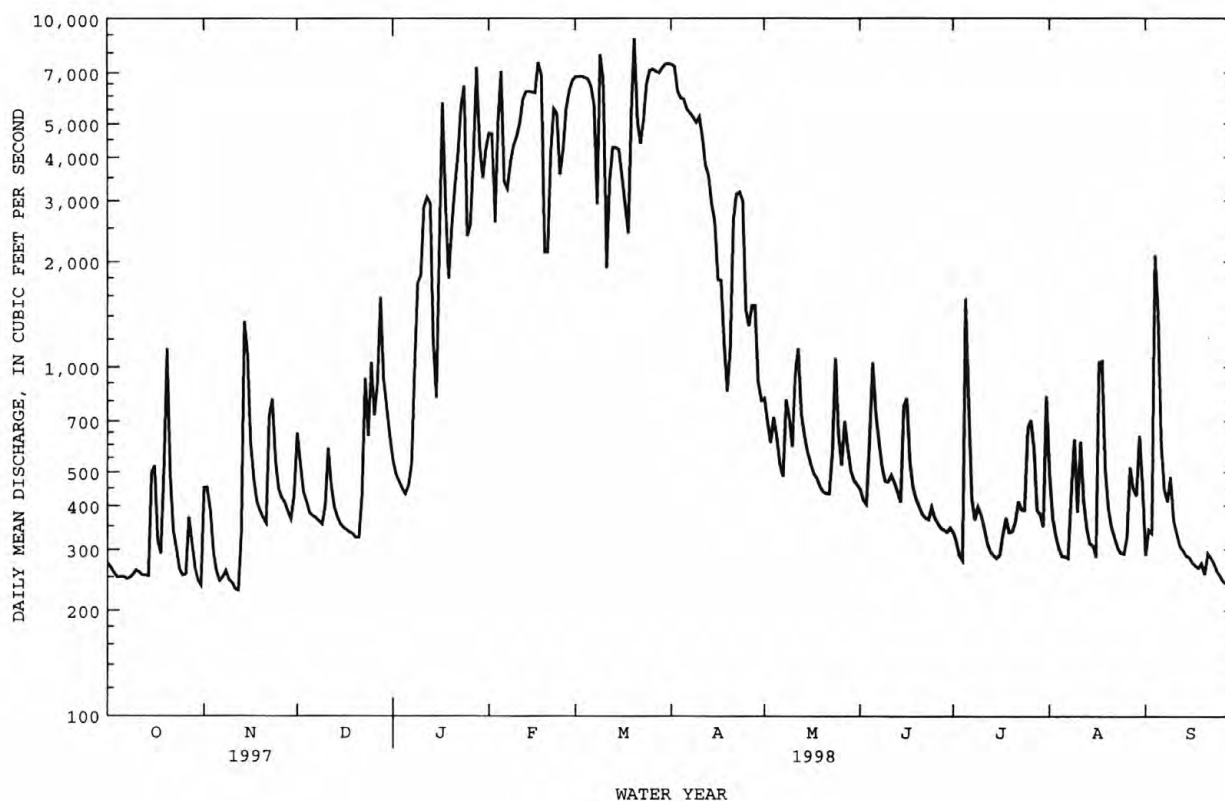
## NEUSE RIVER BASIN

02087500 NEUSE RIVER NEAR CLAYTON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1983 - 1998*	
ANNUAL TOTAL	359611		614018		1117	
ANNUAL MEAN	985		1682		1760	1996
HIGHEST ANNUAL MEAN					458	1988
LOWEST ANNUAL MEAN					18900	Sep 7 1996
HIGHEST DAILY MEAN	5870	Jul 25	8800	Mar 20	105	Sep 16 1985
LOWEST DAILY MEAN	219	Sep 6	229	Nov 12	117	Sep 12 1985
ANNUAL SEVEN-DAY MINIMUM	227	Sep 3	243	Nov 6	19700	Sep 7 1996
INSTANTANEOUS PEAK FLOW			9570	Mar 9	20.12	Sep 7 1996
INSTANTANEOUS PEAK STAGE			13.33	Mar 9	78	Sep 18 1985
INSTANTANEOUS LOW FLOW			208	Sep 20	3300	
10 PERCENT EXCEEDS	2760		5640		460	
50 PERCENT EXCEEDS	463		499		254	
90 PERCENT EXCEEDS	252		272			

e Estimated.

\* Regulated period only (1983-1998). See REMARKS.



## NEUSE RIVER BASIN

0208758850 SWIFT CREEK NEAR MCCULLARS CROSSROADS, NC

LOCATION.--Lat 35°41'33", long 78°41'34", Wake County, Hydrologic Unit 03020201, 0.1 mi downstream of Secondary Road 1375, 0.1 mi downstream of Lake Wheeler, and 2.0 mi north of McCullars Crossroads.

DRAINAGE AREA.--35.8 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 258 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.-- No estimated daily discharges. Records good except those below 5.0 ft<sup>3</sup>/s, which are poor. Some regulation by Lake Wheeler (station 02087588). Maximum gage-height for period of record from floodmarks. Minimum discharge for period of record, no flow, also occurred June 28, 29, 1993. Minimum discharge for the current water year also occurred on July 23, 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	24	23	17	49	26	62	11	4.1	.11	34	11
2	1.3	32	19	12	34	25	91	13	3.8	.11	12	11
3	1.0	31	12	9.3	35	40	47	12	2.5	.12	4.4	15
4	.94	25	10	8.1	935	28	105	22	2.7	.51	2.2	282
5	1.1	20	9.5	7.4	745	20	78	22	23	45	1.1	127
6	.23	19	7.1	9.2	237	17	44	14	24	25	.27	53
7	.14	22	5.5	17	123	17	35	13	13	9.1	.14	33
8	.17	25	4.6	147	90	142	32	229	6.6	5.5	112	29
9	.26	25	5.3	195	57	982	140	110	4.3	5.5	48	32
10	1.0	22	13	70	43	421	131	45	13	5.3	32	13
11	1.3	21	41	35	39	128	66	197	29	4.0	57	6.8
12	1.5	25	28	20	45	74	39	141	16	2.9	38	5.0
13	1.1	31	15	15	33	42	26	57	9.0	1.5	17	4.0
14	1.3	181	10	11	31	33	24	30	5.4	.71	11	2.8
15	5.6	115	8.1	31	25	26	25	18	33	.19	8.9	2.2
16	9.8	64	6.2	353	30	22	22	14	41	.15	9.2	1.8
17	11	46	4.6	873	746	29	34	13	15	.41	112	1.4
18	11	40	4.1	237	548	202	57	11	6.7	.62	63	1.2
19	44	38	4.2	240	160	1390	40	10	4.2	.35	28	.97
20	93	36	3.5	315	93	772	42	8.6	3.5	.24	12	.95
21	33	36	3.2	118	53	536	28	8.0	2.1	.16	8.9	.49
22	16	82	24	60	36	233	19	6.4	1.1	.14	7.3	.82
23	9.1	73	68	360	60	123	18	10	1.1	.17	6.5	.41
24	5.8	36	52	584	78	87	16	21	1.8	.06	5.2	.16
25	11	14	86	190	44	71	13	17	1.0	1.2	4.5	.12
26	13	11	55	81	30	51	13	14	.93	6.2	4.7	.13
27	23	7.2	123	169	25	37	9.8	56	1.1	5.0	15	.32
28	19	6.6	177	951	26	32	11	33	.62	4.0	15	.10
29	16	5.4	87	328	---	27	10	14	.10	3.1	12	.08
30	15	11	58	137	---	24	9.8	9.0	.40	22	11	.86
31	16	---	31	87	---	23	---	6.6	---	63	9.6	---
TOTAL	365.64	1124.2	997.9	5687.0	4450	5680	1287.6	1185.6	270.05	212.35	701.91	636.61
MEAN	11.8	37.5	32.2	183	159	183	42.9	38.2	9.00	6.85	22.6	21.2
MAX	93	181	177	951	935	1390	140	229	41	63	112	282
MIN	.14	5.4	3.2	7.4	25	17	9.8	6.4	.10	.06	.14	.08

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	MEAN	25.8	30.2	23.6	63.3	62.5	76.2	39.4	27.5	28.4	16.9	17.9	22.3
MAX	106	69.4	50.9	183	159	183	90.5	75.7	65.8	51.5	81.4	152	
(WY)	1996	1996	1990	1998	1998	1998	1993	1989	1992	1989	1989	1996	
MIN	4.38	3.16	7.81	19.7	14.4	15.1	10.7	6.42	3.46	1.16	.61	.11	
(WY)	1992	1992	1989	1989	1991	1988	1995	1992	1993	1988	1997	1990	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1988 - 1998

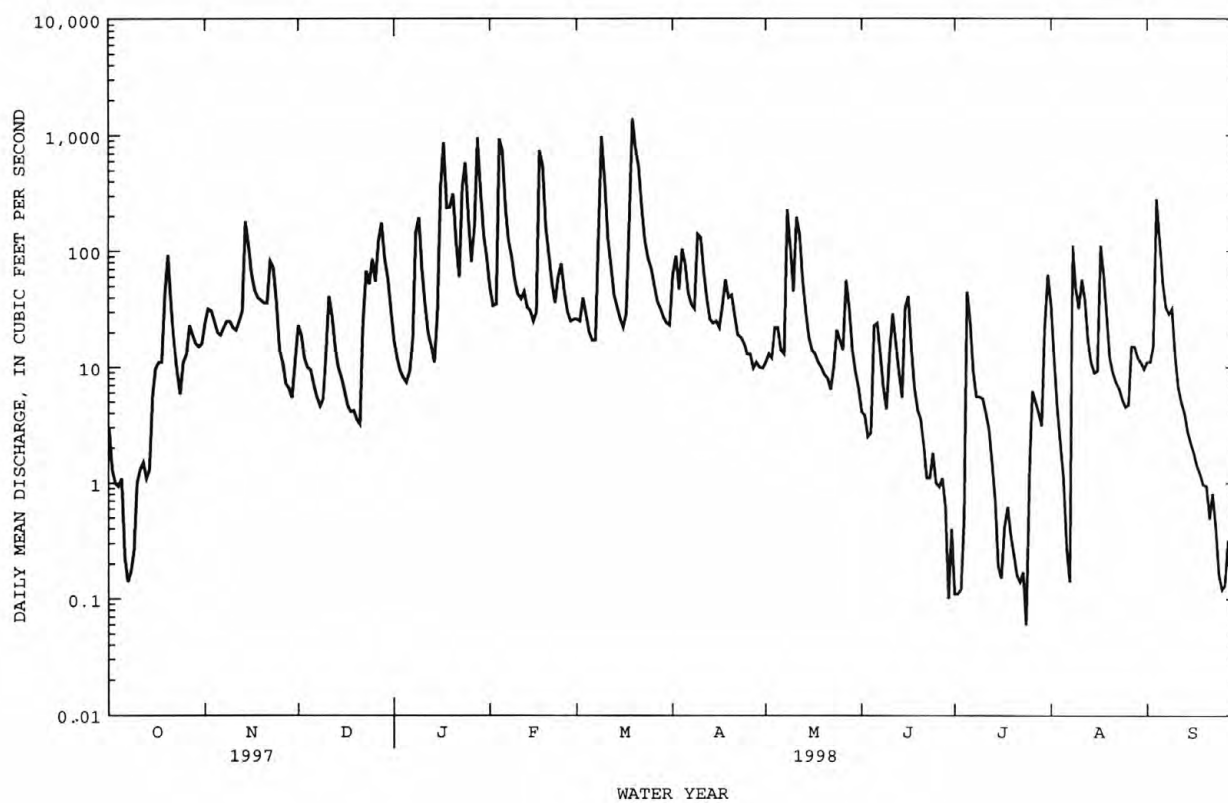
ANNUAL TOTAL	14504.74	22598.86	
ANNUAL MEAN	39.7	61.9	37.5
HIGHEST ANNUAL MEAN			61.9
LOWEST ANNUAL MEAN			18.4
HIGHEST DAILY MEAN	974	Jun 3	2700
LOWEST DAILY MEAN	.04	Aug 18	.01
ANNUAL SEVEN-DAY MINIMUM	.05	Aug 14	.03
INSTANTANEOUS PEAK FLOW		1960	6790
INSTANTANEOUS PEAK STAGE		11.45	14.15*
INSTANTANEOUS LOW FLOW		.05*	0*
10 PERCENT EXCEEDS	82	129	78
50 PERCENT EXCEEDS	14	17	14
90 PERCENT EXCEEDS	.06	.95	.38

\* See REMARKS.



## NEUSE RIVER BASIN

0208758850 SWIFT CREEK NEAR MCCULLARS CROSSROADS, NC--Continued



## NEUSE RIVER BASIN

02088000 MIDDLE CREEK NEAR CLAYTON, NC

LOCATION.--Lat 35°34'10", long 78°35'30", Johnston County, Hydrologic Unit 03020201, on left bank 800 ft downstream of bridge on State Highway 50, 0.5 mi upstream from Buffalo Branch, 3.7 mi downstream of Wake-Johnston County line, and 9.5 mi southwest of Clayton.

DRAINAGE AREA.--83.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for Oct. 1939, published in WSP 1303.

REVISED RECORDS.--WSP 952: 1940(M), 1941. WSP 1233: 1943(M), 1945, 1949. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 184.53 ft above sea level. Nov. 1-20, 1939, nonrecording gage at same site and datum. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge for period of record from rating curve extended above 10,000 ft<sup>3</sup>/s, by logarithmic plotting; maximum gage height for period of record, 14.88 ft, from high-water mark in gage well. Minimum discharge for period of record, no flow, also occurred Oct. 12-13, 1954, and July 13-28, 1986.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	15	55	79	173	110	109	58	43	12	41	15
2	10	23	51	68	143	100	187	67	36	11	20	14
3	8.1	32	39	64	141	109	146	61	32	9.1	13	20
4	7.7	26	34	64	e890	108	168	61	28	9.1	10	107
5	7.5	20	32	62	1590	94	296	67	33	15	8.7	192
6	7.8	16	29	61	1110	88	180	56	40	48	8.2	66
7	7.5	16	26	77	586	83	114	52	39	22	7.3	36
8	7.1	16	25	170	301	241	99	313	34	14	23	31
9	6.7	18	25	355	218	2010	197	594	28	12	38	55
10	6.7	17	28	234	181	1510	367	350	33	11	79	47
11	6.9	17	38	104	164	794	253	153	66	9.5	174	29
12	7.0	16	44	85	175	311	125	298	51	8.6	80	21
13	6.6	24	35	76	160	184	103	193	37	8.3	41	19
14	6.5	75	31	71	140	157	92	101	30	7.4	28	17
15	8.7	124	28	73	129	146	98	78	27	7.0	21	16
16	9.8	56	26	274	128	132	93	66	30	7.9	19	15
17	13	34	26	574	e650	126	91	63	29	9.4	20	14
18	11	26	25	808	e1300	300	113	59	21	12	50	13
19	17	22	24	607	e950	1020	100	50	18	13	31	12
20	53	21	24	607	352	2270	123	43	17	12	20	12
21	46	21	24	619	173	1170	110	39	17	9.9	16	12
22	24	33	34	294	141	786	82	35	16	9.4	13	12
23	18	67	114	336	165	546	77	39	15	9.2	12	11
24	15	44	98	e890	239	265	80	61	13	10	12	11
25	12	32	189	e880	164	180	74	60	13	10	11	11
26	13	27	141	491	125	152	65	48	12	9.0	12	11
27	17	26	126	295	110	142	59	74	12	9.3	25	11
28	23	24	306	1100	106	132	59	131	11	11	35	12
29	19	22	261	1260	---	121	60	127	11	11	26	13
30	15	32	132	742	---	110	54	67	11	9.2	19	20
31	13	---	103	296	---	104	---	52	---	52	16	---
TOTAL	434.6	942	2173	11716	10704	13601	3774	3516	803	408.3	929.2	875
MEAN	14.0	31.4	70.1	378	382	439	126	113	26.8	13.2	30.0	29.2
MAX	53	124	306	1260	1590	2270	367	594	66	52	174	192
MIN	6.5	15	24	61	106	83	54	35	11	7.0	7.3	11
CFSM	.17	.38	.84	4.53	4.58	5.25	1.51	1.36	.32	.16	.36	.35
IN.	.19	.42	.97	5.22	4.77	6.06	1.68	1.57	.36	.18	.41	.39

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

	MEAN	50.5	65.5	86.0	138	168	171	116	73.3	53.3	54.9	56.2	52.5
MAX	275	230	254	378	450	439	319	330	203	472	340	461	
(WY)	1960	1996	1973	1998	1973	1998	1959	1958	1992	1965	1949	1996	
MIN	.77	4.67	19.7	31.6	46.2	45.1	16.1	11.4	2.15	.23	1.75	.50	
(WY)	1987	1974	1952	1942	1941	1981	1986	1981	1986	1986	1983	1954	

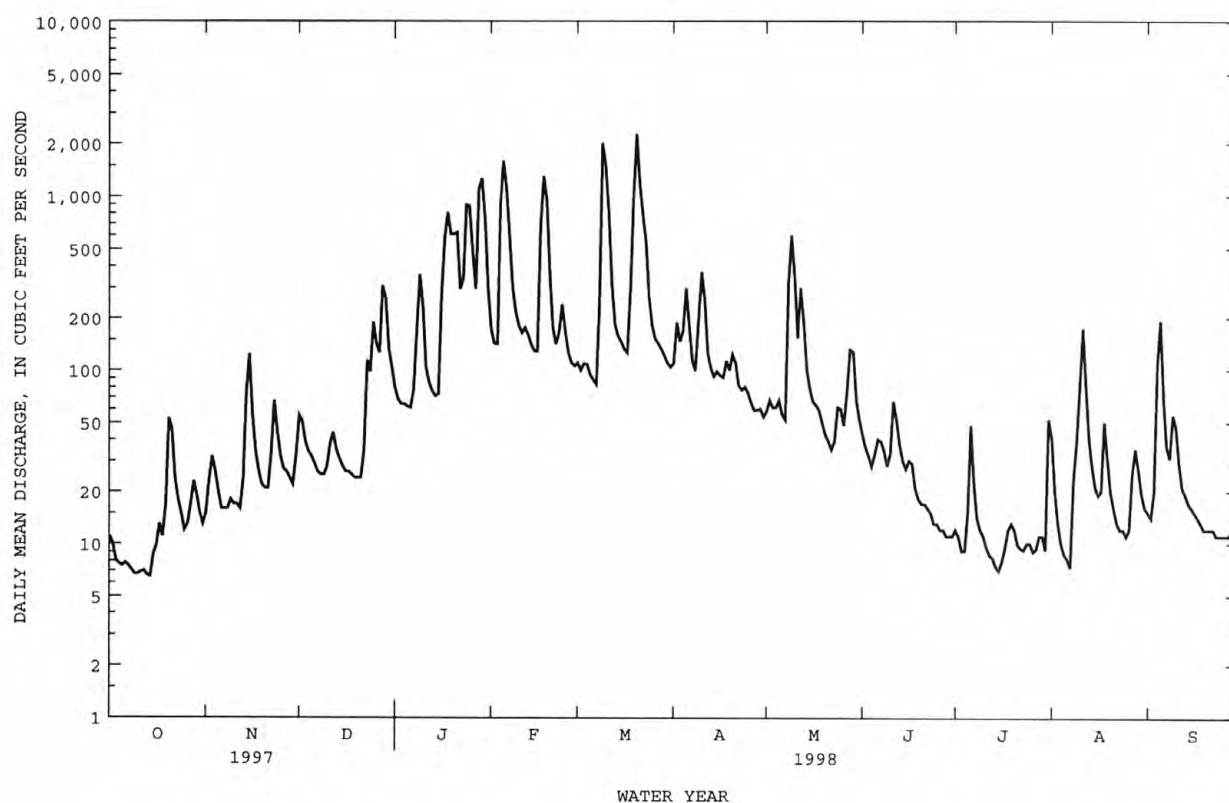
## NEUSE RIVER BASIN

02088000 MIDDLE CREEK NEAR CLAYTON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1940 - 1998	
ANNUAL TOTAL	29866.5		49876.1		90.1	
ANNUAL MEAN	81.8		137		161	
HIGHEST ANNUAL MEAN					30.0	
LOWEST ANNUAL MEAN					0	
HIGHEST DAILY MEAN	896	Apr 30	2270	Mar 20	6260	Sep 6 1996
LOWEST DAILY MEAN	5.3	Sep 5	6.5	Oct 14	0*	Oct 11 1954
ANNUAL SEVEN-DAY MINIMUM	5.8	Sep 2	6.8	Oct 8	0	Jul 13 1986
INSTANTANEOUS PEAK FLOW			2630	Mar 20	11900*	Sep 6 1996
INSTANTANEOUS PEAK STAGE			11.03	Mar 20	14.88*	Sep 6 1996
INSTANTANEOUS LOW FLOW			5.3	Oct 14	0*	Oct 11 1954
ANNUAL RUNOFF (CFSM)	.98		1.64		1.08	
ANNUAL RUNOFF (INCHES)	13.31		22.22		14.66	
10 PERCENT EXCEEDS	170		300		200	
50 PERCENT EXCEEDS	41		41		45	
90 PERCENT EXCEEDS	9.6		11		7.4	

e Estimated.

\* See REMARKS.



## NEUSE RIVER BASIN

02088500 LITTLE RIVER NEAR PRINCETON, NC

LOCATION.--Lat 35°30'40", long 78°09'38", Johnston County, Hydrologic Unit 03020201, on left bank 600 ft downstream of bridge on Secondary Road 2320, 0.8 mi upstream from Little Creek, and 3 mi north of Princeton.

DRAINAGE AREA.--232 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1930 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORD.--WSP 1233: 1935(M). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 107.75 ft above sea level. Prior to Nov. 17, 1934, nonrecording gage at same site and datum. Satellite telemetry at station.

REMARKS.--Records fair. Slight fluctuation and occasional regulation for short periods is caused by mills upstream from station. Minimum discharge for period of record occurred frequently in June 1986 due to regulation from unknown source. Minimum discharge for current water year also occurred on Aug. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	18	138	268	1450	222	302	108	87	14	22	22
2	14	22	168	218	1150	210	635	118	75	14	17	20
3	12	23	135	174	748	194	527	129	61	13	14	23
4	9.5	24	102	147	994	182	383	125	65	13	9.4	51
5	8.3	29	88	134	1640	178	404	120	91	28	7.9	102
6	7.4	34	78	131	2230	165	380	136	88	48	9.0	96
7	6.3	37	70	198	2170	154	338	129	86	84	8.6	69
8	5.3	53	63	355	1860	250	307	186	79	78	5.5	50
9	7.2	54	63	490	1510	1180	347	181	67	53	3.9	46
10	4.4	52	64	540	1090	3460	436	165	57	116	8.0	43
11	4.1	46	67	426	660	4880	430	154	51	51	12	35
12	3.8	44	68	332	439	3660	377	174	46	35	7.3	31
13	3.2	48	70	273	372	2320	343	193	42	28	4.6	28
14	2.8	65	70	218	330	1410	304	182	39	23	4.4	26
15	2.5	76	66	191	289	800	272	155	39	22	4.2	25
16	3.9	84	64	265	261	452	247	131	33	22	9.7	24
17	2.5	83	62	531	673	354	226	106	39	28	15	22
18	2.9	81	59	742	1200	369	229	90	50	29	8.8	20
19	3.7	74	56	902	1380	591	245	77	43	27	6.7	18
20	e6.1	66	53	1220	1330	969	287	66	37	24	5.4	18
21	e7.0	60	52	1490	1160	1350	310	58	33	21	3.5	16
22	e8.0	58	61	1460	917	1910	301	49	30	17	2.8	18
23	e23	59	103	1280	616	2170	282	54	27	15	2.7	18
24	15	65	151	1300	416	1570	272	72	25	11	2.3	17
25	15	70	227	1380	362	1090	244	104	21	14	2.0	15
26	12	71	255	1410	313	761	199	144	19	17	6.1	14
27	16	69	251	1380	269	502	163	138	18	17	53	13
28	17	64	298	1660	239	383	139	142	18	32	70	12
29	17	60	338	1900	---	335	123	136	17	28	44	13
30	15	81	340	1880	---	308	112	121	16	29	31	19
31	15	---	314	1700	---	284	---	97	---	29	25	---
TOTAL	285.9	1670	3994	24595	26068	32663	9164	3840	1399	980	425.8	924
MEAN	9.22	55.7	129	793	931	1054	305	124	46.6	31.6	13.7	30.8
MAX	23	84	340	1900	2230	4880	635	193	91	116	70	102
MIN	2.5	18	52	131	239	154	112	49	16	11	2.0	12
CFSM	.04	.24	.56	3.42	4.01	4.54	1.32	.53	.20	.14	.06	.13
IN.	.05	.27	.64	3.94	4.18	5.24	1.47	.62	.22	.16	.07	.15

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1998, BY WATER YEAR (WY)

	MEAN	137	148	232	391	478	485	327	191	153	180	180	142
MAX	1202	645	717	999	1285	1204	969	835	698	826	783	1538	
(WY)	1965	1948	1937	1954	1948	1989	1959	1989	1995	1959	1931	1996	
MIN	6.00	13.0	16.0	24.1	49.6	120	53.3	17.3	14.1	16.9	4.10	2.84	
(WY)	1934	1934	1934	1934	1934	1981	1986	1986	1986	1994	1993	1980	

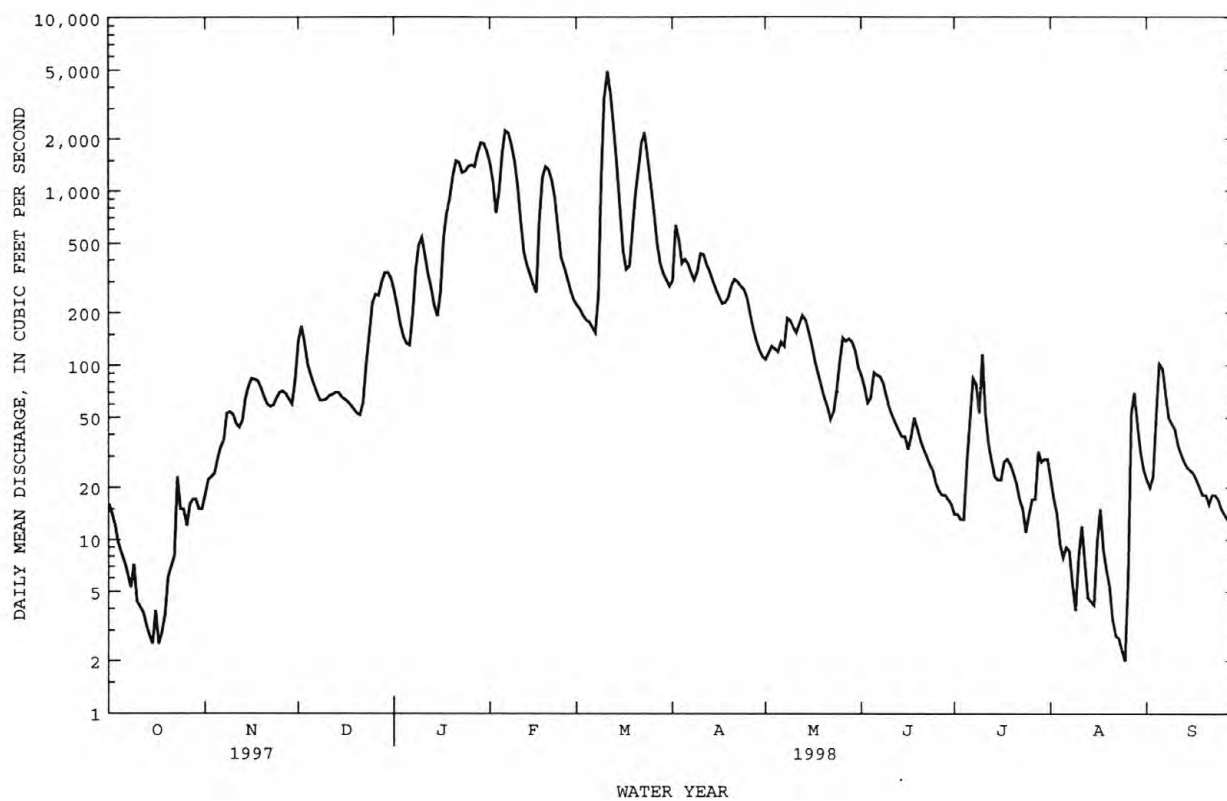
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1930 - 1998
ANNUAL TOTAL	57474.0	106008.7	
ANNUAL MEAN	157	290	254
HIGHEST ANNUAL MEAN			511
LOWEST ANNUAL MEAN			91.8
HIGHEST DAILY MEAN	984	4880	6790
LOWEST DAILY MEAN	2.5	2.0	.08
ANNUAL SEVEN-DAY MINIMUM	3.1	3.1	.36
INSTANTANEOUS PEAK FLOW		5150	7150
INSTANTANEOUS PEAK STAGE		13.51	13.94
INSTANTANEOUS LOW FLOW		1.8*	.08*
ANNUAL RUNOFF (CFSM)	.68	1.25	1.10
ANNUAL RUNOFF (INCHES)	9.22	17.00	14.90
10 PERCENT EXCEEDS	380	979	630
50 PERCENT EXCEEDS	75	70	118
90 PERCENT EXCEEDS	8.0	8.9	20

e Estimated.

\* See REMARKS.

## NEUSE RIVER BASIN

02088500 LITTLE RIVER NEAR PRINCETON, NC--Continued



## NEUSE RIVER BASIN

02089000 NEUSE RIVER NEAR GOLDSBORO, NC

LOCATION.--Lat 35°20'14", long 77°59'51", Wayne County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on Secondary Road 1915, 0.2 mi upstream from Stony Creek, 1.5 mi downstream of Seaboard Coast Line Railroad bridge, 3.2 mi south of Wayne County courthouse in Goldsboro, 4.3 mi downstream of Little River, and 135 mi upstream from mouth.

DRAINAGE AREA.--2,399 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1930 to current year.

REVISED RECORDS.--WSP 1333: 1931, 1935. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 42.95 ft above sea level. Prior to July 24, 1931, nonrecording gage at railroad bridge 1.5 mi upstream at 44.95 ft. July 24, 1931, to Aug. 31, 1948, water-stage recorder at site 2.3 mi upstream at 44.66 ft. National Weather Service telephone telemetry at station. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Falls Lake (station 02087182). Prior to regulation, maximum discharge: 30,700 ft<sup>3</sup>/s, Sept. 27, 1945; gage height: 26.72 ft at site and datum then in use; minimum discharge: 76 ft<sup>3</sup>/s, Sept. 26, 1968. Minimum discharge during regulation also occurred Oct. 3, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 1866 and July 1919, reached stages of about 29 and 28 ft, respectively, at site 2.3 mi upstream at present datum, from flood profiles of U.S. Army Corps of Engineers. Flood of Oct. 5, 1929, reached a stage of 27.3 ft at railroad bridge at present datum; discharge, 38,600 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	944	728	1280	3470	13800	7650	9410	2100	1400	486	918	1370
2	826	837	1680	2880	13800	7320	9540	1960	1250	492	1070	1110
3	699	940	1880	2370	13300	7210	9630	1890	1150	458	920	983
4	623	962	1830	2050	13500	7280	10200	1870	1080	448	720	1480
5	552	903	1670	1920	13600	7450	10800	1990	1250	423	578	2350
6	507	819	1510	1910	13500	7620	10900	1910	1400	600	491	3290
7	448	745	1330	1960	13900	7750	10500	1780	1530	1410	428	3470
8	440	779	1200	3110	14500	7980	9950	2340	1300	996	422	2560
9	431	831	1100	3870	14900	10700	10400	2920	1160	747	426	2060
10	420	820	1060	4540	14800	12200	12100	3250	1090	624	751	1740
11	404	795	1060	5100	14200	13600	12000	3420	1030	584	967	1570
12	398	761	1130	5210	13100	15500	11900	3520	1000	585	921	1300
13	399	837	1200	5120	11600	17800	11600	3720	995	484	1140	1090
14	391	1070	1180	4930	10100	18600	10900	3590	971	435	1030	937
15	387	1360	1160	4740	9030	17700	9960	3100	1080	398	857	826
16	389	2030	1080	4340	8330	16000	9030	2590	1070	379	702	725
17	459	1980	1020	4090	8530	14000	8060	2160	1240	442	638	659
18	593	1760	968	4700	10200	12100	6680	1940	1140	713	596	602
19	538	1490	925	5960	11100	10500	5330	1710	952	612	1140	574
20	501	1290	901	6730	12400	9820	4020	1440	840	613	1090	544
21	668	1110	864	7430	13400	9450	3630	1270	742	545	788	515
22	999	1010	975	8110	13700	9460	3920	1150	665	514	600	488
23	779	948	1180	8850	13400	10100	4720	1150	630	463	488	484
24	644	1210	1700	9610	12300	12000	4820	1190	604	449	434	474
25	575	1280	2430	10000	10800	13400	4760	1470	582	410	398	461
26	566	1140	2830	10300	9570	13700	4790	1630	592	759	491	447
27	646	1030	3290	10900	8780	13200	4510	1530	568	1160	1450	422
28	645	955	3530	12300	8170	12200	3330	1920	522	1230	1580	403
29	694	883	3830	13000	---	11200	2930	1770	498	1070	1810	395
30	690	1050	4160	13400	---	10300	2560	1660	490	916	1470	388
31	646	---	3950	13600	---	9740	---	1580	---	975	1250	---
TOTAL	17901	32353	53903	196500	338310	353530	232880	65520	28821	20420	26564	33717
MEAN	577	1078	1739	6339	12080	11400	7763	2114	961	659	857	1124
MAX	999	2030	4160	13600	14900	18600	12100	3720	1530	1410	1810	3470
MIN	387	728	864	1910	8170	7210	2560	1150	490	379	398	388

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998\*, BY WATER YEAR (WY)

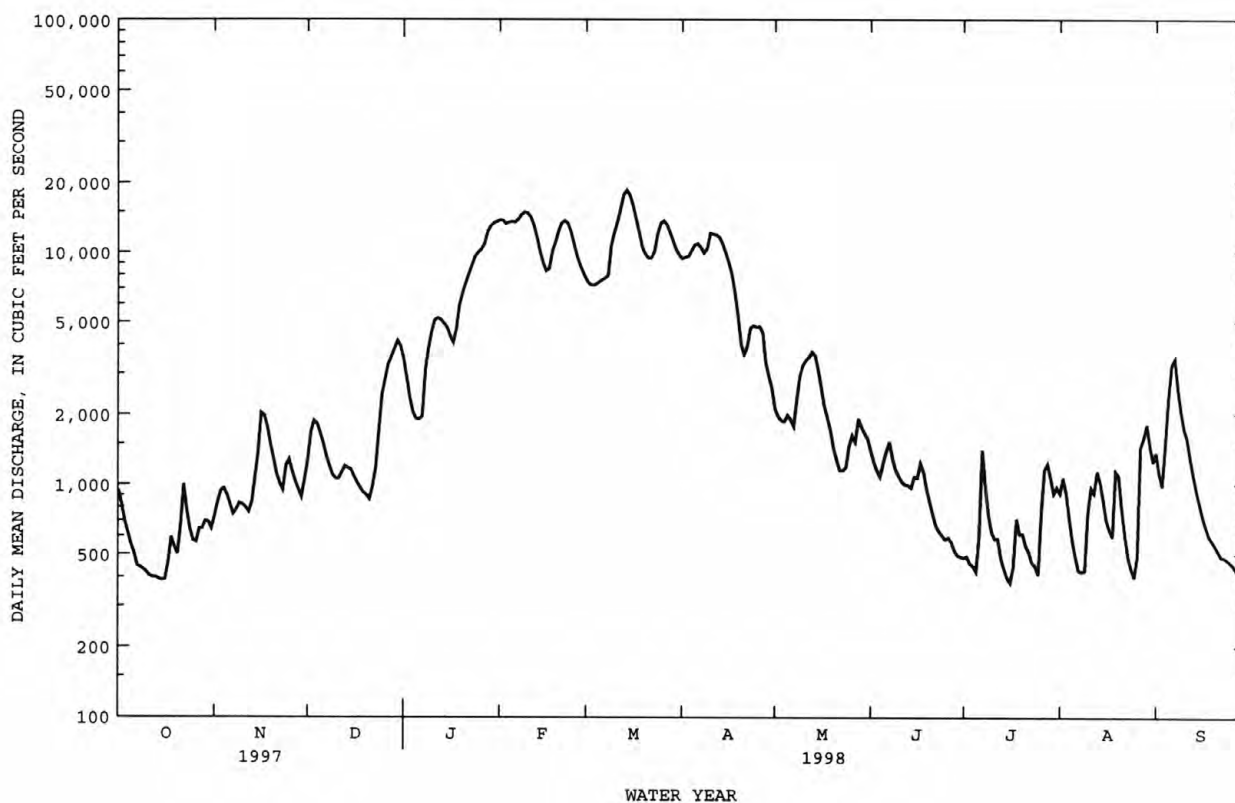
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	1444	1426	2107	3494	4413	5662	4086	2175	1566	1449	1387	1637				
MAX	6120	5287	4546	6644	12080	11400	7850	7276	5530	4668	3601	12780				
(WY)	1997	1996	1997	1993	1998	1998	1989	1989	1995	1989	1989	1996				
MIN	310	326	622	884	1518	1575	631	433	342	394	264	247				
(WY)	1984	1988	1988	1986	1986	1988	1986	1986	1986	1987	1983	1985				

## NEUSE RIVER BASIN

02089000 NEUSE RIVER NEAR GOLDSBORO, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1983 - 1998*	
ANNUAL TOTAL	756660		1400419		2693	
ANNUAL MEAN	2073		3837		3869	
HIGHEST ANNUAL MEAN					1042	
LOWEST ANNUAL MEAN					28800	
HIGHEST DAILY MEAN	7140	May 7	18600	Mar 14	162	Sep 12 1996
LOWEST DAILY MEAN	345	Sep 9	379	Jul 16	172	Sep 10 1983
ANNUAL SEVEN-DAY MINIMUM	382	Sep 18	398	Oct 10	29300	Sep 15 1985
INSTANTANEOUS PEAK FLOW			18700	Mar 14	26.21	Sep 12 1996
INSTANTANEOUS PEAK STAGE			23.02	Mar 14	157*	Sep 19 1985
INSTANTANEOUS LOW FLOW			356	Aug 26	6940	
10 PERCENT EXCEEDS	5060		12000		1310	
50 PERCENT EXCEEDS	1230		1330		393	
90 PERCENT EXCEEDS	456		487			

\* Regulated period only (1983-1998). See REMARKS.





## NEUSE RIVER BASIN

0208925200 BEAR CREEK AT MAYS STORE, NC

LOCATION.--Lat 35°16'28", long 77°47'40", Lenoir County, Hydrologic Unit 03020202, at downstream side of bridge on Secondary Road 1326, 0.7 mi west of Mays Store, and 1.0 mi downstream of Secondary Road 1002.

DRAINAGE AREA.--57.7 mi<sup>2</sup>.

ERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 50 ft above sea level, from topographic map. Satellite telemetry at site.

REMARKS.--Records fair except those for estimated daily discharges and those for discharges greater than 450 ft<sup>3</sup>/s, which are poor. Minimum discharge for current water year also occurred Aug. 24, 25, 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	45	115	110	167	140	118	71	76	24	71	45
2	27	83	97	98	151	134	167	71	67	21	45	36
3	24	76	77	88	147	129	126	76	58	20	35	32
4	22	56	67	81	576	124	196	84	63	23	29	93
5	20	45	60	76	725	118	180	127	379	25	25	84
6	20	38	52	74	414	109	139	100	211	24	23	61
7	19	35	46	74	313	101	116	85	136	22	23	46
8	18	33	42	147	275	113	95	327	103	21	22	40
9	18	31	43	306	243	601	383	198	85	22	22	42
10	18	29	44	188	219	750	917	118	80	35	24	32
11	18	27	47	143	199	359	447	124	73	24	24	27
12	17	26	47	124	217	274	314	126	65	21	21	24
13	17	36	47	110	188	241	265	101	58	19	24	21
14	17	92	43	103	170	204	242	87	54	19	30	20
15	22	93	40	101	154	185	221	76	207	19	24	19
16	21	78	37	192	147	169	201	69	182	19	22	18
17	20	61	36	282	545	151	188	62	102	27	31	18
18	20	49	34	221	1110	236	178	58	75	31	24	18
19	23	43	32	289	526	341	146	e54	62	26	21	18
20	26	39	31	535	355	507	133	e50	55	25	19	18
21	23	35	30	328	293	400	122	e46	44	22	18	18
22	22	34	41	247	260	324	141	e43	38	20	17	18
23	22	33	104	286	251	254	267	e370	35	21	16	18
24	21	31	93	541	239	212	196	e195	41	20	15	18
25	21	30	217	339	209	172	151	e160	32	20	15	18
26	22	29	172	254	166	151	121	e150	28	30	25	17
27	37	29	175	233	151	141	102	e142	25	30	377	17
28	42	28	240	467	147	132	96	e136	23	28	281	17
29	37	27	174	327	---	124	87	e132	22	26	131	18
30	32	65	151	251	---	117	74	112	22	81	87	19
31	29	---	128	204	---	106	---	94	---	208	61	---
TOTAL	726	1356	2562	6819	8557	7119	6129	3644	2501	973	1602	890
MEAN	23.4	45.2	82.6	220	306	230	204	118	83.4	31.4	51.7	29.7
MAX	42	93	240	541	1110	750	917	370	379	208	377	93
MIN	17	26	30	74	147	101	74	43	22	19	15	17
CFSM	.41	.78	1.43	3.81	5.30	3.98	3.54	2.04	1.44	.54	.90	.51
IN.	.47	.87	1.65	4.40	5.52	4.59	3.95	2.35	1.61	.63	1.03	.57

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	MEAN	52.2	47.3	58.9	102	89.8	109	77.8	63.0	58.6	45.9	64.4	55.8
MAX	206	119	133	266	306	230	204	216	201	98.5	231	253	
(WY)	1997	1993	1993	1993	1998	1998	1998	1989	1995	1989	1992	1996	
MIN	17.2	15.8	21.5	29.0	45.0	35.3	26.5	19.8	13.2	12.5	12.8	17.6	
(WY)	1995	1995	1995	1995	1988	1988	1995	1994	1994	1993	1993	1994	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1988 - 1998

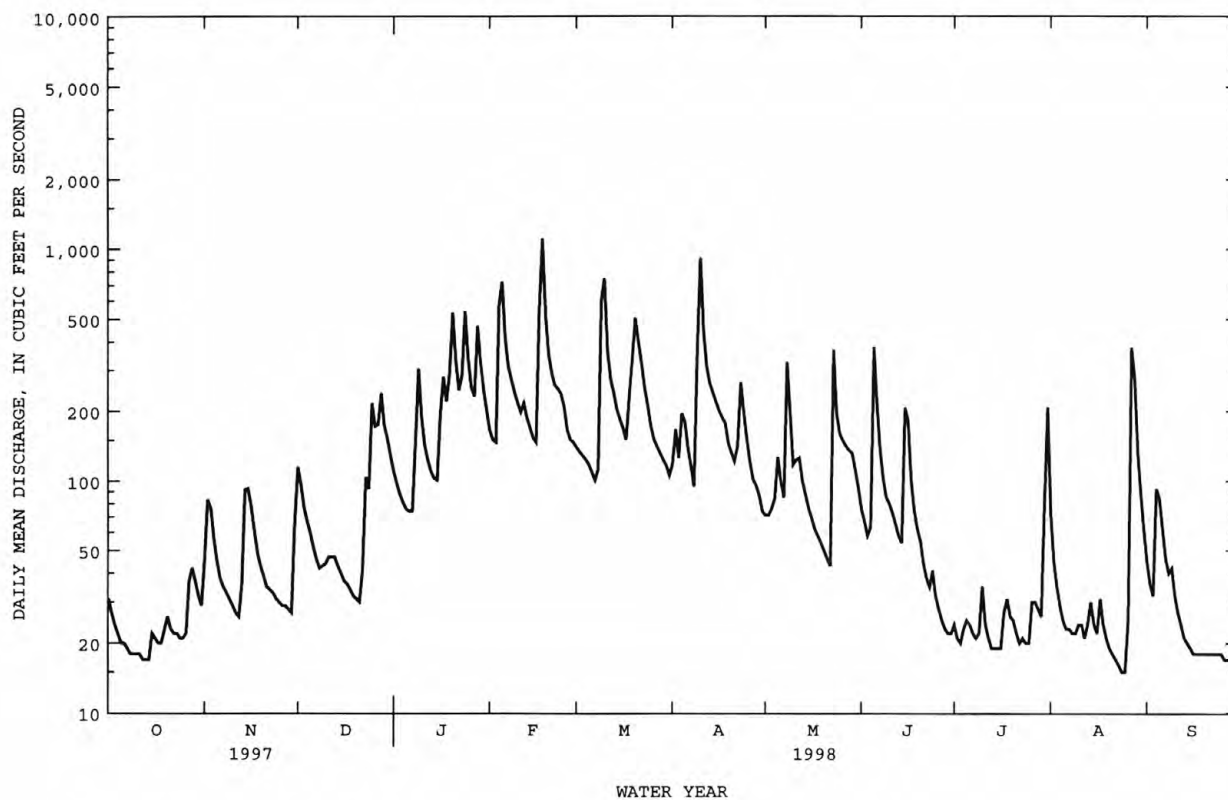
ANNUAL TOTAL	18474.5	42878	
ANNUAL MEAN	50.6	117	68.6
HIGHEST ANNUAL MEAN			117
LOWEST ANNUAL MEAN			31.7
HIGHEST DAILY MEAN	244	Feb 16	1110
LOWEST DAILY MEAN	8.4	Aug 18	15
ANNUAL SEVEN-DAY MINIMUM	9.2	Aug 12	17
INSTANTANEOUS PEAK FLOW			1270
INSTANTANEOUS PEAK STAGE			9.23
INSTANTANEOUS LOW FLOW			15*
ANNUAL RUNOFF (CFSM)	.88		2.04
ANNUAL RUNOFF (INCHES)	11.91		27.64
10 PERCENT EXCEEDS	105		274
50 PERCENT EXCEEDS	34		69
90 PERCENT EXCEEDS	12		20

e Estimated.

\* See REMARKS.

## NEUSE RIVER BASIN

0208925200 BEAR CREEK AT MAYS STORE, NC--Continued



## NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC

LOCATION.--Lat 35°15'29", long 77°35'09", Lenoir County, Hydrologic Unit 03020202, on left bank at Kinston, 600 ft downstream of bridge on State Highway 11, and 90 mi upstream from mouth.

DRAINAGE AREA.--2,692 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1930 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10.90 ft above sea level. Prior to Nov. 25, 1934, nonrecording gage at highway bridge 1 mi downstream at 10.10 ft. National Weather Service telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Falls Lake (station 02087182). Prior to regulation, maximum discharge: 26,000 ft<sup>3</sup>/s, Oct. 13, 1964; gage height: 22.86 ft, at site and datum then in use; minimum discharge: 124 ft<sup>3</sup>/s, Sept. 26, 1932, at site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1919 reached a stage of 25.0 ft, at present site and datum; discharge, about 39,000 ft<sup>3</sup>/s, from information provided by North Carolina State Highway Commission. Flood in October 1924 reached a stage of 24.7 ft, at present site and datum; discharge, 36,000 ft<sup>3</sup>/s, from information provided by North Carolina State Highway Commission. Flood of Sept. 25-26, 1928, reached a stage of 24.2 ft, at present site and datum; discharge, 34,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	789	1440	4410	12100	10200	11000	3960	1940	624	1350	1690
2	1050	882	1710	4350	12400	9510	10600	3270	1760	613	1150	1600
3	934	1010	1970	4020	12600	8930	10400	2780	1570	599	1160	1450
4	815	1070	2170	3410	13500	8430	10300	2560	1480	586	1120	1480
5	720	1090	2180	2840	14000	8090	10200	2590	1530	591	924	1830
6	649	1040	2040	2510	14200	7910	10300	2720	1880	584	768	2340
7	591	956	1840	2390	14000	7890	10400	2590	1980	580	675	2970
8	539	873	1640	2450	13600	8030	10500	2670	1980	1160	614	3400
9	502	848	1470	2940	13400	8570	10800	3140	1730	1220	585	3440
10	491	887	1360	3670	13400	9290	11100	3610	1530	1020	587	2920
11	476	896	1290	4180	13600	10100	11600	3860	1440	882	789	2280
12	453	871	1270	4630	13800	10900	11900	4080	1340	741	1090	1920
13	436	909	1300	5070	13700	11900	12000	4240	1250	700	1050	1620
14	434	1080	1370	5360	13300	13000	11800	4290	1200	637	e1100	1360
15	426	1340	1370	5490	12500	14500	11700	4310	1170	585	e1150	1180
16	435	1540	1350	5600	11500	16000	11300	4140	1360	567	1040	1030
17	443	2010	1280	5610	11100	16600	10700	3720	1420	546	927	908
18	459	2200	1200	5450	11200	16400	10200	3100	1410	618	840	827
19	608	2040	1140	5470	11400	15500	9510	2590	1380	771	758	762
20	631	1790	1090	5830	11300	14200	8690	2260	1180	786	1030	724
21	610	1530	1060	6440	11300	13100	7560	1940	1020	724	1220	694
22	622	1320	1060	7050	11600	12000	6290	1710	904	682	1010	661
23	916	1180	1200	7720	12200	11000	5480	1570	840	634	792	624
24	892	1090	1520	8460	12700	10400	5340	1580	849	593	661	600
25	759	1190	2010	9140	12900	10300	5550	1630	776	564	570	579
26	681	1360	2700	9620	12600	10700	5620	1740	732	550	631	565
27	678	1280	3100	9950	11900	11600	5590	1940	704	657	1170	552
28	745	1170	3490	10300	11000	12300	5530	1940	692	1120	2230	527
29	763	1080	3860	10700	---	12500	5270	2300	657	1260	2630	505
30	757	1180	4090	11300	---	12200	4660	2260	630	1230	2510	497
31	769	---	4280	11800	---	11600	---	2080	---	1210	2120	---
TOTAL	20454	36501	58850	188160	352800	353650	271890	87170	38334	23634	34251	41535
MEAN	660	1217	1898	6070	12600	11410	9063	2812	1278	762	1105	1385
MAX	1170	2200	4280	11800	14200	16600	12000	4310	1980	1260	2630	3440
MIN	426	789	1060	2390	11000	7890	4660	1570	630	546	570	497

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998\*, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	1392	1576	2421	3742	4771	6236	4750	2439	1854	1649	1674	1874				
MAX	7637	5643	5097	7560	12600	11410	9582	8773	6062	5223	4068	13110				
(WY)	1997	1996	1990	1993	1998	1998	1989	1989	1995	1989	1989	1996				
MIN	366	430	760	1181	1768	1673	878	563	460	468	314	357				
(WY)	1984	1988	1988	1986	1986	1988	1986	1986	1986	1987	1983	1985				

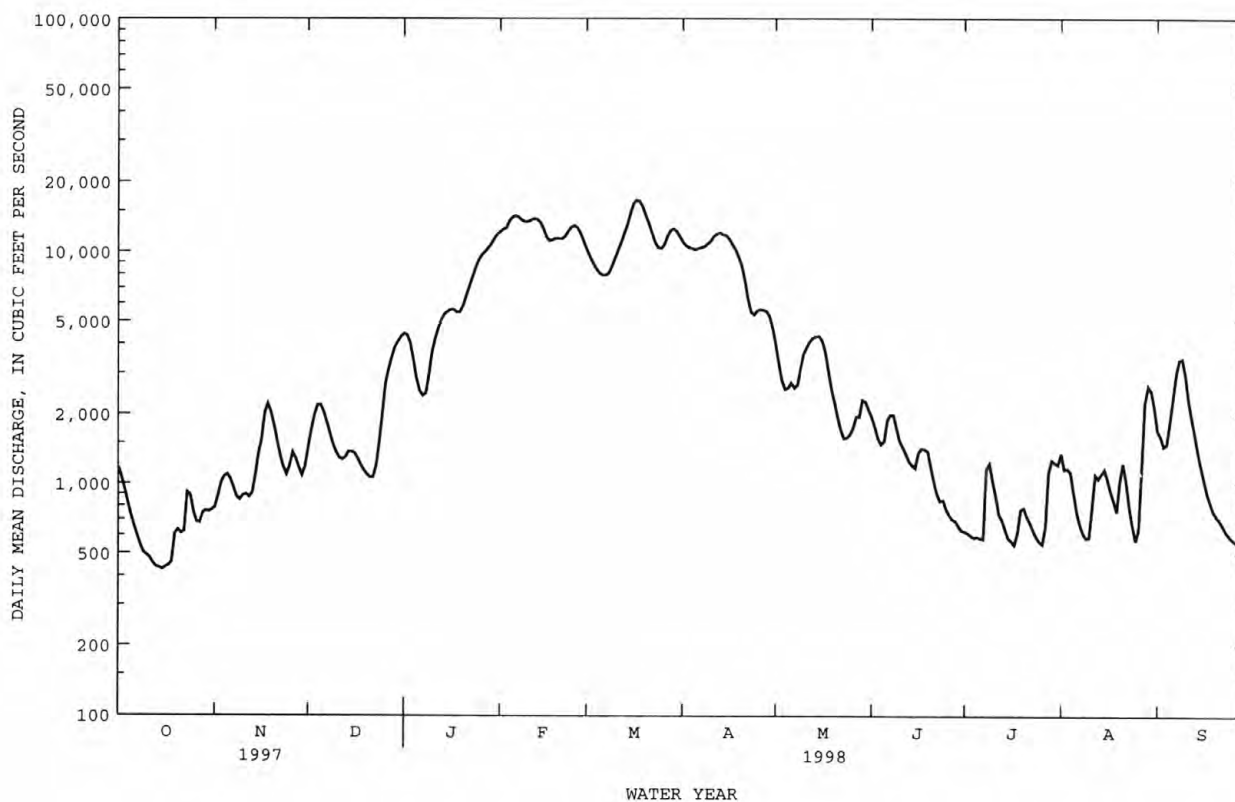
## NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1983 - 1998*	
ANNUAL TOTAL	809993		1507229		2788	
ANNUAL MEAN	2219		4129		4216	
HIGHEST ANNUAL MEAN					1204	
LOWEST ANNUAL MEAN					26900	
HIGHEST DAILY MEAN	6980	Feb 23	16600	Mar 17	200	Sep 17 1996
LOWEST DAILY MEAN	392	Sep 23	426	Oct 15	214	Sep 20 1985
ANNUAL SEVEN-DAY MINIMUM	425	Sep 19	441	Oct 12	214	Sep 16 1985
INSTANTANEOUS PEAK FLOW			16700	Mar 17	27100	Sep 17 1996
INSTANTANEOUS PEAK STAGE			20.08	Mar 17	23.26	Sep 17 1996
INSTANTANEOUS LOW FLOW			422	Oct 15	196	Sep 20 1985
10 PERCENT EXCEEDS	5220		11800		7620	
50 PERCENT EXCEEDS	1360		1710		1600	
90 PERCENT EXCEEDS	526		614		488	

e Estimated.

\* Regulated period only (1983-1998). See REMARKS.



## NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1955-56, 1959-67, 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1973 to September 1986.

WATER TEMPERATURE: October 1949 to September 1950, January 1955 to September 1956, July 1973 to September 1986.

INSTRUMENTATION.--Water-quality monitor from October 1981 to September 1986.

REMARKS.--Station operated as part of NAWQA Program from March 1993 to present. Station also operated as part of NASQAN network from October 1974 to September 1994. Daily records of specific conductance for January 1955 to September 1956 are available in the files of the district office in Raleigh.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 242 microsiemens, Sept. 21, 1983; minimum daily, 43 microsiemens, Mar. 28, 1975.

WATER TEMPERATURE: Maximum recorded, 36.0°C, July 13, 14, 19, 20, 1986; minimum daily, 0.0°C, Feb. 7, 1978, Jan. 13, 1981.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	HARD- NESS TOTAL (MG/L CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT											
15...	1000	422	169	7.8	21.8	767	8.6	98	30	7.2	2.9
DEC											
03...	1100	1960	130	7.4	10.8	766	11.2	101	27	6.5	2.7
22...	1000	1030	140	7.4	7.6	768	9.9	83	28	6.8	2.7
JAN											
30...	1045	11300	77	7.3	8.3	758	10.6	91	17	3.9	1.7
FEB											
26...	1030	12700	58	6.7	11.9	763	9.1	85	16	3.8	1.6
MAR											
31...	1100	11700	65	7.3	19.1	763	6.1	66	16	3.9	1.6
APR											
21...	1045	7640	79	7.1	18.9	764	7.2	77	21	5.0	2.1
MAY											
21...	1100	1950	97	7.0	24.5	756	6.9	83	21	4.8	2.3
JUL											
09...	1100	1240	165	7.0	29.0	758	6.8	89	26	5.2	3.1
31...	0945	1150	--	6.7	28.0	762	5.7	--	23	5.3	2.4
AUG											
31...	1100	2150	110	6.8	28.1	760	6.5	84	24	5.8	2.4
SEP											
29...	1100	504	159	7.5	25.2	760	6.7	81	33	8.1	3.0
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT											
15...	17	51	1	4.8	34	28	15	16	.25	6.9	101
DEC											
03...	9.9	39	.8	5.1	20	17	14	13	.13	7.4	88
22...	12	44	1	4.4	23	19	14	14	.14	7.1	96
JAN											
30...	5.3	36	.6	2.9	11	9	8.8	7.1	<.10	5.8	67
FEB											
26...	4.5	34	.5	2.5	13	11	7.5	5.6	<.10	4.0	44
MAR											
31...	4.2	33	.5	2.3	13	11	6.3	4.6	<.10	3.4	49
APR											
21...	5.0	31	.5	2.6	21	17	6.4	5.9	.11	5.0	66
MAY											
21...	7.3	39	.7	2.8	18	15	8.0	8.4	.10	6.4	69
JUL											
09...	18	55	2	4.8	31	26	14	15	.27	7.9	101
31...	12	47	1	4.5	25	20	12	11	.18	8.9	76
AUG											
31...	9.5	41	.8	4.2	--	--	12	11	.15	7.5	84
SEP											
29...	16	48	1	4.3	38	31	13	15	.28	8.6	110

## NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
OCT											
15...	<.010	1.23	<.015	--	--	.31	.26	1.5	1.5	.067	.046
DEC											
03...	<.010	1.12	<.020	--	--	.45	.28	1.6	1.4	.072	.026
22...	<.010	1.16	<.020	--	--	.35	.31	1.5	1.5	.057	.047
JAN											
30...	.012	.668	.024	.48	.37	.50	.40	1.2	1.1	.065	.018
FEB											
26...	.012	.456	.037	.49	.37	.53	.40	.98	.86	.058	.030
MAR											
31...	<.010	.203	.052	.49	.32	.54	.37	.74	.57	.069	.044
APR											
21...	<.010	.543	.037	.69	.49	.73	.52	1.3	1.1	.124	.081
MAY											
21...	.019	.776	.068	.41	.37	.48	.43	1.3	1.2	.108	.066
JUL											
09...	<.010	1.38	.063	.41	.31	.47	.37	1.9	1.8	.116	.103
31...	<.010	.836	.046	.39	.25	.44	.30	1.3	1.1	.134	.068
AUG											
31...	<.010	.521	.050	.63	.43	.68	.48	1.2	1.0	.112	.052
SEP											
29...	<.010	.706	.022	.37	.26	.39	.28	1.1	.99	.099	.054

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC, (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)
OCT											
15...	.039	190	23	4.7	.30	<.002	.055	<.0020	<.0020	<.0040	<.0040
DEC											
03...	.036	180	23	6.3	.70	.004	.020	<.0020	<.0020	<.0040	<.0040
22...	.054	430	31	5.0	.20	<.002	.025	<.0020	<.0020	E.0030	<.0040
JAN											
30...	.025	310	19	8.1	.60	<.002	.012	<.0020	<.0020	<.0040	<.0040
FEB											
26...	.034	490	15	7.5	.40	<.002	.008	<.0020	<.0020	<.0040	<.0040
MAR											
31...	.035	410	28	8.0	.40	E.003	.008	<.0020	<.0020	E.0030	<.0040
APR											
21...	.065	1300	59	8.3	.40	.021	.067	<.0020	<.0020	E.0036	<.0040
MAY											
21...	.036	630	62	7.2	.70	.021	.140	<.0020	<.0020	<.0040	<.0040
JUL											
09...	.075	70	23	4.7	.40	<.002	.027	<.0020	<.0020	<.0040	<.0040
31...	.064	220	28	5.8	.70	<.002	.013	<.0020	<.0020	<.0040	E.0124
AUG											
31...	.054	310	61	9.5	1.1	<.002	.011	<.0020	<.0020	<.0040	<.0040
SEP											
29...	.059	500	47	5.2	.60	<.002	.012	<.0020	<.0020	<.0040	<.0040



## NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P, P' DDE DISSOLV (UG/L) (34653)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)
OCT											
15...	<.0020	<.0060	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
DEC											
03...	<.0020	<.0060	.005	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
22...	<.0020	<.0060	.006	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
JAN											
30...	<.0020	<.0060	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
FEB											
26...	<.0020	<.0060	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
MAR											
31...	<.0020	<.0060	E.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
APR											
21...	<.0020	<.0060	.005	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
MAY											
21...	<.0020	<.0060	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
JUL											
09...	<.0020	<.0060	.005	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
31...	<.0020	<.0060	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
AUG											
31...	<.0020	<.0060	<.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
SEP											
29...	<.0020	<.0060	E.002	<.001	<.0030	<.0170	<.0020	<.0040	<.0030	<.0030	<.0020
DATE	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PARA- THION, DIS- SOLVED (UG/L) (39542)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
OCT											
15...	<.004	<.0020	<.005	.012	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
DEC											
03...	<.004	<.0020	<.005	.010	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
22...	<.004	<.0020	<.005	.008	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
JAN											
30...	<.004	<.0020	<.005	.010	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
FEB											
26...	<.004	<.0020	<.005	.010	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
MAR											
31...	<.004	<.0020	<.005	.013	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
APR											
21...	<.004	<.0020	.018	.045	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
MAY											
21...	<.004	<.0020	<.005	.112	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
JUL											
09...	<.004	<.0020	<.005	.082	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
31...	<.004	<.0020	<.005	.035	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
AUG											
31...	<.004	<.0020	<.005	.013	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040
SEP											
29...	<.004	<.0020	<.005	.016	<.004	<.0040	<.0030	<.004	<.0060	<.0040	<.0040



## NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)
OCT 15...	<.0050	<.0020	<.0030	.0223	<.0070	<.0040	<.0130	.0401	<.0020	<.0100	<.0130
DEC 03...	<.0050	<.0020	<.0030	.0242	<.0070	<.0040	<.0130	.309	<.0020	<.0100	<.0130
22...	<.0050	<.0020	<.0030	E.0142	<.0070	<.0040	<.0130	.0497	<.0020	<.0100	<.0130
JAN 30...	<.0050	<.0020	<.0030	E.0080	<.0070	<.0040	<.0130	.0916	<.0020	<.0100	<.0130
FEB 26...	<.0050	<.0020	<.0030	E.0058	<.0070	<.0040	<.0130	.0966	<.0020	<.0100	<.0130
MAR 31...	<.0050	<.0020	<.0030	E.0054	<.0070	<.0040	<.0130	.0487	<.0020	E.0036	<.0130
APR 21...	<.0050	<.0020	<.0030	E.0154	<.0070	<.0040	<.0130	.0393	<.0020	<.0100	<.0130
MAY 21...	<.0050	<.0020	<.0030	.0275	<.0070	<.0040	<.0130	.0313	<.0020	E.0038	<.0130
JUL 09...	<.0050	<.0020	<.0030	.0599	<.0070	<.0040	<.0130	.0139	<.0020	<.0100	<.0130
31...	<.0050	<.0020	<.0030	.0199	<.0070	<.0040	<.0130	.0121	<.0020	<.0100	<.0130
AUG 31...	<.0050	<.0020	<.0030	.0310	<.0070	<.0040	<.0130	.0125	<.0020	E.0054	<.0130
SEP 29...	<.0050	<.0020	<.0030	E.0139	<.0070	<.0040	<.0130	.0083	<.0020	E.0052	<.0130
DATE	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 15...	<.0010	<.0020	E.0046	<.0010	E.0058	<.0030	<.0070	<.0020	5	5.7	82
DEC 03...	<.0010	<.0020	E.0030	<.0010	E.0091	<.0030	<.0070	<.0020	16	85	72
22...	<.0010	<.0020	E.0051	<.0010	<.0030	<.0030	<.0070	<.0020	5	14	81
JAN 30...	<.0010	<.0020	<.0020	<.0010	<.0030	<.0030	<.0070	<.0020	62	1890	89
FEB 26...	<.0010	<.0020	E.0018	<.0010	E.0282	<.0030	<.0070	<.0020	7	240	55
MAR 31...	<.0010	<.0020	E.0031	<.0010	<.0030	<.0030	<.0070	<.0020	16	505	54
APR 21...	<.0010	<.0020	E.0054	<.0010	E.0041	<.0030	<.0070	<.0020	10	206	78
MAY 21...	<.0010	<.0020	E.0082	<.0010	E.0077	<.0030	<.0070	<.0020	17	90	91
JUL 09...	<.0010	<.0020	E.0056	<.0010	E.0056	<.0030	<.0070	<.0020	11	37	93
31...	<.0010	<.0020	<.0020	<.0010	<.0030	<.0030	<.0070	<.0020	21	65	93
AUG 31...	<.0010	<.0020	<.0020	<.0010	<.0030	<.0030	<.0070	<.0020	26	151	76
SEP 29...	<.0010	<.0020	E.0029	<.0010	<.0030	<.0030	<.0070	<.0020	10	14	78

## NEUSE RIVER BASIN

02090380 CONTENTNEA CREEK NEAR LUCAMA, NC

LOCATION.--Lat 35°41'29", long 78°06'38", Wilson County, Hydrologic Unit 03020203, on right bank 250 ft upstream from bridge on State Highway 581, 1.0 mi downstream of Buckhorn Reservoir, 1.0 mi upstream from Buckhorn Branch, and 6.5 mi northwest of Lucama.

DRAINAGE AREA.--161 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1964 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 117.43 ft above sea level (levels by U.S. Army Corps of Engineers). Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Since September 1976, some regulation at low flow by Buckhorn Reservoir (station 02090370) 1 mi upstream. Minimum discharge for period of record also occurred Sept. 10-14, 1976, due to regulation. Minimum discharge for current water year, due to regulation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	14	26	150	568	172	166	63	35	19	18	29
2	8.9	16	26	116	383	161	203	72	27	19	19	43
3	8.6	18	18	100	301	149	179	70	24	19	19	38
4	8.6	21	2.3	106	881	145	182	70	29	19	18	177
5	8.6	22	22	111	2200	133	209	74	39	67	18	294
6	8.3	23	29	132	2320	117	227	75	36	190	18	225
7	8.2	23	33	165	1510	111	184	68	35	120	18	120
8	8.2	23	30	226	851	213	149	79	29	60	17	72
9	8.2	25	35	360	509	1950	172	100	24	37	17	56
10	8.1	25	41	371	363	3900	245	92	24	30	17	40
11	7.8	26	42	286	302	2690	280	87	23	24	18	31
12	7.8	26	45	190	301	1270	233	88	23	20	17	26
13	7.8	27	48	150	292	583	174	83	24	18	17	23
14	7.8	27	47	126	271	344	142	75	19	18	17	20
15	7.7	27	44	126	229	252	131	64	20	18	17	18
16	7.7	27	41	224	209	209	123	55	34	17	17	17
17	7.6	27	39	562	574	190	118	47	42	18	17	17
18	7.4	25	36	758	1130	252	114	40	33	18	17	17
19	7.7	23	34	844	1200	591	115	34	24	18	17	17
20	7.9	23	33	864	863	1520	142	27	21	18	17	17
21	7.9	23	30	776	544	2100	159	25	16	18	16	17
22	8.3	24	50	672	362	1420	166	19	13	18	15	17
23	8.6	24	86	654	305	794	149	45	15	18	15	18
24	9.0	24	133	862	319	501	133	89	14	18	14	18
25	9.0	23	189	1020	293	339	110	110	25	17	14	17
26	9.9	24	194	926	255	262	88	91	36	18	23	17
27	10	25	191	723	209	223	68	77	40	19	32	17
28	11	24	245	1160	185	195	62	72	31	18	90	17
29	11	24	281	1610	---	176	58	62	30	18	97	17
30	11	28	257	1410	---	162	55	50	24	19	54	18
31	11	---	204	926	---	152	---	42	---	19	33	---
TOTAL	268.8	711	2531.3	16706	17729	21276	4536	2045	809	967	753	1470
MEAN	8.67	23.7	81.7	539	633	686	151	66.0	27.0	31.2	24.3	49.0
MAX	11	28	281	1610	2320	3900	280	110	42	190	97	294
MIN	7.4	14	2.3	100	185	111	55	19	13	17	14	17
CFSM	.05	.15	.51	3.35	3.93	4.26	.94	.41	.17	.19	.15	.30
IN.	.06	.16	.58	3.86	4.10	4.92	1.05	.47	.19	.22	.17	.34

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

	MEAN	72.1	88.9	139	266	313	346	201	125	95.1	88.5	97.6	59.0
MAX	644	305	404	690	633	803	701	537	359	624	512	562	
(WY)	1965	1996	1973	1987	1998	1989	1987	1989	1965	1984	1986	1996	
MIN	2.05	2.76	21.2	39.4	87.5	67.7	24.7	8.08	10.4	3.96	3.18	2.52	
(WY)	1981	1974	1966	1981	1986	1981	1986	1981	1970	1981	1980	1968	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

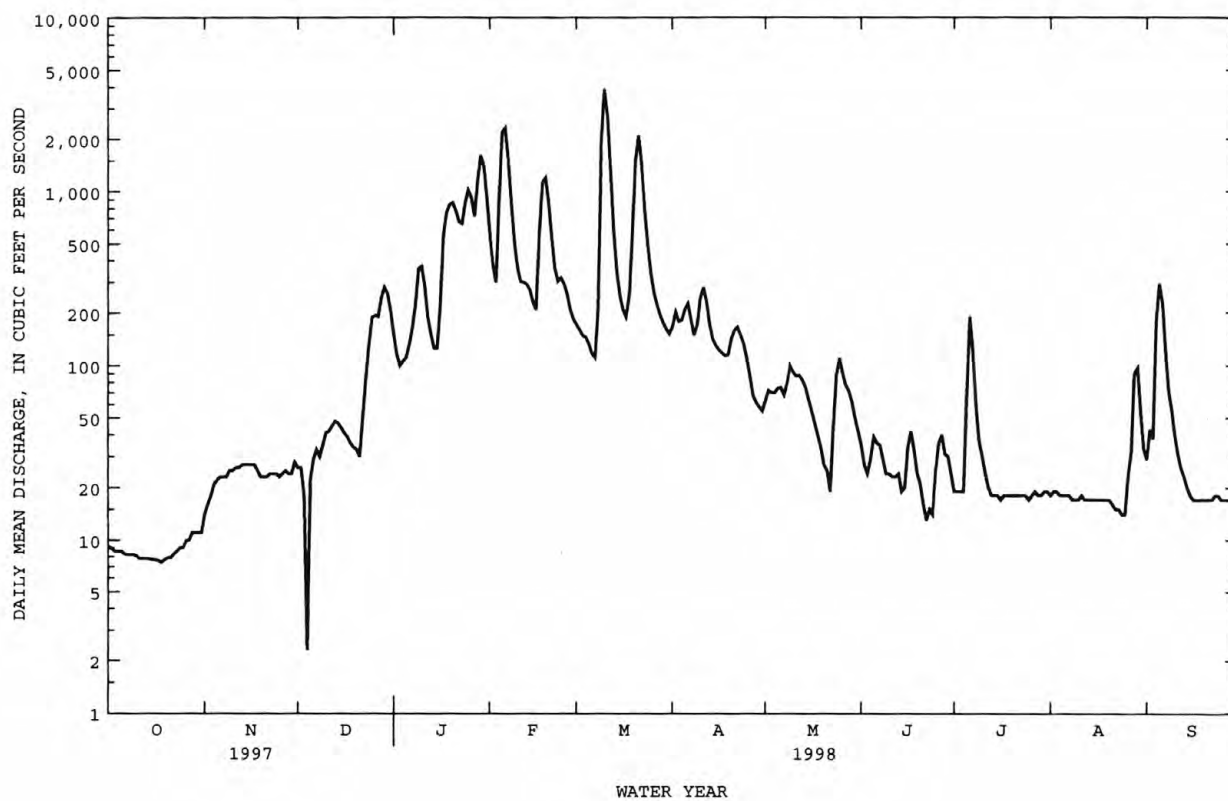
## WATER YEARS 1964 - 1998

ANNUAL TOTAL	36747.9	69802.1	
ANNUAL MEAN	101	191	156
HIGHEST ANNUAL MEAN			278
LOWEST ANNUAL MEAN			35.5
HIGHEST DAILY MEAN	876	Feb 16	3900
LOWEST DAILY MEAN	2.3	Dec 4	2.3
ANNUAL SEVEN-DAY MINIMUM	7.7	Oct 13	7.7
INSTANTANEOUS PEAK FLOW			4060
INSTANTANEOUS PEAK STAGE			14.41
INSTANTANEOUS LOW FLOW			1.0*
ANNUAL RUNOFF (CFSM)	.63		1.19
ANNUAL RUNOFF (INCHES)	8.49		16.13
10 PERCENT EXCEEDS	256		523
50 PERCENT EXCEEDS	40		39
90 PERCENT EXCEEDS	10		14
			11

\* See REMARKS.

## NEUSE RIVER BASIN

02090380 CONTENTNEA CREEK NEAR LUCAMA, NC--Continued



## NEUSE RIVER BASIN

0209096970 MOCCASIN RUN NEAR PATETOWN, NC

LOCATION.--Lat 35°28'46", long 77°54'37", Wayne County, Hydrologic Unit 03020203, on left bank at downstream side of bridge on State Highway 111, and 1.5 mi northeast of Patetown.

DRAINAGE AREA.--1.89 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 90 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minimum discharge for period of record and current water year also occurred July 15, 16, 1998.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	1.4	2.5	1.5	4.2	2.5	15	2.5	.91	.05	1.3	1.3
2	.45	1.8	1.5	1.5	3.5	2.4	12	2.6	.50	.06	.95	1.3
3	.42	1.1	1.2	1.5	4.0	2.3	5.1	2.0	.37	.04	.82	2.4
4	.35	.68	1.1	1.4	79	2.2	11	2.6	6.0	.02	.67	5.6
5	.37	.50	1.0	1.5	33	2.2	5.7	3.7	5.7	.14	.52	2.1
6	.32	.52	.86	1.5	13	2.1	3.9	2.3	1.7	.12	.30	1.4
7	.29	.64	.87	1.6	7.8	2.3	3.0	4.7	1.5	.05	.29	1.3
8	.21	.67	.85	15	6.0	9.8	2.6	40	1.1	.04	.28	1.4
9	.19	.60	1.0	5.6	4.6	100	57	7.0	.88	.06	3.2	1.3
10	.24	.55	1.2	2.5	3.7	36	24	4.0	.99	.21	3.6	1.1
11	.24	.92	1.2	2.1	4.2	16	10	4.9	1.0	.21	1.3	.99
12	.22	.78	1.1	1.9	5.1	10	6.1	4.1	.95	.12	1.0	.97
13	.24	2.2	1.1	2.0	3.6	6.9	4.4	2.9	.85	.05	.84	.91
14	.25	3.0	1.1	1.9	3.2	5.5	3.8	2.4	.80	.04	.76	.87
15	.23	1.4	1.1	2.7	2.8	4.8	3.4	2.0	2.0	.02	.66	.89
16	.30	.98	1.1	8.2	3.9	4.3	2.8	1.9	1.4	.02	.60	.88
17	.42	.78	1.1	7.5	81	4.9	3.4	1.8	1.0	.64	.65	.87
18	.39	.85	1.1	3.2	35	14	3.2	1.8	.84	.36	.62	.85
19	.72	.88	1.1	22	15	37	2.8	1.7	.57	.25	.55	.80
20	.68	.78	1.1	15	8.0	26	3.4	1.6	.50	.24	.39	.80
21	.40	.77	1.1	5.5	5.7	26	2.6	1.6	.42	.14	.16	.75
22	.43	.95	2.3	3.8	4.4	16	27	1.5	.85	.06	.13	.72
23	.39	.82	1.9	25	5.4	8.2	22	6.5	1.0	.05	.12	.67
24	.31	.79	3.3	25	4.6	6.3	8.2	3.7	.81	.03	.08	.45
25	.32	.84	3.1	8.2	3.7	4.9	4.9	1.9	.59	.03	.08	.27
26	.54	.97	1.8	5.1	3.0	3.9	3.4	1.7	.59	1.1	2.9	.18
27	1.3	.88	5.0	23	2.8	3.6	2.7	1.7	.38	1.0	12	.17
28	1.0	.75	2.9	37	2.7	3.3	2.6	1.6	.32	.87	2.9	.19
29	.51	.80	2.0	13	---	2.9	2.2	1.4	.19	.60	1.6	.30
30	.44	5.1	1.9	7.6	---	2.7	2.0	1.1	.14	23	1.3	1.1
31	.51	---	1.6	5.2	---	2.6	---	1.0	---	4.6	1.1	---
TOTAL	13.26	33.70	50.08	258.5	352.9	371.6	260.2	120.2	34.85	34.22	41.67	32.83
MEAN	.43	1.12	1.62	8.34	12.6	12.0	8.67	3.88	1.16	1.10	1.34	1.09
MAX	1.3	5.1	5.0	37	81	100	57	40	6.0	.23	.12	5.6
MIN	.19	.50	.85	1.4	2.7	2.1	2.0	1.0	.14	.02	.08	.17
CFSM	.23	.59	.85	4.41	6.67	6.34	4.59	2.05	.61	.58	.71	.58
IN.	.26	.66	.99	5.09	6.95	7.31	5.12	2.37	.69	.67	.82	.65

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

MEAN	2.25	2.36	2.81	4.47	4.43	5.96	3.73	2.42	2.09	2.00	2.78	2.44
MAX	11.1	5.70	6.62	10.0	12.6	12.0	11.2	7.12	10.2	7.57	8.22	14.7
(WY)	1997	1993	1993	1993	1998	1998	1989	1989	1995	1989	1992	1996
MIN	.43	.63	.69	1.38	1.42	2.29	1.28	.76	.28	.24	.38	.26
(WY)	1998	1995	1995	1991	1991	1992	1995	1994	1994	1994	1993	1990

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

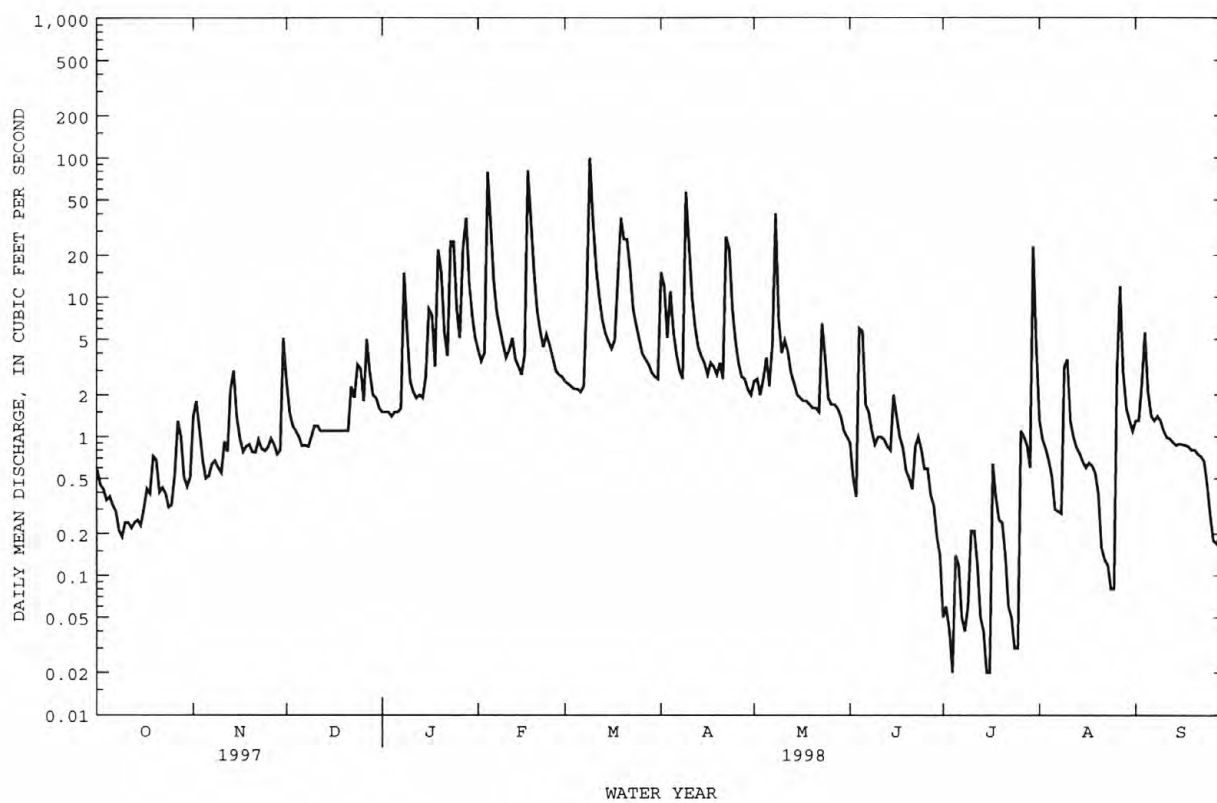
## WATER YEARS 1988 - 1998

ANNUAL TOTAL	781.43	1604.01	
ANNUAL MEAN	2.14	4.39	
HIGHEST ANNUAL MEAN			3.23
LOWEST ANNUAL MEAN			4.69
HIGHEST DAILY MEAN			1.86
LOWEST DAILY MEAN	30	Feb 15	100
ANNUAL SEVEN-DAY MINIMUM	.11	Sep 9	.02
INSTANTANEOUS PEAK FLOW	.20	Sep 3	.07
INSTANTANEOUS PEAK STAGE			185
INSTANTANEOUS LOW FLOW			4.76
ANNUAL RUNOFF (CFSM)	1.13		.02*
ANNUAL RUNOFF (INCHES)	15.38		2.33
10 PERCENT EXCEEDS	4.5		31.57
50 PERCENT EXCEEDS	1.1		8.2
90 PERCENT EXCEEDS	.29		1.4
			.24
			.30

\* See REMARKS.

## NEUSE RIVER BASIN

0209096970 MOCCASIN RUN NEAR PATETOWN, NC--Continued



## NEUSE RIVER BASIN

02091000 NAHUNTA SWAMP NEAR SHINE, NC

LOCATION.--Lat 35°29'20", long 77°48'22", Greene County, Hydrologic Unit 03020203, on right bank 10 ft downstream of bridge on Secondary Road 1058, 2 mi upstream from Appletree Swamp, 3.5 mi north of Shine, and 8 mi northwest of Snow Hill.

DRAINAGE AREA.--80.4 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1954 to current year. Monthly discharges only for some periods, published in WSP 1723.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 50.74 ft above sea level. Prior to Apr. 1, 1955, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	29	143	75	190	107	167	81	41	14	e105	33
2	13	60	106	65	145	100	385	90	34	15	e51	40
3	12	46	75	60	133	95	254	75	30	13	e30	37
4	10	27	59	56	578	87	291	77	61	12	e22	183
5	8.9	19	50	53	934	81	221	159	321	19	e18	126
6	8.2	15	43	54	731	76	166	107	e190	26	e17	67
7	7.9	14	39	63	519	77	137	78	e130	19	e16	47
8	7.2	13	35	195	356	126	119	415	e90	14	15	52
9	11	13	36	320	206	1020	589	363	e60	14	49	97
10	8.4	11	40	202	161	1700	1180	160	e50	47	117	53
11	7.2	11	45	146	148	842	517	150	e39	28	61	39
12	6.7	11	42	108	192	518	253	144	e33	20	32	32
13	6.5	29	41	93	160	270	182	115	e28	17	24	26
14	6.6	111	37	86	140	174	148	92	e25	15	21	24
15	6.7	82	34	91	124	149	136	74	e195	12	18	23
16	7.2	53	33	199	117	134	118	62	e150	11	18	21
17	8.0	40	32	291	570	129	116	54	e82	e35	18	21
18	8.3	34	30	209	1190	263	120	54	e60	e31	16	20
19	11	32	30	273	737	363	114	44	e42	e24	15	20
20	13	30	31	425	494	656	123	40	e32	e20	14	19
21	11	29	30	346	311	533	109	38	e24	e17	13	19
22	9.6	28	53	245	177	376	178	36	e21	e14	12	19
23	10	27	103	279	170	e270	473	134	e19	e12	11	18
24	9.1	25	91	473	175	e190	297	206	e36	e11	10	16
25	7.4	23	198	427	150	e150	162	101	e22	e10	9.9	15
26	7.8	26	123	313	128	e130	126	68	e19	e41	31	15
27	24	26	154	269	117	e115	102	99	e18	e36	356	16
28	28	26	197	483	110	e100	99	192	e16	e26	185	14
29	15	25	136	505	---	e90	85	83	e14	e20	78	14
30	12	86	120	402	---	e100	75	62	e13	e89	49	19
31	11	---	96	314	---	e102	---	49	---	e410	38	---
TOTAL	329.7	1001	2282	7120	9163	9123	7042	3502	1895	1092	1469.9	1145
MEAN	10.6	33.4	73.6	230	327	294	235	113	63.2	35.2	47.4	38.2
MAX	28	111	198	505	1190	1700	1180	415	321	410	356	183
MIN	6.5	11	30	53	110	76	75	36	13	10	9.9	14
CFSM	.13	.42	.92	2.86	4.07	3.66	2.92	1.41	.79	.44	.59	.47
IN.	.15	.46	1.06	3.29	4.24	4.22	3.26	1.62	.88	.51	.68	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1998, BY WATER YEAR (WY)

	MEAN	49.9	55.7	70.8	119	144	148	105	61.0	53.6	60.2	70.5	61.3
MAX	473	253	184	261	327	311	253	277	243	395	360	396	
(WY)	1965	1978	1958	1993	1998	1983	1974	1989	1995	1965	1974	1955	
MIN	2.26	11.2	19.7	31.1	34.6	33.7	19.1	10.8	5.35	3.10	4.71	2.58	
(WY)	1955	1987	1995	1955	1988	1986	1986	1986	1986	1987	1954	1954	

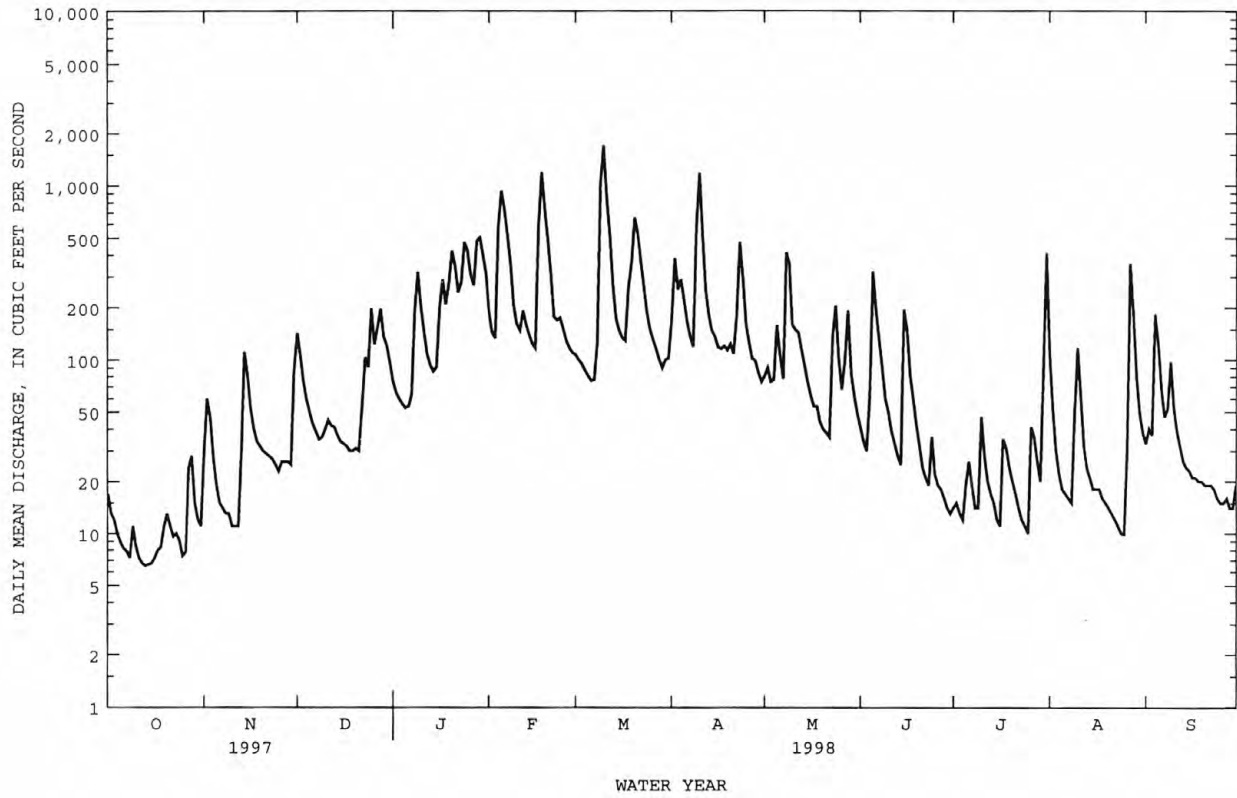
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1954 - 1998		
ANNUAL TOTAL	19931.5			45164.6					
ANNUAL MEAN	54.6			124			84.1		
HIGHEST ANNUAL MEAN							150		
LOWEST ANNUAL MEAN							22.9		
HIGHEST DAILY MEAN	396	Mar 15		1700	Mar 10		4560	Oct 6	1964
LOWEST DAILY MEAN	1.1	Jul 9		6.5	Oct 13		1.0	Oct 7	1954
ANNUAL SEVEN-DAY MINIMUM	2.3	Sep 1		7.0	Oct 11		1.3	Oct 4	1954
INSTANTANEOUS PEAK FLOW				2060	Mar 10		5470	Oct 6	1964
INSTANTANEOUS PEAK STAGE				11.50	Mar 10		14.14	Oct 6	1964
INSTANTANEOUS LOW FLOW				6.2	Oct 12		1.0*	Oct 7	1954
ANNUAL RUNOFF (CFSM)	.68			1.54			1.05		
ANNUAL RUNOFF (INCHES)	9.22			20.90			14.21		
10 PERCENT EXCEEDS	124			313			176		
50 PERCENT EXCEEDS	31			54			44		
90 PERCENT EXCEEDS	4.5			12			10		

e Estimated.

\* See REMARKS.

## NEUSE RIVER BASIN

02091000 NAHUNTA SWAMP NEAR SHINE, NC--Continued





## NEUSE RIVER BASIN

02091500 CONTENTINEA CREEK AT HOOKERTON, NC

LOCATION.--Lat 35°25'44", long 77°34'59", Greene County, Hydrologic Unit 03020203, on left bank at bridge on State Highway 123 at Hookerton, and 2.2 mi upstream from Wheat Swamp Creek.

DRAINAGE AREA.--733 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1928 to current year.

REVISED RECORDS.--WSP 1333: 1903-35. WSP 1383: Drainage area. WSP 1503: 1951. WSP 1723: 1932. WDR NC-90-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 14.85 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Nov. 26, 1934, nonrecording gage at site 1,400 ft upstream and Nov. 27, 1934, to Sept. 30, 1987, water-stage recorder at site 0.3 mi upstream at present datum. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Buckhorn Reservoir (station 02090370) since September 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1928 reached a stage of 23.3 ft, from floodmark; high water of autumn 1924 was about 0.1 ft lower, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e190	e80	e320	1310	3770	1750	1460	679	365	117	363	1040
2	e170	e100	e450	1290	3740	1500	1310	568	311	111	343	937
3	e140	e150	e520	1240	3600	1340	1330	522	272	110	247	826
4	e110	e120	656	1140	3990	1210	1510	517	256	108	186	869
5	e100	e100	659	985	4560	1100	1680	685	498	109	147	944
6	e90	e90	594	792	4620	1010	1760	702	677	142	122	988
7	e75	e80	488	640	4880	924	1690	675	619	218	112	1010
8	e65	e75	388	609	5560	880	1520	973	441	195	117	1030
9	e60	e70	323	812	5830	1230	1840	1120	345	166	101	1050
10	e55	e70	286	1040	5400	1940	2620	1180	304	242	100	1100
11	e50	e80	278	1200	4690	2920	2660	1140	279	357	178	1100
12	e48	e120	287	1320	4110	4120	2510	996	254	421	210	982
13	e46	e140	296	1430	3620	5310	2170	865	234	302	178	737
14	e45	e200	299	1530	3210	5750	1760	751	229	209	152	508
15	e44	e300	294	1550	2820	5340	1470	643	327	169	131	371
16	e42	e200	280	e1500	2470	4570	1310	553	386	152	121	296
17	e40	e150	263	e1200	2600	3820	1170	481	334	137	157	251
18	e42	e140	249	e1000	3010	3290	1030	425	263	219	138	222
19	e46	e130	238	e1400	3160	2970	910	379	206	471	118	203
20	e50	e120	228	e2000	3380	2800	827	343	175	322	103	187
21	e54	e115	218	e2500	3670	2810	781	305	159	194	92	175
22	e40	e110	226	2520	3780	2940	801	272	150	144	84	166
23	e44	e105	328	2750	3660	3190	1000	328	144	120	78	157
24	e40	e105	437	3120	3400	3480	1170	564	180	107	73	148
25	e54	e100	673	3320	3090	3640	1340	667	201	96	67	139
26	e65	e100	873	3420	2750	3600	1400	585	190	94	73	131
27	e80	e95	985	3480	2410	3400	1360	511	166	99	535	124
28	e70	e110	1150	3700	2070	3090	1260	653	142	107	951	116
29	e60	e200	1250	3790	---	2720	1090	731	123	121	1070	110
30	e50	e280	1310	3790	---	2300	876	596	116	129	1070	111
31	e70	---	1320	3750	---	1820	---	447	---	159	1050	---
TOTAL	2135	3835	16166	60128	103850	86764	43615	19856	8346	5647	8467	16028
MEAN	68.9	128	521	1940	3709	2799	1454	641	278	182	273	534
MAX	190	300	1320	3790	5830	5750	2660	1180	677	471	1070	1100
MIN	40	70	218	609	2070	880	781	272	116	94	67	110
CFSM	.09	.17	.71	2.65	5.06	3.82	1.98	.87	.38	.25	.37	.73
IN.	.11	.19	.82	3.05	5.27	4.40	2.21	1.01	.42	.29	.43	.81

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1998, BY WATER YEAR (WY)

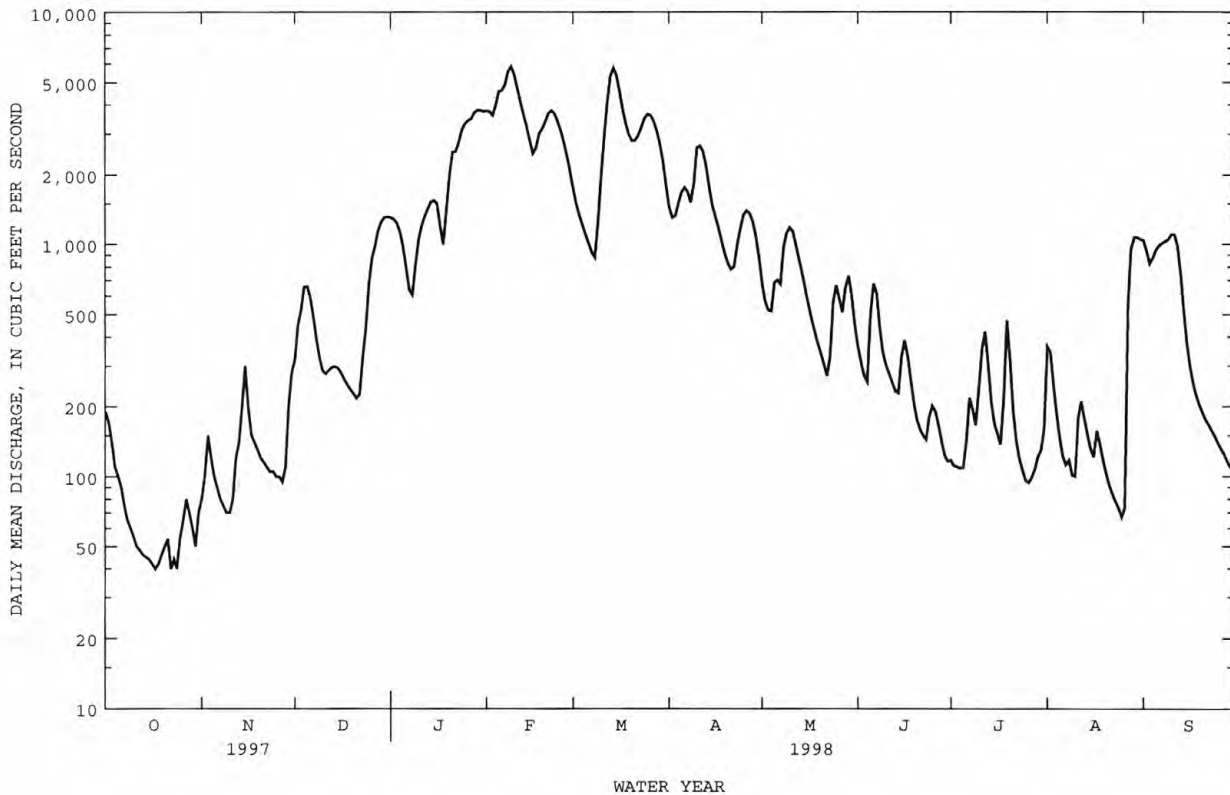
	454	458	683	1115	1389	1469	1034	590	464	560	632	522
MEAN	454	458	683	1115	1389	1469	1034	590	464	560	632	522
MAX	4183	2150	2349	2626	4316	3491	2752	3363	1770	2203	2422	3675
(WY)	1965	1948	1949	1993	1948	1989	1989	1989	1995	1929	1960	1955
MIN	20.3	41.1	64.7	92.5	239	382	202	82.9	38.5	63.3	37.2	24.9
(WY)	1955	1955	1934	1934	1934	1981	1986	1986	1986	1952	1954	1954

NEUSE RIVER BASIN

02091500 CONTENTINEA CREEK AT HOOKERTON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1929 - 1998	
ANNUAL TOTAL	192621		374837		768	
ANNUAL MEAN	528		1027		1422	1960
HIGHEST ANNUAL MEAN					242	1951
LOWEST ANNUAL MEAN					16000	Oct 7 1964
HIGHEST DAILY MEAN	2250	Feb 22	5830	Feb 9	15	Oct 28 1933
LOWEST DAILY MEAN	40	Oct 17	40	Oct 17	16	Oct 8 1954
ANNUAL SEVEN-DAY MINIMUM	44	Oct 13	44	Oct 13	17200	Oct 8 1964
INSTANTANEOUS PEAK FLOW			5910	Feb 9	22.11	Oct 8 1964
INSTANTANEOUS PEAK STAGE			15.27	Feb 9	15	Oct 28 1933
INSTANTANEOUS LOW FLOW			NOT DETERMINED		1.05	
ANNUAL RUNOFF (CFSM)	.72		1.40		14.23	
ANNUAL RUNOFF (INCHES)	9.78		19.02		1910	
10 PERCENT EXCEEDS	1360		3240		445	
50 PERCENT EXCEEDS	236		437		86	
90 PERCENT EXCEEDS	65		88			

e Estimated.



## NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1969-72, 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1979 to September 1984.

WATER TEMPERATURE: October 1949 to September 1950, March 1979 to September 1984.

INSTRUMENTATION.--Water-quality monitor from October 1981 to September 1984.

REMARKS.--Station operated as part of NAWQA Program from March 1993 to present. Station also operated as part of NASQAN network from March 1979 to September 1993. Miscellaneous chemical data published for water years 1945, 1947-49, 1955-67.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 218 microsiemens, Nov. 1, 10, 1983; minimum daily, 41 microsiemens, June 11, 1979.

WATER TEMPERATURE: Maximum, 29.5°C, Aug. 23, 1983; minimum daily, 1.0°C, Jan. 13, 14, 1981, Jan. 18, 1982.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT											
15...	1230	45	131	7.0	19.9	768	7.7	83	26	6.6	2.4
DEC											
03...	1400	591	139	6.8	10.2	763	9.4	83	27	6.5	2.7
22...	1200	217	128	6.8	7.3	767	10.6	87	27	6.5	2.6
JAN											
30...	1315	3800	75	6.3	8.5	754	9.8	85	17	3.9	1.8
FEB											
26...	1430	2710	57	6.5	11.4	760	8.5	78	16	3.7	1.6
MAR											
31...	1400	1780	75	6.7	19.5	765	6.8	74	18	4.4	1.8
APR											
08...	1045	1540	78	7.1	16.5	758	7.3	75	19	4.6	1.9
21...	1330	782	89	6.8	18.5	763	6.5	69	22	5.1	2.3
MAY											
07...	1100	678	78	6.3	19.6	--	8.3	--	20	4.7	2.1
21...	1330	303	98	6.6	23.4	754	6.7	79	23	5.4	2.3
JUN											
03...	1100	275	95	7.1	26.2	754	5.1	64	23	5.4	2.3
26...	1130	192	107	7.2	27.8	760	6.1	78	24	5.4	2.5
JUL											
09...	1430	164	136	6.7	27.7	757	6.0	77	23	5.4	2.3
31...	1230	145	--	6.6	26.9	761	4.3	--	22	4.9	2.3
AUG											
13...	1115	178	83	7.1	26.4	764	5.2	64	18	4.3	1.8
31...	1430	1050	--	6.7	27.1	760	4.6	--	20	5.1	1.9
SEP											
29...	1445	110	122	7.0	24.0	760	5.3	64	27	6.7	2.5

## NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 15...	12	44	1	4.1	26	21	9.4	14	.17	6.9	78
DEC 03...	11	39	.9	7.1	19	16	12	17	.15	6.7	101
22...	9.9	40	.8	4.8	20	17	12	15	.12	6.7	93
JAN 30...	4.3	30	.5	3.4	6	5	8.0	7.8	<.10	6.7	76
FEB 26...	3.8	30	.4	2.8	8	6	6.4	6.6	<.10	4.1	54
MAR 31...	4.5	31	.5	2.8	11	9	6.3	7.8	<.10	4.1	63
APR 08...	4.8	31	.5	3.2	11	9	5.7	8.2	<.10	4.1	71
21...	5.8	33	.5	2.9	14	12	5.8	9.7	.13	4.8	70
MAY 07...	5.9	35	.6	2.9	13	10	5.8	10	.17	4.4	75
21...	6.9	36	.6	2.8	17	14	6.1	11	.11	5.5	72
JUN 03...	7.0	36	.6	3.0	18	15	5.8	9.6	.17	5.3	73
26...	8.2	39	.7	3.5	19	16	7.3	12	.17	5.8	80
JUL 09...	14	51	1	4.2	20	17	10	17	.19	5.1	90
31...	9.8	45	.9	3.5	18	15	7.4	13	.15	6.8	80
AUG 13...	6.3	37	.6	3.9	14	12	6.1	9.3	.17	6.1	489
31...	6.1	33	.6	4.5	15	12	10	7.8	.13	6.0	78
SEP 29...	11	44	.9	3.5	21	18	8.0	14	.17	9.4	96

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
OCT 15...	<.010	.664	<.015	--	--	.46	.37	1.1	1.0	.155	.049
DEC 03...	<.010	.789	<.020	--	--	.57	.45	1.4	1.2	.105	.090
22...	.012	.838	<.020	--	--	.46	.41	1.3	1.2	.069	.059
JAN 30...	.010	.703	.027	.62	.49	.65	.52	1.3	1.2	.060	.029
FEB 26...	.012	.514	.067	.52	.44	.58	.51	1.1	1.0	.071	.036
MAR 31...	<.010	.452	.071	.56	.40	.63	.47	1.1	.93	.089	.076
APR 08...	.011	.530	.078	.65	.66	.73	.74	1.3	1.3	.131	.101
21...	.021	.839	.117	.48	.49	.60	.60	1.4	1.4	.134	.088
MAY 07...	<.010	.891	.073	.63	.48	.70	.55	1.6	1.4	.144	.065
21...	.020	.827	.079	.45	.53	.53	.61	1.4	1.4	.100	.096
JUN 03...	.024	.736	.101	.56	.46	.66	.56	1.4	1.3	.117	.110
26...	.011	.863	.079	.50	.50	.57	.58	1.4	1.4	.185	.090
JUL 09...	<.010	.795	.078	.60	.57	.68	.65	1.5	1.4	.171	.090
31...	<.010	.712	.076	.47	.35	.55	.43	1.3	1.1	.211	.086
AUG 13...	.017	.685	.142	.43	.34	.58	.48	1.3	1.2	.147	.074
31...	.010	.282	.110	.84	.64	.95	.75	1.2	1.0	.161	.075
SEP 29...	.013	.924	.089	.54	.40	.63	.49	1.6	1.4	.202	.118

## NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDEED TOTAL (MG/L AS C) (00689)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)
OCT 15...	.039	320	57	6.2	.40	.005	.006	<.0020	<.0020	<.0040	<.0040
DEC 03...	.085	760	19	8.9	.40	--	--	--	--	--	--
22...	.067	730	24	6.7	.60	--	--	--	--	--	--
JAN 30...	.041	700	17	11	.60	--	--	--	--	--	--
FEB 26...	.041	480	15	10	.40	--	--	--	--	--	--
MAR 31...	.058	750	28	10	.40	.005	.029	<.0020	<.0020	E.0027	<.0040
APR 08...	.087	1200	32	11	.30	.043	.168	<.0020	<.0020	<.0040	<.0040
21...	.058	1100	40	9.6	.80	.032	.099	<.0020	<.0020	.0053	.0061
MAY 07...	.057	960	29	9.0	1.1	.093	.587	<.0020	--	.0058	--
21...	.063	1100	50	8.7	.70	.047	.354	<.0020	<.0020	<.0040	<.0040
JUN 03...	.100	1200	72	8.1	.50	.022	.174	<.0020	<.0020	.0070	<.0040
26...	.096	830	61	8.4	1.1	.013	.052	<.0020	<.0020	.0065	.0431
JUL 09...	.091	780	63	8.5	.50	.011	.042	<.0020	<.0020	E.0081	.213
31...	.110	1000	69	6.0	.70	<.002	.011	<.0020	<.0020	<.0040	.0994
AUG 13...	.091	660	46	9.7	.90	<.002	.035	<.0020	<.0020	<.0040	.0258
31...	.077	510	85	12	1.4	.015	.013	<.0020	<.0020	<.0040	<.0250
SEP 29...	.118	1500	93	8.1	1.1	--	--	--	--	--	--

[illegible]

## NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible]

## NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, NC--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	DEETHYL- ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	METHYL- AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	SEDI- MENT, DIS- CHARGE, SUS- PENDE D (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE D (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 15...	<.0010	<.0020	<.0020	<.0010	<.0030	<.0030	<.0070	<.0020	10	1.2	52
DEC 03...	--	--	--	--	--	--	--	--	27	43	85
22...	--	--	--	--	--	--	--	--	4	2.3	61
JAN 30...	--	--	--	--	--	--	--	--	7	72	49
FEB 26...	--	--	--	--	--	--	--	--	6	44	62
MAR 31...	<.0010	<.0020	E.0038	<.0010	<.0030	<.0030	<.0070	<.0020	8	38	84
APR 08...	<.0010	<.0020	E.0041	<.0010	E.0043	<.0030	<.0070	<.0020	8	33	85
21...	<.0010	.0054	E.0055	<.0010	E.0095	<.0030	<.0070	<.0020	11	23	76
MAY 07...	<.0010	<.0020	--	<.0010	E.0303	E.0232	<.0070	<.0020	11	20	84
21...	<.0010	<.0020	E.0104	<.0010	<.0030	E.0106	<.0070	<.0020	7	5.7	89
JUN 03...	<.0010	.0060	E.0189	<.0010	E.0194	E.0642	<.0070	<.0020	12	8.9	74
26...	<.0010	.0068	E.0096	<.0010	E.0199	<.0030	<.0070	<.0020	8	4.1	90
JUL 09...	<.0010	.0058	E.0087	<.0010	E.0129	<.0030	<.0070	<.0020	9	4.0	75
31...	<.0010	<.0020	E.0043	<.0010	<.0030	<.0030	<.0070	<.0020	7	2.7	89
AUG 13...	<.0010	<.0020	E.0052	<.0010	E.0560	<.0030	<.0070	<.0020	--	--	--
31...	<.0010	<.0020	E.0040	<.0010	E.469	<.0030	<.0070	<.0020	12	34	86
SEP 29...	--	--	--	--	--	--	--	--	8	2.4	57





## NEUSE RIVER BASIN

02091814 NEUSE RIVER NEAR FORT BARNWELL, NC

LOCATION.--Lat 35°18'40", long 77°18'20", Craven County, Hydrologic Unit 03020202, on left bank 0.2 mi upstream from bridge on Secondary Road 1470, 1.5 mi upstream from Core Creek and 2.0 mi east of Fort Barnwell.

DRAINAGE AREA.--3,900 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1996 to current year. Occasional measurements water years 1955-1995.

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is at sea level. Satellite telemetry at station.

REMARKS.--Records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--An estimated peak flow of 31,900 ft<sup>3</sup>/s occurred on Sept. 11, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	1200	2080	6520	16600	14700	14700	6400	2960	884	1510	4570
2	1710	1210	2450	6610	16700	13500	14000	5580	2740	949	1670	4300
3	1570	1320	2760	6560	16800	12300	13300	4690	2450	1000	1650	3880
4	1330	1440	3030	6330	19100	11300	12900	4030	2170	916	1520	3680
5	1140	1550	3200	5830	22300	10500	12700	3630	2290	806	1340	3730
6	1000	1650	3220	5240	23800	9910	12600	3510	2560	1090	1200	3950
7	900	1460	3120	4680	24100	9510	12600	3540	2850	1110	1090	4250
8	905	1360	2860	4280	23700	9320	12600	3820	2940	1110	964	4610
9	846	1250	2550	4190	23000	9640	13000	4140	2830	1420	943	4950
10	738	1390	2300	4490	22300	10200	14200	4510	2550	1560	889	5020
11	750	1400	2070	5000	21600	11100	15300	4900	2240	1490	862	4730
12	984	1370	2000	5490	21000	12500	15900	5220	2020	1430	1070	4270
13	904	1520	1980	6010	20300	14300	16000	5380	1820	1340	1290	3820
14	833	1640	2020	6480	19500	16300	15600	5410	1750	1290	1350	3350
15	839	1720	2140	6890	18500	18200	14900	5310	1800	1130	1380	2800
16	909	1970	2160	7330	17200	19800	14300	5160	1940	940	1270	2230
17	961	2230	2020	7730	17100	21100	13600	4970	2100	972	1130	1740
18	920	2520	1910	8010	18100	21700	12900	4660	2060	1250	1040	1480
19	1060	2620	1820	8410	18500	21800	12200	4170	1930	1420	1070	1420
20	1180	2510	1700	9050	18400	21900	11300	3610	1810	1610	1170	1320
21	1250	2280	1680	9520	18000	21200	10400	3130	1580	1590	1260	1250
22	1150	1990	1750	9860	17500	20000	9500	2700	1390	1360	1200	1150
23	1280	1770	1810	10400	17300	18600	8350	2500	1260	1050	1030	1190
24	1320	1590	2110	11500	17300	17200	7500	2730	1310	865	886	1280
25	1180	1550	2760	12700	17200	16100	7080	2790	1340	838	837	1090
26	1180	1570	3420	13500	17000	15500	7020	2740	1230	872	1260	979
27	1030	1600	4160	14200	16500	15300	7120	2790	1080	987	2510	896
28	1040	1570	4880	15000	15700	15500	7180	2920	1090	1010	3030	795
29	1170	1460	5460	15600	---	15700	7120	2990	1120	1240	3850	942
30	1110	1650	5970	16100	---	15700	6880	3160	902	1350	4480	896
31	1170	---	6330	16400	---	15300	---	3160	---	1300	4740	---
TOTAL	34139	50360	87720	269910	535100	475680	352750	124250	58112	36179	49491	80568
MEAN	1101	1679	2830	8707	19110	15340	11760	4008	1937	1167	1596	2686
MAX	1780	2620	6330	16400	24100	21900	16000	6400	2960	1610	4740	5020
MIN	738	1200	1680	4190	15700	9320	6880	2500	902	806	837	795
CFSM	.28	.43	.73	2.23	4.90	3.93	3.01	1.03	.50	.30	.41	.69
IN.	.33	.48	.84	2.57	5.10	4.54	3.36	1.19	.55	.35	.47	.77

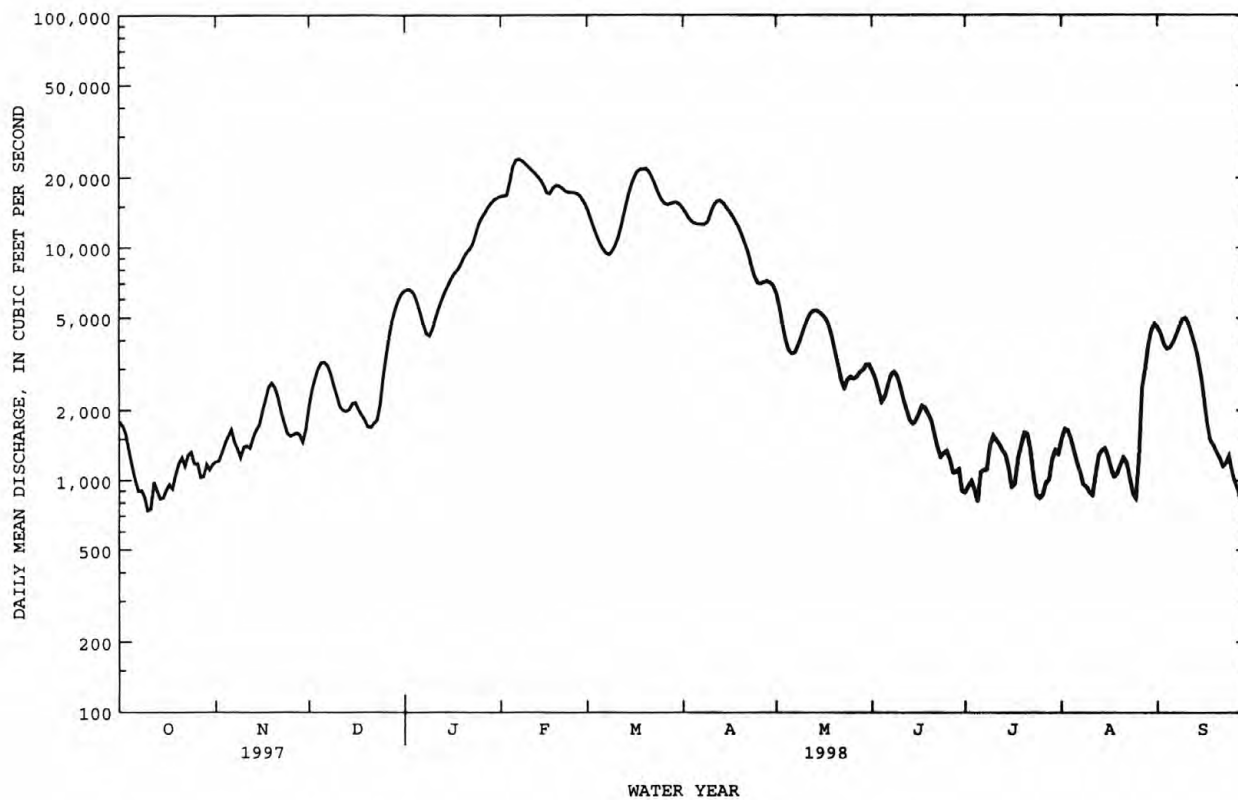
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

MEAN	5423	2944	4900	7687	12740	10540	7342	4515	1915	1252	1465	1864
MAX	9745	4210	6969	8707	19110	15340	11760	5023	1937	1338	1596	2686
(WY)	1997	1997	1997	1998	1998	1998	1998	1997	1998	1997	1998	1998
MIN	1101	1679	2830	6666	6366	5736	2925	4008	1893	1167	1333	1041
(WY)	1998	1998	1998	1997	1997	1997	1997	1998	1997	1998	1997	1997

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1997 - 1998
ANNUAL TOTAL	1149245	2154259	
ANNUAL MEAN	3149	5902	5172
HIGHEST ANNUAL MEAN			5902
LOWEST ANNUAL MEAN			4442
HIGHEST DAILY MEAN	9150	Feb 25	24100
LOWEST DAILY MEAN	503	Aug 18	503
ANNUAL SEVEN-DAY MINIMUM	722	Aug 13	722
INSTANTANEOUS PEAK FLOW			24300
INSTANTANEOUS PEAK STAGE		14.01	Feb 6
INSTANTANEOUS LOW FLOW		576	Oct 11
ANNUAL RUNOFF (CFSM)	.81	1.51	1.33
ANNUAL RUNOFF (INCHES)	10.96	20.55	18.02
10 PERCENT EXCEEDS	6930	16500	12900
50 PERCENT EXCEEDS	2020	2760	3520
90 PERCENT EXCEEDS	920	1010	1000

## NEUSE RIVER BASIN

02091814 NEUSE RIVER NEAR FORT BARNWELL, NC--Continued



## NEUSE RIVER BASIN

0209205053 SWIFT CREEK AT NC HWY 43 NEAR STREETS FERRY, NC

LOCATION.--Lat 35°13'56", long 77°06'52", Craven County, Hydrologic Unit 03020202, at downstream side of bridge on Highway 43, 0.5 mi upstream from mouth, 2 mi upstream from Little Fisher Creek, and 1.3 mi north-northeast of Streets Ferry.

DRAINAGE AREA.--269 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1996 to current year.

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 10 ft below sea level, from topographic map. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	182	127	603	1150	470	165	143	93	113	-640	1220
2	-217	56	445	515	959	441	63	255	421	85	-125	e1110
3	268	158	540	377	230	541	-186	136	231	124	489	e428
4	48	194	422	308	1020	361	396	96	51	208	230	e1420
5	26	-196	330	258	3040	270	153	259	218	-100	-11	615
6	39	288	191	197	3560	-439	405	331	216	198	169	e1120
7	-19	58	181	210	4010	454	382	314	585	401	198	971
8	30	89	134	244	4060	-35	322	500	395	386	.94	e416
9	29	-132	87	293	3460	425	410	863	371	-52	97	449
10	57	133	162	363	2430	763	448	1020	281	251	152	469
11	-176	31	-28	432	1610	865	1190	822	259	79	89	412
12	59	113	117	310	1390	894	1610	857	269	295	76	e393
13	97	-565	106	292	977	592	1820	28	200	165	17	214
14	-8.9	643	-3.0	-3.3	823	620	1530	278	156	113	-6.7	178
15	-27	3.9	-163	571	466	-281	968	533	416	223	264	180
16	-11	241	265	438	511	-166	636	427	625	155	96	110
17	19	146	84	624	705	-290	524	345	731	127	210	-15
18	-58	143	28	1000	2300	289	-310	108	538	161	194	-31
19	-53	67	102	598	2770	306	459	359	69	218	-40	203
20	-165	54	58	1560	2980	727	78	106	454	244	85	15
21	67	29	-104	1570	2760	1690	-457	165	210	116	235	252
22	54	-3.3	166	1710	1880	1860	94	27	219	141	87	120
23	13	-33	112	1720	971	1900	275	516	58	151	84	-361
24	145	19	216	1700	1680	1540	382	619	94	56	72	247
25	65	9.1	530	2060	819	906	136	960	159	52	-74	118
26	29	30	609	1850	447	974	166	693	245	-138	-1380	-87
27	177	-56	710	1490	558	697	-438	444	e68	321	457	-12
28	-120	14	631	2180	449	392	188	405	e-172	129	2490	-68
29	126	-76	558	1630	---	291	282	959	e253	166	1880	-217
30	21	235	1200	1780	---	132	136	806	e236	71	2050	14
31	-97	---	742	1380	---	118	---	570	---	-29	1950	---
TOTAL	563.91	1874.7	8555.0	28259.7	48015	17307	11827	13944	7949	4430	9395.24	9883
MEAN	18.2	62.5	276	912	1715	558	394	450	265	143	303	329
MAX	268	643	1200	2180	4060	1900	1820	1020	731	401	2490	1420
MIN	-217	-565	-163	-3.3	230	-439	-457	27	-172	-138	-1380	-361

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
MEAN	378	123	271	553	993	425	243	277	148	266	194	627
MAX	738	183	276	912	1715	558	394	450	265	594	303	1441
(WY)	1997	1997	1998	1998	1998	1998	1998	1998	1998	1996	1998	1996
MIN	18.2	62.5	267	194	271	291	90.8	104	30.1	62.9	80.9	109
(WY)	1998	1998	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997

## SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1996 - 1998

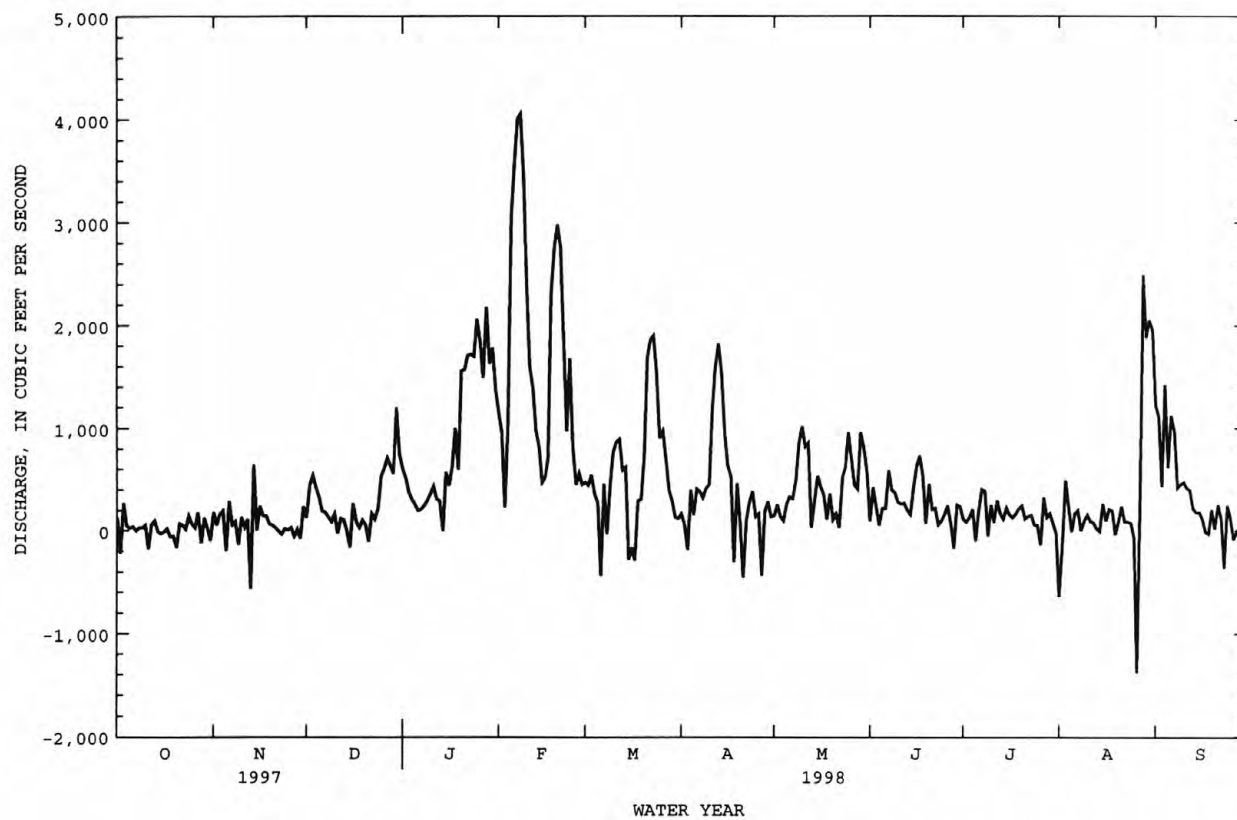
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
ANNUAL TOTAL	48194.41	162003.55	323	444	202	4060	Feb 8	4060	Feb 8	1998	1998
ANNUAL MEAN	132	444	202	4060	Feb 8	4060	Feb 8	4060	Feb 8	1998	1998
HIGHEST ANNUAL MEAN	1200	Dec 30	4060	Feb 8	4060	Feb 8	4060	Feb 8	4060	Feb 8	1998
LOWEST ANNUAL MEAN	-565	Nov 13	-1380	Aug 26	-1380	Aug 26	-1380	Aug 26	-1380	Aug 26	1998
HIGHEST DAILY MEAN	-43	Oct 14	-127	Aug 20	-127	Aug 20	-127	Aug 20	-127	Aug 20	1998
LOWEST DAILY MEAN	4840	Feb 7	4840	Feb 7	4840	Feb 7	4840	Feb 7	4840	Feb 7	1998
ANNUAL SEVEN-DAY MINIMUM	5.69	Feb 8	5.69	Feb 8	5.69	Feb 8	5.69	Feb 8	5.69	Feb 8	1998
INSTANTANEOUS PEAK FLOW	-3950	Aug 27	-3950	Aug 27	-3950	Aug 27	-3950	Aug 27	-3950	Aug 27	1998
INSTANTANEOUS PEAK STAGE	362	1400	993	155	155	155	155	155	155	155	1998
INSTANTANEOUS LOW FLOW	79	223	155	155	155	155	155	155	155	155	1998
10 PERCENT EXCEEDS	-14	-34	155	155	155	155	155	155	155	155	1998
50 PERCENT EXCEEDS											1998
90 PERCENT EXCEEDS											1998

e Estimated.

Note.--Negative values indicate reverse flow.

## NEUSE RIVER BASIN

0209205053 SWIFT CREEK AT NC HWY 43 NEAR STREETS FERRY, NC--Continued



## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC

LOCATION.--Lat 35°06'33", long 77°01'59" (revised), Craven County, Hydrologic Unit 03020204, at bridge on U.S. Highway 17 at New Bern, and 0.9 mi upstream from Trent River.

DRAINAGE AREA.--4,470 mi<sup>2</sup>.

## TIDAL-ELEVATION RECORDS

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10 ft above sea level; gage readings have been adjusted to sea level.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 8.28 ft, Sept. 5, 1996; minimum elevation recorded, -3.96 ft, Mar. 14, 1993.

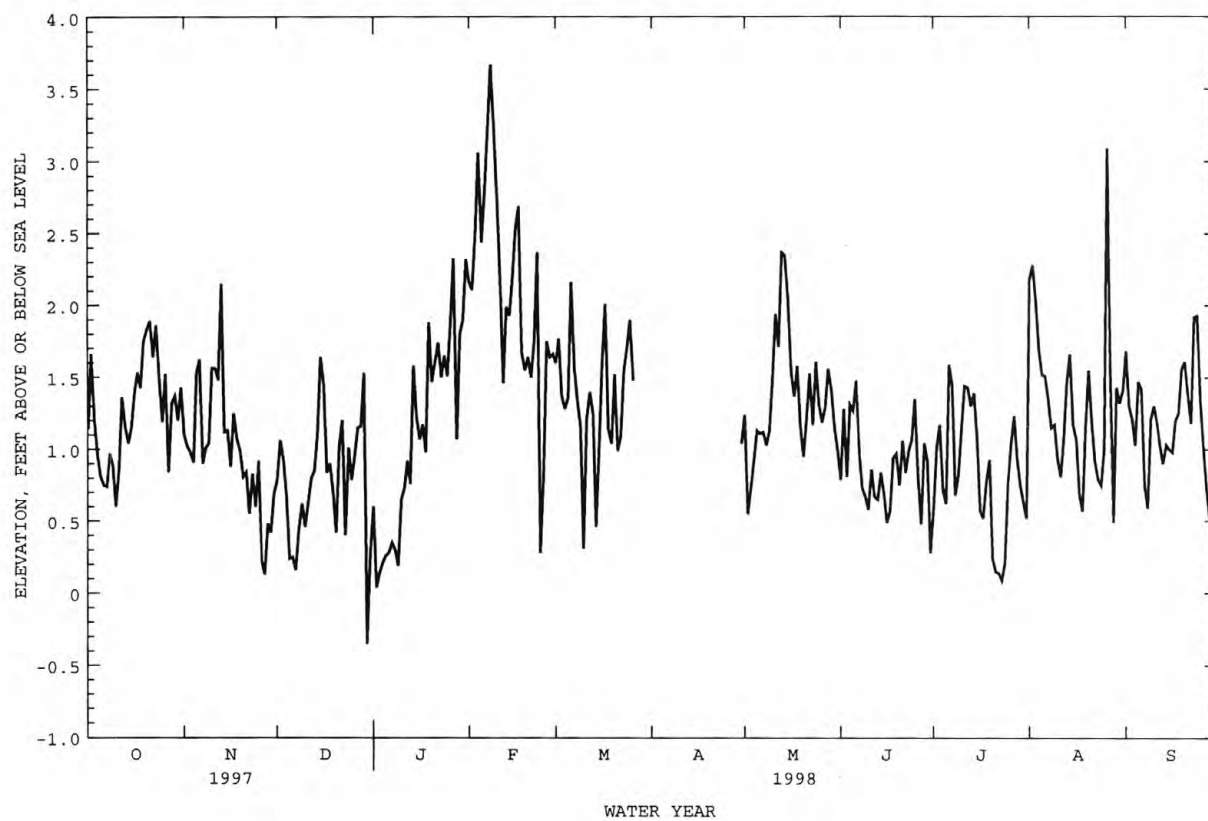
EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 5.35 ft, Aug. 27; minimum elevation, -2.32 ft, Aug. 28.

ELEVATION, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.14	1.10	.78	.60	2.16	1.60	---	1.24	.79	.58	2.18	1.68
2	1.66	1.02	1.06	.04	2.11	1.77	---	.55	1.28	1.01	2.28	1.30
3	1.20	.98	.93	.14	2.49	1.37	---	.73	.81	1.17	2.03	1.21
4	.96	.91	.67	.21	3.06	1.28	---	.93	1.31	.71	1.69	1.03
5	.81	1.53	.24	.26	2.44	1.36	---	1.13	1.27	.62	1.52	1.47
6	.75	1.62	.25	.28	2.79	2.16	---	1.11	1.48	1.59	1.51	1.42
7	.74	.90	.16	.35	3.22	1.57	---	1.12	.98	1.45	1.35	.74
8	.97	1.01	.44	.30	3.67	1.34	---	1.03	.73	.68	1.15	.59
9	.89	1.04	.62	.19	3.25	1.16	---	1.13	.67	.82	1.17	1.21
10	.60	1.56	.46	.65	2.76	.31	---	1.49	.58	1.14	.93	1.30
11	.86	1.56	.63	.73	2.22	1.21	---	1.94	.86	1.44	.81	1.19
12	1.36	1.48	.80	.92	1.46	1.40	---	1.71	.67	1.43	1.08	1.03
13	1.15	2.15	.85	.76	1.99	1.25	---	2.37	.65	1.30	1.47	.90
14	1.04	1.12	1.10	1.58	1.93	.46	---	2.35	.84	1.39	1.66	1.03
15	1.15	1.13	1.64	1.22	2.19	1.01	---	2.04	.69	1.08	1.17	1.00
16	1.39	.88	1.46	1.07	2.54	1.60	---	1.54	.49	.57	1.07	.98
17	1.53	1.25	.84	1.17	2.69	2.01	---	1.37	.57	.52	.68	1.20
18	1.43	1.07	.90	.98	1.67	1.14	---	1.58	.94	.77	.57	1.25
19	1.75	.99	.70	1.88	1.55	1.04	---	1.16	.97	.93	1.15	1.56
20	1.83	.81	.42	1.47	1.64	1.52	---	.95	.75	.24	1.55	1.61
21	1.89	.84	1.02	1.61	1.50	.99	---	1.21	1.06	.15	1.19	1.37
22	1.64	.55	1.20	1.74	1.75	1.09	---	1.53	.84	.14	.92	1.18
23	1.86	.83	.40	1.50	2.37	1.54	---	1.17	.99	.09	.79	1.92
24	1.49	.60	1.01	1.65	.28	1.70	---	1.61	1.07	.21	.75	1.93
25	1.19	.92	.79	1.51	.80	1.90	---	1.31	1.35	.76	1.01	1.34
26	1.52	.22	.96	1.88	1.75	1.48	---	1.19	.81	1.04	3.09	1.01
27	.84	.13	1.15	2.33	1.64	---	---	1.29	.48	1.23	1.52	.72
28	1.32	.48	1.16	1.07	1.66	---	---	1.56	1.04	.93	.49	.50
29	1.37	.42	1.53	1.80	---	---	---	1.42	.92	.75	1.43	1.26
30	1.20	.69	-.35	1.90	---	---	1.04	1.15	.28	.63	1.32	.95
31	1.43	---	.28	2.32	---	---	---	.99	---	.52	1.41	---
MEAN	1.26	.99	.78	1.10	2.13	---	---	1.35	.87	.84	1.32	1.20
MAX	1.89	2.15	1.64	2.33	3.67	---	---	2.37	1.48	1.59	3.09	1.93
MIN	.60	.13	-.35	.04	.28	---	---	.55	.28	.09	.49	.50

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC--Continued





## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1957 - 67, June 1996 to current year.

PERIOD OF DAILY RECORD.--

SALINITY (TOP AND BOTTOM): October 1956 to September 1967, June 1996 to current year.

pH (TOP AND BOTTOM), June 1996 to current year.

WATER TEMPERATURE (TOP AND BOTTOM): October 1956 to September 1967, June 1996 to current year.

DISSOLVED OXYGEN (TOP AND BOTTOM): June 1996 to current year.

DISSOLVED OXYGEN, PERCENT SATURATION, (TOP AND BOTTOM): June 1996 to current year.

INSTRUMENTATION.-- Water-quality monitor with satellite telemetry from June 1996 to current year.

REMARKS.--Station operated in cooperation with the North Carolina Department of Environment and Natural Resources. Top constituents were monitored at 8 ft above the streambed, and the bottom constituents, 2 ft above the streambed. Salinity and dissolved oxygen, percent saturation are computed. Dissolved oxygen, minimum extremes are reported only as <1.0 mg/L. Dissolved oxygen, percent saturation, minimum extremes are reported only as <10%.

EXTREMES FOR PERIOD OF RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	12.3, November 29, 1997	< 0.1, on many days during the period.
SALINITY (BOTTOM), ppt	15.4, November 30, 1997	< 0.1, on many days during the period.
pH (TOP), standard units	9.4, July 10, 1997	6.1, July 19, October 14, 1996
pH (BOTTOM), standard units	9.7, July 10, 11, 1997	5.7, September 24, 1996
WATER TEMPERATURE (TOP), °C	31.9, June 25, July 29, 1998	4.9, January 23, 1997
WATER TEMPERATURE (BOTTOM), °C	31.0, July 23, 1998	4.9, January 23, 1997
DISSOLVED OXYGEN (TOP), mg/L	17.4, December 19, 1997	< 1.0, on several days during the period
DISSOLVED OXYGEN (BOTTOM), mg/L	16.1, January 8, 1998	< 1.0, on several days during the period

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	12.3, November 29	< .1, on many days during the year
SALINITY (BOTTOM), ppt	15.4, November 30	< .1, on many days during the year
pH (TOP), standard units	9.3, November 29, August 12	6.2, February 9, 10, 13, 14, 21, 22, 26-28, March 1, 2
pH (BOTTOM), standard units	8.8, July 11	5.9, January 9
WATER TEMPERATURE (TOP), °C	31.9, June 25, July 29	5.3, January 2, 3
WATER TEMPERATURE (BOTTOM), °C	31.0, July 23	7.7, January 4, 5, February 1
DISSOLVED OXYGEN (TOP), mg/L	17.4, December 19	< 1.0, on several days during the year
DISSOLVED OXYGEN (BOTTOM), mg/L	16.1, January 8	< 1.0, on many days during the year
DISSOLVED OXYGEN, PERCENT SATURATION (TOP), %	191, November 10	< 10, October 7, 8, 13, 14, July 27, 29, 30
DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM), %	152, January 8	< 10, on several days during the year

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued

SALINITY, TOP, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	5.9	2.6	3.7	7.9	2.5	5.4	7.9	4.4	6.3	2.7	.56	1.7
2	7.0	2.8	4.2	7.2	3.9	5.1	7.4	4.7	6.2	1.2	.47	.70
3	6.3	3.4	4.6	5.9	3.7	4.8	8.1	3.5	5.8	.47	.25	.31
4	5.2	3.7	4.5	5.9	3.1	4.5	4.3	1.6	2.6	.41	.23	.27
5	5.7	3.0	4.3	8.1	2.3	4.5	7.5	2.6	4.8	.43	.28	.30
6	6.3	2.8	4.3	8.7	3.4	5.8	6.9	4.7	5.8	.47	.24	.31
7	8.0	3.5	5.3	7.0	4.8	5.8	6.1	3.7	4.8	.44	.26	.33
8	8.0	5.0	6.7	7.0	5.7	6.2	8.4	2.8	4.7	.33	.20	.23
9	5.4	3.7	4.8	7.6	5.9	6.7	10.2	4.3	7.3	.21	.18	.20
10	5.4	3.5	4.5	8.8	6.4	7.5	9.4	3.9	7.3	.37	.20	.25
11	5.5	3.2	4.4	9.3	5.6	7.9	8.5	4.1	6.2	.46	.23	.31
12	6.4	3.7	5.1	9.3	6.3	8.3	8.5	3.3	6.4	4.0	.32	.90
13	6.5	4.2	5.3	9.0	5.8	7.4	10.0	5.0	8.4	.59	.42	.47
14	6.3	4.5	5.4	8.2	5.6	6.9	11.6	5.1	8.4	---	---	---
15	6.5	4.7	5.5	8.0	5.1	6.3	11.5	7.1	8.8	2.5	.51	1.2
16	6.0	5.0	5.5	7.4	4.8	6.3	9.7	6.9	8.3	3.3	.54	1.4
17	6.3	4.8	5.5	6.8	4.9	5.9	8.9	5.0	6.7	3.7	.77	2.1
18	6.4	5.0	5.7	7.9	4.8	6.5	10.6	6.3	8.8	3.5	.99	1.9
19	6.9	5.2	6.0	8.4	3.8	7.2	10.8	5.4	9.2	---	---	---
20	7.7	6.4	6.8	8.7	5.6	7.6	11.1	5.8	8.5	4.1	1.5	2.6
21	7.6	6.6	7.0	9.3	4.5	7.1	11.4	4.1	9.2	2.6	.49	1.6
22	8.5	6.1	7.1	4.7	2.8	3.7	11.2	5.2	9.6	.60	.28	.40
23	8.6	6.2	7.1	6.6	3.0	4.1	8.6	5.6	6.8	.69	.16	.30
24	8.8	6.5	7.4	8.4	4.5	6.9	10.9	4.2	6.7	.27	.09	.16
25	7.6	5.5	6.6	7.8	5.2	6.9	6.9	3.1	4.7	.61	.17	.28
26	7.8	4.4	6.1	7.5	3.4	5.9	8.3	3.2	5.7	.26	.09	.17
27	7.1	4.1	5.7	7.3	3.0	4.9	10.2	1.4	6.3	---	---	---
28	8.0	5.3	6.6	11.8	3.6	6.0	6.9	4.4	5.4	.15	.05	.07
29	7.7	5.5	6.9	12.3	4.1	7.2	6.7	1.4	4.6	.13	.04	.07
30	7.7	4.9	6.1	11.4	1.5	5.9	3.5	.26	.93	.05	.04	.05
31	7.2	2.9	5.9	---	---	---	2.9	.39	1.2	.04	.04	.04
MONTH	8.8	2.6	5.6	12.3	1.5	6.2	11.6	.26	6.3	---	---	---

SALINITY, TOP, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	.05	.04	.04	.05	.03	.04	.03	.03	.03	.04	.03	.04
2	.05	.04	.04	.05	.04	.04	.03	.03	.03	.04	.03	.04
3	---	---	---	.05	.03	.04	.04	.03	.03	.05	.04	.04
4	---	---	---	.06	.03	.04	.06	.03	.04	.04	.04	.04
5	.05	.04	.04	.26	.04	.08	.05	.03	.04	.04	.04	.04
6	.04	.03	.04	.34	.08	.15	.04	.02	.03	.05	.04	.05
7	.04	.03	.03	.23	.05	.10	.04	.03	.03	.05	.05	.05
8	---	---	---	.13	.04	.08	.04	.03	.03	.05	.04	.05
9	.04	.03	.03	.06	.04	.04	.04	.03	.03	.05	.04	.05
10	.04	.03	.03	.06	.04	.05	.05	.03	.04	.06	.05	.05
11	.04	.03	.04	.08	.04	.06	.04	.03	.03	.05	.05	.05
12	.05	.04	.04	.05	.04	.04	.04	.03	.03	.05	.05	.05
13	.05	.03	.04	---	---	---	.03	.03	.03	.05	.04	.05
14	.04	.03	.04	---	---	---	.03	.03	.03	.05	.03	.04
15	.04	.04	.04	---	---	---	.03	.02	.03	.04	.03	.04
16	.04	.03	.03	---	---	---	.03	.03	.03	.04	.04	.04
17	.04	.03	.03	---	---	---	.04	.03	.03	.04	.04	.04
18	.05	.04	.04	---	---	---	.04	.02	.03	.04	.04	.04
19	.05	.04	.04	---	---	---	.04	.03	.03	.04	.04	.04
20	.04	.04	.04	---	---	---	.04	.03	.03	.04	.04	.04
21	.04	.04	.04	---	---	---	.04	.03	.03	.05	.04	.04
22	.04	.04	.04	---	---	---	.04	.03	.03	.05	.05	.05
23	.05	.03	.04	---	---	---	.04	.03	.03	.06	.05	.05
24	.06	.04	.04	---	---	---	.05	.03	.04	.06	.05	.05
25	.05	.03	.04	---	---	---	.05	.03	.04	.06	.05	.06
26	.05	.03	.04	---	---	---	.05	.04	.04	.06	.06	.06
27	.05	.03	.04	---	---	---	.05	.03	.04	.06	.06	.06
28	.05	.03	.04	.04	.03	.03	.04	.04	.04	.06	.05	.05
29	---	---	---	.04	.03	.03	.04	.03	.04	.06	.05	.05
30	---	---	---	.03	.03	.03	.04	.03	.04	.06	.06	.06
31	---	---	---	.03	.03	.03	---	---	---	.06	.05	.06
MONTH	---	---	---	---	---	---	.06	.02	.03	.06	.03	.05

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

SALINITY, TOP, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	.09	.05	.06	1.4	.46	.80	2.1	.94	1.4	.09	.06	.06
2	.10	.05	.06	1.2	.50	.79	2.0	.76	1.3	.13	.06	.09
3	.06	.05	.06	1.3	.58	.86	1.3	.30	.64	.59	.06	.11
4	.07	.05	.06	.93	.21	.61	.51	.29	.38	.84	.06	.15
5	.06	.05	.06	1.2	.21	.50	.62	.26	.42	.08	.06	.07
6	.06	.05	.06	1.6	.51	.99	.59	.27	.44	.08	.07	.07
7	.07	.06	.07	1.1	.31	.64	.91	.35	.50	.07	.06	.07
8	.07	.06	.06	.74	.28	.43	1.6	.29	.93	.08	.06	.07
9	.07	.05	.06	.98	.29	.45	---	---	---	.08	.07	.07
10	.07	.06	.06	.50	.24	.35	1.1	.31	.61	.09	.07	.08
11	.06	.06	.06	.65	.20	.35	1.2	.46	.77	.08	.07	.08
12	.06	.05	.05	.48	.19	.32	1.1	.44	.70	.08	.07	.07
13	.07	.05	.06	.28	.15	.22	1.5	.70	1.0	.07	.07	.07
14	.07	.05	.06	.28	.16	.21	1.7	.81	1.1	.08	.07	.07
15	.08	.05	.06	.19	.09	.15	1.6	.43	.92	.08	.07	.08
16	.07	.06	.06	.11	.07	.08	1.3	.46	.76	.10	.08	.08
17	.07	.06	.06	.17	.07	.09	1.1	.41	.65	.22	.08	.11
18	.07	.06	.06	.14	.07	.08	.97	.36	.54	.39	.13	.23
19	.55	.06	.14	.18	.08	.10	2.2	.41	1.1	.34	.14	.23
20	.13	.06	.08	.09	.07	.08	2.2	.92	1.4	.41	.16	.20
21	.16	.07	.11	.11	.08	.09	1.6	.28	.99	.29	.16	.20
22	.10	.06	.07	.11	.08	.09	1.6	.05	.78	.33	.15	.19
23	.41	.06	.10	.10	.08	.08	1.2	.35	.61	1.2	.17	.81
24	.40	.11	.23	.13	.08	.09	1.4	.40	.66	1.2	.38	.71
25	.48	.19	.30	.13	.09	.10	1.4	.46	.78	.66	.36	.49
26	1.1	.25	.37	2.0	.09	.43	4.2	1.4	2.9	.39	.24	.28
27	.76	.23	.38	.74	.36	.49	4.8	.40	2.7	.42	.24	.29
28	1.6	.36	.70	.42	.19	.29	.43	.29	.34	.40	.20	.27
29	1.6	.41	.87	1.4	.20	.38	.32	.09	.19	1.1	.28	.53
30	.96	.36	.50	.69	.19	.38	.10	.06	.08	.46	.27	.35
31	---	---	---	1.2	.16	.32	.07	.06	.06	---	---	---
MONTH	1.6	.05	.16	2.0	.07	.35	---	---	---	1.2	.06	.21

SALINITY, BOTTOM, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.4	7.6	8.1	10.4	9.5	10.1	14.4	10.7	13.0	9.5	8.5	9.1
2	9.5	7.9	8.9	10.3	8.5	9.6	13.1	10.9	12.4	8.9	7.1	8.2
3	9.1	7.7	8.4	9.6	7.2	9.0	12.6	11.6	12.2	8.9	8.2	8.5
4	8.9	7.8	8.4	9.2	6.9	8.3	12.7	11.1	12.0	8.8	7.8	8.4
5	8.7	8.0	8.5	10.4	9.1	9.8	13.9	11.6	12.9	8.7	8.0	8.4
6	8.7	8.3	8.5	10.6	10.0	10.4	13.5	11.0	12.5	8.6	7.9	8.2
7	10.0	8.5	9.3	10.5	9.0	10.1	12.6	10.6	11.9	8.4	2.5	6.1
8	10.4	9.8	10.1	9.9	9.0	9.5	12.6	11.8	12.2	3.3	.36	.77
9	10.5	8.6	9.9	10.0	9.4	9.8	13.0	12.3	12.8	1.4	.36	.70
10	9.8	8.8	9.3	9.9	8.9	9.5	13.2	11.1	12.7	3.5	1.1	1.4
11	10.7	7.7	9.9	9.7	9.0	9.4	12.7	11.3	12.2	13.8	3.5	9.4
12	10.4	8.5	9.9	9.8	9.1	9.5	12.9	11.9	12.5	14.4	12.9	13.6
13	10.0	8.5	9.5	9.8	8.6	9.4	12.9	12.3	12.6	13.4	12.0	12.8
14	9.5	6.7	8.6	9.3	8.1	8.8	14.2	12.6	13.2	13.2	11.1	12.4
15	8.8	6.7	7.7	9.6	8.3	9.0	14.2	11.9	13.5	12.5	11.6	12.1
16	8.3	6.3	7.2	9.9	7.7	8.8	14.1	12.3	13.6	13.0	12.1	12.6
17	8.1	6.6	7.3	9.9	8.6	9.2	13.8	12.3	13.3	13.0	12.1	12.5
18	9.4	7.7	8.6	10.0	9.2	9.7	13.3	12.0	12.7	14.4	12.2	13.3
19	9.2	7.0	8.4	10.3	9.7	10.0	13.4	12.3	12.9	---	---	---
20	8.8	6.8	7.5	10.4	9.9	10.2	13.5	13.0	13.3	14.3	12.9	13.6
21	11.0	8.3	9.8	10.4	8.7	9.7	13.6	13.0	13.3	13.9	12.3	13.1
22	11.2	9.6	10.7	9.1	7.4	8.4	13.2	12.4	12.9	14.0	11.8	12.9
23	11.5	10.9	11.2	10.4	8.8	9.3	12.8	12.4	12.7	13.3	3.2	9.3
24	11.4	10.4	10.9	11.8	8.1	9.9	13.1	12.6	12.8	11.1	2.5	6.9
25	10.5	9.3	10.1	11.0	8.2	10.0	13.0	11.7	12.4	12.0	9.7	11.2
26	10.6	9.0	10.1	12.0	10.4	11.0	13.4	12.1	12.5	11.2	7.2	10.0
27	9.5	6.4	8.1	15.0	10.5	14.1	12.9	11.7	12.6	---	---	---
28	8.0	6.7	7.6	15.1	14.4	14.7	12.1	6.6	8.9	.39	.06	.09
29	9.0	7.8	8.5	15.1	14.5	14.8	8.7	6.5	7.8	.18	.05	.08
30	9.8	8.5	9.4	15.4	13.8	14.8	6.5	3.5	4.8	.10	.05	.06
31	10.3	9.1	10.0	---	---	---	9.5	4.1	7.6	.09	.05	.06
MONTH	11.5	6.3	9.0	15.4	6.9	10.2	14.4	3.5	12.0	---	---	---

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

SALINITY, BOTTOM, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	.08	.05	.06	.06	.04	.05	.04	.03	.03	.05	.04	.04
2	.07	.04	.06	.06	.04	.05	.05	.03	.03	.05	.04	.04
3	---	---	---	.07	.04	.05	.18	.03	.07	.05	.05	.05
4	---	---	---	.07	.05	.06	.07	.03	.04	.05	.05	.05
5	.06	.04	.05	8.0	.05	4.2	.14	.04	.06	.05	.04	.05
6	.06	.04	.05	7.7	3.1	6.2	.14	.03	.07	.07	.05	.06
7	.05	.04	.04	6.6	.71	2.7	.26	.04	.11	.07	.05	.06
8	---	---	---	6.9	.05	2.7	.20	.08	.13	.06	.05	.06
9	.05	.04	.04	.07	.05	.05	.21	.18	.20	.06	.05	.06
10	.05	.04	.05	.07	.05	.06	.24	.20	.21	.06	.06	.06
11	.05	.04	.04	.08	.05	.06	.23	.19	.21	.06	.06	.06
12	.06	.04	.04	.06	.04	.05	.25	.21	.23	.07	.06	.06
13	.06	.03	.04	---	---	---	.27	.23	.25	.06	.05	.06
14	.06	.03	.04	---	---	---	.24	.06	.15	.06	.04	.05
15	.05	.03	.04	---	---	---	.06	.03	.04	.06	.05	.05
16	.04	.03	.03	---	---	---	.21	.03	.05	.06	.05	.05
17	.05	.03	.04	---	---	---	.04	.03	.03	.06	.05	.05
18	.05	.04	.04	---	---	---	.04	.03	.03	.06	.05	.05
19	.05	.04	.04	---	---	---	.04	.03	.03	.06	.05	.05
20	.05	.04	.04	---	---	---	.05	.03	.04	.06	.05	.05
21	.05	.04	.04	---	---	---	.04	.03	.04	.06	.05	.05
22	.06	.04	.05	---	---	---	.04	.03	.04	.06	.05	.05
23	.05	.04	.04	---	---	---	.05	.04	.04	.06	.05	.05
24	.07	.04	.05	---	---	---	.05	.04	.04	.06	.05	.05
25	.06	.04	.05	---	---	---	.05	.04	.05	.06	.06	.06
26	.06	.04	.04	---	---	---	.06	.05	.05	.06	.06	.06
27	.05	.04	.04	---	---	---	.05	.04	.05	.06	.05	.06
28	.06	.04	.04	.03	.03	.03	.05	.04	.05	.06	.05	.06
29	---	---	---	.03	.03	.03	.05	.04	.04	.06	.05	.06
30	---	---	---	.03	.02	.03	.05	.04	.04	.07	.05	.06
31	---	---	---	.04	.02	.03	---	---	---	.07	.05	.06
MONTH	---	---	---	---	---	---	.27	.03	.08	.07	.04	.05

SALINITY, BOTTOM, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	.21	.05	.06	1.7	.74	1.4	2.5	1.2	1.8	.57	.07	.17
2	.27	.05	.07	1.6	1.2	1.4	2.5	1.0	1.7	2.6	.11	.63
3	.06	.05	.06	1.5	.86	1.1	2.0	.70	1.2	.57	.06	.13
4	.07	.05	.06	1.1	.23	.78	1.6	.74	1.1	.91	.06	.15
5	.06	.05	.06	1.2	.24	.71	3.6	.75	1.7	.08	.06	.07
6	.06	.05	.06	1.5	.87	1.2	3.9	1.3	3.1	.08	.06	.07
7	.09	.06	.07	1.3	.72	1.1	4.1	2.6	3.7	.06	.06	.06
8	.07	.05	.06	1.3	.70	1.1	3.4	2.2	2.8	.07	.05	.06
9	.07	.05	.06	1.2	.53	.88	---	---	---	.07	.05	.06
10	.07	.06	.06	.98	.52	.76	3.8	2.2	3.2	.07	.06	.06
11	.06	.05	.06	1.2	.52	.83	4.4	2.6	3.4	.06	.05	.06
12	.06	.06	.06	.80	.40	.50	4.5	2.4	3.6	.06	.05	.05
13	.06	.05	.06	.57	.29	.43	4.0	1.6	3.1	.05	.05	.05
14	.08	.06	.06	.43	.20	.33	3.8	1.2	2.5	.06	.05	.05
15	.12	.06	.06	.47	.22	.35	3.2	1.3	2.3	.05	.05	.05
16	.09	.06	.07	.25	.08	.09	3.6	2.0	2.5	.22	.05	.07
17	.09	.06	.07	.31	.08	.13	2.9	1.5	2.1	.94	.06	.21
18	.10	.07	.07	.28	.07	.11	2.9	1.1	1.8	.86	.11	.34
19	1.5	.07	.28	.18	.08	.09	3.1	1.4	2.3	.85	.17	.34
20	.36	.07	.18	.08	.07	.08	2.3	1.4	1.8	1.5	.18	.52
21	.48	.08	.29	.10	.07	.08	2.2	1.1	1.5	1.3	.44	.83
22	.09	.07	.08	.11	.07	.09	2.5	1.3	1.9	1.6	.19	.55
23	1.1	.07	.54	.09	.07	.07	2.1	1.0	1.6	1.7	.37	.97
24	2.2	.62	1.5	.11	.07	.08	1.6	.95	1.4	1.2	.56	.97
25	3.0	2.1	2.6	.11	.07	.08	1.5	.72	1.0	1.0	.51	.71
26	2.7	1.0	2.2	2.0	.07	.64	4.6	1.5	3.1	1.2	.34	.74
27	2.5	.81	1.8	1.9	.60	.82	5.1	.52	3.2	.73	.22	.45
28	2.9	1.3	2.3	2.2	.40	.88	.53	.32	.42	.50	.15	.24
29	2.4	1.0	1.9	3.0	1.4	2.4	.54	.10	.28	1.0	.05	.58
30	1.9	.73	1.4	2.1	.29	1.3	.12	.08	.10	.80	.04	.37
31	---	---	---	1.6	.21	.69	.09	.07	.08	---	---	---
MONTH	3.0	.05	.54	3.0	.07	.66	---	---	---	2.6	.04	.32

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

PH, TOP, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	7.7	7.3	7.5	8.0	6.9	7.4	7.7	7.5	7.6	7.7	7.3	7.5
2	8.3	7.2	7.5	7.7	6.8	7.1	7.6	7.4	7.5	7.4	7.2	7.3
3	8.0	7.0	7.4	7.8	7.0	7.2	7.9	7.3	7.5	7.3	7.2	7.2
4	8.0	7.0	7.3	8.5	7.2	7.7	7.6	7.3	7.4	7.2	7.1	7.2
5	7.7	6.9	7.2	7.6	7.1	7.4	7.5	7.3	7.4	7.2	7.1	7.1
6	7.3	6.7	7.0	7.6	7.2	7.3	7.8	7.4	7.6	7.1	7.0	7.1
7	7.1	6.7	6.9	7.4	7.1	7.3	7.9	7.5	7.7	7.1	7.0	7.1
8	6.8	6.6	6.7	7.6	7.3	7.4	8.0	7.6	7.8	7.3	6.8	6.9
9	7.9	6.7	6.9	8.3	7.4	7.7	8.3	7.5	7.9	7.2	7.0	7.1
10	7.1	6.7	6.8	8.7	7.5	7.9	8.1	7.5	7.8	7.2	7.0	7.1
11	7.7	6.7	7.1	8.1	7.3	7.7	8.0	7.5	7.7	7.1	6.9	7.0
12	7.3	6.6	6.9	7.6	7.0	7.4	8.0	7.5	7.8	7.2	6.9	7.0
13	6.8	6.5	6.6	8.4	7.2	8.0	8.1	7.7	7.9	7.1	7.0	7.0
14	---	---	---	7.4	7.0	7.1	7.9	7.6	7.7	---	---	---
15	7.7	7.3	7.5	7.7	7.0	7.3	8.0	7.6	7.8	---	---	---
16	7.7	7.4	7.6	8.0	7.1	7.5	7.9	7.7	7.8	---	---	---
17	7.9	7.6	7.7	8.1	7.3	7.8	8.1	7.7	7.8	---	---	---
18	7.9	7.6	7.8	8.5	7.2	7.5	8.1	7.7	7.9	---	---	---
19	8.0	7.7	7.9	8.0	7.0	7.3	8.9	7.7	8.0	---	---	---
20	8.9	7.9	8.1	7.1	6.9	7.0	8.7	7.8	8.1	---	---	---
21	8.5	7.6	8.1	7.3	6.9	7.1	8.4	7.6	8.1	---	---	---
22	7.7	7.3	7.5	7.2	6.9	7.1	8.3	7.8	7.9	6.7	6.6	6.7
23	8.2	7.3	7.6	7.1	6.8	7.0	8.1	7.7	7.9	6.7	6.6	6.7
24	8.1	7.2	7.4	7.2	6.8	7.0	8.0	7.6	7.8	6.7	6.6	6.6
25	8.3	7.1	7.7	8.4	7.1	7.5	7.9	7.6	7.7	6.8	6.5	6.6
26	8.2	6.9	7.5	8.2	7.6	7.8	7.7	7.3	7.5	6.5	6.4	6.4
27	7.2	6.8	7.0	8.4	7.7	8.0	7.9	7.2	7.5	---	---	---
28	7.8	7.1	7.4	8.7	7.6	7.9	7.6	7.4	7.5	6.8	6.3	6.5
29	7.6	6.8	7.2	9.3	7.5	7.9	7.6	7.2	7.5	6.8	6.3	6.5
30	7.8	6.8	7.3	8.2	7.3	7.6	7.4	7.2	7.3	6.4	6.3	6.3
31	7.9	6.9	7.3	---	---	---	7.6	7.2	7.4	6.4	6.3	6.4
MONTH	---	---	---	9.3	6.8	7.5	8.9	7.2	7.7	---	---	---

PH, TOP, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.4	6.3	6.3	6.3	6.2	6.2	6.6	6.4	6.5	6.7	6.5	6.6
2	6.5	6.3	6.3	6.3	6.2	6.3	6.5	6.4	6.5	6.7	6.5	6.6
3	---	---	---	6.4	6.3	6.3	6.6	6.4	6.5	6.7	6.6	6.6
4	---	---	---	6.5	6.3	6.4	7.0	6.5	6.7	6.8	6.6	6.6
5	6.6	6.4	6.5	6.5	6.3	6.4	6.9	6.5	6.6	6.8	6.7	6.8
6	6.4	6.3	6.3	6.6	6.4	6.5	6.6	6.5	6.6	6.8	6.6	6.7
7	6.4	6.3	6.3	6.5	6.3	6.4	6.6	6.5	6.6	6.7	6.5	6.6
8	---	---	---	6.5	6.4	6.4	6.7	6.6	6.6	6.7	6.6	6.6
9	6.3	6.2	6.3	6.6	6.4	6.5	6.8	6.6	6.7	6.8	6.6	6.7
10	6.3	6.2	6.3	6.5	6.4	6.5	6.8	6.7	6.7	6.8	6.6	6.7
11	6.4	6.3	6.3	6.8	6.4	6.6	6.8	6.6	6.7	6.8	6.6	6.7
12	6.5	6.3	6.4	6.7	6.4	6.6	6.6	6.5	6.6	6.8	6.7	6.7
13	6.4	6.2	6.3	---	---	---	6.6	6.4	6.5	7.0	6.8	6.9
14	6.4	6.2	6.3	---	---	---	6.6	6.4	6.5	6.9	6.6	6.7
15	6.4	6.3	6.3	---	---	---	6.6	6.4	6.5	6.7	6.4	6.5
16	6.5	6.3	6.4	---	---	---	6.6	6.5	6.5	6.5	6.3	6.4
17	6.6	6.4	6.5	---	---	---	6.7	6.5	6.5	6.5	6.4	6.5
18	6.5	6.4	6.5	---	---	---	6.6	6.5	6.5	6.5	6.5	6.5
19	6.4	6.3	6.3	---	---	---	6.6	6.5	6.5	6.6	6.4	6.5
20	6.3	6.3	6.3	---	---	---	6.7	6.5	6.6	6.6	6.4	6.5
21	6.3	6.2	6.3	---	---	---	6.7	6.5	6.6	---	---	---
22	6.3	6.2	6.3	---	---	---	6.7	6.5	6.6	6.5	6.3	6.4
23	6.4	6.3	6.3	---	---	---	6.6	6.5	6.5	6.6	6.3	6.4
24	6.7	6.3	6.5	---	---	---	6.6	6.4	6.5	6.6	6.5	6.5
25	6.6	6.3	6.4	---	---	---	6.6	6.5	6.5	6.5	6.3	6.4
26	6.4	6.2	6.3	---	---	---	6.8	6.5	6.6	6.5	6.3	6.4
27	6.3	6.2	6.3	---	---	---	6.8	6.6	6.7	6.5	6.3	6.4
28	6.3	6.2	6.3	6.6	6.5	6.5	6.8	6.6	6.7	6.5	6.4	6.4
29	---	---	---	6.6	6.5	6.5	6.6	6.5	6.6	6.5	6.3	6.4
30	---	---	---	6.5	6.4	6.5	6.6	6.5	6.6	6.5	6.3	6.4
31	---	---	---	6.6	6.4	6.5	---	---	---	6.4	6.3	6.3
MONTH	---	---	---	---	---	---	7.0	6.4	6.6	---	---	---



## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

PH, TOP, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	6.7	6.4	6.5	8.3	6.9	7.4	7.8	7.2	7.5	---	---	---
2	6.7	6.4	6.6	8.2	7.0	7.5	7.7	7.1	7.4	---	---	---
3	6.5	6.4	6.5	8.9	6.9	7.7	7.5	7.0	7.2	---	---	---
4	6.7	6.4	6.6	8.4	6.9	7.6	7.4	6.8	7.1	6.8	6.5	6.6
5	6.6	6.4	6.5	8.8	6.9	7.3	7.3	6.7	7.0	6.7	6.6	6.6
6	6.6	6.4	6.5	7.4	6.9	7.1	7.1	6.7	6.8	6.7	6.5	6.6
7	6.8	6.5	6.7	---	---	---	7.6	6.6	7.0	6.6	6.5	6.5
8	6.8	6.6	6.7	8.3	6.8	7.3	8.8	6.7	7.3	6.7	6.5	6.6
9	6.8	6.6	6.7	9.0	6.7	7.4	---	---	---	6.7	6.6	6.6
10	7.2	6.6	6.8	8.3	6.9	7.5	7.9	6.7	6.9	6.7	6.6	6.7
11	7.2	6.8	6.9	8.8	6.7	7.5	8.5	6.6	7.2	6.7	6.5	6.6
12	7.1	6.8	6.9	8.6	7.1	7.7	9.3	6.8	7.9	6.6	6.5	6.6
13	7.3	6.9	7.0	9.0	6.9	7.8	8.9	7.3	8.2	6.6	6.4	6.5
14	7.3	7.0	7.1	9.2	7.0	7.9	8.9	7.9	8.4	6.6	6.4	6.5
15	7.3	7.0	7.2	8.6	6.9	7.3	8.6	7.0	7.9	6.7	6.5	6.6
16	7.3	7.0	7.1	7.3	6.8	7.1	8.1	6.8	7.2	7.2	6.5	6.7
17	7.5	7.0	7.2	7.2	6.8	7.0	7.5	6.8	7.1	7.0	6.7	6.8
18	7.5	7.0	7.2	8.2	6.8	7.0	8.2	6.8	7.3	6.9	6.7	6.8
19	7.3	7.0	7.1	7.5	6.7	7.1	7.8	7.0	7.4	7.0	6.8	6.9
20	7.4	7.0	7.1	7.3	6.9	7.1	8.4	7.0	7.7	7.0	6.8	6.9
21	7.6	6.9	7.1	7.7	7.0	7.2	8.8	7.7	8.4	6.9	6.7	6.8
22	7.6	6.8	7.0	8.2	6.9	7.4	9.2	7.3	8.2	6.9	6.7	6.8
23	8.0	7.0	7.2	8.6	7.1	7.6	8.9	7.1	7.6	7.0	6.7	6.9
24	7.8	6.9	7.2	8.4	7.0	7.4	9.1	7.1	7.8	7.1	6.9	7.0
25	8.0	6.9	7.2	8.5	6.8	7.2	---	---	---	7.1	6.8	6.9
26	8.8	6.7	7.3	7.6	6.8	7.1	---	---	---	7.0	6.7	6.8
27	8.2	6.8	7.3	7.4	6.9	7.1	---	---	---	6.9	6.7	6.8
28	8.0	6.8	7.3	7.2	6.8	7.0	---	---	---	7.1	6.7	7.0
29	7.8	6.8	7.2	7.8	6.7	7.0	---	---	---	7.2	6.8	7.0
30	8.2	6.7	7.2	7.9	6.8	7.3	---	---	---	7.3	6.9	7.1
31	---	---	---	7.8	7.2	7.5	---	---	---	---	---	---
MONTH	8.8	6.4	7.0	---	---	---	---	---	---	---	---	---

PH, BOTTOM, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.1	6.9	7.0	7.0	6.9	7.0	7.2	6.8	7.0	7.5	7.1	7.4
2	7.1	6.9	7.0	7.1	6.9	7.0	7.2	7.0	7.1	7.2	7.0	7.1
3	7.0	6.9	7.0	7.1	6.9	7.0	7.0	6.9	7.0	7.3	6.9	7.1
4	7.0	6.9	7.0	7.0	6.9	6.9	6.9	6.8	6.9	7.3	7.0	7.2
5	7.0	6.9	7.0	7.2	6.9	7.1	7.2	6.9	7.1	7.3	7.1	7.2
6	7.0	6.9	7.0	7.2	7.0	7.1	7.2	7.0	7.1	7.2	6.9	7.1
7	7.0	6.9	7.0	7.3	7.0	7.2	7.3	7.0	7.1	7.0	6.8	6.9
8	7.0	7.0	7.0	7.4	7.1	7.3	7.6	7.0	7.4	6.8	6.0	6.4
9	7.0	6.9	7.0	7.3	7.1	7.2	7.9	7.4	7.7	6.9	5.9	6.4
10	7.0	6.9	7.0	7.4	7.0	7.1	7.7	7.3	7.5	6.9	6.7	6.8
11	7.0	6.9	7.0	7.5	7.0	7.2	7.6	7.2	7.5	7.1	6.9	7.0
12	7.0	6.9	7.0	7.3	6.9	7.1	7.5	7.1	7.4	7.1	6.9	7.0
13	7.0	6.9	7.0	7.7	7.0	7.3	7.5	7.2	7.4	7.0	6.7	6.9
14	7.0	6.9	6.9	7.3	7.1	7.2	7.4	7.2	7.3	7.0	6.9	7.0
15	7.0	6.9	7.0	7.3	7.0	7.2	7.4	7.2	7.2	7.0	6.9	7.0
16	7.2	6.9	7.1	7.4	7.0	7.2	7.3	7.1	7.2	7.1	7.0	7.1
17	7.3	7.2	7.3	7.7	7.1	7.4	7.3	7.0	7.1	7.1	7.0	7.0
18	7.4	7.1	7.3	7.6	7.1	7.4	7.4	7.1	7.2	7.1	7.0	7.1
19	7.6	7.3	7.4	7.7	7.2	7.6	7.4	7.1	7.3	---	---	---
20	7.6	7.5	7.5	7.7	7.2	7.5	7.6	7.2	7.4	7.1	7.0	7.0
21	7.5	7.3	7.4	7.7	7.1	7.4	7.6	7.3	7.4	7.0	7.0	7.0
22	7.4	7.1	7.3	7.2	7.0	7.1	7.3	7.2	7.3	7.0	7.0	7.0
23	7.3	7.2	7.3	7.3	7.1	7.2	7.3	7.0	7.2	7.0	6.8	6.9
24	7.2	6.9	7.0	7.7	7.1	7.3	7.3	7.1	7.2	7.0	6.9	6.9
25	6.9	6.9	6.9	7.7	7.1	7.4	7.2	7.0	7.1	7.0	6.9	7.0
26	7.0	6.9	6.9	7.1	7.0	7.1	7.3	7.0	7.2	7.0	6.9	6.9
27	7.1	6.9	6.9	7.3	7.0	7.2	7.3	7.1	7.2	---	---	---
28	7.5	7.1	7.3	7.3	7.1	7.2	7.3	7.1	7.2	7.0	6.5	6.7
29	7.3	7.1	7.2	7.3	7.1	7.2	7.3	7.0	7.1	7.0	6.5	6.7
30	7.1	7.0	7.1	7.2	6.8	7.0	7.1	6.9	7.0	6.6	6.4	6.5
31	7.1	6.9	7.0	---	---	---	7.4	7.0	7.2	6.5	6.4	6.5
MONTH	7.6	6.9	7.1	7.7	6.8	7.2	7.9	6.8	7.2	---	---	---

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

PH, BOTTOM, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	6.5	6.4	6.4	6.6	6.4	6.5	6.9	6.6	6.7	6.7	6.6	6.7
2	6.6	6.3	6.4	6.6	6.5	6.5	7.1	6.4	6.6	6.7	6.6	6.7
3	---	---	---	6.7	6.5	6.6	7.2	6.6	7.0	6.7	6.6	6.7
4	---	---	---	6.8	6.6	6.7	---	---	---	6.8	6.6	6.7
5	6.7	6.5	6.6	7.0	6.5	6.8	---	---	---	6.9	6.5	6.8
6	6.5	6.3	6.4	6.9	6.7	6.9	---	---	---	6.8	6.7	6.7
7	6.5	6.4	6.4	6.9	6.6	6.7	---	---	---	6.8	6.6	6.7
8	---	---	---	6.9	6.6	6.7	---	---	---	6.8	6.6	6.7
9	6.4	6.3	6.4	6.9	6.7	6.8	---	---	---	6.8	6.6	6.7
10	6.4	6.3	6.4	6.8	6.7	6.8	---	---	---	6.8	6.7	6.7
11	6.5	6.3	6.4	7.1	6.7	6.9	---	---	---	6.8	6.6	6.7
12	6.7	6.5	6.5	6.9	6.7	6.8	---	---	---	6.8	6.6	6.7
13	6.6	6.3	6.4	---	---	---	---	---	---	6.9	6.7	6.9
14	6.5	6.3	6.4	---	---	---	---	---	---	6.7	6.5	6.6
15	6.5	6.4	6.4	---	---	---	---	---	---	6.7	6.5	6.5
16	6.6	6.4	6.5	---	---	---	7.0	6.5	6.6	6.5	6.4	6.4
17	6.8	6.5	6.6	---	---	---	6.8	6.5	6.6	6.5	6.4	6.5
18	6.7	6.6	6.7	---	---	---	7.2	6.5	6.6	6.6	6.5	6.5
19	6.6	6.5	6.5	---	---	---	7.2	6.6	6.9	6.5	6.4	6.5
20	6.6	6.4	6.5	---	---	---	---	---	---	6.6	6.4	6.5
21	6.6	6.4	6.5	---	---	---	6.7	6.5	6.6	6.7	6.5	6.5
22	6.6	6.4	6.5	---	---	---	6.7	6.6	6.6	6.8	6.5	6.7
23	6.7	6.5	6.6	---	---	---	6.7	6.5	6.6	6.9	6.6	6.7
24	6.9	6.6	6.7	---	---	---	6.7	6.5	6.6	6.9	6.7	6.8
25	6.9	6.5	6.6	---	---	---	6.8	6.6	6.7	6.8	6.7	6.7
26	6.7	6.5	6.5	---	---	---	6.8	6.6	6.7	6.8	6.6	6.6
27	6.6	6.5	6.5	---	---	---	6.8	6.6	6.7	6.8	6.6	6.7
28	6.6	6.5	6.5	6.5	6.3	6.4	6.8	6.7	6.7	6.8	6.6	6.7
29	---	---	---	6.4	6.3	6.3	6.7	6.6	6.6	6.7	6.6	6.6
30	---	---	---	6.4	6.3	6.3	6.7	6.5	6.6	6.7	6.6	6.6
31	---	---	---	6.9	6.2	6.5	---	---	---	6.7	6.6	6.6
MONTH	---	---	---	---	---	---	---	---	---	6.9	6.4	6.6

PH, BOTTOM, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.0	6.6	6.7	7.4	7.0	7.2	7.7	7.3	7.5	6.3	6.0	6.1
2	6.9	6.7	6.8	7.5	7.0	7.2	7.8	7.3	7.5	6.6	6.1	6.3
3	6.8	6.6	6.7	7.8	6.9	7.2	7.5	7.2	7.4	6.6	6.0	6.2
4	7.0	6.7	6.8	8.2	6.8	7.2	7.3	7.1	7.2	6.7	6.3	6.5
5	6.9	6.7	6.8	8.0	6.9	7.4	7.3	6.9	7.1	6.5	6.3	6.4
6	6.8	6.7	6.7	7.6	7.2	7.4	7.1	6.9	6.9	6.5	6.3	6.4
7	7.0	6.6	6.8	7.5	7.0	7.2	7.1	6.8	6.9	6.4	6.3	6.3
8	7.0	6.8	6.9	7.2	6.7	6.9	6.9	6.8	6.8	6.5	6.3	6.4
9	6.9	6.7	6.8	7.8	6.6	6.9	---	---	---	6.6	6.4	6.5
10	7.0	6.7	6.8	7.6	6.9	7.3	6.9	6.8	6.8	6.6	6.4	6.5
11	6.8	6.5	6.6	8.8	6.9	7.3	7.4	6.8	7.0	6.5	6.4	6.4
12	6.6	6.5	6.5	7.7	6.8	7.3	7.2	7.0	7.1	6.4	6.2	6.3
13	6.9	6.5	6.6	7.6	6.9	7.2	8.0	7.0	7.1	6.3	6.2	6.3
14	6.9	6.7	6.8	8.5	7.0	7.6	8.1	6.9	7.3	6.3	6.2	6.3
15	7.0	6.8	6.9	---	---	---	8.1	6.9	7.3	6.4	6.2	6.3
16	7.0	6.8	6.9	---	---	---	8.3	7.9	8.1	6.5	6.2	6.4
17	7.1	6.8	6.9	---	---	---	8.3	7.9	8.1	6.8	6.4	6.6
18	7.2	6.9	7.0	---	---	---	8.0	7.2	7.5	6.8	6.5	6.6
19	7.3	6.8	6.9	---	---	---	8.1	7.3	7.7	6.8	6.6	6.7
20	7.1	6.8	7.0	---	---	---	8.1	6.8	7.5	6.7	6.5	6.6
21	7.0	6.7	6.8	---	---	---	7.3	6.6	6.9	6.6	6.5	6.5
22	6.9	6.6	6.7	---	---	---	7.2	6.6	6.8	6.7	6.4	6.5
23	7.0	6.8	6.8	---	---	---	7.1	6.7	6.9	6.8	6.6	6.8
24	6.8	6.6	6.8	---	---	---	7.4	6.8	7.0	6.8	6.7	6.8
25	6.8	6.7	6.8	---	---	---	7.9	6.9	7.2	6.8	6.6	6.7
26	6.9	6.7	6.8	---	---	---	7.8	7.3	7.4	6.7	6.6	6.6
27	7.0	6.7	6.8	---	---	---	7.4	6.6	7.1	6.8	6.5	6.6
28	7.8	6.8	6.9	---	---	---	6.7	6.4	6.5	6.8	6.5	6.6
29	7.2	6.8	6.9	---	---	---	6.7	6.2	6.4	7.1	6.6	6.9
30	7.3	6.8	6.9	---	---	---	6.3	6.1	6.2	7.1	6.9	7.0
31	---	---	---	7.5	6.8	7.1	6.1	6.0	6.1	---	---	---
MONTH	7.8	6.5	6.8	---	---	---	---	---	---	7.1	6.0	6.5



## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

TEMPERATURE, TOP, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	23.3	22.6	23.0	17.9	16.9	17.3	13.4	12.6	13.1	6.9	5.8	6.3
2	22.9	21.4	22.2	18.1	17.4	17.7	12.9	11.1	12.0	6.6	5.3	6.0
3	22.7	20.9	21.8	17.8	17.0	17.5	12.6	11.7	12.1	6.6	5.3	6.1
4	22.7	21.7	22.1	17.4	15.9	16.6	12.8	11.5	12.2	7.7	6.1	6.8
5	23.7	22.3	22.7	16.6	14.8	15.8	13.0	11.8	12.6	8.4	6.8	7.5
6	24.0	22.8	23.1	16.6	15.1	16.1	11.8	10.4	11.2	9.5	7.9	8.6
7	23.5	22.6	23.1	16.4	15.4	15.9	10.5	8.8	9.7	11.7	9.4	10.4
8	24.1	22.8	23.2	15.4	14.4	15.0	9.8	8.1	9.2	13.3	11.6	12.5
9	25.8	23.8	24.2	15.1	14.0	14.5	10.1	9.3	9.8	13.6	13.1	13.3
10	24.9	23.9	24.3	15.2	14.3	14.9	10.5	9.7	10.0	13.8	12.9	13.2
11	25.3	23.8	24.4	15.3	14.4	15.0	10.2	9.6	9.9	13.6	12.5	13.1
12	24.5	23.1	23.7	15.4	14.7	15.1	10.0	9.6	9.9	13.2	11.7	12.4
13	24.0	22.9	23.5	15.0	14.0	14.3	10.2	9.1	9.9	12.3	12.0	12.2
14	24.9	23.2	23.9	14.7	14.1	14.5	10.1	8.9	9.6	12.2	10.6	11.4
15	24.1	22.3	23.4	14.4	13.6	14.0	10.0	8.2	8.8	10.9	10.3	10.7
16	22.4	20.8	21.5	14.0	12.7	13.5	9.3	8.2	8.8	11.0	10.6	10.8
17	20.8	20.0	20.4	12.9	11.0	11.8	9.3	8.3	8.8	10.9	9.9	10.2
18	20.5	19.3	19.8	12.7	11.8	12.3	9.3	8.6	9.0	10.4	9.5	10.0
19	19.4	18.5	19.0	13.0	11.6	12.3	10.0	9.0	9.4	---	---	---
20	18.7	17.8	18.3	12.8	12.0	12.4	9.9	9.2	9.5	9.0	7.9	8.4
21	18.5	17.6	18.1	12.9	12.0	12.5	9.7	8.5	9.4	8.3	6.8	7.7
22	18.2	17.6	17.9	14.1	12.7	13.4	9.6	8.7	9.4	7.5	6.3	6.9
23	17.9	16.3	16.9	14.2	13.3	14.0	10.2	9.3	9.6	8.1	7.0	7.6
24	17.5	16.5	17.1	13.7	12.0	13.0	10.0	9.3	9.7	8.7	8.0	8.3
25	17.5	16.9	17.1	12.0	10.4	11.2	11.8	9.7	10.5	8.9	7.9	8.5
26	18.4	17.3	17.9	12.4	11.0	11.6	11.4	10.6	10.9	8.6	7.9	8.3
27	18.9	18.0	18.4	12.2	10.7	11.6	10.9	9.9	10.4	---	---	---
28	18.2	17.0	17.6	12.4	11.7	12.1	10.1	8.8	9.4	9.4	8.7	8.9
29	19.0	16.8	18.0	12.6	12.1	12.3	9.4	7.6	8.8	9.3	8.1	8.7
30	18.9	16.8	17.9	13.2	12.4	12.8	8.6	7.3	7.7	9.3	8.5	8.8
31	18.3	16.1	16.9	---	---	---	8.0	6.8	7.4	9.0	8.3	8.6
MONTH	25.8	16.1	20.7	18.1	10.4	14.0	13.4	6.8	10.0	---	---	---

TEMPERATURE, TOP, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.5	7.8	8.2	14.5	13.4	13.7	19.6	19.1	19.3	18.9	18.1	18.4
2	8.6	7.9	8.2	14.3	13.6	13.9	20.7	19.2	19.8	19.7	18.5	19.1
3	---	---	---	13.8	12.7	13.3	20.0	19.5	19.8	20.1	19.0	19.5
4	---	---	---	12.7	12.1	12.4	19.5	17.7	18.8	20.3	19.6	20.0
5	10.1	9.6	9.9	12.7	11.6	12.1	17.8	17.0	17.4	20.8	19.5	20.2
6	9.6	9.1	9.3	12.3	11.6	12.0	18.1	16.8	17.4	22.6	20.4	21.0
7	9.1	8.7	8.9	12.9	11.8	12.3	18.4	17.0	17.5	22.0	20.5	21.3
8	---	---	---	13.8	12.5	13.0	19.2	17.4	18.2	22.0	21.1	21.6
9	8.6	8.0	8.3	15.5	13.7	14.6	19.5	18.6	18.9	22.5	21.5	21.8
10	8.9	8.1	8.5	14.8	13.6	14.1	18.9	17.5	18.0	22.9	21.2	21.7
11	10.0	8.7	9.2	13.6	12.3	12.9	17.6	16.6	17.2	22.7	20.7	21.4
12	10.8	9.9	10.3	12.7	11.1	11.6	17.4	16.6	17.0	20.7	19.6	20.1
13	10.6	9.7	10.0	---	---	---	17.4	16.2	16.8	20.0	18.1	19.1
14	9.7	9.0	9.4	---	---	---	17.0	16.3	16.6	19.2	17.4	18.2
15	9.0	8.5	8.8	---	---	---	18.2	16.2	17.0	20.8	18.6	19.5
16	8.9	8.4	8.6	---	---	---	19.0	17.6	18.1	22.3	19.2	20.0
17	11.3	8.9	10.2	---	---	---	19.6	18.2	18.8	20.6	20.0	20.4
18	12.0	10.6	11.2	---	---	---	19.2	18.7	19.0	22.0	20.5	21.1
19	12.4	11.2	11.8	---	---	---	19.5	18.3	18.9	21.7	21.2	21.4
20	12.9	11.9	12.4	---	---	---	20.4	19.0	19.6	24.1	21.3	22.3
21	12.9	12.2	12.6	---	---	---	19.9	18.9	19.5	24.5	22.4	23.5
22	12.8	12.0	12.4	---	---	---	19.5	18.1	18.6	24.3	23.3	23.8
23	13.1	12.0	12.6	---	---	---	18.1	17.0	17.4	24.0	23.4	23.7
24	12.7	11.7	12.0	---	---	---	17.9	16.5	17.1	23.9	23.2	23.5
25	12.3	11.2	11.7	---	---	---	18.4	16.9	17.5	26.5	23.6	24.2
26	12.8	11.7	12.2	---	---	---	19.6	17.5	18.3	26.3	23.7	25.0
27	12.6	12.0	12.3	---	---	---	19.3	18.1	18.7	26.2	24.9	25.4
28	13.5	12.5	12.9	16.7	15.3	15.9	19.3	17.8	18.5	27.1	24.6	25.6
29	---	---	---	17.9	16.3	17.0	19.0	17.9	18.4	27.0	25.2	26.0
30	---	---	---	18.8	17.3	18.0	18.6	18.0	18.3	29.0	25.7	26.7
31	---	---	---	19.8	18.2	18.9	---	---	---	26.9	26.0	26.4
MONTH	---	---	---	---	---	---	20.7	16.2	18.2	29.0	17.4	22.0

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

TEMPERATURE, TOP, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	27.6	26.0	26.6	31.1	29.9	30.4	29.5	28.3	28.9	28.7	27.0	27.7
2	27.5	26.3	27.0	30.9	29.7	30.2	28.3	26.8	27.4	28.2	27.2	27.6
3	27.8	26.8	27.2	31.0	29.3	30.1	26.8	25.9	26.2	27.8	26.6	27.1
4	27.8	27.0	27.4	30.3	29.5	29.9	26.5	25.5	26.1	26.7	25.7	26.0
5	28.1	26.8	27.1	30.5	29.3	29.7	26.2	25.4	25.9	27.7	25.4	26.1
6	26.9	25.6	26.3	29.4	28.8	29.1	26.1	25.6	25.9	27.3	26.2	26.5
7	25.7	24.6	25.3	29.7	28.3	29.0	27.4	25.7	26.3	27.2	25.9	26.5
8	24.9	23.9	24.5	29.9	28.9	29.3	30.7	26.6	27.8	27.0	25.9	26.4
9	24.5	23.9	24.2	31.0	29.1	29.7	---	---	---	25.9	24.7	25.2
10	27.4	23.8	24.3	31.4	29.6	30.3	30.9	28.4	28.9	24.8	23.8	24.3
11	26.9	23.9	24.9	31.0	30.0	30.4	29.3	27.7	28.3	25.3	23.6	24.4
12	27.5	24.8	25.9	30.3	29.1	29.7	30.8	27.9	28.8	24.4	23.5	23.9
13	27.9	26.3	27.1	29.9	28.8	29.3	29.1	28.5	28.7	26.0	23.2	23.8
14	28.3	26.8	27.4	29.8	28.6	29.1	29.3	28.0	28.6	25.7	23.7	24.8
15	28.0	26.8	27.4	29.4	28.7	29.0	31.3	28.1	28.8	27.1	24.8	25.6
16	28.6	27.3	27.8	29.1	28.6	28.9	29.8	28.3	29.0	29.4	24.9	26.1
17	29.2	27.8	28.4	29.2	28.2	28.7	30.0	28.6	29.2	27.4	26.2	26.8
18	30.0	28.0	28.6	30.7	28.0	28.7	30.6	29.3	29.7	27.2	26.3	26.9
19	28.7	27.9	28.1	29.9	28.4	29.2	30.2	28.6	29.3	27.8	26.5	27.1
20	29.7	27.3	28.4	30.3	29.1	29.7	28.6	27.3	28.0	27.9	26.8	27.3
21	30.3	28.4	28.9	30.8	29.4	30.0	28.6	26.8	27.6	27.9	26.8	27.2
22	31.2	28.3	29.1	31.1	29.5	30.2	30.0	26.8	27.8	28.2	26.9	27.3
23	31.7	28.6	29.8	31.3	29.9	30.5	29.4	27.5	28.2	28.2	25.9	26.8
24	30.8	29.5	30.1	31.2	30.3	30.6	30.3	28.1	28.7	25.9	24.3	25.1
25	31.9	29.3	30.4	31.4	30.1	30.5	29.1	28.2	28.7	25.5	24.3	24.6
26	31.0	29.7	30.1	30.3	29.2	29.7	28.9	27.2	28.1	26.8	24.3	24.9
27	31.7	29.5	30.4	29.3	28.6	28.8	27.3	26.0	26.4	25.4	24.7	25.0
28	31.2	29.9	30.5	30.2	28.2	29.1	27.0	25.6	26.2	26.7	25.3	25.9
29	31.4	29.8	30.4	31.9	29.0	29.8	27.5	26.5	26.9	26.5	25.9	26.1
30	31.2	30.0	30.5	30.5	29.4	29.9	28.6	26.8	27.1	26.9	26.0	26.3
31	---	---	---	30.2	29.5	29.8	27.7	27.0	27.2	---	---	---
MONTH	31.9	23.8	27.8	31.9	28.0	29.7	---	---	---	29.4	23.2	26.0

TEMPERATURE, BOTTOM, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	23.5	23.3	23.4	17.7	17.6	17.6	13.3	12.9	13.1	8.6	8.1	8.4
2	23.3	22.8	23.1	17.8	17.6	17.7	13.4	13.2	13.3	8.6	8.1	8.3
3	23.1	22.7	23.0	18.0	17.7	17.9	13.5	13.3	13.4	8.4	7.9	8.2
4	23.1	22.7	22.8	18.0	17.4	17.8	13.5	13.3	13.4	8.4	7.7	7.9
5	22.9	22.5	22.7	17.8	17.1	17.5	13.4	12.9	13.2	8.0	7.7	7.8
6	22.8	22.1	22.4	17.3	16.9	17.1	13.1	12.3	12.8	8.2	7.9	8.0
7	22.5	21.8	22.0	16.9	16.1	16.5	12.7	11.1	12.1	10.2	8.2	8.9
8	22.2	22.0	22.1	16.2	15.9	16.1	12.2	10.4	11.3	13.3	10.1	12.3
9	22.7	22.1	22.3	16.0	15.6	15.9	10.5	10.1	10.2	13.6	12.8	13.3
10	22.9	22.4	22.6	15.9	15.3	15.7	11.0	10.3	10.5	13.5	12.5	13.0
11	23.4	22.4	22.6	15.5	15.1	15.3	10.6	10.0	10.3	12.5	10.5	11.4
12	23.4	22.7	22.9	15.5	15.1	15.3	10.6	9.9	10.2	10.9	10.4	10.6
13	23.4	22.9	23.1	15.4	14.6	15.0	10.0	9.9	9.9	11.5	10.8	11.1
14	23.8	23.1	23.3	15.0	14.8	14.9	10.5	9.9	10.2	11.3	11.0	11.2
15	23.8	23.1	23.5	14.9	14.4	14.7	10.4	9.0	10.0	11.4	11.2	11.3
16	23.2	21.5	22.4	14.8	13.8	14.3	10.1	9.5	9.9	11.2	11.1	11.1
17	21.6	20.6	21.1	14.3	13.2	13.7	10.1	9.4	9.9	11.2	11.0	11.1
18	21.1	20.3	20.8	13.9	13.4	13.6	10.0	9.2	9.6	11.2	10.8	11.0
19	20.5	18.9	19.9	13.7	12.7	12.9	9.8	9.4	9.6	---	---	---
20	18.9	18.3	18.6	13.2	12.8	12.9	9.7	9.3	9.5	10.9	10.5	10.8
21	18.8	18.5	18.6	13.5	12.9	13.1	9.6	9.4	9.5	10.9	10.6	10.8
22	18.8	18.6	18.7	13.5	13.3	13.4	9.7	9.6	9.6	10.8	10.4	10.6
23	18.8	18.5	18.6	13.7	13.4	13.5	9.9	9.7	9.8	10.7	8.5	9.6
24	18.7	18.4	18.6	14.0	12.8	13.5	10.0	9.9	9.9	10.2	8.9	9.8
25	18.6	18.2	18.5	13.1	12.5	12.9	10.1	9.9	10.0	10.2	10.0	10.1
26	18.5	18.2	18.4	13.2	12.9	13.0	10.1	10.0	10.0	10.3	9.6	9.9
27	18.7	18.2	18.4	13.1	12.5	12.7	10.2	10.1	10.1	---	---	---
28	18.6	17.2	17.6	12.8	12.6	12.7	10.3	9.4	9.9	9.3	8.6	8.9
29	17.6	17.4	17.5	12.7	12.6	12.7	10.1	9.3	9.8	9.2	8.0	8.5
30	17.6	17.5	17.5	13.0	12.7	12.8	9.5	8.5	8.9	9.2	8.4	8.7
31	17.7	17.5	17.5	---	---	---	9.2	8.5	8.9	8.9	8.2	8.5
MONTH	23.8	17.2	20.8	18.0	12.5	14.8	13.5	8.5	10.6	---	---	---

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

TEMPERATURE, BOTTOM, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.3	7.7	8.0	14.2	13.3	13.6	19.6	19.0	19.3	18.7	18.0	18.4
2	8.5	7.8	8.1	14.2	13.5	13.8	20.6	19.1	19.7	19.7	18.5	19.0
3	---	---	---	13.7	12.6	13.2	19.9	19.2	19.6	19.9	18.9	19.4
4	---	---	---	12.6	12.0	12.3	19.5	17.7	18.8	20.3	19.6	19.9
5	10.0	9.5	9.8	12.1	11.7	11.8	17.8	17.0	17.3	20.7	19.5	20.1
6	9.5	9.1	9.2	11.9	11.7	11.8	17.6	16.9	17.2	20.9	20.3	20.5
7	9.1	8.6	8.8	12.5	11.8	12.0	17.7	17.0	17.2	22.0	20.2	20.9
8	---	---	---	13.7	12.0	12.6	18.9	17.3	17.9	21.9	21.1	21.5
9	8.5	7.9	8.2	15.4	13.7	14.5	18.8	18.4	18.6	22.0	21.5	21.7
10	8.8	8.0	8.4	14.6	13.5	14.0	18.5	17.6	17.9	21.7	21.1	21.3
11	9.9	8.6	9.1	13.6	12.1	12.7	17.6	16.9	17.2	22.4	20.6	21.4
12	10.7	9.8	10.2	12.6	11.0	11.5	17.3	16.8	17.0	20.6	19.5	20.1
13	10.5	9.6	9.9	---	---	---	17.2	16.5	16.8	19.9	18.1	19.0
14	9.6	8.9	9.3	---	---	---	16.9	16.4	16.6	19.1	17.4	18.1
15	8.9	8.4	8.7	---	---	---	18.2	16.2	16.9	20.2	18.6	19.1
16	8.8	8.3	8.5	---	---	---	18.9	17.5	18.0	20.3	19.1	19.5
17	11.2	8.8	10.1	---	---	---	19.6	18.2	18.7	20.6	19.7	20.2
18	11.9	10.5	11.1	---	---	---	19.2	18.7	18.9	21.7	20.5	20.9
19	12.3	11.1	11.7	---	---	---	19.5	18.3	18.9	21.6	21.1	21.3
20	12.8	11.8	12.3	---	---	---	20.0	18.9	19.3	23.1	21.1	21.7
21	12.8	12.1	12.5	---	---	---	19.9	18.9	19.5	22.7	21.5	22.1
22	12.7	11.9	12.3	---	---	---	19.5	18.2	18.7	23.5	22.4	23.0
23	13.0	11.9	12.5	---	---	---	18.2	17.0	17.4	23.9	23.4	23.6
24	12.6	11.6	11.9	---	---	---	17.8	16.5	17.0	23.7	23.2	23.3
25	12.3	11.1	11.6	---	---	---	17.8	16.9	17.2	23.6	23.5	23.6
26	12.6	11.6	12.0	---	---	---	19.6	17.5	18.2	24.4	23.5	23.7
27	12.5	11.9	12.2	---	---	---	19.2	18.1	18.7	25.2	24.0	24.6
28	13.4	12.4	12.8	16.8	15.4	16.0	19.3	17.9	18.5	25.5	24.4	24.7
29	---	---	---	18.0	16.3	17.0	19.0	17.8	18.4	25.6	24.7	25.0
30	---	---	---	18.9	17.3	17.9	18.6	18.0	18.3	26.0	25.5	25.7
31	---	---	---	19.8	18.2	18.9	---	---	---	26.2	25.8	26.0
MONTH	---	---	---	---	---	---	20.6	16.2	18.1	26.2	17.4	21.6

TEMPERATURE, BOTTOM, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	27.4	25.9	26.2	30.5	29.6	30.0	29.6	28.6	29.0	27.6	27.0	27.2
2	27.5	26.3	26.8	30.3	29.6	29.9	28.8	27.0	27.5	27.7	26.7	27.3
3	27.3	26.6	26.9	30.0	29.4	29.6	27.0	26.0	26.3	27.7	26.6	27.1
4	27.6	26.8	27.2	30.3	29.3	29.6	26.3	25.7	26.1	26.7	25.6	26.0
5	27.4	26.5	26.8	30.1	29.4	29.7	26.2	25.6	25.9	26.4	25.4	25.6
6	26.8	25.5	26.3	29.5	28.7	29.1	26.0	25.7	25.9	26.2	25.6	25.9
7	25.5	24.5	25.0	29.1	28.3	28.7	26.2	25.7	25.8	26.9	25.8	26.2
8	24.6	23.8	24.3	29.1	28.5	28.7	26.5	25.9	26.2	27.0	25.8	26.3
9	24.4	23.8	24.0	29.8	28.9	29.2	---	---	---	25.8	24.7	25.1
10	24.4	23.7	24.0	29.8	29.3	29.5	27.0	26.2	26.5	24.7	23.6	24.1
11	24.6	23.9	24.0	30.3	29.3	29.7	27.0	26.2	26.6	24.4	23.6	24.0
12	26.0	24.5	25.0	30.0	28.9	29.3	27.4	26.6	27.0	24.1	23.3	23.7
13	27.2	25.7	26.3	29.4	28.6	28.9	28.6	27.0	27.6	23.6	23.1	23.3
14	27.4	26.7	27.0	29.3	28.4	28.8	28.7	27.2	28.0	24.3	23.5	23.9
15	27.9	26.8	27.3	29.0	28.6	28.8	28.2	27.8	28.0	25.3	24.2	24.6
16	28.1	27.2	27.6	29.0	28.6	28.8	28.4	27.9	28.1	25.2	24.7	24.9
17	28.4	27.7	28.0	29.0	28.2	28.6	28.7	28.1	28.3	27.0	25.1	25.8
18	28.4	27.9	28.1	28.5	27.9	28.1	29.2	28.5	28.9	27.0	26.0	26.6
19	28.1	27.5	27.9	29.9	28.2	28.8	29.4	28.6	29.0	27.5	26.3	26.8
20	27.9	27.3	27.5	30.1	29.0	29.4	28.6	27.4	28.0	27.0	26.3	26.7
21	28.1	27.6	27.8	30.0	29.4	29.6	28.0	26.8	27.3	26.6	26.3	26.4
22	28.6	27.9	28.2	30.1	29.5	29.7	27.7	27.3	27.4	27.0	26.3	26.7
23	28.9	27.9	28.3	31.0	29.9	30.2	28.1	27.5	27.7	27.4	25.9	26.6
24	28.6	27.8	28.0	30.8	30.2	30.4	28.5	27.9	28.1	25.9	24.6	25.2
25	27.9	27.6	27.7	30.5	30.0	30.1	29.1	28.0	28.7	25.1	24.4	24.7
26	29.0	27.7	28.0	30.2	29.2	29.7	28.9	27.1	28.1	25.0	24.4	24.7
27	29.4	28.3	28.8	29.3	28.6	28.9	27.2	26.0	26.3	25.2	24.6	24.9
28	30.4	28.3	28.9	29.0	28.3	28.6	26.2	25.6	25.9	25.7	25.2	25.4
29	30.0	29.0	29.3	28.9	28.5	28.6	27.0	26.0	26.4	26.1	25.5	25.9
30	30.5	29.3	29.7	29.8	28.7	29.1	27.2	26.8	27.0	26.4	25.9	26.1
31	---	---	---	29.9	29.5	29.7	27.2	27.0	27.1	---	---	---
MONTH	30.5	23.7	27.0	31.0	27.9	29.3	---	---	---	27.7	23.1	25.6

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

OXYGEN DISSOLVED, TOP, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	8.7	4.6	7.4	12.3	4.6	9.1	10.0	8.2	9.1	13.1	12.1	12.7
2	10.9	2.8	6.9	11.1	3.2	8.0	10.3	8.4	9.4	12.6	11.5	12.3
3	10.4	3.2	7.0	11.7	6.0	8.3	12.2	7.6	9.1	12.9	12.3	12.6
4	11.9	2.3	7.4	14.2	8.0	10.9	11.1	8.3	9.5	12.8	12.2	12.6
5	12.5	4.2	7.0	11.6	7.8	9.7	9.9	7.2	8.9	12.8	12.1	12.5
6	8.1	1.7	5.8	11.3	6.6	9.4	11.8	9.3	10.1	12.8	11.9	12.4
7	6.7	.5	4.2	10.8	7.9	9.5	12.2	10.3	11.1	12.6	12.0	12.3
8	4.3	.5	1.7	11.4	8.9	10.2	13.0	11.0	11.8	12.5	11.4	12.0
9	12.1	1.2	5.6	14.0	9.6	11.6	13.9	9.6	11.3	11.5	10.9	11.2
10	9.9	1.4	5.2	16.3	9.1	12.0	12.1	10.1	11.0	11.4	9.6	10.6
11	10.0	2.0	6.5	13.5	8.1	11.4	12.1	10.4	11.4	9.8	8.9	9.5
12	7.7	1.1	5.3	12.4	5.6	9.7	12.2	10.4	11.6	9.9	7.7	9.1
13	7.3	.5	2.0	15.0	8.0	12.8	12.5	10.5	11.6	10.1	9.1	9.6
14	8.1	.6	4.1	11.3	7.4	9.3	12.3	9.4	11.2	---	---	---
15	4.4	3.0	3.8	13.0	6.5	10.0	13.4	10.1	11.9	10.7	8.7	9.7
16	4.4	3.5	3.9	14.9	9.2	12.0	13.6	11.2	12.6	9.9	8.7	9.4
17	5.0	3.6	4.1	14.9	8.5	13.0	13.6	12.1	12.9	10.3	8.7	9.4
18	4.7	3.7	4.3	16.6	5.1	10.4	13.9	11.0	12.8	10.6	8.9	9.6
19	4.8	4.0	4.4	15.7	3.1	9.0	17.4	10.4	12.7	---	---	---
20	6.3	4.3	4.9	8.4	3.1	6.0	16.1	12.1	13.8	11.3	9.4	10.6
21	9.6	4.2	6.4	10.4	4.1	6.9	15.0	11.5	13.2	12.2	10.0	11.0
22	8.9	6.8	7.9	10.6	7.9	9.3	14.0	10.8	12.3	12.7	11.8	12.4
23	11.7	7.0	8.6	10.1	3.2	8.2	14.3	11.9	13.0	12.9	12.3	12.7
24	11.1	4.9	7.8	10.1	4.6	7.5	14.0	10.1	12.4	12.5	11.8	12.1
25	12.5	7.0	9.9	12.4	7.7	9.3	13.3	11.3	12.5	12.4	11.4	11.9
26	12.2	4.0	8.9	11.8	7.5	10.1	12.2	10.5	11.6	11.8	11.4	11.7
27	9.2	3.3	6.2	12.6	8.8	10.8	12.8	10.3	11.3	---	---	---
28	11.0	6.6	8.6	13.9	7.2	10.4	12.4	10.6	11.8	12.4	11.3	11.6
29	11.1	3.4	7.3	14.2	7.7	10.2	12.4	10.5	11.6	12.5	11.6	11.8
30	10.8	3.4	8.2	12.4	5.5	9.1	13.0	10.3	11.9	11.6	11.2	11.4
31	13.2	5.1	8.4	---	---	---	12.6	11.4	12.0	11.9	11.3	11.6
MONTH	13.2	.5	6.1	16.6	3.1	9.8	17.4	7.2	11.5	---	---	---

OXYGEN DISSOLVED, TOP, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	11.5	11.3	11.4	9.2	8.6	8.9	7.9	7.3	7.6	8.4	7.5	8.0
2	11.7	11.5	11.6	9.1	8.6	8.8	7.5	6.6	6.9	7.7	7.3	7.6
3	---	---	---	9.0	8.6	8.8	7.3	6.7	7.0	7.6	7.2	7.4
4	---	---	---	9.1	8.5	8.8	8.2	6.8	7.4	8.4	7.2	7.5
5	11.3	10.9	11.2	9.7	8.9	9.1	8.0	7.0	7.4	8.7	7.4	8.0
6	11.1	10.6	10.7	9.8	9.3	9.6	7.3	6.9	7.1	7.8	6.4	7.2
7	11.6	10.6	11.0	9.5	8.9	9.2	7.5	6.9	7.2	7.1	6.3	6.8
8	---	---	---	9.4	8.5	9.0	7.7	7.3	7.6	7.6	7.0	7.3
9	11.7	11.2	11.4	9.7	8.8	9.4	7.8	7.2	7.5	7.6	6.9	7.3
10	11.4	11.2	11.3	9.3	8.6	9.0	7.6	7.2	7.3	7.5	6.7	7.2
11	11.9	11.3	11.5	9.6	8.7	9.2	7.5	7.1	7.3	7.4	6.7	7.1
12	11.8	11.2	11.4	9.6	8.7	9.3	7.2	6.8	6.9	7.5	7.0	7.2
13	11.3	11.0	11.1	---	---	---	7.2	6.4	6.8	8.6	7.3	8.3
14	11.4	11.0	11.2	---	---	---	7.2	6.8	7.0	8.5	7.9	8.1
15	11.7	11.2	11.4	---	---	---	7.7	6.9	7.1	8.0	6.7	7.3
16	12.3	11.7	12.1	---	---	---	7.6	7.2	7.4	6.9	6.2	6.5
17	12.9	11.7	12.3	---	---	---	7.7	7.2	7.4	7.1	6.1	6.5
18	11.7	10.9	11.1	---	---	---	7.9	7.0	7.3	7.1	6.3	6.8
19	11.1	9.4	10.2	---	---	---	7.5	6.8	7.1	6.6	6.2	6.4
20	9.7	9.2	9.4	---	---	---	7.5	6.8	7.2	6.9	6.1	6.6
21	9.4	9.0	9.2	---	---	---	7.3	6.8	7.1	6.8	5.2	6.2
22	9.3	9.0	9.2	---	---	---	7.5	7.0	7.2	6.8	5.2	6.1
23	10.1	8.9	9.5	---	---	---	7.4	6.7	7.1	6.0	5.1	5.6
24	10.3	9.3	9.8	---	---	---	7.0	6.6	6.9	6.5	4.9	5.7
25	10.3	9.5	9.9	---	---	---	7.4	6.7	7.1	5.8	4.5	5.1
26	9.7	9.2	9.4	---	---	---	7.8	7.1	7.4	5.5	3.7	4.6
27	9.5	9.1	9.3	---	---	---	8.7	7.5	8.0	5.7	4.0	4.9
28	9.4	8.9	9.2	8.9	8.6	8.8	8.3	7.6	8.0	6.0	4.2	5.1
29	---	---	---	8.7	8.1	8.4	7.7	7.4	7.6	5.7	4.1	4.7
30	---	---	---	8.2	7.8	7.9	7.8	7.4	7.6	6.7	3.5	4.8
31	---	---	---	8.0	7.4	7.8	---	---	---	5.1	3.7	4.5
MONTH	---	---	---	---	---	---	8.7	6.4	7.3	8.7	3.5	6.5

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

OXYGEN DISSOLVED, TOP, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	6.9	4.5	5.4	8.7	3.5	6.3	5.9	2.5	4.6	5.0	3.5	4.2
2	7.0	5.0	6.0	8.6	3.3	6.4	6.3	1.4	4.2	4.5	3.6	4.0
3	6.3	4.6	5.5	10.0	2.9	7.0	6.4	2.7	4.8	6.0	3.8	4.6
4	7.0	5.3	6.2	8.6	3.6	6.8	6.8	1.1	4.4	6.8	4.9	5.7
5	6.8	3.5	5.3	9.6	2.8	5.8	6.8	1.6	4.7	6.7	4.9	5.8
6	5.7	3.7	4.9	7.2	2.0	5.1	6.4	1.8	4.0	6.1	4.2	5.1
7	5.8	3.9	5.0	10.6	3.0	7.2	8.3	2.1	5.3	5.6	4.3	4.9
8	6.3	4.9	5.6	8.9	4.2	6.8	10.9	1.2	5.4	6.8	5.3	5.9
9	6.2	4.9	5.6	11.0	4.4	6.9	---	---	---	6.4	5.6	6.1
10	7.8	4.7	5.7	9.5	5.4	7.4	9.3	1.8	4.7	6.8	5.8	6.5
11	8.1	5.1	6.3	10.1	3.5	7.5	10.6	1.3	6.1	6.3	5.5	6.0
12	7.7	5.5	6.6	10.7	5.5	8.4	13.3	5.3	9.3	6.2	5.5	5.7
13	7.6	6.0	6.8	11.8	5.0	8.4	11.5	7.7	9.7	6.7	5.5	5.9
14	7.3	5.8	6.7	12.0	6.1	8.7	11.3	9.2	10.1	6.7	5.4	6.2
15	7.8	6.3	7.1	9.9	3.7	6.4	11.7	5.6	9.3	8.4	5.8	6.9
16	7.3	5.9	6.6	7.2	3.7	5.9	10.1	4.9	7.4	9.6	5.8	7.9
17	8.1	5.8	6.9	6.9	2.5	5.0	9.0	3.8	6.9	10.0	7.8	8.9
18	8.1	6.1	7.0	9.0	3.4	5.2	10.3	6.2	8.2	8.5	6.8	7.9
19	7.4	5.6	6.5	7.7	1.9	5.5	10.1	6.5	8.0	9.2	7.3	8.2
20	7.9	5.7	6.7	7.5	4.6	6.1	10.3	5.4	8.0	8.9	6.6	7.6
21	8.8	5.3	6.7	8.4	4.9	6.7	11.8	8.0	10.0	7.5	5.5	6.6
22	8.9	4.6	6.2	8.9	3.3	6.6	14.0	6.0	9.4	8.3	4.9	7.1
23	9.7	5.2	7.1	9.7	4.9	7.5	11.4	5.5	7.9	7.4	5.5	6.6
24	8.5	5.2	6.9	8.9	3.4	6.4	11.6	5.3	7.4	8.3	5.3	6.6
25	9.2	4.5	6.5	8.9	.8	4.3	9.8	5.9	7.8	9.5	5.8	6.9
26	10.5	3.0	6.7	6.9	1.0	3.7	8.2	6.6	7.2	9.1	4.3	6.4
27	9.4	4.7	6.7	6.3	.5	3.7	7.5	5.7	6.7	7.7	4.6	6.1
28	8.4	2.9	6.4	6.5	1.0	3.7	7.2	5.4	6.5	8.6	5.8	7.1
29	8.2	1.9	5.4	8.9	.4	3.3	6.5	4.5	5.1	9.0	5.6	7.0
30	8.1	2.2	5.5	6.3	.4	3.7	5.2	3.9	4.4	7.7	6.1	6.9
31	---	---	---	6.0	2.5	4.6	4.6	3.3	4.0	---	---	---
MONTH	10.5	1.9	6.2	12.0	.4	6.0	---	---	---	10.0	3.5	6.4

OXYGEN DISSOLVED, BOTTOM, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	3.1	.4	1.5	4.6	3.6	3.8	6.7	.1	3.0	5.0	.7	2.3
2	2.2	.2	1.2	5.0	3.6	3.9	7.0	1.5	4.1	6.1	.1	2.4
3	.4	.2	.2	5.8	3.8	4.2	4.3	.7	2.3	5.8	.0	2.3
4	.2	.2	.2	5.9	3.7	4.1	2.3	.0	1.2	4.1	.1	1.8
5	.4	.1	.2	7.2	3.1	5.6	4.6	.5	2.5	5.1	.1	1.9
6	.1	.1	.1	6.7	5.2	6.1	7.3	.9	3.0	5.5	.2	2.0
7	.1	.1	.1	6.9	3.9	6.0	6.8	.5	3.2	7.6	.2	3.1
8	.1	.1	.1	7.0	3.9	6.2	7.3	.6	3.6	16.1	4.0	12.1
9	.1	.1	.1	6.4	4.4	5.5	5.8	.3	2.8	15.4	10.6	13.4
10	.1	.1	.1	5.7	3.0	4.2	7.6	1.2	3.3	13.6	9.5	11.8
11	2.4	.1	.3	---	---	---	5.7	.4	2.9	10.6	1.8	6.3
12	.3	.1	.1	---	---	---	8.4	.4	2.5	---	---	---
13	.1	.1	.1	---	---	---	6.3	.5	3.0	---	---	---
14	2.5	.1	.7	---	---	---	4.3	.2	1.7	---	---	---
15	3.6	1.1	1.9	---	---	---	4.3	.5	2.4	3.8	2.1	2.8
16	5.9	2.0	3.8	---	---	---	5.4	.1	1.9	3.8	3.0	3.5
17	6.5	5.0	5.7	---	---	---	3.6	.0	1.3	3.8	2.6	3.3
18	6.2	4.0	5.4	---	---	---	5.0	.1	1.7	3.6	2.4	3.1
19	8.0	5.2	6.1	---	---	---	4.7	.0	1.5	---	---	---
20	8.2	7.2	7.7	---	---	---	2.8	.0	1.1	2.9	1.9	2.4
21	7.8	6.3	7.0	---	---	---	5.4	.4	2.0	2.2	1.4	1.8
22	6.8	4.8	6.1	---	---	---	4.6	.9	2.1	2.0	1.1	1.6
23	6.0	5.0	5.6	---	---	---	5.0	.4	2.2	7.3	1.0	3.2
24	5.0	2.6	3.4	---	---	---	2.7	.0	1.0	7.8	1.4	3.7
25	3.2	2.5	2.8	---	---	---	4.4	.2	1.7	2.1	1.0	1.3
26	3.7	2.6	3.0	7.4	4.6	6.1	4.2	.0	1.6	2.9	.6	1.3
27	6.7	2.4	3.2	7.8	4.0	6.4	3.6	.0	1.7	---	---	---
28	9.4	5.4	8.1	7.1	3.4	5.1	5.1	1.1	3.1	9.7	8.9	9.2
29	8.3	5.5	6.9	7.4	3.3	5.2	5.2	.7	2.5	9.8	8.1	9.3
30	6.2	4.3	5.3	7.1	.1	3.4	7.4	1.4	3.5	9.2	6.1	8.8
31	5.9	3.6	5.1	---	---	---	4.9	.4	2.3	9.5	8.8	9.2
MONTH	9.4	.1	3.0	---	---	---	8.4	.0	2.3	---	---	---



## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

OXYGEN DISSOLVED, BOTTOM, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	9.1	8.9	9.0	9.0	8.5	8.7	---	---	---	8.8	6.3	8.1
2	9.3	9.0	9.2	9.0	8.5	8.8	---	---	---	7.8	6.2	7.3
3	---	---	---	9.0	8.6	8.8	---	---	---	7.9	6.3	7.2
4	---	---	---	9.3	8.4	8.9	---	---	---	8.8	6.0	7.3
5	9.0	8.2	8.8	9.2	6.6	7.6	---	---	---	9.2	5.0	8.0
6	8.8	8.4	8.5	7.5	6.1	6.8	---	---	---	7.4	5.0	6.3
7	9.4	8.4	8.8	8.2	5.2	7.0	---	---	---	7.4	4.5	6.0
8	---	---	---	9.9	4.3	7.5	---	---	---	7.8	5.7	7.2
9	9.4	8.9	9.1	10.2	9.3	9.9	---	---	---	7.5	5.7	6.9
10	9.2	8.9	9.0	9.9	9.2	9.5	---	---	---	7.4	5.2	6.4
11	9.5	9.0	9.2	10.3	8.9	9.9	---	---	---	7.7	5.4	6.8
12	9.5	8.9	9.1	10.5	9.4	10.1	---	---	---	7.9	5.9	7.2
13	9.1	8.8	8.9	---	---	---	---	---	---	9.2	7.8	8.6
14	9.1	8.8	9.0	---	---	---	---	---	---	8.8	7.4	8.1
15	9.4	8.9	9.2	---	---	---	---	---	---	8.3	6.6	7.3
16	9.9	9.4	9.8	---	---	---	---	---	---	6.8	5.8	6.5
17	10.5	9.3	9.9	---	---	---	---	---	---	7.3	5.2	6.4
18	9.3	8.7	8.8	---	---	---	---	---	---	7.1	6.0	6.6
19	8.8	8.4	8.6	---	---	---	---	---	---	6.7	5.6	6.2
20	8.8	8.3	8.6	---	---	---	---	---	---	6.9	5.7	6.3
21	8.6	8.3	8.4	---	---	---	---	---	---	6.8	5.1	5.9
22	8.8	8.3	8.5	---	---	---	7.0	5.3	6.3	7.3	5.8	6.4
23	---	---	---	---	---	---	7.3	5.4	6.4	6.9	5.9	6.4
24	---	---	---	---	---	---	6.7	5.7	6.2	7.4	6.0	6.6
25	9.6	9.0	9.3	---	---	---	7.3	5.3	6.3	6.5	5.2	5.9
26	9.2	8.8	9.0	---	---	---	7.9	5.6	7.0	5.7	4.1	5.0
27	9.1	8.9	9.0	---	---	---	8.9	6.5	7.8	5.9	4.0	5.0
28	9.1	8.7	8.9	---	---	---	8.2	6.1	7.5	5.7	4.4	5.1
29	---	---	---	---	---	---	7.9	6.7	7.3	4.9	4.1	4.5
30	---	---	---	---	---	---	8.2	6.4	7.4	4.7	3.3	4.2
31	---	---	---	---	---	---	---	---	---	5.0	3.5	4.3
MONTH	---	---	---	---	---	---	---	---	---	9.2	3.3	6.5

OXYGEN DISSOLVED, BOTTOM, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	7.1	4.7	5.3	8.1	3.6	5.3	6.8	5.0	6.1	1.9	.0	.7
2	7.2	5.3	5.9	6.6	1.4	4.7	7.7	6.0	6.7	2.2	.0	1.1
3	5.6	4.5	5.2	8.0	4.5	6.7	7.6	6.3	6.9	4.7	.4	2.3
4	6.0	4.6	5.4	10.1	3.5	6.3	6.8	5.3	6.3	5.2	2.7	4.0
5	5.8	3.5	4.7	9.6	4.7	7.7	7.8	2.2	5.5	4.0	1.6	3.3
6	---	---	---	7.9	6.2	7.1	6.0	2.3	3.6	3.0	1.9	2.6
7	---	---	---	7.8	5.5	6.4	2.7	.5	1.8	3.6	1.8	2.8
8	---	---	---	5.9	3.2	4.1	3.0	.8	1.6	5.0	3.4	4.0
9	---	---	---	7.1	2.4	4.6	---	---	---	4.7	3.1	4.1
10	---	---	---	6.7	4.2	5.8	2.7	.7	1.1	5.0	2.0	4.0
11	6.7	5.3	6.2	9.3	3.3	5.3	1.3	.7	.8	4.3	2.3	3.6
12	7.3	5.8	6.8	7.5	4.2	6.3	1.3	.6	.8	3.9	2.0	3.3
13	8.2	6.5	7.1	7.3	4.2	6.0	7.4	.6	1.6	3.8	2.6	3.3
14	8.0	6.8	7.6	9.0	4.5	7.1	7.6	.6	3.4	3.8	1.8	2.8
15	8.4	7.5	8.0	8.1	4.5	6.5	6.6	.6	2.4	4.4	1.6	3.0
16	7.9	7.2	7.6	7.3	4.5	6.1	2.0	.5	.8	4.2	1.9	3.1
17	7.9	6.6	7.5	7.0	4.6	6.1	1.9	.5	.7	6.9	2.4	3.9
18	8.1	6.8	7.6	6.8	5.2	5.8	2.8	.5	1.1	6.3	1.8	4.4
19	8.2	2.8	7.0	6.7	4.4	5.5	7.0	.5	3.1	6.4	2.1	4.6
20	8.0	5.9	7.3	7.1	5.1	6.1	8.1	2.0	5.8	5.0	.6	3.3
21	6.8	4.7	5.8	7.0	4.4	6.3	8.6	2.2	6.0	2.0	.1	.6
22	7.9	5.4	6.6	7.2	4.9	6.5	7.3	1.4	3.0	4.3	.1	1.5
23	7.7	3.1	5.4	9.3	5.4	7.3	5.1	1.6	2.8	5.2	.7	3.7
24	4.5	1.4	2.6	8.5	6.4	7.4	5.8	1.7	3.1	5.3	1.8	3.6
25	1.5	.6	.8	7.9	1.9	5.5	6.8	1.7	4.3	5.5	1.7	3.8
26	3.2	.5	.9	7.1	1.6	4.9	6.6	4.8	5.5	2.9	.0	1.6
27	4.8	1.5	2.6	6.8	2.2	4.9	6.0	2.6	4.8	5.0	.0	1.5
28	8.8	1.2	2.9	6.9	2.0	4.7	3.9	.0	1.6	5.0	.2	2.8
29	8.3	1.9	3.2	2.5	.9	1.5	2.7	.1	1.4	5.8	.0	3.7
30	7.8	1.8	3.5	4.3	.6	1.8	2.6	.0	1.0	5.7	2.7	4.2
31	---	---	---	6.1	2.9	4.4	1.9	.0	.7	---	---	---
MONTH	---	---	---	10.1	.6	5.6	---	---	---	6.9	.0	3.0

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

OXYGEN DISSOLVED, TOP, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	104	55	88	134	52	99	100	82	90	109	101	106
2	127	33	81	119	35	86	97	82	91	106	95	102
3	124	38	82	125	67	90	117	75	87	108	101	104
4	141	27	87	150	86	116	106	79	90	109	101	106
5	149	51	83	121	85	102	95	71	86	110	104	107
6	97	20	69	121	71	100	110	88	95	114	104	109
7	82	7	50	114	85	101	110	94	100	116	110	113
8	52	7	20	118	94	107	118	98	107	120	113	116
9	152	14	68	146	99	121	126	88	106	114	108	111
10	121	17	63	191	97	126	114	96	104	113	95	105
11	124	23	80	143	86	120	115	97	107	98	89	95
12	94	14	64	129	61	103	115	98	108	96	76	89
13	88	7	24	156	85	133	120	100	110	98	89	94
14	99	7	50	117	78	97	115	92	106	---	---	---
15	54	36	46	133	69	103	124	98	111	95	79	88
16	50	41	45	153	94	122	125	106	116	90	81	86
17	57	42	47	145	83	128	126	112	118	92	79	85
18	52	42	49	180	53	105	127	105	119	94	80	86
19	53	45	49	153	34	91	162	100	119	---	---	---
20	71	47	54	86	33	62	151	115	129	97	83	92
21	106	46	71	105	44	70	138	110	124	101	87	94
22	97	75	87	108	80	95	131	104	116	107	97	103
23	126	76	93	103	35	85	134	111	121	109	104	107
24	120	55	85	103	50	77	130	98	116	106	103	105
25	135	77	107	117	78	90	126	106	117	106	98	103
26	133	44	97	112	74	96	116	101	111	101	98	100
27	102	37	69	120	85	103	124	99	107	---	---	---
28	120	59	93	134	72	100	114	100	108	108	99	102
29	121	39	80	174	77	100	112	95	105	107	100	102
30	116	39	90	120	56	89	110	93	102	101	98	100
31	139	55	90	---	---	---	106	96	102	104	99	101
MONTH	152	7	70	191	33	101	162	71	107	---	---	---

OXYGEN DISSOLVED, TOP, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	99	98	98	88	84	86	85	80	82	89	81	85
2	101	99	100	88	84	86	82	73	76	84	80	82
3	---	---	---	87	82	85	79	73	76	83	78	81
4	---	---	---	86	81	83	87	74	80	92	78	83
5	102	99	101	91	83	85	85	73	77	96	83	89
6	99	94	96	92	86	89	76	72	74	86	71	81
7	103	94	98	89	84	86	79	73	75	81	71	76
8	---	---	---	91	80	85	82	77	79	87	79	83
9	102	98	99	95	87	92	84	77	81	87	79	83
10	102	97	99	92	85	88	82	75	77	85	76	81
11	107	100	102	91	83	88	78	73	75	84	76	80
12	107	102	104	89	83	86	76	69	72	83	77	79
13	103	100	101	---	---	---	73	65	69	93	80	89
14	102	99	101	---	---	---	74	70	72	91	84	86
15	103	99	101	---	---	---	80	70	73	86	75	80
16	109	103	107	---	---	---	81	76	78	80	69	72
17	117	108	112	---	---	---	83	78	80	80	68	73
18	108	101	104	---	---	---	85	75	79	82	71	77
19	105	88	95	---	---	---	82	72	77	76	71	74
20	90	86	88	---	---	---	81	75	78	82	70	77
21	88	85	86	---	---	---	80	74	78	---	---	---
22	87	84	86	---	---	---	80	76	78	79	62	72
23	95	85	90	---	---	---	78	70	74	71	60	66
24	96	87	91	---	---	---	74	68	71	77	57	67
25	94	87	91	---	---	---	79	70	74	69	53	61
26	90	86	88	---	---	---	85	75	80	68	44	56
27	88	86	87	---	---	---	94	80	86	70	49	60
28	88	85	87	91	87	89	88	82	85	75	50	63
29	---	---	---	89	85	87	82	78	80	71	49	57
30	---	---	---	86	83	84	83	78	81	84	42	58
31	---	---	---	86	81	84	---	---	---	62	44	54
MONTH	---	---	---	---	---	---	94	65	77	---	---	---



## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

OXYGEN DISSOLVED, TOP, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	85	54	65	117	46	83	76	33	59	64	45	53
2	86	60	73	114	43	85	80	18	53	58	46	51
3	79	56	67	134	38	93	79	33	59	75	48	57
4	87	64	76	114	46	90	85	15	55	83	61	71
5	83	42	65	127	37	76	84	20	58	85	61	71
6	68	44	58	95	27	67	79	22	49	76	53	64
7	69	45	58	139	38	94	104	25	66	70	54	61
8	74	56	64	116	56	90	146	15	69	84	65	73
9	71	56	64	148	58	92	---	---	---	79	67	74
10	98	53	67	128	71	99	125	24	61	82	70	78
11	101	61	76	135	47	101	137	18	80	76	66	72
12	96	66	80	142	72	111	179	69	121	73	64	67
13	95	75	85	155	66	111	151	100	126	82	65	69
14	94	73	85	160	80	114	149	119	132	83	65	75
15	100	80	90	129	49	84	159	72	121	105	69	84
16	94	73	84	94	48	76	133	63	97	122	70	97
17	105	73	89	89	33	65	118	48	89	127	96	111
18	108	79	91	120	45	67	136	80	106	108	84	99
19	96	71	83	101	24	72	133	84	104	117	92	103
20	103	71	86	100	60	80	133	68	102	112	83	96
21	116	69	87	112	65	89	152	100	127	96	69	83
22	119	59	80	120	44	88	182	73	118	105	62	90
23	131	67	93	130	65	100	145	66	97	94	69	83
24	114	69	91	120	45	85	147	62	90	101	65	80
25	126	59	87	120	11	57	127	69	99	115	68	83
26	140	40	88	91	13	49	108	85	93	114	51	78
27	126	61	89	82	7	48	96	71	84	94	56	73
28	113	37	85	86	14	48	89	66	81	107	71	87
29	113	25	72	122	6	44	82	56	64	112	64	87
30	110	30	74	84	6	49	68	49	55	96	76	85
31	---	---	---	78	33	60	58	42	50	---	---	---
MONTH	140	25	78	160	6	80	---	---	---	127	45	79

OXYGEN DISSOLVED, BOTTOM, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	39	5	19	51	40	42	68	1	31	45	6	21
2	27	2	15	56	40	43	72	16	43	55	1	21
3	5	2	2	63	42	47	44	7	24	52	0	20
4	3	2	2	64	41	45	24	0	12	36	0	15
5	5	2	2	79	34	62	47	5	26	45	1	17
6	2	2	2	74	57	67	74	9	30	49	0	18
7	2	1	1	75	42	65	69	5	32	68	2	27
8	2	1	1	75	42	67	71	6	36	152	37	114
9	2	1	1	69	47	59	56	3	27	147	102	128
10	2	1	1	60	33	45	74	12	32	129	90	113
11	30	1	4	---	---	---	55	4	27	102	18	61
12	4	1	1	---	---	---	81	4	24	---	---	---
13	2	1	1	---	---	---	61	5	29	---	---	---
14	26	1	8	---	---	---	42	2	16	---	---	---
15	44	13	23	---	---	---	41	5	23	37	21	28
16	69	24	46	---	---	---	52	0	19	38	30	34
17	75	59	67	---	---	---	35	0	12	37	25	32
18	72	48	64	---	---	---	47	0	16	36	24	30
19	90	61	71	---	---	---	45	0	14	---	---	---
20	92	81	86	---	---	---	27	0	11	29	19	24
21	88	72	80	---	---	---	52	4	19	21	14	18
22	78	54	69	---	---	---	43	8	20	20	11	15
23	69	57	65	---	---	---	48	0	20	64	10	29
24	57	30	39	---	---	---	26	0	9	68	12	32
25	36	29	31	---	---	---	42	2	16	19	9	12
26	42	30	34	75	47	62	40	0	15	27	6	12
27	75	27	36	80	41	66	34	0	16	---	---	---
28	102	60	88	73	35	53	48	10	29	83	77	79
29	90	60	76	77	35	54	48	7	23	83	70	79
30	69	48	58	74	1	35	65	12	31	78	53	76
31	66	40	56	---	---	---	45	4	21	81	76	79
MONTH	102	1	34	---	---	---	81	0	23	---	---	---

## NEUSE RIVER BASIN

02092162 NEUSE RIVER AT NEW BERN, NC -- Continued--Continued

OXYGEN DISSOLVED, BOTTOM, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	77	75	76	87	83	85	---	---	---	93	68	86
2	79	76	78	88	83	86	---	---	---	85	68	79
3	---	---	---	87	83	86	---	---	---	87	69	78
4	---	---	---	88	80	85	---	---	---	96	66	80
5	79	73	78	87	65	74	---	---	---	101	56	88
6	77	73	74	72	61	67	---	---	---	82	56	70
7	80	73	76	79	50	68	---	---	---	85	49	67
8	---	---	---	96	43	73	---	---	---	88	65	81
9	80	76	77	101	94	98	---	---	---	85	65	78
10	79	75	77	98	91	95	---	---	---	84	59	72
11	83	77	79	98	86	95	---	---	---	87	62	77
12	83	79	80	98	91	95	---	---	---	87	66	79
13	79	76	78	---	---	---	---	---	---	99	85	92
14	78	76	77	---	---	---	---	---	---	93	80	86
15	80	76	77	---	---	---	---	---	---	89	72	79
16	85	79	82	---	---	---	---	---	---	77	65	71
17	92	84	88	---	---	---	---	---	---	82	58	72
18	84	78	80	---	---	---	---	---	---	80	67	74
19	81	77	79	---	---	---	---	---	---	77	64	71
20	82	78	80	---	---	---	---	---	---	79	66	73
21	81	77	79	---	---	---	---	---	---	76	59	68
22	82	78	80	---	---	---	75	58	68	86	67	74
23	---	---	---	---	---	---	77	56	67	82	70	76
24	---	---	---	---	---	---	70	59	64	87	71	77
25	89	83	86	---	---	---	77	55	65	77	61	69
26	86	83	84	---	---	---	87	60	75	68	48	59
27	86	83	85	---	---	---	96	70	84	71	48	60
28	87	83	86	---	---	---	88	64	80	69	53	62
29	---	---	---	---	---	---	85	71	77	60	49	55
30	---	---	---	---	---	---	87	68	78	57	41	51
31	---	---	---	---	---	---	---	---	---	62	44	53
MONTH	---	---	---	---	---	---	---	---	---	101	41	73

OXYGEN DISSOLVED, BOTTOM, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	90	57	65	110	49	72	89	66	79	---	---	---
2	90	66	74	88	20	63	98	76	86	---	---	---
3	71	57	65	106	61	89	93	79	86	59	5	28
4	75	58	69	134	46	83	85	67	78	64	33	49
5	73	44	59	127	63	103	97	28	68	50	20	40
6	---	---	---	105	81	94	74	28	44	37	23	33
7	---	---	---	106	71	84	33	6	23	45	21	33
8	---	---	---	77	41	53	38	10	20	63	43	50
9	---	---	---	94	32	60	---	---	---	57	38	49
10	---	---	---	89	55	77	34	8	14	59	25	48
11	79	63	74	124	44	71	17	0	10	52	27	43
12	91	70	82	99	56	84	16	8	10	46	24	39
13	103	81	89	97	55	79	97	8	21	45	29	38
14	101	85	95	119	60	93	99	7	45	44	20	33
15	106	94	100	106	59	85	86	8	31	53	18	36
16	101	91	96	94	58	79	26	7	10	51	23	38
17	103	85	96	90	60	79	25	6	9	87	29	49
18	104	87	98	87	66	74	38	6	15	79	23	56
19	106	36	90	89	57	72	92	7	41	81	26	58
20	103	75	93	93	67	80	106	27	75	63	7	41
21	86	60	73	92	58	83	109	28	76	25	1	7
22	102	70	85	95	64	86	94	18	39	53	1	19
23	100	40	70	125	71	97	66	20	37	65	8	46
24	59	18	34	114	85	99	76	21	39	63	22	44
25	20	8	11	106	25	73	89	22	56	67	21	47
26	43	8	13	93	21	65	86	62	71	36	1	20
27	63	20	35	89	29	64	77	32	60	61	1	18
28	118	16	38	90	27	62	---	---	---	61	2	34
29	110	25	42	32	12	20	---	---	---	71	0	46
30	106	24	47	56	7	24	---	---	---	70	33	52
31	---	---	---	80	39	58	---	---	---	---	---	---
MONTH	---	---	---	134	7	74	---	---	---	---	---	---

## NEUSE RIVER BASIN

02092500 TRENT RIVER NEAR TRENTON, NC

LOCATION.--Lat 35°03'54", long 77°27'24", Jones County, Hydrologic Unit 03020204, on left bank 50 ft downstream of Free Bridge on Secondary Road 1129, 800 ft downstream of Little Chinquapin Branch, 1.5 mi southwest of Phillips Crossroads, and 6 mi west of Trenton.

DRAINAGE AREA.--168 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 19.15 ft above sea level. Prior to Mar. 21, 1951, nonrecording gage on bridge 50 ft upstream at same datum. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for current water year also occurred Aug. 26. Minimum discharge for period of record also occurred Oct. 24, 25, 26, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1928 reached a stage of 17.3 ft; discharge, 7,600 ft<sup>3</sup>/s, from information provided by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	18	152	503	546	344	144	80	62	4.4	85	1020
2	54	36	204	429	443	303	127	70	54	4.0	56	764
3	42	58	247	359	372	269	109	60	48	3.5	28	526
4	39	76	291	298	760	240	113	53	39	2.8	17	534
5	27	84	299	251	1270	215	137	57	31	2.7	12	658
6	20	82	275	215	1800	194	156	63	27	2.5	9.2	824
7	15	72	237	201	2050	176	165	68	28	2.2	7.5	869
8	12	59	196	208	1770	165	170	97	24	2.1	6.4	726
9	10	48	159	234	1270	224	274	135	19	2.5	11	526
10	8.4	38	134	262	826	288	485	173	15	3.8	14	373
11	6.9	30	119	291	551	390	809	192	12	3.0	16	237
12	5.5	25	113	301	450	459	1050	189	11	2.8	11	147
13	4.4	25	119	284	403	442	929	166	10	2.7	7.8	104
14	3.6	42	128	254	369	385	660	147	9.4	2.5	6.7	78
15	2.9	73	133	223	342	314	442	127	8.4	5.0	5.7	62
16	2.5	97	130	233	313	256	330	106	7.3	4.5	4.1	52
17	2.3	106	122	283	810	212	261	88	7.0	5.3	3.0	45
18	2.1	103	113	347	1890	186	214	80	13	17	3.2	40
19	2.5	96	103	430	2620	232	181	69	11	33	3.6	35
20	3.0	87	93	498	2740	406	162	57	10	24	4.3	31
21	4.1	75	84	527	2160	689	151	50	7.8	12	3.8	28
22	4.8	65	78	520	1320	926	140	45	6.0	7.4	3.0	26
23	4.6	56	88	566	918	877	133	38	5.5	4.3	2.5	23
24	4.6	49	111	957	704	678	135	36	8.8	3.0	2.1	20
25	5.0	47	191	1220	603	485	133	35	7.3	3.6	1.7	18
26	5.9	47	237	1330	533	375	127	33	5.7	20	7.2	17
27	7.3	36	312	1200	455	305	118	32	4.9	51	331	15
28	13	37	436	1040	394	256	107	72	4.5	36	726	14
29	16	36	540	863	---	218	98	100	3.9	24	1150	13
30	16	56	617	753	---	187	88	93	3.9	18	1330	12
31	17	---	586	660	---	164	---	78	---	53	1230	---
TOTAL	427.4	1759	6647	15740	28682	10860	8148	2689	504.4	362.6	5098.8	7837
MEAN	13.8	58.6	214	508	1024	350	272	86.7	16.8	11.7	164	261
MAX	66	106	617	1330	2740	926	1050	192	62	53	1330	1020
MIN	2.1	18	78	201	313	164	88	32	3.9	2.1	1.7	12
CFSM	.08	.35	1.28	3.02	6.10	2.09	1.62	.52	.10	.07	.98	1.55
IN.	.09	.39	1.47	3.49	6.35	2.40	1.80	.60	.11	.08	1.13	1.74

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

	MEAN	98.5	89.3	170	306	338	348	215	118	127	150	176	133
MAX	864	295	551	703	1024	963	685	435	768	1381	1587	1577	
(WY)	1972	1963	1958	1978	1998	1983	1973	1978	1961	1962	1955	1955	
MIN	1.58	1.80	6.65	17.2	31.8	36.5	23.1	10.2	2.77	4.78	1.81	2.55	
(WY)	1955	1955	1955	1955	1955	1955	1955	1985	1985	1993	1993	1995	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

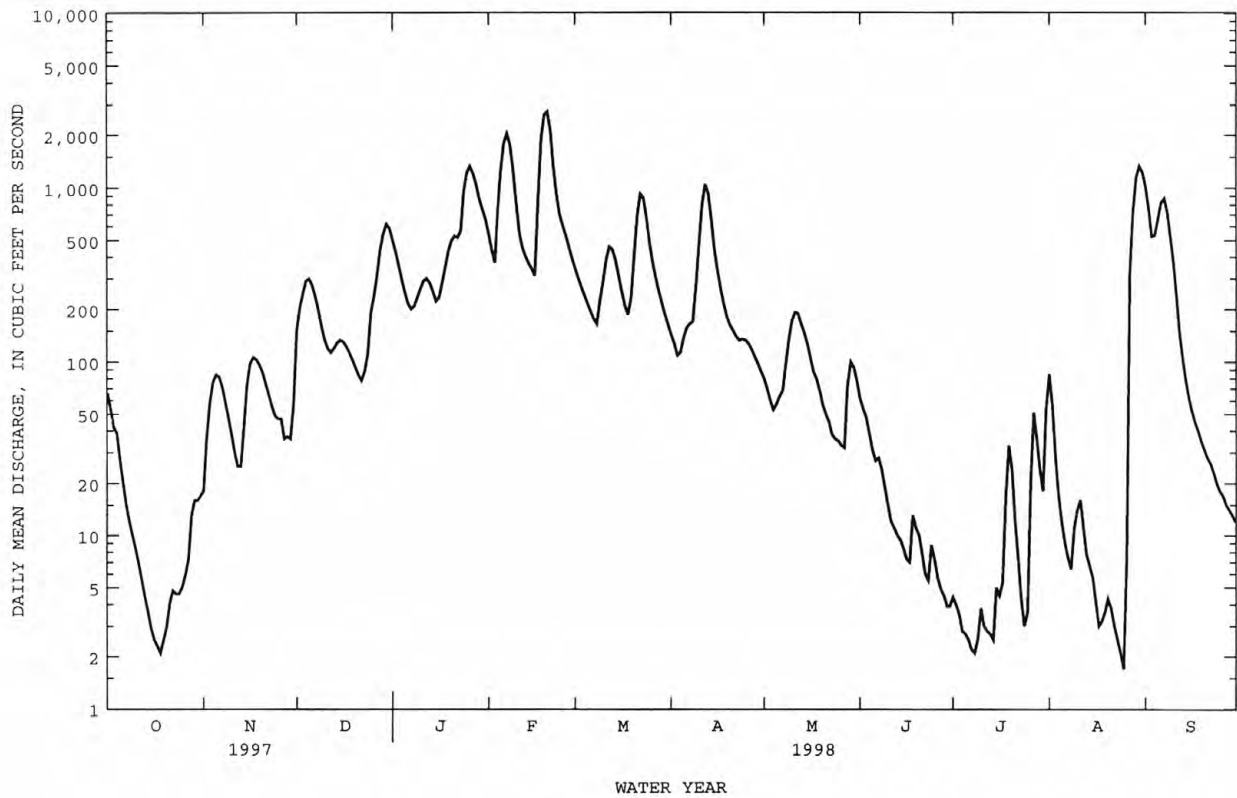
## WATER YEARS 1951 - 1998

ANNUAL TOTAL	41921.1	88755.2	
ANNUAL MEAN	115	243	190
HIGHEST ANNUAL MEAN			316
LOWEST ANNUAL MEAN			79.8
HIGHEST DAILY MEAN	860	Feb 17	8580
LOWEST DAILY MEAN	2.1	Oct 18	.33
ANNUAL SEVEN-DAY MINIMUM	2.7	Oct 14	.39
INSTANTANEOUS PEAK FLOW			9100
INSTANTANEOUS PEAK STAGE			17.84
INSTANTANEOUS LOW FLOW			.30*
ANNUAL RUNOFF (CFSM)	.68	1.45	1.13
ANNUAL RUNOFF (INCHES)	9.28	19.65	15.38
10 PERCENT EXCEEDS	294	695	473
50 PERCENT EXCEEDS	59	88	81
90 PERCENT EXCEEDS	9.4	4.4	8.3

\*See REMARKS.

## NEUSE RIVER BASIN

02092500 TRENT RIVER NEAR TRENTON, NC--Continued



## NEUSE RIVER BASIN

02092554 TRENT RIVER AT POLLOCKSVILLE, NC

LOCATION.--Lat 35°00'38", long 77°13'10", Jones County, Hydrologic Unit 03020204, at downstream side of bridge on U.S. Highway 17, 0.5 mi downstream from Goshen Branch, and 0.2 mi northeast of Pollocksville.

DRAINAGE AREA.--370 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1996 to current year.

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 10 ft below sea level, from topographic map. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	244	e171	e539	1660	1280	e163	228	-2.2	-23	-194	1710
2	-100	103	e471	e658	1460	1100	e94	347	283	-66	48	1720
3	264	192	e589	e670	1010	1000	e-68	195	183	33	351	1440
4	106	198	452	e614	1610	836	e334	146	-13	158	183	1860
5	85	-66	492	684	2440	750	e176	213	83	-174	e-21	1730
6	105	283	421	582	2500	542	e362	288	61	-4.9	e96	1680
7	61	176	506	302	2520	723	e344	220	252	65	e114	1610
8	86	174	e332	e442	2730	530	e378	246	73	221	e-27	1310
9	74	52	e206	534	2810	619	637	550	87	-195	e40	1340
10	129	167	e173	459	2750	660	816	463	48	199	e89	1240
11	-89	145	e27	536	2570	585	1160	401	60	21	67	1130
12	84	211	e136	458	2390	804	1220	500	137	78	-11	996
13	125	-47	e324	e520	1910	873	1520	253	55	8.1	-34	729
14	62	456	e52	e408	1740	970	1530	367	-43	-6.6	-3.4	452
15	30	82	e-41	e531	1280	685	1370	467	122	150	205	357
16	12	238	e278	536	1160	758	1370	359	8.5	116	39	241
17	67	177	e134	558	1400	745	1190	295	-43	50	105	111
18	86	260	159	628	2530	901	815	212	39	92	33	139
19	32	226	227	e392	2590	778	980	311	-149	175	-164	195
20	77	234	173	e1010	2710	909	513	157	148	244	-7.5	144
21	151	243	14	843	2830	1380	400	170	36	65	163	227
22	116	272	234	831	2820	1300	510	53	70	79	4.0	143
23	92	203	153	1160	2850	1480	467	204	-56	69	50	-112
24	176	213	158	e1380	3020	1500	480	61	241	24	8.3	241
25	150	e288	358	e1690	2510	1440	362	179	165	-22	-104	167
26	99	251	405	e1540	2110	1520	398	71	189	20	-819	147
27	207	e5.8	e655	e1400	1840	e597	14	111	12	306	1050	148
28	-40	278	e652	2180	1490	e350	339	123	-139	187	1660	18
29	176	e58	e565	1830	---	e365	343	367	204	202	1320	-32
30	99	e322	e1050	1880	---	e146	236	242	96	82	1390	184
31	26	---	e653	1740	---	e134	---	268	---	13	1930	---
TOTAL	2584	5638.8	10179	27535	61240	26260	18453	8067	2207.3	2165.6	7560.4	21265
MEAN	83.4	188	328	888	2187	847	615	260	73.6	69.9	244	709
MAX	264	456	1050	2180	3020	1520	1530	550	283	306	1930	1860
MIN	-100	-66	-41	302	1010	134	-68	53	-149	-195	-819	-112

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	1996	1997	1998	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	599	259	500	807	1494	736	414	225	108	265	239	818
MAX	1115	330	672	888	2187	847	615	260	142	642	407	1696
(WY)	1997	1997	1997	1998	1998	1998	1998	1998	1997	1996	1996	1996
MIN	83.4	188	328	725	800	625	214	191	73.6	69.9	65.6	48.3
(WY)	1998	1998	1998	1997	1997	1997	1997	1997	1998	1998	1997	1997

## SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1996 - 1998

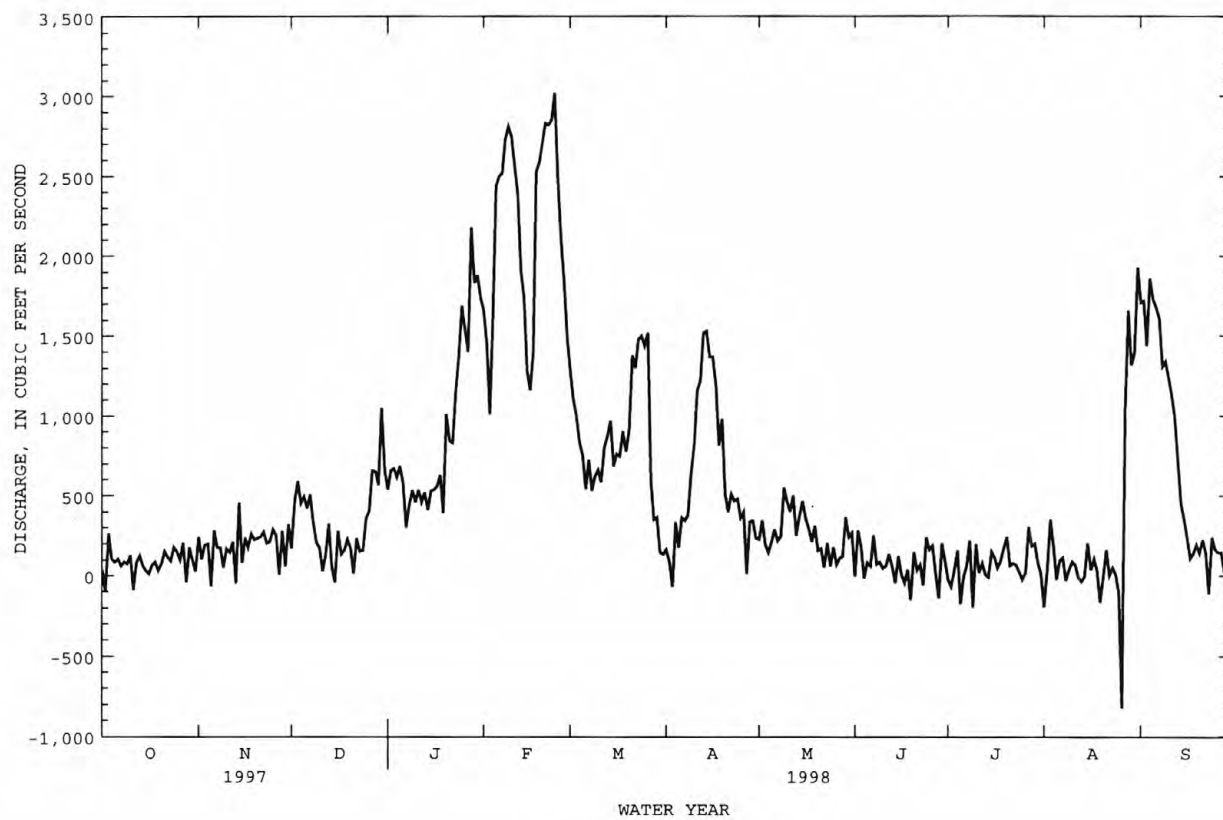
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
ANNUAL TOTAL	105291.31	193155.1										
ANNUAL MEAN	288	529										
HIGHEST ANNUAL MEAN			473									1998
LOWEST ANNUAL MEAN			529									1997
HIGHEST DAILY MEAN	1520	Feb 21	3020	Feb 24	3220	Sep 14	1996					
LOWEST DAILY MEAN	-293	May 27	-819	Aug 26	-819	Aug 26	1998					
ANNUAL SEVEN-DAY MINIMUM	6.3	Sep 21	-101	Aug 20	-101	Aug 20	1998					
INSTANTANEOUS PEAK FLOW			3560	Feb 23	4210	Sep 6	1996					
INSTANTANEOUS PEAK STAGE			5.44	Aug 27	7.77	Sep 6	1996					
INSTANTANEOUS LOW FLOW			-2000	Aug 27	-3560	Sep 6	1996					
10 PERCENT EXCEEDS	807		1530		1400							
50 PERCENT EXCEEDS	194		241		288							
90 PERCENT EXCEEDS	6.4		8.2		12							

e Estimated.

Note. - Negative values indicate reverse flow.

## NEUSE RIVER BASIN

02092554 TRENT RIVER AT POLLOCKSVILLE, NC--Continued



## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11

LOCATION.--Lat. 34°59'56", long. 76°56'36", Craven County, Hydrologic Unit 03020204, at U.S. Coast Guard Channel Light 11.

PERIOD OF RECORD.--May to December 1989, January 1991 to July 1993, June 1996 to current year.

PERIOD OF DAILY RECORD.--

SALINITY (TOP AND BOTTOM): May to December 1989, January 1991 to July 1993, June 1996 to current year.

pH (TOP AND BOTTOM): June 1996 to current year.

WATER TEMPERATURE (TOP): May to December 1989, January 1991 to July 1993, June 1996 to current year.

WATER TEMPERATURE (BOTTOM): June 1996 to current year.

DISSOLVED OXYGEN (TOP AND BOTTOM): May to December 1989, January 1991 to July 1993, June 1996 to current year.

DISSOLVED OXYGEN (MID): May to December 1989, January 1991 to July 1993.

DISSOLVED OXYGEN, PERCENT SATURATION, (TOP AND BOTTOM): May to December 1989, January 1991 to July 1993, June 1996 to current year.

DISSOLVED OXYGEN, PERCENT SATURATION, (MID): May to December 1989, January 1991 to July 1993.

INSTRUMENTATION.-- Water-quality monitor from May to December 1989, January 1991 to July 1993. Constituents monitored were: specific conductance, top and bottom, water temperature top, dissolved oxygen, top, mid-depth and bottom. Water-quality monitor with satellite telemetry from June 1996 to current year. Constituents monitored were the same as previous water years except, mid-depth dissolved oxygen was not measured, water temperature, bottom, was added as well as pH top and bottom.

REMARKS.--Station operated in cooperation with the North Carolina Department of Environment and Natural Resources. Prior to June 1996, top constituents were monitored at 10 ft above streambed, mid constituents at 6 ft above streambed, and bottom constituents 2 ft above streambed. Beginning in June 1996 top constituents were monitored at 8 ft above streambed, and bottom constituents 2 ft above streambed. Salinity and dissolved oxygen, percent saturation are computed. Salinities reported as .0 ppt are actually <0.1 due to rounding. Dissolved oxygen, minimum extremes are reported only as <1.0 mg/L. Dissolved oxygen, percent saturation, minimum extremes are reported only as <10%.

EXTREMES FOR PERIOD OF RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	15.2, November 27, 1997	<0.1, on many days during the period
SALINITY (BOTTOM), ppt	20.8, August 1, 1992	<0.1, on many days during the period
pH (TOP), standard units	9.7, May 7, 1997	5.7, February 16, 1998
pH (BOTTOM), standard units	9.3, September 23, 1998	6.0, June 21, 1997
WATER TEMPERATURE (TOP), °C	32.9, September 10, 1992	1.7, January 20, 1997
WATER TEMPERATURE (BOTTOM), °C	30.5, June 28, 1998	3.5, January 19, 1997
DISSOLVED OXYGEN (TOP), mg/L	20.0, February 18, 1992	< 1.0, June 23, 24 1991, July 11, 13, 15, 24, 27, 28, 1992, July 6, 25, 1996, July 13, 19, 29, 1998
DISSOLVED OXYGEN (BOTTOM), mg/L	21.2, February 20, 1991	< 1.0, on many days during the period



## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	15.2, November 27	< 0.1 on many days during February, March, April, and May
SALINITY (BOTTOM), ppt	17.0, November 28	< 0.1 on many days during February, March, April, and May
pH (TOP), standard units	9.4, May 28	5.7, February 16
pH (BOTTOM), standard units	9.3, September 23	6.2, February 11
WATER TEMPERATURE (TOP), °C	32.6, June 26	5.5, January 2
WATER TEMPERATURE (BOTTOM), °C	30.5, June 28	6.4, January 1
DISSOLVED OXYGEN (TOP), mg/L	16.6, December 19	< 1.0, July 13, 19, 29
DISSOLVED OXYGEN (BOTTOM), mg/L	15.4, February 3	< 1.0, October 6, 7, 17, November 3, 10-12, 15
DISSOLVED OXYGEN, PERCENT SATURATION (TOP), %	175, October 6	< 10, July 13, 17, 19, 23-29, August 12, 13, 17-19, September 17, 30
DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM), %	139, February 4	< 10, October 6, 7, 17, November 3, 10, 11, 12, 15, 17, July 23-29, August 12, 13, 17, 18, 19, September 17, 30

## SALINITY, TOP, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	12.4	10.3	11.4	8.8	6.6	7.5
2	---	---	---	---	---	---	11.8	10.5	11.2	7.7	5.3	6.6
3	---	---	---	---	---	---	10.9	9.3	10.3	7.9	4.2	6.1
4	---	---	---	---	---	---	13.7	9.8	11.8	6.3	2.9	4.7
5	---	---	---	---	---	---	11.7	8.3	10.2	4.9	1.8	3.3
6	---	---	---	---	---	---	12.2	11.6	12.0	5.0	2.0	3.8
7	---	---	---	---	---	---	12.6	10.7	12.2	6.6	4.3	5.5
8	---	---	---	---	---	---	11.0	9.1	9.9	6.5	3.9	5.8
9	---	---	---	---	---	---	10.5	7.2	9.1	5.5	3.5	4.3
10	---	---	---	---	---	---	10.6	7.5	9.6	4.9	2.0	3.3
11	---	---	---	---	---	---	10.9	8.7	9.7	5.5	1.0	1.7
12	---	---	---	---	---	---	9.6	9.2	9.4	9.3	1.1	4.6
13	---	---	---	---	---	---	9.6	6.8	8.3	5.1	3.1	4.4
14	---	---	---	---	---	---	9.8	7.3	7.9	4.6	3.3	4.3
15	---	---	---	---	---	---	12.1	8.4	10.7	4.5	2.8	3.6
16	---	---	---	---	---	---	11.9	10.3	11.1	6.0	2.2	3.1
17	---	---	---	---	---	---	11.8	10.5	11.1	7.5	5.0	6.4
18	---	---	---	---	---	---	10.7	9.0	10.3	7.5	5.9	6.9
19	---	---	---	---	---	---	11.3	8.6	10.2	7.6	6.4	7.0
20	---	---	---	8.7	7.2	8.0	13.4	9.9	12.0	7.2	4.7	5.8
21	---	---	---	13.3	7.3	9.5	13.1	8.6	11.0	5.1	4.2	4.6
22	---	---	---	13.0	10.3	11.3	10.9	8.2	9.3	6.0	4.4	4.9
23	---	---	---	11.3	9.9	10.5	10.9	10.2	10.5	6.0	3.2	4.7
24	---	---	---	11.8	9.7	10.7	10.9	10.3	10.5	3.7	1.0	1.9
25	---	---	---	13.4	10.7	11.4	10.6	9.3	10.2	3.7	1.7	2.8
26	---	---	---	14.4	12.0	13.1	10.6	8.1	9.8	2.7	.7	2.0
27	---	---	---	15.2	12.2	13.6	10.6	8.5	9.2	2.0	.6	1.0
28	---	---	---	13.4	10.9	12.6	12.1	8.6	10.7	2.8	1.4	2.0
29	---	---	---	12.5	10.8	11.8	11.7	8.8	10.4	2.4	1.5	2.0
30	---	---	---	11.8	10.0	11.1	10.1	7.4	8.9	1.8	.4	1.1
31	---	---	---	---	---	---	10.4	7.7	9.5	1.5	.8	1.1
MONTH	---	---	---	---	---	---	13.7	6.8	10.3	9.3	.4	4.1

## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

SALINITY, TOP, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	1.7	.5	.9	.0	.0	.0	.1	.0	.0	.0	.0	.0
2	.7	.3	.4	.4	.0	.1	.1	.0	.1	.1	.0	.0
3	.8	.3	.4	1.3	.3	.6	.6	.1	.3	.1	.0	.1
4	1.6	.3	.9	2.3	.5	1.4	2.0	.1	.6	.1	.0	.1
5	.8	.3	.5	4.1	1.5	2.1	1.9	.5	.9	.1	.0	.0
6	.4	.2	.3	---	---	---	1.2	.3	.6	.1	.0	.0
7	.3	.2	.2	2.2	.8	1.5	1.0	.2	.5	.1	.0	.1
8	.4	.1	.3	1.6	.5	.9	1.1	.3	.5	.1	.1	.1
9	.2	.1	.1	2.6	.8	1.5	.6	.0	.3	.5	.1	.2
10	.2	.0	.1	2.3	.8	1.5	1.0	.1	.6	.9	.2	.5
11	.3	.1	.2	2.1	.8	1.2	.6	.2	.3	1.0	.6	.8
12	.2	.1	.1	1.8	.7	1.0	.4	.1	.2	1.5	.3	.8
13	.2	.1	.1	.9	.3	.5	.1	.0	.0	2.3	1.2	1.8
14	.2	.0	.1	1.2	.1	.6	.0	.0	.0	2.3	1.6	1.9
15	.2	.0	.1	1.6	.2	.7	.0	.0	.0	2.2	.8	1.3
16	.2	.0	.1	.9	.3	.4	.0	.0	.0	.9	.5	.7
17	.2	.0	.1	.3	.1	.1	.0	.0	.0	1.0	.6	.8
18	.2	.0	.1	.1	.0	.0	.0	.0	.0	1.0	.6	.7
19	.2	.0	.1	.0	.0	.0	.0	.0	.0	.9	.3	.5
20	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.3	.5	.8
21	.1	.0	.0	.0	.0	.0	.0	.0	.0	1.0	.5	.8
22	.2	.0	.1	.0	.0	.0	.0	.0	.0	1.2	.4	.7
23	.7	.0	.2	.0	.0	.0	.0	.0	.0	1.7	.5	.9
24	.3	.0	.1	.0	.0	.0	.0	.0	.0	1.9	.7	1.3
25	.5	.0	.2	.0	.0	.0	.0	.0	.0	1.4	.5	1.1
26	.2	.1	.1	.0	.0	.0	.0	.0	.0	1.2	.5	.9
27	.1	.0	.0	.0	.0	.0	.1	.0	.0	1.5	.4	.8
28	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.9	.6	1.1
29	---	---	---	.0	.0	.0	.0	.0	.0	1.8	.7	1.2
30	---	---	---	.1	.0	.0	.0	.0	.0	1.7	.7	1.1
31	---	---	---	.1	.0	.1	---	---	---	1.1	.2	.5
MONTH	1.7	.0	.2	---	---	---	2.0	.0	.2	2.3	.0	.7

SALINITY, TOP, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	1.5	.4	.8	4.1	2.6	3.5	6.6	4.7	5.4	---	---	---
2	2.0	.7	1.4	4.4	2.4	3.6	5.8	3.7	4.9	---	---	---
3	1.7	.6	1.2	4.5	2.9	3.8	7.4	4.8	5.9	---	---	---
4	2.2	.7	1.5	4.0	2.5	3.4	7.8	5.3	6.3	---	---	---
5	2.0	.6	1.2	4.2	2.3	3.2	6.3	5.2	5.9	---	---	---
6	2.7	.8	1.4	4.7	3.1	3.7	6.5	4.6	5.7	---	---	---
7	3.0	1.1	1.8	4.4	3.4	3.7	6.3	3.6	4.9	---	---	---
8	3.7	1.6	2.4	3.8	2.8	3.3	6.0	3.3	4.5	---	---	---
9	3.5	1.7	2.7	4.2	2.7	3.5	4.8	2.7	3.7	---	---	---
10	3.6	1.4	2.2	4.0	3.3	3.6	4.4	3.3	3.9	---	---	---
11	3.4	1.2	1.9	3.9	3.0	3.6	5.1	3.3	4.3	---	---	---
12	2.7	1.1	1.8	4.1	3.6	3.8	5.8	4.2	5.2	---	---	---
13	2.7	1.9	2.3	4.1	3.4	3.8	5.8	4.4	5.3	---	---	---
14	2.8	2.0	2.5	4.2	3.5	3.9	5.5	4.5	4.8	---	---	---
15	3.2	2.1	2.7	4.1	2.9	3.3	5.9	3.1	4.7	---	---	---
16	3.2	2.0	2.7	3.3	2.0	2.8	5.6	3.5	4.5	---	---	---
17	3.1	2.3	2.7	3.6	2.2	3.0	5.8	3.8	4.7	3.4	.7	2.3
18	3.1	1.6	2.2	3.9	2.3	3.3	5.7	3.5	5.1	2.9	1.7	2.5
19	3.5	2.0	2.6	3.2	2.0	2.7	6.6	4.5	5.6	2.9	1.8	2.4
20	3.3	2.1	2.7	3.2	1.9	2.6	7.0	5.7	6.2	2.4	1.8	2.1
21	3.5	2.1	2.5	3.5	1.7	2.8	6.2	4.6	5.6	2.5	1.7	2.0
22	2.8	1.7	2.2	3.4	2.0	3.0	5.2	4.0	4.6	2.2	1.6	1.9
23	2.9	1.6	2.5	3.9	2.8	3.3	5.1	4.0	4.6	3.2	1.5	2.6
24	2.9	2.1	2.6	3.6	2.5	3.1	---	---	---	3.4	1.9	2.5
25	3.2	2.0	2.9	4.5	3.4	3.9	---	---	---	2.9	2.0	2.4
26	2.9	1.6	2.6	4.9	2.2	3.6	---	---	---	2.7	2.1	2.4
27	3.5	2.0	2.9	4.4	3.3	3.7	---	---	---	3.1	1.7	2.3
28	3.7	2.6	3.1	4.1	3.4	3.7	---	---	---	3.4	2.2	2.9
29	3.7	2.6	3.3	4.1	2.9	3.6	---	---	---	3.8	2.8	3.4
30	4.4	2.4	3.3	4.5	3.5	4.1	---	---	---	3.7	2.9	3.6
31	---	---	---	5.0	2.7	3.7	---	---	---	---	---	---
MONTH	4.4	.4	2.3	5.0	1.7	3.4	---	---	---	---	---	---

## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

SALINITY, BOTTOM, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	13.9	11.7	13.5	16.0	11.1	12.8	8.7	7.0	7.9
2	11.0	10.5	10.7	13.9	12.3	13.2	13.4	11.0	12.1	10.1	8.3	9.5
3	11.7	10.4	11.0	13.4	12.8	13.1	14.2	13.2	13.7	10.1	9.3	9.6
4	12.5	11.4	12.1	13.6	12.3	13.3	14.4	13.5	14.1	10.5	9.3	9.9
5	13.0	12.3	12.7	13.5	12.0	12.3	14.6	10.2	13.0	11.3	10.2	10.8
6	13.3	12.5	13.1	12.7	11.9	12.3	12.2	11.5	11.9	10.6	6.6	9.6
7	15.0	13.2	13.8	12.9	11.5	12.5	12.6	11.8	12.2	9.6	5.6	6.8
8	15.3	13.5	14.7	13.2	11.5	12.4	12.8	11.1	12.3	6.3	5.3	5.7
9	13.9	12.8	13.5	12.4	11.9	12.1	13.5	9.5	11.0	13.5	4.3	8.3
10	13.8	12.3	13.2	12.5	12.2	12.4	13.7	10.6	12.9	15.2	13.5	14.5
11	14.4	11.6	13.0	14.2	12.3	13.5	13.5	10.5	11.8	15.3	13.9	14.8
12	12.6	11.7	12.1	14.6	11.7	14.1	13.8	9.3	10.5	15.4	13.8	14.8
13	12.2	11.6	12.0	14.6	11.1	12.2	14.7	10.3	14.0	14.2	9.7	12.5
14	12.2	11.8	12.0	14.6	11.4	12.6	14.5	9.5	14.0	14.4	3.8	10.8
15	12.2	11.5	12.0	13.3	11.5	12.4	14.0	10.1	11.4	14.9	7.2	12.8
16	12.3	11.9	12.1	13.8	11.8	12.3	12.8	10.6	11.7	14.8	11.6	13.7
17	13.0	12.1	12.6	11.8	10.8	11.4	12.9	11.5	12.0	14.8	7.3	12.4
18	13.5	12.1	12.9	13.3	11.5	12.3	13.5	10.3	12.2	14.3	7.4	11.7
19	13.5	12.4	13.1	14.0	11.7	13.7	13.8	13.0	13.6	13.5	6.3	9.4
20	14.1	13.2	13.7	14.2	13.8	14.0	13.9	13.1	13.6	12.9	4.7	7.4
21	14.1	12.5	12.9	14.4	12.8	13.9	13.8	10.8	12.7	13.0	9.7	12.3
22	13.7	12.2	12.7	13.9	11.8	13.0	12.9	11.3	11.8	11.9	7.1	10.5
23	12.6	12.1	12.2	16.4	11.7	15.1	13.1	11.3	12.0	10.9	5.2	7.4
24	13.0	12.2	12.7	16.5	10.2	12.4	12.4	10.1	11.0	11.9	5.3	7.9
25	14.0	12.4	13.1	15.8	11.0	13.5	13.1	10.0	12.2	11.0	3.4	5.8
26	14.0	12.1	13.1	16.9	13.3	15.9	13.4	10.8	12.9	8.9	5.7	8.3
27	13.7	11.7	12.4	16.5	13.4	15.0	13.4	9.1	12.2	8.9	.9	3.6
28	12.8	12.0	12.4	17.0	14.2	15.9	12.6	10.1	11.1	4.5	1.8	3.0
29	13.7	12.1	12.8	16.9	15.5	16.3	12.7	8.6	11.1	5.6	1.8	3.8
30	14.0	13.1	13.8	15.9	10.8	13.4	10.0	7.2	8.9	6.7	4.0	5.5
31	14.0	12.2	13.6	---	---	---	10.2	8.3	9.7	8.7	.8	4.5
MONTH	---	---	---	17.0	10.2	13.3	16.0	7.2	12.1	15.4	.8	9.2

SALINITY, BOTTOM, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	9.2	1.1	7.5	.3	.0	.0	.6	.0	.1	.0	.0	.0
2	6.8	.5	4.6	5.1	.0	2.4	5.2	.0	2.0	.1	.0	.0
3	3.4	.3	1.1	8.4	4.6	6.7	6.5	.3	3.0	.1	.0	.0
4	1.8	.5	1.1	10.1	8.0	9.5	11.3	.1	.8	.1	.0	.0
5	.8	.3	.6	10.0	7.5	9.1	2.0	.7	1.2	.0	.0	.0
6	.4	.2	.3	---	---	---	9.6	1.3	3.0	.1	.0	.0
7	.2	.1	.2	5.4	1.6	2.3	9.4	1.1	4.4	.1	.0	.0
8	.3	.1	.2	5.7	1.6	3.4	4.0	.5	1.8	.1	.0	.1
9	.1	.0	.1	2.8	.8	1.7	1.6	.0	.4	1.0	.1	.3
10	.1	.0	.1	2.4	.9	1.6	1.3	.2	.8	2.5	.3	.9
11	.3	.0	.1	2.1	1.1	1.5	.8	.3	.4	1.0	.6	.8
12	.1	.0	.1	1.3	.8	1.0	10.2	.1	.3	1.5	.3	.8
13	.1	.0	.1	2.8	.6	1.0	.1	.0	.1	2.4	1.0	1.7
14	.1	.0	.0	4.4	.3	2.5	.1	.0	.0	2.2	1.6	1.8
15	.1	.0	.0	4.0	.5	1.5	.1	.0	.1	2.1	1.0	1.5
16	.1	.0	.0	6.3	.3	1.7	.0	.0	.0	1.9	.9	1.5
17	.1	.0	.1	6.1	5.8	5.9	.0	.0	.0	2.0	.7	1.5
18	.1	.0	.1	6.7	.0	5.2	.1	.0	.0	1.6	.6	1.0
19	.1	.0	.1	7.1	.0	4.3	.0	.0	.0	1.6	.7	1.2
20	.0	.0	.0	.0	.0	.0	.0	.0	.0	1.6	.6	1.0
21	5.9	.0	.4	.0	.0	.0	.0	.0	.0	3.3	1.0	1.6
22	6.4	.1	3.2	.0	.0	.0	.1	.0	.0	4.7	2.4	3.6
23	.7	.0	.2	.1	.0	.0	.0	.0	.0	4.3	1.1	2.7
24	.3	.0	.1	.1	.0	.0	.0	.0	.0	3.7	.9	1.7
25	.6	.1	.3	.0	.0	.0	10.6	.0	.2	2.3	1.0	1.4
26	.6	.1	.2	.0	.0	.0	11.4	.0	1.0	5.1	1.4	3.4
27	.1	.0	.1	.0	.0	.0	11.4	.0	4.6	5.2	3.9	4.6
28	.0	.0	.0	.0	.0	.0	11.1	.0	1.9	6.0	3.6	4.9
29	---	---	---	9.8	.0	.2	.0	.0	.0	5.0	1.0	2.5
30	---	---	---	11.0	.0	2.0	.0	.0	.0	3.3	1.0	1.9
31	---	---	---	4.6	.0	1.4	---	---	---	3.7	1.6	2.9
MONTH	9.2	.0	.7	---	---	---	11.4	.0	.9	6.0	.0	1.5

## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

SALINITY, BOTTOM, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	5.3	.9	3.8	4.6	3.5	4.1	6.9	5.0	5.7	---	---	---
2	3.5	.8	1.6	4.6	3.8	4.1	6.3	4.4	5.6	---	---	---
3	4.5	1.0	2.9	4.2	3.9	4.0	6.6	5.4	6.0	---	---	---
4	5.0	1.2	2.8	4.0	3.0	3.7	6.5	5.6	6.1	---	---	---
5	5.3	1.2	3.5	4.0	3.0	3.4	6.8	5.6	6.2	---	---	---
6	4.6	1.1	2.7	4.0	3.8	3.9	6.6	6.1	6.4	---	---	---
7	2.9	1.2	1.7	4.0	3.8	3.9	7.3	6.1	6.8	---	---	---
8	3.2	1.9	2.5	4.1	3.0	3.7	7.4	7.0	7.3	---	---	---
9	3.9	2.2	2.8	4.5	3.2	3.8	7.0	6.0	6.8	---	---	---
10	3.8	1.9	2.8	4.1	3.5	3.9	7.0	6.3	6.8	---	---	---
11	3.6	2.6	3.2	4.1	3.5	3.8	7.2	6.6	7.0	---	---	---
12	3.2	2.7	3.0	4.2	3.6	3.9	7.9	6.4	7.3	---	---	---
13	3.4	2.7	3.1	4.2	3.5	3.9	6.4	5.6	5.9	---	---	---
14	4.5	2.7	3.7	4.6	3.9	4.3	5.9	5.1	5.7	---	---	---
15	4.5	2.2	3.3	4.6	3.6	4.1	6.3	5.3	5.8	---	---	---
16	3.4	2.2	3.0	4.8	3.0	3.9	6.5	5.7	6.2	---	---	---
17	3.8	3.0	3.3	4.7	3.0	4.1	6.9	6.1	6.6	7.5	2.8	5.2
18	5.0	2.8	3.8	4.4	3.5	4.0	7.3	6.6	7.0	4.1	2.3	3.2
19	5.6	3.3	4.5	4.5	3.6	4.1	8.1	5.8	6.9	5.8	2.3	3.3
20	4.1	2.8	3.6	4.6	2.3	3.7	7.2	5.1	6.1	6.3	2.0	3.7
21	4.5	3.2	4.0	4.3	2.3	3.5	6.7	5.1	6.0	6.2	4.0	5.1
22	4.9	4.0	4.4	5.3	2.8	4.0	7.9	5.3	6.1	6.3	3.5	5.1
23	5.5	3.4	4.7	6.5	3.5	5.2	7.2	4.9	6.4	6.0	2.3	4.0
24	5.8	2.9	4.5	7.6	3.5	6.5	---	---	---	4.9	2.7	3.9
25	6.4	3.1	4.2	8.5	6.9	7.8	---	---	---	4.4	2.6	3.5
26	6.1	3.5	5.0	8.9	4.2	7.2	---	---	---	4.6	3.0	4.1
27	6.0	4.0	5.1	7.1	4.4	5.4	---	---	---	5.5	3.9	4.7
28	5.9	3.6	4.8	8.3	4.3	5.7	---	---	---	5.8	3.8	5.2
29	4.5	3.4	3.7	8.9	6.5	8.1	---	---	---	6.7	3.6	5.3
30	5.3	3.5	3.9	8.3	5.8	6.8	---	---	---	5.5	3.4	4.8
31	---	---	---	8.3	4.7	6.5	---	---	---	---	---	---
MONTH	6.4	.8	3.5	8.9	2.3	4.7	---	---	---	---	---	---

PH, TOP, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.2	7.4	7.8	8.4	7.6	8.1	8.6	8.2	8.5	8.7	8.3	8.4
2	8.1	7.9	8.0	8.2	7.3	7.8	8.5	7.6	8.3	9.1	8.4	8.7
3	8.3	8.0	8.2	7.7	7.4	7.6	8.7	8.0	8.4	9.0	8.1	8.6
4	8.7	8.1	8.4	8.1	7.3	7.7	8.7	8.1	8.4	9.0	8.0	8.5
5	8.9	7.3	8.5	8.1	7.9	8.0	8.7	8.2	8.4	8.9	7.6	8.1
6	8.7	8.0	8.4	8.0	7.9	7.9	8.9	8.6	8.7	9.1	7.8	8.6
7	8.8	8.2	8.4	8.1	7.9	8.0	8.8	8.5	8.6	9.0	8.4	8.8
8	8.9	8.1	8.6	8.1	7.9	8.0	8.8	8.2	8.6	8.9	7.9	8.4
9	8.8	8.3	8.6	8.0	7.8	8.0	8.8	7.9	8.6	8.0	7.8	7.9
10	8.7	8.0	8.5	8.6	7.9	8.1	9.1	7.6	8.5	7.9	7.7	7.9
11	8.6	6.9	7.7	8.4	8.1	8.3	9.0	8.5	8.8	7.8	7.4	7.6
12	8.2	7.7	7.9	8.6	8.3	8.3	9.1	8.9	9.0	8.1	7.3	7.7
13	8.1	7.4	7.6	8.6	8.3	8.5	9.2	8.9	9.0	8.4	7.8	8.2
14	7.5	7.1	7.3	8.4	8.0	8.2	9.1	8.7	8.9	8.3	7.8	8.2
15	7.4	7.1	7.2	8.4	8.2	8.3	9.0	8.7	8.9	8.2	7.8	7.9
16	7.2	7.1	7.1	8.4	8.2	8.2	9.1	8.8	9.0	7.8	7.5	7.6
17	7.1	6.9	7.0	8.5	8.2	8.3	9.1	8.8	8.9	7.8	7.6	7.6
18	7.0	6.9	6.9	8.9	8.3	8.5	9.3	8.9	9.1	8.2	7.7	7.9
19	7.0	6.9	6.9	8.9	8.7	8.8	9.3	9.0	9.2	8.0	7.8	7.9
20	7.0	6.9	6.9	8.9	8.7	8.8	9.3	8.6	9.0	8.0	7.8	7.9
21	7.9	6.9	7.4	9.0	7.9	8.6	9.3	8.8	9.1	---	---	---
22	8.0	7.7	7.8	8.7	7.9	8.3	9.3	8.9	9.1	---	---	---
23	8.0	7.8	7.9	8.6	8.4	8.5	9.1	8.8	9.0	8.3	6.9	7.7
24	8.1	7.7	8.0	8.4	8.1	8.2	9.1	9.0	9.1	7.0	6.5	6.7
25	8.2	7.9	8.1	8.4	8.1	8.2	9.2	8.9	9.0	6.9	6.6	6.7
26	8.1	7.9	8.0	8.4	8.3	8.4	9.3	9.1	9.2	6.9	6.6	6.7
27	7.9	7.5	7.8	8.7	8.2	8.5	9.2	8.8	9.1	6.7	6.4	6.5
28	8.0	7.7	7.8	8.9	8.5	8.7	8.9	8.6	8.8	7.0	6.6	6.7
29	8.2	7.6	7.9	8.9	8.6	8.7	8.8	8.4	8.7	7.0	6.6	6.7
30	8.3	7.9	8.1	8.9	8.5	8.7	8.7	8.1	8.4	7.1	6.3	6.6
31	8.3	8.1	8.2	---	---	---	8.8	8.6	8.7	6.5	6.2	6.3
MONTH	8.9	6.9	7.8	9.0	7.3	8.3	9.3	7.6	8.8	---	---	---

## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

PH, TOP, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

PH, TOP, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

PH, BOTTOM, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	7.6	6.9	7.2	8.3	7.3	8.0	8.1	7.9	8.0
2	7.9	7.5	7.8	7.5	7.0	7.2	8.1	7.7	8.0	8.0	7.9	8.0
3	7.8	7.0	7.4	7.3	7.0	7.2	8.0	7.9	7.9	7.9	7.8	7.9
4	7.3	7.0	7.1	7.3	7.0	7.2	8.1	7.7	7.8	7.8	7.6	7.7
5	7.3	6.9	7.0	7.4	7.1	7.2	8.3	7.6	7.9	7.7	7.6	7.6
6	7.3	6.8	6.9	7.4	7.1	7.2	8.5	8.2	8.4	8.0	7.5	7.6
7	7.0	6.8	6.9	7.7	7.1	7.5	8.4	8.2	8.3	8.7	7.5	8.3
8	7.0	6.8	6.9	7.7	7.2	7.4	8.3	8.1	8.2	8.6	7.8	8.1
9	7.0	6.8	6.9	7.8	7.2	7.4	8.6	7.9	8.4	7.8	7.3	7.6
10	7.3	6.9	7.1	7.7	7.2	7.5	8.3	7.8	8.0	7.8	7.4	7.5
11	7.7	6.8	7.0	7.6	7.0	7.2	8.3	7.7	8.1	7.8	7.5	7.7
12	7.8	7.2	7.6	7.6	7.0	7.2	8.6	7.6	8.3	7.7	7.5	7.6
13	7.6	7.0	7.3	7.9	7.2	7.6	8.3	7.5	7.7	7.5	7.2	7.4
14	7.5	6.9	7.1	7.9	7.1	7.4	8.1	7.4	7.5	8.0	7.3	7.5
15	7.4	6.9	7.1	8.1	7.2	7.7	8.4	7.6	8.3	7.6	7.2	7.3
16	7.0	6.9	6.9	8.0	7.2	7.7	8.6	8.0	8.3	7.4	7.2	7.3
17	6.9	6.8	6.8	7.8	7.1	7.5	8.6	8.0	8.3	7.4	7.2	7.3
18	6.9	6.7	6.8	7.9	7.1	7.6	8.7	7.4	8.1	7.7	7.2	7.3
19	7.0	6.8	6.8	7.9	7.7	7.7	8.0	7.5	7.8	7.6	7.2	7.4
20	7.1	6.6	6.9	7.7	7.6	7.6	8.3	8.0	8.0	7.6	7.2	7.5
21	7.9	6.6	7.2	7.7	7.5	7.6	8.8	7.9	8.3	7.5	7.1	7.4
22	7.9	7.3	7.7	7.9	7.3	7.5	8.7	8.1	8.5	7.9	7.3	7.5
23	7.9	7.7	7.8	7.7	7.5	7.6	8.4	7.7	8.1	8.4	7.1	7.4
24	8.0	7.6	7.7	8.0	7.6	7.9	8.7	7.7	8.4	7.9	7.0	7.4
25	7.9	7.3	7.6	8.0	7.7	7.9	8.7	7.5	7.8	7.3	7.0	7.2
26	7.9	7.2	7.6	8.0	7.6	7.7	8.6	7.4	7.6	7.4	7.1	7.3
27	7.8	7.2	7.6	8.3	7.5	7.9	8.7	7.4	7.7	7.4	6.9	7.1
28	7.8	7.4	7.6	7.9	7.5	7.7	8.4	8.0	8.2	7.3	7.0	7.1
29	7.7	7.1	7.4	7.8	7.4	7.6	8.3	8.0	8.2	7.5	7.0	7.3
30	7.6	7.0	7.3	8.4	7.6	8.0	8.2	7.7	8.0	7.5	7.3	7.4
31	7.4	7.0	7.2	---	---	---	8.3	8.1	8.2	7.5	6.8	7.2
MONTH	---	---	---	8.4	6.9	7.5	8.8	7.3	8.1	8.7	6.8	7.5

PH, BOTTOM, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	7.7	6.9	7.5	6.5	6.4	6.4	---	---	---	7.3	7.0	7.2
2	7.6	6.8	7.3	7.0	6.4	6.7	---	---	---	7.5	7.1	7.3
3	7.2	6.6	6.7	7.2	7.0	7.1	---	---	---	8.4	7.3	7.7
4	7.1	6.8	6.9	7.4	7.2	7.3	---	---	---	8.3	7.3	7.9
5	6.8	6.6	6.7	7.3	7.3	7.3	---	---	---	8.5	7.3	7.8
6	6.9	6.6	6.7	---	---	---	---	---	---	8.5	7.2	7.5
7	6.8	6.6	6.7	7.3	7.0	7.2	---	---	---	8.7	7.3	8.1
8	6.7	6.6	6.7	7.3	7.0	7.1	---	---	---	8.4	7.4	7.8
9	6.8	6.6	6.7	7.2	7.1	7.2	---	---	---	7.8	7.0	7.4
10	6.7	6.3	6.5	7.3	7.2	7.3	---	---	---	7.5	6.8	7.2
11	6.6	6.2	6.4	7.4	7.3	7.4	---	---	---	7.5	7.3	7.4
12	6.5	6.4	6.4	7.4	7.4	7.4	---	---	---	7.5	7.2	7.3
13	6.5	6.4	6.4	7.4	7.2	7.4	---	---	---	7.7	7.1	7.4
14	6.5	6.3	6.4	7.5	6.9	7.3	---	---	---	8.5	7.3	7.6
15	6.4	6.3	6.4	7.4	7.0	7.3	---	---	---	8.3	7.3	7.8
16	6.5	6.4	6.4	---	---	---	---	---	---	8.2	6.9	7.6
17	6.7	6.4	6.6	---	---	---	---	---	---	8.0	6.7	7.0
18	6.8	6.6	6.7	---	---	---	---	---	---	7.7	6.7	7.1
19	---	---	---	---	---	---	---	---	---	8.2	6.7	7.2
20	6.7	6.6	6.6	---	---	---	---	---	---	7.7	6.8	7.2
21	7.1	6.5	6.6	---	---	---	---	---	---	7.3	6.7	6.9
22	7.2	6.7	6.9	---	---	---	---	---	---	6.8	6.7	6.7
23	7.1	6.6	6.8	---	---	---	---	---	---	7.2	6.7	6.9
24	7.2	6.7	6.9	---	---	---	---	---	---	7.5	6.8	7.1
25	7.2	7.0	7.1	---	---	---	---	---	---	7.8	6.9	7.4
26	7.1	7.0	7.0	---	---	---	---	---	---	7.3	6.6	6.8
27	7.0	6.5	6.7	---	---	---	---	---	---	6.8	6.6	6.7
28	6.6	6.4	6.5	---	---	---	---	---	---	6.7	6.6	6.6
29	---	---	---	---	---	---	7.9	7.1	7.4	8.7	6.6	7.1
30	---	---	---	---	---	---	7.8	7.1	7.3	8.6	6.7	7.3
31	---	---	---	---	---	---	---	---	---	6.9	6.6	6.7
MONTH	---	---	---	---	---	---	---	---	---	8.7	6.6	7.3



## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

PH, BOTTOM, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.4	6.6	6.7	7.7	7.3	7.5	7.8	7.3	7.6	---	---	---
2	8.1	6.6	7.5	7.8	7.4	7.6	7.6	7.4	7.5	---	---	---
3	7.9	6.7	6.9	7.9	7.5	7.7	8.0	7.5	7.7	---	---	---
4	7.6	6.7	6.9	8.1	7.7	7.9	8.2	7.7	7.9	---	---	---
5	7.1	6.7	6.7	8.0	7.6	7.7	8.4	7.7	8.1	---	---	---
6	7.4	6.6	6.9	8.1	7.8	7.9	8.3	7.6	8.0	---	---	---
7	8.0	7.2	7.5	8.5	7.9	8.1	8.2	7.5	8.0	---	---	---
8	7.9	6.9	7.4	8.6	6.7	8.0	7.8	7.3	7.6	---	---	---
9	7.3	6.7	7.1	8.3	7.4	7.9	7.7	6.8	7.2	---	---	---
10	7.1	6.7	6.9	8.3	7.6	7.9	7.2	6.8	6.8	---	---	---
11	6.8	6.6	6.7	8.3	7.4	7.9	6.8	6.7	6.8	---	---	---
12	7.6	6.5	6.7	8.3	7.8	8.0	6.9	6.7	6.8	---	---	---
13	7.6	6.4	6.9	8.1	7.6	7.9	7.9	6.7	7.3	---	---	---
14	7.1	6.4	6.6	8.3	7.6	7.9	8.1	6.9	7.5	---	---	---
15	8.0	6.5	7.3	8.0	7.1	7.6	8.0	7.3	7.6	---	---	---
16	7.9	7.0	7.5	7.5	7.0	7.2	8.0	7.1	7.5	---	---	---
17	8.1	6.9	7.4	7.3	6.9	7.0	7.3	7.0	7.2	8.9	7.2	7.8
18	7.8	6.7	7.2	7.9	7.0	7.2	7.4	7.1	7.2	9.1	7.9	8.4
19	7.9	6.7	7.0	7.4	6.8	7.0	7.9	7.2	7.5	8.6	7.4	8.1
20	8.2	6.9	7.3	7.1	6.8	6.9	8.1	7.6	7.8	8.7	7.2	7.9
21	8.1	6.8	7.0	7.1	6.8	6.9	8.1	7.8	8.0	7.6	7.2	7.3
22	7.1	6.8	7.0	8.1	6.8	7.2	7.9	7.2	7.6	7.7	7.2	7.4
23	7.1	6.9	7.0	8.1	7.0	7.3	7.6	7.1	7.4	9.3	7.4	8.5
24	8.1	6.9	7.3	7.6	6.9	7.0	---	---	---	9.0	7.6	8.4
25	8.4	7.0	7.6	7.1	7.0	7.0	---	---	---	9.1	7.7	8.5
26	7.6	7.0	7.2	7.9	7.0	7.2	---	---	---	8.4	7.4	7.7
27	7.6	7.1	7.3	7.9	6.9	7.4	---	---	---	7.8	7.4	7.6
28	7.6	7.3	7.5	8.1	7.0	7.4	---	---	---	7.7	6.8	7.3
29	7.7	7.1	7.6	7.1	6.9	7.0	---	---	---	7.2	6.8	6.9
30	7.7	7.2	7.5	7.1	6.8	6.9	---	---	---	7.5	6.9	7.0
31	---	---	---	7.8	6.8	7.1	---	---	---	---	---	---
MONTH	8.4	6.4	7.1	8.6	6.7	7.5	---	---	---	---	---	---

TEMPERATURE, TOP, WATER, (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.9	21.7	22.5	17.6	16.2	16.9	13.4	12.6	13.2	7.2	6.1	6.5
2	22.5	21.4	21.8	17.8	17.0	17.4	12.7	11.7	12.3	7.1	5.5	6.4
3	22.2	20.7	21.4	17.6	17.0	17.3	12.2	10.7	11.8	7.5	6.2	6.8
4	22.9	20.7	21.7	17.1	16.2	16.8	12.9	12.0	12.5	8.8	6.8	7.3
5	23.6	21.8	22.3	16.3	15.6	16.0	13.1	11.9	12.6	9.1	7.0	8.0
6	25.2	22.3	23.1	15.9	15.5	15.7	11.9	10.5	11.2	10.6	7.7	9.6
7	23.8	22.4	22.9	15.9	15.2	15.7	10.5	8.6	9.7	12.1	10.0	11.0
8	25.2	22.6	24.0	15.2	14.7	14.9	8.8	8.0	8.3	13.3	12.1	12.7
9	25.7	23.8	24.6	15.1	14.4	14.7	9.1	7.9	8.3	13.5	12.8	13.2
10	25.1	24.1	24.6	15.3	14.2	14.5	9.5	8.5	8.9	13.5	12.4	12.8
11	24.9	22.7	23.6	15.0	14.3	14.6	9.7	9.3	9.5	13.1	12.5	12.8
12	24.3	22.8	23.4	15.0	14.4	14.7	9.5	9.4	9.4	12.6	11.2	12.0
13	24.5	22.6	23.4	14.8	14.0	14.2	9.6	9.1	9.4	12.3	11.9	12.1
14	24.7	23.4	24.0	14.5	14.1	14.3	9.4	8.2	8.8	12.3	10.7	11.5
15	24.3	22.7	23.5	14.6	13.8	14.2	8.7	7.9	8.3	11.0	10.4	10.7
16	22.7	21.1	21.9	14.1	12.8	13.6	8.9	7.9	8.4	11.1	10.6	10.9
17	21.2	20.3	20.6	12.8	11.5	12.1	9.1	8.3	8.6	10.6	10.1	10.3
18	20.5	19.8	20.3	12.2	10.7	11.5	9.4	8.1	8.7	10.2	9.5	9.9
19	20.1	19.0	19.5	12.0	10.6	11.3	9.4	8.8	9.2	9.9	8.5	9.2
20	19.1	18.1	18.6	11.6	10.6	11.0	10.2	8.6	9.2	8.6	7.9	8.3
21	18.9	17.9	18.2	13.4	10.9	11.9	9.9	8.8	9.3	8.4	7.3	7.8
22	18.7	17.2	17.9	14.8	13.4	14.1	9.6	9.1	9.3	8.5	7.1	7.8
23	17.5	16.5	16.9	14.9	14.2	14.7	10.1	9.2	9.5	---	---	---
24	17.1	16.5	16.8	14.2	12.3	13.2	9.8	9.5	9.7	9.7	8.6	9.1
25	18.4	16.8	17.2	12.3	10.9	11.5	11.1	9.8	10.5	11.1	8.3	9.0
26	18.1	17.5	17.8	12.5	10.4	11.4	12.0	10.2	10.9	9.3	7.4	8.5
27	18.4	17.9	18.2	12.7	11.1	12.0	11.5	10.4	11.2	9.5	8.3	8.9
28	18.1	16.7	17.3	12.3	10.7	11.8	10.4	8.7	9.7	9.5	8.8	9.2
29	17.4	16.1	16.7	12.8	11.6	11.9	8.9	7.8	8.4	9.7	8.3	8.9
30	16.9	15.1	16.1	13.4	12.2	12.8	8.2	7.7	7.9	9.8	8.5	9.2
31	16.2	15.6	15.9	---	---	---	7.8	7.2	7.5	9.6	8.3	8.9
MONTH	25.7	15.1	20.5	17.8	10.4	13.9	13.4	7.2	9.7	---	---	---



## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

TEMPERATURE, TOP, WATER, (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.8	8.0	8.4	---	---	---	19.6	19.0	19.3	19.7	18.6	18.9
2	9.6	8.0	8.7	---	---	---	20.9	19.5	19.8	20.1	19.2	19.6
3	9.5	8.8	9.1	---	---	---	19.9	18.7	19.2	20.6	19.3	19.9
4	10.5	9.3	9.9	---	---	---	19.3	16.9	18.5	20.8	19.9	20.4
5	10.1	9.4	9.8	---	---	---	17.2	16.5	16.9	21.0	19.7	20.3
6	10.1	9.1	9.4	---	---	---	17.7	16.0	16.8	23.1	20.3	21.0
7	9.4	8.7	9.0	---	---	---	18.0	16.5	17.2	22.7	21.2	21.9
8	9.1	8.3	8.5	---	---	---	19.1	17.0	18.1	22.7	21.1	21.8
9	8.5	7.8	8.3	---	---	---	19.3	18.5	18.8	22.1	21.7	21.9
10	9.2	8.0	8.4	---	---	---	18.8	17.4	17.9	23.1	21.2	21.9
11	10.1	8.6	9.2	---	---	---	17.5	16.8	17.2	22.2	20.6	21.3
12	10.7	9.8	10.3	---	---	---	17.5	16.9	17.2	20.6	19.4	20.0
13	10.7	10.3	10.5	---	---	---	17.9	16.6	17.1	19.5	18.8	19.1
14	10.5	9.4	10.0	---	---	---	17.3	16.5	17.0	20.0	18.1	18.9
15	9.8	8.9	9.3	---	---	---	18.6	16.8	17.5	20.6	18.6	19.6
16	9.7	8.7	9.1	---	---	---	19.2	17.7	18.4	22.5	19.7	20.7
17	11.3	8.9	9.9	10.9	10.3	10.5	19.6	18.5	19.0	22.0	21.0	21.5
18	12.1	10.3	11.2	11.7	10.3	11.0	19.6	19.1	19.5	22.3	21.0	21.5
19	---	---	---	12.6	11.6	12.1	20.0	19.0	19.5	24.8	21.6	22.5
20	---	---	---	13.3	12.3	12.7	20.5	19.4	19.9	24.6	22.0	23.0
21	---	---	---	13.3	12.5	12.9	20.0	19.2	19.6	26.8	23.5	24.7
22	---	---	---	13.6	12.5	13.1	19.6	18.8	19.2	25.3	23.2	24.1
23	---	---	---	13.6	12.2	12.9	18.9	18.2	18.4	23.3	22.4	22.9
24	---	---	---	13.2	12.4	12.7	18.8	17.5	18.1	23.1	22.2	22.6
25	---	---	---	13.2	12.1	12.6	19.8	17.7	18.3	26.4	22.8	23.5
26	---	---	---	14.2	12.6	13.4	19.2	18.0	18.5	26.4	23.4	24.8
27	---	---	---	15.4	13.6	14.5	19.3	18.0	18.6	26.8	25.0	25.9
28	---	---	---	16.4	14.9	15.6	18.7	17.6	18.2	26.4	24.8	25.4
29	---	---	---	18.1	16.1	16.9	19.9	17.8	18.4	26.9	25.2	25.9
30	---	---	---	18.9	17.5	18.0	19.4	18.3	18.8	28.1	25.6	26.6
31	---	---	---	19.5	18.0	18.7	---	---	---	28.4	25.9	26.7
MONTH	---	---	---	---	---	---	20.9	16.0	18.4	28.4	18.1	22.2

TEMPERATURE, TOP, WATER, (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	27.4	25.4	26.5	31.1	29.0	30.0	29.9	28.0	28.9	---	---	---
2	27.4	26.0	26.7	32.1	29.6	30.6	28.0	26.3	27.1	---	---	---
3	28.8	26.2	27.0	30.8	29.7	30.3	26.3	25.9	26.1	---	---	---
4	27.6	26.5	27.0	30.6	29.3	29.9	26.3	25.5	25.9	---	---	---
5	27.2	26.5	26.8	30.3	28.7	29.3	26.1	25.4	25.7	---	---	---
6	26.9	25.2	26.1	29.0	28.4	28.7	26.0	25.5	25.8	---	---	---
7	25.2	24.0	24.7	29.0	27.9	28.5	27.9	25.7	26.5	---	---	---
8	24.2	23.1	23.7	29.4	27.9	28.6	29.5	26.8	27.8	---	---	---
9	24.6	23.2	23.7	29.5	28.4	28.9	29.8	27.5	28.6	---	---	---
10	25.4	23.6	24.2	30.2	28.6	29.3	30.3	28.5	29.1	---	---	---
11	26.7	24.5	25.3	30.1	29.4	29.7	29.9	27.5	28.5	---	---	---
12	27.8	25.5	26.5	29.6	28.6	29.1	29.4	27.3	28.1	---	---	---
13	27.3	25.6	26.4	29.4	28.4	28.8	28.5	27.7	28.0	---	---	---
14	27.4	26.1	26.8	29.4	28.1	28.7	28.6	27.5	28.0	---	---	---
15	27.3	26.0	26.7	29.6	28.3	28.8	29.8	27.7	28.4	---	---	---
16	27.9	26.5	27.2	29.3	28.5	28.8	29.5	28.6	29.0	---	---	---
17	28.5	26.9	27.7	29.0	28.1	28.5	30.1	28.5	29.1	27.8	26.1	26.9
18	29.7	27.4	28.3	29.6	27.8	28.5	31.7	28.4	29.6	27.5	26.6	27.0
19	29.0	27.2	28.1	30.2	28.3	29.2	29.2	28.0	28.6	28.0	26.6	27.1
20	29.0	26.8	27.7	29.8	28.7	29.2	28.1	27.0	27.5	27.6	26.8	27.1
21	30.2	28.2	28.8	30.0	28.8	29.4	27.6	26.5	27.0	27.8	26.8	27.3
22	30.7	28.0	28.9	30.6	28.6	29.6	28.8	26.2	27.2	30.3	27.0	28.1
23	30.5	28.2	29.1	30.4	28.8	29.7	29.0	27.0	28.0	29.1	25.9	26.9
24	30.1	28.8	29.5	30.9	28.9	29.7	---	---	---	26.0	24.7	25.3
25	31.2	29.0	29.9	30.3	29.1	29.5	---	---	---	26.3	24.4	25.1
26	32.6	29.5	30.6	29.3	28.2	28.8	---	---	---	27.1	25.2	25.9
27	32.0	28.4	29.9	28.4	27.6	28.1	---	---	---	27.2	24.8	26.0
28	31.0	29.7	30.3	29.8	27.6	28.6	---	---	---	26.2	24.4	25.3
29	31.9	29.8	30.4	31.0	28.8	29.7	---	---	---	26.0	25.5	25.8
30	30.5	29.6	30.1	30.5	29.6	30.0	---	---	---	26.1	25.4	25.7
31	---	---	---	30.6	29.0	29.7	---	---	---	---	---	---
MONTH	32.6	23.1	27.5	32.1	27.6	29.2	---	---	---	---	---	---

## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

TEMPERATURE, BOTTOM, WATER, (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	22.8	22.2	22.5	17.7	16.8	17.5	13.3	12.8	13.1	7.2	6.4	6.6
2	22.5	21.5	21.8	17.9	17.4	17.7	13.0	12.0	12.3	7.0	6.6	6.9
3	21.9	20.9	21.5	17.9	17.2	17.5	12.6	12.3	12.4	7.2	6.8	7.0
4	21.8	21.3	21.5	17.5	16.6	17.0	12.8	12.4	12.6	7.5	6.9	7.3
5	21.9	21.7	21.7	17.2	15.7	16.1	12.9	12.0	12.6	7.7	7.4	7.5
6	22.0	21.8	21.9	16.2	15.6	15.9	12.1	10.5	11.3	9.0	7.4	7.6
7	22.3	22.0	22.1	16.2	15.6	15.9	10.5	9.4	9.8	11.8	7.8	10.3
8	22.4	22.2	22.3	16.0	14.8	15.4	9.5	8.4	9.1	13.2	11.8	12.7
9	22.8	22.2	22.4	15.2	14.5	14.8	10.0	8.0	8.6	13.3	9.3	11.5
10	23.0	22.4	22.7	14.6	14.3	14.5	10.3	9.6	10.0	10.0	9.2	9.5
11	23.9	22.4	22.9	15.4	14.5	15.1	10.3	9.3	9.8	10.6	9.6	10.0
12	23.8	22.9	23.4	15.6	14.6	15.4	10.5	9.4	9.7	10.6	9.8	10.1
13	23.8	22.8	23.1	15.6	14.1	14.7	10.6	9.8	10.4	11.7	10.4	11.0
14	24.4	23.0	23.6	15.6	14.3	14.8	10.5	9.2	10.3	11.4	10.4	10.8
15	24.2	22.8	23.5	14.8	13.9	14.3	10.3	8.0	8.6	10.9	10.5	10.6
16	22.8	21.2	21.9	14.8	12.9	13.8	8.9	7.9	8.5	10.7	10.4	10.6
17	21.2	20.8	20.9	12.9	12.1	12.3	9.3	8.5	8.7	10.5	10.4	10.5
18	21.0	19.9	20.5	13.4	11.9	12.7	9.8	8.4	9.0	10.5	10.0	10.3
19	20.1	19.1	19.6	13.6	12.7	13.4	9.9	9.0	9.4	10.4	8.6	9.7
20	19.4	18.2	19.0	13.6	13.3	13.4	9.8	9.0	9.2	10.0	8.3	8.9
21	19.1	18.0	18.4	13.6	13.4	13.5	9.8	9.0	9.4	10.0	9.1	9.6
22	19.2	17.6	18.2	14.3	13.4	13.8	9.8	9.1	9.3	9.4	8.3	8.9
23	17.7	16.5	16.9	14.3	13.8	14.0	9.8	9.3	9.5	9.5	8.2	9.0
24	17.4	16.9	17.2	13.8	12.4	13.3	9.8	9.4	9.6	9.7	9.1	9.4
25	18.0	17.2	17.6	13.1	11.5	12.1	10.2	9.7	9.9	9.6	8.5	9.0
26	18.1	17.5	17.9	13.4	12.0	13.1	10.5	9.9	10.0	9.2	8.9	9.1
27	18.5	18.0	18.2	13.2	11.9	12.6	11.0	9.9	10.2	9.4	8.5	9.0
28	18.2	16.8	17.4	13.0	12.4	12.7	10.4	9.2	9.7	9.5	8.8	9.1
29	17.7	16.8	17.2	13.2	12.6	12.9	9.5	8.3	8.8	8.9	8.5	8.7
30	17.8	17.3	17.7	13.4	12.4	12.8	8.3	7.8	8.0	9.2	8.7	8.9
31	17.8	17.1	17.6	---	---	---	7.9	7.2	7.6	9.3	8.4	9.0
MONTH	24.4	16.5	20.4	17.9	11.5	14.4	13.3	7.2	9.9	13.3	6.4	9.3

TEMPERATURE, BOTTOM, WATER, (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	9.3	8.1	9.1	13.6	13.1	13.2	19.6	18.6	19.3	19.6	18.6	18.9
2	9.1	8.4	8.7	13.8	11.5	12.2	19.7	14.1	17.8	20.1	19.2	19.6
3	9.5	8.7	9.0	11.6	11.3	11.3	19.4	13.9	16.7	20.6	19.1	19.7
4	10.1	9.4	9.8	11.4	11.3	11.3	19.3	16.9	18.5	20.8	20.0	20.3
5	9.8	9.5	9.7	11.6	11.3	11.4	17.1	16.5	16.8	21.0	19.8	20.3
6	9.6	9.1	9.4	---	---	---	---	---	---	20.6	20.2	20.3
7	9.2	8.7	9.0	11.9	11.5	11.6	---	---	---	21.8	20.3	21.1
8	8.7	8.4	8.5	13.6	11.4	12.1	19.0	16.3	17.5	22.4	21.1	21.7
9	8.6	7.9	8.3	14.9	13.5	14.3	19.3	18.1	18.8	22.1	21.4	21.8
10	8.7	8.1	8.4	14.6	13.3	14.0	18.8	17.4	17.9	22.1	20.5	21.3
11	10.0	8.6	9.2	13.3	12.0	12.5	17.4	16.8	17.1	22.1	20.6	21.3
12	10.7	9.9	10.3	12.3	11.0	11.4	17.5	16.7	17.2	20.6	19.5	20.0
13	10.6	10.4	10.5	11.5	10.4	10.7	17.6	16.6	16.9	19.6	18.9	19.1
14	10.5	9.5	10.0	12.1	11.3	11.7	17.3	16.5	17.0	20.0	18.1	18.8
15	9.6	8.9	9.3	12.3	11.2	11.8	18.2	16.8	17.3	19.7	18.9	19.2
16	9.3	8.9	9.1	---	---	---	19.2	17.3	18.3	20.2	19.0	19.6
17	10.7	9.1	10.0	---	---	---	19.6	18.5	19.0	21.5	19.3	20.0
18	11.9	10.5	11.2	---	---	---	19.6	19.1	19.5	22.1	20.2	21.1
19	11.9	11.0	11.4	---	---	---	20.0	18.9	19.4	21.9	20.8	21.4
20	12.8	11.8	12.3	---	---	---	20.3	19.4	19.8	22.9	20.9	21.8
21	12.9	11.0	12.5	13.3	12.6	12.9	20.0	19.2	19.6	22.2	20.3	21.2
22	13.0	10.8	11.8	13.6	12.5	13.1	19.6	18.8	19.2	21.4	19.9	20.3
23	13.2	11.8	12.6	13.5	12.3	12.9	18.9	18.2	18.4	22.7	20.1	21.3
24	12.8	11.9	12.2	13.2	12.4	12.7	18.6	17.6	18.0	22.8	20.6	22.0
25	11.9	11.4	11.6	13.1	12.1	12.6	18.6	17.7	18.0	22.9	21.8	22.6
26	12.0	11.5	11.7	14.2	12.6	13.3	19.1	18.0	18.5	23.2	20.2	21.2
27	12.4	11.6	11.9	15.4	13.6	14.4	---	---	---	21.7	20.3	20.6
28	13.2	12.3	12.7	16.4	14.9	15.6	---	---	---	21.5	20.4	20.6
29	---	---	---	17.8	16.1	16.7	18.8	17.8	18.1	26.2	21.4	23.7
30	---	---	---	---	---	---	19.1	18.3	18.6	26.0	23.4	24.9
31	---	---	---	19.4	13.7	17.6	---	---	---	25.0	22.5	23.4
MONTH	13.2	7.9	10.4	---	---	---	---	---	---	26.2	18.1	20.9

## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

TEMPERATURE, BOTTOM, WATER, (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	26.1	21.0	22.5	30.4	28.7	29.4	29.7	27.8	28.8	---	---	---
2	27.1	22.1	26.1	30.2	29.1	29.8	27.8	26.3	27.1	---	---	---
3	26.8	23.3	24.8	30.5	29.3	30.1	26.4	25.8	26.1	---	---	---
4	26.7	23.2	25.0	30.4	29.3	29.7	26.3	25.5	25.9	---	---	---
5	26.4	23.6	24.5	29.5	28.8	29.1	26.1	25.4	25.7	---	---	---
6	25.8	23.8	24.9	29.0	28.4	28.6	26.0	25.7	25.8	---	---	---
7	25.2	24.1	24.6	28.9	27.9	28.4	27.1	25.7	26.1	---	---	---
8	24.1	23.2	23.7	29.4	27.9	28.5	27.4	26.7	27.0	---	---	---
9	24.2	23.2	23.5	29.3	28.0	28.6	27.8	27.1	27.3	---	---	---
10	23.8	23.4	23.6	29.9	28.6	29.0	27.6	27.2	27.3	---	---	---
11	24.1	23.5	23.8	29.9	29.1	29.5	27.2	26.7	26.9	---	---	---
12	25.8	23.5	24.1	29.4	28.5	28.9	27.2	26.2	26.5	---	---	---
13	26.0	24.3	25.1	29.2	28.3	28.7	28.1	26.9	27.6	---	---	---
14	26.0	24.0	24.5	29.3	28.1	28.6	28.6	27.4	27.9	---	---	---
15	27.3	24.3	26.0	28.7	28.2	28.4	28.3	27.8	27.9	---	---	---
16	27.8	26.2	26.9	28.9	28.3	28.5	28.4	27.9	28.0	---	---	---
17	28.3	26.5	27.2	28.5	28.0	28.2	28.0	27.7	27.8	27.3	24.8	25.7
18	27.9	26.1	27.0	28.6	27.5	28.0	28.1	27.5	27.7	27.5	26.6	26.9
19	27.9	26.2	26.8	28.6	27.9	28.2	28.8	27.6	28.1	27.1	25.7	26.6
20	28.3	26.8	27.2	29.7	28.1	28.5	28.1	27.0	27.5	27.0	25.8	26.4
21	28.1	26.7	27.1	29.6	28.4	28.9	27.4	26.7	27.0	26.4	25.7	26.1
22	26.9	26.5	26.7	29.8	28.4	28.8	27.4	26.8	27.1	26.8	25.8	26.1
23	27.5	26.6	26.9	29.8	28.2	28.7	27.3	26.9	27.1	26.8	25.9	26.4
24	29.9	26.8	28.1	29.5	28.2	28.5	---	---	---	26.3	24.5	25.1
25	29.7	27.0	28.6	28.8	28.3	28.5	---	---	---	25.3	24.5	24.9
26	29.7	27.0	28.0	28.9	28.2	28.6	---	---	---	25.1	24.6	24.8
27	28.6	27.0	27.7	28.5	27.8	28.1	---	---	---	25.2	24.8	25.0
28	30.5	27.3	28.6	28.2	27.7	28.0	---	---	---	25.3	24.6	25.1
29	30.5	28.5	29.7	29.0	28.1	28.4	---	---	---	25.6	25.0	25.2
30	30.4	28.3	29.7	29.2	28.1	28.6	---	---	---	25.7	25.3	25.4
31	---	---	---	29.9	28.1	28.8	---	---	---	---	---	---
MONTH	30.5	21.0	26.1	30.5	27.5	28.7	---	---	---	---	---	---

OXYGEN DISSOLVED, TOP, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9.6	6.8	8.6	12.0	7.3	10.4	10.9	7.2	10.3	13.3	11.9	12.4
2	8.8	7.7	8.3	10.2	6.6	9.0	11.3	7.9	10.2	14.8	12.5	13.6
3	9.8	8.1	8.8	9.3	7.0	8.4	12.3	8.5	10.8	14.7	12.2	13.6
4	11.5	8.7	10.2	10.5	7.9	9.3	12.3	7.9	10.4	14.7	12.6	13.7
5	13.0	5.2	10.6	10.4	9.8	10.1	11.6	10.2	11.0	14.8	12.0	13.1
6	13.9	8.5	10.4	10.5	9.7	10.1	12.6	11.0	11.6	15.0	12.3	13.9
7	12.3	9.1	10.5	10.6	9.8	10.2	12.3	11.1	11.6	13.5	12.7	13.1
8	12.9	9.3	11.5	10.9	10.1	10.5	13.9	10.6	12.4	12.8	10.7	11.7
9	12.5	9.0	10.7	11.2	9.9	10.5	---	---	---	10.9	10.3	10.6
10	12.1	7.7	9.8	14.1	10.1	11.5	15.9	11.8	13.9	11.0	10.4	10.7
11	11.0	3.3	7.2	12.8	11.3	12.0	13.6	11.8	12.7	10.7	9.7	10.4
12	10.6	7.2	8.6	12.7	11.6	12.1	13.8	12.9	13.3	10.8	8.9	9.7
13	12.7	5.5	8.7	12.3	10.5	11.3	15.2	12.7	13.8	11.9	10.7	11.4
14	10.2	3.0	7.0	11.4	9.9	10.7	14.2	12.2	13.1	11.5	10.6	11.3
15	9.1	4.6	8.3	11.3	10.0	10.7	13.1	11.8	12.4	11.2	10.6	10.9
16	8.8	7.4	8.3	11.1	10.4	10.7	13.8	12.0	12.7	10.6	9.1	10.0
17	8.7	4.2	7.6	11.7	10.6	11.1	14.5	12.2	13.2	10.0	8.6	9.1
18	8.8	6.8	8.1	13.7	10.7	12.0	15.9	13.4	14.6	11.5	9.8	10.5
19	9.5	6.8	8.5	13.7	12.3	12.9	16.6	13.8	15.2	10.9	9.9	10.6
20	11.0	4.9	8.2	13.6	12.3	13.0	15.1	10.3	13.1	11.5	10.7	11.1
21	10.5	6.7	9.4	14.4	8.2	11.8	15.3	11.9	14.1	---	---	---
22	9.9	8.3	9.0	12.4	8.2	10.2	14.4	12.4	13.2	---	---	---
23	10.2	8.7	9.4	11.9	10.3	11.0	13.8	11.7	12.7	---	---	---
24	10.8	9.4	10.1	10.4	9.8	10.0	13.4	12.6	13.0	---	---	---
25	11.3	9.9	10.5	10.9	9.7	10.3	13.8	12.1	12.9	---	---	---
26	11.0	9.7	10.3	11.1	10.2	10.7	15.5	13.0	14.2	---	---	---
27	9.8	8.2	9.2	12.4	9.2	11.0	15.0	11.4	13.7	---	---	---
28	10.1	8.7	9.4	13.7	10.4	12.3	12.4	10.8	11.4	---	---	---
29	11.6	9.2	10.1	14.2	11.7	12.8	12.2	11.1	11.6	---	---	---
30	12.1	10.1	11.0	13.9	10.5	12.3	12.2	10.9	11.6	---	---	---
31	12.2	10.1	11.3	---	---	---	13.1	11.5	12.2	---	---	---
MONTH	13.9	3.0	9.3	14.4	6.6	11.0	---	---	---	---	---	---



## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

OXYGEN DISSOLVED, BOTTOM, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	---	---	---	10.9	4.5	9.1	12.1	11.0	11.6
2	7.6	5.5	6.9	---	---	---	10.6	7.5	9.8	11.5	10.6	11.0
3	7.3	3.9	5.7	7.4	.7	4.1	9.5	8.4	9.0	10.9	10.2	10.5
4	4.9	2.6	3.7	8.4	1.2	5.2	10.2	7.8	8.8	10.8	8.9	9.8
5	5.6	1.7	2.7	8.3	1.4	5.6	11.6	7.4	9.1	9.4	8.3	8.9
6	5.6	.6	1.7	8.3	1.7	5.1	12.8	10.7	11.7	11.5	8.2	9.2
7	2.2	.2	.9	9.1	3.8	7.7	12.4	11.2	11.7	12.6	8.5	11.4
8	---	---	---	9.5	1.5	6.9	12.1	11.0	11.6	12.0	10.0	10.8
9	---	---	---	8.8	1.4	7.0	14.3	9.0	12.7	10.0	5.8	8.4
10	---	---	---	9.2	.6	7.2	11.9	8.6	9.6	9.1	6.8	7.9
11	---	---	---	8.6	.2	4.9	12.0	8.2	10.5	9.4	7.5	8.5
12	7.7	5.3	6.5	9.3	.2	4.4	13.2	7.1	11.4	8.6	7.4	8.2
13	8.8	5.3	6.7	8.9	2.3	6.7	12.4	7.1	8.1	8.1	5.3	6.8
14	7.7	1.0	5.0	8.8	2.3	6.2	11.9	5.9	7.2	11.2	5.6	7.7
15	6.9	1.6	5.6	8.8	.3	7.0	12.8	7.8	12.0	8.5	5.1	6.5
16	6.6	2.6	4.8	8.7	1.6	7.2	13.1	10.2	11.7	7.3	4.9	5.6
17	6.4	.7	4.3	8.5	.7	6.6	13.3	10.1	11.9	8.9	4.7	6.2
18	6.9	2.8	4.7	9.3	2.5	7.2	13.5	6.2	10.7	11.1	4.4	6.9
19	7.7	3.2	6.0	9.3	7.9	8.1	9.9	6.5	8.7	11.4	4.2	8.3
20	8.6	1.7	6.5	8.1	7.3	7.7	11.6	9.8	10.2	---	---	---
21	8.9	3.0	7.3	8.3	7.1	7.4	13.9	9.3	11.3	---	---	---
22	8.7	3.8	7.1	9.1	5.7	7.6	12.8	10.4	11.9	---	---	---
23	9.5	7.9	8.6	7.6	6.8	7.1	11.3	7.8	9.9	---	---	---
24	9.6	7.2	7.9	10.0	7.1	9.3	12.4	7.8	11.1	---	---	---
25	9.6	4.3	6.9	10.1	7.9	9.7	12.0	6.5	8.0	---	---	---
26	9.1	4.2	7.3	10.5	6.5	7.6	11.6	6.3	7.0	---	---	---
27	8.9	4.6	7.4	11.8	5.8	9.0	12.2	6.2	7.9	---	---	---
28	9.1	6.5	8.2	9.6	6.4	7.6	11.1	9.9	10.5	---	---	---
29	9.4	2.0	6.3	8.4	5.6	7.0	11.3	9.6	10.8	---	---	---
30	8.1	1.3	5.1	12.0	6.8	9.5	11.7	10.5	11.2	9.7	9.1	9.5
31	---	---	---	---	---	---	12.4	10.9	11.5	12.0	9.2	10.2
MONTH	---	---	---	---	---	---	14.3	4.5	10.2	---	---	---

OXYGEN DISSOLVED, BOTTOM, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	10.9	9.1	9.8	10.2	9.8	10.0	---	---	---	10.2	9.6	10.0
2	13.1	10.6	11.4	10.1	9.0	9.6	---	---	---	10.8	9.6	10.2
3	15.4	11.4	13.6	10.1	9.5	9.8	---	---	---	11.6	10.1	10.8
4	15.3	14.0	14.5	9.8	9.3	9.5	---	---	---	11.5	10.5	11.0
5	14.7	14.3	14.5	9.5	8.8	9.1	---	---	---	11.5	10.2	10.8
6	14.7	14.4	14.6	---	---	---	---	---	---	11.4	9.6	10.3
7	14.7	14.2	14.4	---	---	---	---	---	---	11.8	9.8	10.9
8	14.7	14.2	14.4	---	---	---	---	---	---	11.2	9.6	10.3
9	14.4	14.1	14.3	---	---	---	---	---	---	10.2	6.2	9.1
10	14.2	12.3	13.4	11.8	11.3	11.5	---	---	---	9.6	5.0	8.3
11	13.0	11.9	12.4	12.2	11.8	12.0	---	---	---	9.6	9.1	9.4
12	13.2	12.1	12.8	12.6	12.2	12.5	---	---	---	9.8	9.1	9.4
13	13.3	12.2	12.8	12.7	11.2	12.5	---	---	---	10.3	9.0	9.8
14	12.2	11.8	12.0	12.1	10.8	11.5	---	---	---	11.8	9.8	10.5
15	12.1	11.8	11.9	12.7	11.2	12.3	---	---	---	11.6	9.6	10.7
16	11.9	11.6	11.8	---	---	---	---	---	---	11.1	7.1	9.6
17	12.1	11.5	11.8	---	---	---	---	---	---	10.0	6.4	7.6
18	11.8	11.0	11.4	---	---	---	---	---	---	9.3	6.0	7.7
19	11.0	8.2	10.7	---	---	---	---	---	---	9.2	5.8	7.7
20	10.6	10.1	10.3	---	---	---	---	---	---	9.3	5.7	8.0
21	10.7	9.9	10.3	---	---	---	---	---	---	8.5	2.9	5.8
22	11.5	10.0	10.8	---	---	---	---	---	---	4.9	1.8	3.0
23	12.3	10.5	11.3	---	---	---	---	---	---	8.2	2.6	5.0
24	12.1	10.6	11.3	---	---	---	---	---	---	9.3	3.3	7.0
25	12.8	11.5	12.1	---	---	---	---	---	---	9.7	5.4	8.5
26	12.3	11.9	12.1	---	---	---	---	---	---	8.6	1.1	3.5
27	12.1	10.6	11.2	---	---	---	---	---	---	3.3	1.2	1.6
28	10.7	9.9	10.2	---	---	---	---	---	---	2.2	1.0	1.3
29	---	---	---	---	---	---	11.5	10.3	10.7	10.7	1.3	5.1
30	---	---	---	---	---	---	11.3	9.6	10.4	10.6	3.2	6.8
31	---	---	---	---	---	---	---	---	---	6.2	1.5	2.8
MONTH	15.4	8.2	12.2	---	---	---	---	---	---	11.8	1.0	7.8



## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

OXYGEN DISSOLVED, BOTTOM, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.8	1.3	2.0	---	---	---	7.4	5.2	6.6	---	---	---
2	10.2	1.6	8.7	---	---	---	7.8	6.3	7.0	---	---	---
3	9.9	2.3	5.1	---	---	---	9.0	6.8	8.0	---	---	---
4	9.3	1.7	5.1	---	---	---	9.8	8.1	8.8	---	---	---
5	7.1	1.5	2.8	---	---	---	9.2	7.1	8.6	---	---	---
6	8.8	1.5	4.9	---	---	---	8.6	6.4	7.7	---	---	---
7	10.7	8.4	9.3	---	---	---	9.3	5.9	8.0	---	---	---
8	10.7	6.4	9.2	---	---	---	7.8	5.7	6.9	---	---	---
9	11.0	4.0	8.4	---	---	---	7.3	3.8	5.2	---	---	---
10	10.0	4.3	7.1	---	---	---	5.2	1.5	2.5	---	---	---
11	---	---	---	---	---	---	1.9	1.2	1.4	---	---	---
12	---	---	---	---	---	---	2.1	.5	1.0	---	---	---
13	---	---	---	---	---	---	7.3	.5	5.1	---	---	---
14	---	---	---	---	---	---	8.1	2.0	5.8	---	---	---
15	---	---	---	---	---	---	7.7	4.4	6.0	---	---	---
16	---	---	---	---	---	---	6.6	1.6	4.4	---	---	---
17	---	---	---	---	---	---	2.9	.2	1.5	7.8	.6	3.2
18	---	---	---	---	---	---	1.0	.0	.2	8.7	5.3	7.2
19	---	---	---	---	---	---	6.8	.0	3.2	7.9	1.1	6.1
20	---	---	---	---	---	---	8.3	5.9	7.1	8.2	1.0	4.9
21	---	---	---	---	---	---	8.6	7.1	7.7	4.9	1.1	1.8
22	---	---	---	---	---	---	7.7	3.8	6.0	4.3	1.1	1.5
23	---	---	---	7.4	.5	2.4	6.1	3.5	4.9	8.9	1.3	6.3
24	---	---	---	5.7	.4	.9	---	---	---	9.1	3.5	7.3
25	---	---	---	.6	.4	.5	---	---	---	10.0	4.1	7.8
26	---	---	---	7.0	.5	2.4	---	---	---	9.9	2.2	4.7
27	---	---	---	7.0	.8	4.5	---	---	---	3.6	1.9	2.1
28	---	---	---	7.6	.9	4.0	---	---	---	---	---	---
29	---	---	---	4.1	.8	2.0	---	---	---	---	---	---
30	---	---	---	6.6	2.0	3.4	---	---	---	7.7	.7	2.3
31	---	---	---	9.2	2.5	6.2	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

OXYGEN DISSOLVED, TOP, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	118	81	104	132	80	114	110	73	105	108	98	102
2	106	93	100	113	75	100	112	78	101	123	101	110
3	117	97	105	105	78	94	120	83	106	122	97	111
4	138	103	122	114	87	103	123	80	104	122	102	112
5	160	63	127	114	107	110	116	102	109	126	100	108
6	175	103	128	113	106	109	122	107	113	133	102	120
7	153	110	127	115	106	110	117	104	109	123	113	118
8	163	113	143	115	107	111	124	94	110	118	100	109
9	159	113	134	118	105	111	124	106	116	102	96	98
10	151	96	123	150	108	122	144	108	125	102	95	98
11	138	40	88	135	120	127	125	108	116	98	87	94
12	132	88	106	135	121	128	126	118	121	98	78	87
13	160	67	108	129	110	119	139	115	124	109	97	104
14	127	35	87	120	104	112	129	107	116	104	96	101
15	112	56	101	119	105	113	117	106	111	99	91	94
16	105	87	99	117	109	111	125	106	114	92	79	86
17	101	49	88	119	106	112	132	110	120	86	75	78
18	103	79	94	134	103	119	146	119	132	101	84	91
19	109	79	97	129	120	125	152	125	139	93	85	90
20	125	56	93	130	118	124	137	96	120	96	89	92
21	118	75	106	140	86	115	139	109	127	---	---	---
22	112	94	101	131	86	107	130	111	118	---	---	---
23	114	96	104	125	107	116	127	105	115	---	---	---
24	118	103	111	107	99	102	122	115	119	---	---	---
25	127	110	117	107	94	101	130	110	120	---	---	---
26	123	110	115	111	99	106	147	120	132	---	---	---
27	110	92	104	124	93	110	141	105	128	---	---	---
28	114	98	105	134	101	121	112	98	103	---	---	---
29	127	101	112	140	116	126	107	99	102	---	---	---
30	130	108	119	139	107	123	106	92	100	---	---	---
31	132	109	122	---	---	---	112	98	104	---	---	---
MONTH	175	35	109	150	75	113	152	73	115	---	---	---

[illegible]



## NEUSE RIVER BASIN

0209262905 NEUSE RIVER AT CHANNEL LIGHT 11--Continued

OXYGEN DISSOLVED, BOTTOM, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	---	---	---	112	47	94	104	95	100
2	93	66	84	---	---	---	107	77	99	99	94	96
3	88	47	69	84	6	47	96	86	92	95	90	92
4	59	32	44	94	14	59	104	81	90	94	80	87
5	69	20	33	91	16	61	116	77	93	83	75	80
6	69	7	21	91	19	56	125	107	115	101	74	82
7	27	3	11	99	40	84	119	107	112	121	76	107
8	---	---	---	102	18	74	113	104	109	115	99	106
9	---	---	---	94	16	74	131	87	117	99	55	81
10	---	---	---	98	27	77	112	84	92	89	65	75
11	---	---	---	91	12	53	112	80	99	92	73	83
12	97	67	82	98	2	48	123	69	107	84	72	80
13	110	67	84	94	25	71	117	70	79	79	52	67
14	98	13	63	91	24	65	110	58	71	105	55	74
15	87	20	70	94	3	74	117	76	110	82	50	63
16	81	32	59	90	18	74	121	96	108	70	48	55
17	77	8	52	85	7	66	123	96	110	84	46	60
18	82	34	56	98	25	74	124	59	100	103	43	66
19	90	38	70	94	82	84	94	63	83	---	---	---
20	99	20	75	85	77	81	111	92	97	---	---	---
21	101	35	83	86	74	77	129	89	107	---	---	---
22	98	44	81	95	59	79	121	99	112	---	---	---
23	106	88	96	81	73	76	106	74	93	---	---	---
24	107	80	88	103	75	96	117	74	105	---	---	---
25	108	50	78	103	83	98	113	62	76	---	---	---
26	104	49	83	106	70	80	112	61	68	---	---	---
27	101	54	84	120	62	93	117	60	76	---	---	---
28	102	73	93	98	68	79	104	94	99	---	---	---
29	---	---	---	88	59	73	103	91	100	---	---	---
30	93	16	58	122	71	98	106	93	100	90	83	88
31	---	---	---	---	---	---	110	98	103	107	86	94
MONTH	---	---	---	---	---	---	131	47	97	---	---	---

OXYGEN DISSOLVED, BOTTOM, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	100	85	93	100	95	97	---	---	---	111	104	108
2	116	98	105	100	87	93	---	---	---	119	105	112
3	138	103	123	99	92	96	---	---	---	129	110	118
4	139	129	133	96	92	94	---	---	---	128	116	121
5	134	131	133	94	88	90	---	---	---	129	111	119
6	135	130	133	---	---	---	---	---	---	127	107	115
7	132	129	130	---	---	---	---	---	---	133	109	122
8	132	128	130	---	---	---	---	---	---	126	109	117
9	130	127	128	---	---	---	---	---	---	117	71	105
10	128	112	121	118	114	116	---	---	---	110	56	95
11	118	110	115	119	116	117	---	---	---	110	103	106
12	126	114	121	120	118	119	---	---	---	109	101	104
13	126	117	122	119	108	117	---	---	---	113	99	107
14	117	112	114	117	105	111	---	---	---	131	104	113
15	114	111	113	121	110	117	---	---	---	127	105	117
16	112	110	111	---	---	---	---	---	---	124	78	106
17	116	110	114	---	---	---	---	---	---	113	69	84
18	---	---	---	---	---	---	---	---	---	108	67	88
19	---	---	---	---	---	---	---	---	---	107	66	88
20	99	95	96	113	108	111	---	---	---	108	65	91
21	101	93	96	110	106	108	---	---	---	98	33	66
22	109	97	102	113	110	111	---	---	---	57	20	34
23	115	100	107	112	109	111	---	---	---	97	29	57
24	113	100	107	---	---	---	---	---	---	109	39	81
25	120	108	113	---	---	---	---	---	---	114	62	99
26	115	111	113	---	---	---	---	---	---	102	13	40
27	112	100	105	---	---	---	---	---	---	38	14	18
28	101	95	98	---	---	---	---	---	---	25	12	15
29	---	---	---	---	---	---	126	108	120	134	15	62
30	---	---	---	---	---	---	121	103	111	132	39	83
31	---	---	---	---	---	---	---	---	---	77	17	33
MONTH	---	---	---	---	---	---	---	---	---	134	12	88



## NEUSE RIVER BASIN

0209265810 NEUSE RIVER AT CHANNEL LIGHT 9

LOCATION.--Lat. 34°56'54", long. 76°48'36", Craven County, Hydrologic Unit 03020204, at U.S. Coast Guard Channel Light 9.

PERIOD OF RECORD.--May 1989 to July 1993, June 1996 to current year.

PERIOD OF DAILY RECORD.--

SALINITY (TOP AND BOTTOM): May 1989 to July 1993, June 1996 to current year

pH (TOP AND BOTTOM): June 1996 to current year.

WATER TEMPERATURE (TOP): May 1989 to July 1993, June 1996 to current year.

WATER TEMPERATURE (BOTTOM): June 1996 to current year.

DISSOLVED OXYGEN (TOP AND BOTTOM): May 1989 to July 1993, June 1996 to current year.

DISSOLVED OXYGEN (MID): May 1989 to July 1993.

DISSOLVED OXYGEN, PERCENT SATURATION (TOP AND BOTTOM): May 1989 to July 1993, June 1996 to current year.

DISSOLVED OXYGEN, PERCENT SATURATION (MID): May 1989 to July 1993.

INSTRUMENTATION.-- Water-quality monitor from May 1989 to July 1993. Constituents monitored were: specific conductance top and bottom, water temperature top and bottom, dissolved oxygen top, mid-depth and bottom. Water-quality monitor with satellite telemetry from June 1996 to current water year. Constituents monitored were the same as previous water years except mid-depth dissolved oxygen was not measured, water temperature, bottom, was added as well as pH top and bottom.

REMARKS.--Station operated in cooperation with the North Carolina Department of Environment and Natural Resources. Prior to June 1996, top constituents were monitored at 8 ft above streambed, mid constituents at 6 ft above streambed, and bottom constituents 2 ft above streambed. Beginning in June 1996, top constituents were monitored at 8 ft above streambed, and bottom constituents 2 ft above streambed. Salinity and dissolved oxygen, percent saturation are computed. Dissolved oxygen, minimum extremes are reported only as <1.0 mg/L. Dissolved oxygen, percent saturation, minimum extremes are reported only as <10%.

EXTREMES FOR PERIOD OF RECORD.-

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY(TOP), ppt	17.1, November 21, 1997	0.1, January 24, April 21, 1993
SALINITY(BOTTOM), ppt	19.6, November 23, 1997	0.2 January 23, 1993, March 27, 1998
pH(TOP), standard units	9.5, July 23, 1998	4.3, June 13, 1997
pH(BOTTOM), standard units	9.1, July 28, 1998	6.3, September 30, 1998
WATER TEMPERATURE (TOP), °C	32.3, August 6, 1989	0.3, March 14, 1993
WATER TEMPERATURE (BOTTOM), °C	31.0, July 1, 1998	6.3, January 2, 1998
DISSOLVED OXYGEN (TOP), mg/L	20.7, April 10, 1991	< 1.0, June 15, 1990, July 3, 4 1991, July 6, 11, 12, 15-17, 19, 20, 1992
DISSOLVED OXYGEN (BOTTOM), mg/L	16.8, April 26, 1991	< 1.0 on several days during the period

## NEUSE RIVER BASIN

0209265810 NEUSE RIVER AT CHANNEL LIGHT 9--Continued

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	17.1, November 21	0.2, March 27
SALINITY (BOTTOM), ppt	19.6, November 23	0.2, March 27
pH (TOP), standard units	9.5, July 23	6.7, July 18, 21
pH (BOTTOM), standard units	9.1, July 28	6.3, September 30
WATER TEMPERATURE (TOP), °C	31.4, June 26, 27	5.7, January 2
WATER TEMPERATURE (BOTTOM), °C	31.0, July 1	6.3, January 2
DISSOLVED OXYGEN (TOP), mg/L	18.7, January 3	1.7, July 11
DISSOLVED OXYGEN (BOTTOM), mg/L	16.0, January 3	< 1.0 on several days during October, April, May, June, July, August and September.
DISSOLVED OXYGEN, PERCENT SATURATION (TOP), %	187, June 23	20, July 11
DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM), %	182, July 28	< 10 on several days during October, April, May, June, July and August.

## SALINITY, TOP, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	13.7	11.8	12.5	13.0	11.4	12.3	15.5	12.1	13.8	9.5	7.4	8.7
2	13.8	11.7	12.6	12.4	11.4	11.8	14.4	11.6	12.9	9.7	7.6	8.7
3	13.3	11.7	12.5	12.3	11.1	11.8	14.5	11.5	12.6	8.9	6.0	7.1
4	13.1	11.3	12.2	11.8	10.8	11.2	14.2	11.2	12.7	8.5	6.1	7.5
5	12.9	10.4	11.4	12.1	11.1	11.5	14.5	11.1	12.3	8.5	5.5	7.2
6	12.2	10.3	10.8	11.8	10.4	11.6	14.9	12.0	13.4	8.6	6.0	6.8
7	13.5	9.7	10.7	10.8	9.8	10.1	14.7	11.8	13.3	13.2	7.0	10.4
8	13.7	9.7	11.2	11.9	9.8	10.8	13.3	10.8	12.0	15.3	9.2	13.1
9	13.1	11.6	12.2	12.5	10.3	11.7	13.0	10.6	11.9	13.6	5.6	9.5
10	13.1	11.1	12.2	12.4	10.9	11.5	12.9	10.4	11.6	10.9	4.9	6.4
11	13.5	10.7	12.2	12.7	10.5	10.9	13.1	10.8	12.0	---	---	---
12	13.7	12.4	13.2	11.4	10.5	10.8	13.2	10.5	11.8	---	---	---
13	13.7	12.3	13.2	12.4	10.8	11.6	12.1	9.3	10.9	---	---	---
14	13.6	11.9	13.0	11.8	10.5	11.2	11.2	7.7	8.9	---	---	---
15	13.5	12.1	12.9	12.0	10.5	11.3	11.5	7.6	9.6	---	---	---
16	13.6	11.3	12.4	12.0	11.2	11.7	10.3	7.0	8.0	---	---	---
17	11.8	10.5	11.3	12.2	11.3	11.8	10.9	6.8	7.8	---	---	---
18	12.4	9.9	10.9	12.7	10.7	11.7	11.0	8.0	9.3	---	---	---
19	11.3	10.3	10.9	12.6	10.6	11.6	11.5	8.1	9.8	---	---	---
20	13.5	10.5	12.0	12.1	9.6	10.8	11.5	8.1	9.3	---	---	---
21	13.3	11.7	12.5	17.1	9.5	12.2	13.1	8.1	10.5	---	---	---
22	13.1	11.7	12.4	16.3	10.9	13.3	13.8	10.1	12.3	---	---	---
23	13.5	12.4	12.8	13.7	9.1	11.3	13.5	10.4	12.1	---	---	---
24	13.8	12.8	13.2	12.7	9.1	11.1	13.7	11.1	12.4	---	---	---
25	14.0	12.1	13.0	13.9	11.5	12.7	13.3	10.9	11.9	---	---	---
26	13.8	11.6	12.8	14.5	11.6	13.0	12.7	10.1	11.3	---	---	---
27	14.0	12.4	13.2	14.6	12.4	13.5	---	---	---	---	---	---
28	13.4	12.5	13.0	14.5	12.0	13.3	12.0	7.0	9.0	---	---	---
29	13.8	11.8	12.3	14.3	11.6	12.9	11.7	8.5	10.3	---	---	---
30	12.5	11.9	12.1	15.6	12.0	13.5	11.5	9.0	10.2	---	---	---
31	12.9	12.0	12.4	---	---	---	12.0	8.9	10.5	---	---	---
MONTH	14.0	9.7	12.3	17.1	9.1	11.8	---	---	---	---	---	---



## NEUSE RIVER BASIN

0209265810 NEUSE RIVER AT CHANNEL LIGHT 9--Continued

SALINITY, BOTTOM, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	13.2	12.2	12.7	13.6	12.2	12.9	16.7	13.8	15.0	13.3	8.1	10.4
2	13.8	11.9	12.7	13.7	11.9	12.7	15.6	13.4	14.6	14.5	8.5	10.6
3	13.6	12.1	12.9	13.6	12.0	12.5	16.0	14.5	15.5	16.2	7.9	14.1
4	13.7	12.5	13.3	13.5	11.3	11.9	16.6	13.7	15.7	16.3	13.9	15.2
5	15.5	12.7	14.0	12.7	11.5	12.0	15.3	12.0	13.5	17.6	9.9	15.3
6	16.0	13.5	14.8	12.4	11.4	12.0	16.3	13.6	14.6	17.3	12.9	15.5
7	16.9	13.0	15.7	13.2	10.3	11.3	16.3	12.3	14.6	17.9	13.8	16.2
8	17.2	14.7	15.9	12.9	10.2	11.9	18.0	12.1	15.0	18.5	14.4	16.7
9	15.9	13.8	14.6	14.4	12.0	13.1	18.4	11.3	14.5	18.6	10.0	15.1
10	16.2	12.9	14.6	14.5	11.9	13.5	17.4	10.4	14.1	18.8	12.7	15.2
11	16.4	11.9	13.4	16.2	12.0	14.4	16.0	12.0	13.7	---	---	---
12	14.4	13.1	13.6	16.1	12.5	14.7	15.2	11.7	12.9	---	---	---
13	14.0	13.2	13.6	15.3	11.6	12.9	15.2	10.9	12.5	---	---	---
14	14.3	13.1	13.8	14.1	11.0	12.1	13.6	9.2	11.8	---	---	---
15	14.1	12.5	13.3	14.1	11.0	12.6	12.4	8.5	10.3	---	---	---
16	14.0	11.8	12.7	13.4	12.0	12.5	13.8	7.8	10.2	---	---	---
17	14.5	11.5	13.3	14.1	12.3	12.8	16.2	9.2	13.6	---	---	---
18	14.2	10.9	12.7	16.7	12.1	14.4	16.8	11.0	14.1	---	---	---
19	13.9	10.5	11.6	17.6	12.9	16.6	17.7	12.5	15.3	---	---	---
20	14.6	11.1	12.8	18.2	14.8	17.2	19.1	14.4	17.0	---	---	---
21	14.9	12.3	13.8	19.1	16.2	18.1	19.4	10.4	15.1	---	---	---
22	15.3	12.5	14.0	18.9	15.8	17.7	15.0	12.5	13.9	---	---	---
23	15.4	12.7	13.7	19.6	13.2	17.4	15.6	11.2	13.4	---	---	---
24	15.1	13.7	14.2	16.9	11.5	13.4	15.6	11.8	13.5	---	---	---
25	14.7	13.1	13.7	17.8	13.4	15.0	15.1	12.2	13.1	---	---	---
26	14.8	12.5	13.9	18.4	13.8	16.2	15.4	12.2	14.1	---	---	---
27	14.8	13.1	13.9	16.8	13.0	15.4	---	---	---	---	---	---
28	13.9	12.6	13.2	19.2	14.4	16.0	12.9	8.7	11.1	---	---	---
29	14.3	12.5	13.7	18.8	15.0	17.1	13.6	8.7	11.4	---	---	---
30	14.7	12.3	13.8	19.1	14.5	16.6	13.2	8.5	10.9	---	---	---
31	14.5	12.6	13.4	---	---	---	12.8	8.9	11.1	---	---	---
MONTH	17.2	10.5	13.7	19.6	10.2	14.2	---	---	---	---	---	---

SALINITY, BOTTOM, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	8.2	4.2	6.5	1.9	.9	1.5
2	---	---	---	---	---	---	8.6	3.9	6.3	1.8	1.0	1.2
3	---	---	---	---	---	---	8.5	2.1	4.7	3.6	1.0	1.6
4	---	---	---	---	---	---	5.7	1.6	3.1	4.9	1.4	2.3
5	---	---	---	---	---	---	4.5	1.5	2.7	5.8	1.2	2.5
6	---	---	---	---	---	---	4.6	1.9	3.2	3.3	.8	1.8
7	---	---	---	---	---	---	4.6	2.0	3.3	5.1	1.2	3.0
8	---	---	---	---	---	---	3.3	2.1	2.6	5.8	.9	3.8
9	---	---	---	---	---	---	3.6	2.1	2.8	5.4	.8	1.9
10	---	---	---	---	---	---	2.8	1.7	2.1	3.6	.9	1.8
11	---	---	---	---	---	---	1.9	1.4	1.6	3.4	1.5	1.9
12	---	---	---	---	---	---	2.1	1.3	1.6	1.9	1.3	1.6
13	---	---	---	---	---	---	1.8	1.2	1.6	2.4	.5	1.0
14	---	---	---	---	---	---	2.1	1.0	1.4	1.3	.3	.7
15	---	---	---	---	---	---	1.7	.8	1.1	1.5	.7	1.1
16	---	---	---	---	---	---	3.6	.8	1.6	2.0	.9	1.2
17	---	---	---	---	---	---	4.8	1.2	2.0	3.1	1.3	1.9
18	---	---	---	---	---	---	2.7	1.2	1.7	3.2	1.5	2.0
19	---	---	---	---	---	---	2.7	1.3	1.8	4.2	1.5	2.1
20	---	---	---	---	---	---	1.4	.7	.8	3.8	1.6	2.4
21	---	---	---	---	---	---	1.6	.7	1.1	5.1	2.6	3.8
22	---	---	---	---	---	---	1.1	.6	1.0	5.4	2.4	3.6
23	---	---	---	---	---	---	.8	.5	.6	5.9	2.0	3.7
24	---	---	---	---	---	---	1.1	.5	.7	6.8	2.1	3.2
25	---	---	---	---	---	---	1.7	.4	.8	4.4	2.1	3.0
26	---	---	---	---	---	---	3.9	.6	1.4	5.6	2.6	4.1
27	---	---	---	3.4	.2	1.1	1.9	1.1	1.5	8.5	3.6	6.0
28	---	---	---	5.3	.6	2.9	1.8	1.5	1.7	6.3	2.7	4.5
29	---	---	---	6.2	3.7	5.2	1.8	1.5	1.7	5.0	3.0	3.9
30	---	---	---	6.3	3.6	5.7	1.9	1.3	1.6	5.3	2.7	3.6
31	---	---	---	7.7	4.7	6.5	---	---	---	6.2	3.6	5.0
MONTH	---	---	---	---	---	---	8.6	.4	2.2	8.5	.3	2.6



## NEUSE RIVER BASIN

0209265810 NEUSE RIVER AT CHANNEL LIGHT 9--Continued

SALINITY, BOTTOM, (PARTS PER THOUSAND), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	6.9	2.7	4.3	4.8	4.2	4.4	8.5	6.6	7.4	---	---	---
2	6.0	3.8	4.7	5.6	4.3	4.7	9.5	6.8	8.1	---	---	---
3	5.5	2.5	4.0	5.5	4.2	4.8	8.4	6.6	7.5	---	---	---
4	5.7	3.3	4.0	5.5	4.3	4.9	6.7	5.4	6.1	---	---	---
5	5.2	3.5	4.2	5.4	4.7	5.0	6.0	5.0	5.5	---	---	---
6	5.0	3.3	3.9	5.6	4.9	5.3	6.8	5.8	6.2	---	---	---
7	4.2	2.4	3.1	5.6	5.3	5.4	7.6	6.2	6.8	---	---	---
8	4.0	2.1	2.9	---	---	---	8.8	6.0	7.2	---	---	---
9	4.5	2.6	3.5	6.4	4.9	5.9	8.0	6.0	7.2	---	---	---
10	4.4	2.9	3.5	6.4	5.5	6.1	8.7	6.2	7.2	---	---	---
11	5.2	3.0	4.1	6.5	5.4	6.1	9.0	5.9	7.0	---	---	---
12	5.7	3.7	4.9	6.4	5.6	6.1	9.4	6.2	7.2	8.3	3.0	6.4
13	5.9	3.6	4.7	6.3	5.7	6.0	9.2	6.4	7.7	8.7	5.3	7.5
14	5.5	3.8	4.2	6.4	6.0	6.2	8.1	7.5	7.8	9.9	7.4	8.5
15	6.8	3.2	4.7	6.6	4.9	5.8	8.2	6.9	7.4	10.2	7.7	9.0
16	5.6	4.2	4.8	7.2	5.6	6.2	8.6	7.0	7.6	11.3	8.1	9.6
17	5.3	4.5	4.8	6.5	5.7	5.9	8.8	6.8	7.5	11.2	5.2	8.1
18	5.8	4.2	4.7	5.9	5.5	5.7	8.1	6.9	7.2	7.2	5.2	5.7
19	7.3	3.8	4.6	6.3	5.4	5.7	7.4	6.8	7.1	6.2	5.6	5.9
20	5.7	4.3	5.0	7.0	5.2	5.6	8.4	7.3	7.6	6.4	5.6	5.9
21	7.1	4.7	5.6	6.6	5.3	5.6	8.0	7.5	7.7	5.9	5.2	5.6
22	7.3	4.8	5.9	8.9	5.5	6.6	8.3	6.9	7.5	6.4	4.5	5.3
23	6.0	4.2	4.8	9.3	5.7	6.8	8.5	7.1	7.6	6.0	4.1	5.0
24	5.1	4.0	4.5	7.8	5.0	6.6	---	---	---	5.4	4.7	5.0
25	5.7	4.1	4.9	9.0	4.9	6.7	---	---	---	5.8	4.6	5.0
26	5.5	4.2	4.6	9.8	5.3	6.8	---	---	---	7.2	4.5	5.4
27	4.8	4.2	4.4	9.4	5.7	8.0	---	---	---	8.0	4.6	6.1
28	4.7	4.0	4.3	8.3	6.7	7.2	---	---	---	9.1	5.0	6.0
29	5.0	4.1	4.5	9.4	6.4	7.3	---	---	---	9.8	4.5	6.7
30	4.7	4.0	4.3	10.0	6.5	8.2	---	---	---	10.3	5.6	7.4
31	---	---	---	9.1	6.6	7.6	---	---	---	---	---	---
MONTH	7.3	2.1	4.4	---	---	---	---	---	---	---	---	---

PH, TOP, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.9	7.4	7.7	8.0	7.6	7.8	8.0	7.8	7.9	8.4	8.1	8.2
2	8.0	7.7	7.8	8.0	7.5	7.9	8.3	7.9	8.1	8.5	8.2	8.3
3	8.1	7.7	7.9	8.0	7.7	7.9	8.4	8.0	8.2	8.7	8.4	8.5
4	8.2	7.6	8.0	8.2	7.8	8.0	8.4	8.0	8.2	8.8	8.4	8.6
5	8.3	7.8	8.1	8.1	7.9	8.0	8.4	7.9	8.2	8.8	8.4	8.6
6	8.5	8.2	8.3	8.1	7.9	8.0	8.2	8.0	8.1	8.8	8.4	8.7
7	8.5	8.2	8.4	8.0	7.9	8.0	8.2	8.0	8.1	8.4	7.9	8.2
8	8.4	8.1	8.3	8.0	7.8	7.9	8.4	8.0	8.2	8.2	7.8	7.9
9	8.3	8.1	8.2	8.0	7.7	7.9	8.5	8.3	8.3	8.5	7.9	8.2
10	8.4	8.0	8.2	8.2	7.7	8.0	8.5	8.3	8.4	8.7	8.0	8.3
11	8.2	7.9	8.1	8.3	7.8	8.1	8.4	8.1	8.3	---	---	---
12	8.1	7.8	8.0	8.3	8.0	8.2	8.4	8.3	8.3	---	---	---
13	7.9	7.7	7.8	8.3	7.9	8.1	8.6	8.3	8.5	---	---	---
14	8.0	7.6	7.8	8.2	7.9	8.1	8.6	8.4	8.5	---	---	---
15	7.8	7.4	7.7	8.1	7.9	8.0	8.6	8.4	8.5	---	---	---
16	7.8	7.5	7.7	8.1	7.9	8.0	8.6	8.3	8.5	---	---	---
17	7.8	7.6	7.7	8.0	7.6	7.9	8.6	8.3	8.4	---	---	---
18	7.7	7.5	7.6	8.2	7.3	8.0	8.6	8.4	8.5	---	---	---
19	7.6	7.5	7.5	8.3	8.1	8.2	8.7	8.3	8.6	---	---	---
20	7.8	7.5	7.6	8.4	8.2	8.3	8.7	8.6	8.7	---	---	---
21	8.2	7.6	7.9	8.4	7.8	8.2	8.7	8.4	8.6	---	---	---
22	8.1	7.8	7.9	8.3	7.9	8.1	8.6	8.2	8.3	---	---	---
23	8.0	7.8	7.9	8.4	8.0	8.2	8.4	8.2	8.3	---	---	---
24	8.2	7.9	8.1	8.3	8.0	8.1	8.4	8.1	8.2	---	---	---
25	8.3	8.0	8.1	8.2	7.8	8.0	8.4	8.0	8.2	---	---	---
26	8.3	7.8	8.1	8.1	8.0	8.1	8.6	8.2	8.4	---	---	---
27	8.2	7.7	7.9	8.3	7.9	8.1	---	---	---	---	---	---
28	8.1	7.8	7.9	8.4	8.1	8.3	8.5	8.3	8.4	---	---	---
29	8.2	7.9	8.0	8.5	8.2	8.4	8.3	8.1	8.2	---	---	---
30	8.1	7.8	8.0	8.4	7.9	8.2	8.3	8.0	8.1	---	---	---
31	8.1	7.8	8.0	---	---	---	8.3	8.0	8.2	---	---	---
MONTH	8.5	7.4	7.9	8.5	7.3	8.1	---	---	---	---	---	---

[illegible]

## NEUSE RIVER BASIN

0209265810 NEUSE RIVER AT CHANNEL LIGHT 9--Continued

PH, BOTTOM, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.9	7.1	7.7	7.9	7.5	7.7	8.0	7.9	7.9	8.2	8.0	8.1
2	8.1	7.7	7.8	8.0	7.4	7.7	8.1	7.9	8.0	8.4	7.9	8.1
3	7.9	7.6	7.8	7.9	7.4	7.7	8.1	7.7	7.9	8.4	7.6	7.9
4	7.9	7.5	7.7	8.1	7.4	7.9	8.2	7.6	7.8	8.2	7.6	7.9
5	7.9	7.4	7.6	8.1	7.8	8.0	8.4	7.8	8.1	8.1	7.4	7.7
6	8.0	7.3	7.6	8.1	7.9	8.0	8.2	8.0	8.1	7.8	7.5	7.7
7	7.8	7.3	7.4	8.0	7.7	7.9	8.2	8.0	8.1	7.9	7.5	7.6
8	7.9	7.2	7.5	8.0	7.8	7.9	8.2	7.8	8.0	7.9	7.6	7.7
9	7.9	7.1	7.5	8.0	7.4	7.8	8.5	7.8	8.1	8.2	7.6	7.8
10	8.0	7.1	7.5	8.0	7.5	7.7	8.6	7.9	8.1	8.0	7.6	7.8
11	8.2	7.1	7.9	8.1	7.5	7.7	8.4	8.0	8.2	---	---	---
12	8.1	7.6	7.9	8.1	7.3	7.6	8.5	7.9	8.3	---	---	---
13	8.0	7.4	7.9	8.3	7.3	7.9	8.5	7.9	8.3	---	---	---
14	8.0	7.2	7.6	8.2	7.5	8.0	8.6	8.0	8.3	---	---	---
15	7.9	7.2	7.7	8.1	7.6	7.9	8.6	8.2	8.5	---	---	---
16	8.0	7.5	7.8	8.1	7.8	8.0	8.6	8.0	8.4	---	---	---
17	7.9	7.4	7.5	8.0	7.7	7.9	8.4	7.9	8.1	---	---	---
18	7.8	7.2	7.6	8.1	7.5	7.7	8.4	7.9	8.1	---	---	---
19	7.8	7.4	7.6	8.1	7.6	7.7	8.2	7.8	8.0	---	---	---
20	7.8	7.6	7.7	7.9	7.6	7.7	8.3	7.7	7.8	---	---	---
21	8.0	7.4	7.7	8.0	7.6	7.8	8.7	7.7	8.1	---	---	---
22	8.0	7.5	7.7	8.0	7.7	7.9	8.4	8.1	8.3	---	---	---
23	8.0	7.6	7.9	8.2	7.6	7.8	8.4	7.9	8.2	---	---	---
24	8.1	7.7	7.9	8.2	7.8	8.1	8.4	7.9	8.2	---	---	---
25	8.3	7.7	8.1	8.1	7.7	7.9	8.5	7.9	8.2	---	---	---
26	8.2	7.5	7.9	8.1	7.6	7.9	8.4	7.6	7.9	---	---	---
27	8.0	7.4	7.8	8.1	7.7	8.0	---	---	---	---	---	---
28	8.0	7.6	7.9	8.3	7.7	8.0	8.5	8.0	8.4	---	---	---
29	7.8	7.6	7.7	8.2	7.6	7.8	8.3	7.6	8.1	---	---	---
30	7.9	7.4	7.6	8.2	7.5	7.8	8.3	8.0	8.1	---	---	---
31	8.0	7.4	7.7	---	---	---	8.3	8.0	8.2	---	---	---
MONTH	8.3	7.1	7.7	8.3	7.3	7.8	---	---	---	---	---	---

PH, BOTTOM, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	7.4	7.1	7.2	8.3	7.2	7.5
2	---	---	---	---	---	---	7.3	7.1	7.2	8.4	7.2	7.8
3	---	---	---	---	---	---	7.4	7.1	7.2	8.3	6.9	7.7
4	---	---	---	---	---	---	7.4	7.0	7.2	8.2	6.6	7.4
5	---	---	---	---	---	---	7.4	7.0	7.3	7.6	6.5	7.1
6	---	---	---	---	---	---	7.6	7.3	7.4	8.6	6.7	7.2
7	---	---	---	---	---	---	7.5	7.2	7.3	7.4	6.5	6.9
8	---	---	---	---	---	---	7.6	7.2	7.4	7.9	6.5	6.8
9	---	---	---	---	---	---	7.7	7.3	7.5	7.6	6.6	7.3
10	---	---	---	---	---	---	7.5	7.3	7.4	7.5	6.8	7.1
11	---	---	---	---	---	---	7.6	7.4	7.5	7.8	6.9	7.3
12	---	---	---	---	---	---	7.8	7.5	7.6	7.3	7.1	7.2
13	---	---	---	---	---	---	8.0	7.5	7.6	7.3	6.9	7.1
14	---	---	---	---	---	---	8.0	7.3	7.7	7.7	6.9	7.2
15	---	---	---	---	---	---	7.8	7.1	7.5	7.3	6.8	7.2
16	---	---	---	---	---	---	7.6	7.0	7.3	8.4	6.7	7.6
17	---	---	---	---	---	---	7.6	6.9	7.2	8.1	6.7	7.1
18	---	---	---	---	---	---	7.5	7.1	7.4	8.0	6.8	7.0
19	---	---	---	---	---	---	7.5	7.2	7.3	8.7	6.5	7.6
20	---	---	---	---	---	---	7.5	7.2	7.4	8.8	6.7	7.5
21	---	---	---	---	---	---	7.6	7.2	7.4	7.5	7.0	7.2
22	---	---	---	---	---	---	7.5	7.2	7.3	7.8	6.9	7.3
23	---	---	---	---	---	---	7.5	7.2	7.3	8.2	6.9	7.4
24	---	---	---	---	---	---	7.7	7.1	7.3	8.0	6.9	7.5
25	---	---	---	---	---	---	7.6	7.0	7.3	8.6	7.0	7.5
26	---	---	---	---	---	---	7.6	6.9	7.2	7.8	6.8	7.0
27	---	---	---	7.2	6.6	7.0	8.1	7.2	7.6	7.3	6.7	6.9
28	---	---	---	7.4	6.8	7.1	8.2	7.5	7.8	8.4	6.8	7.2
29	---	---	---	7.3	6.9	7.1	8.8	7.4	8.0	8.1	6.8	7.2
30	---	---	---	7.3	7.1	7.2	8.5	7.1	7.7	8.0	6.6	7.3
31	---	---	---	7.3	7.1	7.2	---	---	---	7.0	6.5	6.7
MONTH	---	---	---	---	---	---	8.8	6.9	7.4	8.8	6.5	7.3

## NEUSE RIVER BASIN

0209265810 NEUSE RIVER AT CHANNEL LIGHT 9--Continued

PH, BOTTOM, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.2	6.6	7.0	7.2	6.8	7.0	8.0	7.6	7.8	---	---	---
2	7.3	6.7	7.0	7.2	6.8	6.9	7.8	7.4	7.6	---	---	---
3	7.4	6.8	7.1	7.1	6.8	6.9	7.6	7.5	7.5	---	---	---
4	7.4	6.8	7.2	7.0	6.8	6.9	8.0	7.4	7.6	---	---	---
5	7.6	6.8	7.1	7.3	6.8	7.0	8.5	7.4	7.9	---	---	---
6	7.6	6.8	7.2	7.4	7.0	7.2	8.3	7.8	8.1	---	---	---
7	7.9	7.0	7.4	7.6	7.0	7.2	8.5	8.0	8.2	---	---	---
8	7.9	7.0	7.5	---	---	---	8.4	7.4	7.8	---	---	---
9	7.5	6.8	7.2	8.3	7.4	7.7	8.3	7.3	7.5	---	---	---
10	7.7	6.8	7.2	8.7	7.1	7.7	8.2	7.3	7.6	---	---	---
11	7.8	6.8	7.2	8.4	7.0	7.6	8.6	7.2	7.9	---	---	---
12	7.7	6.9	7.1	8.3	7.4	7.6	8.4	7.1	7.9	8.3	7.0	7.4
13	8.2	6.9	7.3	8.1	7.3	7.7	8.6	7.1	7.9	7.5	7.0	7.2
14	8.3	7.0	7.6	7.8	7.2	7.5	8.2	7.6	7.9	7.3	7.0	7.1
15	8.1	6.9	7.5	7.4	6.9	7.2	8.5	7.1	7.9	7.1	7.0	7.0
16	7.9	7.1	7.5	7.3	6.8	7.0	8.2	6.9	7.5	7.1	6.9	7.0
17	8.3	7.2	7.8	7.3	6.8	7.1	8.4	6.9	7.6	7.8	6.9	7.2
18	8.3	7.0	7.7	7.1	6.9	7.0	8.3	7.2	7.8	8.0	7.2	7.5
19	8.2	7.0	7.6	7.5	6.8	7.0	8.8	7.5	8.3	7.9	7.4	7.6
20	8.0	7.1	7.4	7.4	6.7	7.0	8.5	7.6	8.2	8.3	7.4	7.7
21	7.4	6.9	7.1	7.4	6.7	7.1	8.6	8.0	8.2	8.2	7.1	7.5
22	7.3	6.9	7.0	8.6	6.7	7.5	8.5	7.6	8.1	8.0	6.8	7.4
23	7.9	6.8	7.4	8.3	7.2	7.9	8.5	7.3	8.0	8.3	7.1	7.7
24	8.1	6.9	7.5	8.6	7.4	7.9	---	---	---	8.1	7.3	7.7
25	7.9	6.8	7.3	8.2	7.2	7.7	---	---	---	8.2	6.9	7.4
26	7.8	6.8	7.4	8.3	7.1	7.7	---	---	---	7.3	6.8	7.1
27	7.9	6.9	7.3	8.0	7.2	7.4	---	---	---	7.4	6.8	7.0
28	8.3	6.8	7.5	9.1	7.3	8.1	---	---	---	9.0	6.7	7.6
29	7.1	6.8	6.9	8.7	7.0	7.9	---	---	---	9.0	6.4	7.6
30	7.2	6.8	6.9	7.9	7.0	7.3	---	---	---	8.1	6.3	6.9
31	---	---	---	8.6	6.9	7.6	---	---	---	---	---	---
MONTH	8.3	6.6	7.3	---	---	---	---	---	---	---	---	---

TEMPERATURE, TOP, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.4	22.4	23.0	17.9	17.1	17.5	13.4	12.6	13.1	7.6	6.4	6.9
2	22.8	21.7	22.4	18.0	17.4	17.7	12.7	12.0	12.4	7.2	5.7	6.4
3	22.4	21.3	21.8	17.6	16.8	17.3	12.5	11.1	11.9	7.5	6.2	6.9
4	23.4	21.5	22.1	17.5	16.8	17.1	13.4	12.1	12.7	7.8	6.7	7.1
5	23.8	22.2	22.8	16.8	16.1	16.5	13.1	11.9	12.6	9.4	6.7	7.9
6	24.1	22.6	23.3	16.5	15.9	16.2	11.9	10.4	11.2	11.5	8.8	9.7
7	24.5	23.1	23.6	15.9	15.3	15.7	10.6	9.2	9.9	10.7	8.3	9.6
8	25.0	23.6	24.3	15.5	14.6	15.1	9.3	8.6	9.0	12.1	8.0	10.1
9	25.1	24.0	24.6	15.3	14.5	14.9	9.4	8.6	9.0	13.3	10.7	12.2
10	26.2	24.0	24.6	15.3	14.1	14.6	10.2	9.0	9.5	13.6	11.6	12.5
11	24.5	23.7	24.2	15.5	14.6	14.9	10.1	9.8	9.9	---	---	---
12	23.9	23.1	23.5	15.1	14.5	14.8	9.9	9.7	9.8	---	---	---
13	23.9	23.1	23.5	14.9	14.5	14.6	9.8	9.2	9.5	---	---	---
14	24.4	23.1	23.7	14.8	14.3	14.6	9.3	8.4	8.9	---	---	---
15	23.8	22.5	23.3	14.7	14.0	14.4	8.5	7.9	8.2	---	---	---
16	22.7	20.9	21.8	14.3	13.2	13.8	8.4	7.7	8.0	---	---	---
17	21.3	20.4	21.0	13.2	12.1	12.7	9.3	8.0	8.5	---	---	---
18	21.0	19.8	20.3	12.8	11.2	11.9	9.2	8.2	8.7	---	---	---
19	19.9	18.8	19.4	12.1	10.8	11.7	9.3	8.1	8.9	---	---	---
20	19.6	18.0	18.9	12.2	10.1	11.3	9.8	8.5	9.1	---	---	---
21	19.4	18.3	18.8	13.7	11.2	12.1	9.7	8.9	9.3	---	---	---
22	19.0	17.5	18.2	14.9	13.1	13.9	9.8	9.0	9.2	---	---	---
23	18.3	17.0	17.4	14.9	14.5	14.7	9.9	9.4	9.6	---	---	---
24	17.8	16.7	17.4	14.5	12.6	13.7	9.8	9.6	9.7	---	---	---
25	18.4	17.4	17.8	13.0	10.9	12.2	11.3	9.8	10.6	---	---	---
26	18.4	18.0	18.2	12.0	10.7	11.4	11.8	10.6	11.1	---	---	---
27	18.9	18.3	18.6	12.1	11.4	11.9	---	---	---	---	---	---
28	18.4	17.2	17.7	12.7	11.4	12.0	10.7	9.8	10.3	---	---	---
29	18.0	16.4	16.9	13.1	11.8	12.3	10.1	9.2	9.6	---	---	---
30	17.0	16.1	16.5	13.4	12.3	12.8	9.2	8.1	8.6	---	---	---
31	17.3	16.2	16.7	---	---	---	8.4	7.4	8.0	---	---	---
MONTH	26.2	16.1	20.8	18.0	10.1	14.1	---	---	---	---	---	---





## NEUSE RIVER BASIN

0209265810 NEUSE RIVER AT CHANNEL LIGHT 9--Continued

TEMPERATURE, BOTTOM, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	23.3	22.5	22.9	17.8	17.1	17.5	13.4	12.7	13.2	7.8	6.6	7.2
2	22.9	22.1	22.5	18.0	17.4	17.7	13.2	12.1	12.6	7.8	6.3	7.1
3	22.5	21.3	22.0	17.8	16.9	17.4	12.7	12.4	12.6	7.8	6.5	7.4
4	22.4	21.9	22.2	17.6	16.5	17.1	13.0	12.5	12.7	7.9	7.4	7.6
5	22.5	22.0	22.2	16.8	16.2	16.4	13.0	11.9	12.7	8.0	7.1	7.7
6	22.6	22.2	22.4	16.5	15.9	16.1	12.0	10.5	11.3	8.0	7.5	7.8
7	22.9	21.9	22.2	16.2	15.5	15.9	10.8	9.4	10.0	9.2	7.6	7.9
8	23.6	22.1	22.7	16.0	14.8	15.3	10.9	8.8	9.8	9.9	7.8	8.6
9	24.0	22.6	23.4	15.8	14.7	15.2	10.9	8.7	9.6	12.3	8.8	10.3
10	24.2	22.7	23.5	15.8	14.3	15.2	10.2	9.4	9.8	11.8	9.6	10.8
11	24.4	22.9	23.9	15.7	14.9	15.5	10.2	9.8	10.0	---	---	---
12	23.8	23.0	23.4	15.8	15.1	15.5	10.2	9.8	9.9	---	---	---
13	23.9	23.1	23.4	15.6	14.4	14.8	10.2	9.4	9.8	---	---	---
14	23.8	23.2	23.4	15.1	14.3	14.6	9.9	8.6	9.6	---	---	---
15	23.7	22.4	23.3	14.6	13.9	14.3	9.0	8.0	8.4	---	---	---
16	23.0	20.9	21.9	14.5	13.2	13.8	9.1	7.8	8.3	---	---	---
17	22.4	20.6	21.6	13.8	12.3	13.0	9.3	8.5	8.8	---	---	---
18	21.7	20.0	21.0	14.0	11.8	13.2	8.9	8.7	8.8	---	---	---
19	20.9	19.0	19.8	14.2	12.1	13.7	9.1	8.7	8.9	---	---	---
20	20.0	18.7	19.4	14.1	12.6	13.7	9.3	8.7	9.1	---	---	---
21	19.9	17.6	19.3	14.0	12.6	13.7	9.5	8.9	9.3	---	---	---
22	19.5	18.1	18.8	14.9	13.4	13.9	9.6	9.0	9.3	---	---	---
23	19.3	17.0	17.8	14.6	13.9	14.2	9.9	9.5	9.6	---	---	---
24	18.8	17.6	18.0	14.5	13.4	13.9	9.9	9.6	9.7	---	---	---
25	18.3	17.4	17.8	13.5	11.9	12.7	10.9	9.7	10.2	---	---	---
26	18.5	17.7	18.2	13.3	11.8	12.4	11.0	9.9	10.2	---	---	---
27	18.9	18.3	18.6	12.4	11.6	12.0	---	---	---	---	---	---
28	18.4	17.2	17.7	12.8	12.0	12.3	10.7	10.1	10.3	---	---	---
29	18.0	16.6	17.6	12.8	12.1	12.6	10.3	9.2	9.7	---	---	---
30	18.2	16.3	17.5	13.3	12.6	12.9	9.2	8.2	8.7	---	---	---
31	17.9	16.3	17.2	---	---	---	8.4	7.5	8.0	---	---	---
MONTH	24.4	16.3	20.8	18.0	11.6	14.6	---	---	---	---	---	---

TEMPERATURE, BOTTOM, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	16.5	12.7	14.2	19.4	18.0	18.6
2	---	---	---	---	---	---	16.8	13.6	15.4	20.0	18.6	19.2
3	---	---	---	---	---	---	17.8	13.5	16.4	20.0	18.5	19.2
4	---	---	---	---	---	---	17.7	15.9	16.9	20.4	18.7	19.6
5	---	---	---	---	---	---	16.6	15.7	16.3	20.3	18.2	19.5
6	---	---	---	---	---	---	16.9	15.5	16.1	21.2	19.5	20.0
7	---	---	---	---	---	---	16.9	15.7	16.1	21.0	19.0	19.9
8	---	---	---	---	---	---	18.5	16.2	17.2	22.4	18.9	20.0
9	---	---	---	---	---	---	19.0	16.8	17.9	22.0	19.6	21.4
10	---	---	---	---	---	---	18.1	17.1	17.7	21.8	20.8	21.4
11	---	---	---	---	---	---	17.4	16.7	17.0	21.8	20.5	21.0
12	---	---	---	---	---	---	17.1	15.9	16.7	20.5	19.6	20.0
13	---	---	---	---	---	---	16.9	15.8	16.3	19.8	18.8	19.1
14	---	---	---	---	---	---	17.1	16.4	16.7	19.2	17.7	18.6
15	---	---	---	---	---	---	17.5	16.5	16.8	19.1	18.4	18.8
16	---	---	---	---	---	---	18.3	16.4	17.4	20.1	19.0	19.4
17	---	---	---	---	---	---	19.3	16.3	18.2	20.5	18.9	19.6
18	---	---	---	---	---	---	19.1	18.2	18.8	20.8	19.4	19.9
19	---	---	---	---	---	---	19.8	18.2	18.7	22.5	19.3	20.9
20	---	---	---	---	---	---	20.8	19.2	19.8	22.8	20.4	21.6
21	---	---	---	---	---	---	19.8	18.7	19.4	22.6	19.4	20.5
22	---	---	---	---	---	---	19.4	18.3	18.7	22.6	19.5	21.1
23	---	---	---	---	---	---	18.9	18.3	18.5	22.9	19.3	21.4
24	---	---	---	---	---	---	19.5	16.7	18.0	22.7	19.2	21.8
25	---	---	---	---	---	---	18.8	17.8	18.3	23.3	20.9	22.1
26	---	---	---	---	---	---	19.0	17.7	18.4	23.4	20.0	21.7
27	---	---	---	14.5	12.5	13.5	19.2	18.4	18.7	23.4	19.3	21.1
28	---	---	---	14.8	12.2	13.4	18.7	18.0	18.2	25.5	21.9	23.5
29	---	---	---	14.4	12.2	12.7	19.0	17.8	18.2	25.9	22.7	24.4
30	---	---	---	15.4	12.4	13.1	18.6	18.0	18.3	26.0	22.0	24.7
31	---	---	---	15.4	12.6	13.2	---	---	---	25.2	21.4	23.1
MONTH	---	---	---	---	---	---	20.8	12.7	17.5	26.0	17.7	20.7





[illegible]

## NEUSE RIVER BASIN

0209265810 NEUSE RIVER AT CHANNEL LIGHT 9--Continued

OXYGEN DISSOLVED, BOTTOM, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	8.3	5.9	7.3	8.3	5.7	7.3	11.2	9.9	10.5	14.1	12.0	13.2
2	8.8	5.7	7.3	8.9	4.1	7.5	11.6	9.8	10.7	15.9	11.1	13.4
3	7.5	5.5	6.8	8.6	2.3	7.1	10.9	8.1	9.5	16.0	8.5	12.0
4	8.0	4.6	6.4	9.3	5.4	8.1	12.0	7.9	9.4	13.6	9.0	11.6
5	7.5	3.5	5.1	9.2	7.4	8.6	13.4	9.9	11.8	14.0	7.0	10.3
6	7.7	3.2	5.1	9.4	7.0	8.6	12.4	10.7	11.7	12.4	8.0	10.1
7	6.0	2.4	3.7	9.1	4.0	8.4	12.7	11.4	11.9	12.3	8.7	9.9
8	7.0	2.1	4.4	9.3	7.5	8.5	13.8	8.8	11.2	11.6	9.2	10.7
9	6.8	1.2	4.4	9.5	6.2	8.2	15.5	9.5	12.1	13.4	9.3	11.2
10	7.0	.3	3.4	9.2	6.1	7.7	15.7	10.1	12.5	12.6	8.8	10.8
11	8.0	.4	6.0	10.1	5.9	7.4	13.8	11.3	12.5	---	---	---
12	7.6	4.1	6.2	9.9	6.0	7.3	14.6	10.1	13.2	---	---	---
13	7.3	2.9	6.1	10.5	5.5	8.8	15.1	10.0	13.3	---	---	---
14	5.7	1.2	3.9	9.9	6.7	9.0	15.1	10.8	13.5	---	---	---
15	7.0	1.4	5.1	9.6	7.7	8.8	14.6	11.8	13.8	---	---	---
16	7.6	4.8	6.4	9.8	8.5	9.4	14.7	10.6	13.2	---	---	---
17	---	---	---	9.8	8.1	9.3	13.8	9.8	11.6	---	---	---
18	---	---	---	12.1	7.7	9.3	13.7	10.4	11.8	---	---	---
19	---	---	---	12.1	7.9	8.8	13.0	9.7	11.1	---	---	---
20	---	---	---	10.5	7.5	8.3	13.4	9.2	10.2	---	---	---
21	---	---	---	10.8	7.2	8.6	15.6	9.4	12.0	---	---	---
22	---	---	---	10.4	8.2	9.3	13.6	11.7	12.6	---	---	---
23	8.5	5.4	7.5	11.3	7.3	8.7	13.3	9.5	11.9	---	---	---
24	9.1	6.0	7.8	11.5	8.9	10.8	13.5	10.0	11.9	---	---	---
25	10.0	5.9	8.6	11.6	7.9	10.3	13.7	9.8	12.0	---	---	---
26	9.4	4.5	7.3	11.6	7.3	10.0	13.5	7.1	9.9	---	---	---
27	8.1	4.3	6.7	12.1	8.5	11.2	---	---	---	---	---	---
28	8.8	6.4	7.8	13.5	8.0	11.0	13.3	10.4	12.3	---	---	---
29	8.1	5.9	6.9	13.2	7.0	9.3	12.9	7.6	11.7	---	---	---
30	8.4	5.0	6.6	12.0	6.5	9.4	13.6	11.6	12.4	---	---	---
31	9.3	5.1	7.3	---	---	---	13.6	12.2	12.9	---	---	---
MONTH	---	---	---	13.5	2.3	8.8	---	---	---	---	---	---

OXYGEN DISSOLVED, BOTTOM, (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	8.3	3.8	6.4	10.7	8.5	9.4
2	---	---	---	---	---	---	8.4	4.9	7.1	10.6	8.8	9.8
3	---	---	---	---	---	---	9.1	5.2	7.5	10.3	6.6	9.3
4	---	---	---	---	---	---	9.3	.3	6.2	10.1	4.4	8.6
5	---	---	---	---	---	---	9.4	.1	6.5	9.3	4.1	7.8
6	---	---	---	---	---	---	9.9	6.0	8.9	10.7	5.7	8.3
7	---	---	---	---	---	---	9.5	6.3	8.7	8.7	2.7	6.4
8	---	---	---	---	---	---	9.6	4.4	8.3	9.5	2.4	5.4
9	---	---	---	---	---	---	9.9	5.1	8.1	9.1	3.6	7.9
10	---	---	---	---	---	---	9.5	.1	2.1	9.0	5.7	7.8
11	---	---	---	---	---	---	2.0	.1	.4	9.4	5.7	8.4
12	---	---	---	---	---	---	10.7	.1	2.2	8.8	7.8	8.3
13	---	---	---	---	---	---	10.9	.1	3.6	9.1	7.5	8.6
14	---	---	---	---	---	---	10.9	3.1	9.4	10.1	7.8	9.2
15	---	---	---	---	---	---	10.3	.3	7.2	9.7	7.8	9.3
16	---	---	---	---	---	---	7.3	.1	3.0	11.6	6.1	9.7
17	---	---	---	---	---	---	9.1	1.4	6.4	10.6	6.1	8.4
18	---	---	---	---	---	---	9.4	3.7	8.0	10.3	6.4	8.0
19	---	---	---	---	---	---	9.1	7.6	8.5	11.9	4.0	8.8
20	---	---	---	---	---	---	9.5	8.5	9.0	9.6	5.0	7.9
21	---	---	---	---	---	---	9.5	.1	7.5	7.7	3.6	6.0
22	---	---	---	---	---	---	8.9	.1	4.7	7.8	3.0	6.0
23	---	---	---	---	---	---	8.3	.2	4.5	8.4	2.5	5.7
24	---	---	---	---	---	---	9.8	.8	6.1	8.3	2.2	6.4
25	---	---	---	---	---	---	9.6	.8	8.4	9.3	3.5	6.4
26	---	---	---	---	---	---	9.9	.0	6.5	7.4	1.3	4.1
27	---	---	---	10.1	6.9	9.3	10.1	.0	6.2	6.1	.5	2.5
28	---	---	---	10.1	4.9	8.2	10.1	1.6	8.3	8.1	2.9	5.1
29	---	---	---	8.7	4.6	6.6	11.8	.1	8.0	7.1	3.1	5.3
30	---	---	---	8.4	4.0	6.6	10.9	8.1	9.7	6.9	.9	4.8
31	---	---	---	7.7	4.0	6.5	---	---	---	3.7	.4	1.3
MONTH	---	---	---	---	---	---	11.8	.0	6.6	11.9	.4	7.1

[illegible]





## NEUSE RIVER BASIN

0209265810 NEUSE RIVER AT CHANNEL LIGHT 9--Continued

OXYGEN DISSOLVED, BOTTOM, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	105	82	92	94	65	82	117	104	110	123	109	117
2	110	72	91	100	45	84	118	101	110	137	102	118
3	93	68	84	95	25	78	112	85	99	137	78	109
4	98	57	79	102	60	89	123	83	98	125	84	107
5	93	43	63	101	82	94	136	103	121	123	66	96
6	96	41	63	102	76	94	123	109	117	113	75	94
7	75	30	46	96	42	90	123	112	116	117	82	93
8	89	27	56	97	80	90	131	90	109	112	87	102
9	88	15	56	101	67	87	146	96	116	133	91	110
10	89	4	44	95	65	82	150	100	120	127	87	107
11	103	5	77	107	64	80	132	110	121	---	---	---
12	97	53	79	104	65	78	139	98	126	---	---	---
13	94	37	77	110	59	92	143	98	127	---	---	---
14	72	15	49	103	71	94	143	104	127	---	---	---
15	87	18	65	99	81	92	133	111	126	---	---	---
16	92	60	78	101	89	98	131	100	120	---	---	---
17	---	---	---	99	84	94	127	94	109	---	---	---
18	---	---	---	122	79	96	128	100	111	---	---	---
19	---	---	---	122	86	94	122	94	106	---	---	---
20	---	---	---	109	81	89	126	89	99	---	---	---
21	---	---	---	114	78	92	145	93	114	---	---	---
22	97	56	78	111	89	101	128	112	120	---	---	---
23	96	64	86	121	80	95	128	92	114	---	---	---
24	103	69	89	121	97	113	129	97	114	---	---	---
25	114	69	98	119	84	107	134	95	116	---	---	---
26	107	53	83	118	77	104	132	70	96	---	---	---
27	93	50	78	122	88	115	---	---	---	---	---	---
28	99	72	88	138	85	113	128	100	118	---	---	---
29	89	67	77	136	75	98	119	73	111	---	---	---
30	92	57	75	124	68	98	125	108	115	---	---	---
31	103	59	82	---	---	---	122	111	117	---	---	---
MONTH	---	---	---	138	25	94	---	---	---	---	---	---

OXYGEN DISSOLVED, BOTTOM, (% OF SATURATION), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	86	38	65	115	89	100
2	---	---	---	---	---	---	89	50	74	115	93	104
3	---	---	---	---	---	---	97	54	78	112	70	100
4	---	---	---	---	---	---	98	2	65	111	47	93
5	---	---	---	---	---	---	98	1	68	103	43	85
6	---	---	---	---	---	---	104	62	93	120	62	91
7	---	---	---	---	---	---	100	65	90	98	29	71
8	---	---	---	---	---	---	104	47	88	109	26	60
9	---	---	---	---	---	---	109	55	87	104	40	89
10	---	---	---	---	---	---	102	1	23	102	64	89
11	---	---	---	---	---	---	21	1	4	108	64	94
12	---	---	---	---	---	---	112	1	23	97	86	92
13	---	---	---	---	---	---	114	1	37	98	83	93
14	---	---	---	---	---	---	114	32	97	109	84	98
15	---	---	---	---	---	---	107	4	75	105	83	100
16	---	---	---	---	---	---	78	1	31	129	67	107
17	---	---	---	---	---	---	100	15	69	118	66	93
18	---	---	---	---	---	---	102	40	86	116	72	89
19	---	---	---	---	---	---	100	80	92	138	44	100
20	---	---	---	---	---	---	106	92	98	113	57	91
21	---	---	---	---	---	---	104	1	81	90	41	68
22	---	---	---	---	---	---	94	0	50	91	34	69
23	---	---	---	---	---	---	89	1	48	99	28	66
24	---	---	---	---	---	---	107	9	64	98	24	75
25	---	---	---	---	---	---	103	9	90	111	41	75
26	---	---	---	---	---	---	107	1	70	89	14	48
27	---	---	---	99	67	90	110	0	68	73	6	29
28	---	---	---	100	48	80	108	17	89	101	34	62
29	---	---	---	85	45	64	126	1	85	89	37	65
30	---	---	---	86	39	65	116	85	102	86	11	60
31	---	---	---	79	39	64	---	---	---	46	5	16
MONTH	---	---	---	---	---	---	126	0	70	138	5	80





## NEW RIVER BASIN

02093000 NEW RIVER NEAR GUM BRANCH, NC

LOCATION.--Lat 34°50'56", long 77°31'11", Onslow County, Hydrologic Unit 03030001, on right bank 5 ft downstream of Secondary Road 1314, 0.7 mi downstream of Jenkins Swamp, 1.8 mi southwest of Gum Branch, and 3.8 mi southeast of Richlands.

DRAINAGE AREA.--94 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1949 to September 1973. July 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers). Aug. 19, 1949, to Mar. 22, 1950, nonrecording gage and Mar. 23, 1950, to Mar. 25, 1969, water-stage recorder at site 0.2 mi upstream at 2.52 ft. Mar. 26, 1969, to Sept. 1973 water-stage recorder at present site and datum. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges and those below 5 ft<sup>3</sup>/s, which are poor. Maximum gage height for period of record, from floodmark, site and datum then in use. Minimum discharge for period of record also occurred Oct. 3, 4, 1993. Low flows affected by tide.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1908 reached a stage of about 18 ft at former site and datum, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	76	326	214	248	211	92	51	33	19	62	362
2	33	137	303	162	206	188	89	50	29	17	39	238
3	27	118	230	139	190	171	82	46	27	15	29	197
4	23	86	158	127	748	163	143	45	27	18	26	541
5	20	63	127	113	1280	147	151	80	29	22	22	781
6	17	49	104	113	1300	136	127	67	32	18	21	658
7	16	45	88	195	930	128	108	54	31	15	21	390
8	15	42	78	210	552	129	94	59	27	14	21	234
9	14	41	77	254	367	252	215	61	23	14	20	226
10	13	39	79	231	290	338	460	53	23	13	21	179
11	13	36	78	181	248	275	485	50	25	14	25	142
12	13	33	89	150	306	193	295	52	23	16	23	118
13	13	49	105	135	300	157	177	46	22	14	97	100
14	13	105	96	129	261	139	135	45	19	13	44	86
15	13	114	86	121	218	126	115	44	21	13	31	75
16	13	92	78	237	199	115	100	41	19	17	26	69
17	12	75	72	307	970	110	92	37	18	44	25	64
18	15	62	65	283	e2000	127	94	41	16	73	22	65
19	21	55	61	249	e1700	229	85	35	14	29	19	62
20	29	50	56	329	1060	545	85	32	20	21	17	59
21	25	48	52	326	610	590	80	31	17	17	17	56
22	22	45	60	265	378	440	70	30	15	15	16	53
23	20	57	119	343	388	302	75	35	14	14	15	49
24	18	54	117	816	457	220	86	50	94	15	14	45
25	29	46	234	994	393	179	77	45	35	79	13	43
26	27	45	240	760	302	153	66	38	23	210	87	39
27	36	43	245	487	239	138	57	33	19	94	1170	36
28	31	40	357	502	215	126	55	66	17	57	2100	35
29	25	38	364	506	---	115	52	53	16	40	1770	34
30	22	164	342	409	---	106	48	42	19	31	1140	34
31	20	---	286	314	---	98	---	36	---	32	654	---
TOTAL	653	1947	4772	9601	16355	6346	3890	1448	747	1023	7607	5070
MEAN	21.1	64.9	154	310	584	205	130	46.7	24.9	33.0	245	169
MAX	45	164	364	994	2000	590	485	80	94	210	2100	781
MIN	12	33	52	113	190	98	48	30	14	13	13	34
CFSM	.22	.69	1.64	3.29	6.21	2.18	1.38	.50	.26	.35	2.61	1.80
IN.	.26	.77	1.89	3.80	6.47	2.51	1.54	.57	.30	.40	3.01	2.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1998<sup>e</sup>, BY WATER YEAR (WY)

	MEAN	76.1	63.0	94.5	160	184	182	115	70.0	92.7	119	113	99.7
MAX	553	190	277	374	584	418	377	188	423	717	734	887	
(WY)	1972	1970	1958	1993	1998	1959	1973	1969	1961	1962	1955	1955	
MIN	2.01	4.30	13.3	32.4	33.1	27.7	21.0	16.4	11.3	7.21	6.25	4.25	
(WY)	1955	1955	1955	1955	1955	1955	1955	1957	1970	1993	1954	1954	

## NEW RIVER BASIN

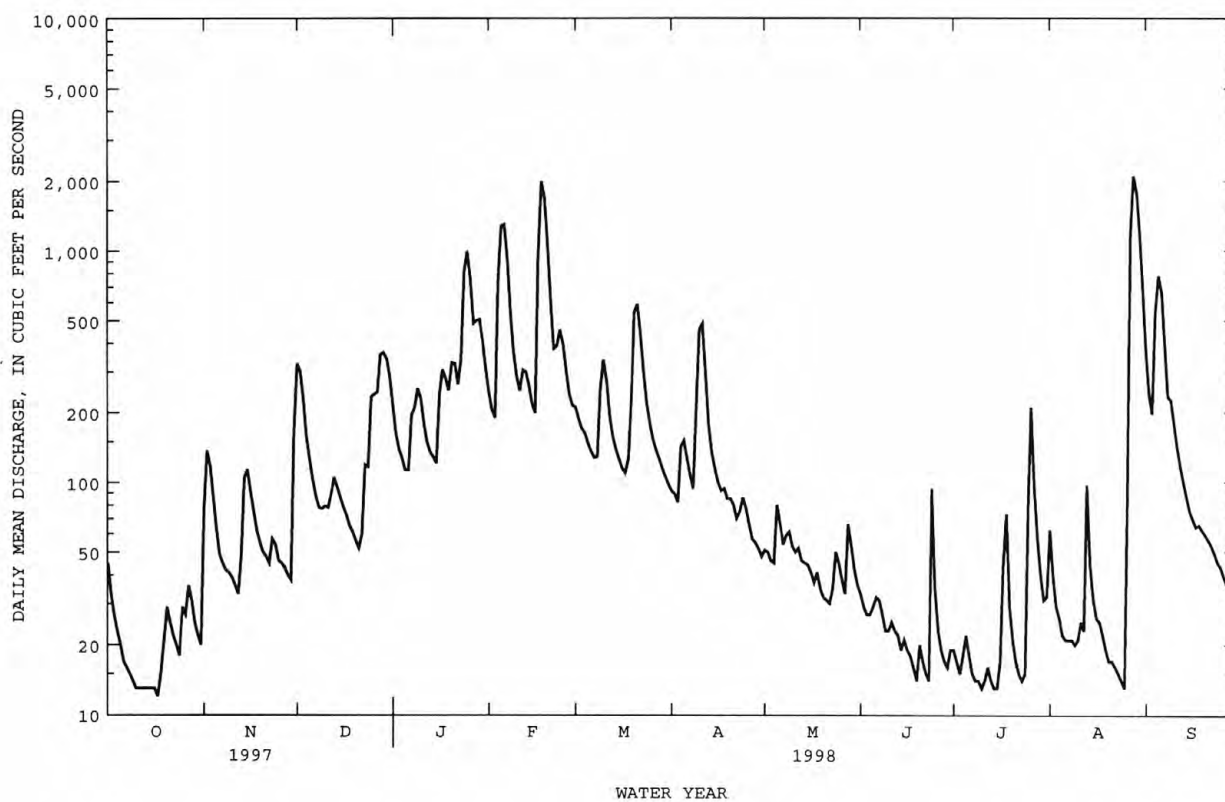
02093000 NEW RIVER NEAR GUM BRANCH, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1949 - 1998 <sup>a</sup>	
ANNUAL TOTAL	26977.0		59459		114	
ANNUAL MEAN	73.9		163		208	
HIGHEST ANNUAL MEAN					59.9	
LOWEST ANNUAL MEAN					1972	
HIGHEST DAILY MEAN	608	Feb 16	2100	Aug 28	6490	Sep 20 1955
LOWEST DAILY MEAN	6.5	Sep 9	12	Oct 17	1.9	Oct 6 1954
ANNUAL SEVEN-DAY MINIMUM	8.0	Sep 4	13	Oct 11	2.0	Oct 4 1954
INSTANTANEOUS PEAK FLOW			2170	Aug 28	7900	Sep 20 1955
INSTANTANEOUS PEAK STAGE			18.22	Aug 28	19.99*	Sep 20 1955
INSTANTANEOUS LOW FLOW			10	Oct 17	1.8*	Oct 7 1954
ANNUAL RUNOFF (CFSM)	.79		1.73		1.21	
ANNUAL RUNOFF (INCHES)	10.68		23.53		16.51	
10 PERCENT EXCEEDS	170		365		248	
50 PERCENT EXCEEDS	42		65		53	
90 PERCENT EXCEEDS	11		17		12	

e Estimated.

a See PERIOD OF RECORD.

\* See REMARKS.



## CAPE FEAR RIVER BASIN

02093800 REEDY FORK NEAR OAK RIDGE, NC

LOCATION.--Lat 36°10'22", long 79°57'12", Guilford County, Hydrologic Unit 03030002, on left bank at downstream side of bridge on Secondary Road 2128, 0.8 mi downstream of Beaver Creek, and 2 mi east of Oak Ridge.

DRAINAGE AREA.--20.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 771.30 ft above sea level. Prior to Dec. 13, 1955, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges which are poor. Some diurnal fluctuation at medium and low flows caused by upstream mill. Maximum discharge for period of record, from rating curve extended above 1,500 ft<sup>3</sup>/s on basis of contracted-opening measurement; gage height: 10.94 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	12	22	e11	29	24	23	25	21	17	7.5	5.0
2	7.1	12	14	e10	25	23	22	26	17	11	5.3	4.5
3	7.1	11	12	e9.8	27	21	21	22	16	9.7	4.6	4.9
4	7.0	8.5	16	e12	90	20	37	25	22	9.5	4.3	15
5	6.7	8.2	13	e10	150	e19	28	21	23	10	4.0	8.3
6	6.7	8.4	12	e9.8	54	e18	24	19	24	12	3.7	6.6
7	6.5	8.9	11	e49	40	e17	22	105	24	9.2	4.5	5.9
8	6.5	9.6	11	e61	34	66	22	349	18	8.4	46	12
9	6.6	8.8	11	e26	30	163	102	55	17	7.9	31	13
10	6.7	8.5	14	e17	27	57	55	42	31	7.4	89	7.8
11	7.4	8.5	13	e13	26	39	40	51	25	7.2	43	6.5
12	6.7	8.5	e11	e11	40	34	32	37	20	7.1	21	6.4
13	6.8	12	e10	e10	29	32	28	31	20	7.1	16	6.2
14	7.0	23	e9.5	e41	25	30	26	27	17	6.9	15	5.7
15	9.5	13	e9.3	e125	22	28	25	25	20	6.8	14	6.6
16	8.1	11	e9.2	e56	29	27	23	23	16	6.8	12	6.3
17	7.4	9.7	e11	e42	226	26	182	21	16	7.1	13	5.4
18	8.6	9.3	e9.2	e33	88	30	81	20	15	6.4	11	5.0
19	18	9.1	e8.9	e100	47	62	71	20	15	6.0	9.8	4.6
20	15	9.0	e8.7	e50	37	47	165	18	15	5.6	8.9	4.3
21	9.7	12	e8.6	e36	31	44	52	17	13	5.2	8.3	5.3
22	8.8	31	e16	e30	28	38	41	16	12	5.2	7.9	14
23	8.2	15	e13	e115	49	32	34	22	12	5.2	7.8	12
24	8.5	12	e14	e62	42	29	28	20	11	5.1	7.3	7.6
25	9.6	11	e23	e82	32	26	26	18	11	5.1	6.2	6.6
26	18	10	e17	e37	28	25	24	16	11	5.4	5.7	6.3
27	23	10	e22	e46	28	24	23	18	11	6.8	5.7	6.0
28	13	10	e34	e170	26	23	23	17	10	8.4	5.4	5.6
29	11	9.8	e20	62	---	22	21	15	10	6.5	5.3	5.5
30	10	23	e17	39	---	22	21	21	11	5.5	5.0	6.0
31	10	---	e14	33	---	21	---	43	---	5.6	4.9	---
TOTAL	292.4	352.8	434.4	1408.6	1339	1089	1322	1185	504	233.1	433.1	214.9
MEAN	9.43	11.8	14.0	45.4	47.8	35.1	44.1	38.2	16.8	7.52	14.0	7.16
MAX	23	31	34	170	226	163	182	349	31	17	89	15
MIN	6.5	8.2	8.6	9.8	22	17	21	15	10	5.1	3.7	4.3
CFSM	.46	.57	.68	2.21	2.32	1.71	2.14	1.86	.82	.37	.68	.35
IN.	.53	.64	.78	2.54	2.42	1.97	2.39	2.14	.91	.42	.78	.39

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1998, BY WATER YEAR (WY)

	MEAN	18.8	17.7	23.6	30.8	35.7	37.9	30.1	23.6	19.4	19.5	16.9	17.9
MAX	80.2	40.4	48.7	82.0	78.7	102	75.8	58.9	74.4	152	14.0	62.0	100
(WY)	1991	1986	1963	1978	1979	1975	1987	1991	1982	1984	1978	1996	
MIN	5.90	7.21	8.67	8.52	13.5	12.4	9.79	8.19	5.03	3.64	5.88	3.39	
(WY)	1968	1968	1956	1956	1968	1967	1967	1986	1986	1977	1977	1968	

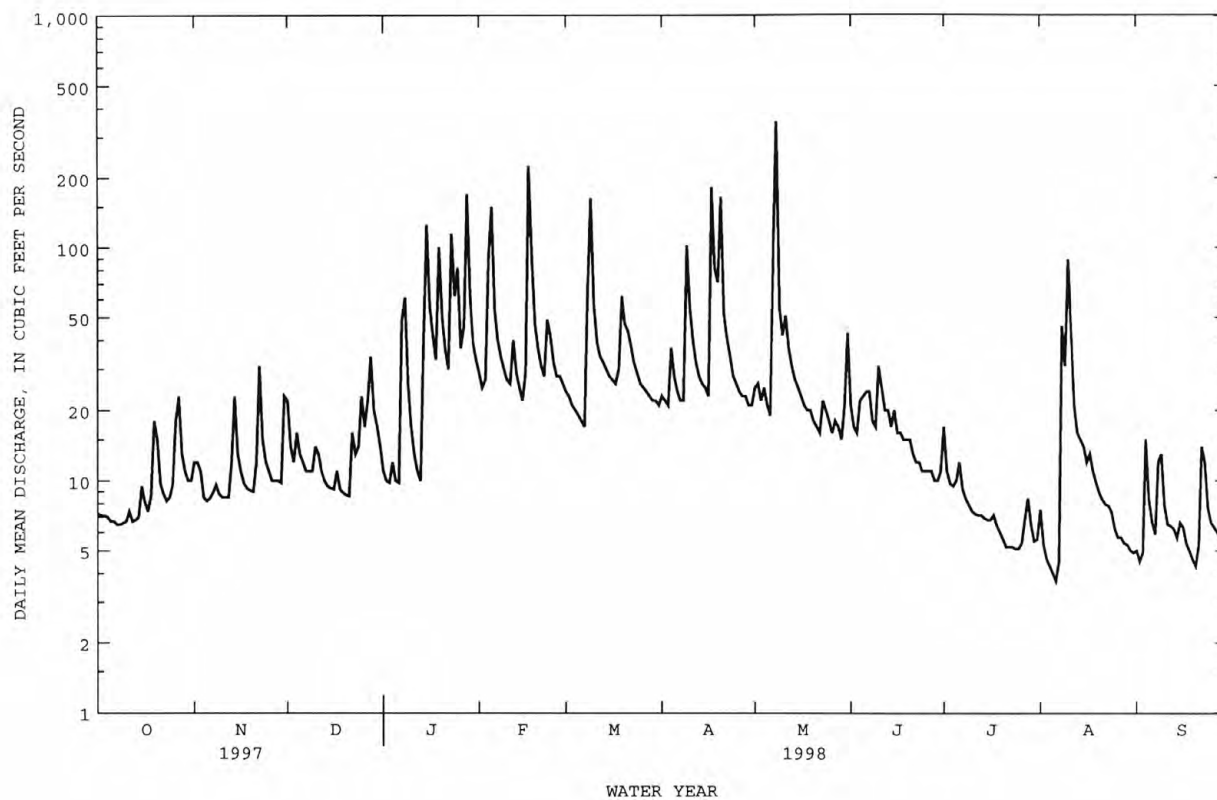
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1956 - 1998	
ANNUAL TOTAL	8507.1		8808.3			
ANNUAL MEAN	23.3		24.1		24.3	
HIGHEST ANNUAL MEAN					42.7	
LOWEST ANNUAL MEAN					11.7	
HIGHEST DAILY MEAN	758		349		1250	
LOWEST DAILY MEAN	6.1		3.7		1.7	
ANNUAL SEVEN-DAY MINIMUM	6.6		4.8		2.3	
INSTANTANEOUS PEAK FLOW			741		3950*	
INSTANTANEOUS PEAK STAGE			9.13		12.41	
INSTANTANEOUS LOW FLOW			3.1		1.2	
ANNUAL RUNOFF (CFSM)	1.13		1.17		1.18	
ANNUAL RUNOFF (INCHES)	15.36		15.91		16.00	
10 PERCENT EXCEEDS	37		46		39	
50 PERCENT EXCEEDS	17		15		15	
90 PERCENT EXCEEDS	7.5		6.1		7.0	

e Estimated.

\* See REMARKS.

## CAPE FEAR RIVER BASIN

02093800 REEDY FORK NEAR OAK RIDGE, NC--Continued



## CAPE FEAR RIVER BASIN

02094500 REEDY FORK NEAR GIBSONVILLE, NC

LOCATION.--Lat 36°10'31", long 79°37'01", Guilford County, Hydrologic Unit 03030002, on right bank 0.2 mi downstream of Huffines Mill on Secondary Road 2719, 1.2 mi upstream from Buffalo Creek, and 6 mi northwest of Gibsonville.

DRAINAGE AREA.--131 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1928 to current year.

REVISED RECORDS.--WSP 1303: 1929-40 (monthly and yearly runoff). WSP 1383: 1929-30, 1933(M), 1934, 1937(M), 1939-42(M), 1948. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder and rock-masonry control. Datum of gage is 626.88 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since 1923 by Lake Brandt (station 02094117), 14 mi upstream; since 1957 by Lake Higgins (station 02093981) on Brush Creek, a tributary to Lake Brandt; since 1943 by Richland Lake 12 mi. upstream from station; and since 1968 by Lake Townsend (station 02094305), 9 mi upstream from station. City of Greensboro diverted an average of 23.9 ft<sup>3</sup>/s from Lake Brandt and an average of 37.2 ft<sup>3</sup>/s from Lake Townsend for municipal water supply. Prior to regulation, maximum discharge: 11,600 ft<sup>3</sup>/s, Sept. 25, 1947; gage height: 20.77 ft; minimum discharge not determined. Minimum discharge for regulated period also occurred July 30, Aug. 6, 7, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1916 reached a stage of 17.90 ft, from information by local resident; discharge, 8,640 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	7.6	34	18	802	29	339	193	15	7.7	e5.5	e2.8
2	7.8	8.6	20	16	851	26	53	434	15	11	e5.0	1.8
3	7.9	9.6	15	16	311	25	76	290	16	9.3	e4.5	2.2
4	7.1	8.7	14	18	1490	24	214	110	22	7.5	e4.0	4.5
5	6.4	8.1	14	17	918	23	32	46	64	6.4	e3.8	7.6
6	5.5	7.8	12	16	503	21	23	32	25	5.9	e3.6	6.4
7	5.2	10	11	158	374	444	21	399	25	5.6	e3.4	5.4
8	5.0	13	10	432	56	1020	25	1750	17	15	3.6	5.0
9	4.9	14	10	112	34	691	530	1310	15	9.3	6.5	8.6
10	7.0	12	12	48	28	333	161	161	18	e6.5	13	6.8
11	6.2	12	17	32	90	390	42	144	19	e6.0	19	5.1
12	6.9	12	13	25	119	107	47	289	28	e5.5	8.7	4.4
13	6.8	15	11	21	40	34	443	45	88	e5.0	6.1	4.3
14	5.8	50	11	72	61	29	69	32	139	e4.8	5.4	4.3
15	5.6	25	10	419	494	26	292	29	29	e4.6	5.3	4.3
16	6.4	14	10	642	890	221	46	26	19	e4.5	5.1	4.3
17	8.7	11	11	502	2080	111	456	23	15	e4.4	6.3	4.2
18	27	9.5	11	451	1170	41	1200	20	13	e4.3	7.8	4.0
19	29	9.2	9.9	463	201	602	1130	19	11	e4.2	6.3	4.5
20	31	9.0	9.6	340	50	458	292	18	10	e4.1	5.3	5.1
21	14	11	9.3	48	36	549	56	20	9.6	e4.0	4.9	5.1
22	9.2	75	12	32	299	111	279	17	9.4	e3.9	4.3	11
23	7.3	32	17	617	724	78	101	127	9.2	e3.8	3.9	8.1
24	6.4	18	18	449	83	188	38	76	9.0	e3.7	e3.5	5.3
25	6.3	13	51	449	42	36	31	24	9.3	e3.6	e3.0	4.6
26	9.1	12	28	340	34	32	26	19	8.2	e3.5	e2.8	4.2
27	22	13	54	452	31	31	25	67	7.8	e4.5	e2.6	4.1
28	13	12	62	1630	32	28	281	28	7.7	e6.0	e2.5	4.0
29	8.7	10	35	931	---	27	54	20	7.3	e5.0	e2.4	4.1
30	7.5	16	28	615	---	25	80	18	7.8	e4.5	e2.3	4.1
31	7.2	---	25	372	---	49	---	17	---	e5.0	e2.5	---
TOTAL	310.2	478.1	604.8	9753	11843	5809	6462	5803	688.3	179.1	162.9	150.2
MEAN	10.0	15.9	19.5	315	423	187	215	187	22.9	5.78	5.25	5.01
MAX	31	75	62	1630	2080	1020	1200	1750	139	15	19	11
MIN	4.9	7.6	9.3	16	28	21	21	17	7.3	3.5	2.3	1.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1998\*, BY WATER YEAR (WY)

	MEAN	55.6	46.2	92.4	188	164	180	146	99.3	66.1	64.6	42.8	65.1
MAX	432	165	221	644	456	613	613	365	477	596	216	518	
(WY)	1991	1993	1973	1978	1979	1993	1987	1978	1982	1984	1978	1996	
MIN	2.85	6.70	5.97	11.1	19.9	16.4	11.2	7.43	6.08	2.83	2.82	3.31	
(WY)	1969	1970	1969	1981	1977	1976	1976	1986	1986	1986	1977	1983	



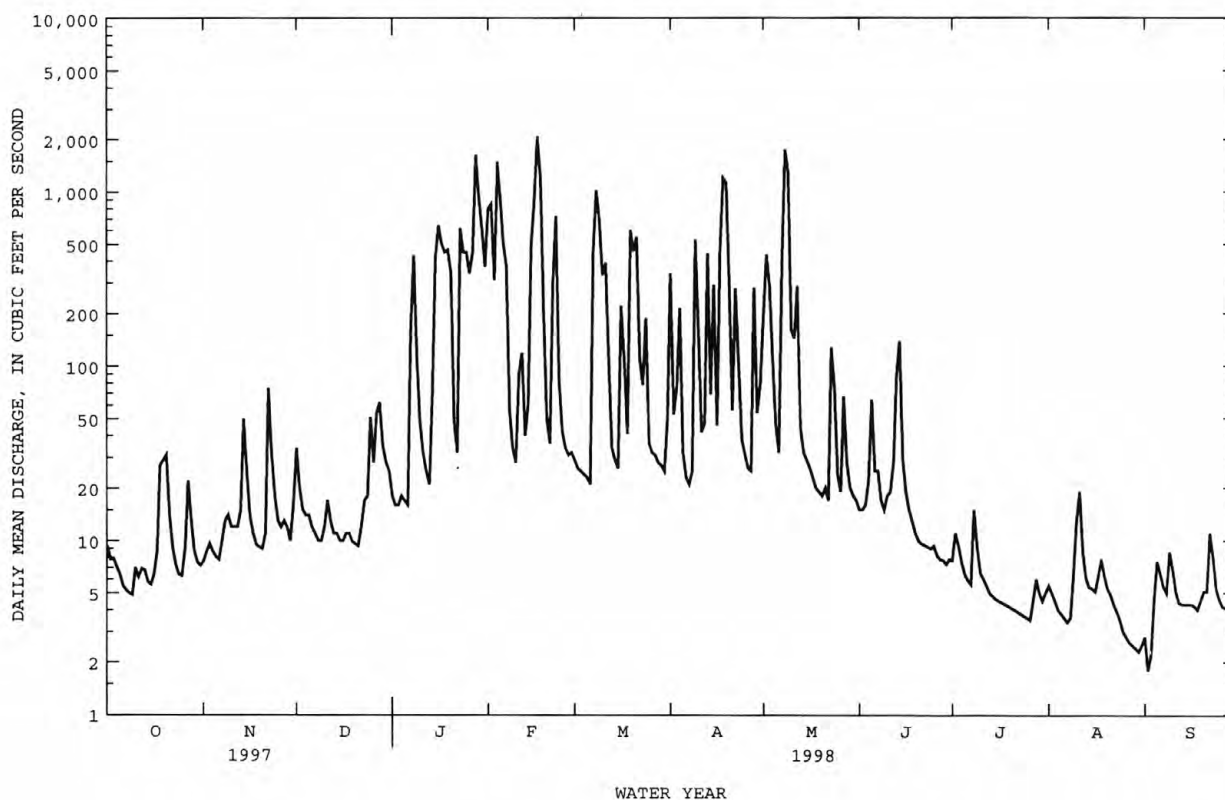
## CAPE FEAR RIVER BASIN

02094500 REEDY FORK NEAR GIBSONVILLE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1969 - 1998*	
ANNUAL TOTAL	32959.3		42243.6		101	
ANNUAL MEAN	90.3		116		188	1984
HIGHEST ANNUAL MEAN					20.8	1981
LOWEST ANNUAL MEAN					5230	Sep 6 1996
HIGHEST DAILY MEAN	2780	Apr 29	2080	Feb 17	1.2	Oct 3 1968
LOWEST DAILY MEAN	4.9	Oct 9	1.8	Sep 2	1.4	Oct 1 1968
ANNUAL SEVEN-DAY MINIMUM	5.7	Oct 5	2.4	Aug 28	6330	Sep 6 1996
INSTANTANEOUS PEAK FLOW			2710	Feb 17	15.65	Sep 6 1996
INSTANTANEOUS PEAK STAGE			9.61	Feb 17	1.4*	Jul 29 1977
INSTANTANEOUS LOW FLOW			1.6	Sep 2	289	
10 PERCENT EXCEEDS	344		424		23	
50 PERCENT EXCEEDS	23		16		5.7	
90 PERCENT EXCEEDS	9.2		4.3			

e Estimated.

\* Regulated period only (1969-1998). See REMARKS.



## CAPE FEAR RIVER BASIN

02096500 HAW RIVER AT HAW RIVER, NC

LOCATION.--Lat 36°05'13", long 79°22'02", Alamance County, Hydrologic unit 03030002, on left bank at Haw River, 650 ft downstream of Southern Railway bridge, 800 ft downstream of bridge on U.S. Highway 70 and State Highway 49, and 3 mi downstream of Stony Creek.

DRAINAGE AREA.--606 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 757: 1929 (M). WSP 782: 1934. WSP 1383: 1930,1932(M), 1933(m), 1936, 1943, 1944 (M), 1947(m). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 471.69 ft above sea level. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Diurnal fluctuations and occasional regulation at low flows. City of Burlington diverted an average of 2.9 ft<sup>3</sup>/s from two Stony Creek Reservoirs (stations 02096003 and 02096432) for municipal water supply, about half of which was returned upstream of station as treated effluent, the remainder was returned downstream of station. Maximum discharge for period of record from rating curve extended above 38,000 ft<sup>3</sup>/s, by logarithmic plotting; maximum gage height, 32.83 ft, from floodmark. Minimum discharge for the current water year also occurred Aug. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	177	767	456	1730	546	766	603	251	377	193	130
2	131	196	476	363	1790	517	820	2410	281	200	145	121
3	123	208	376	333	1240	515	514	1280	317	144	104	145
4	131	177	332	335	7230	470	1160	848	419	128	95	604
5	110	159	345	328	8060	436	817	696	564	119	96	342
6	101	143	296	339	3690	399	578	506	435	128	94	153
7	111	145	271	1170	2620	532	488	602	583	120	91	162
8	113	148	251	4390	1640	3110	432	5090	332	122	97	347
9	110	144	239	2920	1140	5920	1960	3240	271	131	290	376
10	106	141	252	1570	793	3140	1710	1800	267	125	279	165
11	104	139	359	1130	690	2170	843	1670	535	120	508	120
12	98	140	305	773	2020	1480	646	1560	294	110	206	109
13	98	160	273	554	1160	937	791	855	369	112	167	102
14	120	685	258	481	900	652	669	619	444	109	140	264
15	141	566	245	1570	995	538	632	503	320	112	120	414
16	151	273	238	4960	1750	543	531	433	450	117	117	412
17	128	223	238	3430	10600	703	4260	389	302	114	390	378
18	323	200	238	2200	7570	1680	4690	346	270	110	302	252
19	414	182	230	1980	3110	9690	3200	316	225	101	144	113
20	778	172	225	2020	1900	3740	4120	289	203	101	121	99
21	289	235	218	976	1370	4890	2020	379	190	101	112	101
22	222	2000	258	671	1060	2660	1640	286	178	102	104	173
23	185	929	439	3740	1820	1500	1480	302	174	101	96	159
24	166	511	364	3390	1740	1210	1100	723	166	105	95	113
25	118	377	1020	2090	1030	791	723	399	165	99	112	105
26	165	324	668	1690	826	648	554	349	158	115	127	100
27	472	291	923	2330	646	589	475	613	147	137	123	96
28	282	250	1710	8750	649	535	604	393	137	235	120	98
29	228	228	832	4530	---	491	584	299	138	157	117	94
30	190	271	681	3000	---	453	384	277	214	140	121	98
31	172	---	670	2040	---	429	---	299	---	127	218	---
TOTAL	6028	9794	13997	64509	69769	51914	39191	28374	8799	4119	5044	5945
MEAN	194	326	452	2081	2492	1675	1306	915	293	133	163	198
MAX	778	2000	1710	8750	10600	9690	4690	5090	583	377	508	604
MIN	98	139	218	328	646	399	384	277	137	99	91	94
CFSM	.32	.54	.75	3.43	4.11	2.76	2.16	1.51	.48	.22	.27	.33
IN.	.37	.60	.86	3.96	4.28	3.19	2.41	1.74	.54	.25	.31	.36

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1998, BY WATER YEAR (WY)

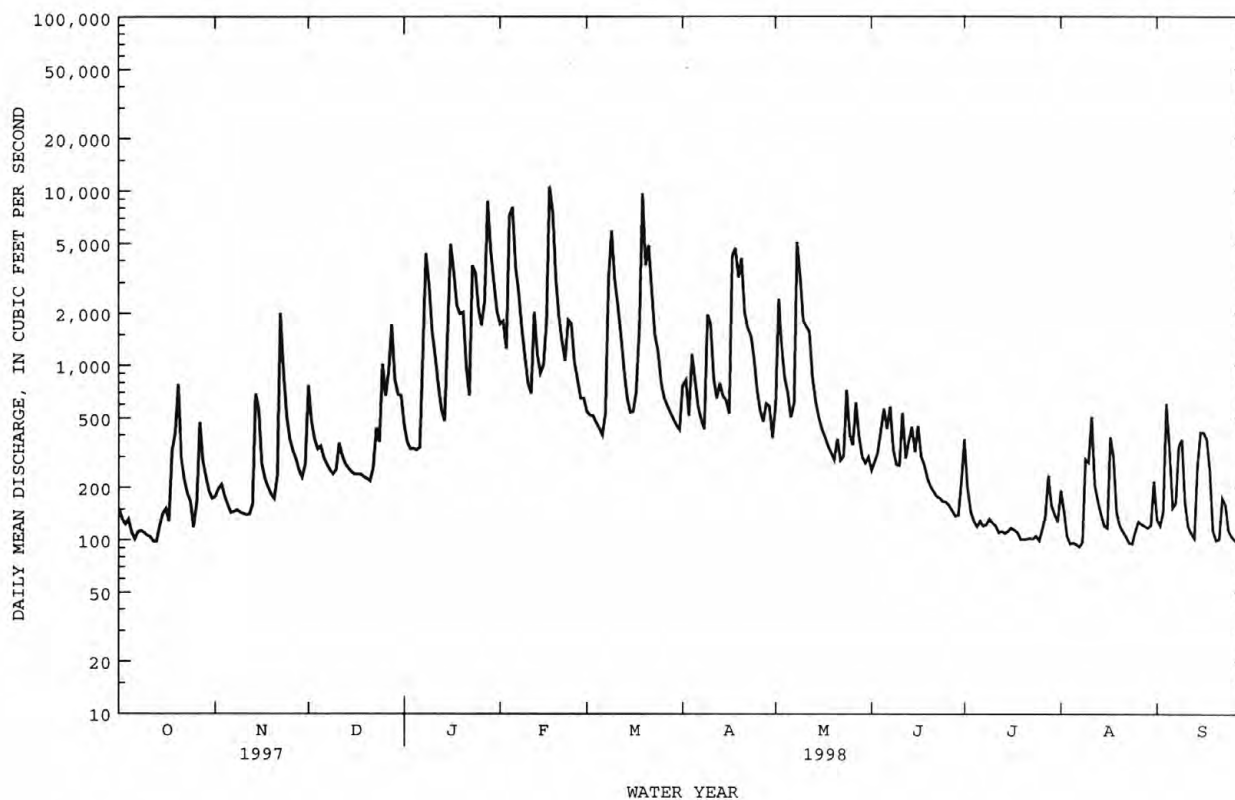
	397	411	576	913	1025	1029	827	492	423	396	354	407
MEAN	397	411	576	913	1025	1029	827	492	423	396	354	407
MAX	2480	1286	1487	2977	2492	3276	2771	1948	2145	2348	1662	4373
(WY)	1960	1948	1946	1937	1998	1993	1987	1978	1982	1984	1939	1996
MIN	48.9	61.1	118	172	272	289	184	139	101	70.9	57.2	33.4
(WY)	1942	1954	1934	1956	1931	1967	1967	1986	1986	1932	1953	1954

## CAPE FEAR RIVER BASIN

02096500 HAW RIVER AT HAW RIVER, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1929 - 1998	
ANNUAL TOTAL	232810		307483		602	
ANNUAL MEAN	638		842		1082	
HIGHEST ANNUAL MEAN					229	
LOWEST ANNUAL MEAN					1967	
HIGHEST DAILY MEAN	12400	Apr 29	10600	Feb 17	42000	Sep 7 1996
LOWEST DAILY MEAN	98	Oct 12	91	Aug 7	5.0	Sep 6 1930
ANNUAL SEVEN-DAY MINIMUM	106	Oct 7	101	Sep 24	16	Oct 7 1954
INSTANTANEOUS PEAK FLOW			15500	Feb 17	51400*	Sep 6 1996
INSTANTANEOUS PEAK STAGE			22.37	Feb 17	32.83*	Sep 6 1996
INSTANTANEOUS LOW FLOW			82*	Oct 5	3.0	Sep 5 1930
ANNUAL RUNOFF (CFSM)	1.05		1.39		.99	
ANNUAL RUNOFF (INCHES)	14.29		18.88		13.50	
10 PERCENT EXCEEDS	1580		2020		1260	
50 PERCENT EXCEEDS	324		335		298	
90 PERCENT EXCEEDS	125		111		102	

\* See REMARKS.



## CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC

LOCATION.--Lat 35°59'13", long 79°12'23", Orange County, Hydrologic Unit 03030002, on right bank at downstream side of bridge on Secondary Road 1114, and 1.0 mi northwest of Orange Grove.

DRAINAGE AREA.--7.54 mi<sup>2</sup>

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 510 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum discharge for period of record from rating curve extended above 500 ft<sup>3</sup>/s, based on contracted-opening measurement of peak flow; maximum gage-height, 7.90 ft, from floodmark. No flow occurs at times most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	.20	1.6	2.6	6.4	5.0	6.4	4.0	1.5	.44	.14	0
2	.07	.27	1.5	2.0	5.4	4.8	5.9	4.0	1.3	.40	.13	0
3	.04	.30	1.1	1.7	9.2	4.4	5.0	3.2	1.3	.37	.11	.01
4	.05	.28	.91	1.4	273	3.9	8.3	3.1	1.5	.33	.09	6.0
5	.05	.26	.86	1.2	88	3.8	6.0	3.0	1.9	.33	.07	1.1
6	.05	.24	.72	1.2	23	3.7	5.0	2.4	2.8	.29	.07	.45
7	e.05	.23	.64	3.2	15	3.7	4.5	2.6	3.7	.26	.06	.26
8	e.04	.23	.56	46	11	38	4.3	4.5	1.8	.25	.07	.23
9	e.04	.23	.58	26	8.4	149	82	4.2	1.4	.26	.07	.20
10	e.04	.22	.71	7.7	6.9	24	21	3.1	1.9	.28	.08	.16
11	e.04	.20	1.3	4.3	7.2	13	12	40	1.9	.26	.11	.09
12	e.03	.19	1.2	3.0	9.7	9.3	8.2	9.2	1.5	.24	.07	.06
13	.03	.32	1.0	2.7	6.6	7.7	6.6	5.4	1.3	.24	.06	.04
14	.03	3.9	.90	2.6	5.6	6.9	6.6	4.1	1.4	.21	.05	.03
15	.09	1.9	.73	49	4.7	6.1	6.5	3.2	1.3	.19	.04	.02
16	.08	.82	.66	160	12	5.5	5.5	2.7	1.1	.16	.04	.01
17	.08	.54	.67	40	353	5.5	55	2.5	.93	.15	.06	.01
18	.08	.41	.64	12	33	302	22	2.2	.77	.14	.04	.01
19	.74	.33	.57	23	15	457	13	2.0	.74	.13	.03	.01
20	1.0	.32	.51	18	11	102	13	1.9	.76	.13	.02	.01
21	.45	.44	.51	8.6	8.6	162	8.1	1.9	.70	.13	.01	0
22	.27	21	2.2	6.0	7.2	31	9.1	1.8	.69	.11	.01	0
23	.19	3.7	5.2	76	9.8	18	9.1	5.8	.62	.11	.01	0
24	.15	1.6	3.4	29	9.1	13	6.8	3.9	.61	.11	.01	0
25	.13	1.0	9.3	14	6.6	11	5.3	2.6	.58	.11	.01	0
26	.17	.84	4.0	8.4	5.7	9.3	4.8	5.1	.55	.11	.01	0
27	.43	.76	9.9	144	5.3	8.5	4.0	7.4	.49	.11	.01	0
28	.32	.65	13	141	5.3	7.4	3.9	3.4	.46	.14	.01	0
29	.22	.68	5.4	21	---	6.7	3.6	2.4	.51	.13	0	0
30	.20	.77	5.1	12	---	6.1	3.5	2.0	.50	.14	0	0
31	.20	---	3.9	8.2	---	5.7	---	1.7	---	.16	0	---
TOTAL	5.45	42.83	79.27	875.8	961.7	1434.0	355.0	145.3	36.51	6.42	1.49	8.70
MEAN	.18	1.43	2.56	28.3	34.3	46.3	11.8	4.69	1.22	.21	.048	.29
MAX	1.0	.21	.13	160	353	457	82	40	3.7	.44	.14	6.0
MIN	.03	.19	.51	1.2	4.7	3.7	3.5	1.7	.46	.11	0	0
CFSM	.02	.19	.34	3.75	4.56	6.14	1.57	.62	.16	.03	.01	.04
IN.	.03	.21	.39	4.32	4.74	7.07	1.75	.72	.18	.03	.01	.04

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	2.80	3.89	5.60	14.9	14.7	21.8	9.76	6.51	4.48	2.03
MAX	8.72	15.5	11.2	28.3	34.3	46.3	16.7	18.7	16.4	10.2
(WY)	1996	1996	1997	1998	1998	1998	1993	1989	1995	1996
MIN	.031	.62	.75	3.89	4.66	9.03	1.47	1.30	.53	.19
(WY)	1994	1992	1992	1989	1991	1995	1995	1995	1993	1994

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1989 - 1998

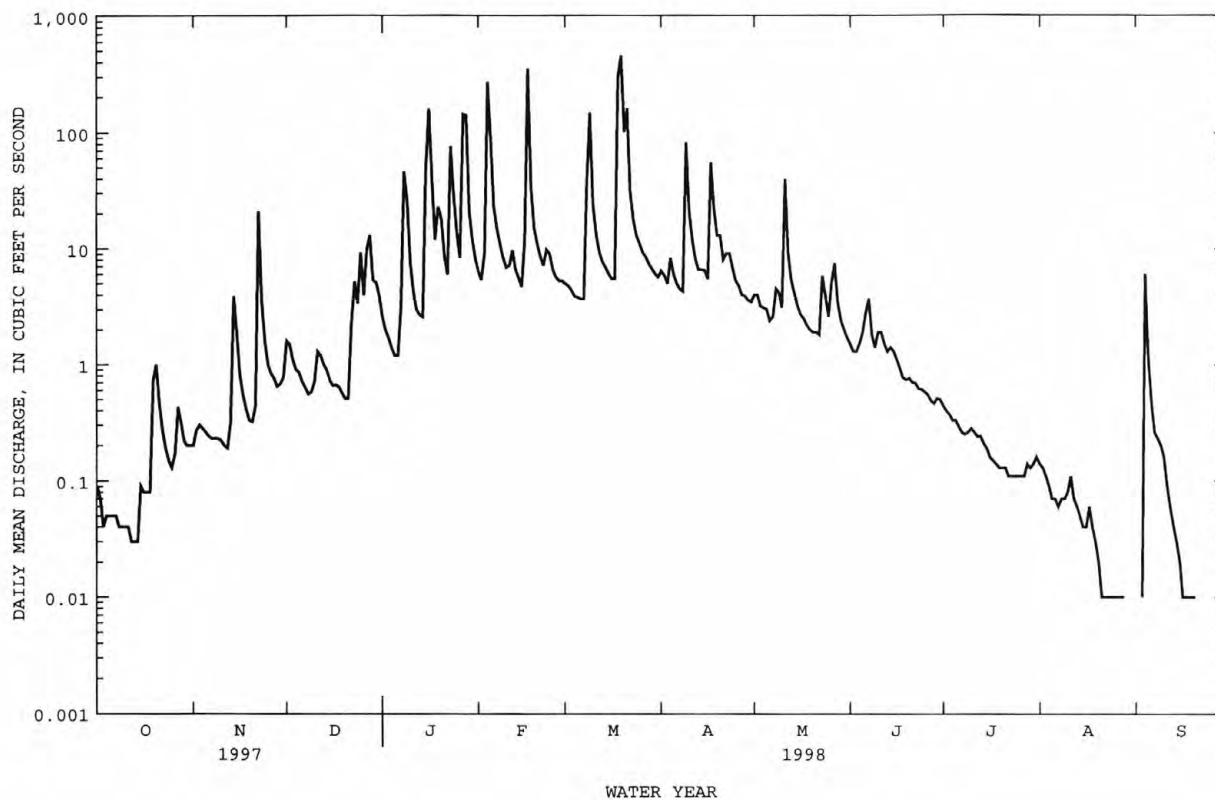
ANNUAL TOTAL	2027.70	3952.47	
ANNUAL MEAN	5.56	10.8	7.40
HIGHEST ANNUAL MEAN			10.8
LOWEST ANNUAL MEAN			4.86
HIGHEST DAILY MEAN	176	457	516
LOWEST DAILY MEAN	0	0	0
ANNUAL SEVEN-DAY MINIMUM	0	0	0
INSTANTANEOUS PEAK FLOW		1110	2060*
INSTANTANEOUS PEAK STAGE		6.15	7.90
INSTANTANEOUS LOW FLOW		0*	0*
ANNUAL RUNOFF (CFSM)	.74	1.44	.98
ANNUAL RUNOFF (INCHES)	10.00	19.50	13.34
10 PERCENT EXCEEDS	12	13	14
50 PERCENT EXCEEDS	1.0	1.3	2.3
90 PERCENT EXCEEDS	.04	.04	.12

e Estimated.

\* See REMARKS.

## CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued



CAPE FEAR RIVER BASIN  
02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
OCT 23...	1030	.18	114	6.8	8.7	60	758	13.3	115	34
DEC 04...	1100	.89	81	6.7	9.5	55	745	11.4	102	25
FEB 04...	1000	270	45	6.3	6.7	130	735	11.0	94	11
MAR 05...	1030	3.9	73	6.8	7.1	36	762	12.3	102	20
MAR 19...	0945	511	26	6.4	8.5	140	746	10.8	94	8
JUN 11...	1130	1.9	81	7.2	20.5	55	753	7.5	84	27
JUN 30...	1330	.47	100	7.4	25.0	30	748	8.8	109	35
AUG 25...	1110	.01	125	7.1	24.9	38	751	5.6	69	45

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	ANC UNFLTRD CARBON- ATE IT-FLD (MG/L - CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 23...	8.1	3.4	4.8	21	.4	4.9	41	34	4.2	6.5
DEC 04...	6.0	2.3	4.9	28	.4	1.9	24	19	--	--
FEB 04...	2.6	1.1	2.0	26	.3	1.2	5.0	5.0	--	--
MAR 05...	5.0	1.9	4.4	31	.4	.73	31	25	--	--
MAR 19...	1.9	.80	1.2	22	.2	.90	14	11	--	--
JUN 11...	6.9	2.4	4.6	26	.4	1.1	32	26	--	--
JUN 30...	9.1	3.1	5.5	25	.4	1.1	51	42	1.6	6.0
AUG 25...	12	3.7	6.6	23	.4	2.1	56	46	1.4	7.3

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 23...	<.10	<.10	--	.003	.325	.009	.38	.39	.71	.056
DEC 04...	--	--	--	.002	.297	<.002	--	.26	.55	.028
FEB 04...	--	--	--	.004	.155	.016	.55	.57	.72	.081
MAR 05...	--	--	--	.001	.665	<.002	--	.17	.83	.024
MAR 19...	--	--	--	.003	.072	.026	.40	.43	.50	.068
JUN 11...	--	--	--	.005	<.005	.006	.28	.28	--	.031
JUN 30...	<.10	13	70	.002	.720	.262	--	.21	.93	.049
AUG 25...	<.10	6.5	78	<.001	.052	.022	.35	.37	.42	.059



## CAPE FEAR RIVER BASIN

02096846 CANE CREEK NEAR ORANGE GROVE, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
OCT 23...	.042	110	<1	<1	<1	<1	1	790	<1	21
DEC 04...	.011	--	--	--	--	--	--	--	--	--
FEB 04...	.043	810	<1	<1	1	<1	2	910	1	85
MAR 05...	.005	--	--	--	--	--	--	--	--	--
19...	.029	620	<1	<1	<1	1	2	1200	1	92
JUN 11...	.015	90	<1	<1	1	<1	<1	950	<1	19
30...	.031	--	--	--	--	--	--	--	--	--
AUG 25...	.010	--	--	--	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 23...	<.10	<1	<1	<1	<1	<10	7.5	3	.00
DEC 04...	--	--	--	--	--	--	6.9	2	.00
FEB 04...	<.10	<1	<1	<1	<1	<10	12	50	36
MAR 05...	--	--	--	--	--	--	2.8	8	.08
19...	<.10	<1	1	<1	<1	<10	11	62	85
JUN 11...	<.10	<1	2	<1	<1	<10	4.2	7	.04
30...	--	--	--	--	--	--	3.4	6	.01
AUG 25...	--	--	--	--	--	--	5.2	22	.00

## CAPE FEAR RIVER BASIN

0209684980 CANE CREEK RESERVOIR AT DAM NEAR WHITE CROSS. NC

LOCATION.--Lat 35°56'59", long 79°14'29", Orange County, Hydrologic Unit 03030002, at Orange Water and Sewage Authority intakes, 0.7 mi above State Highway 54, and 3.6 mi northwest of White Cross.

DRAINAGE AREA.--31.4 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1989 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment. Samples for nutrient and chlorophyll a and b analyses were collected through a sampling zone equal to double the secchi disk depth using the depth-integration sampling technique.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	SAMPLING DEPTH (FEET) (000003)	SPECIFIC CONDUCTANCE (US/CM) (000095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	BAROMETRIC PRESSURE (MM HG) (00025)	TRANSPARENCY (SECCHI DISK) (00078)	OXYGEN, DIS-SOLVED (PERCENT SATURATION) (00300)	OXYGEN, DIS-SOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)
OCT 22...	1030	1.00	76	6.9	16.7	22	755	.75	7.8	81	25	5.9
APR 16...	1100	1.00	42	6.0	15.0	70	750	.85	--	--	15	3.6
JUN 23...	0945	1.00	59	7.5	29.6	26	756	.85	8.3	110	19	4.6
AUG 25...	1350	1.00	66	8.4	30.0	40	751	--	9.5	128	21	5.1

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	ANC UNFLTRD CARBON- ATE IT-FLD (MG/L - CAC03) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 22...	2.5	4.1	24	.4	2.1	16	13	2.5	5.1	<.10	--	--
APR 16...	1.5	2.4	24	.3	1.4	13	11	--	--	--	--	--
JUN 23...	1.8	3.3	26	.3	1.7	--	--	3.5	3.9	<.10	6.0	49
AUG 25...	2.0	3.8	26	.4	1.9	24	20	3.0	4.3	<.10	7.7	48

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
OCT 22...	.002	.020	.067	.49	.56	.58	<.010	<.001	13.0	<.100	20	<1
APR 16...	.003	.153	.040	.41	.45	.60	.031	.001	3.50	<.100	200	<1
JUN 23...	.003	<.005	.010	.58	.60	--	.020	.007	5.30	<.100	--	--
AUG 25...	<.001	<.005	.002	.50	.51	--	.022	<.001	10.0	E.340	--	--

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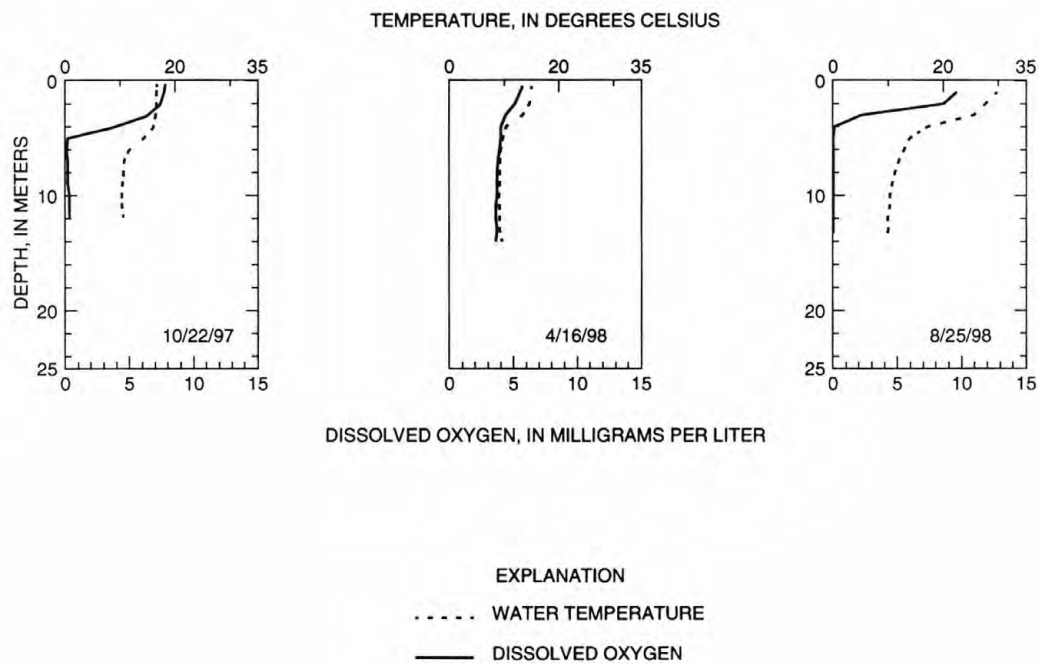
0209684980 CANE CREEK RESERVOIR AT DAM NEAR WHITE CROSS, NC--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

## CAPE FEAR RIVER BASIN

0209684980 CANE CREEK RESERVOIR AT DAM NEAR WHITE CROSS, NC--Continued





## CAPE FEAR RIVER BASIN

02096960 HAW RIVER NEAR BYNUM, NC

LOCATION.--Lat 35°45'48", long 79°08'02", Chatham County, Hydrologic Unit 03030002, on right bank 500 ft upstream from Pokeberry Creek, 0.9 mi south of Bynum, and 1.1 mi downstream of U.S. Highways 15 and 501.

DRAINAGE AREA.--1,275 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1973 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 283.31 ft above sea level. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Considerable regulation for short periods at low flow caused by power plant above station. Maximum discharge for period of record, from rating curve extended above 36,000 ft<sup>3</sup>/s, on basis of slope-conveyance measurement of peak flow; maximum gage height, 21.76 ft, from floodmarks. Minimum discharge for period of record also occurred Sept. 27, 1983. Minimum discharge for each year affected by regulation. Minimum discharge for current water year also occurred Aug. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	300	268	636	1080	2410	1220	1070	799	565	262	184	e220
2	186	276	870	786	2400	1110	1700	1960	487	407	172	175
3	188	274	621	690	1980	1050	1300	1970	567	208	217	148
4	169	286	407	651	14400	1000	1500	1320	e510	196	154	1330
5	169	265	444	658	18700	959	2090	1110	e730	181	121	1010
6	175	231	431	631	7480	792	1390	987	752	161	115	249
7	138	223	369	696	4360	827	1160	780	874	157	115	207
8	128	208	346	8820	3080	3380	981	5040	868	158	106	193
9	143	221	333	7540	2240	13900	2620	4940	574	155	107	528
10	144	215	337	3080	1730	7460	4260	2810	571	155	258	413
11	144	209	460	2040	1430	3700	2130	3850	652	159	460	208
12	134	207	535	1520	2450	2670	1560	3080	696	145	454	174
13	128	239	433	1170	2520	1890	1270	1920	516	143	199	143
14	122	616	389	955	1740	1500	1420	1320	538	151	201	131
15	143	1260	346	1620	1520	1270	1120	1060	749	141	177	221
16	196	593	340	11500	1920	1110	1210	897	692	191	163	423
17	208	390	320	10500	21000	1220	5020	790	623	220	180	404
18	201	340	322	4310	23200	6030	9240	722	496	149	471	362
19	526	310	320	3530	5690	39300	4880	658	455	152	230	254
20	1150	256	308	4290	3430	14500	6140	615	412	128	197	174
21	840	269	299	2520	2510	11900	3890	565	306	135	152	126
22	398	3200	375	1660	1950	6010	2530	684	264	116	129	120
23	176	2310	1000	5500	2080	3430	2330	557	262	122	128	138
24	274	940	933	7990	3080	2510	1900	992	253	116	120	202
25	259	635	1590	3930	1980	1980	1510	982	229	126	111	162
26	209	506	1770	2880	1590	1600	1180	708	224	268	113	130
27	e700	420	1320	3540	1350	1450	1010	1250	254	159	141	125
28	e480	379	3210	16900	1240	1330	915	1250	156	224	156	111
29	406	335	1960	8500	---	1230	1100	814	203	287	116	110
30	344	316	1490	4610	---	1120	870	608	166	238	133	122
31	265	---	1320	3190	---	1070	---	595	---	200	e300	---
TOTAL	9043	16197	23834	127287	139460	138518	69296	45633	14644	5610	5880	8313
MEAN	292	540	769	4106	4981	4468	2310	1472	488	181	190	277
MAX	1150	3200	3210	16900	23200	39300	9240	5040	874	407	471	1330
MIN	122	207	299	631	1240	792	870	557	156	116	106	110
CFSM	.23	.42	.60	3.22	3.91	3.50	1.81	1.15	.38	.14	.15	.22
IN.	.26	.47	.70	3.71	4.07	4.04	2.02	1.33	.43	.16	.17	.24

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1998, BY WATER YEAR (WY)

	MEAN	682	760	1169	2339	2280	2691	1179	920	814	583	805
MAX	2906	2888	2681	5895	5465	6110	4044	3936	4633	4477	1893	4904
(WY)	1991	1986	1984	1978	1979	1975	1987	1978	1982	1975	1985	1996
MIN	154	225	275	262	627	648	412	256	155	135	118	111
(WY)	1987	1974	1981	1981	1977	1988	1995	1986	1986	1986	1987	1983

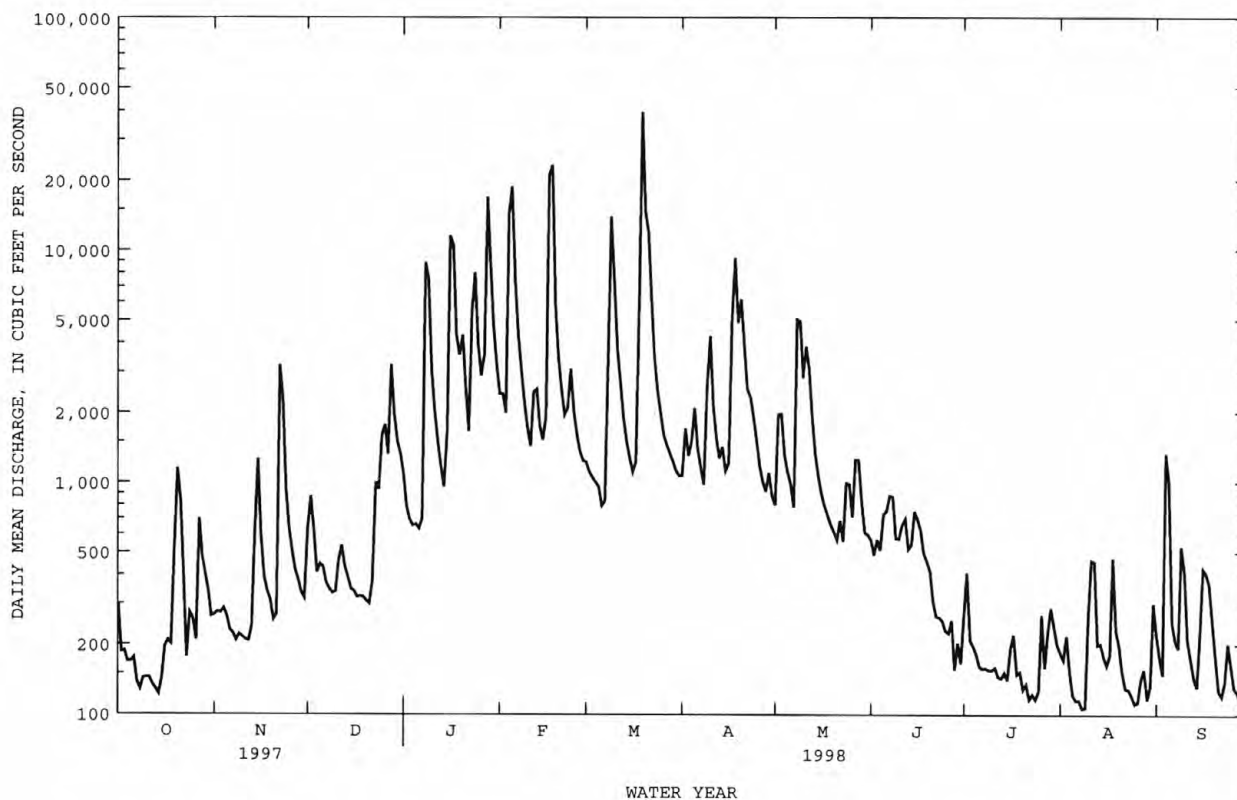


## CAPE FEAR RIVER BASIN

02096960 HAW RIVER NEAR BYNUM, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1973 - 1998	
ANNUAL TOTAL	411513		603715		1326	
ANNUAL MEAN	1127		1654		2181	1975
HIGHEST ANNUAL MEAN					164	1973
LOWEST ANNUAL MEAN					58000	Sep 6 1996
HIGHEST DAILY MEAN	23400	Apr 29	39300	Mar 19	.18	Sep 10 1983
LOWEST DAILY MEAN	122	Oct 14	106	Aug 8	46	Sep 7 1983
ANNUAL SEVEN-DAY MINIMUM	135	Oct 8	126	Aug 23	76700*	Sep 6 1996
INSTANTANEOUS PEAK FLOW			46300	Mar 19	21.76*	Sep 6 1996
INSTANTANEOUS PEAK STAGE			17.72	Mar 19	.18*	Sep 10 1983
INSTANTANEOUS LOW FLOW			87*	Aug 8	1.04	
ANNUAL RUNOFF (CFSM)	.88		1.30		14.13	
ANNUAL RUNOFF (INCHES)	12.01		17.61		2880	
10 PERCENT EXCEEDS	2370		3600		592	
50 PERCENT EXCEEDS	593		574		168	
90 PERCENT EXCEEDS	182		143			

e Estimated.  
 \* See REMARKS.



## CAPE FEAR RIVER BASIN

02096960 HAW RIVER NEAR BYNUM, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982-86, 1989-1996, 1998.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1981 to September 1984.

WATER TEMPERATURE: October 1981 to September 1984.

INSTRUMENTATION.-- Water-quality monitor from October 1981 to September 1984.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 514 microsiemens, Sept. 19, 1983; minimum, 46 microsiemens, March 21, 1983.

WATER TEMPERATURE: Maximum, 35.0°C, July 21, 1983; minimum, 0.0°C, on several days during winter months in water years 1982 and 1984.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	
FEB 05...	1215	20200	64	7.2	6.0	220	741	12.2	101	19	
DATE	TIME	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE IT-FLD (MG/L AS HCO3) (99440)	ANC CARBON-ATE IT-FLD (MG/L - CAC03) (99430)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	
FEB 05...	4.5	2.0	3.6	27	.4	1.9	16	13	7.3	3.6	
DATE	TIME	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, PHOS-PHORUS TOTAL (MG/L AS P) (00665)		
FEB 05...	.11	7.1	55	.006	.277	.064	.84	.90	1.2	.244	
DATE	TIME	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)
FEB 05...	.052	2000	<1	<1	7	3	5	3100	5	320	
DATE	TIME	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	
FEB 05...	<.10	<1	6	<1	<1	30	12	181	9890		

## CAPE FEAR RIVER BASIN

0209719700 JORDAN LAKE, HAW RIVER ARM, ABOVE B. EVERETT JORDAN DAM, NC

LOCATION.--Lat 35°39'39", long 79°04'23", Chatham County, Hydrologic Unit 03030002, 0.5 mi above B. Everett Jordan Dam, and 1.4 mi southwest of Merry Oaks.

PERIOD OF RECORD.--Water years 1989 to current year. Prior to October 1993, published as Haw River at U.S. Highway 64 near Pittsboro (0209699980).

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment. Samples for nutrient and chlorophyll a and b analyses were collected through a sampling zone equal to double the secchi disk depth using the depth-integration sampling technique.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00301)
OCT 30...	1300	1.00	236	7.2	17.3	30	761	.75	8.5	89
JUN 08...	1330	1.00	160	9.0	25.7	33	755	.60	10.6	132
AUG 28...	1115	1.00	247	7.2	27.5	35	756	.55	5.2	67

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L HCO3) (99440)	ANC UNFLTRD CARBON- ATE IT-FLD (MG/L - CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT 30...	35	8.7	3.3	30	62	2	4.6	46	38	30
JUN 08...	32	7.8	3.0	18	52	1	3.0	--	--	--
AUG 28...	32	7.5	3.1	33	66	3	4.5	50	41	27

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
OCT 30...	22	.29	--	--	.016	.571	.030	.89	.92	1.5
JUN 08...	--	--	--	--	.010	.237	<.002	--	.75	.99
AUG 28...	23	.28	5.1	143	<.001	<.005	.132	.33	.46	--

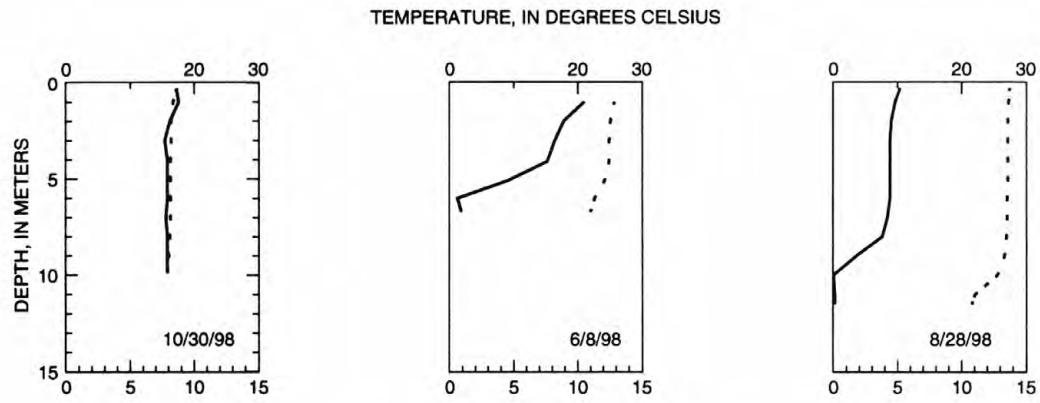
## CAPE FEAR RIVER BASIN

0209719700 JORDAN LAKE, HAW RIVER ARM, ABOVE B. EVERETT JORDAN DAM, NC--Continued

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 30...	170	<1	53	<.10	4	2	<1	<1	<10	6.6
JUN 08...	--	--	--	--	--	--	--	--	--	7.7
AUG 28...	--	--	--	--	--	--	--	--	--	7.2

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
OCT 30...	.040	.016	15.0	.610	80	<1	<1	<1	<1	2
JUN 08...	.038	.003	13.0	.260	--	--	--	--	--	--
AUG 28...	<.010	<.001	14.0	.580	--	--	--	--	--	--



DISSOLVED OXYGEN, IN MILLIGRAMS PER LITER

EXPLANATION  
..... WATER TEMPERATURE  
—— DISSOLVED OXYGEN

## CAPE FEAR RIVER BASIN

02097314 NEW HOPE CREEK NEAR BLANDS, NC

LOCATION.--Lat 35°53'05", long 78°57'58", Durham County, Hydrologic Unit 03030002, on right bank 15 ft downstream of bridge on Secondary Road 1107, 0.5 mi southwest of Blands, and 2 mi downstream of Third Fork Creek.

DRAINAGE AREA.--75.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 230 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.--Records poor. Considerable diurnal fluctuation at low flow. An average of 45.3 ft<sup>3</sup>/s was diverted from the Neuse River Basin for Durham municipal water supply; 22.5 ft<sup>3</sup>/s was returned to the Cape Fear River Basin, and about 14.6 ft<sup>3</sup>/s was returned to the Neuse River Basin. Maximum discharge for period of record 12,700 ft<sup>3</sup>/s, from rating curve extended above 3,500 ft<sup>3</sup>/s, by logarithmic plotting. Maximum gage height for period of record and current water year, occurred as a result of backwater from B. Everett Jordan Lake; maximum gage height unaffected by backwater, 14.05 ft, Sept. 6, 1996. Minimum discharge for period of record not determined due to regulation. Minimum discharge unregulated, 4.2 ft<sup>3</sup>/s, Apr. 28, 29, May 1, 2, and July 10, 1985.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	17	38	83	e250	99	e110	34	26	26	22	17
2	13	16	42	65	e200	77	e90	44	25	23	18	17
3	12	18	40	53	e150	67	67	37	24	21	17	17
4	12	19	36	45	e250	60	86	33	39	19	16	111
5	12	19	33	40	e1500	53	82	32	79	22	15	183
6	12	19	29	36	e3000	91	58	30	59	24	15	50
7	12	18	27	35	e800	89	50	29	83	20	15	27
8	12	e18	27	86	e400	104	46	44	49	19	15	26
9	13	e19	25	e150	e300	417	114	52	34	20	15	54
10	13	22	28	e140	e290	e600	273	41	33	20	20	26
11	12	20	41	e130	e240	e250	223	104	34	19	83	21
12	12	19	36	e100	e190	e150	105	223	31	18	33	19
13	13	24	15	e95	e200	e120	66	106	28	18	21	18
14	13	71	15	84	140	105	56	54	26	18	19	19
15	14	112	15	76	96	82	71	42	43	18	17	18
16	21	89	16	204	84	92	56	35	59	18	16	18
17	18	58	15	1020	1290	74	74	31	35	18	94	18
18	15	39	15	e600	e1000	247	157	30	28	18	45	18
19	30	31	14	e300	e700	4930	158	28	25	18	22	17
20	87	27	15	e200	e450	e3000	135	27	23	18	18	19
21	35	25	14	e300	e300	e1500	115	27	22	17	17	19
22	21	92	20	e180	e200	e800	83	26	23	17	15	18
23	17	192	39	e160	e180	e450	64	32	23	18	15	17
24	13	209	60	e400	e150	e400	59	103	31	21	16	16
25	13	134	93	e200	e120	e300	49	63	26	21	16	16
26	14	71	106	e150	e150	e260	41	41	23	37	16	16
27	15	46	107	e110	171	e220	37	60	22	22	17	16
28	15	34	145	e500	159	e200	36	52	21	19	17	17
29	15	30	153	e1000	---	e180	35	37	23	20	17	17
30	14	30	138	e500	---	e150	34	31	28	18	17	18
31	14	---	110	e300	---	116	---	27	---	24	17	---
TOTAL	545	1538	1507	7342	12960	15283	2630	1555	1025	629	716	883
MEAN	17.6	51.3	48.6	237	463	493	87.7	50.2	34.2	20.3	23.1	29.4
MAX	87	209	153	1020	3000	4930	273	223	83	37	94	183
MIN	12	16	14	35	84	53	34	26	21	17	15	16
CFSM	.23	.68	.64	3.12	6.10	6.50	1.16	.66	.45	.27	.30	.39
IN.	.27	.75	.74	3.60	6.35	7.49	1.29	.76	.50	.31	.35	.43

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998, BY WATER YEAR (WY)

	MEAN	46.9	81.0	84.6	172	218	222	146	102	46.9	45.6	40.0	44.8
MAX	122	371	264	509	463	493	618	411	154	156	97.8	318	
(WY)	1990	1986	1984	1991	1998	1998	1987	1997	1995	1995	1986	1996	
MIN	12.8	16.1	17.0	38.6	62.3	42.0	13.5	29.4	14.3	12.9	14.5	10.8	
(WY)	1987	1985	1989	1986	1986	1985	1985	1994	1985	1993	1997	1984	



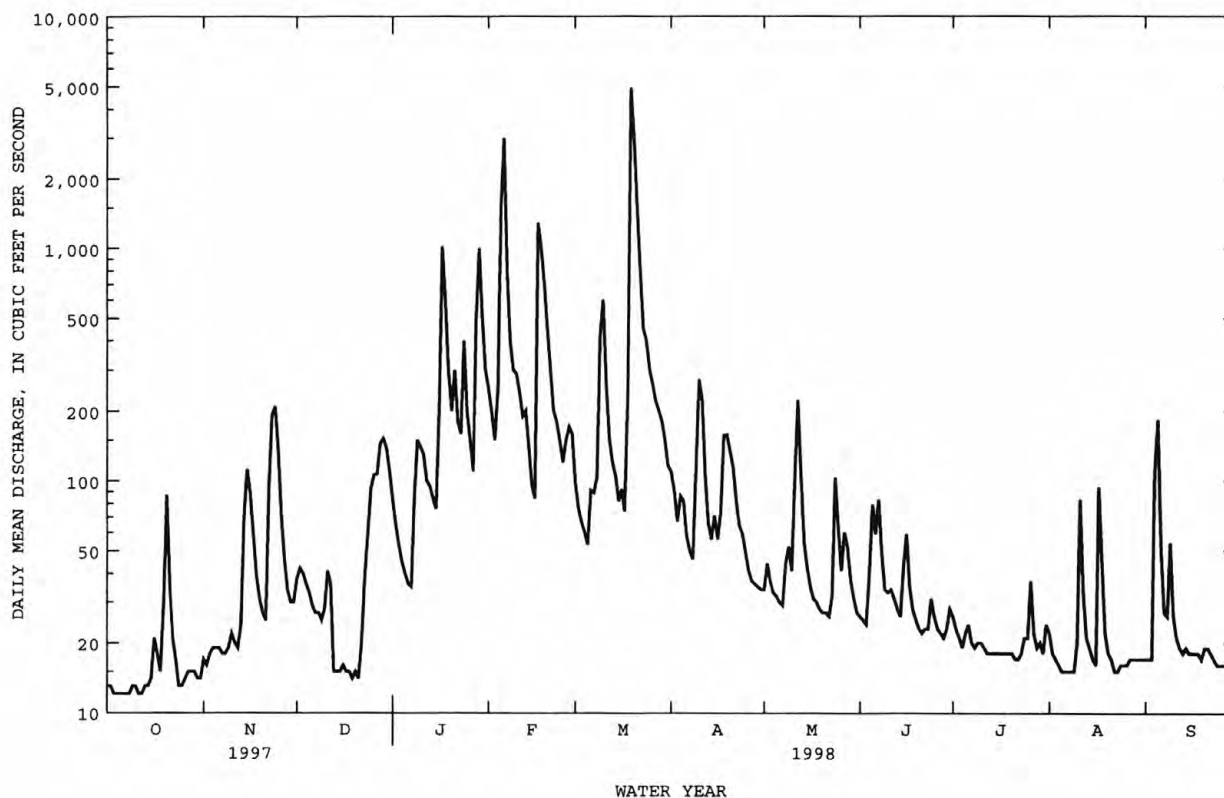
## CAPE FEAR RIVER BASIN

02097314 NEW HOPE CREEK NEAR BLANDS, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1983 - 1998	
ANNUAL TOTAL	39275.0		46613		104	
ANNUAL MEAN	108		128		156	
HIGHEST ANNUAL MEAN					48.3	
LOWEST ANNUAL MEAN					6300	
HIGHEST DAILY MEAN	3130	May 1	4930	Mar 19		1984
LOWEST DAILY MEAN	7.5	Jul 21	12	Oct 3		1988
ANNUAL SEVEN-DAY MINIMUM	12	Aug 26	12	Oct 2		1996
INSTANTANEOUS PEAK FLOW			NOT DETERMINED			1988
INSTANTANEOUS PEAK STAGE			15.63*	Mar 23		1996
INSTANTANEOUS LOW FLOW			8.7	Oct 5		1996
ANNUAL RUNOFF (CFSM)	1.42		1.68			1996
ANNUAL RUNOFF (INCHES)	19.25		22.85			1996
10 PERCENT EXCEEDS	187		230			1996
50 PERCENT EXCEEDS	32		34			1996
90 PERCENT EXCEEDS	13		15			1996

e Estimated.

\* See REMARKS.



## CAPE FEAR RIVER BASIN

02097314 NEW HOPE CREEK NEAR BLANDS, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983-86, 1989 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1982 to September 1985.

WATER TEMPERATURE: December 1982 to September 1985.

INSTRUMENTATION.--Water-quality monitor from October 1982 to September 1985.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 535 microsiemens, Sept. 30, 1984; minimum, 38 microsiemens. Mar. 6, 7, 1984.

WATER TEMPERATURE: Maximum, 27.5°C, Aug. 23, 1983; minimum, 0.0°C, Jan. 21, 22, 1985.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	ANC UNFLTRD CARBON- ATE IT-FLD (MG/L - CAC03) (99430)
OCT 23...	1230	15	304	7.1	16.0	765	8.6	87	--	--
DEC 04...	1000	34	230	--	12.2	745	8.6	82	--	--
MAR 05...	0845	52	190	6.8	9.7	762	9.1	80	--	--
JUN 11...	1245	31	215	7.2	23.0	761	6.9	81	45	37



## CAPE FEAR RIVER BASIN

0209736050 BATTLE BRANCH NEAR CHAPEL HILL, NC

LOCATION.--Lat 35°55'02", long 79°01'57", Orange County, Hydrologic Unit 03030002, 0.8 mi upstream from mouth, and 1.2 mi east of Chapel Hill.

DRAINAGE AREA.--0.42 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1996 to current year. Prior to October 1994, published as Little Creek Tributary near Chapel Hill, NC. Records for February 1987 to September 1996 are unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 376 ft above sea level, from topographic map. Water stage recorder was at present site, at datum of 377 ft, Feb. 1987 to Sept. 1996. Satellite telemetry at station.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.12	e.07	.30	.15	.08	.44	.53	.16	.09	.07	e.05	.05
2	e.11	e.09	.23	.14	.19	.47	.29	.15	.09	.05	e.03	.04
3	.10	e.12	e.18	.13	2.5	.43	.29	.13	.10	.04	.03	2.0
4	.10	e.11	e.15	.13	10	.38	.51	.15	.73	.05	.03	5.0
5	.10	.19	e.14	.13	2.3	.37	.29	.14	.09	.10	.03	e.20
6	e.09	.60	e.12	.13	.81	.37	.28	.14	.29	.04	.02	e.12
7	e.09	.28	e.10	.29	.56	.38	.27	.69	.08	.04	.03	e.09
8	.09	.11	e.09	7.7	.44	4.2	.25	.19	.06	.05	.03	.88
9	.10	e.08	e.09	1.2	.36	8.2	2.4	.12	.05	.05	.03	.26
10	.12	e.08	e.12	.66	.32	1.2	.42	.12	.32	.05	.15	.11
11	.12	e.07	e.20	.51	.45	.65	.32	2.2	.07	.04	.04	.09
12	.13	.13	e.19	.41	.36	.52	.25	.17	.06	.04	.02	.09
13	.13	1.5	e.16	.37	.29	.45	.24	.14	.06	.04	.03	.09
14	4.1	1.5	e.13	.29	.27	.42	.37	.12	.05	.04	.02	.09
15	6.6	.25	e.12	1.8	.25	.38	.26	.12	.52	.04	.02	.09
16	.55	e.20	.11	12	3.2	.36	.30	.11	.08	.16	4.6	.09
17	.07	e.16	.09	1.9	23	.72	1.1	.11	.07	.06	e.20	.09
18	.14	e.14	.08	.77	1.8	17	.42	.09	.06	.05	e.10	.09
19	2.4	e.13	.14	2.1	.69	24	.30	.08	.06	.04	e.07	.09
20	.29	.20	.09	.96	.57	3.8	.25	.09	.06	.04	e.06	.09
21	.20	1.7	.08	.49	.47	3.0	.19	.09	.06	.04	.05	.09
22	.12	4.1	1.5	.36	.47	1.2	.20	.09	.06	.25	.05	.09
23	.09	.50	.26	5.3	1.6	.80	.25	.40	.06	.12	.05	.08
24	.08	.23	.92	1.0	.67	.56	.22	.22	.06	.05	.05	.08
25	.09	e.21	.40	.43	.56	.45	.17	.10	.06	.72	.05	.09
26	.31	e.18	.20	.27	.50	.40	.16	.18	.06	.24	.05	.08
27	.13	e.17	1.2	9.0	.48	.35	.19	.26	.06	.13	.06	.08
28	.10	e.16	.42	2.0	.46	.32	.17	.10	.05	.09	.05	.08
29	e.09	.23	.37	.39	---	.27	.14	.10	.06	.07	.05	.08
30	e.08	.64	.27	.20	---	.25	.15	.08	.34	e.13	.08	.37
31	e.07	---	.18	.12	---	.25	---	.08	---	e.11	.05	---
TOTAL	16.91	14.13	8.63	51.33	53.65	72.59	11.18	6.92	3.86	3.04	6.18	10.77
MEAN	.55	.47	.28	1.66	1.92	2.34	.37	.22	.13	.098	.20	.36
MAX	6.6	4.1	1.5	12	23	24	2.4	2.2	.73	.72	4.6	5.0
MIN	.07	.07	.08	.12	.08	.25	.14	.08	.05	.04	.02	.04
CFSM	1.30	1.12	.66	3.94	4.56	5.58	.89	.53	.31	.23	.47	.85
IN.	1.50	1.25	.76	4.55	4.75	6.43	.99	.61	.34	.27	.55	.95

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1998, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)
1987	.50	1.54	.035	1991
1988	.58	1.79	.13	1992
1989	.30	.81	.086	1993
1990	.72	1.66	.17	1994
1991	.79	1.92	.14	1995
1992	.94	2.34	.11	1996
1993	.54	1.32	.051	1997
1994	5.04	72.6	.073	1998
1995	17.7	308	.003	
1996	.27	.86	.000	
1997	.22	.58	.045	
1998	53.0	534	.000	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

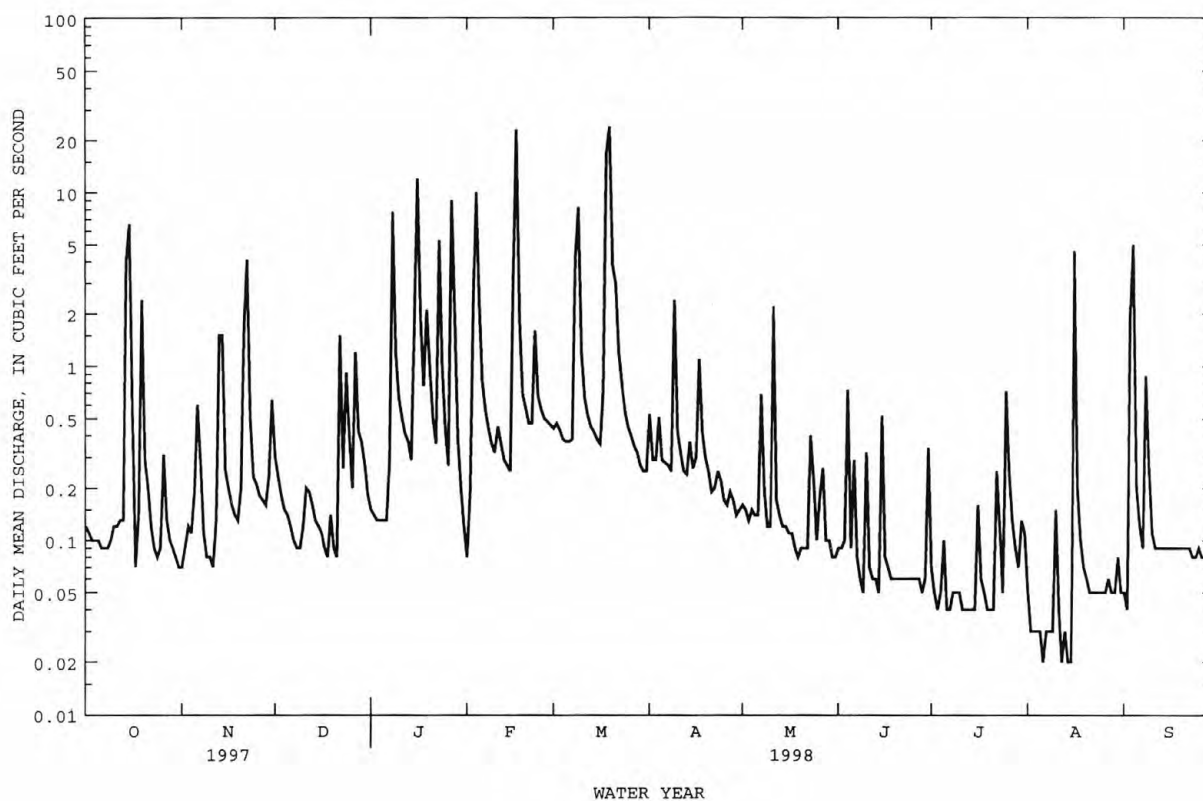
## WATER YEARS 1987 - 1998

ANNUAL TOTAL	169.46	259.19	
ANNUAL MEAN	.46	.71	
HIGHEST ANNUAL MEAN			6.32
LOWEST ANNUAL MEAN			44.6
HIGHEST DAILY MEAN	11	Sep 10	1010
LOWEST DAILY MEAN	.01	Aug 23	.14
ANNUAL SEVEN-DAY MINIMUM	.02	Aug 23	.03
INSTANTANEOUS PEAK FLOW			175
INSTANTANEOUS PEAK STAGE			4.12
INSTANTANEOUS LOW FLOW			NOT DETERMINED
ANNUAL RUNOFF (CFSM)	1.11		15.0
ANNUAL RUNOFF (INCHES)	15.01		204.31
10 PERCENT EXCEEDS	.91		1.2
50 PERCENT EXCEEDS	.16		.14
90 PERCENT EXCEEDS	.05		.00

e Estimated.

## CAPE FEAR RIVER BASIN

0209736050 BATTLE BRANCH NEAR CHAPEL HILL, NC--Continued



## CAPE FEAR RIVER BASIN

0209741955 NORTHEAST CREEK AT SECONDARY ROAD 1100 NEAR GENLEE, NC

LOCATION.--Lat 35°52'20", long 78°54'49", Durham County, Hydrologic Unit 03030002, on left bank at downstream side of bridge on Secondary Road 1100, 1.3 mi west of Genlee, and 1.6 mi downstream of Burdens Creek.

DRAINAGE AREA.--21.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1982 to January 1994, August 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 235 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except those discharges below 5 ft<sup>3</sup>/s, which are poor. An average of 45.3 ft<sup>3</sup>/s was diverted from the Neuse River basin for municipal water supply; 22.5 ft<sup>3</sup>/s was returned to the Cape Fear River basin, of which 6.5 ft<sup>3</sup>/s entered upstream from station as treated effluent. About 14.2 ft<sup>3</sup>/s was returned to Neuse River basin as treated effluent. Maximum discharge for period of record and current water year from rating curve extended above 2,000 ft<sup>3</sup>/s, by logarithmic plotting.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	11	18	11	16	11	54	7.6	6.0	8.1	7.9	6.2
2	4.1	12	12	9.0	14	11	41	9.5	6.0	5.9	6.3	6.0
3	4.1	9.8	9.5	8.1	15	10	17	6.9	5.7	4.8	6.3	8.5
4	3.5	8.2	8.9	7.2	623	9.5	34	8.8	28	4.6	6.1	106
5	3.3	7.2	8.0	7.4	449	8.9	22	7.5	19	19	5.9	45
6	3.7	7.0	6.8	7.5	170	8.3	15	6.5	9.4	8.3	5.9	7.2
7	4.0	7.0	5.9	10	41	7.3	13	6.4	10	6.2	6.0	5.1
8	4.3	6.3	6.2	197	26	99	11	16	7.5	5.6	6.0	10
9	4.2	5.9	6.8	312	19	545	116	9.1	6.4	9.0	6.1	12
10	4.4	6.4	21	43	15	242	119	6.9	7.4	6.9	14	6.2
11	3.8	6.6	28	17	13	36	24	79	7.4	5.5	16	5.0
12	3.5	6.9	13	12	15	20	15	34	6.6	4.7	8.3	3.8
13	4.0	25	9.5	11	13	14	12	11	5.8	5.1	7.2	3.9
14	4.5	108	7.6	11	10	11	13	8.0	5.1	5.4	6.5	4.2
15	6.1	43	7.4	40	9.3	10	16	6.9	12	5.6	5.5	4.4
16	5.1	13	7.2	362	18	9.8	12	6.0	13	14	5.8	4.2
17	4.8	10	7.0	616	841	10	25	5.7	7.5	31	32	4.4
18	4.0	9.1	6.8	135	427	288	23	6.0	6.2	19	9.5	4.2
19	40	8.3	6.6	107	74	1720	16	6.1	5.8	6.8	7.4	3.6
20	35	7.5	5.6	259	28	319	18	5.9	5.1	6.5	6.4	3.5
21	9.3	8.2	5.0	69	19	238	12	6.1	4.8	6.6	6.1	4.1
22	7.4	259	37	24	13	146	10	5.8	5.5	6.7	5.5	4.3
23	6.8	155	73	192	73	44	9.4	16	5.7	7.1	5.4	4.1
24	6.3	18	31	374	106	34	8.7	19	6.1	6.9	5.9	4.0
25	5.5	12	80	116	25	21	7.3	9.8	5.9	25	6.3	4.0
26	6.2	10	24	28	16	18	6.9	7.4	5.8	15	9.0	3.6
27	12	8.6	57	95	13	15	7.4	9.8	5.1	8.2	6.7	3.4
28	8.1	7.2	118	767	12	13	8.1	7.6	4.8	12	6.6	4.0
29	6.6	6.6	31	239	---	13	7.4	7.0	5.3	7.7	5.9	4.2
30	6.2	11	26	52	---	13	7.0	6.1	6.0	9.9	8.7	6.6
31	5.9	---	16	22	---	12	---	5.7	---	12	6.3	---
TOTAL	231.1	813.8	699.8	4160.2	3113.3	3956.8	700.2	354.1	234.9	299.1	247.5	295.7
MEAN	7.45	27.1	22.6	134	111	128	23.3	11.4	7.83	9.65	7.98	9.86
MAX	40	259	118	767	841	1720	119	79	28	31	32	106
MIN	3.3	5.9	5.0	7.2	9.3	7.3	6.9	5.7	4.8	4.6	5.4	3.4
MED	4.8	8.9	9.5	43	19	14	14	7.4	6.0	6.9	6.3	4.3
AC-FT	458	1610	1390	8250	6180	7850	1390	702	466	593	491	587
CFSM	.35	1.29	1.07	6.36	5.27	6.05	1.11	.54	.37	.46	.38	.47
IN.	.41	1.43	1.23	7.33	5.49	6.98	1.23	.62	.41	.53	.44	.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998<sup>6</sup>, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	19.8	28.5	32.3	57.4	61.8	65.4	37.0	21.4	12.9	15.9	17.0	23.1
MAX	60.2	82.7	86.3	134	111	128	84.5	59.1	44.4	48.6	66.7	210
(WY)	1996	1993	1984	1998	1998	1998	1993	1990	1992	1989	1986	1996
MIN	3.27	3.89	4.32	12.6	10.8	8.18	4.00	8.57	4.55	3.33	3.50	2.49
(WY)	1986	1985	1989	1986	1991	1985	1985	1987	1987	1983	1983	1983

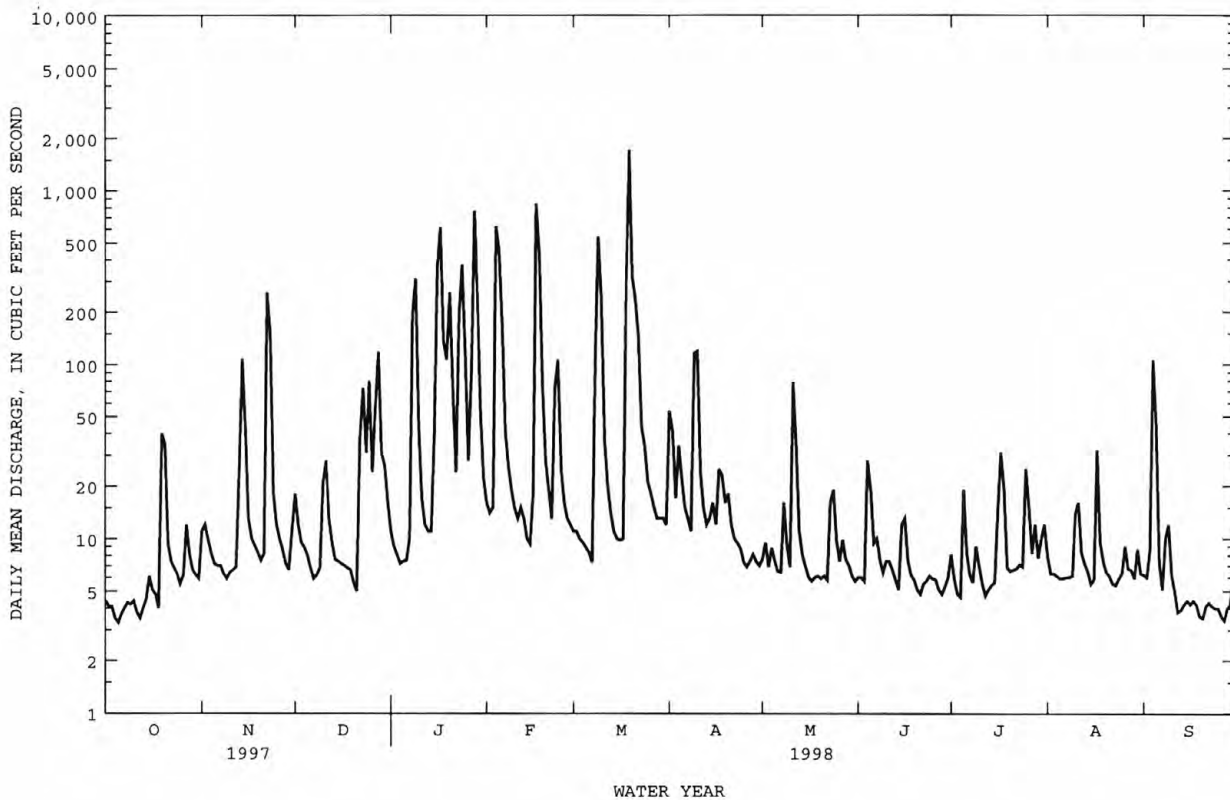
## CAPE FEAR RIVER BASIN

0209741955 NORTHEAST CREEK AT SECONDARY ROAD 1100 NEAR GENLEE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1983 - 1998 <sup>a</sup>	
ANNUAL TOTAL	9845.6		15106.5		33.1	
ANNUAL MEAN	27.0		41.4		49.1	1996
HIGHEST ANNUAL MEAN					14.7	1988
LOWEST ANNUAL MEAN					3350	Sep 6 1996
HIGHEST DAILY MEAN	875	Apr 29	1720	Mar 19		
LOWEST DAILY MEAN	3.3	Sep 21	3.3	Oct 5	.74	Jul 16 1991
ANNUAL SEVEN-DAY MINIMUM	3.9	Oct 2	3.9	Oct 2	1.5	Oct 7 1985
INSTANTANEOUS PEAK FLOW			2620*	Mar 19	5140*	Sep 6 1996
INSTANTANEOUS PEAK STAGE			12.12	Mar 19	13.92	Sep 6 1996
INSTANTANEOUS LOW FLOW			2.6	Oct 5	.76	Oct 7 1985
ANNUAL RUNOFF (AC-FT)	19530		29960		23960	
ANNUAL RUNOFF (CFSM)	1.28		1.96		1.57	
ANNUAL RUNOFF (INCHES)	17.36		26.63		21.30	
10 PERCENT EXCEEDS	41		76		64	
50 PERCENT EXCEEDS	8.2		8.6		8.8	
90 PERCENT EXCEEDS	5.0		4.8		4.0	

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.





## CAPE FEAR RIVER BASIN

02097464 MORGAN CREEK NEAR WHITE CROSS, NC

LOCATION.--Lat 35°55'25", long 79°06'56", Orange County, Hydrologic Unit 030200201, at downstream side of culvert on State Highway 54, 2 mi upstream from University Lake, and 3.5 mi east of White Cross.

DRAINAGE AREA.--8.35 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 420 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Maximum discharge for period of record from rating curve extended above 2,700 ft<sup>3</sup>/s, by logarithmic plotting. Minimum discharge for period of record also occurred Sept. 25-30, Oct. 1-4, 1990. Minimum discharge for the current year also occurred Aug. 30, 31, Sept. 1, 2, 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	1.3	3.1	3.1	8.4	5.3	12	4.1	1.4	.89	.54	.11
2	.29	1.7	2.2	2.7	6.7	4.8	9.7	3.8	1.2	.76	.45	.12
3	.28	1.8	1.8	2.5	13	4.4	7.3	3.3	1.2	.68	.39	.18
4	.30	1.6	1.9	2.4	227	4.2	7.8	3.4	2.9	.58	.35	8.2
5	.29	1.6	1.6	2.2	95	4.0	6.3	3.0	2.9	.68	.31	.50
6	.30	1.7	1.4	2.2	31	3.8	5.6	2.5	3.2	.60	.29	.30
7	.29	2.0	1.3	3.1	20	3.9	5.4	3.1	3.0	.54	.28	.27
8	.32	2.3	1.2	84	14	50	5.1	5.9	1.6	.51	.28	.41
9	.34	2.5	1.3	38	10	137	28	3.6	1.5	.52	.27	.42
10	.36	2.5	2.5	12	8.6	34	13	2.9	2.3	.47	.56	.35
11	.36	2.6	3.7	6.6	8.4	18	8.3	50	1.8	.44	.45	.34
12	.34	2.7	2.4	4.6	10	13	6.3	11	1.4	.42	.30	.33
13	.33	4.8	1.9	3.9	7.1	11	5.5	5.7	1.2	.42	.25	.31
14	.35	14	1.7	3.2	6.0	9.9	5.9	4.2	1.1	.42	.27	.31
15	1.4	3.8	1.5	29	5.0	8.7	5.8	3.5	1.8	.55	.27	.32
16	.42	2.0	1.5	185	17	8.0	5.0	3.0	1.8	.44	.30	.33
17	.32	1.5	1.5	64	460	8.0	20	2.7	1.1	.46	.42	.34
18	.30	1.3	1.4	18	58	257	18	2.4	.95	.42	.34	.35
19	5.4	1.3	1.3	32	23	640	20	2.2	.93	.37	.30	.36
20	2.1	1.2	1.3	26	14	118	16	2.0	.96	.44	.25	.36
21	.65	3.7	1.3	11	11	134	8.8	2.0	.86	.41	.22	.38
22	.45	51	7.4	8.1	8.7	44	7.5	1.8	.80	.43	.20	.38
23	.35	6.0	8.2	87	13	25	7.2	2.6	.78	.60	.18	.38
24	.33	3.1	6.3	46	11	18	6.5	3.1	.71	.53	.19	.37
25	.36	2.2	12	18	7.7	15	5.1	2.5	.68	.51	.19	.36
26	.50	1.8	5.5	11	6.5	13	4.4	2.3	.66	.56	.16	.36
27	.79	1.6	9.8	131	5.9	12	4.0	2.1	.65	.52	.15	.34
28	.65	1.5	13	138	5.9	11	3.9	1.9	.65	.58	.14	.36
29	.56	1.4	6.5	32	---	9.7	3.7	1.8	.62	.53	.13	.35
30	.60	2.2	5.8	17	---	8.8	3.7	1.6	.71	.49	.13	.38
31	.70	---	4.2	11	---	8.2	---	1.5	---	.55	.13	---
TOTAL	20.36	128.7	116.5	1034.6	1111.9	1641.7	265.8	145.5	41.36	16.32	8.69	17.87
MEAN	.66	4.29	3.76	33.4	39.7	53.0	8.86	4.69	1.38	.53	.28	.60
MAX	5.4	51	13	185	460	640	28	50	3.2	.89	.56	8.2
MIN	.28	1.2	1.2	2.2	5.0	3.8	3.7	1.5	.62	.37	.13	.11
CFSM	.08	.51	.45	4.00	4.76	6.34	1.06	.56	.17	.06	.03	.07
IN.	.09	.57	.52	4.61	4.95	7.31	1.18	.65	.18	.07	.04	.08

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

	MEAN	4.33	5.25	5.57	14.3	16.3	22.8	10.4	8.31	5.73	2.64	3.30	4.60
MAX	13.1	15.3	13.2	33.4	39.7	53.0	18.2	30.1	19.9	7.37	18.7	32.0	
(WY)	1990	1996	1990	1998	1998	1998	1993	1989	1995	1991	1995	1996	
MIN	.65	1.22	1.03	2.54	4.15	9.80	2.33	2.41	.96	.53	.16	.075	
(WY)	1995	1995	1995	1989	1991	1997	1995	1995	1993	1998	1997	1990	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

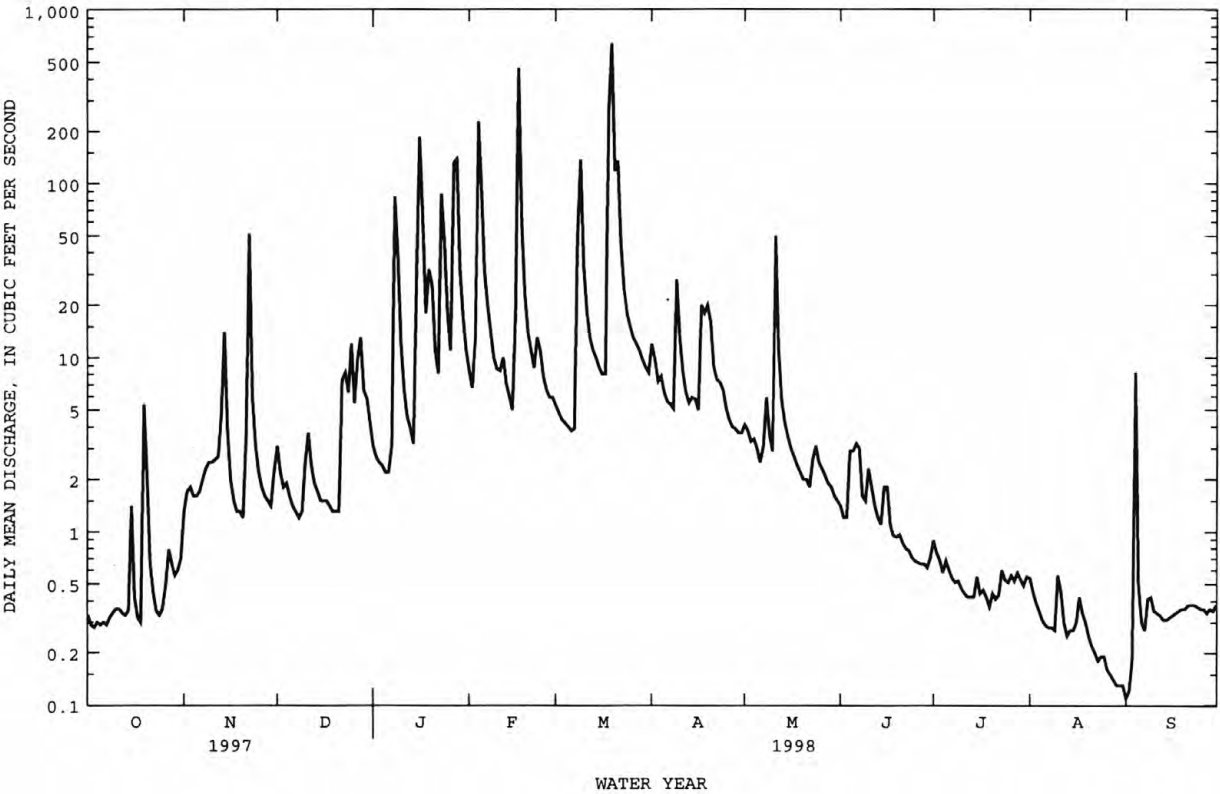
## WATER YEARS 1989 - 1998

ANNUAL TOTAL	1900.63	4549.30	
ANNUAL MEAN	5.21	12.5	8.42
HIGHEST ANNUAL MEAN			12.5
LOWEST ANNUAL MEAN			5.38
HIGHEST DAILY MEAN	113	Feb 15	640
LOWEST DAILY MEAN	.05	Sep 5	.11
ANNUAL SEVEN-DAY MINIMUM	.06	Sep 2	.13
INSTANTANEOUS PEAK FLOW			1790
INSTANTANEOUS PEAK STAGE			9.69
INSTANTANEOUS LOW FLOW			.11*
ANNUAL RUNOFF (CFSM)	.62	1.49	1.01
ANNUAL RUNOFF (INCHES)	8.47	20.27	13.70
10 PERCENT EXCEEDS	10	18	16
50 PERCENT EXCEEDS	2.5	2.0	3.3
90 PERCENT EXCEEDS	.22	.31	.42

\* See REMARKS.

CAPE FEAR RIVER BASIN

02097464 MORGAN CREEK NEAR WHITE CROSS, NC--Continued



## CAPE FEAR RIVER BASIN

02097464 MORGAN CREEK NEAR WHITE CROSS, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1989 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED OF (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
OCT 09...	1300	.36	141	7.0	18.9	25	755	5.8	63	46
DEC 04...	1245	2.2	100	6.9	10.2	35	745	11.1	101	31
FEB 04...	1000	201	78	6.8	7.3	160	735	11.2	96	12
12...	1330	12	71	6.6	11.0	45	746	10.3	95	22
MAR 19...	1115	309	36	6.6	9.1	90	746	10.7	95	10
APR 14...	0945	5.4	78	6.8	13.9	32	754	8.9	87	25
JUN 19...	1030	.94	84	6.5	21.7	55	748	7.5	87	32
AUG 27...	1115	.12	140	7.1	23.8	22	742	4.9	60	49

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L HCO3) (99440)	ANC CARBON- ATE IT-FLD (MG/L CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 09...	11	4.4	5.9	20	.4	5.2	34	28	--	--
DEC 04...	7.8	2.9	5.3	25	.4	2.0	32	26	--	--
FEB 04...	2.8	1.2	1.9	23	.2	1.6	9.0	7.0	--	--
12...	5.4	2.1	4.0	27	.4	1.4	22	18	--	--
MAR 19...	2.4	1.0	1.4	21	.2	1.3	7.0	6.0	--	--
APR 14...	6.3	2.3	4.1	25	.4	.99	27	22	--	--
JUN 19...	8.5	2.7	5.0	24	.4	2.0	--	--	<.10	5.3
AUG 27...	13	4.2	6.7	21	.4	4.5	68	56	2.9	6.5

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 09...	--	--	--	.004	.161	.022	.37	.40	.56	.145
DEC 04...	--	--	--	.002	.320	.005	.17	.17	.50	.139
FEB 04...	--	--	--	.005	.214	.029	.62	.64	.86	.156
12...	--	--	--	.004	.584	.005	.24	.25	.83	.069
MAR 19...	--	--	--	.004	.159	.056	.51	.57	.73	.122
APR 14...	--	--	--	.002	.300	.006	.20	.21	.51	.046
JUN 19...	<.10	16	72	.004	.744	.016	.21	.22	.97	.143
AUG 27...	<.10	17	96	.002	.095	.011	.22	.23	.32	.043

## CAPE FEAR RIVER BASIN

02097464 MORGAN CREEK NEAR WHITE CROSS, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
OCT 09...	.083	80	<1	<1	<1	<1	2	650	<1	190
DEC 04...	.112	--	--	--	--	--	--	--	--	--
FEB 04...	.070	770	<1	<1	1	<1	3	940	2	82
12...	.044	--	--	--	--	--	--	--	--	--
MAR 19...	.043	720	<1	<1	2	1	2	1500	2	110
APR 14...	.020	200	<1	<1	<1	<1	<1	440	<1	22
JUN 19...	.100	--	--	--	--	--	--	--	--	--
AUG 27...	.053	--	--	--	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 09...	.10	<1	<1	<1	<1	<10	3.9	12	.01
DEC 04...	--	--	--	--	--	--	4.4	2	.01
FEB 04...	<.10	<1	1	<1	<1	<10	12	63	34
12...	--	--	--	--	--	--	3.5	3	.09
MAR 19...	<.10	<1	2	<1	<1	<10	11	61	51
APR 14...	<.10	<1	<1	<1	<1	<10	3.7	5	.08
JUN 19...	--	--	--	--	--	--	4.1	7	.02
AUG 27...	--	--	--	--	--	--	3.8	11	.00

## CAPE FEAR RIVER BASIN

0209749990 UNIVERSITY LAKE AT INTAKES NEAR CHAPEL HILL, NC

LOCATION.--Lat 35°53'48", long 79°05'33", Orange County, Hydrologic Unit 03030002, at Orange Water and Sewage Authority intakes, and 1.8 mi southwest of Chapel Hill.

DRAINAGE AREA.--30 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1989 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment. Samples for nutrient and chlorophyll a and b analyses were collected through a sampling zone equal to double the secchi disk depth using the depth-integration sampling technique.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	SAMPLING DEPTH (FEET) (000003)	SPECIFIC CONDUCTANCE (US/CM) (000095)	PH WATER WHOLE FIELD (STANDARD UNITS) (000400)	TEMPERATURE WATER (DEG C) (000010)	COLOR (PLATINUM-COBALT UNITS) (000080)	BAROMETRIC PRESSURE (MM HG) (000025)	TRANSPARENCY (SECCHI DISK) (000078)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (000300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (000301)	HARDNESS TOTAL (MG/L AS CACO3) (000900)	CALCIUM DIS-SOLVED (MG/L AS CA) (000915)
OCT 22...	1230	1.00	95	6.9	17.6	70	755	.45	7.6	80	30	7.7
APR 24...	0945	1.00	67	7.1	17.3	22	755	.85	9.5	99	22	5.5
JUN 23...	1145	1.00	87	8.5	30.2	33	756	.45	9.7	130	26	6.9
AUG 27...	0945	1.00	93	7.0	27.4	55	742	--	5.2	67	29	7.4

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	ANC UNFLTRD CARBON- ATE IT-FLD (MG/L - CAC03) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L 70300)	
OCT 22...	2.7	5.9	28	.5	2.3	23	19	2.2	5.4	<.10	--	--
APR 24...	2.0	4.4	29	.4	1.4	24	20	--	--	--	--	--
JUN 23...	2.2	5.5	30	.5	1.6	--	--	3.4	5.0	<.10	15	70
AUG 27...	2.5	6.3	30	.5	2.2	38	31	2.6	4.8	<.10	20	84

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
OCT 22...	.003	.005	.007	.96	.96	.97	.038	.001	31.0	<.100	20	<1
APR 24...	<.001	<.005	<.002	--	.40	--	.046	.001	--	--	70	<1
JUN 23...	.002	.011	<.002	--	.64	.65	.032	.004	16.0	<.100	--	--
AUG 27...	.001	<.005	<.002	--	.35	--	<.010	<.001	31.0	1.00	--	--

[illegible]

## CAPE FEAR RIVER BASIN

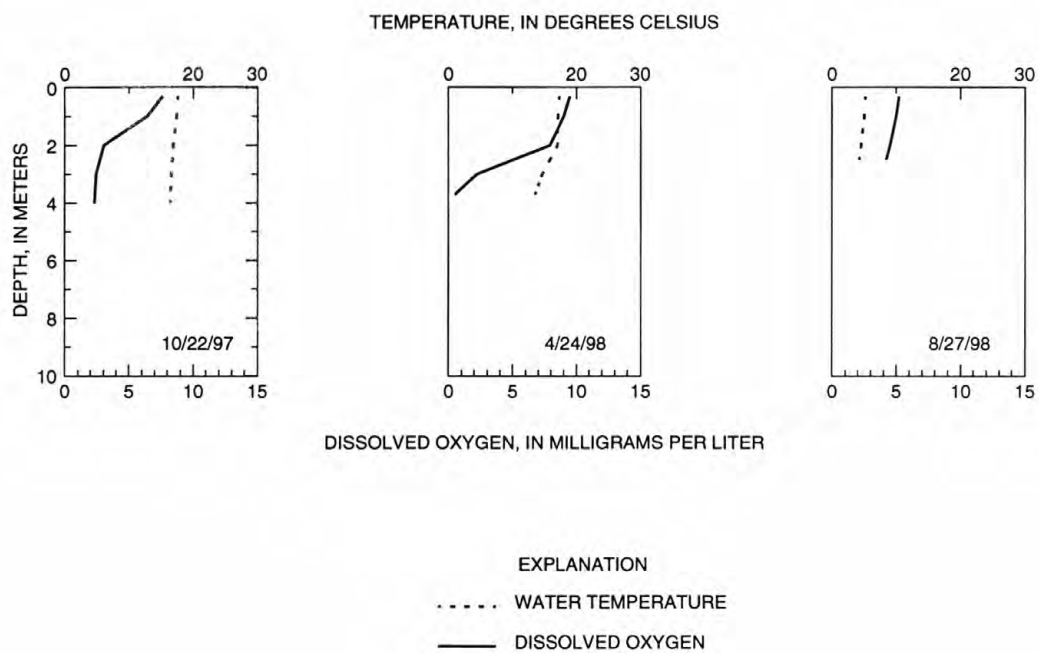
0209749990 UNIVERSITY LAKE AT INTAKES NEAR CHAPEL HILL, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

## CAPE FEAR RIVER BASIN

0209749990 UNIVERSITY LAKE AT INTAKES NEAR CHAPEL HILL, NC--Continued







## CAPE FEAR RIVER BASIN

02097517 MORGAN CREEK NEAR CHAPEL HILL, NC

LOCATION.--Lat 35°53'36", long 79°01'10", Orange County, Hydrologic Unit 03030002, on left bank 2.5 mi southeast of Chapel Hill, and 3.8 mi downstream of U.S. Highway 501.

DRAINAGE AREA.--41.0 mi<sup>2</sup>

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

GAGE.--Water-stage recorder. Datum of gage is 245 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. The City of Chapel Hill diverted an average of 9.3 ft<sup>3</sup>/s for water supply upstream of station, and an average of 11.3 ft<sup>3</sup>/s was returned as treated effluent upstream of station. Considerable diurnal fluctuation and occasional slight regulation caused by small reservoir and treated effluent outfall upstream from station. Maximum discharge for period of record from rating curve extended above 1,700 ft<sup>3</sup>/s, by logarithmic plotting; maximum gage height, 16.18 ft, from floodmark. Minimum discharge for the current water year also occurred Aug. 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	20	34	25	75	51	59	23	15	17	14	15
2	16	17	24	23	65	49	58	25	15	15	13	16
3	16	16	e21	20	81	48	46	22	15	14	13	25
4	15	16	e19	19	1090	42	56	21	29	13	13	111
5	15	15	e17	19	575	39	45	21	24	16	13	14
6	16	17	17	18	169	36	39	25	23	14	13	12
7	16	30	17	23	118	35	36	25	18	14	13	12
8	16	16	17	462	97	188	35	46	16	14	13	19
9	16	15	18	190	81	761	101	25	16	15	16	14
10	16	15	29	89	72	189	74	20	26	14	28	12
11	16	15	22	59	69	100	53	118	18	13	19	12
12	15	15	18	43	74	79	42	60	17	13	15	11
13	16	46	18	38	62	68	38	35	16	14	15	12
14	19	65	17	31	56	62	41	27	15	14	14	12
15	43	22	17	69	50	56	39	22	28	14	14	12
16	14	18	16	734	96	51	36	20	19	23	69	12
17	13	17	16	585	1660	51	61	18	16	20	36	12
18	13	17	15	133	412	687	61	17	16	15	13	12
19	71	17	15	152	159	2230	64	16	16	14	12	12
20	21	16	15	157	110	378	60	17	14	14	11	12
21	16	34	14	98	89	640	44	16	14	14	11	12
22	17	135	49	75	76	182	37	16	15	15	11	12
23	15	66	26	369	101	116	37	21	15	16	11	12
24	15	36	35	306	88	97	36	18	15	14	11	11
25	15	26	41	123	69	84	30	16	15	17	11	11
26	20	23	46	91	61	77	26	16	15	19	11	12
27	19	21	69	429	57	73	24	22	14	16	12	12
28	16	22	88	946	57	66	24	16	14	16	12	12
29	15	22	59	187	---	60	22	16	14	15	13	12
30	15	37	50	113	---	57	22	16	17	18	15	16
31	15	---	35	89	---	52	---	15	---	16	15	---
TOTAL	576	847	894	5715	5769	6704	1346	791	520	476	500	491
MEAN	18.6	28.2	28.8	184	206	216	44.9	25.5	17.3	15.4	16.1	16.4
MAX	71	135	88	946	1660	2230	101	118	29	23	69	111
MIN	13	15	14	18	50	35	22	15	14	13	11	11
CFSM	.45	.69	.70	4.50	5.03	5.27	1.09	.62	.42	.37	.39	.40
IN.	.52	.77	.81	5.19	5.23	6.08	1.22	.72	.47	.43	.45	.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998, BY WATER YEAR (WY)

	MEAN	23.3	37.8	38.1	72.4	83.5	104	56.7	34.5	25.0	19.3	21.5	21.5
MAX	47.8	141	105	184	206	226	131	91.2	84.9	51.5	65.0	115	
(WY)	1991	1986	1984	1998	1998	1993	1984	1990	1992	1984	1985	1996	
MIN	13.3	10.5	12.9	15.2	17.3	18.0	17.5	14.5	11.1	8.93	12.1	8.77	
(WY)	1985	1983	1989	1989	1991	1988	1986	1986	1986	1988	1988	1983	

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1983 - 1998

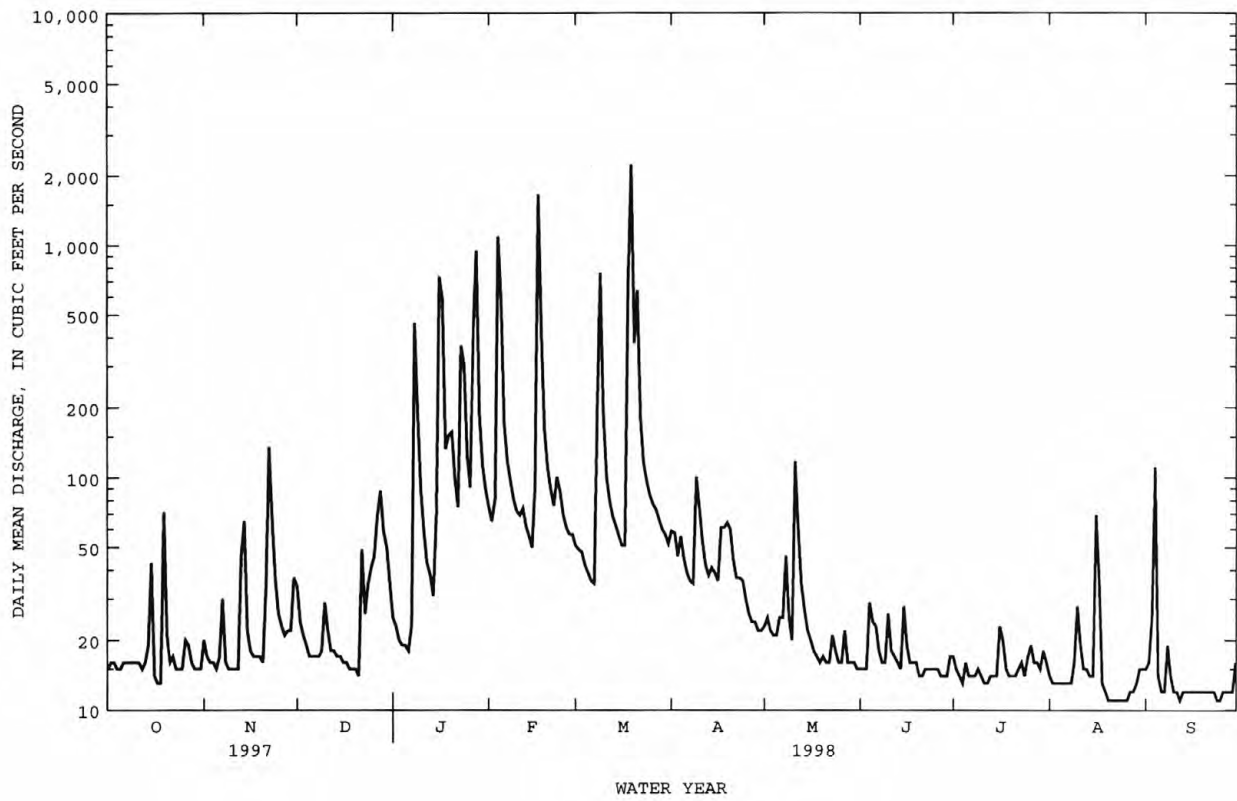
ANNUAL TOTAL	14188	24629	
ANNUAL MEAN	38.9	67.5	43.8
HIGHEST ANNUAL MEAN			75.6
LOWEST ANNUAL MEAN			21.7
HIGHEST DAILY MEAN	872	2230	2600
LOWEST DAILY MEAN	13	11	.60
ANNUAL SEVEN-DAY MINIMUM	14	11	2.1
INSTANTANEOUS PEAK FLOW		3320*	4210*
INSTANTANEOUS PEAK STAGE		14.81	16.18*
INSTANTANEOUS LOW FLOW		8.3*	NOT DETERMINED
ANNUAL RUNOFF (CFSM)	.95	1.65	1.07
ANNUAL RUNOFF (INCHES)	12.87	22.35	14.51
10 PERCENT EXCEEDS	66	100	89
50 PERCENT EXCEEDS	20	19	18
90 PERCENT EXCEEDS	14	13	12

e Estimated.

\* See REMARKS.

## CAPE FEAR RIVER BASIN

02097517 MORGAN CREEK NEAR CHAPEL HILL, NC--Continued



## CAPE FEAR RIVER BASIN

0209768310 JORDAN LAKE AT BUOY 12 AT FARRINGTON, NC

LOCATION.--Lat 35°47'55", long 79°00'22", Chatham County, Hydrologic Unit 03030002, .02 mi above Secondary Road 1008, and 0.2 mi east of Farrington.

PERIOD OF RECORD.--Water years 1992 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment. Samples for nutrient and chlorophyll a and b analyses were collected through a sampling zone equal to double the secchi disk depth using the depth-integration sampling technique.

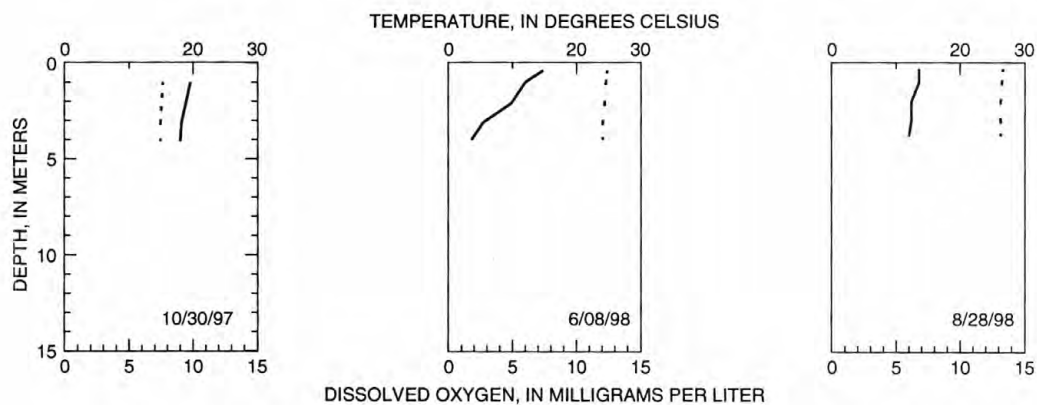
## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	BAROMETRIC PRESSURE (MM HG) (00025)	TRANSPARENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PERCENT SATURATION) (00301)	
OCT 30...	1045	1.00	170	7.4	15.8	55	761	.50	10.1	102	
JUN 08...	1045	1.00	120	7.3	24.8	31	755	.55	7.4	91	
AUG 28...	1000	1.00	159	7.2	26.7	40	754	.25	7.3	92	
DATE	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	BICARBONATE-FLD (MG/L AS HCO3) (99440)	ANC UNFLTRD CARBONATE-IT-FLD (MG/L - CACO3) (99430)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	
OCT 30...	33	8.5	2.9	18	51	1	3.2	40	33	16	
JUN 08...	27	7.2	2.2	11	43	.9	2.3	--	--	--	
AUG 28...	31	8.1	2.6	17	51	1	3.2	41	33	14	
DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	
OCT 30...	17	.30	--	--	.020	.083	.052	.96	1.0	1.1	
JUN 08...	--	--	--	--	.002	.005	.007	.61	.61	.61	
AUG 28...	13	.25	4.7	97	.002	.012	.095	.31	.40	.42	
DATE	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CHLOROPHYTON CHROMO FLUOROM (UG/L) (70953)	CHLOROPHYTON CHROMO FLUOROM (UG/L) (70954)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM TOTAL UNFLTRD (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOVERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	
OCT 30...	.034	.002	20.0	1.00	140	<1	<1	<1	<1	<1	
JUN 08...	.041	.002	11.0	.890	--	--	--	--	--	--	
AUG 28...	.010	<.001	36.0	1.60	--	--	--	--	--	--	

## CAPE FEAR RIVER BASIN

0209768310 JORDAN LAKE AT BUOY 12 AT FARRINGTON, NC--Continued

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 30...	400	<1	260	<.10	2	<1	<1	4	<10	8.0
JUN 08...	--	--	--	--	--	--	--	--	--	9.6
AUG 28...	--	--	--	--	--	--	--	--	--	10



## EXPLANATION

..... WATER TEMPERATURE

—— DISSOLVED OXYGEN

## CAPE FEAR RIVER BASIN

0209799150 JORDAN LAKE ABOVE U.S. HIGHWAY 64 NEAR WILSONVILLE, NC

LOCATION.--Lat 35°44'29", long 79°01'10", Chatham County, Hydrologic Unit 03030002, 0.2 mi above bridge on U.S. Highway 64, and 1.1 mi west of Wilsonville.

PERIOD OF RECORD.--Water years 1991 to current year.

REMARKS.-- Station operated to define water quality as part of a six-county regional surface-water quality assessment. Samples for nutrient and chlorophyll a and b analyses were collected through a sampling zone equal to double the secchi disk depth using the depth-integration sampling technique.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	SAMPLING DEPTH (FEET) (000003)	SPECIFIC CONDUCTANCE (US/CM) (000095)	PH	TEMPERATURE WATER (DEG C) (000010)	COLOR (PLATINUM- COBALT UNITS) (000080)	BARO-	TRANSPAR- ENCY (SECCHI DISK) (M) (000078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS-	HARD- NESS TOTAL (MG/L CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
				WATER WHOLE FIELD (STANDARD UNITS) (00400)			METRIC PRES- SURE (MM OF HG) (000025)			SOLVED (PER- CENT SATUR- ATION) (00301)		
OCT 30...	1200	1.00	139	7.1	16.9	30	761	.55	8.8	91	31	7.7
JUN 08...	1215	1.00	110	7.5	25.0	35	755	.75	8.5	104	22	5.5
AUG 28...	1025	1.00	121	7.2	27.1	35	7540	.55	6.5	8	27	7.1

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION (MG/L AS K) (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00931)	BICAR- BONATE IT-FLD (MG/L AS K) (00935)	ANC UNFLTRD CARBON- ATE IT-FLD (MG/L CAC03) (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS STO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	
OCT 30...	2.8	14	47	1	2.8	35	29	12	13	.21	--	--
JUN 08...	1.9	7.2	39	.7	2.0	--	--	--	--	--	--	--
AUG 28...	2.4	11	43	.9	2.5	34	28	8.7	8.3	.16	4.8	76

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
OCT 30...	.015	.159	.044	.75	.80	.96	.047	.003	12.0	.400	60	<1
JUN 08...	.002	<.005	.006	.50	.51	--	.014	.002	7.50	.540	--	--
AUG 28...	.003	<.005	.145	.67	.81	--	.052	.001	16.0	.820	--	--

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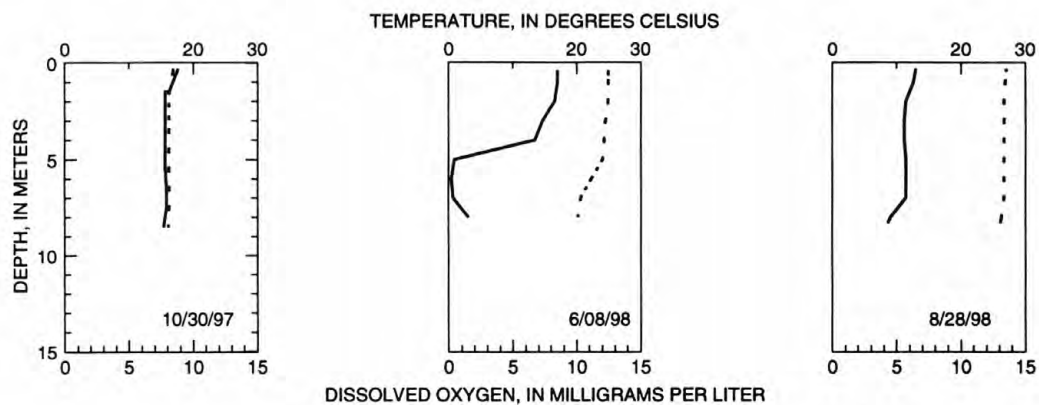
0209799150 JORDAN LAKE ABOVE U.S. HIGHWAY 64 NEAR WILSONVILLE, NC--Continued

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## CAPE FEAR RIVER BASIN

0209799150 JORDAN LAKE ABOVE U.S. HIGHWAY 64 NEAR WILSONVILLE, NC--Continued



## EXPLANATION

- ..... WATER TEMPERATURE
- DISSOLVED OXYGEN



## CAPE FEAR RIVER BASIN

02098197 B. EVERETT JORDAN LAKE AT DAM NEAR MONCURE, NC

LOCATION.--Lat 35°39'16", long 79°04'06", Chatham County, Hydrologic Unit 03030002, at B. Everett Jordan Dam on Haw River, 0.3 mi downstream of mouth of New Hope River, 2.5 mi north of Moncure, 4.2 mi upstream from mouth of Haw River, and 202.2 mi upstream from mouth of Cape Fear River.

DRAINAGE AREA.--1,689 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--Lake elevations controlled by reservoir operations at B. Everett Jordan Dam. Lake is used for flood control, water supply, low-flow augmentation, and recreation. Some storage was affected during construction and then operated temporarily as a "dry reservoir" January 1975 to August 1981. Reservoir began filling September 1981 and reached normal pool elevation, 216 ft, Feb. 4, 1982. Total capacity is 32,825,074,000 ft<sup>3</sup> at 240.0 ft, of which 23,454,011,000 ft<sup>3</sup> is controlled flood storage (see station 02098198).

EXTREMES FOR PERIOD OF RECORD.--Maximum, 233.59 ft, Sept. 8, 1996; minimum, 207.85 ft, Nov. 12, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum, 230.35 ft, Mar. 23; minimum, 213.17 ft, Sept. 30.

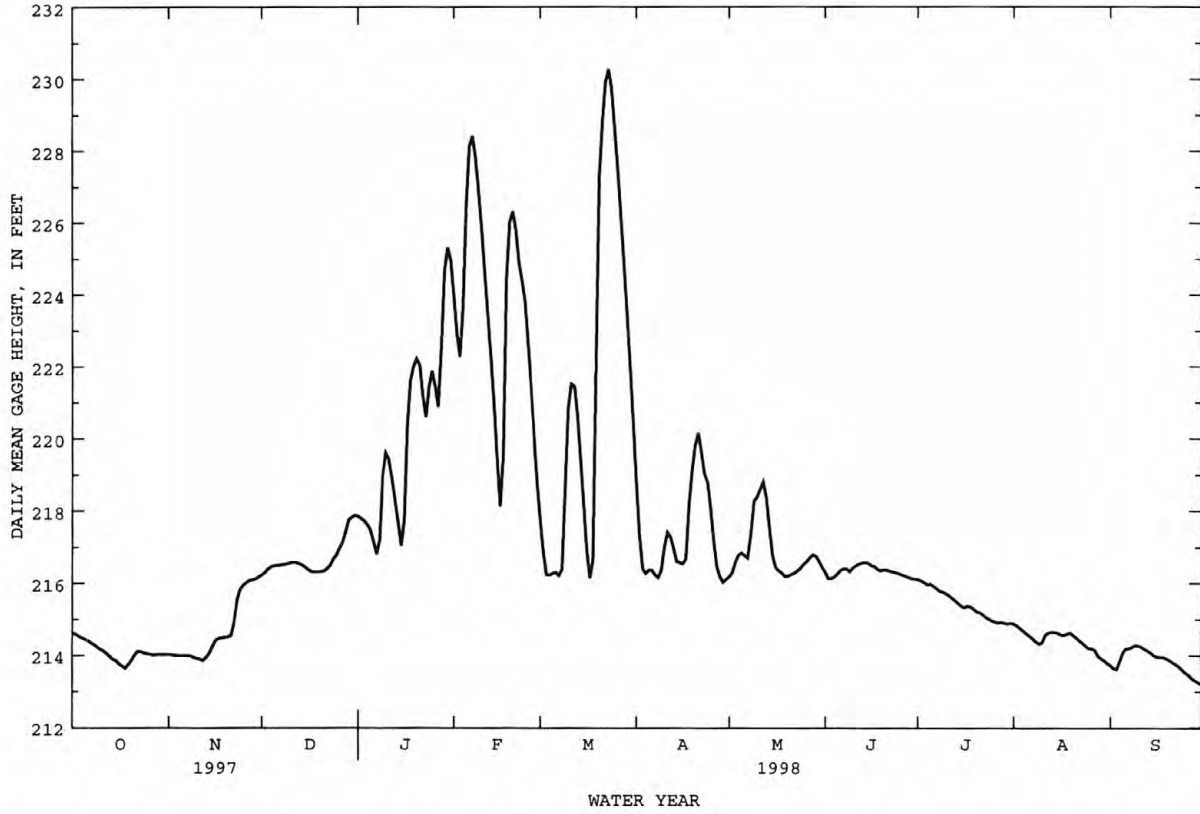
COOPERATION.--Some records furnished by U.S. Army Corps of Engineers.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	214.62	214.03	216.23	217.86	224.00	217.73	218.83	216.19	216.31	216.11	214.88	213.73
2	214.59	214.03	216.30	217.80	222.94	216.85	217.36	216.30	216.14	216.07	214.82	213.65
3	214.53	214.00	216.40	217.73	222.29	216.24	216.41	216.59	216.14	216.03	214.75	213.62
4	214.49	214.01	216.46	217.63	223.68	216.23	216.28	216.78	216.18	215.96	214.68	213.84
5	214.45	214.01	216.49	217.49	226.54	216.28	216.37	216.84	216.26	215.98	214.61	214.08
6	214.41	214.01	216.50	217.16	228.14	216.30	216.37	216.77	216.36	215.92	214.54	214.20
7	214.35	214.01	216.51	216.82	228.43	216.22	216.24	216.70	216.41	215.86	214.47	214.20
8	214.30	213.99	216.52	217.20	227.82	216.39	216.16	217.39	216.40	215.79	214.39	214.25
9	214.23	213.95	216.54	219.01	226.88	218.59	216.34	218.27	216.33	215.76	214.33	214.29
10	214.17	213.92	216.57	219.61	225.83	220.85	217.00	218.39	216.43	215.72	214.36	214.28
11	214.13	213.90	216.58	219.43	224.61	221.53	217.41	218.60	216.49	215.67	214.57	214.25
12	214.05	213.87	216.58	218.92	223.36	221.46	217.28	218.81	216.54	215.59	214.63	214.19
13	213.97	213.95	216.55	218.32	222.21	220.60	216.97	218.37	216.57	215.52	214.66	214.14
14	213.89	214.06	216.51	217.68	220.90	219.40	216.61	217.55	216.58	215.45	214.65	214.08
15	213.86	214.25	216.45	217.04	219.44	218.18	216.58	216.76	216.56	215.37	214.63	214.01
16	213.77	214.42	216.38	217.73	218.13	216.93	216.54	216.44	216.49	215.33	214.58	213.97
17	213.71	214.47	216.32	220.38	219.54	216.15	216.68	216.35	216.47	215.38	214.57	213.96
18	213.65	214.49	216.32	221.61	224.44	216.63	218.14	216.29	216.39	215.35	214.60	213.96
19	213.75	214.51	216.32	222.02	226.03	222.46	219.10	216.19	216.35	215.28	214.63	213.93
20	213.88	214.52	216.33	222.23	226.32	227.30	219.81	216.20	216.38	215.21	214.57	213.88
21	214.02	214.55	216.34	222.05	225.81	228.80	220.16	216.25	216.37	215.19	214.50	213.82
22	214.12	214.90	216.40	221.17	224.91	229.91	219.65	216.28	216.34	215.13	214.42	213.76
23	214.11	215.52	216.49	220.60	224.41	230.28	219.04	216.35	216.32	215.06	214.35	213.71
24	214.07	215.82	216.67	221.45	223.81	229.74	218.79	216.42	216.30	215.01	214.27	213.62
25	214.05	215.95	216.78	221.89	222.66	228.64	218.05	216.53	216.27	214.96	214.20	213.54
26	214.04	216.02	216.96	221.46	221.35	227.41	217.16	216.60	216.23	214.94	214.20	213.48
27	214.02	216.08	217.13	220.89	219.97	226.13	216.46	216.70	216.20	214.91	214.15	213.39
28	214.03	216.10	217.42	222.65	218.74	224.80	216.19	216.79	216.17	214.93	213.99	213.32
29	214.03	216.12	217.75	224.69	---	223.42	216.03	216.76	216.13	214.90	213.92	213.27
30	214.03	216.18	217.83	225.32	---	221.96	216.11	216.61	216.13	214.88	213.87	213.22
31	214.03	---	217.88	224.99	---	220.41	---	216.45	---	214.90	213.79	---
MEAN	214.11	214.65	216.66	220.03	223.69	221.41	217.34	216.89	216.34	215.42	214.44	213.85
MAX	214.62	216.18	217.88	225.32	228.43	230.28	220.16	218.81	216.58	216.11	214.88	214.29
MIN	213.65	213.87	216.23	216.82	218.13	216.15	216.03	216.19	216.13	214.88	213.79	213.22

CAPE FEAR RIVER BASIN

02098197 B. EVERETT JORDAN LAKE AT DAM NEAR MONCURE, NC--Continued



## CAPE FEAR RIVER BASIN

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, NC

LOCATION.--Lat 35°39'11", long 79°04'03", Chatham County, Hydrologic Unit 0303002, on right bank 300 ft downstream from B. Everett Jordan Dam, 2.5 mi north of Moncure, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--1,689 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1965 to September 1992, discharge records. October 1965 to September 1978 published as "Haw River near Haywood, NC" (02098200). Gage height records only October 1992 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 155.00 ft above sea level (U.S. Corps of Engineers bench mark). Prior to Oct. 1, 1978, water-stage recorder at site 0.3 mi. downstream at same datum. U.S. Army Corps of Engineers satellite telemetry at station..

EXTREMES FOR PERIOD OF RECORD.--Maximum, 22.41 ft, Oct. 25, 1971 at site 0.3 mi downstream; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum, 18.42 ft, Jan. 21; minimum not determined.

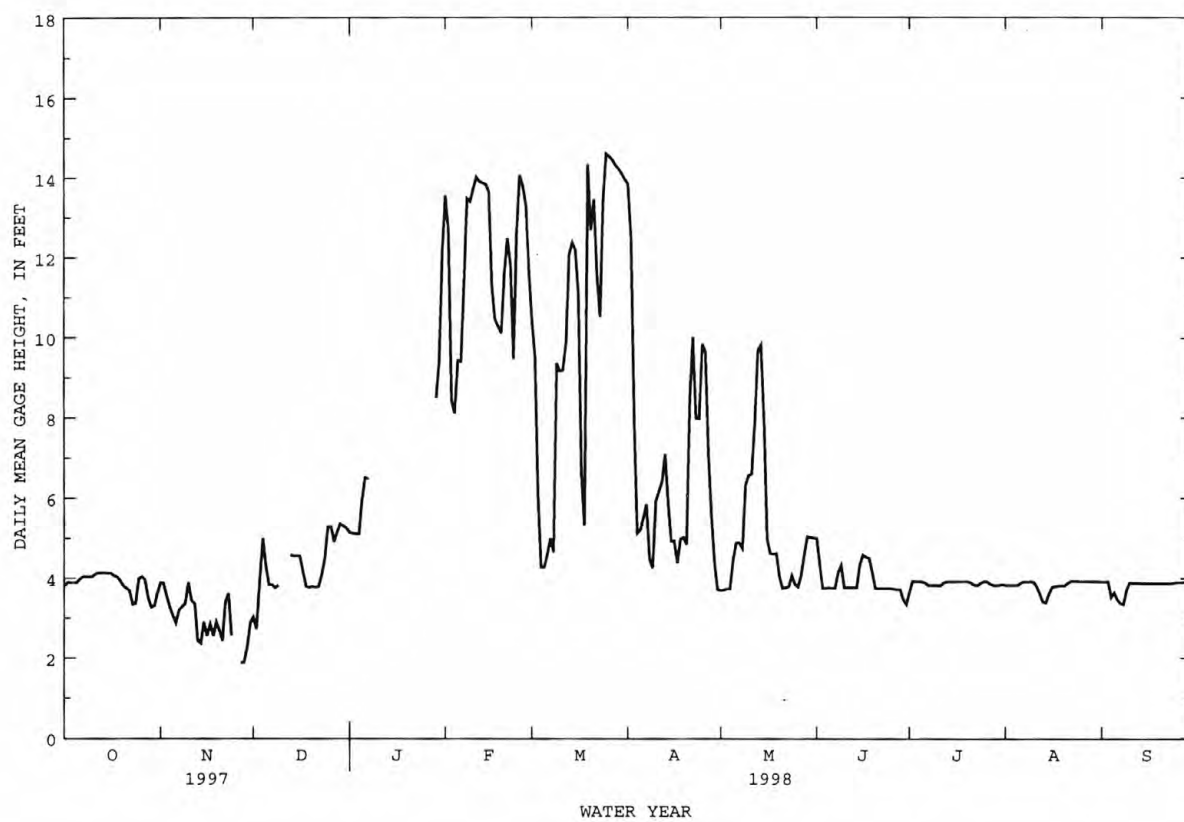
REMARKS.--Stage regulated by B. Everett Jordan Lake Dam (Station 02098197).

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.82	3.89	3.02	5.15	13.56	10.46	13.85	3.70	5.00	3.65	3.83	3.91
2	3.90	3.88	2.73	5.13	12.67	9.54	12.52	3.71	4.35	3.93	3.83	3.91
3	3.89	3.56	3.92	5.11	8.44	6.10	7.92	3.73	3.75	3.92	3.83	3.92
4	3.89	3.27	5.00	5.11	8.12	4.28	5.13	3.73	3.75	3.92	3.83	3.53
5	3.89	3.06	4.34	5.92	9.44	4.28	5.20	4.44	3.76	3.92	3.83	3.64
6	3.98	2.88	3.84	6.52	9.41	4.61	5.51	4.88	3.75	3.89	3.89	3.47
7	4.04	3.21	3.84	6.49	11.35	5.00	5.85	4.89	3.75	3.83	3.92	3.37
8	4.04	3.29	3.77	---	13.48	4.66	4.49	4.75	4.15	3.83	3.91	3.35
9	4.03	3.37	3.82	---	13.41	9.36	4.26	6.33	4.32	3.83	3.92	3.71
10	4.04	3.90	---	---	13.72	9.17	5.93	6.57	3.77	3.83	3.91	3.89
11	4.10	3.44	---	9.23	14.02	9.19	6.17	6.60	3.77	3.82	3.80	3.88
12	4.14	3.36	---	9.08	13.91	9.89	6.41	7.89	3.77	3.89	3.62	3.88
13	4.14	2.44	4.58	---	13.88	12.08	7.10	9.69	3.77	3.92	3.41	3.88
14	4.14	2.38	4.56	---	13.84	12.37	5.86	9.82	3.77	3.92	3.39	3.87
15	4.13	2.90	4.56	---	13.67	12.19	4.93	7.79	4.34	3.92	3.61	3.87
16	4.13	2.55	4.56	---	11.30	11.09	4.94	4.98	4.58	3.92	3.78	3.87
17	4.07	2.85	4.15	---	10.47	6.62	4.38	4.62	4.53	3.92	3.80	3.87
18	4.04	2.55	3.79	---	10.29	5.33	4.98	4.61	4.50	3.92	3.81	3.87
19	3.94	2.90	3.78	---	10.12	14.34	5.02	4.62	4.17	3.92	3.82	3.87
20	3.81	2.68	3.79	---	11.59	12.69	4.85	4.05	3.74	3.92	3.81	3.87
21	3.74	2.43	3.78	---	12.49	13.46	8.48	3.75	3.74	3.88	3.88	3.87
22	3.69	3.41	3.79	17.60	11.84	11.53	10.02	3.76	3.74	3.83	3.93	3.87
23	3.35	3.62	4.07	---	9.47	10.52	8.00	3.80	3.74	3.82	3.93	3.87
24	3.37	2.57	4.47	---	12.61	13.46	7.99	4.07	3.74	3.88	3.93	3.88
25	3.99	---	5.29	---	14.06	14.60	9.84	3.85	3.74	3.92	3.92	3.90
26	4.04	---	5.29	---	13.79	14.53	9.65	3.79	3.73	3.92	3.92	3.90
27	3.97	1.89	4.92	---	13.29	14.44	7.12	4.08	3.72	3.86	3.92	3.90
28	3.52	1.89	5.16	---	11.69	14.31	5.60	4.58	3.72	3.83	3.92	3.91
29	3.27	2.27	5.36	8.51	---	14.22	4.42	5.04	3.47	3.83	3.92	3.91
30	3.31	2.89	5.31	9.43	---	14.10	3.72	5.02	3.35	3.83	3.92	3.92
31	3.62	---	5.26	12.12	---	13.96	---	5.01	---	3.84	3.92	---
MEAN	3.87	---	---	---	12.00	10.40	6.67	5.10	3.93	3.87	3.83	3.81
MAX	4.14	---	---	---	14.06	14.60	13.85	9.82	5.00	3.93	3.93	3.92
MIN	3.27	---	---	---	8.12	4.28	3.72	3.70	3.35	3.65	3.39	3.35

## CAPE FEAR RIVER BASIN

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, NC--Continued



## CAPE FEAR RIVER BASIN

02099000 EAST FORK DEEP RIVER NEAR HIGH POINT, NC

LOCATION.--Lat 36°02'15", long 79°56'46", Guilford County, Hydrologic Unit 03030003, on right bank 5 ft upstream from bridge on Secondary Road 1541, 3.3 mi upstream from High Point Dam, and 5.2 mi northeast of High Point College, High Point.

DRAINAGE AREA.--14.8 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1928 to March 1994, October 1997 to September 1998.

REVISED RECORDS.--WSP 1723: 1929(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 764.02 ft above sea level.

REMARKS.--Records poor. Maximum discharge, 6,300 ft<sup>3</sup>/s, gage height, 10.87 ft, from floodmark, from rating curve extended above 1,600 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e8.0	e10	17	11	11	11	9.0	155	8.8	8.1	9.6	2.9
2	e7.5	e9.0	13	9.6	10	11	9.0	44	7.4	5.6	6.4	2.9
3	e7.0	e8.0	11	10	21	10	8.6	13	6.9	5.0	4.5	4.5
4	6.4	e7.5	12	10	199	9.5	22	12	8.7	4.9	3.8	14
5	6.9	e8.0	10	9.5	158	9.3	11	9.3	12	5.4	3.9	6.5
6	e7.5	e8.5	9.5	108	22	9.1	9.0	8.3	20	4.7	3.5	4.3
7	e7.5	e8.5	9.2	279	14	9.0	8.3	807	13	4.6	3.4	4.0
8	7.8	e8.5	8.8	519	12	155	29	369	8.6	4.5	577	13
9	7.5	e8.5	8.7	35	11	377	144	25	7.5	4.6	297	9.1
10	6.8	e9.0	12	16	10	22	18	18	60	4.5	291	5.9
11	7.1	e10	12	12	13	13	11	36	13	4.4	23	4.8
12	7.0	e12	9.9	11	20	11	8.8	15	9.6	4.2	10	4.0
13	e7.5	e30	8.6	11	12	10	8.1	11	8.6	4.3	7.2	3.9
14	e8.0	e25	8.1	11	11	9.7	8.6	9.6	7.3	4.2	5.8	3.8
15	e8.0	13	7.8	203	10	9.3	8.8	8.7	18	4.1	5.3	3.6
16	e7.0	8.7	7.8	72	47	9.2	11	8.4	10	19	5.0	3.6
17	e15	8.7	7.7	27	589	9.2	557	8.1	8.3	13	7.5	3.4
18	e13	8.8	7.6	15	35	13	32	7.6	6.9	7.5	5.9	4.0
19	e11	8.8	7.4	29	16	143	184	7.3	6.2	5.2	5.3	5.0
20	e9.0	8.7	7.4	18	13	30	69	8.2	5.8	4.7	4.7	4.5
21	e8.0	14	7.3	13	12	32	16	9.0	5.4	4.5	4.4	8.4
22	e8.0	53	11	12	11	16	11	8.1	5.3	4.3	3.8	12
23	e9.0	15	11	185	47	12	10	13	5.2	4.2	3.7	9.5
24	e12	12	19	32	19	10	9.9	10	5.2	4.0	3.6	6.1
25	e25	9.0	30	18	13	9.8	8.7	8.8	5.0	21	3.5	4.5
26	e20	8.7	14	13	11	9.8	8.1	12	5.1	20	3.3	3.7
27	e14	8.5	29	614	13	9.8	7.9	11	5.0	11	3.3	3.5
28	e10	8.2	22	190	12	9.5	8.0	9.0	4.8	8.7	3.2	3.4
29	e9.0	8.1	14	27	---	9.0	7.7	8.2	8.9	6.2	3.2	3.5
30	e10	20	13	15	---	8.7	7.7	59	8.7	5.2	3.5	3.6
31	e12	---	13	12	---	8.4	---	18	---	10	3.2	---
TOTAL	302.5	375.7	378.8	2547.1	1372	1015.3	1261.2	1746.6	305.2	221.6	1318.5	165.9
MEAN	9.76	12.5	12.2	82.2	49.0	32.8	42.0	56.3	10.2	7.15	42.5	5.53
MAX	25	53	30	614	589	377	557	807	60	21	577	14
MIN	6.4	7.5	7.3	9.5	10	8.4	7.7	7.3	4.8	4.0	3.2	2.9
CFSM	.66	.85	.83	5.55	3.31	2.21	2.84	3.81	.69	.48	2.87	.37
IN.	.76	.94	.95	6.40	3.45	2.55	3.17	4.39	.77	.56	3.31	.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	12.0	11.8	16.3	24.2	28.0	26.7	20.8	15.8	12.4	12.7	12.4	12.3
MAX	79.5	39.2	48.6	82.9	83.0	106	71.6	58.8	61.5	97.5	55.9	88.9	
(WY)	1960	1980	1933	1978	1979	1975	1987	1978	1969	1975	1949	1979	
MIN	1.88	2.35	3.53	4.32	6.48	6.76	5.52	4.57	3.41	2.93	2.87	1.74	
(WY)	1942	1942	1942	1942	1931	1967	1942	1941	1986	1977	1941	1954	



## CAPE FEAR RIVER BASIN

02099000 EAST FORK DEEP RIVER NEAR HIGH POINT, NC--Continued

## SUMMARY STATISTICS

FOR 1998 WATER YEAR

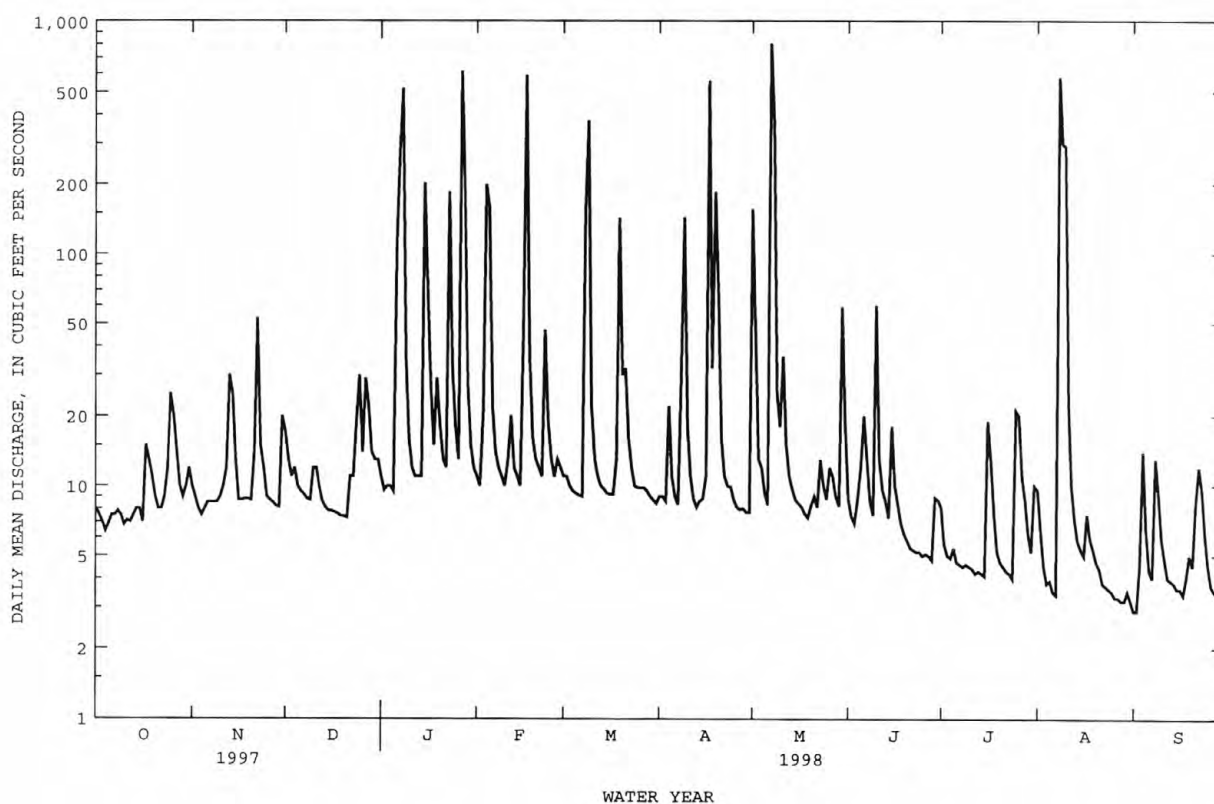
WATER YEARS 1929 - 199<sup>a</sup>

ANNUAL TOTAL	11010.4		
ANNUAL MEAN	30.2		17.1
HIGHEST ANNUAL MEAN			34.1 1978
LOWEST ANNUAL MEAN			7.28 1967
HIGHEST DAILY MEAN	807	May 7	1670 Sep 24 1947
LOWEST DAILY MEAN	2.9	Sep 1	1.1 Aug 8 1977
ANNUAL SEVEN-DAY MINIMUM	3.2	Aug 27	1.2 Aug 7 1977
INSTANTANEOUS PEAK FLOW	4360	May 8	6300* Sep 24 1947
INSTANTANEOUS PEAK STAGE	10.88	May 8	10.87 May 8 1998
INSTANTANEOUS LOW FLOW	2.7	Sep 1	.60 Jan 17 1981
ANNUAL RUNOFF (CFSM)	2.04		1.15
ANNUAL RUNOFF (INCHES)	27.67		15.68
10 PERCENT EXCEEDS	31		26
50 PERCENT EXCEEDS	9.2		7.1
90 PERCENT EXCEEDS	4.3		3.6

e Estimated.

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.



## CAPE FEAR RIVER BASIN

02099500 DEEP RIVER NEAR RANDLEMAN, NC

LOCATION.--Lat 35°54'06", long 79°51'05", Randolph County, Hydrologic Unit 03030003, on left bank 500 ft downstream of bridge on Secondary Road 1929, 0.2 mi downstream of Coltrane's Mill, 0.5 mi south of Guilford County line, 4.8 mi upstream from Muddy Creek, and 7 mi north of Randleman.

DRAINAGE AREA.--125 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 782: 1929-30. WSP 1383: 1934-35, 1941. WSP 1723: 1929(M). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 638.11 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diurnal fluctuation at times during periods of low flow caused by Coltrane's Mill. Some regulation by Oak Hollow Reservoir (station 02098495) and High Point Lake (station 02099096). City of High Point diverted an average of 21.3 ft<sup>3</sup>/s for municipal water supply, 18.6 ft<sup>3</sup>/s was discharged as treated effluent into Richland Creek upstream from station and 5.3 ft<sup>3</sup>/s into Rich Fork Creek in Pee Dee River basin. Maximum discharge for period of record from rating curve extended above 7,100 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow at bridge 1.5 mi upstream; maximum gage height for period of record from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	26	93	92	139	147	207	77	54	e35	32	25
2	22	29	47	69	212	137	154	348	45	e45	24	24
3	20	34	36	66	379	132	121	154	40	e70	36	28
4	19	28	36	67	1130	125	391	145	47	e50	53	187
5	18	27	38	62	1470	117	181	139	54	e25	41	39
6	17	26	32	85	597	71	139	114	133	e30	34	57
7	17	25	29	1300	434	57	124	552	126	e35	29	61
8	18	24	28	1830	385	703	114	2770	57	e25	685	117
9	19	22	28	702	273	1770	679	616	46	22	259	102
10	18	23	30	258	80	546	265	258	109	21	829	68
11	18	22	41	157	79	225	165	627	104	20	317	62
12	19	22	33	127	219	146	132	279	58	19	94	58
13	18	25	31	121	98	113	119	178	66	19	77	57
14	17	161	29	110	86	100	121	150	48	20	76	58
15	19	57	28	693	129	90	118	138	498	20	72	42
16	21	36	27	1190	402	79	82	129	100	21	70	33
17	20	31	27	651	2480	76	2110	117	62	22	100	30
18	39	29	26	264	783	139	951	107	50	22	49	27
19	80	28	25	398	358	1210	640	100	44	21	36	23
20	68	27	25	293	233	668	1140	152	40	20	32	20
21	44	42	24	171	186	590	408	170	36	20	28	19
22	28	380	40	137	161	367	206	113	32	20	24	20
23	28	67	68	1040	494	193	148	207	e30	20	21	24
24	26	42	105	617	332	140	138	151	e27	20	19	24
25	25	33	238	318	202	113	109	116	e26	20	19	23
26	35	30	71	186	162	98	89	186	e30	19	19	22
27	92	29	249	1070	176	89	78	388	e40	19	18	21
28	43	28	291	1870	170	117	79	93	e50	24	18	20
29	31	27	140	650	---	124	67	65	e35	22	18	19
30	29	91	129	288	---	120	63	55	e30	22	24	19
31	27	---	128	176	---	116	---	54	---	22	27	---
TOTAL	920	1471	2172	15058	11849	8718	9338	8748	2117	790	3180	1329
MEAN	29.7	49.0	70.1	486	423	281	311	282	70.6	25.5	103	44.3
MAX	92	380	291	1870	2480	1770	2110	2770	498	70	829	187
MIN	17	22	24	62	79	57	63	54	26	19	18	19
CFSM	.24	.39	.56	3.89	3.39	2.25	2.49	2.26	.56	.20	.82	.35
IN.	.27	.44	.65	4.48	3.53	2.59	2.78	2.60	.63	.24	.95	.40

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1998, BY WATER YEAR (WY)

	MEAN	79.0	82.5	127	202	233	230	177	108	78.7	81.1	75.3	83.6
MAX	474	354	389	645	584	697	529	445	351	465	311	831	
(WY)	1991	1986	1933	1937	1960	1975	1936	1978	1982	1975	1949	1996	
MIN	5.78	9.56	16.9	15.8	38.7	54.4	27.6	23.5	16.7	17.2	17.1	10.6	
(WY)	1931	1932	1934	1942	1986	1967	1985	1977	1933	1947	1945	1941	

## SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1929 - 1998

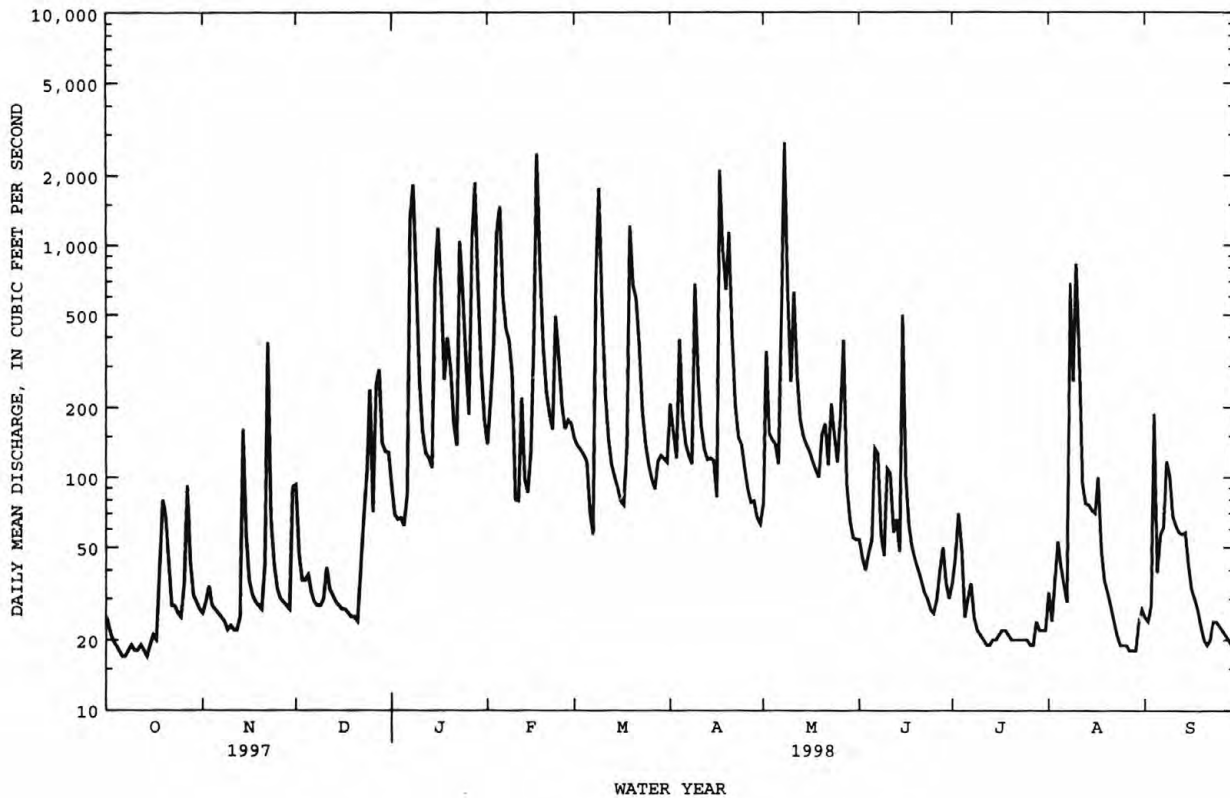
## CAPE FEAR RIVER BASIN

02099500 DEEP RIVER NEAR RANDLEMAN, NC--Continued

ANNUAL TOTAL	47778.4		65690			
ANNUAL MEAN	131		180		129	
HIGHEST ANNUAL MEAN					230	1978
LOWEST ANNUAL MEAN					45.9	1967
HIGHEST DAILY MEAN	4220	Apr 29	2770	May 8	12000	Sep 25 1947
LOWEST DAILY MEAN	6.6	Sep 2	17	Oct 6	1.2	Nov 12 1933
ANNUAL SEVEN-DAY MINIMUM	15	Sep 1	18	Oct 5	3.9	Sep 30 1930
INSTANTANEOUS PEAK FLOW			4440	Apr 17	20000*	Sep 25 1947
INSTANTANEOUS PEAK STAGE			18.03	Apr 17	32.20*	Sep 25 1947
INSTANTANEOUS LOW FLOW			6.9	Oct 22	.50	Nov 28 1931
ANNUAL RUNOFF (CFSM)	1.05		1.44		1.03	
ANNUAL RUNOFF (INCHES)	14.22		19.55		14.05	
10 PERCENT EXCEEDS	278		418		243	
50 PERCENT EXCEEDS	45		66		52	
90 PERCENT EXCEEDS	19		20		16	

e Estimated.

\* See REMARKS.



## CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, NC

LOCATION.--Lat 35°43'34", long 79°39'20", Randolph County, Hydrologic Unit 03030003, on right bank 0.2 mi downstream of Main Street bridge in Ramseur, 0.5 mi downstream of mill dam, and 1.5 mi downstream of Sandy Creek.

DRAINAGE AREA.--349 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1922 to current year.

REVISED RECORDS.--WSP 1032: 1923-24, 1925(M), 1926, 1927-28(M), 1929, 1930(M), 1932-33, 1934(M), 1935, 1936-37(M), 1944(M). WSP 1383: 1923(m), 1925, 1927, 1930, 1936. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 419.50 ft above sea level. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good except those for Mar. 21 - Apr. 1, which are fair. Flow slightly regulated by Oak Hollow Reservoir (station 02098495), High Point Municipal Lake (station 02099096), and small power plant reservoirs. Prior to January 1963, diurnal fluctuation caused by power plant immediately upstream from station. Town of Asheboro diverted an average of 7.4ft<sup>3</sup>/s from Yadkin River Basin for water supply and discharged an average of 7.7 ft<sup>3</sup>/s of treated effluent upstream from the station into Deep River. Maximum discharge for period of record from rating curve extended above 18,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; gage height: 34.04 ft. Minimum discharge for period of record occurred frequently in 1941. Minimum discharge for the current water year due to regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1901 reached a stage of 28.75 ft, from floodmarks 0.2 mi upstream; discharge, 30,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	76	263	306	408	375	334	273	146	197	42	28
2	63	74	181	213	343	298	492	297	114	162	44	36
3	40	72	111	205	508	317	367	432	140	105	43	51
4	23	50	116	193	3810	309	630	339	119	54	42	495
5	27	83	142	181	5180	282	549	265	142	17	60	183
6	30	80	82	183	1420	273	385	260	144	44	63	84
7	30	60	92	1820	813	232	352	258	334	68	53	67
8	30	63	68	4630	663	2160	330	6130	202	55	356	88
9	29	26	61	1770	579	5300	1810	1360	136	46	450	196
10	30	24	177	663	402	1740	1070	585	149	54	526	108
11	31	24	167	427	257	739	546	2220	247	69	626	92
12	29	42	56	333	682	534	399	1020	195	21	214	69
13	29	78	140	280	447	411	354	513	150	26	137	77
14	29	321	81	276	311	347	334	430	131	37	109	76
15	32	293	106	891	292	335	330	321	1080	38	76	60
16	36	124	74	4230	567	297	316	308	499	38	57	84
17	37	116	52	2730	10900	232	3920	292	242	42	113	36
18	35	78	72	833	3320	2300	3000	220	160	42	139	37
19	147	44	114	1140	998	9770	1180	195	160	40	94	51
20	258	59	67	1080	648	2420	2770	190	137	39	43	23
21	143	98	61	559	535	2810	1050	653	79	47	44	34
22	30	1480	246	419	444	1440	614	281	78	43	46	35
23	42	452	430	1970	777	830	493	754	141	41	36	44
24	47	208	363	1590	899	603	424	494	84	40	27	31
25	47	127	999	793	565	523	397	246	33	39	32	24
26	85	112	416	521	437	437	318	250	46	36	28	36
27	262	103	606	2070	402	414	238	687	85	42	26	38
28	180	92	966	5420	436	380	288	326	92	100	24	39
29	80	79	483	1510	---	390	235	222	42	38	25	31
30	42	99	438	739	---	368	237	160	50	37	27	23
31	62	---	437	513	---	345	---	140	---	41	27	---
TOTAL	2067	4637	7667	38488	37043	37211	23762	20121	5357	1698	3629	2276
MEAN	66.7	155	247	1242	1323	1200	792	649	179	54.8	117	75.9
MAX	262	1480	999	5420	10900	9770	3920	6130	1080	197	626	495
MIN	23	24	52	181	257	232	235	140	33	17	24	23
CFSM	.19	.44	.71	3.56	3.79	3.44	2.27	1.86	.51	.16	.34	.22
IN.	.22	.49	.82	4.10	3.95	3.97	2.53	2.14	.57	.18	.39	.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1998, BY WATER YEAR (WY)

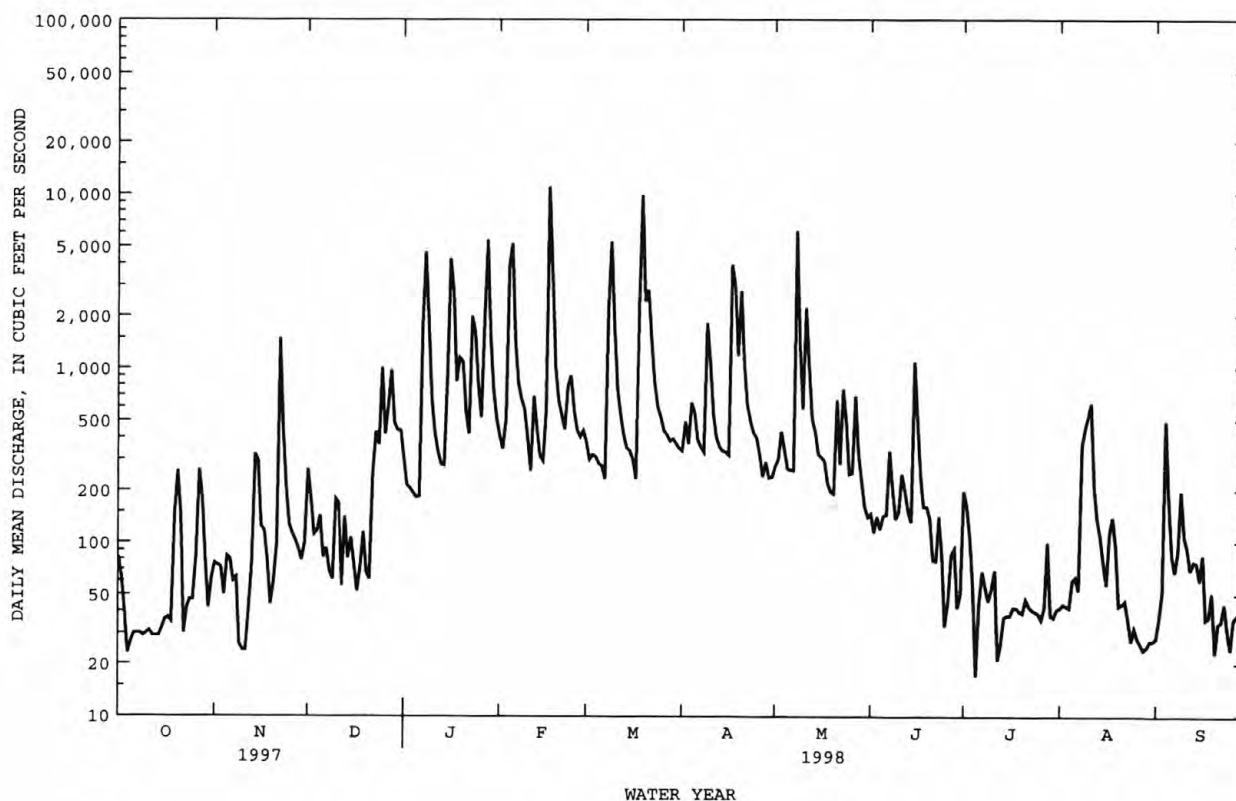
MEAN	211	218	348	561	667	656	500	295	216	223	208	238
MAX	1193	1237	1050	1660	1642	1842	1440	944	978	1434	896	1934
(WY)	1991	1986	1933	1937	1979	1975	1936	1978	1982	1975	1939	1928
MIN	8.69	14.1	39.1	40.8	131	144	116	71.3	48.1	36.5	32.4	17.7
(WY)	1962	1942	1934	1942	1931	1967	1967	1986	1933	1986	1956	1954

## CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1923 - 1998	
ANNUAL TOTAL	122450		183956		360	
ANNUAL MEAN	335		504		665	
HIGHEST ANNUAL MEAN					1975	
LOWEST ANNUAL MEAN					155	
HIGHEST DAILY MEAN	9800	Apr 29	10900	Feb 17	27800	Sep 18 1945
LOWEST DAILY MEAN	23	Oct 4	17	Jul 5	.70	Nov 29 1941
ANNUAL SEVEN-DAY MINIMUM	28	Oct 4	26	Aug 26	3.6	Oct 19 1941
INSTANTANEOUS PEAK FLOW			17200	Feb 17	43000*	Sep 18 1945
INSTANTANEOUS PEAK STAGE			22.88	Feb 17	34.04*	Sep 18 1945
INSTANTANEOUS LOW FLOW			15*	Jul 12	.40*	May 27 1941
ANNUAL RUNOFF (CFSM)	.96		1.44		1.03	
ANNUAL RUNOFF (INCHES)	13.05		19.61		14.02	
10 PERCENT EXCEEDS	631		1060		692	
50 PERCENT EXCEEDS	151		181		153	
90 PERCENT EXCEEDS	37		35		37	

\* See REMARKS.



## CAPE FEAR RIVER BASIN

0210166029 ROCKY RIVER NEAR CRUTCHFIELD CROSSROADS, NC

LOCATION.--Lat 35°48'25", long 79°31'41", Chatham County, Hydrologic Unit 03030003, on right bank at downstream side of culvert on Secondary Road 1300, and 5.5 mi west of Crutchfield Crossroads.

DRAINAGE AREA.--7.42 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 620 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.--Records fair. No flow occurred several days in Aug. 1988. Minimum discharge for current water year also occurred Sept. 1, 2, 3.

REVISIONS.--The maximum discharges for some water years have been revised as shown in the following table. They supercede figures published in the reports for 1996, 1997.

Water year	Date	Discharge (ft <sup>3</sup> /s)	Gage Height
1996	Sept. 6, 1996	1,670	11.91
1997	Apr. 28, 1997	826	8.80

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	1.3	4.9	5.7	7.1	5.6	5.2	3.7	1.9	.81	.51	.10
2	.31	2.1	2.7	4.8	6.5	5.1	5.1	4.6	1.8	.72	.44	.09
3	.28	2.3	2.1	4.5	16	4.7	4.5	3.6	1.7	.62	.36	1.3
4	.24	1.4	2.2	3.9	223	4.3	9.6	5.0	1.6	.56	.31	32
5	.24	1.3	2.0	3.1	107	e4.0	6.7	3.5	1.9	.56	.28	2.0
6	e.24	1.2	1.7	3.0	25	e3.8	5.1	2.9	2.1	.54	.26	.64
7	e.23	1.3	1.7	30	14	e4.0	4.4	31	2.6	.53	.24	.24
8	e.20	1.3	1.4	104	10	117	4.1	79	1.9	.49	.50	.19
9	.22	1.3	1.6	30	8.2	134	51	9.6	1.6	.50	.50	.27
10	.26	1.3	8.0	9.9	7.1	24	13	6.7	3.6	.44	.61	.21
11	.28	1.3	6.4	6.5	9.7	11	8.0	59	2.9	.37	.72	.18
12	.28	1.3	3.5	5.5	12	8.5	6.2	13	2.1	.38	.41	.16
13	.29	4.4	2.4	5.2	7.7	7.3	5.3	7.7	1.8	.36	.30	.15
14	.33	12	2.2	4.5	6.5	6.8	4.8	6.2	1.5	.34	.25	.15
15	4.3	3.7	1.8	54	5.9	5.8	5.1	5.0	25	.36	.24	.14
16	1.3	2.3	1.7	216	24	5.3	5.1	4.0	5.4	.34	.24	.14
17	.59	1.6	1.6	71	308	5.1	79	3.2	3.5	.36	1.1	.14
18	.53	1.5	1.5	20	35	244	24	2.7	2.3	.36	.60	.14
19	23	1.4	1.5	62	15	386	14	2.4	1.5	.32	.28	.13
20	5.1	1.3	1.5	37	11	122	21	2.5	1.4	.28	.21	.12
21	2.4	15	1.5	12	8.9	102	9.0	3.9	1.3	.28	.18	.14
22	1.3	75	26	8.3	7.3	29	7.0	2.5	1.1	.28	.18	.14
23	.89	9.3	14	94	12	15	6.5	3.0	.99	.30	.18	.13
24	.71	4.3	e25	43	9.5	11	6.0	3.0	.91	.29	.17	.13
25	.80	3.0	e35	21	7.2	9.0	4.9	3.2	.87	.31	.17	.13
26	5.5	2.6	e10	9.9	6.3	8.2	4.3	2.7	.90	.53	.15	.12
27	e7.2	2.6	e40	134	5.8	7.4	3.7	5.8	.84	.67	.17	.13
28	e3.0	2.0	e30	103	5.9	6.5	3.6	3.3	.72	.82	.18	.14
29	e1.7	1.9	e15	28	---	5.9	3.3	2.7	.70	.51	.16	.13
30	1.3	4.0	20	13	---	5.7	3.4	2.4	.68	.43	.15	.14
31	1.1	---	11	8.8	---	5.2	---	2.0	---	.41	.12	---
TOTAL	64.55	165.3	279.9	1155.6	921.6	1313.2	332.9	289.8	77.11	14.07	10.17	39.82
MEAN	2.08	5.51	9.03	37.3	32.9	42.4	11.1	9.35	2.57	.45	.33	1.33
MAX	23	75	40	216	308	386	79	79	25	.82	1.1	.32
MIN	.20	1.2	1.4	3.0	5.8	3.8	3.3	2.0	.68	.28	.12	.09
CFSM	.28	.74	1.22	5.02	4.44	5.71	1.50	1.26	.35	.06	.04	.18
IN.	.32	.83	1.40	5.79	4.62	6.58	1.67	1.45	.39	.07	.05	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	6.58	5.96	5.51	15.1	15.1	19.2	10.4	5.99	4.42	3.89	1.92	4.00
MAX	17.1	18.3	10.6	37.3	32.9	42.4	22.0	19.2	20.5	14.8	8.61	23.7
(WY)	1990	1996	1990	1998	1998	1998	1997	1990	1995	1989	1994	1996
MIN	.77	1.52	1.29	2.33	4.89	6.95	1.94	1.58	.44	.45	.33	.26
(WY)	1994	1995	1995	1989	1991	1992	1995	1988	1988	1998	1998	1990

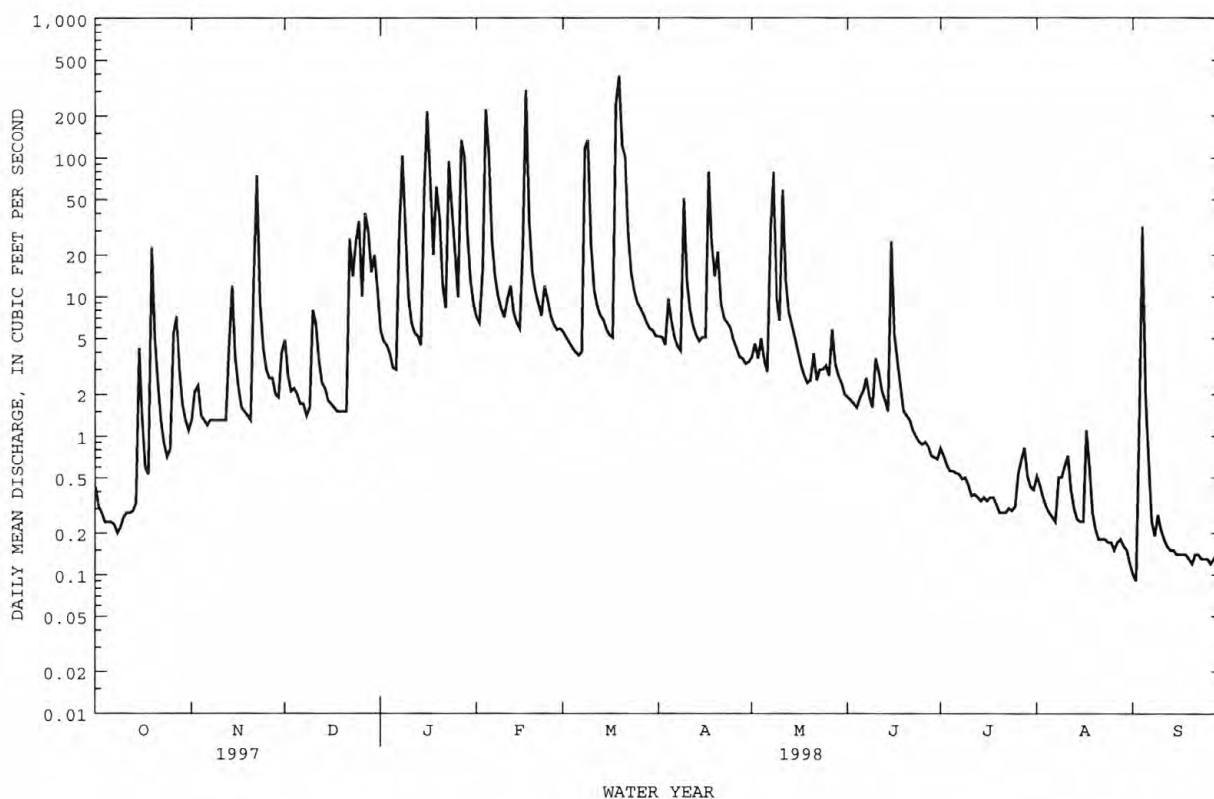
## CAPE FEAR RIVER BASIN

0210166029 ROCKY RIVER NEAR CRUTCHFIELD CROSSROADS, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1988 - 1998
ANNUAL TOTAL	2495.98	4664.02	
ANNUAL MEAN	6.84	12.8	8.24
HIGHEST ANNUAL MEAN			12.8
LOWEST ANNUAL MEAN			4.26
HIGHEST DAILY MEAN	277	386	531
LOWEST DAILY MEAN	.18	.09	0
ANNUAL SEVEN-DAY MINIMUM	.20	.13	.02
INSTANTANEOUS PEAK FLOW		864	1670
INSTANTANEOUS PEAK STAGE		8.97	11.91
INSTANTANEOUS LOW FLOW		.09*	0*
ANNUAL RUNOFF (CFSM)	.92	1.72	1.11
ANNUAL RUNOFF (INCHES)	12.51	23.38	15.09
10 PERCENT EXCEEDS	12	25	15
50 PERCENT EXCEEDS	2.3	2.6	2.4
90 PERCENT EXCEEDS	.29	.21	.39

e Estimated.

\* See REMARKS.





## CAPE FEAR RIVER BASIN

02101800 TICK CREEK NEAR MOUNT VERNON SPRINGS, NC

LOCATION.--Lat 35°39'37", long 79°24'08", Chatham County, Hydrologic Unit 03030003, on right bank 200 ft upstream from bridge on U.S. Highway 421, 1.5 mi east of Mount Vernon Springs, and 4 mi upstream from mouth.

DRAINAGE AREA.--15.5 mi<sup>2</sup>

PERIOD OF RECORD.--June 1958 to September 1981, January 1994 to current year.

GAGE.--Water-stage recorder and v-notch sharp-crested weir. Elevation of gage is 455 ft above sea level, by barometer. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, and those below 1 ft<sup>3</sup>/s, which are poor. Maximum discharge for period of record from rating curve extended above 2,200 ft<sup>3</sup>/s, on basis of contracted-opening measurement of peak flow. No flow occurs at times most years. Minimum discharge for the current water year also occurred Sept. 3, 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	1.4	8.0	8.8	14	9.0	16	4.6	3.3	.32	.21	.01
2	.11	.70	5.2	7.1	12	8.2	14	9.1	2.7	.25	.16	.01
3	.06	.79	4.0	6.7	26	7.6	11	5.0	2.6	.19	.12	.04
4	.04	.83	3.6	5.7	403	6.8	28	4.9	7.0	.18	.10	6.6
5	.04	1.1	3.6	5.3	e145	6.5	15	3.8	4.6	.17	.07	1.8
6	.04	.88	3.3	5.0	43	6.3	12	3.4	4.3	.13	.05	.65
7	.04	.91	2.9	37	27	6.4	10	9.4	3.9	.13	.04	.30
8	.04	1.3	2.7	225	20	148	9.3	33	2.5	.11	.15	.27
9	.03	1.0	2.8	72	e15	281	91	7.8	2.0	.11	.76	.36
10	.03	.61	5.9	25	13	45	25	5.5	2.7	.10	1.8	.12
11	.02	.52	8.7	15	15	22	14	59	3.1	.09	1.1	.08
12	.02	.40	5.4	11	24	15	10	15	2.0	.11	.50	.12
13	.02	5.0	4.3	9.6	14	13	8.4	8.3	1.5	.07	.24	.11
14	.02	26	3.8	8.2	11	11	8.1	6.4	1.2	.05	.15	.05
15	.03	6.2	3.3	73	9.4	10	8.1	5.1	1.8	.04	.10	.04
16	.03	3.1	3.5	386	53	9.0	7.0	4.3	1.4	19	.08	.03
17	.03	e2.3	4.5	150	790	9.1	43	3.7	.92	6.6	.07	.04
18	.04	e2.1	4.5	35	74	471	22	3.1	.60	.92	.06	.03
19	5.3	2.0	4.2	128	32	859	16	2.7	.51	.37	.04	.03
20	4.2	1.5	4.3	64	21	82	18	2.6	.48	.21	.03	.02
21	1.5	1.9	3.2	27	16	97	10	4.5	.37	.18	.02	.02
22	.99	75	25	19	13	50	8.0	2.8	.33	.37	.02	.03
23	.69	4.0	28	138	24	28	7.4	232	.36	.28	.03	.02
24	e.76	1.6	30	75	18	22	6.9	37	.44	.15	.11	.01
25	.88	e2.0	38	32	12	18	5.7	14	.27	7.5	.10	.01
26	1.3	e3.5	14	20	10	16	4.9	9.3	.44	6.0	.08	.01
27	3.1	3.0	29	186	9.7	15	4.7	24	.52	1.2	.06	.01
28	2.7	2.4	35	147	9.7	14	4.9	10	.57	.72	.05	.01
29	2.1	2.2	23	41	---	12	4.4	7.0	.29	.56	.04	.01
30	1.8	4.8	25	25	---	11	4.1	5.0	.24	.48	.02	.02
31	1.7	---	14	18	---	11	---	4.0	---	.36	.02	---
TOTAL	27.77	159.04	352.7	2005.4	1873.8	2319.9	446.9	546.3	52.94	46.95	6.38	10.86
MEAN	.90	5.30	11.4	64.7	66.9	74.8	14.9	17.6	1.76	1.51	.21	.36
MAX	5.3	.75	.38	386	790	859	91	232	7.0	.19	1.8	6.6
MIN	.02	.40	2.7	5.0	9.4	6.3	4.1	2.6	.24	.04	.02	.01
CFSM	.06	.34	.73	4.17	4.32	4.83	.96	1.14	.11	.10	.01	.02
IN.	.07	.38	.85	4.81	4.50	5.57	1.07	1.31	.13	.11	.02	.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	8.04	7.21	11.7	27.4	34.5	31.8	18.4	9.60	8.10	8.70	7.69	6.10
MAX	56.6	33.0	53.4	80.4	81.0	74.8	48.3	39.1	48.0	66.6	55.3	75.2	
(WY)	1972	1980	1973	1978	1960	1998	1960	1978	1973	1975	1964	1996	
MIN	.003	.16	.79	1.27	5.18	4.80	2.45	1.59	.55	.098	.003	0	
(WY)	1964	1974	1961	1981	1968	1981	1981	1981	1981	1966	1977	1980	

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1958 - 1998 <sup>a</sup>	
ANNUAL TOTAL	4402.00		7848.94		15.1	
ANNUAL MEAN	12.1		21.5		26.5	
HIGHEST ANNUAL MEAN					3.84	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	299	Jul 24	859	Mar 19	1570	Sep 6 1996
LOWEST DAILY MEAN	.02	Sep 7	.01	Sep 1	0*	Sep 2 1962
ANNUAL SEVEN-DAY MINIMUM	.02	Oct 9	.01	Sep 23	0*	Sep 2 1962
INSTANTANEOUS PEAK FLOW			2470	Feb 17	4010*	Sep 6 1996
INSTANTANEOUS PEAK STAGE			8.69	Feb 17	13.41*	Sep 6 1996
INSTANTANEOUS LOW FLOW			0*	Sep 2	0*	Sep 2 1962
ANNUAL RUNOFF (CFSM)	.78		1.39		.97	
ANNUAL RUNOFF (INCHES)	10.56		18.84		13.23	
10 PERCENT EXCEEDS	25		34		27	
50 PERCENT EXCEEDS	3.8		3.8		3.8	
90 PERCENT EXCEEDS	.11		.04		.16	

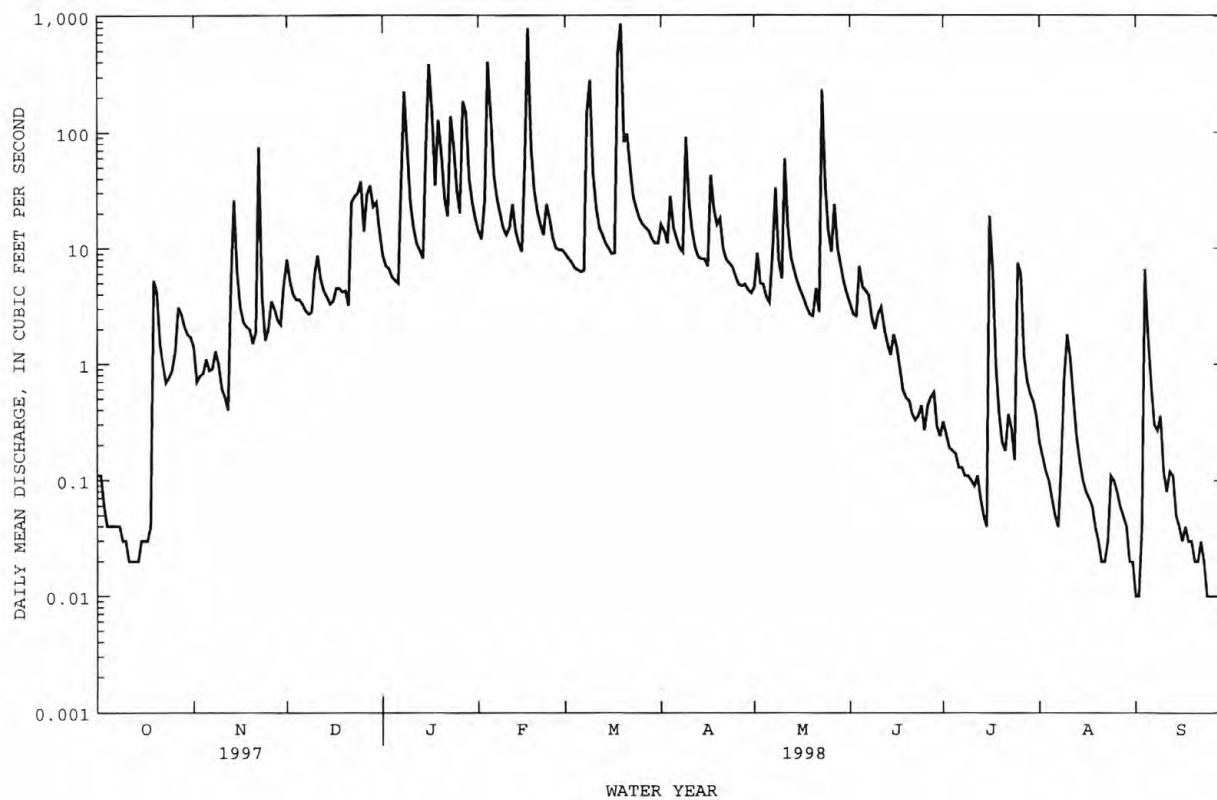
e Estimated.

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.

## CAPE FEAR RIVER BASIN

02101800 TICK CREEK NEAR MOUNT VERNON SPRINGS, NC--Continued



## CAPE FEAR RIVER BASIN

## 02102000 DEEP RIVER AT MONCURE, NC

LOCATION.--Lat 35°37'38", long 79°06'58", Lee County, Hydrologic Unit 03030003, on right bank 1.0 mi upstream from Lockville Dam, 1.2 mi upstream from bridge on U.S. Highway 1, 1.5 mi northwest of Moncure, 2.2 mi downstream of Rocky River, and 4.5 mi upstream from confluence with Haw River.

DRAINAGE AREA.--1,434 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1930 to current year. Records for May 1898 to December 1899 published in 21st Annual Report, Part 4, and in Bulletins 34 and 39 of North Carolina Department of Conservation and Development have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1082: (1930-46 not previously published). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 185.06 ft above sea level. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Diurnal fluctuation and some regulation at low flow caused by small power plants upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

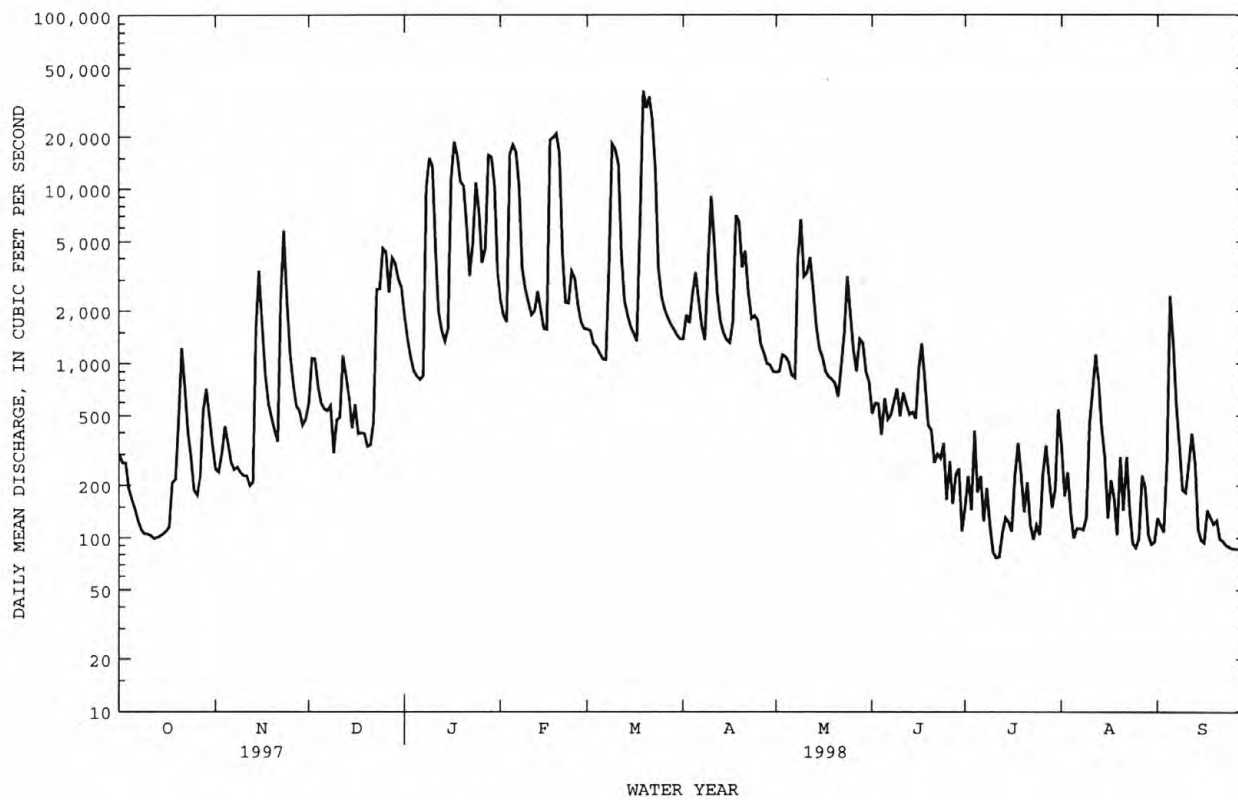
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	298	247	598	1870	2340	1570	1380	889	516	149	334	130
2	269	238	1070	1370	1890	1540	1900	902	590	227	173	118
3	268	308	1060	1080	1730	1300	1700	1120	589	145	238	108
4	191	435	734	905	15900	1240	2510	1090	390	410	138	280
5	164	344	592	844	18000	1140	3320	1020	631	182	100	2440
6	145	270	548	808	16300	1060	2290	860	479	227	113	1290
7	124	246	534	851	10500	1050	1640	828	507	125	113	562
8	111	254	573	10200	3560	3480	1360	4030	602	193	111	332
9	105	237	306	15100	2700	18200	3720	6700	717	119	131	188
10	105	227	474	13500	2250	17000	9110	3160	499	83	444	182
11	103	227	490	4610	1900	13900	4990	3310	678	77	702	267
12	99	199	1110	1980	2000	4230	2510	4060	580	78	1120	397
13	100	209	849	1530	2590	2290	1750	2700	510	106	788	267
14	102	1580	645	1340	2040	1890	1500	1620	526	130	434	113
15	105	3400	425	1580	1580	1620	1360	1210	484	123	285	97
16	109	1690	580	11400	1560	1480	1310	1080	925	109	130	94
17	115	852	394	18700	19200	1340	1730	898	1300	223	215	144
18	207	586	399	15600	19800	6630	7080	839	783	350	170	131
19	217	489	395	11100	20800	36800	6450	811	442	230	104	120
20	473	411	334	10400	16100	29200	3540	773	415	141	292	126
21	1230	356	340	6120	4310	34100	4420	645	269	209	144	99
22	735	2340	465	3190	2230	25000	2610	961	302	119	291	96
23	405	5800	2670	4870	2210	13100	1810	1470	286	98	144	91
24	290	2240	2670	10900	3370	3540	1880	3160	349	118	93	89
25	187	1120	4560	7480	3070	2420	1780	1920	165	104	88	87
26	175	759	4360	3770	2150	2040	1290	1180	276	232	99	87
27	227	568	2560	4560	1730	1830	1150	902	157	339	229	87
28	537	536	4020	15700	1580	1670	1000	1380	231	220	196	85
29	716	443	3760	15300	---	1560	979	1300	251	149	104	86
30	491	475	3050	10400	---	1450	900	893	109	191	92	110
31	339	---	2730	3420	---	1380	---	780	---	545	95	---
TOTAL	8742	27086	43295	210478	183390	235050	78969	52491	14558	5751	7710	8303
MEAN	282	903	1397	6790	6550	7582	2632	1693	485	186	249	277
MAX	1230	5800	4560	18700	20800	36800	9110	6700	1300	545	1120	2440
MIN	99	199	306	808	1560	1050	900	645	109	77	88	85
CFSM	.20	.63	.97	4.73	4.57	5.29	1.84	1.18	.34	.13	.17	.19
IN.	.23	.70	1.12	5.46	4.76	6.10	2.05	1.36	.38	.15	.20	.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1998, BY WATER YEAR (WY)

MEAN	734	856	1328	2443	2923	2921	2081	1135	799	865	831	782
MAX	3590	4789	4765	7182	7945	7582	6455	3590	4147	5528	3861	10580
(WY)	1965	1986	1973	1978	1960	1998	1936	1989	1982	1975	1931	1945
MIN	28.2	14.1	34.6	130	424	566	393	193	135	79.7	75.2	24.1
(WY)	1931	1942	1934	1934	1931	1981	1981	1981	1977	1986	1980	1968

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1930 - 1998	
ANNUAL TOTAL	549903		875823			
ANNUAL MEAN	1507		2400		1469	
HIGHEST ANNUAL MEAN					2711	
LOWEST ANNUAL MEAN					606	
HIGHEST DAILY MEAN	20200		36800		66400	
LOWEST DAILY MEAN	66		77		6.0	
ANNUAL SEVEN-DAY MINIMUM	103		87		6.6	
INSTANTANEOUS PEAK FLOW			42000		80300	
INSTANTANEOUS PEAK STAGE			12.09		17.20	
INSTANTANEOUS LOW FLOW			73		5.5	
ANNUAL RUNOFF (CFSM)	1.05		1.67		1.02	
ANNUAL RUNOFF (INCHES)	14.27		22.72		13.92	
10 PERCENT EXCEEDS	3170		5310		3350	
50 PERCENT EXCEEDS	651		717		542	
90 PERCENT EXCEEDS	136		110		99	

CAPE FEAR RIVER BASIN  
02102000 DEEP RIVER AT MONCURE, NC--Continued



## CAPE FEAR RIVER BASIN

0210215985 CAPE FEAR RIVER AT STATE HIGHWAY 42 NEAR BRICKHAVEN, NC

LOCATION.--Lat 35°32'54", long 79°01'34", Chatham County, Hydrologic Unit 03030004, at bridge on State Highway 42, and 1.8 mi south of Brickhaven.

DRAINAGE AREA.--3,160 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1989 to current year.

REMARKS.--Station operated to define water quality as part of a six-county regional surface-water quality assessment. Daily mean discharge values were obtained from the U.S. Army Corps of Engineers reservoir releases from the B. Everett Jordan Lake at the 2400 hour and the daily mean discharge value from Deep River near Moncure, 02102000. The values from these two sites were added together and entered as a daily mean discharge for each date and time that a water-quality sample was collected.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT 27...	0945	666	235	7.3	17.6	26	754	9.4	100	36	9.0	3.3
DEC 03...	1000	1390	120	6.4	8.8	110	755	10.4	91	27	6.4	2.5
MAR 02...	1015	8890	95	6.8	10.3	120	751	11.7	106	20	5.0	1.9
APR 07...	1030	4390	88	6.6	15.0	90	760	8.1	81	20	5.0	1.9
JUN 09...	0945	1600	138	7.2	23.7	36	764	7.2	85	29	7.0	2.7
AUG 27...	1400	778	255	7.0	27.1	55	749	5.4	69	35	8.5	3.3
DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE IT-FLD AS HCO3) (99440)	ANC UNFLTRD CARBON-ATE IT-FLD (MG/L - CAC03) (99430)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS ST02) (00955)
OCT 27...	28	59	2	5.0	50	41	--	--	--	--	--	--
DEC 03...	11	43	.9	3.7	27	22	27	22	--	--	--	--
MAR 02...	7.4	41	.7	2.1	22	18	--	--	--	--	--	--
APR 07...	7.2	41	.7	1.8	22	18	--	--	--	--	--	--
JUN 09...	13	47	1	3.0	--	--	--	--	--	--	--	--
AUG 27...	32	62	2	5.4	55	45	--	--	22	29	.28	5.9
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)
OCT 27...	--	.006	.693	.013	.65	.66	1.4	.083	.031	80	<1	<1
DEC 03...	--	.004	.696	.039	.50	.53	1.2	.121	.090	--	--	--
MAR 02...	--	.006	.377	.037	.44	.47	.85	.059	.014	--	--	--
APR 07...	--	.005	.340	.053	.55	.60	.94	.101	.025	470	<1	<1
JUN 09...	--	.010	.490	.018	.56	.57	1.1	.075	.027	--	--	--
AUG 27...	149	.159	.498	.170	.52	.69	1.2	.044	.046	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

## CAPE FEAR RIVER BASIN

0210215985 CAPE FEAR RIVER AT STATE HIGHWAY 42 NEAR BRICKHAVEN, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]





## CAPE FEAR RIVER BASIN

02102192 BUCKHORN CREEK NEAR CORINTH, NC

LOCATION.--Lat 35°33'34", long 78°58'25", Chatham County, Hydrologic Unit 03030004, on left bank at upstream side of bridge on State Highway 42, 0.2 mi downstream of White Oak Creek, 1.2 mi downstream of Harris Lake, and 2 mi east of Corinth.

DRAINAGE AREA.--76.3 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1972 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 154.63 ft above sea level. Satellite telemetry at station.

REMARKS.--Records poor. Since Dec. 1, 1980, considerable regulation by Harris Lake (station 02102190). Maximum discharge prior to regulation: 6,920 ft<sup>3</sup>/s, Feb. 2, 1973; gage height: 20.02 ft. Minimum discharge prior to regulation: 0.01 ft<sup>3</sup>/s, Sept. 2, 1976. Minimum discharge for the current water year also occurred Aug. 24, 25, 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	2.1	8.5	15	331	125	227	39	39	1.6	.82	.46
2	.52	2.3	8.6	16	274	111	226	36	34	.97	.46	.55
3	.49	e3.5	8.8	16	249	102	201	34	31	.77	.37	1.4
4	.44	e3.4	9.1	16	798	90	278	38	31	.72	.35	11
5	.43	e2.5	9.2	17	740	79	244	35	29	1.5	.34	1.8
6	.43	e1.9	9.2	19	615	69	212	31	28	1.1	.33	.68
7	.37	e1.7	9.5	22	518	61	185	30	23	.92	.33	.59
8	.33	e1.3	9.7	27	430	139	162	e140	18	.76	.93	1.5
9	.31	e1.3	10	22	346	637	224	e230	15	.82	.53	2.5
10	.31	e.80	11	19	286	550	222	175	16	.82	.94	1.2
11	.31	2.6	12	19	241	467	200	261	16	.66	2.1	.71
12	.31	2.7	11	20	207	388	175	266	14	.61	.83	.63
13	.30	3.9	11	21	177	320	153	235	13	.58	.52	e.60
14	.30	4.5	12	22	153	271	137	201	11	.61	.49	e.57
15	.91	2.9	12	26	128	236	127	172	9.0	.58	.50	e.53
16	.83	3.4	12	81	125	203	114	150	7.1	.70	.66	e.51
17	.78	3.7	12	44	651	178	111	135	5.8	1.0	1.2	e1.9
18	.89	3.8	13	38	613	253	109	123	4.2	.88	.80	e.94
19	2.9	4.0	13	121	519	1190	101	106	2.8	.65	.60	e.70
20	2.2	4.0	13	142	435	1180	99	93	2.8	1.6	.42	e3.2
21	1.1	4.3	14	127	358	1180	90	84	1.7	3.1	.36	e2.0
22	1.3	6.0	17	114	301	1000	82	74	1.3	.66	.33	1.4
23	1.5	6.2	16	223	283	845	75	73	.98	.50	.30	1.2
24	1.4	6.2	18	329	251	708	67	69	1.1	.49	.30	.84
25	1.6	6.0	17	289	216	592	60	60	.80	.70	.28	.60
26	1.7	6.4	14	244	185	495	54	55	.79	.60	.39	.70
27	1.9	6.5	20	437	160	419	53	59	1.0	.60	1.9	.82
28	1.8	6.5	17	737	141	355	52	65	.67	.58	1.1	.84
29	1.8	6.7	14	612	---	307	45	57	.69	.50	.74	.86
30	1.9	7.8	14	506	---	265	41	50	1.6	8.5	.52	2.6
31	2.0	---	14	410	---	228	---	43	---	3.1	.48	---
TOTAL	31.94	118.90	389.6	4751	9731	13043	4126	3219	360.33	37.18	20.22	43.83
MEAN	1.03	3.96	12.6	153	348	421	138	104	12.0	1.20	.65	1.46
MAX	2.9	7.8	20	737	798	1190	278	266	39	8.5	2.1	11
MIN	.30	.80	8.5	15	125	61	41	30	.67	.49	.28	.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1998\*, BY WATER YEAR (WY)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	17.2	25.3	34.7	70.3	107	144	93.9	46.4	26.6	21.4	18.7	22.8						
MAX	128	146	143	241	348	421	312	184	138	102	199	335						
(WY)	1996	1996	1984	1984	1998	1998	1993	1989	1984	1989	1986	1996						
MIN	.70	.81	1.40	2.48	1.37	1.66	1.13	1.56	.67	.34	.65	.88						
(WY)	1982	1992	1992	1992	1992	1992	1992	1992	1981	1981	1998	1981						

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1981 - 1998\*

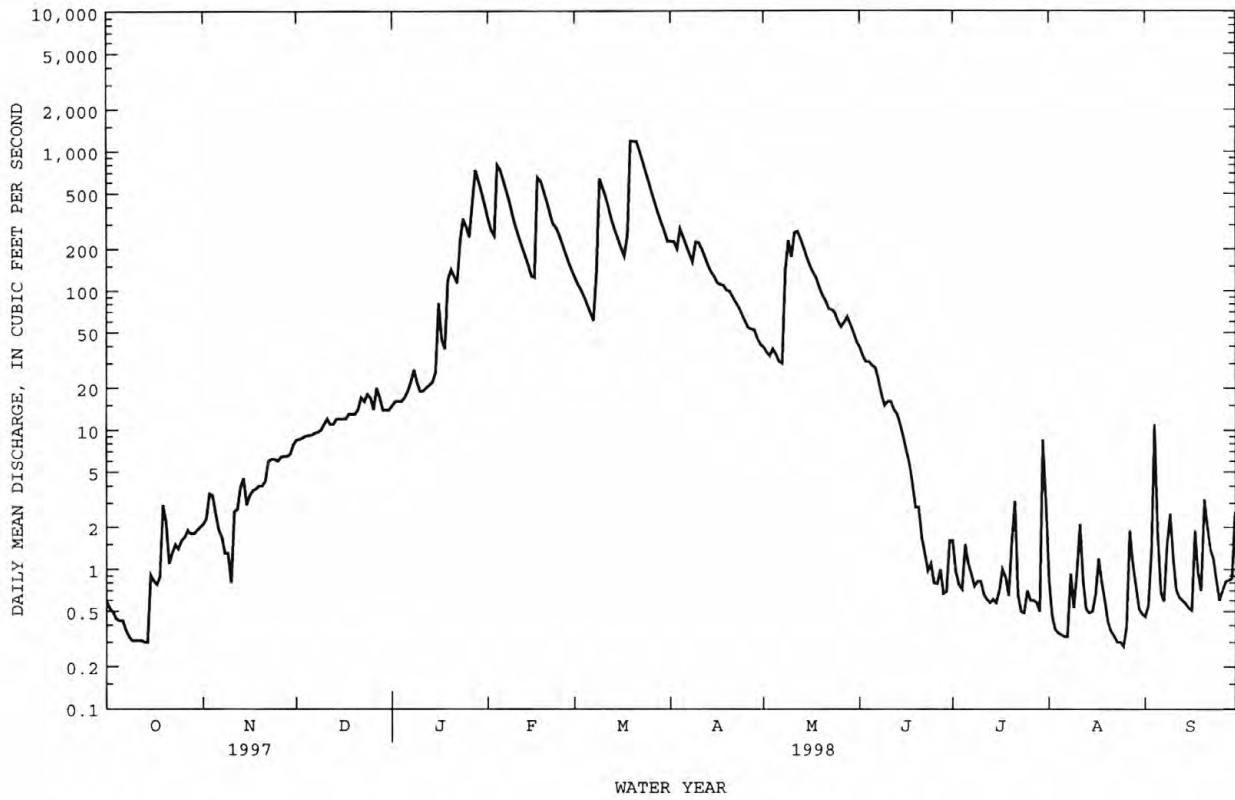
ANNUAL TOTAL	16198.71	35872.00	
ANNUAL MEAN	44.4	98.3	52.1
HIGHEST ANNUAL MEAN			126
LOWEST ANNUAL MEAN			2.47
HIGHEST DAILY MEAN	480	1190	1940
LOWEST DAILY MEAN	.30	.28	.11
ANNUAL SEVEN-DAY MINIMUM	.31	.31	.12
INSTANTANEOUS PEAK FLOW		1740	4300
INSTANTANEOUS PEAK STAGE		10.44	16.79
INSTANTANEOUS LOW FLOW		.26*	.05
10 PERCENT EXCEEDS	110	287	158
50 PERCENT EXCEEDS	14	12	8.5
90 PERCENT EXCEEDS	.58	.53	.69

e Estimated.

\* Regulated period only (1981-1998). See REMARKS.

## CAPE FEAR RIVER BASIN

02102192 BUCKHORN CREEK NEAR CORINTH, NC--Continued



## CAPE FEAR RIVER BASIN

02102500 CAPE FEAR RIVER AT LILLINGTON, NC

LOCATION.--Lat 35°24'22", long 78°48'48", Harnett County, Hydrologic Unit 03030004, on right bank 60 ft downstream of downstream bridge on U.S. Highway 401, 1,860 ft downstream of Southern Railway bridge, 0.5 mi north of Lillington, 1 mi downstream of Neal Creek, and at mile 178.

DRAINAGE AREA.--3,464 mi<sup>2</sup>.

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

REVISED RECORDS.--WSP 1002: 1930(M). WSP 1032: 1942(m). WSP 1303: 1944(M). WSP 1333: 1945. WSP 1383:

GAGE.--Water-stage recorder. Datum of gage is 104.62 ft above sea level. Dec. 6, 1923, to Oct. 7, 1927, nonrecording gage and Oct. 8, 1927, to Dec. 2, 1975, water-stage recorder at site 60 ft upstream in bridge pier at same datum. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Some regulation at high flows, December 1972 to August 1981, caused by temporary storage in B. Everett Jordan Lake. Flow regulated since Sept. 1981 by B. Everett Jordan Lake (station 02098197). Diurnal fluctuation and slight regulation at low flow caused by power plants upstream from station. Fluctuation and regulation by Buckhorn Reservoir, 13 mi upstream from station, ended in December 1962. Prior to regulation, maximum discharge: 150,000 ft<sup>3</sup>/s, Sept. 19, 1945, from rating curve extended above 76,000 ft<sup>3</sup>/s; gage height: 33.19 ft, from floodmark; minimum discharge: 11 ft<sup>3</sup>/s, Oct. 14, 15, 1954; gage height: -0.17 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	587	688	981	3510	15800	10500	15300	1240	2100	297	850	574
2	631	664	1170	2960	13700	9220	14500	1250	1890	532	655	602
3	620	638	1420	2620	10100	6310	9740	1320	966	651	572	616
4	588	743	1210	2420	16800	2210	4300	1440	853	734	598	959
5	523	663	1010	2660	22100	2100	5470	1590	828	794	513	1420
6	512	588	895	3960	18800	2040	4410	2270	963	642	498	1820
7	568	606	845	4020	18700	2620	4870	2160	781	615	555	950
8	573	518	846	7730	17200	3400	2960	4510	861	489	576	606
9	568	622	858	16300	15900	20600	3710	6880	1590	572	591	485
10	560	610	686	16600	15400	20300	9780	7420	1070	516	648	590
11	538	606	1120	12400	16000	17900	7960	6370	869	488	1230	658
12	644	596	1380	8460	15700	12600	6290	7960	992	510	1080	734
13	580	700	1670	7700	16000	13000	5630	9960	796	544	1010	840
14	606	1070	1440	7360	15700	13500	5340	9400	856	553	683	608
15	653	3590	1270	7130	15100	13000	2990	7810	999	574	514	552
16	634	2350	1240	11800	13400	12000	2870	3180	1590	582	547	558
17	632	1330	1230	21600	19400	7500	2840	2100	2070	587	571	546
18	593	929	703	16900	26200	4400	5040	1980	1740	746	587	559
19	745	794	735	16900	20900	34300	7640	1910	1480	699	543	557
20	698	750	687	17900	22400	38000	4340	1690	723	661	520	576
21	1220	670	652	15100	17300	33800	8100	1070	707	644	601	555
22	1110	1090	819	15000	14300	29800	10700	971	579	606	603	549
23	827	5610	1920	13600	9550	20100	8640	1540	603	547	680	474
24	639	3230	3470	17400	13400	16700	5400	2730	590	502	585	535
25	621	1520	5150	14700	17200	17900	9370	2570	604	567	533	538
26	656	1060	6260	14400	15800	17200	8740	1610	504	569	567	533
27	707	962	4460	14400	15000	16900	6890	1460	562	719	626	507
28	694	893	5160	21300	12500	16500	3310	2070	491	680	676	526
29	1000	833	5710	17100	---	16100	2720	2850	533	568	629	544
30	936	891	4670	16000	---	15800	1330	2450	375	633	581	627
31	767	---	4510	14200	---	15500	---	2260	---	987	571	---
TOTAL	21230	35814	64177	364130	460350	461800	191180	104021	29565	18808	19993	20198
MEAN	685	1194	2070	11750	16440	14900	6373	3356	986	607	645	673
MAX	1220	5610	6260	21600	26200	38000	15300	9960	2100	987	1230	1820
MIN	512	518	652	2420	9550	2040	1330	971	375	297	498	474

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1998\*, BY WATER YEAR (WY)

	1915	2125	2867	5750	6855	8065	5192	2804	2422	1839	1696	1622
MEAN	1915	2125	2867	5750	6855	8065	5192	2804	2422	1839	1696	1622
MAX	6442	7919	8595	11750	16440	15710	11670	7784	12510	5694	5448	13920
(WY)	1990	1986	1984	1998	1998	1993	1993	1989	1982	1995	1985	1996
MIN	637	653	723	1373	1860	1628	969	824	702	607	634	596
(WY)	1994	1995	1995	1986	1986	1988	1985	1986	1986	1998	1983	1990

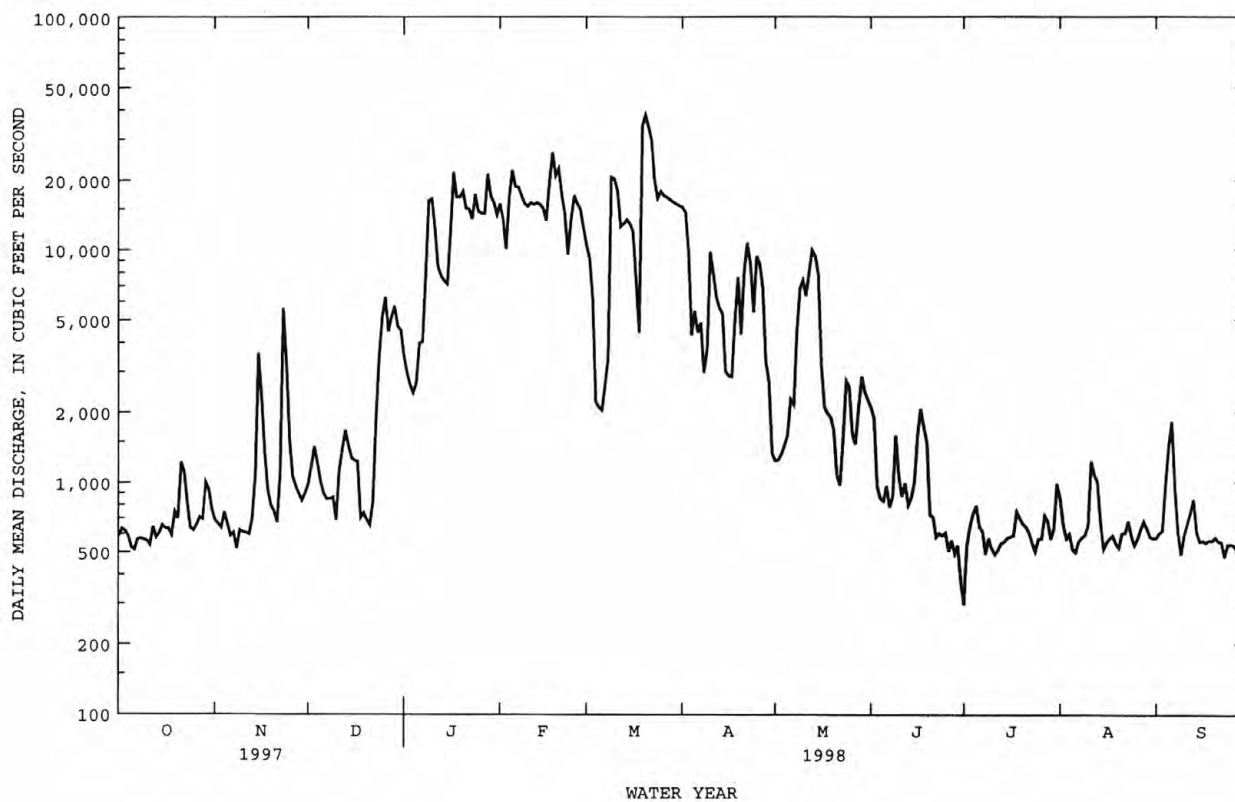
## CAPE FEAR RIVER BASIN

02102500 CAPE FEAR RIVER AT LILLINGTON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1982 - 1998*	
ANNUAL TOTAL	1104946		1791266		3580	
ANNUAL MEAN	3027		4908		6167	1984
HIGHEST ANNUAL MEAN					1488	1988
LOWEST ANNUAL MEAN					e41400	Sep 6 1996
HIGHEST DAILY MEAN	23600	Jul 25	38000	Mar 20	210	Oct 23 1981
LOWEST DAILY MEAN	479	Sep 17	297	Jul 1	223	Oct 2 1981
ANNUAL SEVEN-DAY MINIMUM	524	Sep 15	471	Jun 26	51800	Sep 7 1996
INSTANTANEOUS PEAK FLOW			47500	Mar 19	18.97	Sep 7 1996
INSTANTANEOUS PEAK STAGE			18.37	Mar 19	190	Oct 23 1981
INSTANTANEOUS LOW FLOW			289	Jul 1	10700	
10 PERCENT EXCEEDS	7410		16000		1310	
50 PERCENT EXCEEDS	1180		1210		619	
90 PERCENT EXCEEDS	592		554			

e Estimated.

\* Regulated period only (1982-1998).



## CAPE FEAR RIVER BASIN

02102908 FLAT CREEK NEAR INVERNESS, NC

LOCATION.--Lat 35°10'54", long 79°10'40", Hoke County, Hydrologic Unit 03030004, on left bank 15 ft downstream of culvert on Manchester Road, Fort Bragg military reservation, 0.4 mi upstream from mouth, and 3.6 mi east of Inverness.

DRAINAGE AREA.--7.63 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1968 to current year.

REVISED RECORDS.--WDR NC-72-1: 1968-70 (M). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 191.18 ft above sea level. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Some diurnal fluctuation at low flow during growing season. Minimum discharge some years effected by regulation from unknown source. Minimum discharge for period of record also occurred June 8, 25, 1988. Minimum discharge for the current water year also occurred July 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	12	20	11	15	18	24	19	11	6.6	21	13
2	5.6	19	13	10	15	17	30	18	10	6.4	8.9	7.8
3	5.7	11	10	10	20	16	19	16	9.6	6.2	7.8	11
4	5.5	8.9	10	10	86	16	23	17	9.3	6.2	7.1	40
5	5.4	8.4	9.8	9.7	43	15	19	16	14	6.3	6.9	18
6	5.2	8.3	9.2	12	24	15	17	15	16	6.1	6.5	9.4
7	5.1	8.7	9.0	19	21	15	16	16	12	5.9	6.9	8.3
8	5.1	8.6	8.9	24	22	38	15	38	10	5.7	8.0	7.9
9	5.3	8.1	9.3	18	20	90	97	20	10	5.9	7.2	8.1
10	5.5	7.9	10	12	18	34	44	16	11	6.0	12	7.2
11	5.5	7.8	10	11	18	23	25	19	11	5.7	15	6.9
12	5.2	7.8	9.4	11	20	21	22	17	9.3	5.7	8.9	6.6
13	5.3	20	9.0	11	17	20	21	15	8.7	5.8	12	6.3
14	5.9	29	8.7	11	16	20	21	15	8.0	5.5	8.8	6.2
15	33	14	8.4	15	16	19	22	14	8.3	5.5	7.5	6.2
16	14	11	8.3	30	21	18	19	13	8.0	6.7	10	6.2
17	8.7	10	8.2	24	92	19	34	13	7.6	21	23	6.2
18	8.1	9.4	8.1	15	40	35	36	13	7.4	29	10	6.3
19	19	9.2	8.1	32	28	79	28	12	7.4	10	7.9	6.4
20	22	9.0	8.1	32	21	81	25	11	8.4	28	7.1	6.5
21	9.9	9.2	8.0	19	19	87	21	11	7.5	10	6.7	6.5
22	9.0	16	17	15	19	25	19	11	7.1	7.8	6.5	6.9
23	8.6	11	18	33	31	21	35	15	7.0	6.9	6.3	6.2
24	8.0	9.2	19	33	25	20	37	16	6.7	7.4	5.9	5.7
25	8.1	8.7	28	19	19	19	21	13	6.7	26	5.8	5.7
26	12	8.6	13	16	18	18	19	11	6.7	12	6.7	5.6
27	19	8.4	19	28	17	18	18	11	6.4	9.7	13	5.4
28	10	8.1	20	47	19	17	23	15	6.2	9.6	8.0	5.4
29	8.6	8.1	15	22	---	17	18	12	6.1	8.2	6.8	5.8
30	8.1	23	16	18	---	16	18	13	6.3	7.9	6.2	12
31	7.9	---	12	16	---	16	---	15	---	12	8.2	---
TOTAL	290.1	338.4	380.5	593.7	740	883	786	476	263.7	301.7	282.6	259.7
MEAN	9.36	11.3	12.3	19.2	26.4	28.5	26.2	15.4	8.79	9.73	9.12	8.66
MAX	33	29	28	47	92	90	97	38	16	29	23	40
MIN	5.1	7.8	8.0	9.7	15	15	15	11	6.1	5.5	5.8	5.4
CFSM	1.23	1.48	1.61	2.51	3.46	3.73	3.43	2.01	1.15	1.28	1.19	1.13
IN.	1.41	1.65	1.86	2.89	3.61	4.31	3.83	2.32	1.29	1.47	1.38	1.27

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1998, BY WATER YEAR (WY)

	MEAN	10.6	11.4	12.2	14.4	15.6	17.7	17.0	11.4	11.1	11.1	10.0	10.0
MAX	19.9	20.5	19.5	20.2	32.0	73.6	106	18.9	25.3	24.5	16.4	22.3	
(WY)	1972	1980	1973	1975	1973	1974	1974	1973	1995	1989	1974	1996	
MIN	5.73	6.10	7.64	8.69	9.76	8.77	6.50	6.59	4.85	4.70	5.28	4.35	
(WY)	1987	1982	1971	1969	1989	1981	1981	1988	1981	1986	1968	1968	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

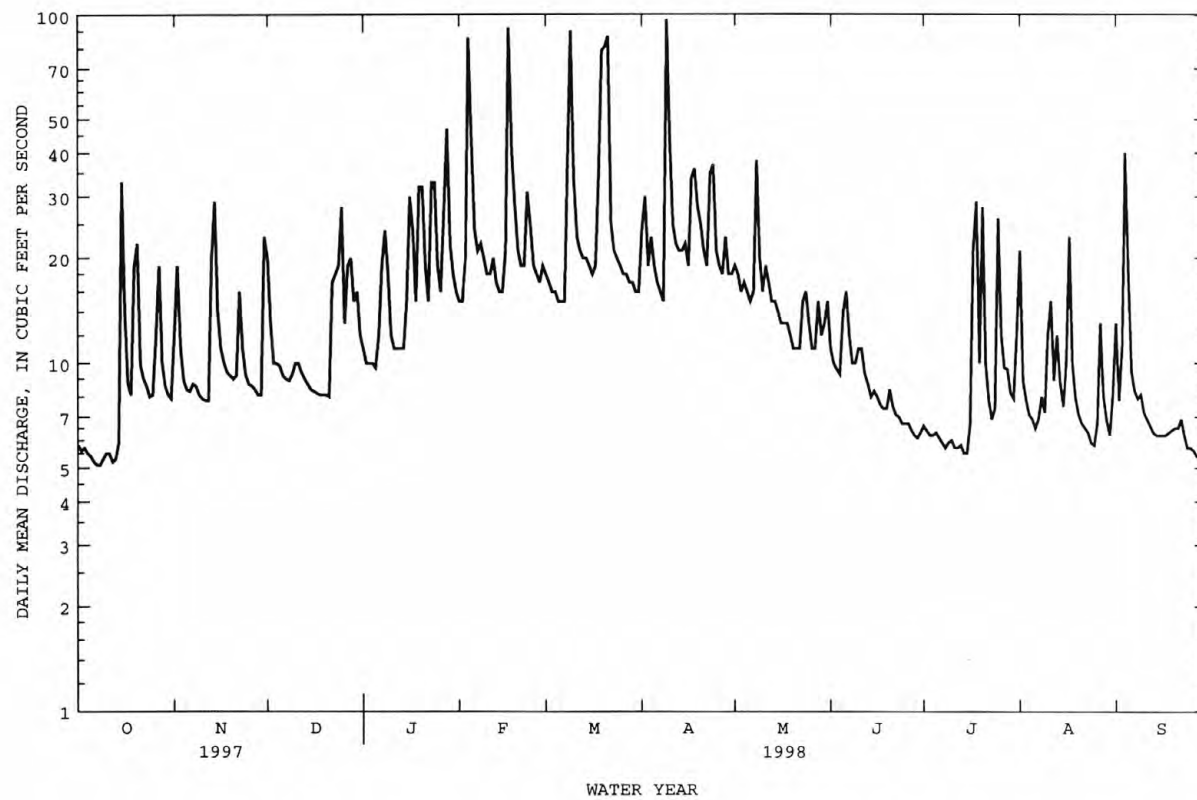
## WATER YEARS 1968 - 1998

ANNUAL TOTAL	4142.5	5595.4	
ANNUAL MEAN	11.3	15.3	12.7
HIGHEST ANNUAL MEAN			26.3
LOWEST ANNUAL MEAN			8.12
HIGHEST DAILY MEAN	138	97	314
LOWEST DAILY MEAN	5.0	5.1	2.2
ANNUAL SEVEN-DAY MINIMUM	5.3	5.3	3.2
INSTANTANEOUS PEAK FLOW		177	394
INSTANTANEOUS PEAK STAGE		3.90	7.30
INSTANTANEOUS LOW FLOW		4.5*	1.9*
ANNUAL RUNOFF (CFSM)	1.49	2.01	1.67
ANNUAL RUNOFF (INCHES)	20.20	27.28	22.67
10 PERCENT EXCEEDS	19	25	20
50 PERCENT EXCEEDS	9.2	11	10
90 PERCENT EXCEEDS	5.8	6.2	5.8

\* See REMARKS.

## CAPE FEAR RIVER BASIN

02102908 FLAT CREEK NEAR INVERNESS, NC--Continued





## CAPE FEAR RIVER BASIN

02104000 CAPE FEAR RIVER AT FAYETTEVILLE, NC

LOCATION.--Lat 35°02'49", long 78°51'36", Cumberland County, Hydrologic Unit 03030004, on Person Street bridge at Fayetteville, 700 ft upstream of Atlantic Coast Railroad bridge, 0.3 mi downstream of Cross Creek, and at mi 145.

DRAINAGE AREA.--4,395 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1986 to current year. Discharge records January 1889 to September 1917, and October 1928 to September 1940.

GAGE.--Water-stage recorder. Datum of gage is 20.52 ft above sea level. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum, 48.3 ft, Sept. 24, 1945.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 46.17 ft, Sept. 7, 1996; minimum not determined

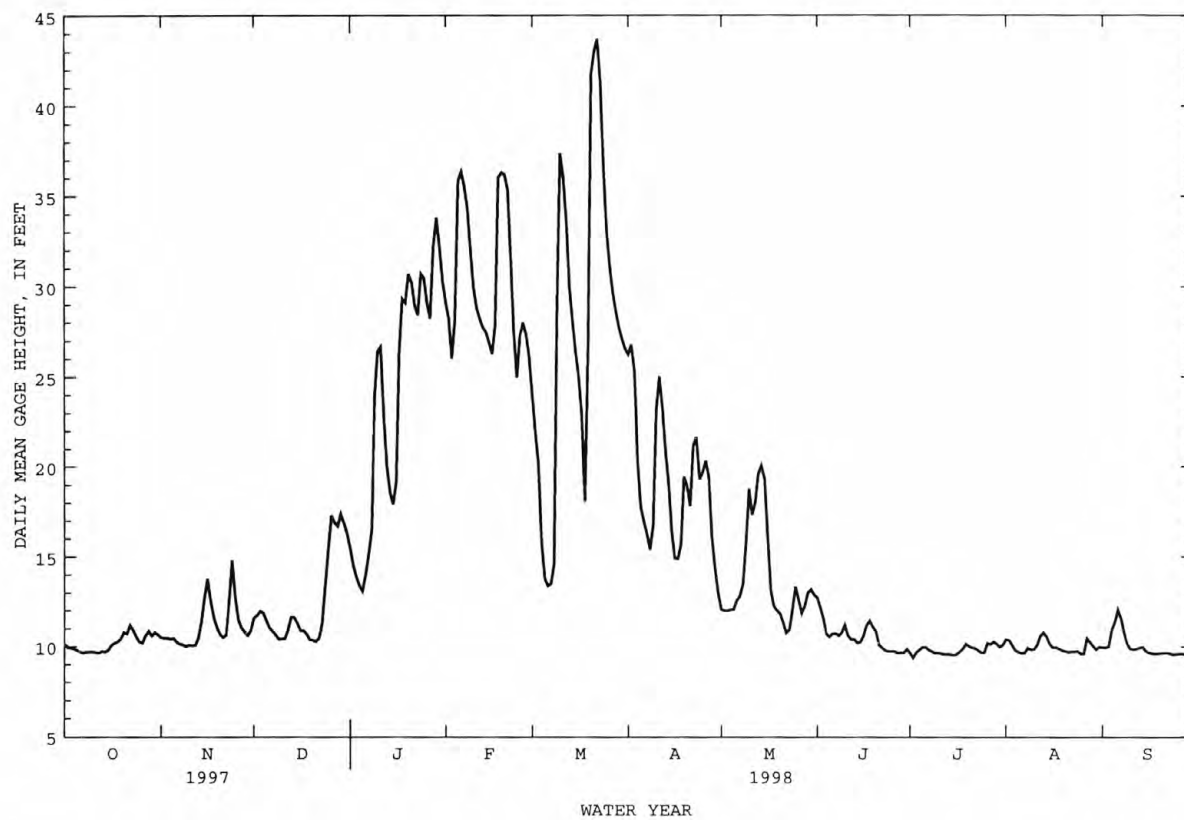
EXTREMES FOR CURRENT YEAR.--Maximum, 43.90 ft, Mar. 22; minimum, 9.33 ft, July 2.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.13	10.50	11.58	15.47	29.18	23.98	26.26	12.05	12.71	9.65	10.38	9.95
2	9.93	10.47	11.73	14.52	28.24	21.94	26.79	12.00	12.16	9.38	10.34	9.93
3	9.91	10.47	11.95	13.87	26.03	20.17	25.28	11.98	11.53	9.66	10.06	10.00
4	9.86	10.41	11.86	13.38	28.12	15.83	20.22	12.03	10.69	9.82	9.78	10.89
5	9.78	10.44	11.43	13.08	35.89	13.76	17.75	12.03	10.53	9.95	9.69	11.34
6	9.69	10.24	11.03	13.95	36.36	13.37	16.96	12.54	10.70	9.96	9.63	12.03
7	9.64	10.13	10.84	15.16	35.54	13.48	16.25	12.77	10.72	9.82	9.65	11.53
8	9.69	10.09	10.65	16.48	34.35	14.59	15.39	13.46	10.59	9.73	9.91	10.71
9	9.69	10.00	10.39	23.81	32.08	28.56	16.72	15.79	10.76	9.62	9.83	10.15
10	9.70	10.06	10.41	26.42	29.97	37.38	23.17	18.76	11.19	9.66	9.85	9.88
11	9.67	10.04	10.43	26.67	28.85	36.10	25.03	17.32	10.59	9.61	10.08	9.84
12	9.65	10.05	10.94	22.86	28.20	33.59	23.26	18.00	10.39	9.57	10.57	9.86
13	9.73	10.45	11.62	20.04	27.72	29.99	20.84	19.61	10.39	9.58	10.77	9.93
14	9.69	11.37	11.61	18.55	27.48	28.09	19.05	20.06	10.20	9.56	10.56	9.97
15	9.79	12.71	11.29	17.91	26.90	26.39	16.35	19.32	10.24	9.52	10.16	9.75
16	10.06	13.77	10.88	19.18	26.29	25.04	14.91	16.10	10.58	9.56	9.94	9.66
17	10.18	12.52	10.86	26.40	27.86	22.81	14.88	13.09	11.16	9.70	9.95	9.62
18	10.25	11.58	10.68	29.32	36.04	18.06	15.68	12.24	11.42	9.86	9.88	9.60
19	10.40	11.04	10.36	29.11	36.32	26.55	19.43	11.99	11.08	10.14	9.79	9.61
20	10.79	10.67	10.34	30.70	36.19	41.76	18.92	11.84	10.82	10.01	9.74	9.62
21	10.71	10.50	10.26	30.22	35.35	43.03	17.83	11.33	10.07	9.93	9.70	9.65
22	11.17	10.64	10.44	28.96	31.60	43.70	21.17	10.75	9.93	9.90	9.72	9.65
23	10.91	12.53	11.25	28.43	27.45	41.27	21.66	10.93	9.77	9.78	9.72	9.61
24	10.54	14.79	13.45	30.70	24.97	36.66	19.30	12.06	9.73	9.66	9.74	9.55
25	10.25	12.63	15.47	30.48	27.28	33.21	19.69	13.32	9.73	9.66	9.61	9.59
26	10.19	11.45	17.29	29.11	28.00	31.11	20.32	12.58	9.73	10.18	9.61	9.60
27	10.59	11.01	16.89	28.24	27.34	29.67	19.44	11.85	9.62	10.12	10.44	9.60
28	10.85	10.81	16.70	32.24	26.13	28.62	16.08	12.24	9.66	10.25	10.24	9.56
29	10.59	10.61	17.37	33.80	---	27.74	14.35	12.99	9.64	10.15	10.03	9.46
30	10.78	10.88	16.90	32.22	---	27.08	12.99	13.16	9.85	9.98	9.84	9.64
31	10.65	---	16.28	30.35	---	26.55	---	12.87	---	10.08	9.98	---
MEAN	10.18	11.10	12.36	23.92	30.20	27.74	19.20	13.78	10.54	9.81	9.97	9.99
MAX	11.17	14.79	17.37	33.80	36.36	43.70	26.79	20.06	12.71	10.25	10.77	12.03
MIN	9.64	10.00	10.26	13.08	24.97	13.37	12.99	10.75	9.62	9.38	9.61	9.46

## CAPE FEAR RIVER BASIN

02104000 CAPE FEAR RIVER AT FAYETTEVILLE, NC--Continued



## CAPE FEAR RIVER BASIN

02104220 ROCKFISH CREEK AT RAEFORD, NC

LOCATION.--Lat 34°59'55", long 79°12'55", Hoke County, Hydrologic Unit 03030004, at upstream side of bridge on U.S. Highway 401, 1.0 mi downstream of Nicholsons Creek, and 1.0 mile north of Raeford.

DRAINAGE AREA.--93.1 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 178 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	115	184	134	198	198	194	231	137	67	103	136
2	66	141	203	122	170	194	297	227	121	63	87	112
3	65	144	170	119	166	184	316	213	114	58	81	98
4	63	120	131	117	415	174	294	201	107	56	78	177
5	61	109	120	114	658	167	263	190	120	55	75	233
6	60	104	112	119	475	163	226	183	155	55	73	221
7	59	105	107	153	344	162	201	170	144	52	73	150
8	57	109	105	181	286	215	194	212	111	51	82	101
9	57	105	107	216	251	611	307	357	99	51	82	102
10	59	102	111	206	228	675	753	329	101	53	e140	90
11	60	102	115	172	209	440	517	261	110	50	e160	83
12	59	101	114	135	199	321	346	218	99	50	e140	79
13	59	136	111	126	194	265	282	189	89	50	134	77
14	60	207	106	127	186	236	244	174	84	49	126	75
15	120	227	103	130	176	220	234	161	80	49	97	75
16	168	203	101	172	172	207	227	150	76	50	91	74
17	155	155	99	227	397	205	253	144	73	78	121	75
18	115	120	98	241	e660	e250	326	141	70	90	135	76
19	133	114	98	244	476	e420	367	134	62	67	114	77
20	199	110	97	279	329	e620	341	127	84	96	90	79
21	195	109	97	285	271	487	306	124	79	116	83	77
22	151	139	e140	253	235	387	289	121	66	86	78	82
23	117	138	e160	251	241	345	315	121	65	67	76	81
24	106	120	174	300	278	295	413	139	65	60	73	76
25	102	108	220	304	276	259	408	143	60	101	70	73
26	115	104	226	265	249	237	324	132	58	145	71	73
27	e180	102	207	246	219	221	258	129	57	234	98	73
28	e200	99	200	321	198	208	223	170	57	174	102	72
29	148	98	184	364	---	200	215	154	57	109	86	73
30	115	132	177	318	---	195	221	136	60	96	80	128
31	107	---	158	249	---	188	---	146	---	94	83	---
TOTAL	3282	3778	4335	6490	8156	8949	9154	5527	2660	2472	2982	2998
MEAN	106	126	140	209	291	289	305	178	88.7	79.7	96.2	99.9
MAX	200	227	226	364	660	675	753	357	155	234	160	233
MIN	57	98	97	114	166	162	194	121	57	49	70	72
CFSM	1.14	1.36	1.51	2.26	3.14	3.11	3.29	1.92	.96	.86	1.04	1.08
IN.	1.32	1.52	1.74	2.60	3.27	3.59	3.67	2.22	1.07	.99	1.20	1.20

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	119	122	119	145	147	167	150	113	99.1	99.0	105
MAX	201	169	186	209	291	289	305	182	175	224	176
(WY)	1990	1990	1990	1998	1998	1998	1998	1989	1989	1989	1996
MIN	72.0	87.7	84.0	95.7	94.7	97.0	88.3	72.5	73.1	54.4	65.2
(WY)	1993	1991	1989	1992	1992	1992	1992	1994	1991	1992	1992

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

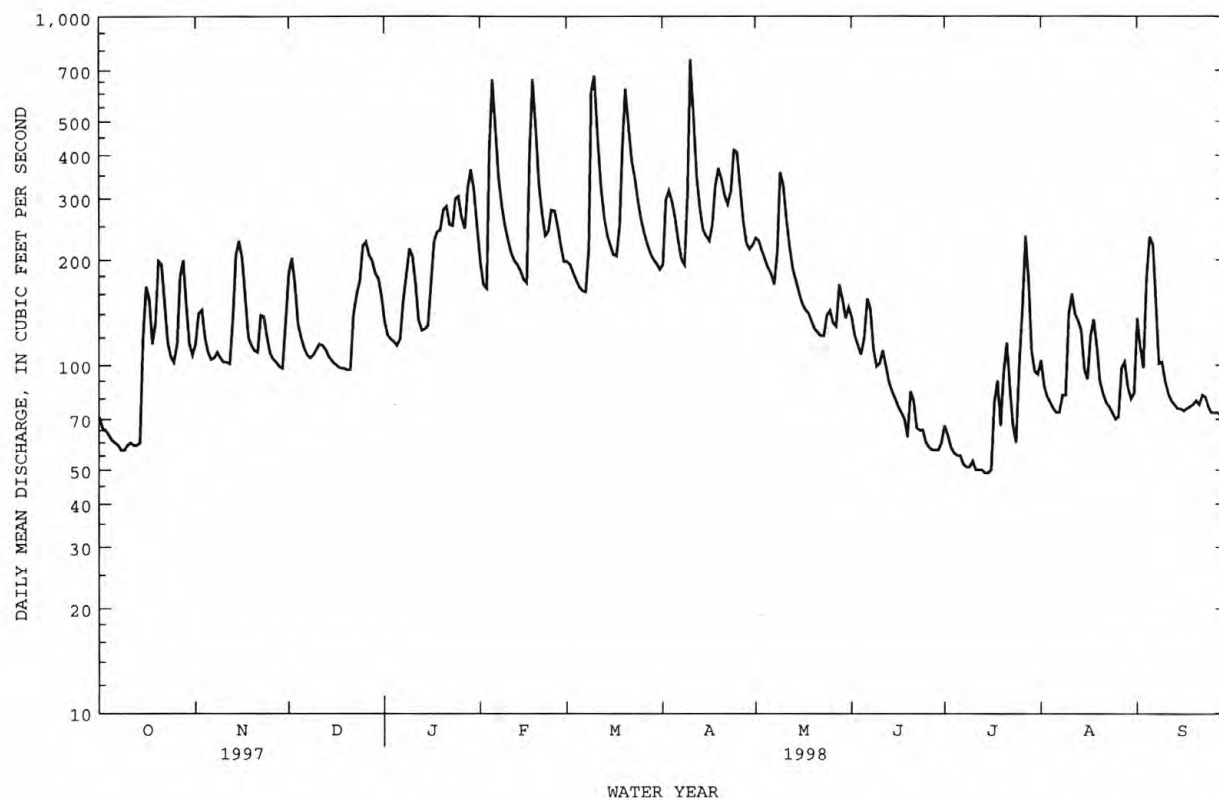
## WATER YEARS 1988 - 1998

	1997	1998	1988-1998
ANNUAL TOTAL	45209	60783	
ANNUAL MEAN	124	167	124
HIGHEST ANNUAL MEAN			167
LOWEST ANNUAL MEAN			88.8
HIGHEST DAILY MEAN	845	753	884
LOWEST DAILY MEAN	50	49	39
ANNUAL SEVEN-DAY MINIMUM	57	50	41
INSTANTANEOUS PEAK FLOW		861	1030
INSTANTANEOUS PEAK STAGE		8.01	8.29
INSTANTANEOUS LOW FLOW		48	38
ANNUAL RUNOFF (CFSM)	1.34	1.80	1.34
ANNUAL RUNOFF (INCHES)	18.14	24.39	18.24
10 PERCENT EXCEEDS	192	302	206
50 PERCENT EXCEEDS	112	134	103
90 PERCENT EXCEEDS	60	65	59

e Estimated.

## CAPE FEAR RIVER BASIN

02104220 ROCKFISH CREEK AT RAEFORD, NC--Continued



## CAPE FEAR RIVER BASIN

02105500 CAPE FEAR RIVER AT WILLIAM O. HUSKE LOCK NEAR TARHEEL, NC

LOCATION.--Lat 34°50'05", long 78°49'27", Bladen County, Hydrologic Unit 03030005, on right bank 100 ft upstream from William O. Huske Lock, 1 mi downstream of Cumberland-Bladen County line, 7 mi north of Tar Heel, 9 mi upstream from Phillips Creek, and at mile 123.

DRAINAGE AREA.--4,852 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1964, published as "Cape Fear River at Lock 3 near Tarheel".

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder and concrete lock and dam control. Datum of gage is 28.97 ft above sea level. Prior to Jan. 8, 1939, nonrecording gage on upper lock wall 100 ft downstream at same datum. Auxiliary water-stage recorder 1.8 mi downstream of base gage; prior to Jan. 14, 1943, auxiliary nonrecording gage 400 ft downstream on lower end of lock wall; Jan. 14, 1943, to Sept. 30, 1953, auxiliary water-stage recorder at site 600 ft downstream. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Slight regulation at high flow, December 1972 to August 1981, caused by temporary storage in B. Everett Jordan Lake. Flow regulated since September 1981 by B. Everett Jordan Lake (station 02098197). Slight diurnal fluctuation and some regulation for short periods at low flow caused by power plants above station. Prior to regulation, maximum discharge not determined; minimum discharge, 170 ft<sup>3</sup>/s, Sep. 20, 1950. Minimum discharge during regulation also occurred Oct. 8, 9, 10, 1981.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1340	1690	2780	7020	23700	16900	18200	3010	3840	884	1530	1150
2	1130	1670	2960	5840	22200	13900	19700	2940	3250	627	1500	1110
3	1100	1640	3130	5090	19200	11600	17900	2960	2680	867	1260	1150
4	1040	1590	3080	4530	21700	8030	12300	2990	1820	1010	964	2040
5	982	1620	2650	4180	32200	4990	10200	3000	1620	1130	897	2610
6	896	1440	2200	5140	33200	4540	8850	3460	1750	1190	856	3170
7	856	1320	2000	6920	31600	4580	7780	3800	1840	1030	858	2800
8	889	1280	1740	8190	30200	5760	6820	4310	1710	945	1110	1920
9	888	1180	1400	16600	27200	21700	7870	6920	1780	849	1030	1350
10	896	1240	1430	19800	25200	35100	15200	10400	2290	889	1030	1090
11	878	1220	1470	20400	23200	32800	18200	9120	1760	852	1190	1020
12	846	1230	1970	15900	22200	29000	15800	9410	1480	793	1690	1040
13	924	1600	2720	11600	21700	24400	12400	11400	1500	799	1890	1100
14	892	2570	2790	11200	21300	21800	10600	12100	1310	785	1740	1150
15	968	3910	2420	9830	20600	19200	8220	11800	1340	732	1350	951
16	1220	5450	1930	10900	19800	17800	6150	8060	1630	750	1110	864
17	1360	3940	1870	18200	21300	15300	6100	4270	2190	832	1130	850
18	1440	2850	1810	24300	31800	9800	7060	3220	2510	1000	1060	839
19	1580	2270	1520	23800	33100	19000	11300	2940	2160	1220	966	835
20	2020	1850	1490	25700	32400	39200	11500	2790	1990	1250	938	839
21	1900	1660	1430	25500	31500	43800	9520	2400	1250	1140	888	858
22	2330	1790	1580	23600	26500	45600	13500	1870	1130	1090	910	867
23	2120	3490	2380	22700	21000	43300	13100	1910	974	1010	899	842
24	1750	6540	4680	25500	17700	33400	11000	2990	953	901	922	769
25	1430	3990	7290	25900	20500	26300	12000	4450	940	838	823	802
26	1370	2630	9290	23800	21900	23200	11500	3760	925	1310	889	813
27	1780	2160	8910	22200	21100	21400	11400	2900	856	1280	1670	807
28	2100	1950	8530	27200	19600	20000	8030	3200	885	1430	1440	775
29	1740	1750	9230	29700	---	18400	5480	4080	849	1350	1210	676
30	1940	2010	8730	27700	---	18200	4130	4370	1060	1160	1030	815
31	1870	---	7930	25400	---	18100	---	4000	---	1220	1170	---
TOTAL	42475	69530	113340	534340	693600	667100	331810	154830	50272	31163	35950	35902
MEAN	1370	2318	3656	17240	24770	21520	11060	4995	1676	1005	1160	1197
MAX	2330	6540	9290	29700	33200	45600	19700	12100	3840	1430	1890	3170
MIN	846	1180	1400	4180	17700	4540	4130	1870	849	627	823	676

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1998\*, BY WATER YEAR (WY)

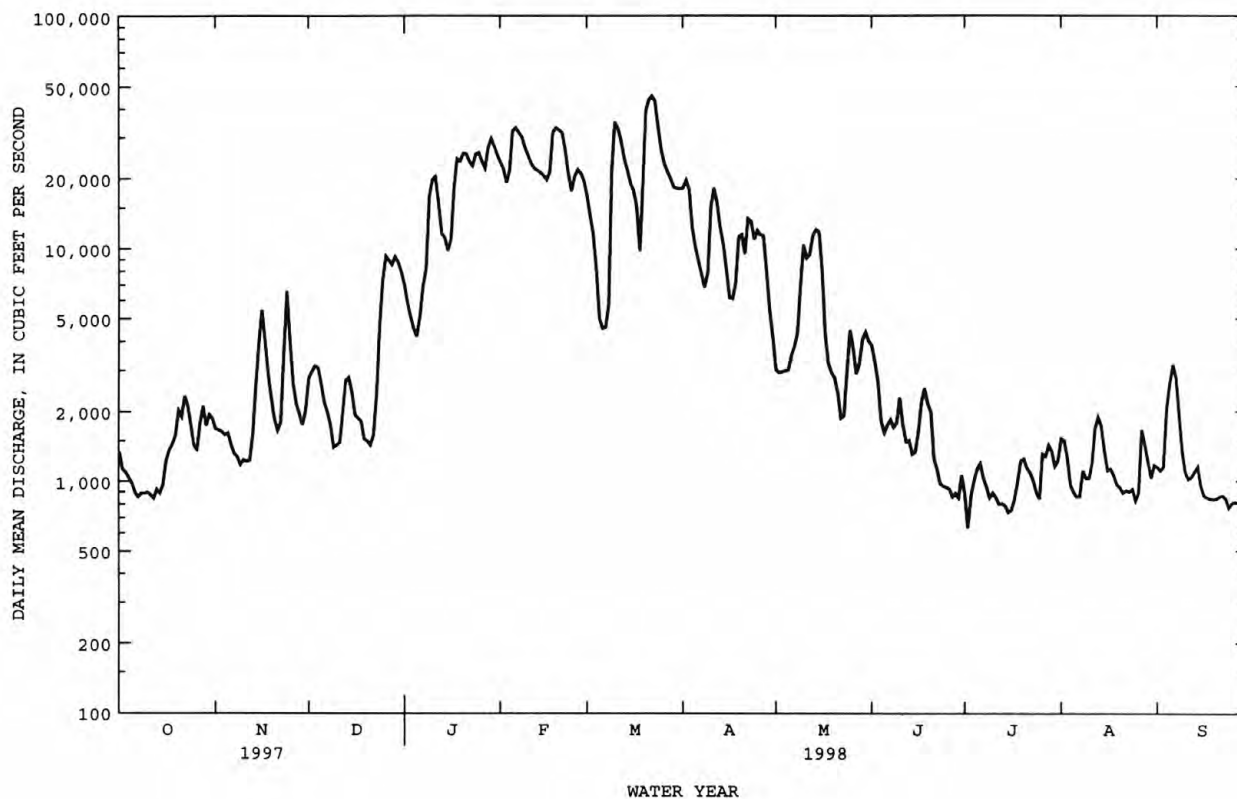
	MEAN	2861	3244	4305	8082	9300	10880	7102	3986	3516	3052	2701	2613
MAX	8666	10190	11360	17240	24770	21520	15410	11770	14200	9262	7358	18950	
(WY)	1990	1996	1984	1998	1998	1998	1993	1989	1982	1995	1984	1996	
MIN	979	1297	1647	2197	2799	3078	1508	1184	1052	958	969	935	
(WY)	1987	1982	1989	1986	1986	1988	1986	1986	1986	1986	1983	1990	

## CAPE FEAR RIVER BASIN

02105500 CAPE FEAR RIVER AT WILLIAM O. HUSKE LOCK NEAR TARHEEL, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1982 - 1998*	
ANNUAL TOTAL	1668743		2760312		5116	
ANNUAL MEAN	4572		7562		8328	
HIGHEST ANNUAL MEAN					2426	
LOWEST ANNUAL MEAN					60000	
HIGHEST DAILY MEAN	34100	Jul 25	45600	Mar 22	414	Sep 8 1996
LOWEST DAILY MEAN	683	Jul 16	627	Jul 2	429	Oct 8 1981
ANNUAL SEVEN-DAY MINIMUM	787	Jul 11	780	Sep 24	429	Oct 4 1981
INSTANTANEOUS PEAK FLOW			47100	Mar 22	NOT DETERMINED	
INSTANTANEOUS PEAK STAGE			26.28	Mar 22	26.75	Sep 8 1996
INSTANTANEOUS LOW FLOW			590	Jul 2	408*	Oct 8 1981
10 PERCENT EXCEEDS	9770		22900		14100	
50 PERCENT EXCEEDS	2100		2330		2450	
90 PERCENT EXCEEDS	948		887		1020	

\* Regulated period only (1982-1998). See REMARKS.



## CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1 NEAR KELLY, NC

LOCATION.--Lat 34°24'15", long 78°17'38", Bladen County, Hydrologic Unit 03030005, on right bank near upstream end of lock No. 1, 1.3 mi upstream from Natmore Creek, 2.0 mi upstream from bridge on State Highway 11, 4.6 mi southeast of Kelly, and at mile 67.

DRAINAGE AREA.--5,255 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1969 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder with concrete lock and dam control. Datum of gage is 2.90 ft below sea level (U.S. Army Corps of Engineers bench mark). Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Slight regulation at high flow December 1972 to August 1981, caused by storage in B. Everett Jordan Lake. Flow regulated since September 1981 by B. Everett Jordan Lake (station 02098197). Slight diurnal fluctuation and some regulation for short periods at low flow caused by power plants upstream from station. The City of Wilmington diverted an average of 17.9 ft<sup>3</sup>/s for municipal water supply, most of which was returned downstream of station as treated effluent. Prior to regulation, maximum discharge: 57,000 ft<sup>3</sup>/s, March 3, 1979; gage height: 24.92 ft, from floodmarks. Minimum discharge prior to regulation, 406 ft<sup>3</sup>/s, July 1, 1981.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1830	2170	3110	10200	29000	21200	21300	4880	4480	927	1750	1300
2	1330	2240	3740	8770	27500	19900	20500	3860	4090	756	1820	1170
3	942	2140	3840	7360	25800	17900	20100	3510	3570	852	1590	1140
4	854	1980	3900	6320	26200	15500	19600	3640	2640	1070	1130	2020
5	782	1870	3630	5620	25900	10900	17400	4170	2060	1270	861	3200
6	698	1810	3080	5410	27100	7160	14100	4140	1750	1310	694	3440
7	693	1660	2630	7250	30800	5810	11500	4560	1950	1100	689	3880
8	897	1580	2400	9040	33900	5940	9960	4780	2160	957	1050	3120
9	969	1480	2320	12100	34900	11300	8850	6180	1980	793	1200	2430
10	972	1430	2240	15800	33800	17700	11400	8600	2170	784	1100	1810
11	975	1450	2230	17800	31400	21400	15100	10900	2320	907	1090	1520
12	931	1410	2450	18900	28500	27200	16800	11000	2030	895	1350	1380
13	939	1630	2770	18400	26000	31800	16900	11200	1940	757	1790	1350
14	966	2430	3300	16400	23900	31400	15800	12500	1870	752	2180	1290
15	967	3500	3180	14200	22600	28400	14000	13000	1610	699	1900	1130
16	1080	5560	2770	13000	21900	24800	10900	12400	1400	696	1530	1000
17	1300	5760	2450	13800	23000	21900	8470	9150	1640	793	1350	778
18	1450	4260	2460	16800	23900	19500	8530	5540	2160	1050	1100	775
19	1580	3160	2100	19100	25600	16300	9650	3960	2360	1250	940	937
20	1860	2530	1850	20700	29500	17600	12200	3470	2400	1410	820	962
21	2060	2130	1800	21900	33100	21300	12400	3120	2150	1140	775	973
22	2130	1990	1790	23100	34800	29500	12100	2570	1480	1020	922	976
23	2350	2310	2400	24000	34600	40200	13800	2010	1020	1020	986	799
24	2090	5450	3670	24200	31300	46000	14700	2350	812	986	929	653
25	1720	6280	7330	24300	26300	46100	13900	3550	728	971	842	665
26	1490	4110	9660	24900	22900	41700	13600	4550	693	1130	1230	825
27	1740	2880	11100	25400	22000	35800	13600	3810	754	1400	2580	861
28	2110	2390	11300	25500	21700	30800	12800	3460	987	1560	3000	798
29	2110	2150	11200	25800	---	27100	9810	4110	949	1490	2250	674
30	1970	2330	11500	27400	---	24300	7080	4850	853	1270	1760	657
31	2070	---	11100	29000	---	22400	---	4820	---	1190	1430	---
TOTAL	43855	82070	139300	532470	777900	738810	406850	180640	57006	32205	42638	42513
MEAN	1415	2736	4494	17180	27780	23830	13560	5827	1900	1039	1375	1417
MAX	2350	6280	11500	29000	34900	46100	21300	13000	4480	1560	3000	3880
MIN	693	1410	1790	5410	21700	5810	7080	2010	693	696	689	653

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1998\*, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	3194	3567	4931	8902	10280	11990	8344	4380	4010	3290	3095	3166					
MAX	9751	11390	11060	17180	27780	23830	17730	12110	15070	10860	7883	22580					
(WY)	1990	1996	1984	1998	1998	1998	1993	1989	1982	1995	1984	1996					
MIN	1068	1398	1855	2265	3025	3629	1667	1272	1147	1039	1046	985					
(WY)	1988	1988	1992	1986	1986	1988	1986	1986	1986	1998	1983	1990					

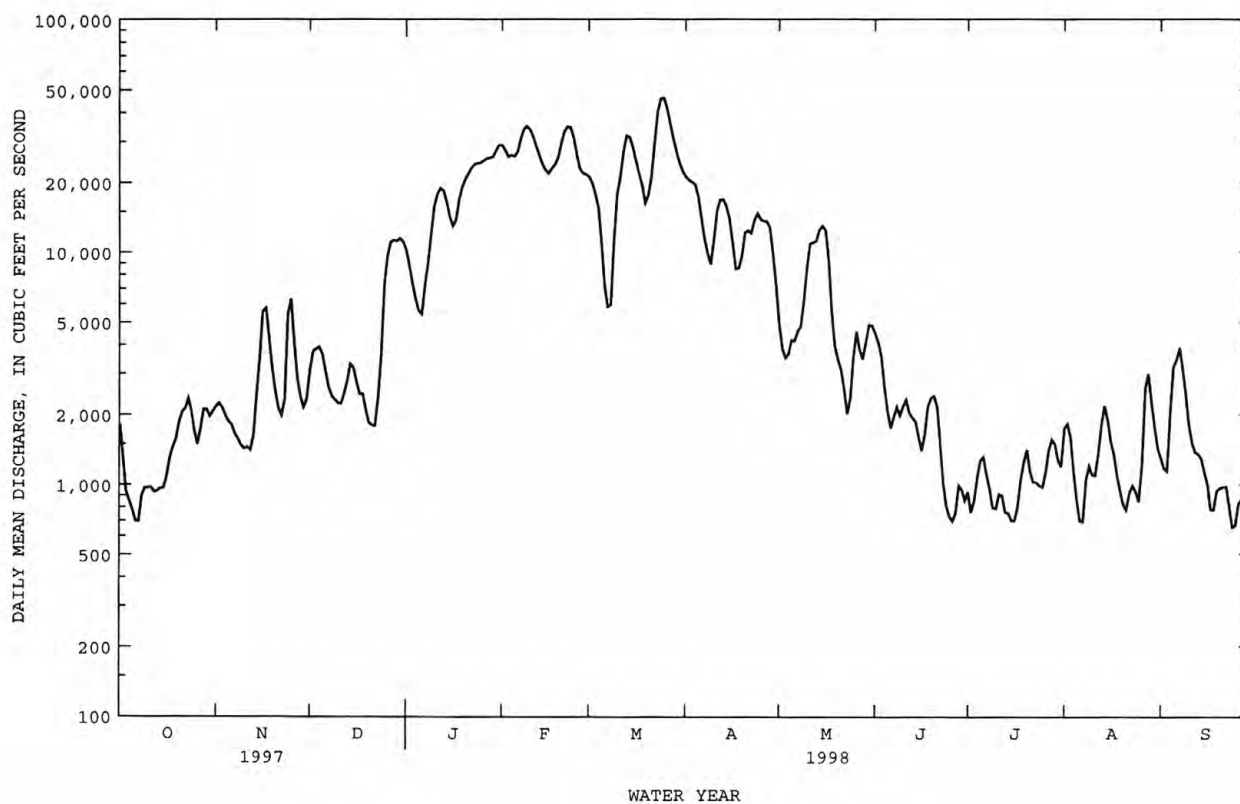


## CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1 NEAR KELLY, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1982 - 1998*	
ANNUAL TOTAL	1868355		3076257		5739	
ANNUAL MEAN	5119		8428		8530	1984
HIGHEST ANNUAL MEAN					2865	1988
LOWEST ANNUAL MEAN					47600	Sep 11 1996
HIGHEST DAILY MEAN	22300	May 4	46100	Mar 25	445	Oct 9 1981
LOWEST DAILY MEAN	677	Aug 30	653	Sep 24	463	Oct 4 1981
ANNUAL SEVEN-DAY MINIMUM	834	Oct 3	733	Sep 24	48300	Sep 11 1996
INSTANTANEOUS PEAK FLOW			47200	Mar 24	24.29	Sep 11 1996
INSTANTANEOUS PEAK STAGE			24.16	Mar 24	380	Oct 7 1981
INSTANTANEOUS LOW FLOW			576	Jul 13	15600	
10 PERCENT EXCEEDS	12300		25400		2910	
50 PERCENT EXCEEDS	2450		2770		1110	
90 PERCENT EXCEEDS	980		903			

\* Regulated period only (1982-1998). See REMARKS.



## CAPE FEAR RIVER BASIN

02105900 HOOD CREEK NEAR LELAND, NC

LOCATION.--Lat 34°16'43", long 78°07'34", Hydrologic Unit 03030005, Brunswick County, on right bank 150 ft downstream from bridge on U.S. Highway 74 and 76, 0.4 mile downstream from Pasture Pond Branch, 1 mile southeast of Maco, and 4.8 miles northwest of Leland.

DRAINAGE AREA.--21.6 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements water years 1950-56, and annual maximum, water years 1953-56. October 1956 to September 1973. October 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 12.22 ft above sea level. Prior to Nov. 28, 1956, crest-stage gage at site 150 ft upstream at datum 9.60 ft lower. Nov. 29, 1956 to Apr. 24, 1969, water-stage recorder 150 ft upstream at datum 0.19 ft higher. Satellite telemetry at station.

REMARKS.--Records fair. Low flows possibly affected by tide. Minimum discharge for period of record, no flow, also occurred Sept. 10, 11, 1997. Maximum stage for current water year and period of record from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	38	139	59	70	102	15	8.2	11	4.6	11	225
2	20	71	97	46	56	86	15	8.1	8.5	4.3	10	178
3	15	52	70	38	74	64	15	8.2	6.9	3.7	8.7	141
4	13	29	51	33	746	49	17	11	5.5	2.5	7.2	329
5	12	20	41	30	430	39	18	26	5.9	7.8	5.8	261
6	11	16	33	32	209	33	16	36	7.1	11	4.5	159
7	9.7	15	27	85	143	30	14	20	9.3	12	6.0	112
8	9.5	14	24	116	112	49	12	29	2.9	9.5	5.9	115
9	9.5	14	25	149	95	490	21	53	4.2	7.3	5.7	185
10	9.7	14	31	109	81	244	45	39	4.7	5.7	4.8	155
11	9.5	13	44	80	74	133	31	174	4.5	4.6	4.2	103
12	9.2	12	50	62	93	94	21	184	3.7	3.8	2.8	74
13	9.0	24	49	50	91	75	17	102	2.9	2.9	2.0	52
14	9.1	54	41	41	74	61	14	66	2.6	2.0	2.7	38
15	9.1	49	33	36	60	50	13	41	2.4	2.6	3.1	29
16	8.7	33	28	53	60	41	12	26	2.1	6.9	3.5	24
17	9.0	24	24	63	767	35	12	22	1.5	9.6	4.5	20
18	9.3	20	21	52	539	36	18	50	1.2	9.4	3.1	17
19	11	17	19	52	217	63	33	48	2.7	8.3	2.0	16
20	12	16	17	71	140	105	28	31	7.4	7.2	1.3	15
21	12	15	16	63	105	84	19	19	9.9	6.0	1.1	14
22	12	14	27	49	86	63	15	13	8.4	4.9	1.0	14
23	12	14	87	114	132	47	16	10	6.1	3.8	.91	13
24	12	13	85	283	160	35	20	8.6	4.9	4.2	.89	10
25	12	14	106	163	116	29	18	7.6	4.4	12	.82	9.1
26	14	13	94	110	88	25	14	6.7	3.9	12	123	8.2
27	19	12	95	119	70	22	12	11	3.5	11	1560	7.3
28	15	12	117	266	72	20	9.3	41	2.6	11	899	6.8
29	13	12	96	165	---	18	7.9	40	2.4	9.5	351	6.4
30	12	81	91	114	---	16	7.5	22	3.9	8.0	188	5.9
31	11	---	77	88	---	15	---	15	---	7.5	139	---
TOTAL	382.3	745	1755	2791	4960	2253	525.7	1176.4	147.0	215.6	3363.52	2342.7
MEAN	12.3	24.8	56.6	90.0	177	72.7	17.5	37.9	4.90	6.95	109	78.1
MAX	33	81	139	283	767	490	45	184	11	12	1560	329
MIN	8.7	12	16	30	56	15	7.5	6.7	1.2	2.0	.82	5.9
CFSM	.57	1.15	2.62	4.17	8.20	3.36	.81	1.76	.23	.32	5.02	3.62
IN.	.66	1.28	3.02	4.81	8.54	3.88	.91	2.03	.25	.37	5.79	4.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1998<sup>8</sup>, BY WATER YEAR (WY)

	MEAN	29.3	20.3	29.1	46.9	58.2	56.4	32.6	14.8	24.8	38.1	52.3	36.4
MAX	91.8	52.6	74.5	93.8	177	111	115	81.9	143	133	153	190	
(WY)	1972	1960	1973	1964	1998	1959	1961	1969	1961	1996	1969	1996	
MIN	1.48	3.51	3.39	9.95	11.5	12.5	3.69	1.67	.32	.73	.15	.51	
(WY)	1968	1966	1966	1957	1957	1967	1967	1995	1960	1957	1957	1963	

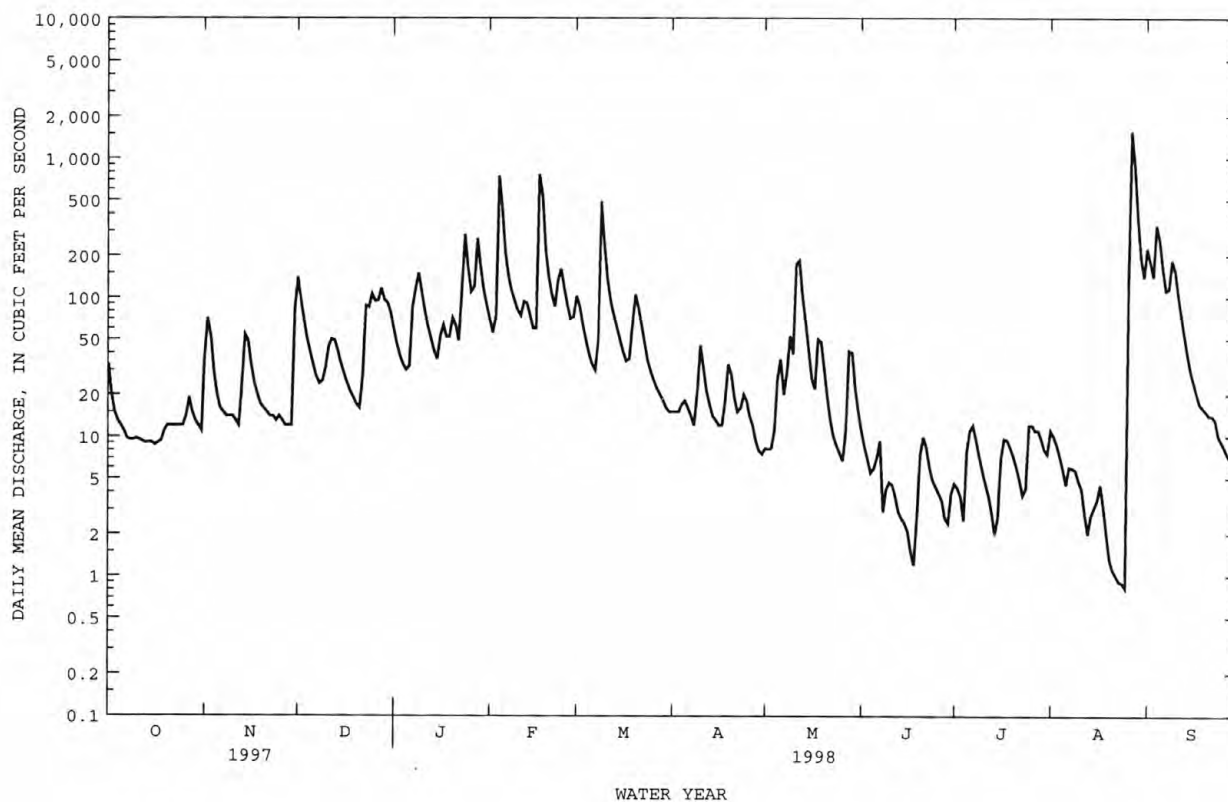
## CAPE FEAR RIVER BASIN

02105900 HOOD CREEK NEAR LELAND, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1957 - 1998 <sup>a</sup>
ANNUAL TOTAL	7011.32	20657.22	
ANNUAL MEAN	19.2	56.6	36.5
HIGHEST ANNUAL MEAN			56.6 1998
LOWEST ANNUAL MEAN			15.6 1968
HIGHEST DAILY MEAN	202 Feb 15	1560 Aug 27	1560 Aug 27 1998
LOWEST DAILY MEAN	0 Sep 10	.82 Aug 25	0* Sep 10 1997
ANNUAL SEVEN-DAY MINIMUM	.02 Sep 4	1.1 Aug 19	.02 Sep 4 1997
INSTANTANEOUS PEAK FLOW		2650 Aug 27	2650 Aug 27 1998
INSTANTANEOUS PEAK STAGE		11.53 Aug 27	11.53 Aug 27 1998
INSTANTANEOUS LOW FLOW		.78 Aug 25	0 Oct 5 1968
ANNUAL RUNOFF (CFSM)	.89	2.62	1.69
ANNUAL RUNOFF (INCHES)	12.08	35.58	22.98
10 PERCENT EXCEEDS	50	118	86
50 PERCENT EXCEEDS	9.6	18	15
90 PERCENT EXCEEDS	.14	4.2	1.4

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.



## CAPE FEAR RIVER BASIN

02106500 BLACK RIVER NEAR TOMAHAWK, NC

LOCATION.--Lat 34°45'17", long 78°17'21", Sampson County, Hydrologic Unit 03030006, on left bank 30 ft upstream from bridge on State Highway 411, 0.2 mi downstream of Clear Run Swamp, and 3.8 mi northeast of Tomahawk.

DRAINAGE AREA.--676 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1723: 1955(M). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 24.61 ft above sea level. Nonrecording gage on downstream side of bridge Oct. 1, 1951 to June 29, 1961. Water-stage recorder was at present site at datum of 24.26 ft June 30, 1961 to Sept. 30, 1964. Satellite telemetry at station

REMARKS.--No estimated daily discharges. Records fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1928 reached a stage of 22.0 ft, present datum; discharge, 14,500 ft<sup>3</sup>/s and floods in 1945 and 1948 reached a stage of 17.6 ft, present datum; discharge, 5,420 ft<sup>3</sup>/s, from information furnished by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	441	509	740	2190	4820	1910	1340	1010	771	88	361	1380
2	378	676	846	2150	4470	1740	1250	933	759	108	266	1080
3	299	765	900	2020	4000	1600	1220	872	776	104	166	825
4	239	791	949	1820	3960	1480	1230	837	803	90	125	1150
5	199	811	1000	1590	4290	1380	1300	890	808	79	100	1590
6	170	832	1010	1380	5110	1280	1390	891	792	70	84	1750
7	146	828	957	1210	6130	1170	1470	870	749	63	75	1760
8	129	762	862	1240	6370	1120	1590	867	685	57	78	1750
9	114	638	790	1620	5870	1560	1860	907	610	51	84	1680
10	103	524	751	1890	5160	2480	2420	941	557	46	77	1440
11	92	452	735	2160	4350	4340	2880	927	534	42	112	998
12	85	410	743	2610	3630	6300	3050	930	495	38	151	723
13	77	416	768	2830	3050	6640	2940	938	451	35	147	604
14	72	554	777	2680	2610	5910	2710	922	412	34	154	536
15	69	690	762	2380	2280	5020	2680	930	388	35	131	476
16	66	762	725	2170	2050	4040	2620	964	365	39	118	417
17	64	834	679	2020	2780	3200	2400	932	336	42	346	374
18	66	961	632	1920	3940	2620	2230	864	295	38	306	338
19	86	1190	592	1890	5370	2320	2040	778	267	35	195	305
20	133	1350	560	1970	6600	2300	1880	697	410	31	144	277
21	205	1300	538	2090	6230	2440	1730	629	375	32	116	251
22	230	1090	538	2180	5430	2670	1590	574	251	31	97	234
23	241	901	633	2440	4730	3100	1480	536	195	25	83	219
24	241	774	722	2940	4020	3430	1430	645	164	21	71	200
25	225	684	921	3410	3350	3470	1440	747	141	19	61	181
26	208	618	1060	3770	2810	3210	1460	789	122	23	86	162
27	254	566	1200	4100	2410	2790	1470	795	110	129	1080	142
28	355	520	1420	4560	2130	2370	1420	874	95	181	1720	123
29	404	479	1660	4790	---	2000	1300	875	83	171	1730	108
30	426	539	1920	4880	---	1720	1140	829	77	172	1600	108
31	442	---	2100	4980	---	1510	---	786	---	180	1520	---
TOTAL	6259	22226	28490	79880	117950	87120	54960	25979	12876	2109	11384	21181
MEAN	202	741	919	2577	4213	2810	1832	838	429	68.0	367	706
MAX	442	1350	2100	4980	6600	6640	3050	1010	808	181	1730	1760
MIN	64	410	538	1210	2050	1120	1140	536	77	19	61	108
CFSM	.30	1.10	1.36	3.81	6.23	4.16	2.71	1.24	.63	.10	.54	1.04
IN.	.34	1.22	1.57	4.40	6.49	4.79	3.02	1.43	.71	.12	.63	1.17

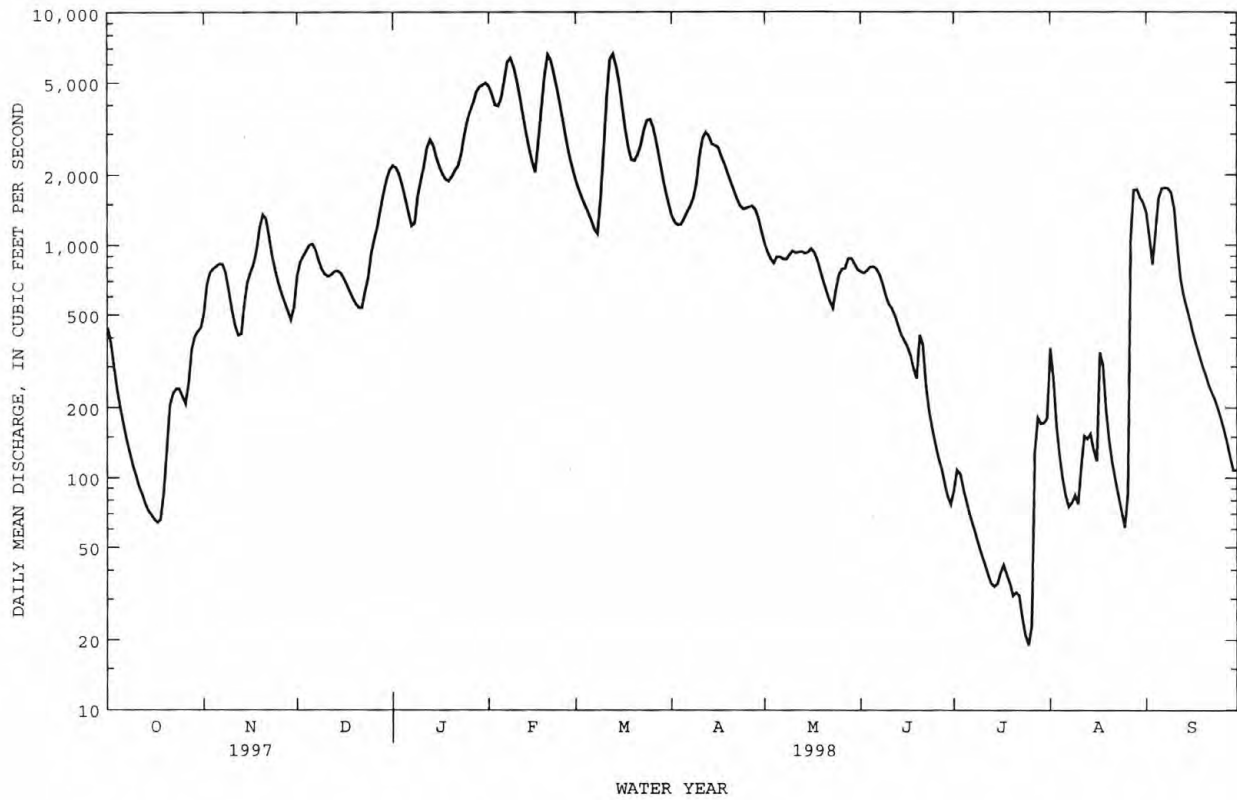
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1998, BY WATER YEAR (WY)

	MEAN	473	496	725	1154	1346	1464	1083	544	477	495	706	622
MAX	2613	1412	2164	2903	4213	3410	3070	1687	3089	2088	2810	4740	
(WY)	1965	1963	1993	1993	1998	1983	1973	1978	1995	1965	1974	1996	
MIN	29.6	57.1	238	287	448	460	225	141	113	68.0	25.2	13.4	
(WY)	1955	1974	1989	1986	1989	1981	1981	1986	1985	1998	1954	1954	

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1952 - 1998

ANNUAL TOTAL	237448	470414	
ANNUAL MEAN	651	1289	796
HIGHEST ANNUAL MEAN			1300
LOWEST ANNUAL MEAN			327
HIGHEST DAILY MEAN	2150	Feb 20	6640
LOWEST DAILY MEAN	47	Jul 15	19
ANNUAL SEVEN-DAY MINIMUM	69	Sep 7	26
INSTANTANEOUS PEAK FLOW			6800
INSTANTANEOUS PEAK STAGE			18.59
INSTANTANEOUS LOW FLOW			18
ANNUAL RUNOFF (CFSM)	.96		1.91
ANNUAL RUNOFF (INCHES)	13.07		25.89
10 PERCENT EXCEEDS	1330		3200
50 PERCENT EXCEEDS	538		803
90 PERCENT EXCEEDS	93		84
			107

CAPE FEAR RIVER BASIN  
02106500 BLACK RIVER NEAR TOMAHAWK, NC--Continued



## CAPE FEAR RIVER BASIN

0210783230 HERRINGS MARSH RUN NEAR SUMMERLINS CROSSROADS, NC

LOCATION.--Lat 35°05'37", long 77°56'35", Duplin County, Hydrologic Unit 03030007, on right bank 150 ft downstream of Secondary Road 1508, and 1.1 mi northeast of Summerlins Crossroads.

DRAINAGE AREA.--2.25 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1991 to current year.

GAGE.--Water stage recorder. Elevation of gage is 102 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and those for discharges below 1.0 ft<sup>3</sup>/s, which are poor. Maximum discharge for period of record from rating curve extended above 40 ft<sup>3</sup>/s by logarithmic plotting. No flow Aug. 20-25, 1998.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	e2.8	e4.5	1.9	4.1	3.4	2.9	2.7	1.0	.09	.16	.98
2	.18	e6.5	e2.9	1.7	3.6	3.1	3.3	4.4	.94	.08	.09	1.0
3	.15	e2.2	2.1	1.6	5.0	3.5	2.2	2.3	.81	.06	.05	2.6
4	.15	e1.6	2.0	1.5	64	3.2	7.1	3.8	1.1	.05	.04	15
5	.14	e1.5	1.9	1.3	19	2.9	3.3	5.0	1.1	.05	.03	5.5
6	.14	e2.0	1.6	1.3	9.2	2.8	2.4	2.8	1.2	.04	.04	1.9
7	.13	e1.3	1.6	1.7	6.9	3.0	2.0	2.1	1.3	.04	.03	1.6
8	.13	e.98	1.5	14	6.1	7.6	1.8	4.1	.91	.05	.03	e1.3
9	.13	e.90	1.9	5.6	5.1	33	20	2.5	.73	.05	.07	e1.2
10	.13	e.85	2.0	2.5	4.6	7.0	7.0	2.1	.74	.05	.30	.94
11	.13	e.80	1.9	2.0	5.1	4.5	4.8	3.2	.71	.05	.09	.71
12	.13	e.79	2.7	1.7	6.8	3.6	3.8	2.8	.67	.04	.14	.53
13	.13	e3.1	2.1	1.5	4.8	3.2	3.2	2.3	.52	.03	.08	.50
14	.15	e10	1.7	1.4	4.3	3.0	3.3	1.8	.49	.04	.10	.50
15	.18	e4.0	1.5	1.8	3.9	2.9	3.4	1.4	.46	.04	.09	.36
16	.21	e.53	1.4	7.2	5.1	2.7	2.7	1.6	.37	.04	.07	.36
17	e.34	e.68	1.4	3.8	81	3.4	3.6	1.3	.25	.12	.16	.38
18	e.62	e2.1	1.2	2.3	13	5.9	3.3	e1.1	.21	.24	.03	.40
19	e3.3	e3.8	1.1	12	7.1	11	2.8	e.92	.18	.16	.01	.48
20	e1.7	e2.5	1.2	6.7	5.9	6.4	2.6	e.80	.22	.16	0	.40
21	e1.1	e2.3	1.0	3.3	4.5	6.1	2.1	e.69	.21	.11	0	.38
22	e1.3	e2.2	3.8	2.6	3.9	4.3	3.1	e.50	.16	.08	0	.29
23	e1.5	e2.1	2.8	20	5.4	3.4	4.5	e2.6	.19	.07	0	.25
24	e1.7	e2.2	8.2	12	4.1	3.1	3.2	e1.9	.16	.07	0	.22
25	e1.8	e2.5	8.0	4.6	3.4	2.9	2.3	e1.3	.14	.07	0	.18
26	e1.9	e2.4	2.8	3.1	3.1	2.8	1.9	e1.0	.12	8.6	12	.16
27	e2.9	e2.3	10	15	2.9	2.8	1.8	e1.4	.12	.17	37	.11
28	e2.1	e2.2	5.3	18	3.8	2.3	2.3	e2.8	.10	.17	3.8	.09
29	e1.6	e2.1	4.1	7.8	---	2.1	1.7	e.90	.10	.13	1.5	.10
30	e1.4	e11	3.6	5.8	---	2.2	1.7	1.1	.10	.39	1.0	.16
31	e1.2	---	2.3	4.7	---	2.1	---	1.1	---	.31	.86	---
TOTAL	26.89	80.23	90.1	170.4	295.7	150.2	110.1	64.31	15.31	11.65	57.77	38.58
MEAN	.87	2.67	2.91	5.50	10.6	4.85	3.67	2.07	.51	.38	1.86	1.29
MAX	3.3	11	10	20	81	33	20	5.0	1.3	8.6	37	15
MIN	.13	.53	1.0	1.3	2.9	2.1	1.7	.50	.10	.03	0	.09
CFSM	.39	1.19	1.29	2.44	4.69	2.15	1.63	.92	.23	.17	.83	.57
IN.	.44	1.33	1.49	2.82	4.89	2.48	1.82	1.06	.25	.19	.96	.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	1.46	1.66	2.36	3.86	3.63	3.36	2.06	.71
MAX	5.45	3.23	4.47	8.75	10.6	5.39	4.24	2.07
(WY)	1997	1993	1993	1993	1998	1993	1993	1998
MIN	.28	.55	1.02	1.50	1.62	1.47	.57	.20
(WY)	1994	1994	1996	1996	1992	1992	1995	1994

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1991 - 1998

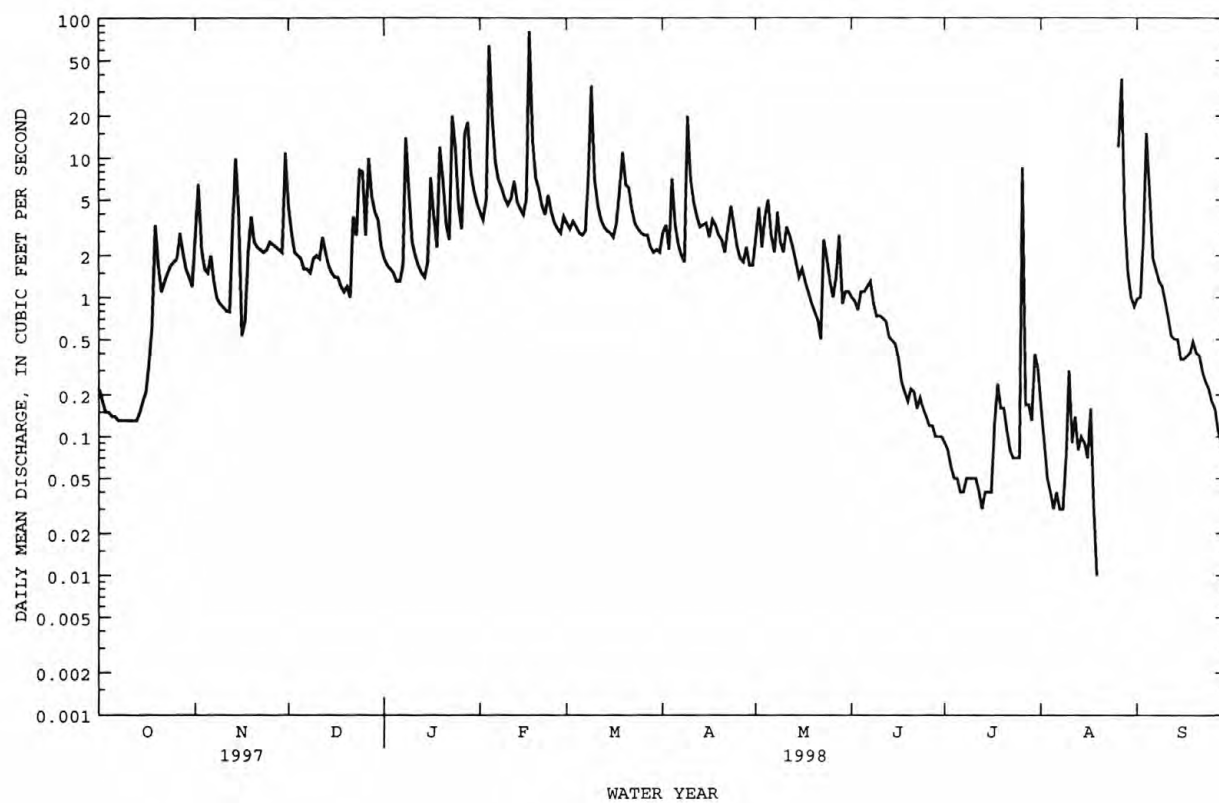
ANNUAL TOTAL	559.46	1111.24	
ANNUAL MEAN	1.53	3.04	
HIGHEST ANNUAL MEAN			2.03
LOWEST ANNUAL MEAN			3.04
HIGHEST DAILY MEAN	13	81	92
LOWEST DAILY MEAN	.07	0	0
ANNUAL SEVEN-DAY MINIMUM	.09	0	0
INSTANTANEOUS PEAK FLOW		284	375
INSTANTANEOUS PEAK STAGE		4.99	5.33
INSTANTANEOUS LOW FLOW		0*	0*
ANNUAL RUNOFF (CFSM)	.68	1.35	.90
ANNUAL RUNOFF (INCHES)	9.25	18.37	12.24
10 PERCENT EXCEEDS	3.1	6.1	4.5
50 PERCENT EXCEEDS	1.0	1.7	1.0
90 PERCENT EXCEEDS	.14	.09	.13

e Estimated.

\* See REMARKS.

## CAPE FEAR RIVER BASIN

0210783230 HERRINGS MARSH RUN NEAR SUMMERLINS CROSSROADS, NC--Continued





## CAPE FEAR RIVER BASIN

0210783240 HERRINGS MARSH RUN TRIBUTARY NEAR SUMMERLINS CROSSROADS, NC

LOCATION.--Lat 35°05'49", long 77°56'01", Duplin County, Hydrologic Unit 03030007, at upstream side of culvert on Secondary Road 1508, and 1.6 mi northeast of Summerlins Crossroads.

DRAINAGE AREA.--1.49 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1991 to current year.

GAGE.--Water stage recorder. Elevation of gage is 95 ft above sea level, from topographic map.

REMARKS.--Records fair, except those for estimated daily discharges, which are poor. Maximum discharge and stage for period of record, result of beaver dam failure.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.9	2.4	3.1	1.7	e2.8	3.2	2.7	2.1	e1.2	e.56	e2.0	2.8
2	e.85	3.2	2.3	1.7	e2.7	2.9	2.9	2.7	e.99	e.40	e.92	3.7
3	e.43	1.4	1.9	1.6	3.6	3.0	2.3	2.1	e.72	e.33	e.51	4.0
4	e.30	1.0	1.8	1.6	3.0	2.9	4.0	2.2	e1.0	e.39	.43	14
5	e.27	1.1	1.7	1.5	9.7	2.7	2.6	3.6	e2.0	e.49	.39	4.8
6	e.25	1.1	1.8	1.5	6.0	2.6	2.2	2.3	e1.8	e.41	.38	2.9
7	e.24	.90	1.7	1.6	5.3	2.6	1.8	1.8	e1.4	e.34	.40	2.6
8	e.23	.80	1.7	4.7	4.9	4.5	1.8	2.8	e1.3	e.31	.52	2.3
9	e.22	.77	2.0	2.5	4.4	17	7.7	2.2	e1.1	e.50	.44	2.2
10	e.23	.70	2.3	1.9	4.1	5.2	3.6	1.7	e1.2	e.44	.49	2.0
11	e.22	.69	2.1	1.8	4.2	3.9	2.7	1.9	e1.3	e.41	1.2	1.8
12	e.21	.70	2.3	1.7	4.7	3.5	2.3	2.0	e1.6	e.38	.61	1.7
13	e.21	2.2	2.0	1.7	3.8	3.2	2.1	1.8	e1.4	e.34	.45	1.7
14	e.22	6.1	1.8	1.6	3.7	3.1	2.1	1.5	e1.3	e.32	.48	1.5
15	e.24	2.4	1.7	1.8	3.5	2.8	2.2	1.3	e1.2	e.30	.39	1.4
16	e.27	.48	1.6	3.7	3.9	2.7	2.0	1.2	e1.1	e.39	.43	1.4
17	e.30	.56	1.6	2.7	54	2.8	2.3	1.1	e1.0	e1.3	1.2	1.3
18	e.36	1.3	1.5	2.1	7.6	4.0	2.5	e1.2	e.99	e2.1	.83	1.3
19	1.9	1.7	1.5	5.3	5.3	5.6	2.2	e1.0	e.90	e.70	.51	1.3
20	1.2	1.7	1.4	3.4	4.8	4.5	2.1	e.92	e.71	e.99	.43	1.3
21	.94	1.4	1.4	2.6	4.1	4.3	1.9	e.86	e.59	e.60	.39	1.3
22	1.1	1.5	2.0	e2.2	3.6	3.4	2.1	e.80	e.53	e.38	.38	1.4
23	1.3	1.6	2.1	e7.0	4.4	3.0	2.9	e2.3	e.48	e.42	.33	1.2
24	1.4	1.5	3.4	e5.6	3.7	2.8	2.5	e2.1	e.44	e.40	.25	.98
25	1.4	1.6	3.2	e3.8	3.3	2.7	1.9	e1.4	e.41	e1.6	.30	.98
26	1.5	1.9	2.1	e2.8	3.2	2.6	1.7	e1.3	e.38	e3.0	6.4	.97
27	1.8	1.7	3.6	e8.6	3.1	2.6	1.6	e1.4	e.35	e1.4	21	.93
28	1.5	1.7	2.5	e7.7	3.4	2.6	1.9	e4.1	e.32	e.70	7.5	.87
29	1.3	1.6	2.3	e4.9	---	2.5	1.7	e2.2	e.30	e.45	3.7	.90
30	1.2	6.6	2.2	e3.8	---	2.4	1.6	e1.8	e.42	e.80	3.3	1.3
31	1.1	---	1.9	e3.2	---	2.4	---	e1.6	---	e3.2	3.1	---
TOTAL	24.59	52.30	64.5	98.3	197.8	114.0	73.9	57.28	28.43	24.35	59.66	66.83
MEAN	.79	1.74	2.08	3.17	7.06	3.68	2.46	1.85	.95	.79	1.92	2.23
MAX	1.9	6.6	3.6	8.6	54	17	7.7	4.1	2.0	3.2	21	14
MIN	.21	.48	1.4	1.5	2.7	2.4	1.6	.80	.30	.30	.25	.87
CFSM	.53	1.17	1.40	2.13	4.74	2.47	1.65	1.24	.64	.53	1.29	1.50
IN.	.61	1.31	1.61	2.45	4.94	2.85	1.85	1.43	.71	.61	1.49	1.67

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1.32	1.41	1.68	2.50	3.25	2.82	1.86	1.06	1.72	1.35	1.53	2.06
MAX	4.18	2.49	3.12	4.63	7.06	3.75	3.31	1.85	4.59	3.25	3.77	6.35
(WY)	1997	1993	1993	1993	1998	1993	1993	1998	1995	1991	1992	1996
MIN	.096	.66	.77	1.25	1.19	1.60	.78	.46	.23	.29	.26	.61
(WY)	1995	1995	1996	1994	1994	1996	1995	1994	1994	1993	1996	1994

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1991 - 1998

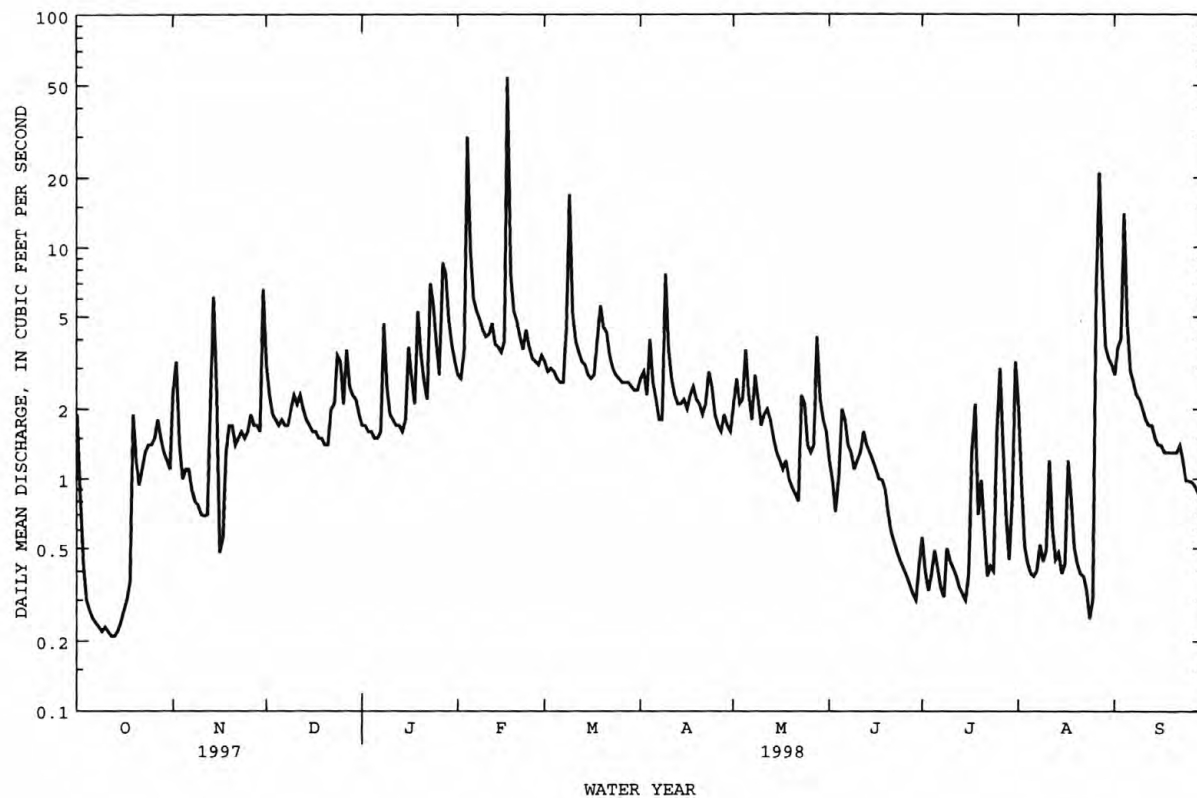
ANNUAL TOTAL	628.93	861.94	
ANNUAL MEAN	1.72	2.36	1.83
HIGHEST ANNUAL MEAN			2.36
LOWEST ANNUAL MEAN			1.07
HIGHEST DAILY MEAN	10	54	59
LOWEST DAILY MEAN	.10	.21	.02
ANNUAL SEVEN-DAY MINIMUM	.11	.22	.02
INSTANTANEOUS PEAK FLOW		237	649*
INSTANTANEOUS PEAK STAGE		5.16	6.69*
INSTANTANEOUS LOW FLOW		NOT DETERMINED	.01
ANNUAL RUNOFF (CFSM)	1.16	1.58	1.23
ANNUAL RUNOFF (INCHES)	15.70	21.52	16.73
10 PERCENT EXCEEDS	3.3	4.1	3.6
50 PERCENT EXCEEDS	1.4	1.7	1.3
90 PERCENT EXCEEDS	.30	.39	.25

e Estimated.

\* See REMARKS.

## CAPE FEAR RIVER BASIN

0210783240 HERRINGS MARSH RUN TRIBUTARY NEAR SUMMERLINS CROSSROADS, NC--Continued



## CAPE FEAR RIVER BASIN

0210783276 HERRINGS MARSH RUN BELOW SECONDARY ROAD 1306 AT RED HILL, NC

LOCATION.--Lat 35°04'25", long 77°54'50", Duplin County, Hydrologic Unit 03030007, on left bank, 200 ft downstream of Secondary Road 1306, and 0.1 mi southwest of Red Hill.

DRAINAGE AREA.--9.11 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 75 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Minimum discharge for period of record also occurred several days in July 1994. Minimum discharge for current water year also occurred June 29, 30, July 7, 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	14	e27	13	17	17	12	9.1	4.0	.89	9.8	16
2	e4.2	26	e18	12	16	15	17	12	3.5	.78	4.7	15
3	e3.0	15	12	11	19	15	12	10	2.8	.74	2.8	19
4	2.4	7.2	11	11	158	15	25	10	3.8	.80	1.5	47
5	2.6	5.1	9.4	11	72	14	18	20	4.5	.87	1.0	31
6	2.1	4.4	7.6	11	36	13	13	11	5.8	.75	1.2	18
7	1.7	4.3	6.8	12	28	13	13	8.3	5.5	.64	1.6	14
8	1.7	3.7	6.4	30	25	21	16	12	4.3	.63	1.8	11
9	1.5	3.2	8.3	33	22	85	49	11	3.5	.89	1.6	9.5
10	1.1	2.5	8.8	17	20	35	32	7.8	3.8	.86	2.7	8.5
11	.94	2.5	8.5	14	20	22	18	8.9	4.1	.83	3.6	7.3
12	1.4	2.4	11	13	25	19	14	9.9	4.2	.76	3.8	6.5
13	1.5	16	9.9	12	20	17	12	8.0	3.8	.73	3.6	6.2
14	1.2	49	7.7	12	18	16	12	6.7	3.3	.69	2.8	5.4
15	1.3	25	6.7	12	17	15	12	5.3	3.5	e.65	2.1	5.3
16	1.4	12	5.5	29	19	14	11	4.3	3.3	e.74	3.9	5.1
17	1.7	7.7	5.1	26	173	15	12	4.0	3.1	e1.8	19	4.9
18	1.3	7.1	5.0	17	57	25	14	3.9	2.8	e7.0	11	4.8
19	5.1	7.0	4.6	28	31	32	11	3.5	2.8	e3.2	5.8	4.5
20	10	7.0	4.5	35	26	31	11	3.2	2.6	e4.0	3.6	4.2
21	7.5	6.6	4.6	20	23	25	9.2	2.7	1.4	e3.0	2.3	4.0
22	4.6	6.4	9.8	17	20	21	10	2.4	1.0	2.7	1.7	4.1
23	4.1	6.0	16	42	24	17	16	5.1	1.0	2.5	1.7	4.0
24	3.4	5.4	19	47	21	15	14	10	.96	2.4	1.2	2.4
25	3.6	4.5	38	27	18	15	10	6.8	.94	14	1.1	1.9
26	5.7	4.7	19	20	16	13	8.0	4.7	.91	17	32	1.8
27	11	4.3	27	27	16	13	7.1	6.8	.81	17	150	1.5
28	10	4.3	28	54	18	12	8.4	18	.65	9.1	58	1.4
29	5.4	4.4	19	29	---	11	7.4	11	.59	6.1	31	1.6
30	3.0	37	19	22	---	11	6.4	6.4	.69	9.6	30	2.0
31	3.4	---	15	19	---	11	---	5.1	---	16	20	---
TOTAL	113.94	304.7	398.2	683	975	613	430.5	247.9	83.95	127.65	416.9	267.9
MEAN	3.68	10.2	12.8	22.0	34.8	19.8	14.4	8.00	2.80	4.12	13.4	8.93
MAX	11	49	38	54	173	85	49	20	5.8	17	150	47
MIN	.94	2.4	4.5	11	16	11	6.4	2.4	.59	.63	1.0	1.4
CFSM	.40	1.11	1.41	2.42	3.82	2.17	1.58	.88	.31	.45	1.48	.98
IN.	.47	1.24	1.63	2.79	3.98	2.50	1.76	1.01	.34	.52	1.70	1.09

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

	7.43	7.72	10.0	15.0	15.8	15.7	9.04	3.74	6.95	6.62	8.22	8.63
MEAN	7.43	7.72	10.0	15.0	15.8	15.7	9.04	3.74	6.95	6.62	8.22	8.63
MAX	23.9	12.5	16.9	28.2	34.8	22.6	17.3	8.00	32.0	15.4	19.6	33.3
(WY)	1997	1993	1993	1993	1998	1993	1993	1998	1995	1991	1992	1996
MIN	3.67	4.25	5.09	8.06	7.13	7.85	3.59	1.57	.75	1.36	1.70	1.78
(WY)	1994	1995	1996	1996	1992	1992	1994	1994	1994	1992	1993	1995

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1991 - 1998

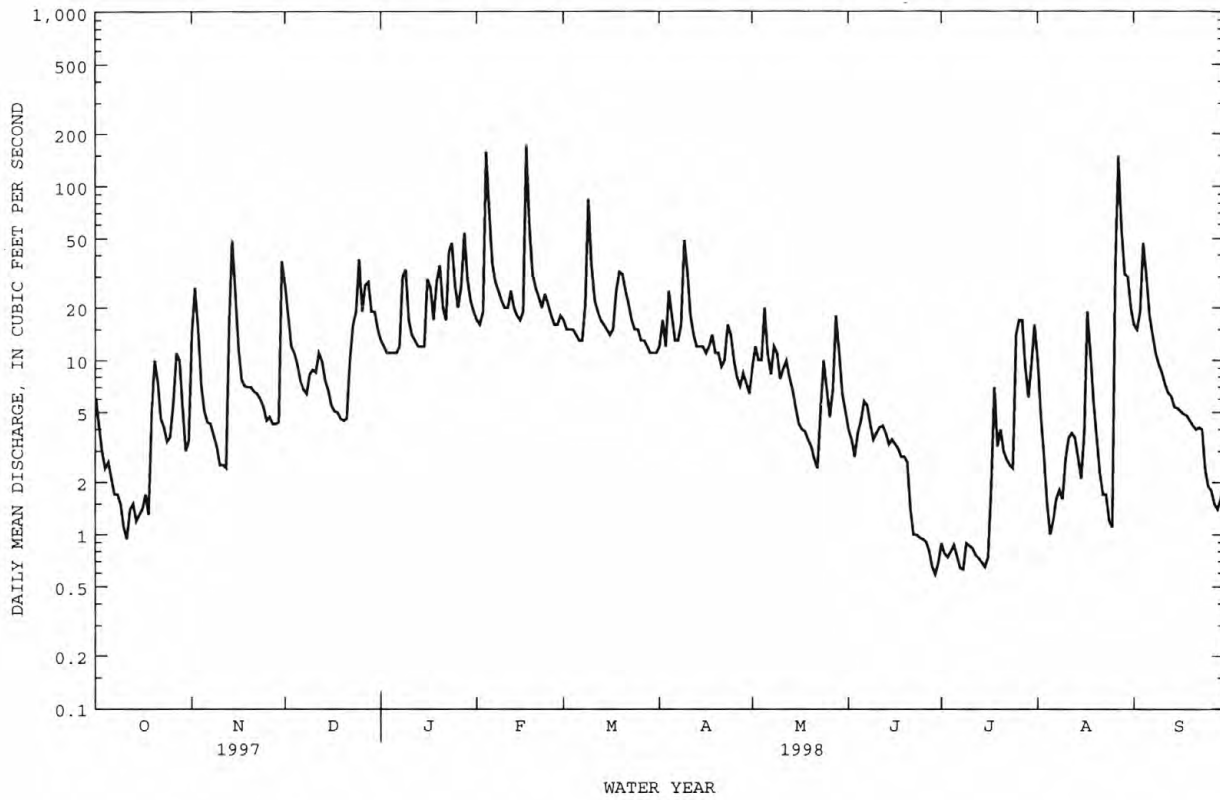
ANNUAL TOTAL	3041.42	4662.64	
ANNUAL MEAN	8.33	12.8	9.33
HIGHEST ANNUAL MEAN			12.8
LOWEST ANNUAL MEAN			5.56
HIGHEST DAILY MEAN	49	173	266
LOWEST DAILY MEAN	.30	.59	.24*
ANNUAL SEVEN-DAY MINIMUM	.32	.73	.28
INSTANTANEOUS PEAK FLOW		307	401
INSTANTANEOUS PEAK STAGE		7.28	8.09
INSTANTANEOUS LOW FLOW		.57*	.24
ANNUAL RUNOFF (CFSM)	.91	1.40	1.02
ANNUAL RUNOFF (INCHES)	12.42	19.04	13.92
10 PERCENT EXCEEDS	18	27	20
50 PERCENT EXCEEDS	5.8	8.5	5.4
90 PERCENT EXCEEDS	1.1	1.4	1.1

e Estimated.

\* See REMARKS.

## CAPE FEAR RIVER BASIN

0210783276 HERRINGS MARSH RUN BELOW SECONDARY ROAD 1306 AT RED HILL, NC--Continued



## CAPE FEAR RIVER BASIN

02108000 NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, NC

LOCATION.--Lat 34°49'40", long 77°50'00", Duplin County, Hydrologic Unit 03030007, on right bank 540 ft downstream of bridge on State Highway 41, 0.5 mi downstream of Muddy Creek, and 1.2 mi west of Chinquapin.

DRAINAGE AREA.--599 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1940 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 17.28 ft above sea level (levels by U.S. Army Corps of Engineers). Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record also occurred Oct. 11, 1954. Minimum discharge for current water year also occurred July 12, 13.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 22.6 ft at old bridge site 1,000 ft upstream from gage. Flood in 1928 reached a stage 0.8 ft lower than the flood in 1908, from information by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	461	327	941	2180	3990	1660	941	786	478	27	228	4580
2	450	507	1180	1950	3600	1440	865	710	417	25	222	3700
3	400	652	1330	1710	3190	1310	826	640	370	24	181	2820
4	329	744	1410	1470	3510	1220	892	599	338	26	142	2620
5	262	798	1400	1280	4700	1150	993	861	319	25	95	2730
6	200	803	1310	1140	5860	1080	1050	1060	315	22	67	2840
7	171	752	1190	1140	6190	1010	1100	1010	318	21	50	2660
8	124	666	1080	1160	5990	966	1160	940	315	21	40	2360
9	86	579	990	1320	5520	1290	1380	877	298	19	32	1920
10	63	506	906	1500	4870	1780	2070	799	275	18	41	1430
11	48	449	831	1620	4100	2660	3020	737	261	17	48	1090
12	39	400	796	1640	3340	3150	3570	744	243	16	45	869
13	33	386	819	1700	2660	3490	3340	789	226	17	88	691
14	27	487	824	1810	2150	3920	2810	838	219	21	126	563
15	24	614	808	1820	1790	3770	2240	877	195	22	114	470
16	22	692	772	1810	1560	3090	1790	883	174	23	92	398
17	21	740	723	1870	2660	2260	1520	805	156	42	90	341
18	21	785	669	1950	5940	1670	1360	731	127	227	173	299
19	27	822	615	2010	8010	1500	1220	666	103	217	182	272
20	57	845	566	2120	8130	1740	1100	571	87	128	143	248
21	80	854	526	2210	7420	2080	995	499	111	78	106	223
22	97	826	509	2240	6450	2340	911	445	97	52	81	199
23	120	758	632	2410	5500	2470	1040	412	75	37	61	176
24	129	656	738	3060	4640	2370	1200	508	65	29	43	157
25	125	558	1030	3950	3860	2230	1230	544	60	27	31	134
26	110	487	1270	4350	3100	2040	1140	521	49	57	99	113
27	181	439	1520	4290	2460	1780	1050	446	42	175	1870	96
28	213	399	1850	4360	1970	1510	966	579	36	275	5500	84
29	228	367	2090	4540	---	1300	907	616	32	239	6940	76
30	250	496	2230	4670	---	1150	851	598	29	157	6350	68
31	257	---	2240	4400	---	1040	---	542	---	115	5470	---
TOTAL	4655	18394	33795	73680	123160	60466	43537	21633	5830	2199	28750	34227
MEAN	150	613	1090	2377	4399	1951	1451	698	194	70.9	927	1141
MAX	461	854	2240	4670	8130	3920	3570	1060	478	275	6940	4580
MIN	21	327	509	1140	1560	966	826	412	29	16	31	68
CFSM	.25	1.02	1.82	3.97	7.34	3.26	2.42	1.17	.32	.12	1.55	1.90
IN.	.29	1.14	2.10	4.58	7.65	3.76	2.70	1.34	.36	.14	1.79	2.13

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

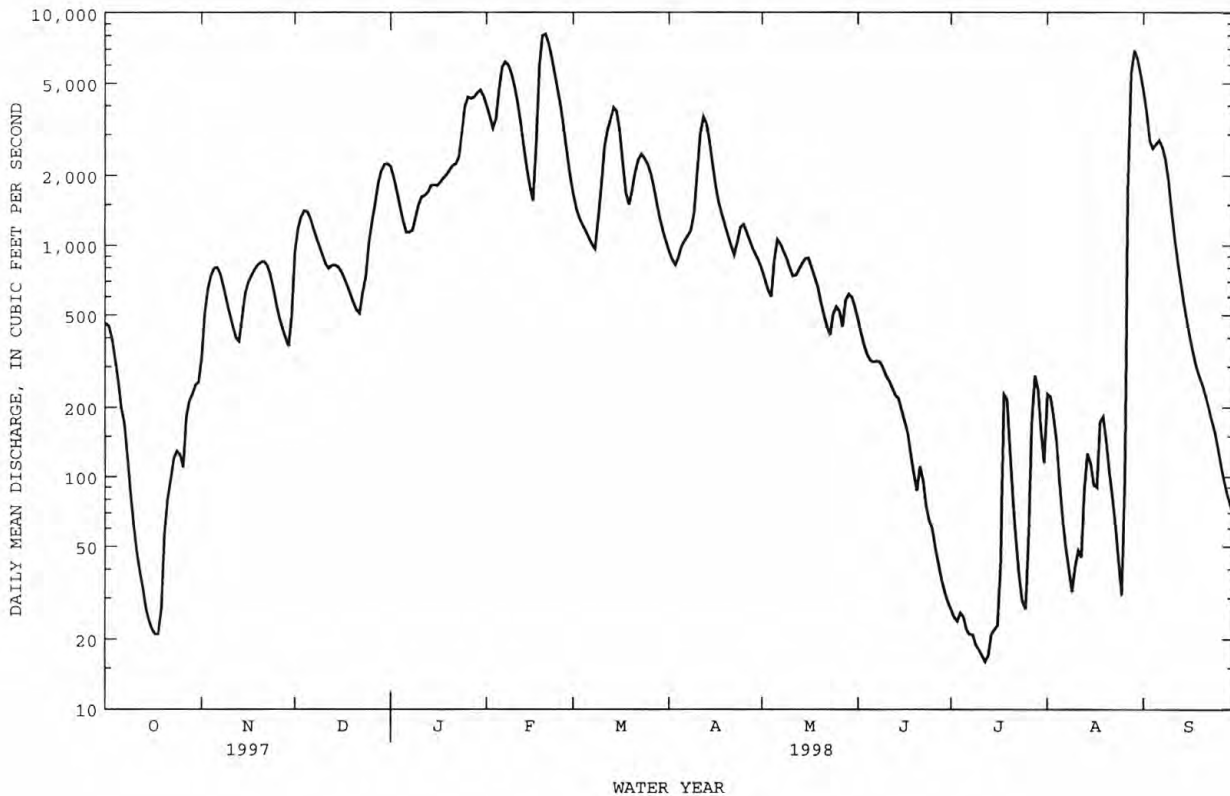
	MEAN	427	424	670	1065	1226	1237	846	470	397	553	683	579
MAX	2486	1852	2225	2548	4399	3506	2958	1901	1953	3922	2681	4754	
(WY)	1997	1948	1949	1993	1998	1983	1973	1969	1961	1962	1955	1955	
MIN	7.59	15.6	59.6	158	249	261	145	64.9	17.3	25.9	13.8	11.0	
(WY)	1955	1955	1955	1955	1955	1955	1986	1995	1994	1954	1954	1954	

## CAPE FEAR RIVER BASIN

02108000 NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1940 - 1998	
ANNUAL TOTAL	213602		450326		714	
ANNUAL MEAN	585		1234		1243	
HIGHEST ANNUAL MEAN					279	
LOWEST ANNUAL MEAN					19500	
HIGHEST DAILY MEAN	2240	Dec 31	8130	Feb 20	5.3	Jul 6 1962
LOWEST DAILY MEAN	21	Oct 17	16	Jul 12	5.5	Oct 10 1954
ANNUAL SEVEN-DAY MINIMUM	25	Oct 13	18	Jul 7	5.5	Oct 8 1954
INSTANTANEOUS PEAK FLOW			8310	Feb 19	20400	Jul 6 1962
INSTANTANEOUS PEAK STAGE			15.51	Feb 19	20.16	Jul 6 1962
INSTANTANEOUS LOW FLOW			16*	Jul 11	5.3*	Oct 10 1954
ANNUAL RUNOFF (CFSM)	.98		2.06		1.19	
ANNUAL RUNOFF (INCHES)	13.27		27.97		16.19	
10 PERCENT EXCEEDS	1320		3340		1700	
50 PERCENT EXCEEDS	446		744		400	
90 PERCENT EXCEEDS	91		43		58	

\* See REMARKS.



## WACCAMAW RIVER BASIN

02109500 WACCAMAW RIVER AT FREELAND, NC

LOCATION.--Lat 34°05'43", long 78°32'55", Brunswick County, Hydrologic Unit 03040206, on left bank 150 ft downstream of New Britton bridge on State Highway 130, 1 mi southwest of Freeland, 7 mi downstream of Juniper Creek, and 117 mi upstream from mouth in Winyah Bay.

DRAINAGE AREA.--680 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1939 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 15.52 ft above sea level. Prior to July 15, 1943, nonrecording gage 150 ft upstream at same datum. Auxiliary nonrecording gage 3.3 mi downstream of base gage Oct. 7, 1949, to July 14, 1952. Since July 15, 1952, auxiliary water-stage recorder at same site and datum. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minimum discharge for period of record also occurred Sept. 9, 19, 28, and Oct. 4-14, 1954. Minimum discharge for current water year also occurred July 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e52	e50	301	1940	3860	3680	1610	534	575	33	96	2460
2	e48	128	360	2080	3820	3550	1520	509	613	29	95	2770
3	e44	203	402	2150	3870	3400	1440	476	664	28	85	3010
4	e40	233	420	2150	5100	3220	1380	444	686	25	76	3420
5	e38	241	425	2110	6430	3050	1180	448	672	23	64	3600
6	34	234	423	2060	7130	2870	1090	465	645	21	52	3730
7	32	216	418	2100	7600	2690	1010	463	635	21	44	3750
8	29	201	415	2160	7750	2530	928	438	619	21	44	3700
9	27	188	421	2350	7540	2530	877	401	578	19	45	3610
10	26	174	442	2550	7000	2530	848	362	510	18	58	3520
11	24	162	477	2700	6260	2580	811	339	441	17	92	3430
12	23	153	507	2820	5270	2650	769	332	406	16	130	3310
13	21	154	535	2860	4250	2950	719	327	420	14	153	3150
14	22	e200	554	2830	3750	3480	668	325	440	14	187	2980
15	24	e250	556	2730	3440	3780	614	318	440	14	212	2810
16	21	e300	556	2690	3240	3760	573	308	415	15	244	2600
17	19	e340	546	2660	3740	3560	533	307	370	28	284	2390
18	18	334	528	2600	4910	3300	509	339	310	68	270	2190
19	19	323	509	2550	6330	3110	512	399	253	91	237	2060
20	21	310	490	2470	7120	2910	519	440	208	88	206	1920
21	20	294	461	2380	7340	2730	519	444	179	78	178	1780
22	19	276	458	2280	7120	2540	510	430	153	66	153	1660
23	19	261	537	2430	7080	2360	559	417	131	56	128	1540
24	20	245	620	2740	6740	2190	617	408	129	49	104	1420
25	19	227	733	2970	6150	2060	647	408	120	49	82	1200
26	19	212	830	3110	5180	1980	653	408	103	67	e80	1050
27	21	197	936	3260	4230	1920	643	401	82	77	e350	958
28	21	185	1060	3550	3820	1870	621	434	64	80	693	871
29	20	175	1280	3740	---	1820	595	495	50	87	906	792
30	19	199	1530	3820	---	1770	563	542	40	86	1330	726
31	18	---	1730	3850	---	1690	---	561	---	87	1880	---
TOTAL	797	6665	19460	82690	156070	85060	24037	12922	10951	1385	8558	72407
MEAN	25.7	222	628	2667	5574	2744	801	417	365	44.7	276	2414
MAX	52	340	1730	3850	7750	3780	1610	561	686	91	1880	3750
MIN	18	50	301	1940	3240	1690	509	307	40	14	44	726
CFSM	.04	.33	.92	3.92	8.20	4.04	1.18	.61	.54	.07	.41	3.55
IN.	.04	.36	1.06	4.52	8.54	4.65	1.31	.71	.60	.08	.47	3.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998, BY WATER YEAR (WY)

	MEAN	440	338	494	1046	1381	1453	976	332	311	525	661	708
MAX	2851	2332	3080	3722	5574	5319	2895	1928	1474	3040	2740	5111	
(WY)	1997	1978	1949	1993	1998	1983	1973	1978	1969	1961	1981	1996	
MIN	1.14	.54	3.53	20.6	44.6	219	120	17.5	5.51	5.72	7.59	.31	
(WY)	1941	1955	1955	1955	1941	1955	1967	1995	1952	1952	1954	1954	



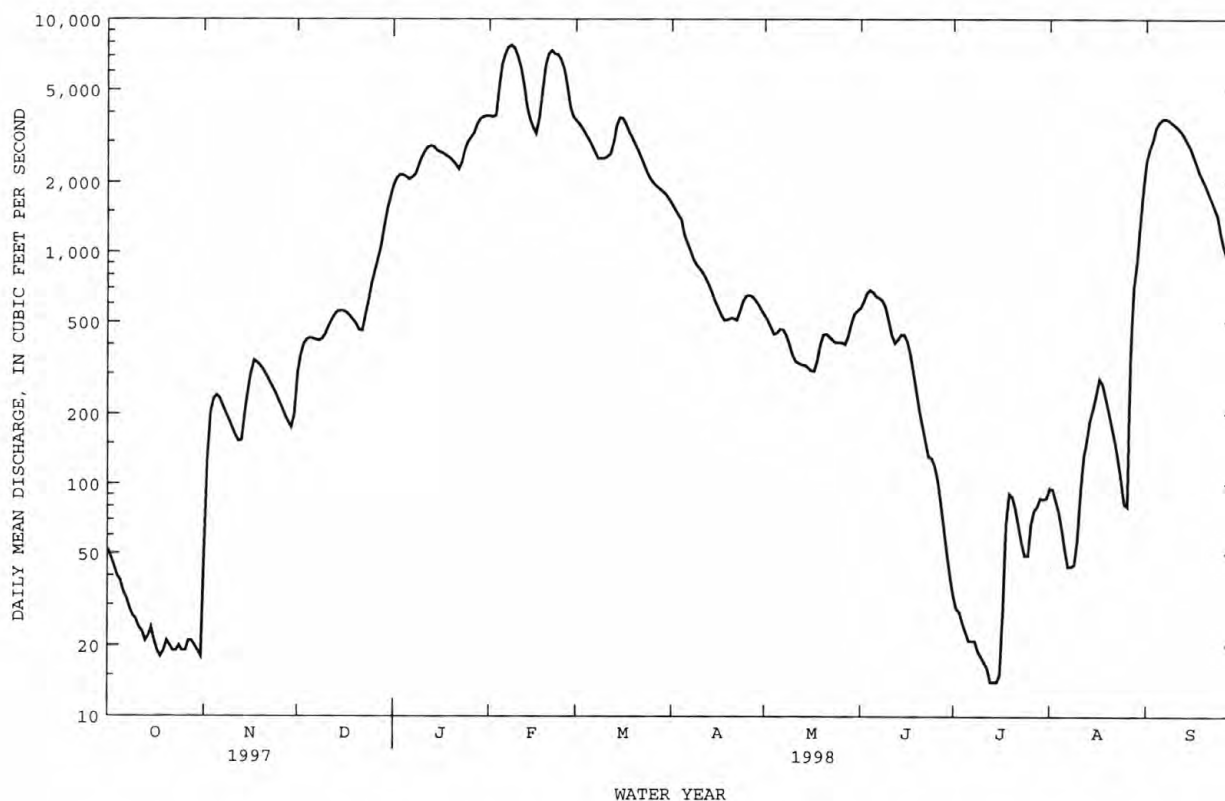
## WACCAMAW RIVER BASIN

02109500 WACCAMAW RIVER AT FREELAND, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1939 - 1998	
ANNUAL TOTAL	148781.6		481002		719	
ANNUAL MEAN	408		1318		1392	1948
HIGHEST ANNUAL MEAN					230	1941
LOWEST ANNUAL MEAN					12200	Sep 12 1996
HIGHEST DAILY MEAN	2880	Feb 23	7750	Feb 8	.10	Aug 30 1954
LOWEST DAILY MEAN	1.3	Sep 10	14	Jul 13	.10	Oct 4 1954
ANNUAL SEVEN-DAY MINIMUM	1.7	Sep 4	15	Jul 10	12400	Sep 12 1996
INSTANTANEOUS PEAK FLOW			7830	Feb 8	17.02	Sep 12 1996
INSTANTANEOUS LOW FLOW			15.94	Feb 8	.10*	Aug 30 1954
ANNUAL RUNOFF (CFSM)	.60		13*	Jul 14	1.06	
ANNUAL RUNOFF (INCHES)	8.14		1.94		14.37	
10 PERCENT EXCEEDS	1020		26.31		1890	
50 PERCENT EXCEEDS	157		3600		358	
90 PERCENT EXCEEDS	12		509		27	

e Estimated.

\* See REMARKS.



## PEE DEE RIVER BASIN

02111000 YADKIN RIVER AT PATTERSON, NC

LOCATION.--Lat 35°59'29", long 81°33'30", Caldwell County, Hydrologic Unit 03040101, on left bank 200 ft upstream from bridge on State Highway 268, 0.4 mi upstream from Warrior Creek, 0.5 mi south of Patterson, 2.0 mi downstream of Walnut Branch, and at mile 416.

DRAINAGE AREA.--28.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 1303: 1940(M), 1947-48(M). WSP 1553: 1948(P). WDR NC-80-1: 1975(P), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,211.47 ft above sea level. Prior to Feb. 9, 1940, nonrecording gage at present site, at datum 1,212.47 ft. Feb. 9, 1940, to Oct. 20, 1970, recording gage at present site, at datum 1,212.47 ft. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge, for period of record, from rating curve extended above 1,400 ft<sup>3</sup>/s on basis of computation of peak flow over dam 1 mi upstream at gage heights 4.58, 6.60, 7.70, and 12.70 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	22	21	23	63	60	62	133	47	33	29	13
2	18	27	19	24	55	56	53	130	45	32	23	13
3	18	24	19	23	100	55	54	109	44	30	20	13
4	18	21	e21	23	391	49	62	152	53	29	19	15
5	17	20	e23	25	217	48	53	126	54	30	19	13
6	17	20	21	26	133	46	50	108	54	29	18	13
7	16	20	20	70	99	46	49	149	46	28	18	13
8	16	22	19	467	81	153	52	179	43	28	19	23
9	16	20	20	131	68	280	127	140	44	30	19	18
10	16	19	22	76	60	186	79	131	84	29	20	13
11	16	19	22	56	69	126	67	116	89	26	19	13
12	17	19	21	47	68	99	61	101	65	26	17	12
13	17	20	20	42	59	86	57	90	51	27	16	12
14	17	23	19	37	55	77	56	84	46	26	31	11
15	17	22	19	88	51	69	54	79	45	26	68	11
16	16	20	19	93	94	65	60	74	48	24	36	11
17	17	19	19	68	314	63	515	70	44	22	26	11
18	18	19	18	55	225	74	182	65	40	22	23	11
19	27	19	18	55	140	122	316	62	40	20	21	11
20	23	18	18	48	108	237	300	60	39	20	20	11
21	18	19	18	43	88	180	186	58	38	19	18	13
22	18	24	23	45	76	124	143	57	39	19	18	16
23	17	21	23	82	116	100	118	56	42	19	17	12
24	18	19	29	69	97	87	102	54	37	21	17	11
25	25	19	44	59	83	77	91	56	35	26	16	11
26	60	19	28	52	74	71	84	68	34	23	16	11
27	37	18	41	188	72	67	82	56	33	44	15	11
28	25	18	35	225	65	64	76	51	32	26	15	12
29	21	18	30	126	---	61	70	50	32	23	15	13
30	20	20	28	92	---	57	84	52	34	21	14	12
31	19	---	25	74	---	56	---	50	---	25	14	---
TOTAL	633	608	722	2532	3121	2941	3345	2766	1377	803	656	383
MEAN	20.4	20.3	23.3	81.7	111	94.9	112	89.2	45.9	25.9	21.2	12.8
MAX	60	27	44	467	391	280	515	179	89	44	68	23
MIN	16	18	18	23	51	46	49	50	32	19	14	11
CFSM	.71	.70	.81	2.84	3.87	3.29	3.87	3.10	1.59	.90	.73	.44
IN.	.82	.79	.93	3.27	4.03	3.80	4.32	3.57	1.78	1.04	.85	.49

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
MEAN	37.1	41.8	45.9	52.1	62.8	74.5	70.5	55.4	49.0	39.4	45.0	36.2
MAX	149	140	98.8	132	143	160	164	125	122	98.9	194	136
(WY)	1991	1978	1974	1946	1960	1993	1980	1973	1992	1941	1940	1979
MIN	8.45	9.07	11.8	11.4	27.0	23.7	26.5	20.5	13.0	9.04	9.05	6.95
(WY)	1955	1982	1956	1956	1988	1988	1981	1940	1956	1988	1988	1954

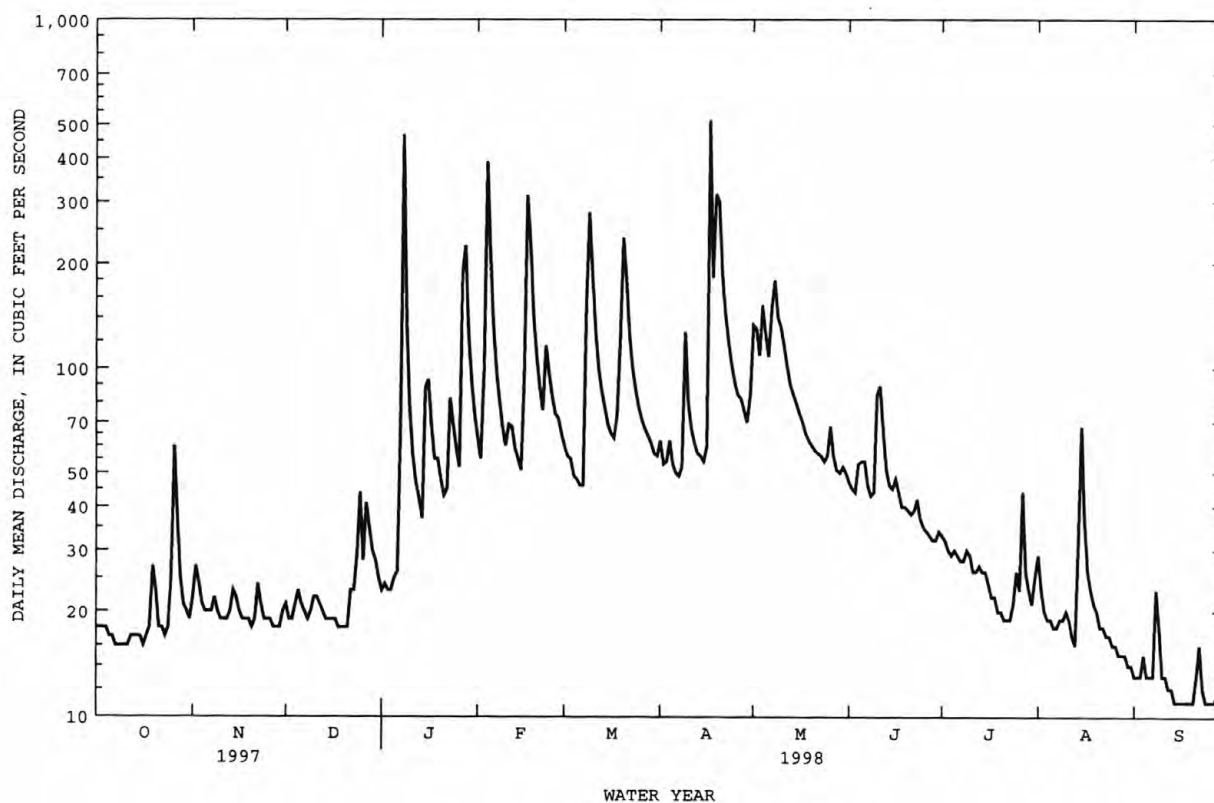
## PEE DEE RIVER BASIN

02111000 YADKIN RIVER AT PATTERSON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1940 - 1998	
ANNUAL TOTAL	16857		19887		50.7	
ANNUAL MEAN	46.2		54.5		78.3	
HIGHEST ANNUAL MEAN					21.5	
LOWEST ANNUAL MEAN					2130	
HIGHEST DAILY MEAN	344	Mar 14	515	Apr 17	2130	Aug 13 1940
LOWEST DAILY MEAN	15	Sep 21	11	Sep 14	5.3	Sep 30 1954
ANNUAL SEVEN-DAY MINIMUM	16	Sep 17	11	Sep 14	5.7	Sep 25 1954
INSTANTANEOUS PEAK FLOW			1760	Apr 17	16200*	Aug 13 1940
INSTANTANEOUS PEAK STAGE			5.88	Apr 17	12.70	Aug 13 1940
INSTANTANEOUS LOW FLOW			10	Sep 28	3.0	May 15 1940
ANNUAL RUNOFF (CFSM)	1.60		1.89		1.76	
ANNUAL RUNOFF (INCHES)	21.77		25.69		23.94	
10 PERCENT EXCEEDS	82		116		89	
50 PERCENT EXCEEDS	38		32		38	
90 PERCENT EXCEEDS	18		16		17	

e Estimated.

\* See REMARKS.



## PEE DEE RIVER BASIN

02111180 ELK CREEK AT ELKVILLE, NC

LOCATION.--Lat 36°04'16", long 81°24'13", Wilkes County, Hydrologic Unit 03040101, on left bank 700 ft upstream from bridge on State Highway 268 in Elkville, and 3,400 ft upstream from mouth.

DRAINAGE AREA.--48.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1965 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1,082.40 ft above sea level. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS --No estimated daily discharges. Records fair. Maximum discharge for period of record, from rating curve extended above 3,200 ft<sup>3</sup>/s on basis of contracted-opening computation. Minimum discharge for period of record, result of freezeup. Minimum discharge for current water year also occurred Sept. 14, 15, 16, 17, 18, 19.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 13, 1940, reached a stage of about 22 ft; discharge, about 70,000 ft<sup>3</sup>/s, on basis of several contracted-opening and slope-area measurements. A discharge of 6.0 ft<sup>3</sup>/s was measured Sept. 19, 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	39	35	41	111	108	112	231	87	73	58	24
2	28	52	31	42	95	102	98	258	84	61	43	24
3	28	44	31	42	160	95	97	217	91	56	43	23
4	28	37	49	42	1250	90	110	579	127	55	36	25
5	28	33	40	44	509	85	96	311	136	55	34	23
6	27	32	34	51	254	83	90	236	119	53	33	22
7	26	37	32	161	178	81	89	305	93	52	32	22
8	26	39	31	1330	139	288	106	466	83	52	32	24
9	26	33	31	267	118	666	259	331	83	52	39	27
10	26	32	35	149	103	368	165	281	157	49	41	22
11	27	31	36	108	112	232	131	247	123	45	37	21
12	27	29	33	89	123	179	113	210	117	45	37	21
13	27	32	32	79	107	152	105	186	98	45	35	20
14	27	43	31	70	99	137	102	172	89	43	87	19
15	27	37	30	156	91	123	96	160	94	43	102	19
16	26	32	29	189	158	115	102	148	88	42	76	19
17	27	31	29	134	1010	110	1080	140	89	45	67	19
18	28	30	29	106	577	121	367	132	75	40	48	19
19	58	30	29	97	273	203	826	124	69	38	41	25
20	42	30	28	84	199	456	706	117	69	37	36	22
21	29	30	28	73	160	348	346	115	66	35	33	27
22	27	42	40	73	135	228	263	110	70	35	32	33
23	26	35	42	142	220	179	222	108	101	37	30	25
24	28	32	46	130	205	154	194	106	71	43	29	23
25	43	31	87	110	167	134	169	104	66	43	29	23
26	93	30	56	94	141	123	156	107	64	39	28	22
27	74	30	71	277	132	116	157	99	60	71	27	21
28	45	30	68	442	118	111	152	94	60	46	26	24
29	38	29	57	225	---	106	135	96	57	40	26	23
30	34	32	52	167	---	101	146	94	61	37	25	22
31	32	---	45	135	---	99	---	91	---	62	25	---
TOTAL	1057	1024	1247	5149	6944	5493	6790	5975	2647	1469	1267	683
MEAN	34.1	34.1	40.2	166	248	177	226	193	88.2	47.4	40.9	22.8
MAX	93	52	87	1330	1250	666	1080	579	157	73	102	33
MIN	26	29	28	41	91	81	89	91	57	35	25	19
CFM	.71	.71	.84	3.45	5.16	3.68	4.71	4.01	1.83	.99	.85	.47
IN.	.82	.79	.96	3.98	5.37	4.25	5.25	4.62	2.05	1.14	.98	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1998, BY WATER YEAR (WY)

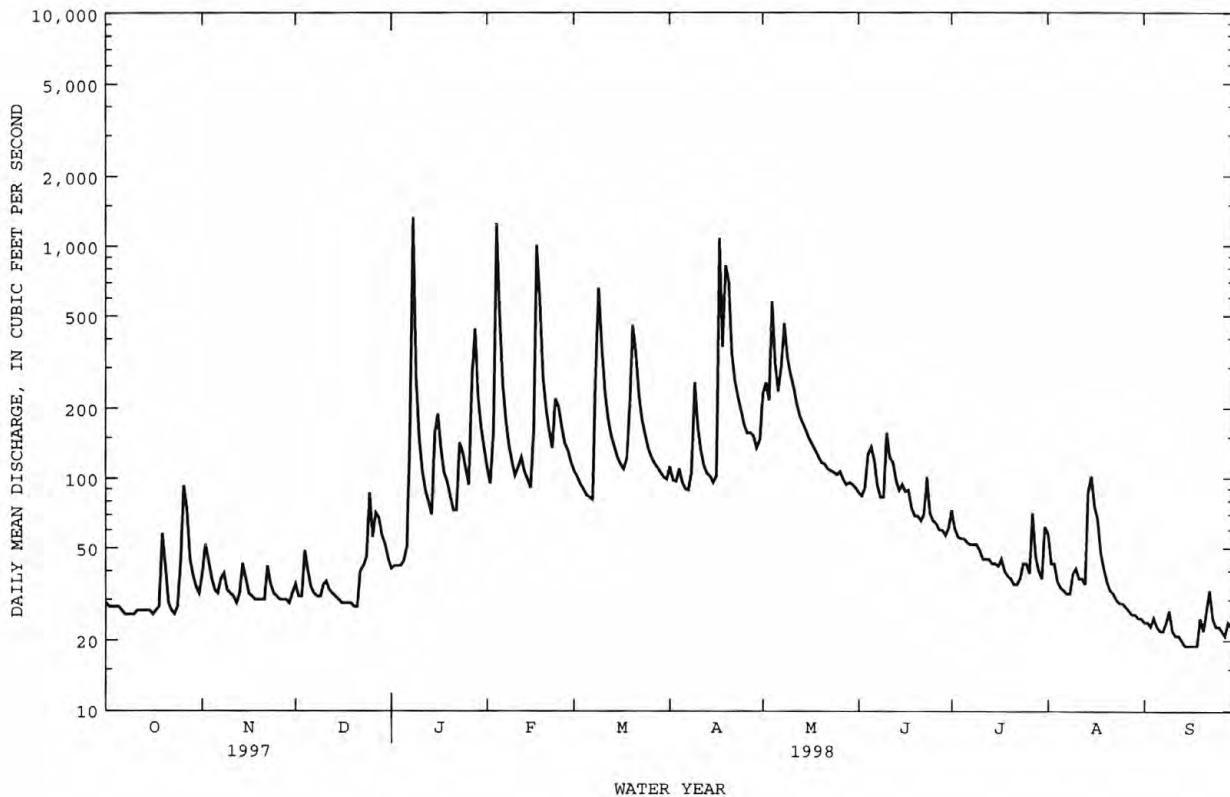
	MEAN	79.4	93.4	90.4	109	126	155	148	116	104	70.6	83.4	65.7
MAX	298	365	193	323	250	317	379	291	226	185	384	257	
(WY)	1991	1978	1974	1995	1966	1993	1980	1973	1992	1989	1994	1979	
MIN	19.8	19.8	24.7	22.5	48.2	47.9	51.5	37.3	21.7	17.6	18.9	22.8	
(WY)	1982	1982	1989	1981	1989	1988	1986	1988	1988	1988	1988	1988	

## PEE DEE RIVER BASIN

02111180 ELK CREEK AT ELKVILLE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1966 - 1998	
ANNUAL TOTAL	31350		39745		103	
ANNUAL MEAN	85.9		109		154	
HIGHEST ANNUAL MEAN					43.7	
LOWEST ANNUAL MEAN					12	
HIGHEST DAILY MEAN	650	Mar 14	1330	Jan 8	5890	Aug 17 1994
LOWEST DAILY MEAN	24	Sep 21	19	Sep 14	14	Jul 18 1988
ANNUAL SEVEN-DAY MINIMUM	26	Sep 17	19	Sep 12	14	Jul 12 1988
INSTANTANEOUS PEAK FLOW			3420	Jan 8	18700*	Aug 17 1994
INSTANTANEOUS PEAK STAGE			5.39	Jan 8	12.02	Aug 17 1994
INSTANTANEOUS LOW FLOW			19*	Sep 13	11*	Jan 5 1981
ANNUAL RUNOFF (CFSM)	1.79		2.26		2.15	
ANNUAL RUNOFF (INCHES)	24.25		30.74		29.17	
10 PERCENT EXCEEDS	158		221		176	
50 PERCENT EXCEEDS	70		62		72	
90 PERCENT EXCEEDS	30		26		31	

\* See REMARKS.



## PEE DEE RIVER BASIN

02111391 W. KERR SCOTT AT DAM NEAR WILKESBORO, NC

LOCATION.--Lat 36°08'04", long 80°13'30", Wilkes County, Hydrologic Unit 03040101, at W. Kerr Scott Dam on Yadkin River, 0.1 mi upstream from Fish Trap Creek, 2.0 mi upstream from Millers Creek, and 4.0 mi west of Wilkesboro.

DRAINAGE AREA.--367 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1962 to current year.

GAGE.--Water-stage recorder and staff gage at dam. Datum of gage is 1,000 ft above sea level. U.S. Army Corps of Engineers telephone and satellite telemetry at station.

REMARKS.--Records good. Lake is used for flood control, low-flow augmentation, recreation, and water supply. Some storage was affected during construction in July 1962, but gates were closed Aug. 22, 1962. Reservoir reached normal pool elevation on Jan. 19, 1963. Total capacity at elevation 1075.0 ft is 6,664,680,000 ft<sup>3</sup> of which 4,878,720,000 ft<sup>3</sup> is controlled flood storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 61.20 ft, Nov. 7, 1977; minimum, 19.85 ft, Nov. 26, 1978.

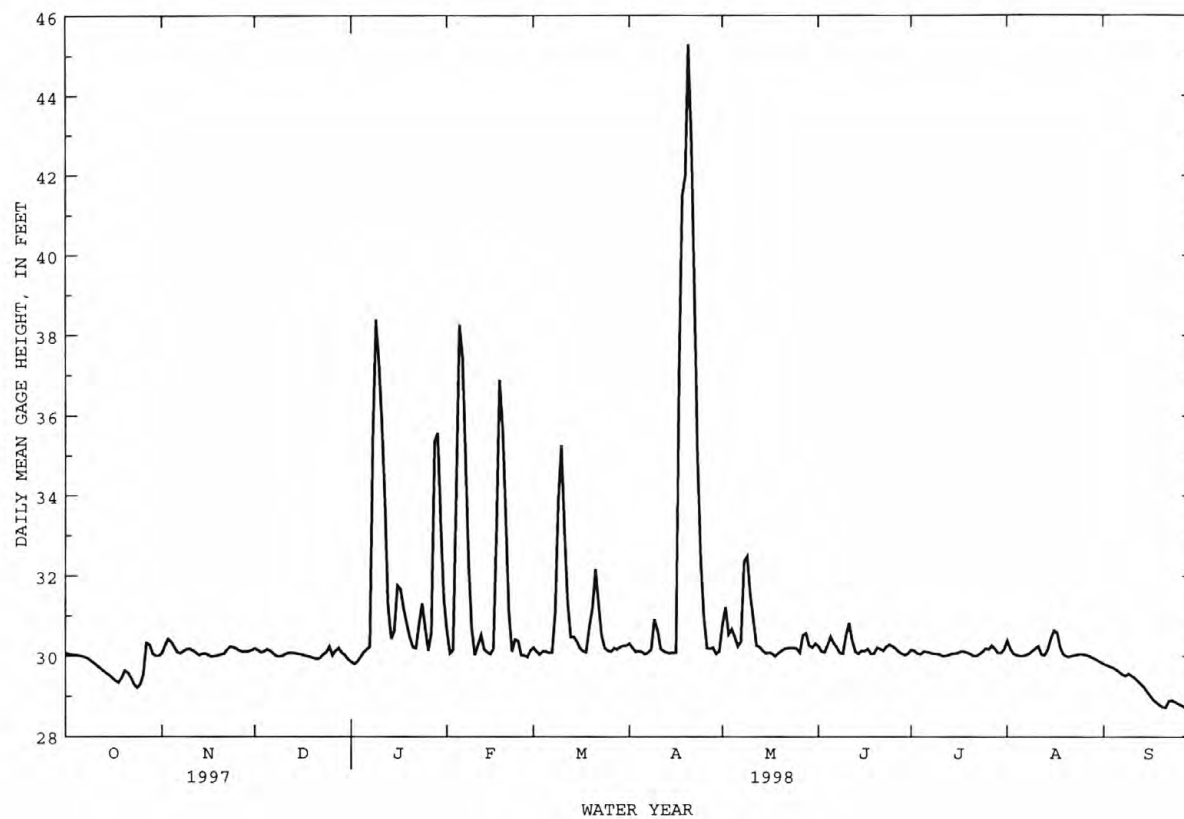
EXTREMES FOR CURRENT YEAR.--Maximum, 45.94 ft, Apr. 20; minimum, 28.58 ft, Sept. 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.08	30.07	30.19	29.86	30.63	30.21	30.31	30.78	30.25	30.16	30.39	29.80
2	30.05	30.27	30.15	29.80	30.07	30.12	30.21	31.23	30.12	30.14	30.18	29.78
3	30.04	30.42	30.09	29.86	30.15	30.04	30.11	30.55	30.10	30.07	30.06	29.74
4	30.03	30.35	30.12	29.97	33.95	30.12	30.13	30.67	30.28	30.05	30.03	29.71
5	30.02	30.22	30.17	30.09	38.27	30.12	30.11	30.48	30.48	30.12	30.01	29.67
6	30.00	30.09	30.13	30.16	37.47	30.08	30.05	30.25	30.32	30.11	30.01	29.61
7	29.98	30.07	30.06	30.24	34.93	30.09	30.09	30.36	30.22	30.09	30.03	29.55
8	29.95	30.13	30.00	35.57	32.34	31.09	30.17	32.37	30.08	30.06	30.06	29.51
9	29.89	30.17	29.99	38.40	30.70	33.88	30.92	32.49	30.07	30.06	30.13	29.56
10	29.83	30.18	30.01	37.35	30.03	35.27	30.65	31.51	30.52	30.05	30.19	29.52
11	29.77	30.14	30.06	35.83	30.27	33.19	30.19	30.91	30.83	30.01	30.25	29.46
12	29.71	30.08	30.08	33.85	30.52	31.34	30.13	30.27	30.39	30.01	30.04	29.39
13	29.64	30.03	30.08	31.27	30.17	30.47	30.09	30.23	30.11	30.03	30.03	29.31
14	29.58	30.06	30.07	30.43	30.10	30.48	30.08	30.15	30.06	30.06	30.16	29.23
15	29.53	30.07	30.06	30.63	30.05	30.37	30.09	30.07	30.14	30.07	30.43	29.12
16	29.46	30.03	30.04	31.76	30.18	30.20	30.09	30.09	30.13	30.08	30.64	29.02
17	29.39	29.99	30.02	31.68	33.10	30.13	37.15	30.07	30.18	30.12	30.59	28.92
18	29.34	30.00	30.00	31.20	36.90	30.10	41.49	30.00	30.06	30.12	30.22	28.85
19	29.45	30.02	29.98	30.83	35.62	30.73	41.99	30.07	30.06	30.09	30.05	28.79
20	29.64	30.04	29.95	30.48	33.35	31.19	45.28	30.13	30.21	30.06	30.00	28.73
21	29.59	30.06	29.93	30.23	31.08	32.17	42.77	30.18	30.18	30.01	29.99	28.72
22	29.47	30.16	29.95	30.20	30.12	31.30	38.93	30.20	30.14	30.01	30.02	28.88
23	29.30	30.24	30.04	30.79	30.41	30.51	34.91	30.21	30.24	30.05	30.03	28.90
24	29.21	30.22	30.10	31.32	30.38	30.21	32.36	30.21	30.29	30.11	30.05	28.86
25	29.29	30.19	30.24	30.70	30.03	30.14	30.97	30.19	30.25	30.19	30.05	28.82
26	29.54	30.14	30.02	30.14	30.02	30.12	30.20	30.09	30.19	30.17	30.04	28.78
27	30.32	30.11	30.14	30.58	29.98	30.20	30.19	30.52	30.11	30.27	30.02	28.73
28	30.28	30.11	30.20	35.36	30.15	30.17	30.21	30.57	30.06	30.19	29.98	28.68
29	30.06	30.12	30.09	35.57	---	30.23	30.06	30.27	30.03	30.08	29.94	28.64
30	30.01	30.15	30.03	33.29	---	30.27	30.12	30.22	30.07	30.08	29.90	28.61
31	30.01	---	29.92	31.44	---	30.27	---	30.31	---	30.17	29.85	---
MEAN	29.76	30.13	30.06	31.90	31.82	30.80	32.67	30.50	30.21	30.09	30.11	29.16
MAX	30.32	30.42	30.24	38.40	38.27	35.27	45.28	32.49	30.83	30.27	30.64	29.80
MIN	29.21	29.99	29.92	29.80	29.98	30.04	30.05	30.00	30.03	30.01	29.85	28.61

## PEE DEE RIVER BASIN

02111391 W. KERR SCOTT AT DAM NEAR WILKESBORO, NC--Continued





## PEE DEE RIVER BASIN

02111500 REDDIES RIVER AT NORTH WILKESBORO, NC

LOCATION.--Lat 36°10'29", long 81°10'09", Wilkes County, Hydrologic Unit 03040101, on left bank 550 ft upstream from bridge on Secondary Road 1517, 1.4 mi upstream from North Wilkesboro municipal dam, 1.2 mi northwest of North Wilkesboro, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--89.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 1433: 1944. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 978.62 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Slight diurnal fluctuation at low flow during growing season. Maximum discharge for period of record, from rating curve extended above 5,600 ft<sup>3</sup>/s on basis of computation of peak flow over dam; gage height: 22.02 ft. Minimum discharge for current water year also occurred Sept. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	e90	66	69	156	176	191	287	145	109	88	65
2	68	e135	61	76	142	167	167	281	141	98	74	65
3	69	e100	61	74	220	160	164	274	138	93	69	65
4	68	e80	80	72	1170	154	181	471	167	91	66	69
5	66	e70	68	75	499	150	163	298	176	93	65	63
6	64	69	64	84	301	145	157	247	161	89	63	62
7	64	69	62	167	241	144	153	446	148	88	61	60
8	63	68	61	1380	207	429	154	467	137	89	65	65
9	62	66	62	273	184	680	241	320	139	95	82	64
10	61	65	67	169	169	372	186	310	235	87	80	59
11	62	65	66	138	171	271	167	313	189	82	72	59
12	62	63	62	123	186	231	159	267	175	81	64	58
13	63	68	61	120	160	210	154	240	153	89	65	56
14	62	82	60	109	150	201	155	225	142	81	94	55
15	63	71	59	263	142	188	152	215	143	79	177	55
16	61	65	59	254	243	182	155	203	160	77	466	55
17	63	64	59	169	906	179	1090	194	144	80	374	54
18	71	63	59	141	505	191	338	183	128	73	139	54
19	79	63	58	134	310	346	865	177	125	73	108	55
20	64	63	57	122	259	597	665	173	125	71	96	55
21	61	64	57	115	224	397	360	175	117	68	89	72
22	e60	82	79	117	202	280	298	168	119	69	85	83
23	e58	69	74	254	312	240	262	179	124	71	81	62
24	e63	65	81	199	263	219	236	173	115	70	79	59
25	e83	63	147	172	221	204	219	165	111	89	77	59
26	e150	63	91	148	201	195	207	167	108	92	75	59
27	e160	62	114	566	197	189	212	168	104	98	72	57
28	e88	61	108	671	188	183	214	161	101	84	70	55
29	e80	61	91	296	---	177	193	156	100	77	70	55
30	e75	66	83	218	---	172	203	151	104	71	68	60
31	e73	---	74	179	---	169	---	153	---	88	67	---
TOTAL		2135	2251	6947	8129	7598	8061	7407	4174	2595	3201	1814
MEAN	72.8	71.2	72.6	224	290	245	269	239	139	83.7	103	60.5
MAX	160	135	147	1380	1170	680	1090	471	235	109	466	83
MIN	58	61	57	69	142	144	152	151	100	68	61	54
CFSM	.82	.80	.81	2.51	3.25	2.75	3.01	2.68	1.56	.94	1.16	.68
IN.	.94	.89	.94	2.90	3.39	3.17	3.36	3.09	1.74	1.08	1.33	.76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

	MEAN	111	120	131	145	168	197	197	163	149	122	125	115
MAX	309	379	273	374	386	405	536	353	412	335	587	479	
(WY)	1977	1978	1974	1996	1960	1975	1980	1973	1976	1941	1940	1945	
MIN	34.5	46.7	49.5	44.5	71.5	77.3	78.4	68.6	47.6	43.0	31.0	30.8	
(WY)	1955	1982	1956	1956	1989	1940	1986	1941	1956	1986	1956	1954	

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

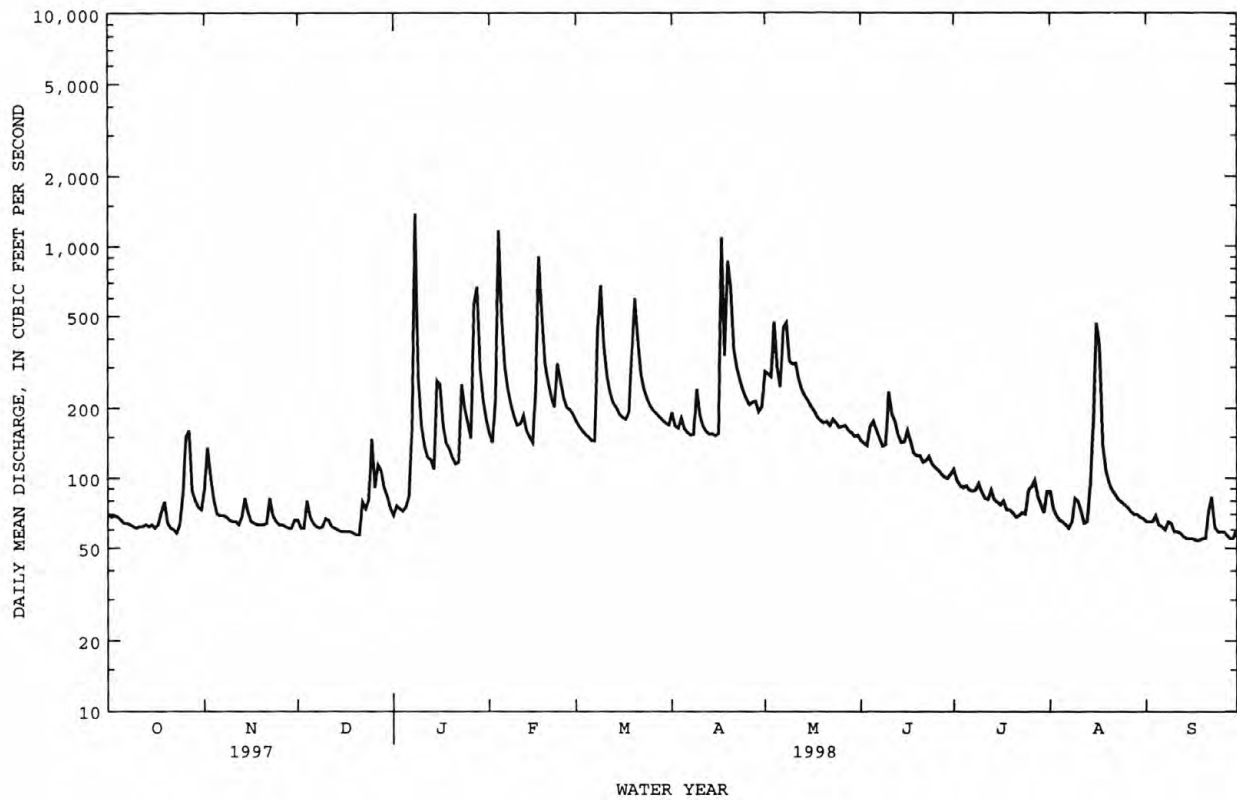
WATER YEARS 1940 - 1998

ANNUAL TOTAL	37916	56568	
ANNUAL MEAN	104	155	
HIGHEST ANNUAL MEAN			145
LOWEST ANNUAL MEAN			218
HIGHEST DAILY MEAN	618	Mar 14	1380
LOWEST DAILY MEAN	32	Sep 7	54
ANNUAL SEVEN-DAY MINIMUM	34	Sep 3	55
INSTANTANEOUS PEAK FLOW			3450
INSTANTANEOUS PEAK STAGE			7.96
INSTANTANEOUS LOW FLOW			52*
ANNUAL RUNOFF (CFSM)	1.16		1.74
ANNUAL RUNOFF (INCHES)	15.81		23.59
10 PERCENT EXCEEDS	168		273
50 PERCENT EXCEEDS	89		108
90 PERCENT EXCEEDS	53		61

e Estimated.

\* See REMARKS.

PEE DEE RIVER BASIN  
02111500 REDDIES RIVER AT NORTH WILKESBORO, NC--Continued



## PEE DEE RIVER BASIN

02112000 YADKIN RIVER AT WILKESBORO, NC

LOCATION.--Lat 36°09'09", long 81°08'45", Wilkes County, Hydrologic Unit 03040101, on right bank 150 ft upstream from bridge on State Highways 18 and 268 between North Wilkesboro and Wilkesboro, 150 ft downstream of Reddies River, 0.5 mi northeast of Wilkesboro, and 382 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--504 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1903 to June 1909, October 1920 to current year. Prior to October 1928, published as "Yadkin River at North Wilkesboro".

REVISED RECORDS.--WSP 1433: 1903-09, 1922, 1925-26(M), 1930, 1932, 1934, 1946-48(M), drainage area at former site. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 942.35 ft above sea level. Apr. 10, 1903, to June 30, 1909, and Oct. 17, 1920, to Apr. 10, 1929, nonrecording gage at site 1.2 mi downstream at different datum. Apr. 11, 1929, to Jan. 9, 1930, nonrecording gage at present site and datum. U.S. Army Corps of Engineers telephone and satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1962 by W. Kerr Scott Reservoir (station 02111391) 5.5 mi upstream. Prior to regulation maximum discharge: 160,000 ft<sup>3</sup>/s, Aug. 14, 1940, from rating curve extended above 20,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; gage height: 37.6 ft, from floodmarks.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1916 reached a stage of 34.5 ft present site and datum, from floodmark; discharge, 116,000 ft<sup>3</sup>/s, from rating curve extended as explained above.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	428	395	381	458	1400	1020	986	1510	975	707	722	380
2	339	448	396	427	1150	991	981	2140	954	716	670	371
3	338	466	399	352	1080	912	928	2050	835	697	563	393
4	341	501	428	353	2140	795	950	2390	938	621	485	411
5	341	491	412	371	1830	848	925	2200	1110	618	465	395
6	333	463	413	482	3290	844	845	1720	1190	631	434	396
7	330	372	409	609	3550	740	788	1960	1070	628	416	388
8	343	372	380	3130	2910	1220	826	1870	938	626	436	399
9	354	372	360	1830	2040	1380	1320	2700	829	635	532	391
10	357	376	376	2280	1120	2600	1720	2650	1100	624	541	382
11	358	410	367	2200	788	3280	1180	2400	1380	595	624	379
12	361	410	353	2650	1130	2540	988	1910	1440	560	595	382
13	357	420	353	2210	1130	1420	978	1460	1090	552	497	381
14	354	438	354	973	910	1120	947	1440	921	540	516	376
15	356	422	347	1060	894	1140	936	1320	946	538	824	384
16	351	415	345	1270	1090	1100	935	1240	925	534	1190	382
17	356	373	345	1360	1810	1010	4600	1220	941	541	1170	364
18	362	342	345	1240	2260	1040	2350	1140	889	532	898	350
19	431	342	342	1050	3440	1530	3060	1010	741	539	612	356
20	430	341	345	992	3340	2140	2990	1000	744	525	546	357
21	343	345	348	813	2660	2370	5590	1010	808	496	470	409
22	501	379	378	673	1480	2340	5360	1000	803	462	447	397
23	406	384	368	943	1430	1800	4630	1010	819	491	446	364
24	361	389	465	1170	1840	1320	3000	1010	792	473	438	359
25	372	385	858	1520	1380	1150	2220	1060	786	557	432	358
26	495	385	651	1110	1170	1020	1560	1080	778	589	424	361
27	569	381	612	1810	1110	1010	1280	952	761	664	420	354
28	661	340	795	1940	944	984	1320	1340	719	783	416	346
29	537	343	654	2760	---	928	1220	1070	686	554	419	344
30	406	354	608	3250	---	918	1120	997	677	500	420	353
31	369	---	526	2200	---	916	---	1000	---	545	412	---
TOTAL	12240	11854	13713	43486	49316	42426	56533	46859	27585	18073	17480	11262
MEAN	395	395	442	1403	1761	1369	1884	1512	920	583	564	375
MAX	661	501	858	3250	3550	3280	5590	2700	1440	783	1190	411
MIN	330	340	342	352	788	740	788	952	677	462	412	344
†	-5	+5	-7	+32	-25	+2	-1	+1	-6	+7	-14	-22
‡	390	400	435	1435	1736	1371	1883	1513	914	590	550	353

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1998\*, BY WATER YEAR (WY)

	MEAN	700	746	779	915	1013	1225	1178	980	904	679	733	614
MAX	1834	2571	1619	1965	1832	2346	2868	1954	1963	1191	2239	1948	
(WY)	1991	1978	1974	1995	1990	1993	1980	1973	1975	1989	1994	1979	
MIN	191	258	268	349	446	441	435	410	293	234	194	209	
(WY)	1989	1982	1982	1989	1989	1988	1986	1988	1988	1988	1988	1988	

## PEE DEE RIVER BASIN

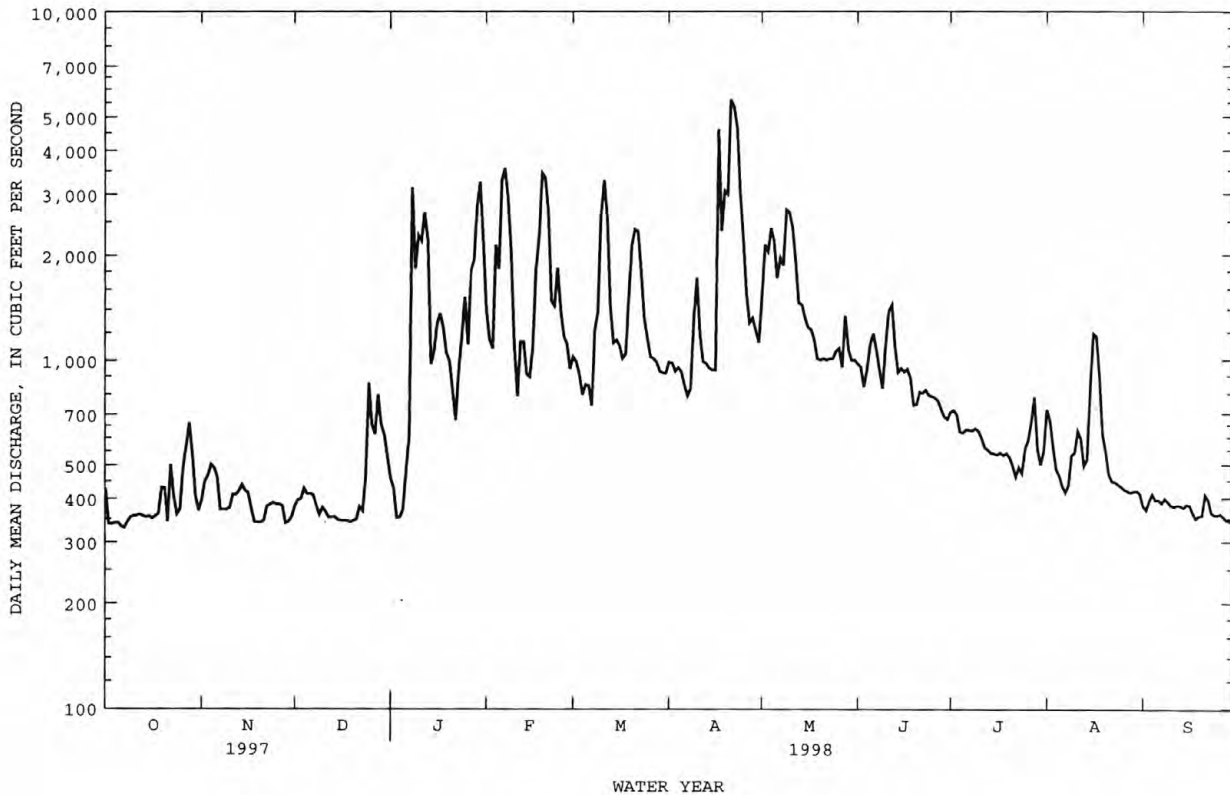
02112000 YADKIN RIVER AT WILKESBORO, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1963 - 1998*	
ANNUAL TOTAL	290511		350827		871	(UNADJUSTED)
ANNUAL MEAN	796		961		1220	1973
HIGHEST ANNUAL MEAN	796		958		393	1988
LOWEST ANNUAL MEAN					7990	Aug 10 1970
HIGHEST DAILY MEAN	3390	Apr 29	5590	Apr 21	114	Dec 8 1970
LOWEST DAILY MEAN	329	Sep 15	330	Oct 7	166	Aug 17 1988
ANNUAL SEVEN-DAY MINIMUM	338	Oct 2	338	Oct 2	12800	Apr 10 1983
INSTANTANEOUS PEAK FLOW			10400	Apr 17	16.22	Apr 10 1983
INSTANTANEOUS PEAK STAGE			13.26	Apr 17	54	Oct 21 1997
INSTANTANEOUS LOW FLOW			54	Oct 21	1460	
10 PERCENT EXCEEDS	1340		2140		669	
50 PERCENT EXCEEDS	757		686		383	
90 PERCENT EXCEEDS	346		356			

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir, provided by U.S. Army Corps of Engineers.

‡ Adjusted for change in W. Kerr Scott Reservoir.

\* For regulated period only (1963-1998). See REMARKS.



## PEE DEE RIVER BASIN

02112120 ROARING RIVER NEAR ROARING RIVER, NC

LOCATION.--Lat 36°14'59", long 81°02'39", Wilkes County, Hydrologic Unit 03040101, on left bank at downstream end of old bridge pier, 800 ft upstream from bridge on Secondary Road 1990, 3.8 mi northwest of Roaring River, and 4.1 mi upstream from mouth.

DRAINAGE AREA.--128 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements water years 1925, 1947, 1949-56, 1963. April 1964 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 964.85 ft above sea level. Prior to May 1, 1964, nonrecording gage on downstream side of bridge at same site and datum. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum discharge for period of record, from rating curve extended above 2,400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow at gage heights 22.54, 14.40, and 10.83 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 reached a stage of about 28 ft; estimated discharge, 45,000 ft<sup>3</sup>/s. The flood of August 1940 reached a stage of about 24 ft; estimated discharge, 31,000 ft<sup>3</sup>/s, from information by local residents and rating curve extended as explained above. A discharge of 24 ft<sup>3</sup>/s was measured Sept. 18, 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	103	91	104	213	202	235	394	177	125	94	81
2	77	192	82	122	193	191	203	382	171	118	81	80
3	79	121	83	121	298	183	196	329	168	113	77	80
4	79	99	106	105	1020	177	223	591	183	113	73	87
5	77	92	92	108	555	172	195	417	206	114	72	78
6	76	90	84	115	369	167	187	338	192	111	71	76
7	75	90	81	203	301	167	182	772	179	108	70	76
8	74	88	81	2870	260	460	181	773	165	109	85	96
9	74	86	82	442	232	637	312	484	168	117	131	86
10	74	84	90	258	213	434	236	461	297	105	102	74
11	75	83	e88	195	216	324	209	443	218	98	115	73
12	75	83	e83	169	231	276	195	375	205	99	98	72
13	77	88	e81	165	203	250	188	334	180	108	170	70
14	83	106	e80	144	190	237	188	310	167	97	105	68
15	78	94	e78	481	180	219	184	294	168	95	177	67
16	74	86	79	446	272	212	188	275	195	93	1700	67
17	77	84	80	264	825	207	1290	260	184	101	602	67
18	79	83	78	204	558	221	483	243	154	90	252	67
19	112	83	77	189	377	483	1090	233	151	95	174	67
20	89	83	77	169	317	852	850	223	150	93	142	66
21	78	84	77	152	274	645	510	218	141	85	128	147
22	77	110	102	155	245	421	419	210	143	84	118	119
23	75	94	98	378	342	341	364	237	140	82	111	78
24	80	86	110	290	289	297	321	221	135	81	106	73
25	107	83	202	244	248	269	292	213	131	96	99	72
26	161	83	122	202	228	255	273	212	132	104	96	72
27	161	83	156	1030	229	241	270	213	126	97	90	70
28	101	81	150	893	219	230	274	200	122	97	88	68
29	91	81	126	407	---	218	245	191	120	87	87	68
30	86	90	116	302	---	209	253	186	124	80	85	84
31	85	---	104	247	---	202	---	183	---	89	83	---
TOTAL	2685	2793	3036	11174	9097	9399	10236	10215	4992	3084	5482	2349
MEAN	86.6	93.1	97.9	360	325	303	341	330	166	99.5	177	78.3
MAX	161	192	202	2870	1020	852	1290	773	297	125	1700	147
MIN	74	81	77	104	180	167	181	183	120	80	70	66
CFSM	.68	.73	.77	2.82	2.54	2.37	2.67	2.57	1.30	.78	1.38	.61
IN.	.78	.81	.88	3.25	2.64	2.73	2.97	2.97	1.45	.90	1.59	.68

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

MEAN	156	163	176	208	229	271	262	220	198	159	155	144
MAX	422	426	389	406	413	610	637	430	432	349	461	446
(WY)	1977	1978	1997	1996	1990	1993	1980	1991	1975	1989	1994	1971
MIN	56.9	63.3	72.1	83.8	99.5	97.4	100	90.7	62.2	50.8	47.3	57.9
(WY)	1989	1982	1989	1981	1989	1988	1986	1988	1988	1986	1988	1988

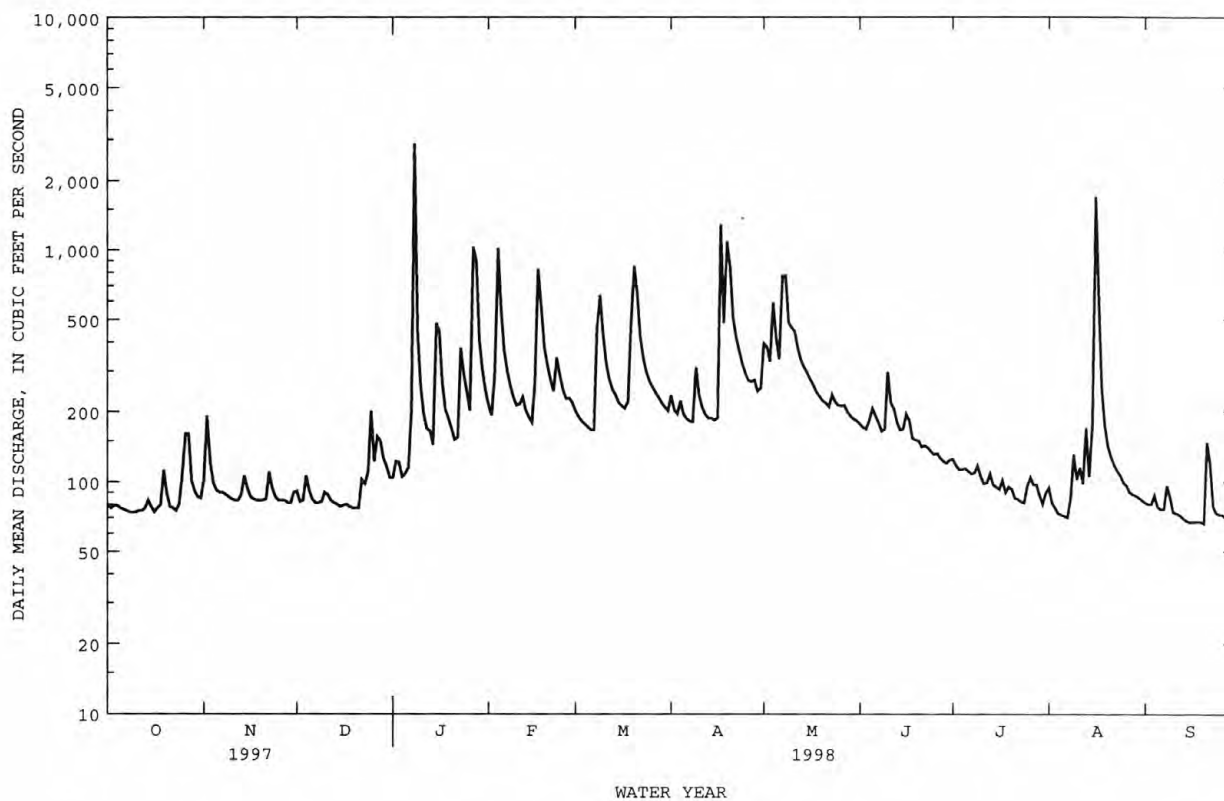
## PEE DEE RIVER BASIN

02112120 ROARING RIVER NEAR ROARING RIVER, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998	
ANNUAL TOTAL	71533		74542		196	
ANNUAL MEAN	196		204		269	1993
HIGHEST ANNUAL MEAN					98.5	1988
LOWEST ANNUAL MEAN					7460	Aug 17 1994
HIGHEST DAILY MEAN	1400	Mar 14	2870	Jan 8	32	Aug 27 1988
LOWEST DAILY MEAN	73	Sep 22	66	Sep 20	38	Aug 22 1988
ANNUAL SEVEN-DAY MINIMUM	75	Oct 6	67	Sep 14	26600*	Oct 17 1975
INSTANTANEOUS PEAK FLOW			9320	Jan 8	22.54*	Oct 17 1975
INSTANTANEOUS PEAK STAGE			13.16	Jan 8	31	Aug 27 1988
INSTANTANEOUS LOW FLOW			63	Sep 21	1.53	
ANNUAL RUNOFF (CFSM)	1.53		1.60		20.76	
ANNUAL RUNOFF (INCHES)	20.79		21.66		314	
10 PERCENT EXCEEDS	335		377		147	
50 PERCENT EXCEEDS	172		135		83	
90 PERCENT EXCEEDS	79		77			

e Estimated.

\* See REMARKS.





## PEE DEE RIVER BASIN

## 02112250 YADKIN RIVER AT ELKIN, NC

LOCATION.--Lat 36°14'30", long 80°50'49", Yadkin County, Hydrologic Unit 03040101, on right bank at downstream side of bridge on U.S. Highway 21 at Elkin, 0.3 mi downstream of Elkin River, and 362 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--869 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1964 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 866.03 ft above sea level. Prior to Aug. 28, 1964, nonrecording gage on upstream side of bridge at same datum. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Considerable regulation by W. Kerr Scott Reservoir (station 02111391). Maximum gage height for period of record, from graph based on hourly gage-height readings and floodmark.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 36.0 ft, from information by North Carolina State Highway Commission. Flood of August 1940 reached a stage of 37.5 ft. A discharge of 172 ft<sup>3</sup>/s was measured on Sept. 19, 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e700	e620	e650	e850	2010	1520	e1350	2530	1370	938	881	581
2	e600	e700	e670	e780	1780	1520	e1400	2980	1340	954	908	546
3	e550	e920	e725	e720	1660	1440	e1400	3020	1260	931	786	563
4	e540	e820	e710	e760	5480	1240	e1350	3710	1270	887	e670	633
5	e530	e760	e750	e850	3110	1280	e1300	3490	1620	785	e650	583
6	e520	e770	e720	e1300	4000	1270	e1250	2860	1520	786	e630	575
7	e530	e780	e690	e3000	4400	1240	1220	4920	1460	771	602	562
8	e550	e770	e650	e16000	3950	2730	1220	4990	1230	768	619	595
9	e560	e750	e620	e6000	2940	3540	1810	4280	1130	824	766	614
10	e560	e720	e600	e4000	1990	3180	2460	4440	1510	836	771	561
11	e560	e690	e630	e3200	1310	4350	1870	4070	1710	817	844	555
12	e560	e700	e650	e2800	1580	3490	1440	3780	1920	778	850	555
13	e560	e730	e640	e3200	1820	2550	1370	e3000	1480	776	815	548
14	e550	e780	e620	e2900	1390	1940	1330	e2500	1180	759	773	535
15	e570	e750	e600	e3500	1320	1960	1310	e2300	e1350	749	852	534
16	e580	e720	e590	e5200	1660	1920	1330	e2100	e1300	766	3330	536
17	e560	e680	e600	e3200	4590	1810	10600	e1900	1360	1680	2280	533
18	e580	e650	e580	e2300	3520	1830	3960	e1750	1230	801	1420	508
19	e640	e630	e590	e2100	4480	3390	6030	1510	1110	763	981	514
20	e720	e620	e600	e1700	4310	3940	5640	1460	995	773	830	516
21	e800	e650	e610	e1400	3850	4330	6820	1450	1080	721	759	608
22	e700	e680	e630	e1300	2540	e3700	6650	1450	1080	685	707	782
23	e600	e720	e670	e1700	2290	e3000	6150	1500	1140	705	688	579
24	e580	e730	e650	e2400	2760	e2500	4400	1510	1120	719	665	543
25	e590	e720	e900	e3000	2230	e2000	3290	1510	1110	730	643	538
26	e750	e710	e1500	e2200	1790	e1800	2750	1600	1110	934	631	542
27	e1000	e700	e1200	e2800	1780	e1600	2140	1390	1090	825	616	540
28	e900	e680	e1300	e3500	1540	e1500	2230	1850	1040	999	607	525
29	e800	e660	e1400	3540	---	e1400	e2000	1690	983	826	612	518
30	e700	e650	e1200	4190	---	e1300	e1750	1410	860	715	607	537
31	e630	---	e920	3120	---	e1350	---	1440	---	720	599	---
TOTAL	19570	21460	23865	93510	76080	70620	87820	78390	37958	25721	27392	16859
MEAN	631	715	770	3016	2717	2278	2927	2529	1265	830	884	562
MAX	1000	920	1500	16000	5480	4350	10600	4990	1920	1680	3330	782
MIN	520	620	580	720	1310	1240	1220	1390	860	685	599	508

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

MEAN	1156	1177	1263	1517	1671	1964	1913	1583	1427	1101	1177	1019
MAX	2911	3871	2591	3129	2978	3885	4510	2887	2942	1922	3323	2910
(WY)	1991	1978	1974	1978	1990	1975	1980	1973	1975	1989	1994	1979
MIN	372	428	532	617	752	745	737	729	507	433	361	416
(WY)	1989	1982	1989	1966	1989	1988	1986	1988	1988	1988	1988	1988

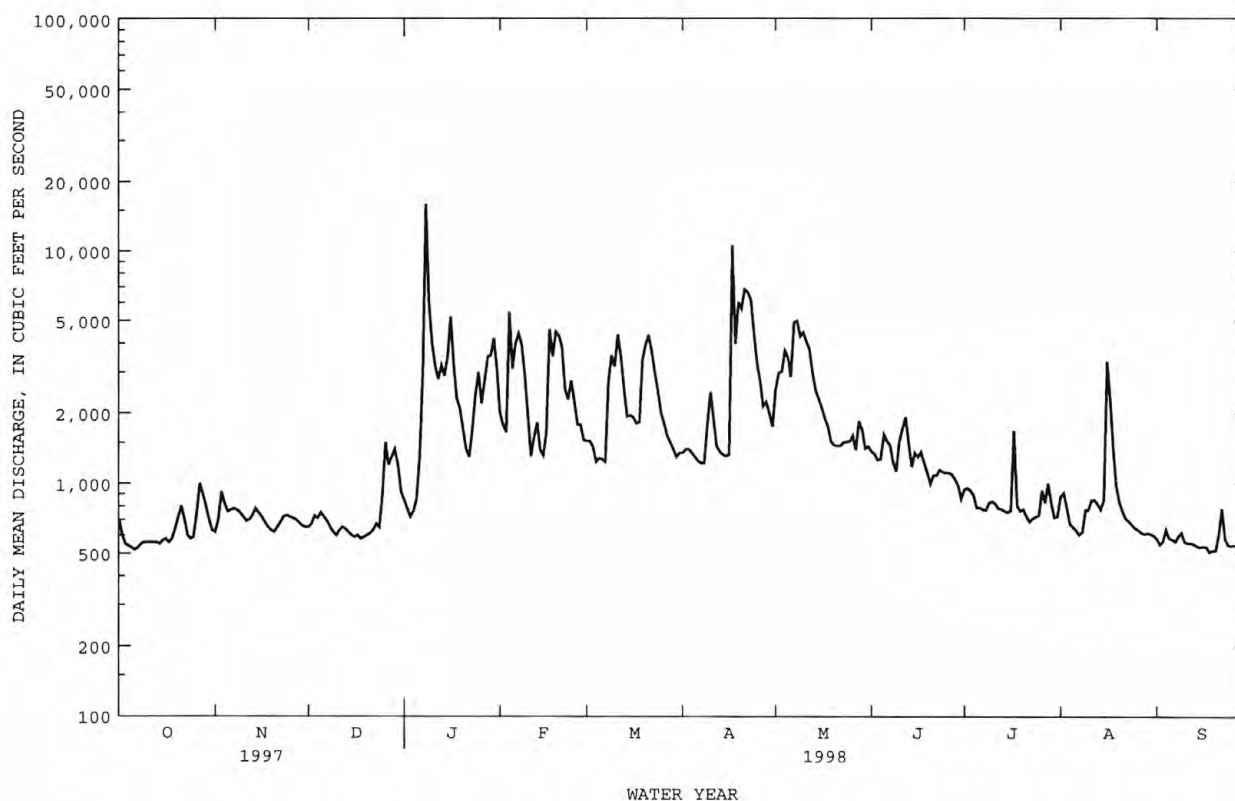


## PEE DEE RIVER BASIN

02112250 YADKIN RIVER AT ELKIN, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998	
ANNUAL TOTAL	454645		579245		1418	
ANNUAL MEAN	1246		1587		1951	1973
HIGHEST ANNUAL MEAN					698	1988
LOWEST ANNUAL MEAN					21500	Aug 10 1970
HIGHEST DAILY MEAN	6150	Apr 29	16000	Jan 8	246	Aug 31 1981
LOWEST DAILY MEAN	513	Sep 9	508	Sep 18	257	Aug 25 1981
ANNUAL SEVEN-DAY MINIMUM	519	Sep 4	525	Sep 14	29100	Aug 17 1994
INSTANTANEOUS PEAK FLOW			a18000	Jan 8	24.88*	Apr 10 1983
INSTANTANEOUS PEAK STAGE			b16.92	Jan 8	239	Aug 31 1981
INSTANTANEOUS LOW FLOW			NOT DETERMINED		2360	
10 PERCENT EXCEEDS	2130		3500		1080	
50 PERCENT EXCEEDS	1140		1000		630	
90 PERCENT EXCEEDS	561		577			

e Estimated.  
a Approximate.  
b Observed.  
\* See REMARKS.



## PEE DEE RIVER BASIN

02112360 MITCHELL RIVER NEAR STATE ROAD, NC

LOCATION.--Lat 36°18'42", long 80°48'26", Surry County, Hydrologic Unit 03040101, on right bank 280 ft upstream from bridge on Secondary Road 1001, 1.8 mi upstream from Grass Creek, and 3.3 mi east of State Road.

DRAINAGE AREA.--78.8 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1952-58, 1963. April 1964 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 927.12 ft above sea level. Prior to Aug. 29, 1964, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for current water year also occurred on Sept. 18.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1900, about 18 ft in August 1940, from information by local resident; estimated discharge, 9,000 ft<sup>3</sup>/s. A discharge of 16 ft<sup>3</sup>/s was measured on Sept. 19, 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	62	61	69	167	137	145	225	129	88	64	55
2	61	107	56	83	168	131	138	198	126	80	59	54
3	60	83	56	75	182	129	133	178	123	79	57	55
4	59	71	64	67	551	122	149	259	151	78	56	62
5	58	65	62	67	329	121	135	251	150	104	55	54
6	55	61	58	72	218	121	129	203	134	121	54	52
7	53	61	56	145	182	122	126	528	132	75	53	51
8	53	61	55	1570	160	313	128	477	135	73	72	58
9	53	59	54	361	144	434	187	292	133	77	88	53
10	51	58	56	180	133	256	142	280	233	70	78	49
11	50	57	59	135	131	201	129	275	160	64	78	48
12	50	57	57	119	138	177	123	241	140	64	67	48
13	50	59	56	120	124	165	121	214	127	102	246	46
14	52	70	55	108	118	158	121	201	116	73	121	45
15	56	67	54	281	114	148	121	189	119	69	102	44
16	52	62	54	236	155	140	121	183	122	69	974	44
17	52	59	54	163	556	145	748	178	128	240	194	42
18	55	58	53	133	354	142	278	167	111	93	128	43
19	71	57	53	123	236	304	707	162	108	81	104	44
20	65	57	53	110	202	314	445	157	108	82	90	44
21	57	57	53	100	172	275	282	153	101	76	84	84
22	56	66	61	115	156	200	221	148	100	73	78	81
23	53	64	66	240	215	181	197	162	98	67	70	56
24	53	60	65	154	189	172	182	154	94	64	76	51
25	68	58	109	133	162	162	170	146	89	69	69	50
26	91	56	80	123	149	157	162	150	87	66	66	50
27	109	56	91	738	143	152	158	178	85	66	62	48
28	72	55	94	705	142	145	158	157	83	67	62	46
29	65	59	80	259	---	143	149	147	83	63	62	45
30	61	58	78	202	---	140	156	139	84	59	60	54
31	60	---	70	191	---	140	---	130	---	61	57	---
TOTAL	1862	1880	1973	7177	5690	5647	6161	6522	3589	2513	3486	1556
MEAN	60.1	62.7	63.6	232	203	182	205	210	120	81.1	112	51.9
MAX	109	107	109	1570	556	434	748	528	233	240	974	84
MIN	50	55	53	67	114	121	121	130	83	59	53	42
CFSM	.76	.80	.81	2.94	2.58	2.31	2.61	2.67	1.52	1.03	1.43	.66
IN.	.88	.89	.93	3.39	2.69	2.67	2.91	3.08	1.69	1.19	1.65	.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

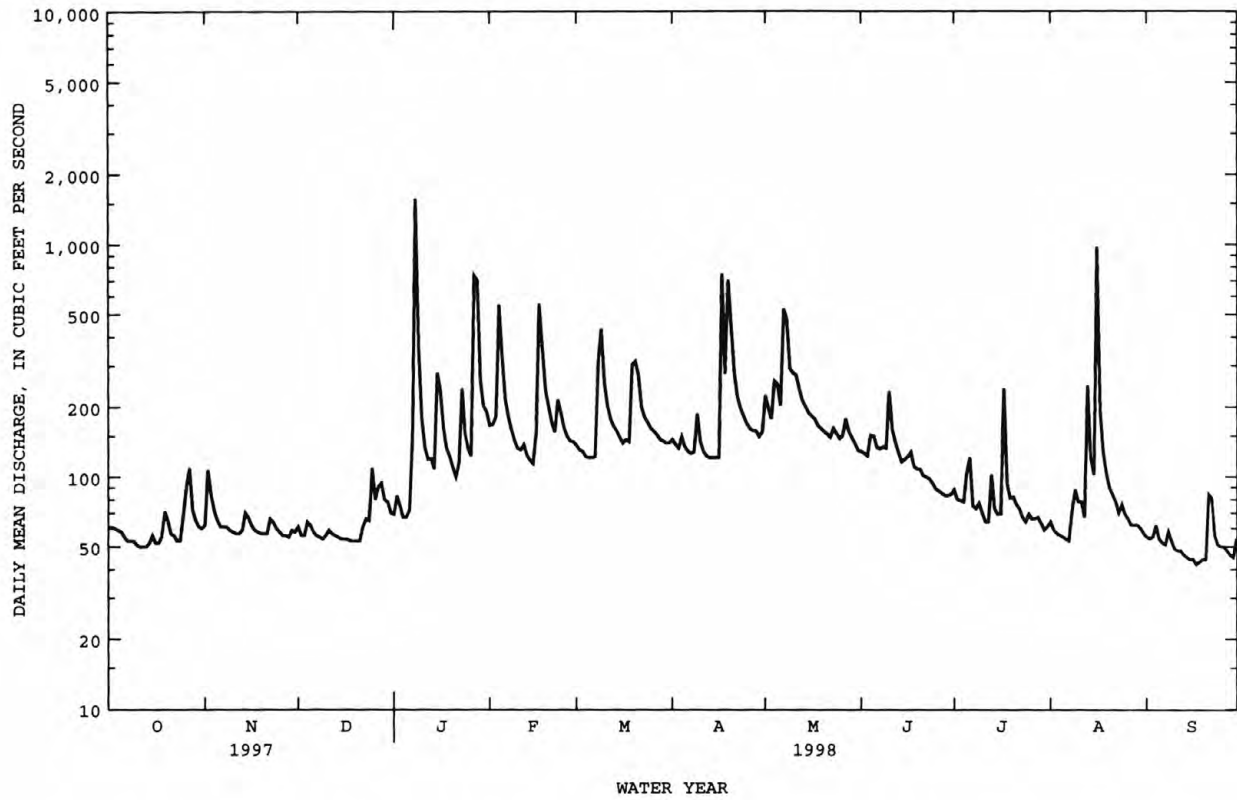
MEAN	111	108	118	134	149	178	176	152	130	109	109	106
MAX	248	211	230	232	258	373	426	264	233	228	247	313
(WY)	1991	1980	1974	1998	1966	1993	1983	1973	1975	1989	1970	1979
MIN	40.1	48.7	47.0	48.3	64.9	72.8	69.1	69.4	50.0	35.9	32.1	51.9
(WY)	1989	1982	1989	1981	1989	1981	1981	1988	1988	1986	1981	1998

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1964 - 1998
ANNUAL TOTAL	43814	48056	
ANNUAL MEAN	120	132	132
HIGHEST ANNUAL MEAN			178
LOWEST ANNUAL MEAN			66.5
HIGHEST DAILY MEAN	527	1570	3260
LOWEST DAILY MEAN	43	42	23
ANNUAL SEVEN-DAY MINIMUM	47	44	25
INSTANTANEOUS PEAK FLOW		5150	7470
INSTANTANEOUS PEAK STAGE		11.05	16.42
INSTANTANEOUS LOW FLOW		41*	16
ANNUAL RUNOFF (CFSM)	1.52	1.67	1.67
ANNUAL RUNOFF (INCHES)	20.68	22.69	22.71
10 PERCENT EXCEEDS	220	228	206
50 PERCENT EXCEEDS	101	94	104
90 PERCENT EXCEEDS	53	53	58

\* See REMARKS.

## PEE DEE RIVER BASIN

02112360 MITCHELL RIVER NEAR STATE ROAD, NC--Continued



## PEE DEE RIVER BASIN

02113000 FISHER RIVER NEAR COPELAND, NC

LOCATION.--Lat 36°21'26", long 80°41'10", Surry County, Hydrologic Unit 03040101, on left bank 500 ft upstream from bridge on State Highway 268, 1 mi upstream from Cody Creek, and 2 mi northwest of Copeland.

DRAINAGE AREA.--128 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 1303: 1933(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 913 ft above sea level, by barometer. Prior to Sept. 5, 1936, twice daily readings at same site and datum. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Some irrigation diversions at times in the growing season. Maximum discharge for period of record, from rating curve extended above 6,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; gage height: 18.4 ft. Minimum discharge for current water year also occurred Sept. 17, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	72	82	89	198	172	167	354	154	107	70	71
2	66	140	82	111	179	163	156	281	144	100	65	70
3	59	106	79	110	205	156	149	216	145	95	63	69
4	58	87	93	89	732	150	182	439	298	95	57	80
5	57	78	89	96	498	144	157	517	233	107	54	69
6	55	71	78	109	294	142	146	289	188	92	52	66
7	53	69	73	282	242	140	142	1010	169	89	50	65
8	51	68	72	3580	214	657	155	1120	155	90	62	66
9	51	67	72	792	194	987	226	409	155	99	320	63
10	51	66	77	294	178	377	181	404	330	87	151	59
11	51	64	81	215	175	257	157	483	223	78	121	58
12	52	64	74	178	213	218	148	339	238	77	84	57
13	54	67	72	166	171	200	143	287	183	90	157	56
14	55	88	72	148	160	190	142	258	163	86	145	53
15	57	85	71	555	150	181	143	241	159	79	97	52
16	52	73	70	438	190	171	146	224	156	76	1580	51
17	53	69	67	230	900	170	1900	218	186	334	343	51
18	58	68	64	184	521	172	397	198	145	106	205	50
19	72	69	64	167	301	522	1370	189	138	91	156	53
20	69	69	65	148	253	525	965	181	142	87	131	52
21	56	69	65	132	221	443	378	178	131	79	118	60
22	55	85	77	128	200	276	294	174	130	77	110	105
23	53	82	89	483	338	230	258	200	124	79	105	69
24	55	73	81	247	271	209	237	199	123	79	111	63
25	71	70	162	191	212	194	216	188	117	80	99	60
26	89	69	110	164	192	190	202	182	114	78	92	67
27	139	68	131	1360	187	181	198	224	110	75	86	62
28	85	68	142	2060	186	175	202	207	107	76	82	58
29	69	68	113	433	---	168	186	171	103	71	81	55
30	65	75	107	285	---	164	187	169	104	65	78	65
31	63	---	93	226	---	159	---	160	---	66	77	---
TOTAL	1937	2267	2667	13690	7775	8083	9530	9709	4867	2890	5002	1875
MEAN	62.5	75.6	86.0	442	278	261	318	313	162	93.2	161	62.5
MAX	139	140	162	3580	900	987	1900	1120	330	334	1580	105
MIN	51	64	64	89	150	140	142	160	103	65	50	50
CFSM	.49	.59	.67	3.45	2.17	2.04	2.48	2.45	1.27	.73	1.26	.49
IN.	.56	.66	.78	3.98	2.26	2.35	2.77	2.82	1.41	.84	1.45	.54

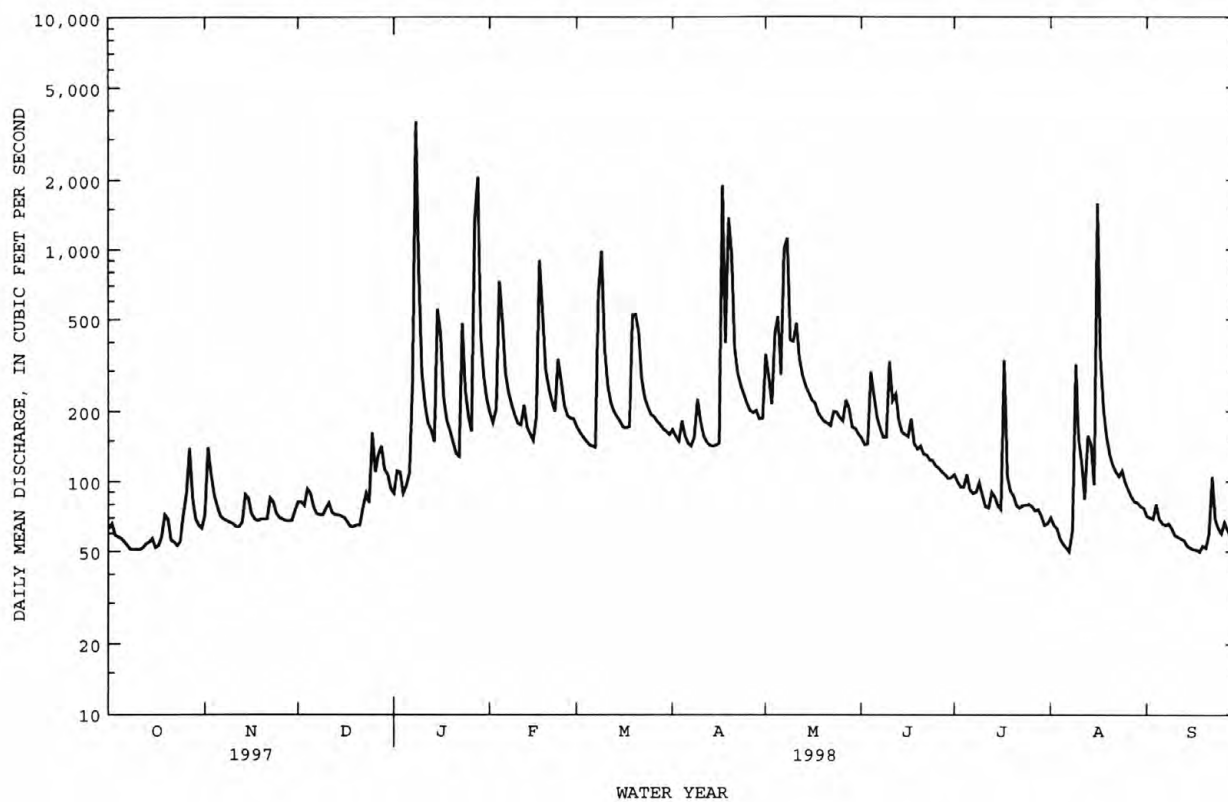
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1998, BY WATER YEAR (WY)

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943
MEAN	149	151	170	204	220	253	248	200	179	149	154	143
MAX	580	344	365	526	539	667	746	387	491	397	510	735
(WY)	1938	1935	1974	1936	1960	1993	1983	1950	1947	1943	1940	1979
MIN	40.2	53.7	58.1	54.4	68.8	103	103	77.6	47.5	31.3	24.6	27.9
(WY)	1942	1932	1956	1956	1934	1981	1981	1941	1956	1986	1981	1954

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1932 - 1998
ANNUAL TOTAL	51770	70292	
ANNUAL MEAN	142	193	185
HIGHEST ANNUAL MEAN			281
LOWEST ANNUAL MEAN			87.6
HIGHEST DAILY MEAN	955	3580	12100
LOWEST DAILY MEAN	37	50	13
ANNUAL SEVEN-DAY MINIMUM	42	52	15
INSTANTANEOUS PEAK FLOW		6950*	34200*
INSTANTANEOUS PEAK STAGE		11.20	19.61*
INSTANTANEOUS LOW FLOW		49*	12
ANNUAL RUNOFF (CFSM)	1.11	1.50	1.44
ANNUAL RUNOFF (INCHES)	15.05	20.43	19.60
10 PERCENT EXCEEDS	230	332	291
50 PERCENT EXCEEDS	123	124	138
90 PERCENT EXCEEDS	53	59	69

\* See REMARKS.

PEE DEE RIVER BASIN  
02113000 FISHER RIVER NEAR COPELAND, NC--Continued



## PEE DEE RIVER BASIN

02113850 ARARAT RIVER AT ARARAT, NC

LOCATION.--Lat 36°24'16", long 80°33'43", Surry County, Hydrologic Unit 03040101, on right bank 265 ft upstream from bridge on Secondary Road 2019 at Ararat, and 300 ft downstream of Flat Shoal Creek.

DRAINAGE AREA.--231 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 880.97 ft above sea level. Yadkin, Inc. satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record also occurred Aug. 30, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 14, 1947, reached a stage of 21.4 ft, result of failure of dams upstream; discharge, 26,000 ft<sup>3</sup>/s, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	145	149	156	381	319	348	528	281	214	142	91
2	94	282	131	153	348	299	312	443	264	198	125	90
3	95	197	127	168	428	290	299	377	265	189	111	87
4	99	154	151	168	726	283	383	582	522	193	103	112
5	95	139	139	173	617	277	316	554	430	200	102	97
6	87	136	128	228	463	269	290	426	335	182	99	87
7	83	138	126	508	412	266	284	1060	302	181	93	83
8	82	135	123	3610	373	838	308	1580	275	182	111	81
9	86	135	126	1240	341	1420	431	650	281	205	347	75
10	85	134	137	600	321	657	357	572	485	181	240	74
11	83	132	139	388	367	479	308	715	367	162	232	74
12	78	133	127	322	475	418	289	553	333	160	162	69
13	85	137	126	312	352	384	276	481	310	173	216	65
14	90	176	126	271	320	368	283	447	269	170	241	62
15	97	162	126	810	301	347	283	416	292	157	174	58
16	89	138	122	727	347	335	288	456	298	162	734	62
17	90	129	123	429	830	334	2640	485	396	418	447	64
18	99	125	127	345	602	337	699	365	280	190	281	90
19	128	126	125	322	446	752	1490	342	264	174	206	84
20	127	126	125	290	411	878	1370	329	275	171	173	76
21	117	129	126	263	373	858	636	329	241	155	158	101
22	111	168	160	259	343	533	516	323	245	149	152	161
23	103	150	173	732	489	461	469	420	236	170	146	133
24	102	131	164	528	432	422	430	479	233	155	136	103
25	142	129	266	426	364	392	400	409	224	149	129	100
26	171	130	191	346	339	381	378	356	225	146	120	97
27	232	130	250	1310	343	369	366	467	208	137	113	95
28	151	130	236	2130	341	355	362	440	204	145	111	89
29	134	130	195	739	---	341	340	365	200	133	110	84
30	129	141	203	523	---	327	344	326	208	121	105	103
31	122	---	180	435	---	323	---	298	---	130	98	---
TOTAL	3390	4347	4747	18911	11885	14312	15495	15573	8748	5452	5717	2647
MEAN	109	145	153	610	424	462	517	502	292	176	184	88.2
MAX	232	282	266	3610	830	1420	2640	1580	522	418	734	161
MIN	78	125	122	153	301	266	276	298	200	121	93	58
CFSM	.47	.63	.66	2.64	1.84	2.00	2.24	2.17	1.26	.76	.80	.38
IN.	.55	.70	.76	3.05	1.91	2.30	2.50	2.51	1.41	.88	.92	.43

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

	MEAN	245	256	290	349	377	451	449	372	329	259	246	229
MAX	587	537	584	743	691	992	1048	591	736	554	536	879	
(WY)	1977	1993	1974	1978	1990	1993	1980	1973	1982	1989	1985	1979	
MIN	104	111	124	120	187	172	170	167	110	81.9	45.4	88.2	
(WY)	1987	1982	1989	1981	1989	1981	1967	1988	1988	1986	1981	1998	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

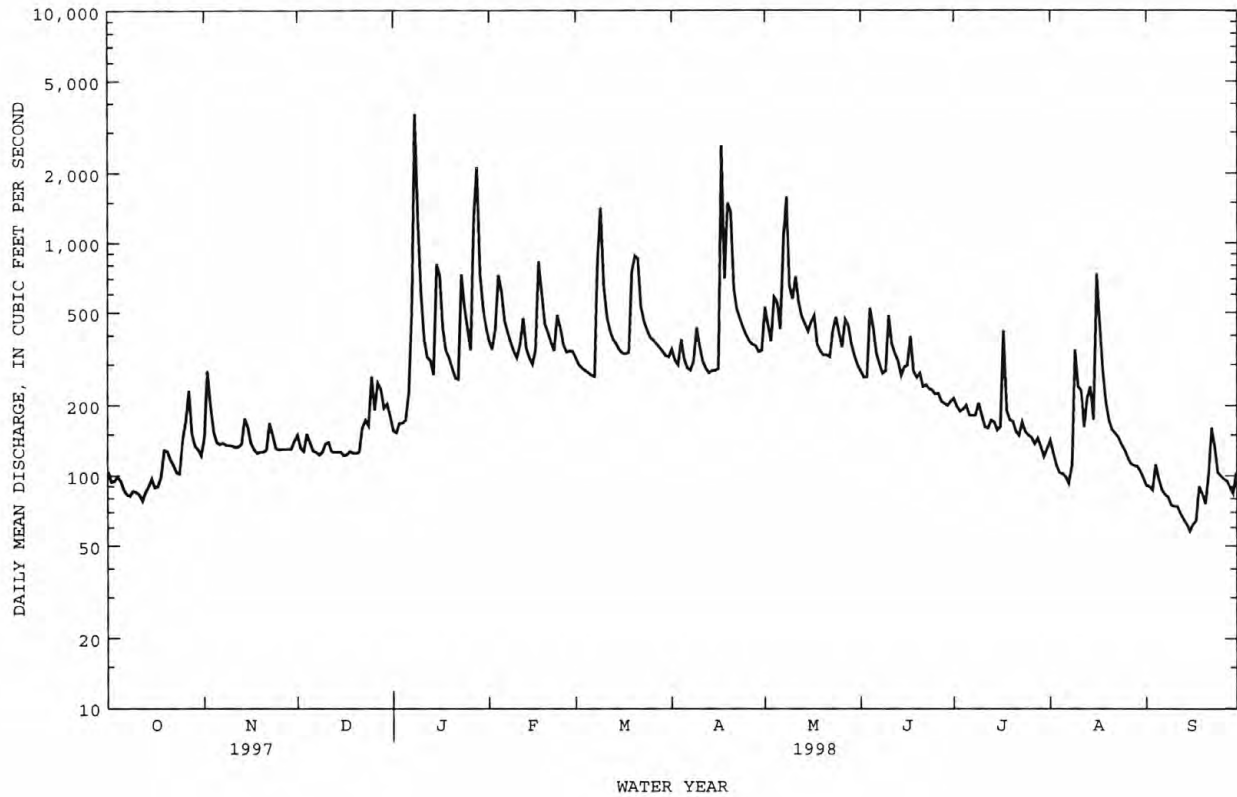
## FOR 1998 WATER YEAR

## WATER YEARS 1964 - 1998

ANNUAL TOTAL	102491	111224	
ANNUAL MEAN	281	305	321
HIGHEST ANNUAL MEAN			462
LOWEST ANNUAL MEAN			150
HIGHEST DAILY MEAN	1670	3610	13600
LOWEST DAILY MEAN	72	58	21
ANNUAL SEVEN-DAY MINIMUM	83	65	23
INSTANTANEOUS PEAK FLOW		6220	35000
INSTANTANEOUS PEAK STAGE		10.40	24.46
INSTANTANEOUS LOW FLOW		53	19*
ANNUAL RUNOFF (CFSM)	1.22	1.32	1.39
ANNUAL RUNOFF (INCHES)	16.51	17.91	18.89
10 PERCENT EXCEEDS	480	525	516
50 PERCENT EXCEEDS	253	228	247
90 PERCENT EXCEEDS	104	96	130

\* See REMARKS.

PEE DEE RIVER BASIN  
02113850 ARARAT RIVER AT ARARAT, NC--Continued





## PEE DEE RIVER BASIN

02114450 LITTLE YADKIN RIVER AT DALTON, NC

LOCATION.--Lat 36°17'56", long 80°25'53", Stokes County, Hydrologic Unit 03040101, on left bank 1,200 ft downstream of bridge on U.S. Highway 52, 1.0 mi southwest of Dalton, 1.3 mi downstream of Southern Railway bridge, and 2.0 mi downstream of Danbury Creek.

DRAINAGE AREA.--42.8 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1960 to current year.

REVISED RECORDS.--WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 813.7 ft above sea level (North Carolina State Highway Commission bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor. A Natural Resources Conservation Service flood-control dam on upstream tributary, drainage area 4.7 mi<sup>2</sup> with flood storage of 695 acre-ft, was completed on June 21, 1977. Maximum discharge for period of record, from rating curve extended above 2,700 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 17.86 ft. Minimum discharge for current water year also occurred Sept. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	18	21	24	44	38	e38	74	28	22	11	6.7
2	12	23	18	24	39	36	e33	89	26	18	9.6	6.4
3	13	20	17	21	53	37	e30	54	25	16	9.0	6.8
4	13	18	30	25	232	38	e42	52	58	16	8.0	15
5	13	17	21	26	155	39	e33	46	54	22	8.0	8.9
6	12	17	18	26	82	42	e30	39	36	17	7.7	7.8
7	12	18	16	39	56	33	e28	176	32	15	7.5	7.7
8	11	17	e16	163	47	233	29	279	29	15	9.3	8.5
9	11	17	e17	73	41	447	45	106	27	16	43	7.8
10	11	17	e18	39	38	118	33	87	46	16	25	6.6
11	12	17	e18	30	52	e61	30	119	36	13	22	6.6
12	11	17	17	27	178	e53	27	74	44	13	15	6.1
13	12	19	16	27	69	e48	27	55	32	13	13	5.3
14	12	26	16	24	49	e46	28	46	26	12	12	5.0
15	17	21	16	270	41	e44	28	41	27	12	12	5.0
16	14	19	16	203	48	e43	30	39	26	16	105	5.0
17	13	17	16	71	201	e42	1100	42	28	125	e32	4.9
18	13	17	16	44	111	e43	220	34	23	26	e20	4.7
19	23	17	16	38	67	e240	308	31	22	18	19	4.6
20	19	17	16	32	55	e270	279	30	22	16	14	4.8
21	15	18	16	28	48	e260	102	30	20	14	13	6.0
22	14	29	21	28	46	e80	72	32	20	13	12	8.7
23	13	22	20	146	77	e57	58	43	22	16	11	10
24	14	19	22	86	74	e53	48	37	21	20	11	7.1
25	17	17	42	57	62	e50	42	72	20	14	9.9	6.6
26	22	17	25	41	56	e48	38	71	19	13	9.1	6.5
27	30	17	60	409	56	e46	37	122	18	12	8.4	6.0
28	19	17	51	417	41	e45	36	53	17	14	8.2	5.3
29	16	17	34	127	---	e43	34	39	17	12	8.1	5.1
30	16	20	30	70	---	e40	35	33	18	11	7.3	7.4
31	15	---	24	51	---	e36	---	31	---	11	7.2	---
TOTAL	458	562	700	2686	2118	2709	2920	2076	839	587	507.3	202.9
MEAN	14.8	18.7	22.6	86.6	75.6	87.4	97.3	67.0	28.0	18.9	16.4	6.76
MAX	30	29	60	417	232	447	1100	279	58	125	105	15
MIN	11	17	16	21	38	33	27	30	17	11	7.2	4.6
CFSM	.35	.44	.53	2.02	1.77	2.04	2.27	1.56	.65	.44	.38	.16
IN.	.40	.49	.61	2.33	1.84	2.35	2.54	1.80	.73	.51	.44	.18

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1998, BY WATER YEAR (WY)

	MEAN	38.0	33.3	47.5	61.4	67.5	83.7	61.6	46.6	40.8	33.0	30.9	27.1
MAX	171	102	113	136	163	250	217	154	155	128	120	172	
(WY)	1991	1993	1974	1978	1990	1975	1987	1984	1962	1978	1970	1979	
MIN	7.47	11.2	16.4	17.2	25.0	20.1	18.0	14.0	7.15	4.27	6.48	5.08	
(WY)	1987	1968	1966	1981	1977	1967	1967	1986	1986	1986	1986	1968	

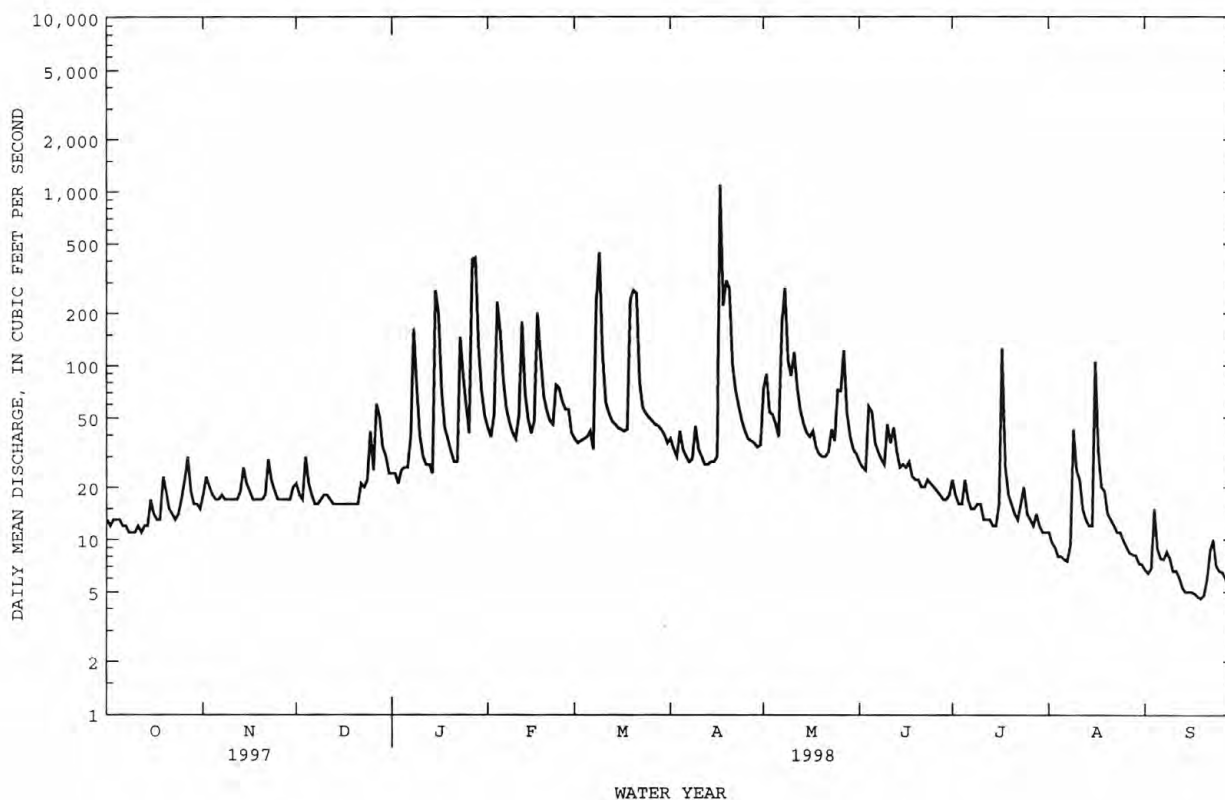
## PEE DEE RIVER BASIN

02114450 LITTLE YADKIN RIVER AT DALTON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1960 - 1998	
ANNUAL TOTAL	14522.1		16365.2		47.5	
ANNUAL MEAN	39.8		44.8		75.2	1990
HIGHEST ANNUAL MEAN					22.1	1967
LOWEST ANNUAL MEAN					3350	Jun 21 1972
HIGHEST DAILY MEAN	561	Apr 29	1100	Apr 17	1.6	Aug 2 1977
LOWEST DAILY MEAN	7.8	Aug 30	4.6	Sep 19	2.3	Jul 28 1986
ANNUAL SEVEN-DAY MINIMUM	8.4	Aug 25	4.9	Sep 14	9400*	Sep 22 1979
INSTANTANEOUS PEAK FLOW			3920*	Apr 17	20.29	Sep 22 1979
INSTANTANEOUS LOW FLOW			10.18	Apr 17	1.3	Aug 2 1977
INSTANTANEOUS LOW FLOW			4.3*	Sep 19	1.11	
ANNUAL RUNOFF (CFSM)	.93		1.05		15.07	
ANNUAL RUNOFF (INCHES)	12.62		14.22		75	
10 PERCENT EXCEEDS	73		75		26	
50 PERCENT EXCEEDS	25		24		12	
90 PERCENT EXCEEDS	12		8.8			

e Estimated.

\* See REMARKS.



LOCATION.--Lat 36°07'55", long 80°26'39", Forsyth County, Hydrologic Unit 03040101, on left bank 50 ft upstream from bridge on Secondary Road 1525, 1.5 mi east of Enon, 4 mi upstream from Forbush Creek, and 324 mi upstream from mouth of Pee Dee River in Winyah Bay.

PERIOD OF RECORD.--July 1964 to current year.

REVISED RECORDS.--WDR NC-72-1: 1970 (M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 701.71 ft above sea level. Prior to Nov. 6, 1968, nonrecording gage on downstream side of bridge at same site and datum. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by W. Kerr Scott Reservoir (station 02111391). Minimum discharge for period of record also occurred Sept. 1, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 15, 1940, reached a stage of 737.5 ft (35.8 ft above gage datum), from information by U.S. Army Corps of Engineers.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	1150	1180	1440	3820	2720	2570	4390	e2450	1640	1140	876
2	1110	1370	1190	1310	3100	2670	2640	5070	e2400	1630	1310	842
3	1010	1710	1180	1300	2890	2630	2550	4370	e2350	1560	1170	824
4	1010	1380	1230	1290	6360	2480	2630	4950	e2700	1520	1030	963
5	1010	1330	1340	1290	7330	2310	2650	5440	4430	1550	927	955
6	983	1290	1260	1310	5060	2300	2490	4500	3570	1500	904	860
7	956	1280	1220	1660	5540	2300	2380	5270	3510	1420	863	842
8	943	1190	1190	e18000	5400	4500	2310	e17000	e3000	1370	861	862
9	935	1170	1170	e10000	4390	10200	2750	e12000	e25000	1430	1530	924
10	935	1160	1150	4920	3540	5720	3400	e8000	2590	1450	1500	843
11	935	1130	1220	4120	2700	5490	3230	e6500	3360	1320	1660	e800
12	935	1120	1210	3720	3590	5070	2670	e5500	3110	1240	1380	e790
13	938	1130	1160	4090	3090	4230	2480	e4500	2900	1210	1250	e785
14	954	1250	1160	3200	2850	3160	2420	e4900	2480	1270	1770	e775
15	1020	1350	1140	3700	2580	2910	2400	e4000	2380	1170	1290	e780
16	1020	1280	1120	7240	2530	2850	2380	e3800	2370	1130	5100	e775
17	982	1210	1080	3970	6190	2800	22800	e3500	2520	3150	3970	774
18	980	1160	1040	3240	7190	2730	10500	e3100	2310	1800	2910	765
19	1110	1110	1040	2860	5480	4700	6810	2630	2150	1290	2070	768
20	1330	1110	1050	2590	5530	4730	16900	2320	2010	1260	1560	764
21	1140	1110	997	2340	5230	7160	7870	2260	1940	1180	1340	778
22	1070	1170	1050	2090	4140	5280	7930	2190	1980	1100	1200	1120
23	1110	1280	1010	3730	3500	4470	7400	2290	2080	1080	1120	1150
24	1080	1220	1090	4040	4330	3780	6150	2850	1980	1170	1080	909
25	1090	1180	e1250	3550	3800	3230	4710	2600	1880	1090	1050	844
26	1230	1160	e2000	3240	3120	3010	4050	2870	1830	1280	1000	834
27	1860	1150	e1900	5230	2940	2840	3270	2600	1840	1260	967	837
28	1640	1150	e1800	22700	2880	2760	3130	3180	1720	1300	938	817
29	1490	1110	e1900	6450	---	2700	3080	2920	1640	1430	924	783
30	1350	1110	e1700	5610	---	2630	2920	e2700	1600	1110	923	808
31	1190	---	e1550	5010	---	2580	---	e2500	---	1030	904	---
TOTAL	34506	36520	39577	145240	119100	116940	149470	140700	73580	42940	45641	25547
MEAN	1113	1217	1277	4685	4254	3772	4982	4539	2453	1385	1472	852
MAX	1860	1710	2000	22700	7330	10200	22800	17000	4430	3150	5100	1220
MIN	935	1110										

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

MEAN	2094	2108	2361	2881	3061	3654	3443	2900	2561	1964	2047	1801
MAX	5371	5128	4814	5725	5645	7862	7337	4989	5435	3485	5611	5810
(WY)	1991	1978	1974	1978	1990	1993	1980	1973	1972	1989	1970	1979
MIN	689	897	1107	1051	1560	1443	1390	1298	748	654	623	815
(WY)	1989	1982	1966	1981	1989	1981	1985	1988	1988	1986	1988	1988

## PEE DEE RIVER BASIN

02115360 YADKIN RIVER AT ENON, NC--Continued

## SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

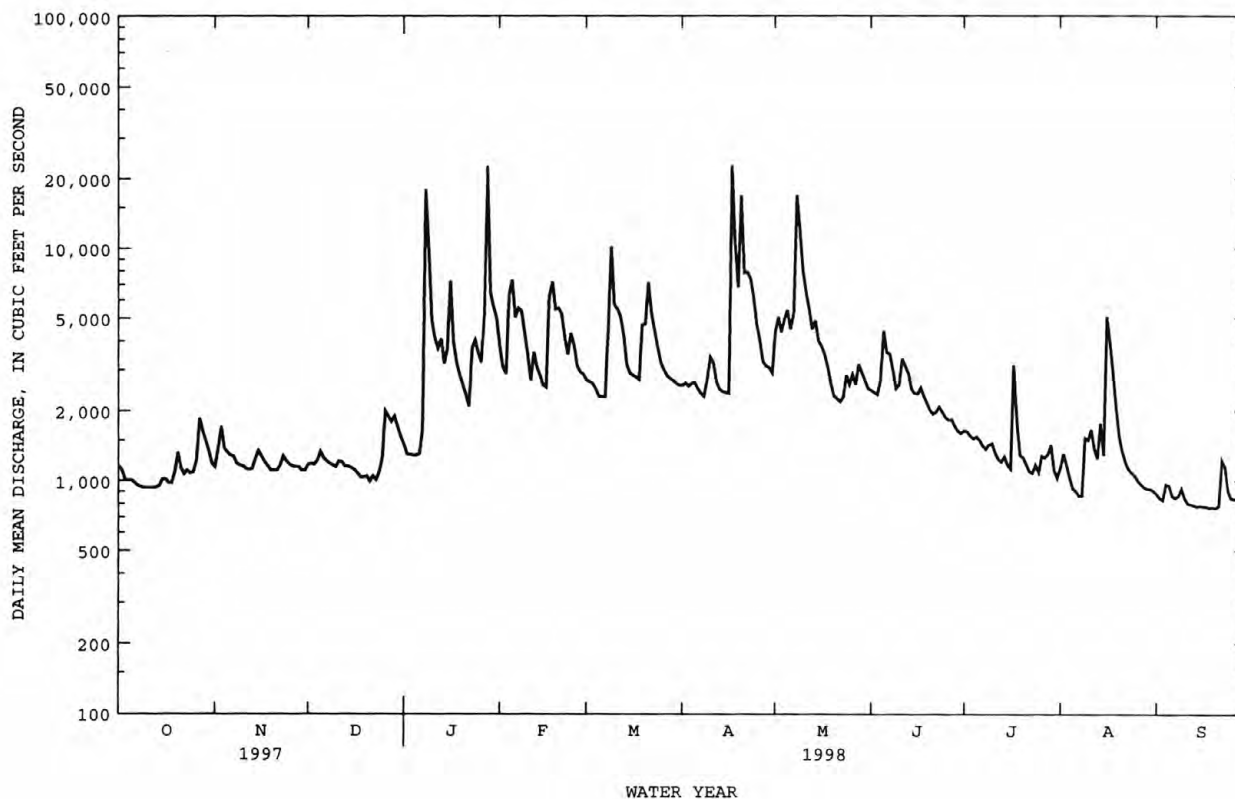
FOR 1998 WATER YEAR

WATER YEARS 1964 - 1998

ANNUAL TOTAL	799158		969761		2568	
ANNUAL MEAN	2189		2657		1332	1973
HIGHEST ANNUAL MEAN					3605	1988
LOWEST ANNUAL MEAN					1332	1988
HIGHEST DAILY MEAN	14100	Apr 29	22800	Apr 17	48400	Sep 22 1979
LOWEST DAILY MEAN	737	Sep 8	764	Sep 20	368	Sep 1 1981
ANNUAL SEVEN-DAY MINIMUM	771	Sep 3	772	Sep 14	384	Aug 26 1981
INSTANTANEOUS PEAK FLOW			34800	Apr 17	73300	Jun 21 1972
INSTANTANEOUS PEAK STAGE			23.05	Apr 17	29.52	Sep 22 1979
INSTANTANEOUS LOW FLOW			NOT DETERMINED		363*	Aug 31 1981
10 PERCENT EXCEEDS	3680		5150		4310	
50 PERCENT EXCEEDS	1950		1770		1950	
90 PERCENT EXCEEDS	955		935		1100	

e Estimated.

\* See REMARKS.



## PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC

LOCATION.--Lat 35°51'23", long 80°23'14", Davie County, Hydrologic Unit 03040101, on right bank on downstream side of bridge on U.S. Highway 64, 1.5 mi south of Yadkin College, 6.2 mi downstream of Reedy Creek, and 295 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--2,280 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 852: 1935-37(m).

GAGE.--Water-stage recorder. Datum of gage is 638.45 ft above sea level. Prior to July 26, 1957, at site on left bank 100 ft downstream at same datum. July 27, 1957, to Sept. 19, 1984, at site 20 ft downstream on bridge pier near left bank, at same datum. U.S. Army Corps of Engineers satellite telemetry and Yadkin, Inc. telephone telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diurnal fluctuation and occasional regulation during low flow caused by small hydroelectric plant 10 mi upstream with little storage capacity. Since Aug. 1962, some regulation by W. Kerr Scott Reservoir (station 02111391). Prior to regulation, maximum discharge: 80,200 ft<sup>3</sup>/s, Aug. 15, 1940; gage height: 33.75 ft; minimum observed discharge: 177 ft<sup>3</sup>/s, Oct. 12, 1954; gage height: -0.42 ft. Minimum discharge for period of record, result of regulation. Minimum discharge for current water year also occurred Sept. 19.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916, reached a stage of 36.3 ft, from floodmarks; discharge, 94,300 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1470	1490	1570	e2600	5090	3340	e3050	3940	2870	1980	1220	968
2	1420	1580	1540	e2500	e3850	3210	e4050	7460	2700	1870	1430	923
3	1290	1890	1430	e2400	e3800	3130	e3000	5500	2620	1800	1330	906
4	1190	1880	1490	e2800	e9000	2990	3500	5400	2620	1730	1190	1340
5	1190	1620	1620	e3500	e12000	2770	3300	6660	3390	1820	1220	1220
6	e1180	1560	1560	e8000	e6000	2750	2940	e8000	3430	1720	1070	1040
7	1170	1540	e1550	e12000	6520	2720	2800	e11000	3360	1670	1030	956
8	1130	1530	e1520	e20000	6370	5180	2670	e25000	2970	1590	1030	1020
9	e1140	1440	e1450	e25000	5510	14800	3970	e14000	2670	1610	1230	1240
10	e1140	1420	e1420	e13000	4410	10700	4200	e7500	2950	1640	2280	1050
11	e1140	1360	e1480	e8000	3560	6510	4020	e6200	3960	1560	1940	910
12	e1140	1350	e1460	e5500	4580	6450	3370	e5500	3480	1520	1710	886
13	e1150	1410	1480	4390	4090	5290	2940	e5100	3590	1440	1530	865
14	e1200	1640	1490	4330	3630	4130	2830	e4800	2990	1460	1650	843
15	e1350	1650	1470	4870	3110	3480	2800	e4500	3680	1400	1660	797
16	e1380	1600	1410	11600	3040	3390	2800	e4300	3050	1350	2310	758
17	e1350	1460	1400	6300	6980	3340	13500	e3800	2810	2140	6560	760
18	e1340	1420	1410	4260	11600	3270	30700	e3500	2830	3100	3650	749
19	e1400	1340	1450	3740	6830	5000	12800	e3200	2510	1610	2500	741
20	e1700	1370	1440	3330	6730	6820	21900	e3100	2350	1440	1860	754
21	e1500	1380	1430	3000	6220	8990	14100	e2900	2170	1400	1560	779
22	1430	1800	1450	2690	5360	6960	10300	e2700	2180	1280	1430	1290
23	1290	1770	e1400	4110	4710	5670	9190	e2600	2280	1230	1320	1530
24	1380	1540	e1600	6330	5330	4730	8120	e3300	2340	1260	1250	1090
25	1370	1400	e2700	4330	4780	4000	6080	e3100	2150	1390	1210	911
26	1580	1350	e3000	4130	4010	3660	4910	e3200	2060	2140	1150	868
27	2100	1360	e3200	5470	3640	3510	4190	e3000	2060	1580	1100	859
28	2330	1340	e3300	e25000	3680	3320	3720	e3100	1980	1500	1060	846
29	1840	1350	e3100	e17000	---	3290	3740	e3200	1870	1400	1030	799
30	1730	1400	e2900	7570	---	3120	3550	e3000	1840	1260	1010	792
31	1580	---	e2700	6700	---	e3050	---	2910	---	1180	997	---
TOTAL	43600	45240	56420	234450	154430	149570	199040	171470	81760	50070	51517	28490
MEAN	1406	1508	1820	7563	5515	4825	6635	5531	2725	1615	1662	950
MAX	2330	1890	3300	25000	12000	14800	30700	25000	3960	3100	6560	1530
MIN	1130	1340	1400	2400	3040	2720	2670	2600	1840	1180	997	741

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1998\*, BY WATER YEAR (WY)

	MEAN	2577	2576	2942	3669	3899	4745	4183	3511	3051	2373	2374	2139
MAX	7491	5844	5784	7580	7632	10380	9419	6277	7755	4622	7191	7314	
(WY)	1991	1993	1974	1978	1990	1975	1987	1984	1972	1984	1970	1979	
MIN	998	1091	1338	1354	2060	1798	1691	1565	1048	749	708	931	
(WY)	1987	1982	1966	1981	1981	1981	1985	1986	1988	1986	1981	1968	

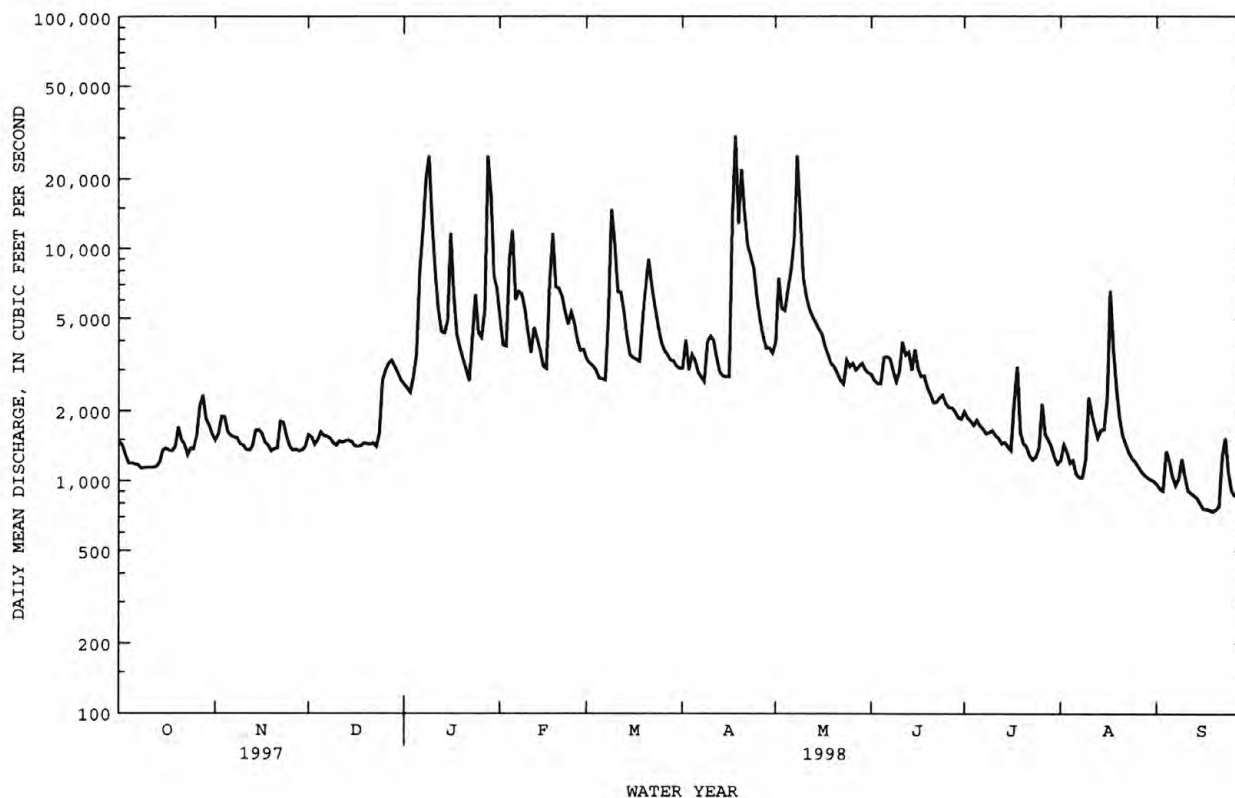
## PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1963 - 1998*	
ANNUAL TOTAL	1023346		1266057		3166	
ANNUAL MEAN	2804		3469		4524	
HIGHEST ANNUAL MEAN					1591	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	18800	Apr 30	30700	Apr 18	66000	Jun 22 1972
LOWEST DAILY MEAN	851	Sep 8	741	Sep 19	350	Aug 28 1988
ANNUAL SEVEN-DAY MINIMUM	987	Sep 3	763	Sep 15	414	Aug 25 1981
INSTANTANEOUS PEAK FLOW			33900	Apr 18	75200*	Jun 22 1972
INSTANTANEOUS PEAK STAGE			22.04	Apr 18	32.81*	Jun 22 1972
INSTANTANEOUS LOW FLOW			706*	Sep 18	110*	Aug 28 1988
10 PERCENT EXCEEDS	4740		6680		5440	
50 PERCENT EXCEEDS	2550		2340		2360	
90 PERCENT EXCEEDS	1240		1140		1310	

e Estimated.

\* Regulated period only (1963-1998). See REMARKS.



## PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944, 1951 to 1995, 1997 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1967, October 1970 to September 1978, February 1979 to September 1989.

WATER TEMPERATURE: October 1943 to September 1944, October 1950 to September 1951, October 1955 to September 1967, October 1970 to September 1989.

SUSPENDED-SEDIMENT DISCHARGE: January 1951 to June 1995.

INSTRUMENTATION.--Water-quality monitor from October 1970 to September 1975.

REMARKS.--Station operated as part of NASQAN network from March 1979 to September 1992. Miscellaneous water-quality data published for water years 1947-49, 1955. Daily records of specific conductance for water years 1956-64 and specific conductance and water temperature for water years 1990 through 1995 are available in files of District office in Raleigh.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 815 microsiemens, Aug. 26, 1971; minimum recorded, 20 microsiemens, Nov. 2, 16, 28, Dec. 1, 6, 7, 1971.

WATER TEMPERATURE: Maximum daily, 35.0°C, July 20, 1986; minimum daily, 0.0°C, on many days during most winter months.

SEDIMENT CONCENTRATION: Maximum daily mean, 2,970 mg/L, May 26, 1952; minimum daily mean, 1 mg/L, Dec. 3, 1953.

SEDIMENT LOAD: Maximum daily, 182,000 tons, June 22, 1972; minimum daily, 3 tons, Dec. 3, 1953.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT				
04...	1245	1180	19	61
11...	1345	1070	23	66
18...	1330	1140	17	52
25...	1330	1370	12	44
NOV				
01...	1345	1450	10	39
08...	1545	1550	17	71
15...	1530	1650	11	49
22...	1330	1930	61	318
28...	1415	1340	7	25
DEC				
05...	1100	1620	11	48
05...	1110	1620	14	61
05...	1215	1620	21	92
06...	1515	1570	11	47
13...	1445	1470	8	32
21...	1445	1430	5	19
JAN				
03...	1345	2840	2	15
09...	1500	21600	717	41800
09...	1645	23400	1610	102000
10...	1315	6520	508	8940
17...	1300	5740	239	3700
18...	1245	4200	777	8810
24...	1545	5830	223	3510
28...	0830	20700	1580	88300
28...	1615	26700	1380	99400
29...	1200	20300	871	47700
29...	1730	13600	306	11200
31...	1200	6870	288	5340
FEB				
07...	1430	6630	208	3720
14...	1315	3630	39	382
18...	1715	10600	239	6840
21...	1330	6200	182	3050
25...	1835	4620	60	748
28...	1315	3730	54	544
MAR				
07...	1330	2740	25	185
10...	1345	9540	17	438
14...	1445	4050	154	1680
21...	1545	10500	481	13600



## PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, NC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
APR				
05...	1305	3320	66	592
11...	1345	4050	125	1370
16...	1615	2740	99	732
17...	1330	16400	1520	67300
18...	1245	33800	361	32900
18...	1615	33300	531	47700
19...	1315	9290	345	8650
20...	1315	23900	1240	80000
25...	1515	5830	222	3490
MAY				
02...	1730	6880	728	13500
05...	1200	6470	564	9850
07...	1800	6630	409	7320
08...	1645	26300	1260	89500
10...	1645	7080	165	3150
16...	1415	3920	107	1130
23...	1315	2510	80	542
30...	1315	2480	112	750
JUN				
06...	1345	3320	83	744
12...	1430	3320	86	771
20...	1315	2390	64	413
24...	1500	2280	37	228
27...	1330	2050	35	194
JUL				
04...	1445	1720	29	135
11...	1330	1570	24	102
17...	1445	2030	21	115
25...	1515	1290	14	49
AUG				
02...	1230	1400	41	155
05...	1100	1170	30	95
07...	1330	1040	23	65
14...	1415	1670	42	189
22...	1315	1440	38	148
29...	1545	1020	29	80
SEP				
05...	1315	1240	44	147
13...	1315	875	18	43
19...	1615	716	17	33
26...	1315	864	22	51

## PEE DEE RIVER BASIN

02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, NC

LOCATION: --Lat 35°50'41", long 80°39'34", Rowan County, Hydrologic Unit 03040102, on right bank 90 ft downstream of bridge on Secondary Road 1972, 1 mi upstream from Little Creek, 4 mi downstream of Fifth Creek, 4.5 mi upstream from Hunting Creek, and 6.5 mi southwest of Mocksville.

DRAINAGE AREA.--306 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 663.62 ft above sea level. Yadkin Inc. satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. The City of Statesville diverted an average of 8.8 ft<sup>3</sup>/s for water supply and waste treatment dilution. The Alexander Water Corporation withdrew an average of 2.3 ft<sup>3</sup>/s for water supply. Maximum discharge for period of record also occurred Mar. 2, 1987. Minimum discharge for period of record also occurred July 24, 1986.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Oct. 3, 1929, reached a stage of 22.6 ft, from floodmark established by local resident (discharge, about 22,000 ft<sup>3</sup>/s).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	174	212	260	520	436	335	727	390	175	150	76
2	126	201	222	246	441	410	328	2040	299	172	171	75
3	127	226	194	252	569	384	321	931	270	166	138	83
4	126	214	202	258	1820	364	519	715	273	160	126	157
5	126	187	234	255	2110	352	392	602	284	163	118	177
6	126	176	213	251	1040	344	340	498	343	156	113	122
7	121	172	191	320	706	338	312	808	453	152	109	100
8	111	170	180	1120	583	1350	305	2120	313	150	107	105
9	102	165	178	2850	499	2830	642	2050	268	155	109	147
10	104	161	188	1360	438	2750	492	847	285	160	150	133
11	107	159	204	570	411	916	366	960	425	149	217	104
12	109	157	195	434	841	646	331	762	317	158	194	96
13	107	168	182	363	642	535	312	603	272	198	145	92
14	111	207	176	328	478	479	305	521	253	154	131	91
15	131	207	172	865	418	435	306	482	270	138	129	96
16	162	186	170	1520	468	409	315	436	278	135	192	88
17	128	174	170	922	1590	404	1840	403	264	176	212	82
18	119	169	169	579	1350	391	3240	376	257	269	166	81
19	177	163	164	527	796	797	2670	355	226	168	144	80
20	250	162	159	474	612	915	2580	340	219	150	135	88
21	184	166	160	387	528	769	2110	332	216	146	131	84
22	143	252	177	352	462	657	872	320	209	139	116	103
23	137	245	213	652	584	517	690	312	235	132	108	104
24	133	202	258	728	677	449	585	310	236	140	102	96
25	143	175	527	547	514	414	506	312	226	147	106	88
26	205	172	417	434	449	393	455	300	214	195	99	86
27	386	175	540	1180	447	379	428	299	198	152	86	84
28	313	177	704	3700	496	368	446	309	187	151	82	81
29	213	171	440	4140	---	359	402	305	182	151	85	79
30	181	169	356	1140	---	350	383	283	179	138	91	82
31	168	---	304	663	---	336	---	496	---	128	79	---
TOTAL	4802	5502	7871	27677	20489	20476	23128	20154	8041	4923	4041	2960
MEAN	155	183	254	893	732	661	771	650	268	159	130	98.7
MAX	386	252	704	4140	2110	2830	3240	2120	453	269	217	177
MIN	102	157	159	246	411	336	305	283	179	128	79	75
CFSM	.51	.60	.83	2.92	2.39	2.16	2.52	2.12	.88	.52	.43	.32
IN.	.58	.67	.96	3.36	2.49	2.49	2.81	2.45	.98	.60	.49	.36

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998, BY WATER YEAR (WY)

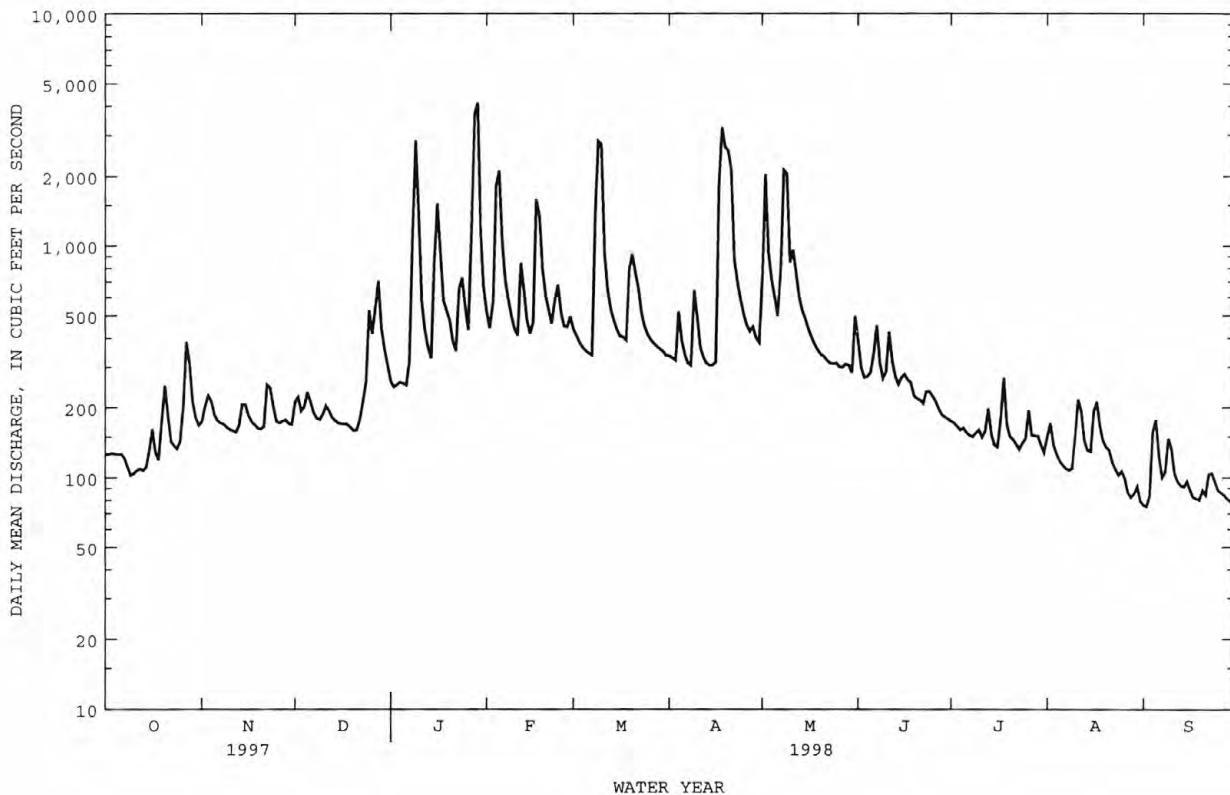
MEAN	261	266	344	433	509	554	476	372	303	236	233	235
MAX	1246	791	738	1088	1458	1485	1110	885	774	628	706	880
(WY)	1965	1958	1962	1978	1960	1975	1958	1984	1972	1941	1970	1979
MIN	70.4	99.7	102	97.7	181	220	159	127	75.0	47.3	61.2	45.7
(WY)	1955	1956	1956	1956	1941	1955	1986	1986	1986	1986	1956	1954

## PEE DEE RIVER BASIN

02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1939 - 1998	
ANNUAL TOTAL	125268		150064		351	
ANNUAL MEAN	343		411		592	1960
HIGHEST ANNUAL MEAN					171	1986
LOWEST ANNUAL MEAN					9750	Mar 2 1987
HIGHEST DAILY MEAN	4160	Apr 30	4140	Jan 29	22	Jul 22 1986
LOWEST DAILY MEAN	102	Oct 9	75	Sep 2	28	Jul 19 1986
ANNUAL SEVEN-DAY MINIMUM	107	Oct 8	82	Aug 28	11800*	Oct 17 1964
INSTANTANEOUS PEAK FLOW			4920	Jan 29	18.88	Mar 2 1987
INSTANTANEOUS PEAK STAGE			13.49	Jan 29	21*	Jul 22 1986
INSTANTANEOUS LOW FLOW			73	Sep 3	1.15	
ANNUAL RUNOFF (CFSM)	1.12		1.34		15.58	
ANNUAL RUNOFF (INCHES)	15.23		18.24		597	
10 PERCENT EXCEEDS	556		780		243	
50 PERCENT EXCEEDS	270		245		124	
90 PERCENT EXCEEDS	127		107			

\* See REMARKS.



## PEE DEE RIVER BASIN

02118500 HUNTING CREEK NEAR HARMONY, NC

LOCATION.--Lat 36°00'00", long 80°44'44", Iredell County, Hydrologic Unit 03040102, on right bank 52 ft downstream of bridge on Secondary Road 2115, 0.8 mi downstream of Kennedy Creek, 1 mi east of Houstonville, 2 mi downstream of U.S. Highway 21, and 3.5 mi northeast of Harmony.

DRAINAGE AREA.--155 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1723.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 734.78 ft above sea level. Prior to Apr. 5, 1951, nonrecording gage on upstream side of bridge at same datum. Yadkin, Inc. satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum gage height for period of record, from high-water mark in gage house. Minimum discharge for current water year also occurred Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	79	101	125	231	247	219	1230	190	139	e100	65
2	30	121	91	e120	196	231	212	892	178	123	e120	66
3	32	133	83	e125	280	219	201	521	171	111	e94	e73
4	32	85	129	128	1260	206	260	491	178	111	e86	e100
5	29	76	112	128	838	201	222	431	269	151	e81	e120
6	27	72	94	139	449	194	205	373	235	113	e77	77
7	27	72	88	246	322	192	199	981	247	105	e75	71
8	27	70	86	2360	258	1020	203	2470	215	106	e72	71
9	27	67	86	840	218	1670	312	743	212	128	e74	e94
10	27	66	93	427	194	666	250	561	305	120	e105	e84
11	28	65	105	293	219	440	219	525	291	104	e160	66
12	28	63	91	227	490	356	204	426	255	107	e140	63
13	29	70	86	195	275	313	196	367	246	108	e98	57
14	34	100	84	163	227	292	195	333	234	97	e89	52
15	142	92	82	523	196	269	196	e310	e230	94	e108	e51
16	52	77	80	814	246	257	194	e290	e210	93	e171	51
17	41	74	80	397	1040	255	3770	e270	e195	e125	e142	50
18	45	73	79	273	673	257	1210	e250	e190	e185	115	50
19	118	73	77	237	426	688	1160	e230	e170	e120	99	50
20	124	72	76	202	348	493	1560	e220	e165	e105	92	e48
21	59	74	75	170	302	521	675	e215	e160	e100	95	e53
22	52	114	90	156	269	382	518	e205	e155	e94	94	e63
23	46	100	104	428	392	321	445	e200	e175	e90	87	e64
24	46	83	115	372	396	291	395	e200	e170	e95	84	56
25	77	77	291	309	308	269	355	e205	e165	e100	79	53
26	105	78	190	235	273	260	324	e195	149	e150	76	54
27	263	77	306	1310	280	249	310	e190	136	e105	71	47
28	131	75	317	2670	281	240	324	e195	127	e105	69	42
29	84	73	218	651	---	231	e315	e220	121	e105	70	43
30	71	81	181	403	---	221	300	e190	119	e93	70	50
31	64	---	150	292	---	215	---	e270	---	e86	68	---
TOTAL	1930	2432	3840	14958	10887	11666	15148	14199	5863	3468	2961	1884
MEAN	62.3	81.1	124	483	389	376	505	458	195	112	95.5	62.8
MAX	263	133	317	2670	1260	1670	3770	2470	305	185	171	120
MIN	27	63	75	120	194	192	194	190	119	86	68	42
CFSM	.40	.52	.80	3.11	2.51	2.43	3.26	2.96	1.26	.72	.62	.41
IN.	.46	.58	.92	3.59	2.61	2.80	3.64	3.41	1.41	.83	.71	.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
MEAN	156	158	198	238	278	328	304	230	195	144	143	142
MAX	654	508	373	585	752	959	713	527	636	355	383	615
(WY)	1965	1978	1974	1978	1960	1975	1987	1990	1972	1987	1970	1979
MIN	50.0	56.9	53.1	56.4	132	123	101	92.8	63.3	41.2	39.4	40.4
(WY)	1955	1956	1956	1956	1977	1956	1995	1981	1956	1986	1997	1954

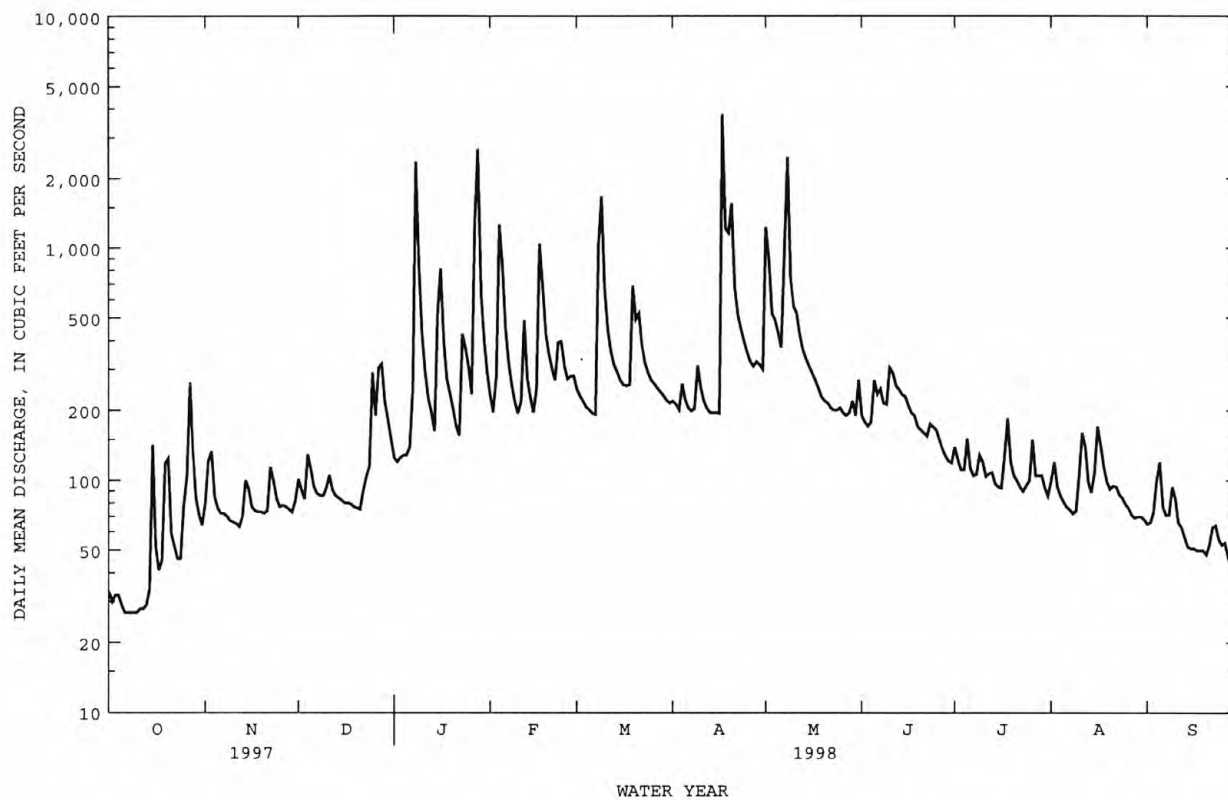
SUMMARY STATISTICS

	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1951 - 1998
ANNUAL TOTAL	66065	89236	
ANNUAL MEAN	181	244	210
HIGHEST ANNUAL MEAN			346
LOWEST ANNUAL MEAN			101
HIGHEST DAILY MEAN	2000	3770	10400
LOWEST DAILY MEAN	23	27	22
ANNUAL SEVEN-DAY MINIMUM	23	27	23
INSTANTANEOUS PEAK FLOW		5580	14800
INSTANTANEOUS PEAK STAGE		18.41	25.05*
INSTANTANEOUS LOW FLOW		26*	18
ANNUAL RUNOFF (CFSM)	1.17	1.58	1.36
ANNUAL RUNOFF (INCHES)	15.86	21.42	18.42
10 PERCENT EXCEEDS	349	435	340
50 PERCENT EXCEEDS	150	150	146
90 PERCENT EXCEEDS	29	58	72

e Estimated.

\* See REMARKS.

PEE DEE RIVER BASIN  
02118500 HUNTING CREEK NEAR HARMONY, NC--Continued



## PEE DEE RIVER BASIN

02120780 SECOND CREEK NEAR BARBER, NC

LOCATION.--Lat 35°43'05", long 80°35'45", Rowan County, Hydrologic Unit 03040102, on right bank 70 ft upstream from bridge on U.S. Highway 70, 1.3 mi downstream of Withrow Creek, and 2.7 mi east of Barber.

DRAINAGE AREA.--118 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-57, 1961-63. April 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 642.31 ft above sea level. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some diurnal fluctuation caused by industry 0.7 mi upstream. Minimum discharge for current water year also occurred Sept. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	61	134	94	179	135	106	147	70	47	33	20
2	28	68	97	91	157	124	102	122	65	42	27	19
3	29	56	74	95	348	116	99	113	63	40	26	22
4	29	51	76	97	1000	110	123	170	62	38	24	70
5	28	47	66	93	443	107	101	204	68	38	23	32
6	26	43	60	92	279	105	97	122	111	36	23	28
7	21	45	61	169	207	105	95	211	87	36	22	27
8	21	43	60	423	176	725	94	177	66	35	25	30
9	21	42	60	207	151	827	243	133	64	36	25	33
10	22	42	68	129	140	308	136	114	263	35	58	28
11	22	41	67	113	136	206	111	128	143	33	58	27
12	22	42	61	102	e310	170	102	107	93	33	30	24
13	22	55	59	98	e220	147	97	98	86	33	29	23
14	23	114	58	91	e160	139	98	95	71	32	30	22
15	28	74	56	325	e140	128	97	91	68	31	32	21
16	27	55	56	646	e160	123	97	86	62	32	73	21
17	27	50	56	436	e700	119	1300	83	59	36	48	21
18	29	49	55	207	e450	132	498	79	56	32	35	21
19	107	48	55	279	e240	349	621	74	55	29	31	20
20	65	47	55	223	e180	223	913	72	54	29	29	20
21	34	54	54	153	154	215	295	71	52	33	28	21
22	34	316	98	134	137	167	222	68	51	28	27	30
23	34	111	98	455	253	141	189	66	50	28	26	24
24	38	78	166	271	194	130	165	66	48	28	25	21
25	40	64	435	185	151	121	146	66	61	34	24	21
26	134	62	154	145	136	117	132	68	50	41	22	20
27	259	57	199	845	164	116	119	309	46	32	21	19
28	69	55	224	2650	156	113	125	106	45	35	20	18
29	55	54	136	487	---	110	114	85	43	31	21	18
30	49	76	118	277	---	107	115	81	47	28	24	22
31	42	---	107	211	---	106	---	83	---	27	22	---
TOTAL	1413	2000	3123	9823	7121	5841	6752	3495	2159	1048	941	743
MEAN	45.6	66.7	101	317	254	188	225	113	72.0	33.8	30.4	24.8
MAX	259	316	435	2650	1000	827	1300	309	263	47	73	70
MIN	21	41	54	91	136	105	94	66	43	27	20	18
CFSM	.39	.56	.85	2.69	2.16	1.60	1.91	.96	.61	.29	.26	.21
IN.	.45	.63	.98	3.10	2.24	1.84	2.13	1.10	.68	.33	.30	.23

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1998, BY WATER YEAR (WY)

	MEAN	97.4	98.4	105	156	184	205	153	93.7	96.8	57.1	64.9	60.4
MAX	419	262	222	317	301	476	390	178	243	98.3	304	196	
(WY)	1991	1996	1984	1998	1990	1993	1987	1990	1992	1989	1995	1979	
MIN	15.8	33.3	44.9	38.9	70.7	67.2	45.5	29.6	13.0	13.2	16.7	11.7	
(WY)	1987	1982	1994	1981	1986	1981	1986	1986	1986	1986	1983	1986	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

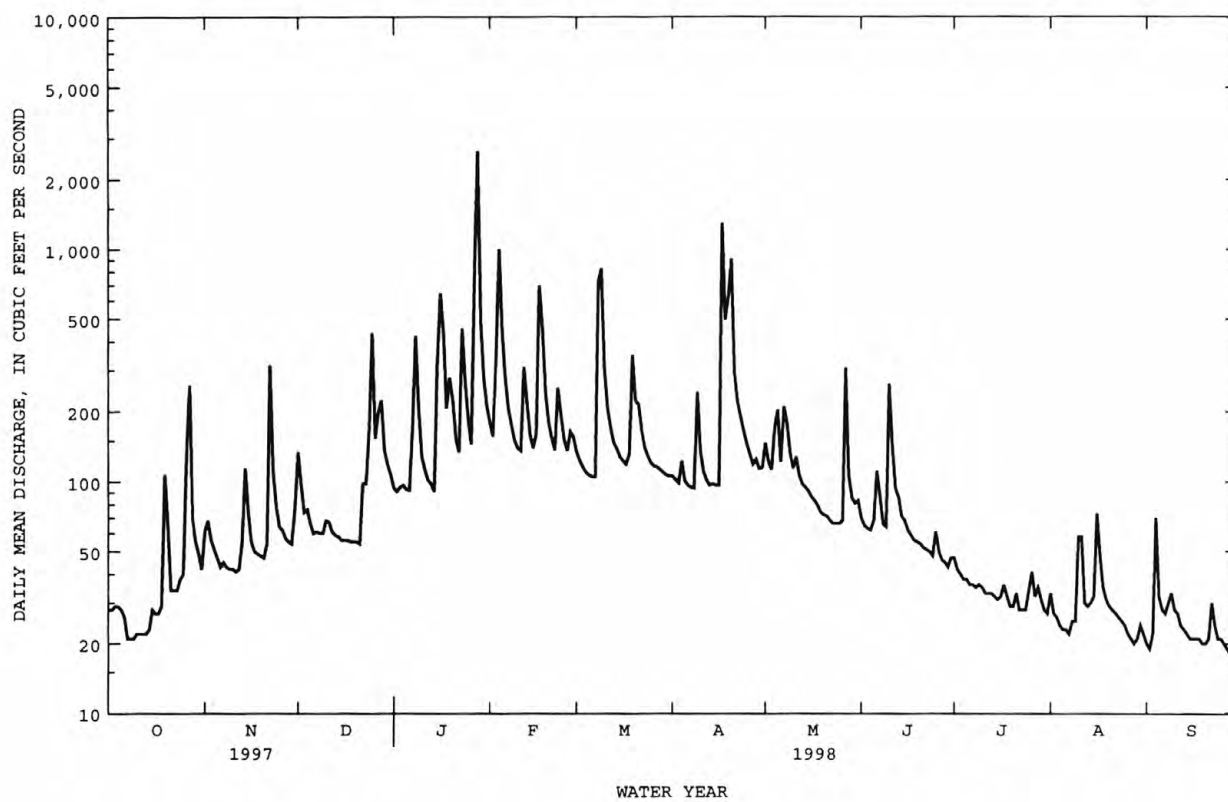
## WATER YEARS 1979 - 1998

ANNUAL TOTAL	44472	44459	
ANNUAL MEAN	122	122	113
HIGHEST ANNUAL MEAN			171
LOWEST ANNUAL MEAN			62.1
HIGHEST DAILY MEAN	2220	2650	5280
LOWEST DAILY MEAN	13	18	5.0
ANNUAL SEVEN-DAY MINIMUM	18	20	5.6
INSTANTANEOUS PEAK FLOW		3160	8560
INSTANTANEOUS PEAK STAGE		13.96	17.28
INSTANTANEOUS LOW FLOW		15*	4.4
ANNUAL RUNOFF (CFSM)	1.03	1.03	.96
ANNUAL RUNOFF (INCHES)	14.02	14.02	13.00
10 PERCENT EXCEEDS	182	223	175
50 PERCENT EXCEEDS	82	68	69
90 PERCENT EXCEEDS	27	24	28

e Estimated.

\* See REMARKS.

PEE DEE RIVER BASIN  
02120780 SECOND CREEK NEAR BARBER, NC--Continued





## PEE DEE RIVER BASIN

02121500 ABBOTTS CREEK AT LEXINGTON, NC

LOCATION.--Lat 35°48'23", long 80°14'05", Davidson County, Hydrologic Unit 03040103, on right bank 150 ft upstream from bridge on Secondary Road 1243, 1.5 mi southeast of Lexington, and 4.5 mi downstream of Rich Fork Creek.

DRAINAGE AREA.--174 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1940 to December 1957. October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 630 ft above sea level, from topographic map. March 1940 to December 1957 at site 100 ft upstream at different datum. Satellite telemetry and rain gage at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. The City of Lexington diverted an average of 6.0 ft<sup>3</sup>/s for water supply. The City of High Point diverted water from the Cape Fear River basin and discharged an average of 5.3 ft<sup>3</sup>/s of treated sewage effluent into Rich Fork Creek, upstream from station. Maximum discharge at former site, 14,800 ft<sup>3</sup>/s, from floodmark; minimum discharge at former site 0.4 ft<sup>3</sup>/s. Minimum discharge for period of record also occurred Sept. 5, 1990. Minimum discharge for current water year also occurred Oct. 13-17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e16	19	188	109	257	180	125	120	61	62	42	9.9
2	e11	17	98	89	191	155	164	268	50	48	40	7.9
3	9.6	19	69	86	205	140	112	237	42	32	37	11
4	8.7	20	63	95	706	125	265	274	73	25	25	94
5	7.9	17	62	93	1440	115	196	237	65	22	14	49
6	6.9	15	58	112	972	107	131	170	119	21	11	24
7	6.9	14	49	769	452	102	112	325	257	20	9.3	16
8	6.5	13	44	1180	333	497	99	2150	103	19	17	15
9	6.5	12	42	941	250	1730	439	1930	65	18	64	60
10	6.5	11	44	321	185	1250	495	437	87	18	142	41
11	6.3	10	61	186	159	447	221	680	146	18	158	25
12	5.9	10	64	142	228	325	151	548	82	17	58	21
13	5.5	16	54	125	194	250	122	315	84	16	38	19
14	5.5	121	48	118	155	197	113	215	98	16	27	18
15	5.5	83	45	326	134	152	114	165	475	15	21	17
16	5.5	54	42	1200	166	125	111	128	489	18	16	16
17	6.1	45	41	1080	1520	118	1700	107	150	89	17	16
18	6.6	39	40	458	1900	142	2660	91	83	47	24	15
19	28	35	38	450	554	862	1070	e80	60	37	21	15
20	57	32	39	477	333	801	1570	e70	55	34	16	15
21	37	34	39	268	252	563	922	69	50	31	12	15
22	31	260	75	187	197	527	431	63	46	26	10	15
23	26	112	134	756	414	319	336	83	42	21	8.4	15
24	22	68	107	955	576	224	298	136	38	18	7.1	16
25	20	66	342	429	297	176	239	80	35	17	7.5	16
26	35	62	179	258	208	152	172	71	31	60	7.5	16
27	95	54	221	728	203	141	131	171	29	66	6.9	15
28	42	45	395	2900	227	128	133	122	26	53	7.0	14
29	35	41	197	1500	---	125	106	77	23	51	7.0	14
30	26	86	154	500	---	114	95	64	27	47	6.8	14
31	21	---	156	341	---	108	---	66	---	44	8.1	---
TOTAL	608.4	1430	3188	17179	12708	10397	12833	9549	2991	1026	885.6	654.8
MEAN	19.6	47.7	103	554	454	335	428	308	99.7	33.1	28.6	21.8
MAX	95	260	395	2900	1900	1730	2660	2150	489	89	158	94
MIN	5.5	10	38	86	134	102	95	63	23	15	6.8	7.9
CFSM	.11	.27	.59	3.18	2.61	1.93	2.46	1.77	.57	.19	.16	.13
IN.	.13	.31	.68	3.67	2.72	2.22	2.74	2.04	.64	.22	.19	.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998<sup>a</sup>, BY WATER YEAR (WY)

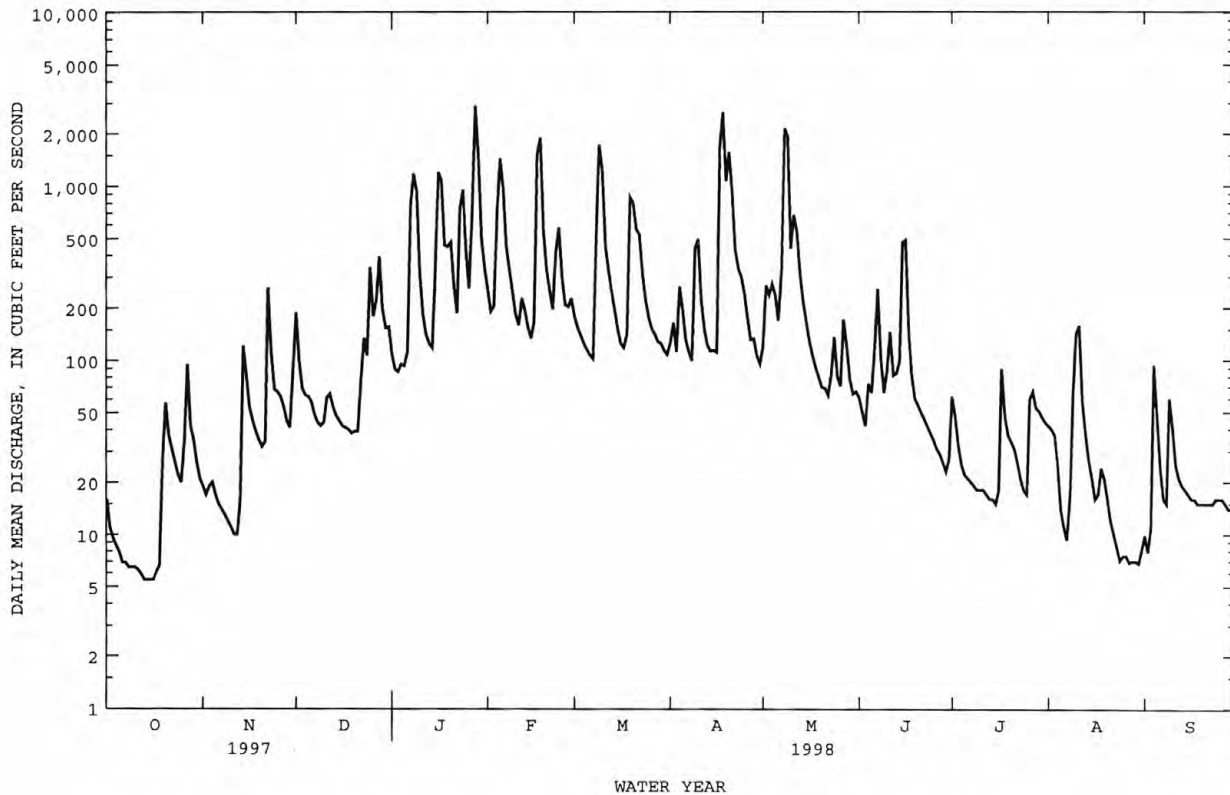
	204	132	147	310	333	413	298	196	94.8	54.3	55.5	85.2
MEAN	204	132	147	310	333	413	298	196	94.8	54.3	55.5	85.2
MAX	731	282	319	554	753	781	506	515	182	115	102	397
(WY)	1990	1996	1990	1998	1990	1993	1993	1989	1989	1995	1989	1996
MIN	12.3	37.7	41.5	108	137	184	46.6	43.0	62.8	21.6	14.9	21.8
(WY)	1994	1994	1995	1989	1991	1992	1995	1995	1996	1996	1990	1998

## PEE DEE RIVER BASIN

02121500 ABBOTTS CREEK AT LEXINGTON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1988 - 1998 <sup>a</sup>
ANNUAL TOTAL	47127.4	73449.8	193
ANNUAL MEAN	129	201	281
HIGHEST ANNUAL MEAN			113
LOWEST ANNUAL MEAN			1990
HIGHEST DAILY MEAN	3290 Apr 29	2900 Jan 28	7120 Oct 2 1989
LOWEST DAILY MEAN	5.5 Oct 13	5.5 Oct 13	2.7 Sep 4 1990
ANNUAL SEVEN-DAY MINIMUM	5.8 Oct 11	5.8 Oct 11	3.9 Sep 1 1990
INSTANTANEOUS PEAK FLOW		3500 May 8	8380 Oct 2 1989
INSTANTANEOUS PEAK STAGE		15.53 May 8	20.30 Apr 22 1992
INSTANTANEOUS LOW FLOW		5.5* Oct 12	2.4* Sep 4 1990
ANNUAL RUNOFF (CFSM)	.74	1.16	1.11
ANNUAL RUNOFF (INCHES)	10.08	15.70	15.07
10 PERCENT EXCEEDS	250	482	375
50 PERCENT EXCEEDS	63	69	84
90 PERCENT EXCEEDS	16	12	19

<sup>a</sup> Estimated.  
<sup>ee</sup> See PERIOD OF RECORD.  
 \* See REMARKS.



## PEE DEE RIVER BASIN

02123567 DUTCHMANS CREEK NEAR UWHARRIE, NC

LOCATION.--Lat 35°22'05", long 80°01'49", Montgomery County, Hydrologic Unit 03040103, near midstream at upstream end of two 6-ft corrugated metal- pipe culverts on Secondary Road 1150, 1.0 mi upstream from mouth, and 3.0 mi southwest of Uwharrie.

DRAINAGE AREA.--3.44 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1981 to September 1983, October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 340 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum gage height for period of record, from floodmark. Minimum discharge for period of record also occurred periodically in July and Oct. 1986. Minimum discharge for current water year also occurred Sept. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	2.6	3.1	2.9	e4.5	8.0	e7.0	5.9	2.6	1.0	.66	.26
2	.92	2.7	2.5	2.8	e4.2	7.6	e6.4	5.3	2.4	.76	.54	.26
3	.94	2.2	2.3	2.6	e4.1	7.4	e6.0	5.0	2.3	.66	.48	3.0
4	.97	2.0	2.3	2.5	e39	7.2	e12	5.2	2.2	.75	.46	45
5	.96	1.9	2.0	2.4	e47	6.9	e8.1	4.7	3.1	1.7	.42	1.7
6	.94	1.9	2.0	11	e12	6.9	e6.4	4.4	2.6	.84	.38	2.1
7	.97	2.0	1.9	64	e6.9	7.1	e6.2	5.4	2.3	.73	.37	1.7
8	.97	2.1	1.9	61	e5.6	49	e6.0	11	2.0	.70	.41	1.1
9	1.0	2.0	2.0	11	e4.7	65	e26	5.3	2.0	.69	.40	.96
10	1.1	2.0	4.4	5.8	e4.2	18	e18	4.8	2.3	.61	.97	.81
11	1.2	2.0	3.3	4.7	e4.5	12	e9.5	12	2.1	.55	1.0	.75
12	1.2	2.1	2.7	4.1	5.5	10	e7.5	6.1	1.9	.52	.55	.75
13	1.3	7.0	2.5	3.8	4.7	9.7	e6.6	4.9	1.7	.51	.49	.73
14	1.4	19	2.3	3.5	4.6	9.4	e6.5	4.5	1.5	.47	.49	.67
15	3.3	3.8	2.6	23	4.4	8.9	e6.6	4.2	1.8	.44	.48	.66
16	1.4	3.0	2.5	86	12	8.6	6.0	4.0	1.5	.50	.54	.65
17	1.2	2.2	2.5	19	153	8.6	17	3.9	1.3	.78	1.3	.65
18	1.3	2.2	2.4	8.4	22	164	13	3.6	1.3	.59	.57	.64
19	33	2.1	2.3	33	13	119	12	3.4	1.2	4.1	.48	.63
20	3.7	2.1	2.3	14	11	e33	11	3.2	1.2	1.9	.43	.60
21	1.8	4.9	2.3	7.7	9.8	e36	8.0	3.1	1.0	1.0	.38	.62
22	1.5	39	16	5.9	8.9	e20	7.0	2.9	.98	.91	.38	.69
23	1.3	5.2	4.9	14	14	e14	8.2	2.9	.93	.83	.35	.71
24	1.4	3.2	26	9.7	10	e11	6.9	2.8	.88	.83	.32	.56
25	1.9	2.8	11	6.3	9.3	e9.0	6.0	2.9	.85	.87	.29	.53
26	7.7	2.5	4.2	5.1	8.6	e8.0	5.6	2.7	.83	1.1	.28	.53
27	4.3	2.3	8.4	75	8.8	e7.5	5.5	3.1	.80	1.0	.29	.52
28	2.1	2.1	5.1	25	8.5	e7.0	5.8	3.8	.74	.96	.29	.52
29	1.8	2.0	7.0	e15	---	e6.8	5.1	2.8	.71	.76	.28	.53
30	1.7	3.4	5.0	e7.4	---	e6.5	5.3	2.7	.80	.98	.26	3.5
31	1.6	---	3.4	e5.3	---	e6.3	---	2.8	---	.81	.26	---
TOTAL	85.87	134.3	143.1	541.9	444.8	698.4	261.2	139.3	47.82	28.85	14.80	72.33
MEAN	2.77	4.48	4.62	17.5	15.9	22.5	8.71	4.49	1.59	.93	.48	2.41
MAX	33	39	26	86	153	164	26	12	3.1	4.1	1.3	45
MIN	.92	1.9	1.9	2.4	4.1	6.3	5.1	2.7	.71	.44	.26	.26
CFSM	.81	1.30	1.34	5.08	4.62	6.55	2.53	1.31	.46	.27	.14	.70
IN.	.93	1.45	1.55	5.86	4.81	7.55	2.82	1.51	.52	.31	.16	.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1998<sup>9</sup>, BY WATER YEAR (WY)

	MEAN	3.19	2.96	2.88	5.89	6.55	8.23	5.59	3.10	1.96	1.70	1.99	1.59
MAX	11.9	8.69	4.81	17.5	15.9	22.5	10.2	6.49	5.28	8.80	11.2	7.81	
(WY)	1991	1986	1991	1998	1998	1998	1992	1990	1994	1997	1996	1996	
MIN	.19	.75	1.27	1.55	1.83	3.05	1.41	.82	.24	.26	.25	.20	
(WY)	1987	1994	1992	1992	1986	1988	1986	1986	1986	1986	1993	1986	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

WATER YEARS 1982 - 1998<sup>9</sup>

ANNUAL TOTAL	1639.80	2612.67	
ANNUAL MEAN	4.49	7.16	3.79
HIGHEST ANNUAL MEAN			7.16
LOWEST ANNUAL MEAN			1.60
HIGHEST DAILY MEAN	131	164	206
LOWEST DAILY MEAN	.43	.26	.01
ANNUAL SEVEN-DAY MINIMUM	.46	.27	.03
INSTANTANEOUS PEAK FLOW		1040	1560
INSTANTANEOUS PEAK STAGE		11.45	11.96*
INSTANTANEOUS LOW FLOW		.23*	.01*
ANNUAL RUNOFF (CFSM)	1.31	2.08	1.10
ANNUAL RUNOFF (INCHES)	17.73	28.25	14.97
10 PERCENT EXCEEDS	6.5	12	6.3
50 PERCENT EXCEEDS	2.7	2.7	1.9
90 PERCENT EXCEEDS	.94	.54	.39

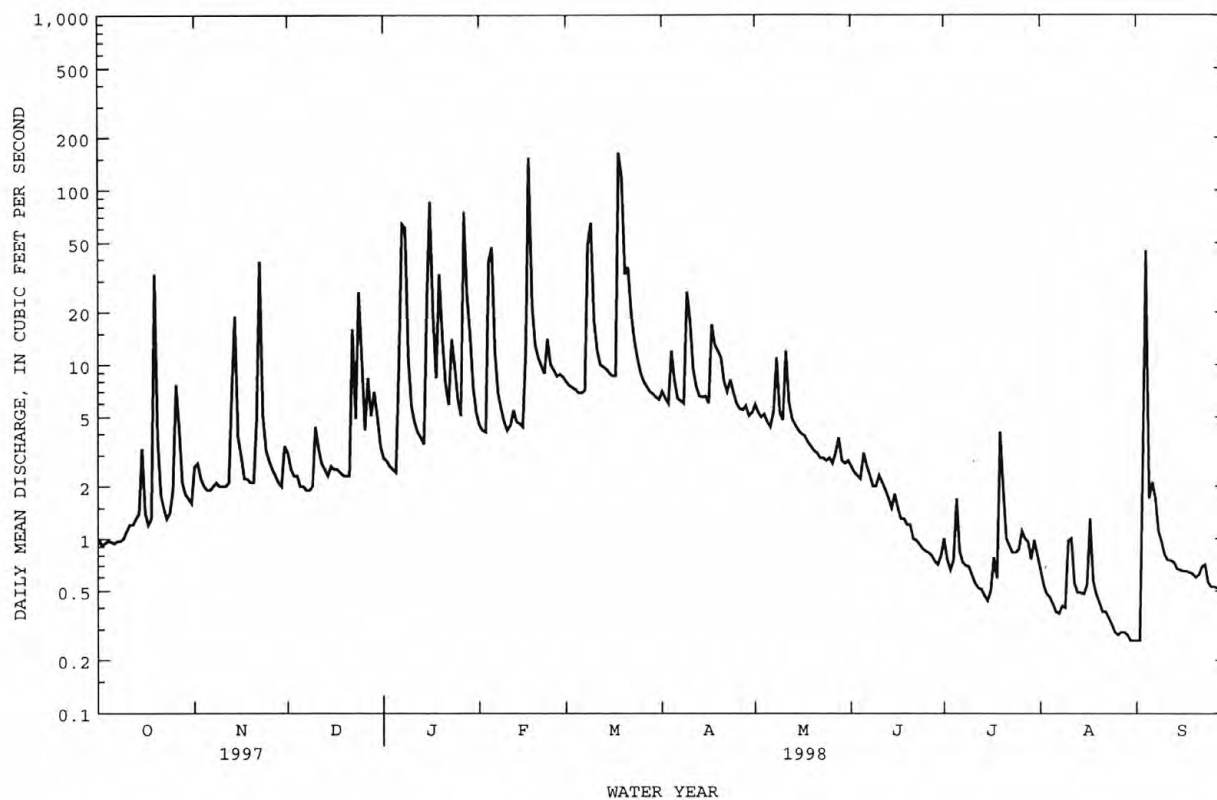
e Estimated.

<sup>9</sup> See PERIOD OF RECORD.

\* See REMARKS.

## PEE DEE RIVER BASIN

02123567 DUTCHMANS CREEK NEAR UWHARRIE, NC--Continued



## PEE DEE RIVER BASIN

0212414900 MALLARD CREEK BELOW STONY CREEK NEAR HARRISBURG, NC

LOCATION.--Lat 35°19'57", long 80°42'58", Mecklenburg County, Hydrologic Unit 03040105, on left bank on upstream side of bridge at Blockbuster Blvd, 0.1 mi downstream of Stony Creek, and 3.8 mi northwest of Harrisburg.

DRAINAGE AREA.--34.6 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 568.4 (revised) ft above sea level, levels by City of Charlotte. Telephone telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges and discharges below 3 ft<sup>3</sup>/s, which are poor. Maximum discharge for period of record from contracted opening measurement of peak flow; maximum gage height for period of record from floodmarks. Minimum discharge for current water year also occurred Aug. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	52	163	28	33	31	41	55	19	15	13	20
2	4.6	64	52	25	32	27	23	28	14	6.1	5.8	18
3	5.8	21	30	23	357	24	30	21	12	5.4	4.0	135
4	7.0	15	28	22	510	22	87	20	19	5.0	3.6	187
5	6.8	14	24	21	173	22	27	18	52	4.7	3.4	17
6	6.2	13	21	181	75	21	22	16	21	4.2	3.0	9.2
7	6.6	12	19	210	50	29	20	51	14	4.0	11	7.1
8	6.3	12	18	491	40	567	19	37	11	3.9	89	7.9
9	5.2	11	23	81	31	375	700	23	11	3.9	66	12
10	7.3	11	55	45	28	71	65	22	55	3.6	26	6.4
11	8.8	11	31	34	31	44	37	70	19	3.6	7.7	5.3
12	8.3	13	23	30	33	35	29	20	13	4.0	4.2	5.5
13	9.7	65	20	27	26	31	26	16	16	3.8	51	5.5
14	9.4	147	18	24	24	28	32	14	10	3.2	14	5.6
15	13	34	18	179	22	26	25	14	9.1	3.3	99	4.5
16	10	21	16	626	110	24	22	13	8.3	9.5	74	4.0
17	9.3	17	16	155	493	23	155	15	8.2	8.8	74	5.2
18	12	15	16	70	91	65	55	12	7.3	4.2	15	5.0
19	260	14	16	e180	50	288	211	11	7.2	3.4	11	5.0
20	29	14	15	e90	40	66	100	11	7.5	30	7.5	5.1
21	16	74	14	48	33	50	42	11	7.4	39	6.1	19
22	16	293	364	49	30	37	31	10	8.5	6.4	6.1	11
23	13	49	77	314	117	30	86	12	27	4.6	5.5	5.2
24	12	29	332	76	48	26	36	10	7.9	8.8	4.9	5.4
25	13	22	171	47	33	25	25	11	7.0	24	5.1	4.3
26	417	20	55	37	30	23	22	10	6.4	11	6.6	6.3
27	95	18	136	924	53	22	43	13	5.9	72	12	5.1
28	26	17	74	339	48	21	39	17	5.8	12	13	4.0
29	16	16	48	74	---	20	22	9.9	5.8	7.8	16	3.7
30	13	143	57	55	---	20	50	220	16	5.8	17	50
31	12	---	43	44	---	20	---	43	---	13	17	---
TOTAL	1078.0	1257	1993	4549	2641	2113	2122	853.9	431.3	334.0	691.5	584.3
MEAN	34.8	41.9	64.3	147	94.3	68.2	70.7	27.5	14.4	10.8	22.3	19.5
MAX	417	293	364	924	510	567	700	220	55	72	99	187
MIN	3.7	11	14	21	22	20	19	9.9	5.8	3.2	3.0	3.7
CFSM	1.01	1.21	1.86	4.24	2.73	1.97	2.04	.80	.42	.31	.64	.56
IN.	1.16	1.35	2.14	4.89	2.84	2.27	2.28	.92	.46	.36	.74	.63

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1998, BY WATER YEAR (WY)

	1995	1996	1997	1998
MEAN	41.2	52.0	35.3	76.2
MAX	53.7	90.4	64.3	147
(WY)	1995	1996	1997	1998
MIN	34.8	23.6	16.2	44.2
(WY)	1998	1997	1995	1996

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1995 - 1998

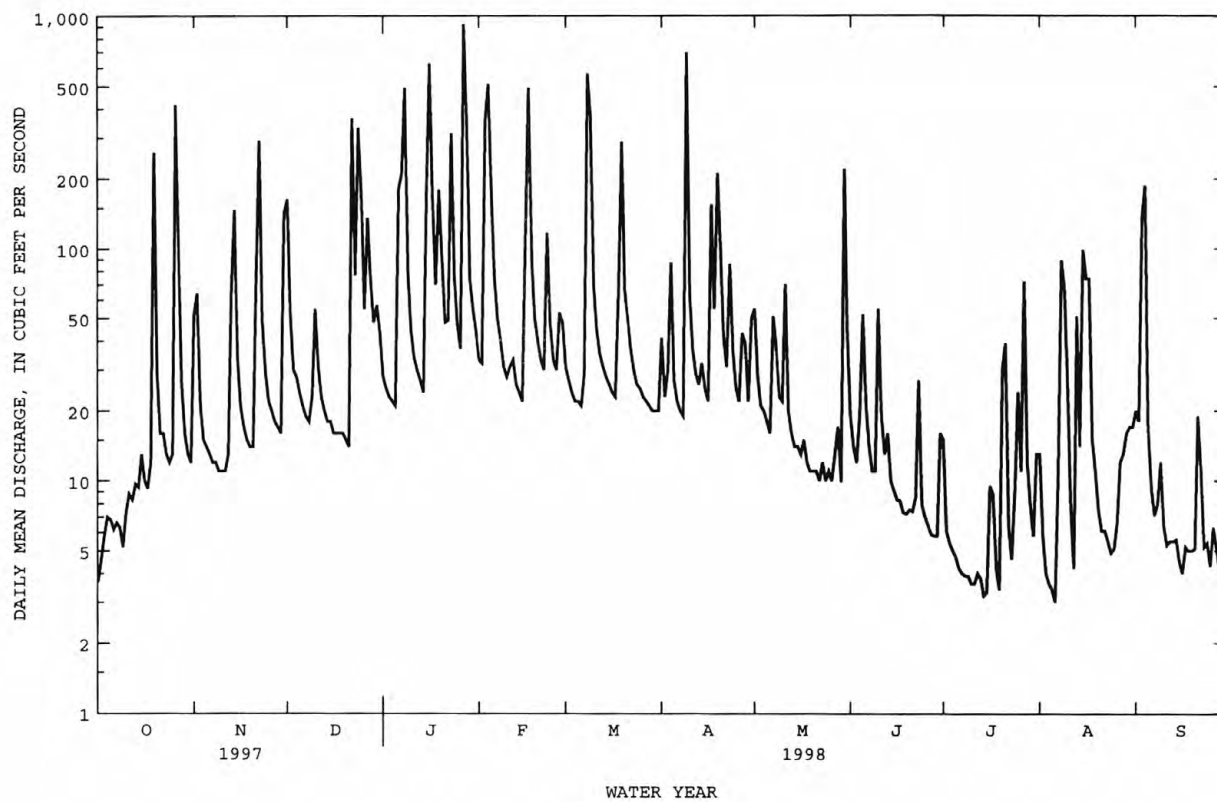
ANNUAL TOTAL	17157.7	18648.0	
ANNUAL MEAN	47.0	51.1	45.8
HIGHEST ANNUAL MEAN			51.1
LOWEST ANNUAL MEAN			43.1
HIGHEST DAILY MEAN	2050	Jul 23	e2350
LOWEST DAILY MEAN	1.9	Jul 14	1.9
ANNUAL SEVEN-DAY MINIMUM	2.1	Aug 29	2.1
INSTANTANEOUS PEAK FLOW			6260*
INSTANTANEOUS PEAK STAGE			17.43*
INSTANTANEOUS LOW FLOW			1.1
ANNUAL RUNOFF (CFSM)	1.36		1.32
ANNUAL RUNOFF (INCHES)	18.45		17.99
10 PERCENT EXCEEDS	75		77
50 PERCENT EXCEEDS	16		17
90 PERCENT EXCEEDS	3.6		5.8

e Estimated.

\* See REMARKS.

## PEE DEE RIVER BASIN

0212414900 MALLARD CREEK BELOW STONY CREEK NEAR HARRISBURG, NC--Continued



## PEE DEE RIVER BASIN

02125000 BIG BEAR CREEK NEAR RICHFIELD, NC

LOCATION.--Lat 35°20'02", long 80°20'09", Stanly County, Hydrologic Unit 03040105, on left bank 300 ft downstream of Little Creek, 400 ft upstream from bridge on Secondary Road 1134, and 10 mi southwest of Richfield.

DRAINAGE AREA.--55.6 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1954 to current year.

REVISED RECORDS.--WSP 1503: 1955, 1956(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 426.62 ft above sea level. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No flow occurs periodically.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1921 reached a stage of about 19 ft, information from State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	96	107	101	72	56	25	40	4.3	e.70	1.6	0
2	3.4	141	82	103	59	52	23	38	19	.66	1.4	0
3	2.1	73	49	71	332	52	22	25	6.9	.54	1.2	1.3
4	1.5	43	41	51	699	46	64	34	4.3	.49	1.0	268
5	1.1	29	34	44	329	44	35	23	3.3	1.3	.91	13
6	.86	23	25	367	193	41	25	17	2.7	1.1	.80	3.8
7	.68	21	21	878	123	41	21	17	3.6	.70	.71	2.1
8	.55	19	18	1160	92	699	19	306	4.6	.46	.71	1.4
9	.47	16	19	347	68	1270	1080	67	3.4	.30	1.1	1.3
10	.43	15	104	160	55	291	169	36	3.8	.12	1.4	1.1
11	.40	13	122	99	51	150	72	202	13	.01	2.4	1.0
12	.38	12	63	72	61	102	47	78	5.4	0	1.7	.87
13	.37	57	44	59	48	78	36	39	3.6	0	1.1	.72
14	.37	440	36	50	42	69	32	26	2.6	0	.82	.62
15	.37	151	28	211	37	60	30	20	2.1	0	.78	.58
16	.36	77	24	1240	100	54	24	17	1.8	0	.88	.54
17	.35	50	21	557	1640	51	263	15	1.5	.22	.94	.49
18	.35	40	19	201	377	113	172	12	1.3	.19	.88	.47
19	459	33	17	514	167	1230	215	10	1.2	.26	.66	.46
20	111	28	15	346	108	300	366	8.1	1.4	159	.49	.43
21	35	124	15	158	76	324	109	7.3	1.2	217	.37	.44
22	20	587	560	110	60	139	63	6.6	.99	4.1	.28	.60
23	15	164	321	581	326	76	106	5.8	1.2	3.1	.13	.70
24	11	80	676	321	201	56	72	5.6	1.5	5.8	.04	.53
25	9.4	50	578	159	108	44	44	5.2	1.6	19	.01	.46
26	264	39	205	101	76	39	31	5.0	1.4	4.1	0	.48
27	270	32	355	1640	71	37	26	4.2	1.2	39	0	.41
28	76	25	318	851	67	35	45	4.5	e1.1	14	0	.33
29	41	22	194	277	---	32	27	5.6	e.90	4.5	0	.27
30	28	46	237	148	---	29	23	6.3	e.80	2.7	0	.60
31	21	---	188	97	---	26	---	4.9	---	2.0	0	---
TOTAL	1380.74	2546	4536	11074	5638	5636	3286	1091.1	101.69	481.35	22.31	303.00
MEAN	44.5	84.9	146	357	201	182	110	35.2	3.39	15.5	.72	10.1
MAX	459	587	676	1640	1640	1270	1080	306	19	217	2.4	268
MIN	.35	12	15	44	37	26	19	4.2	.80	0	0	0
CFSM	.80	1.53	2.63	6.42	3.62	3.27	1.97	.63	.06	.28	.01	.18
IN.	.92	1.70	3.03	7.41	3.77	3.77	2.20	.73	.07	.32	.01	.20

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1998, BY WATER YEAR (WY)

	MEAN	40.8	33.1	57.5	113	137	127	75.0	38.4	29.4	33.1	24.7	19.4
MAX	355	212	186	357	284	345	247	234	140	220	223	125	
(WY)	1991	1986	1977	1998	1984	1993	1958	1975	1957	1984	1967	1995	
MIN	.006	.34	2.12	4.38	16.2	13.2	6.87	1.32	.24	.31	.002	0	
(WY)	1962	1962	1966	1981	1986	1981	1967	1986	1986	1986	1980	1993	



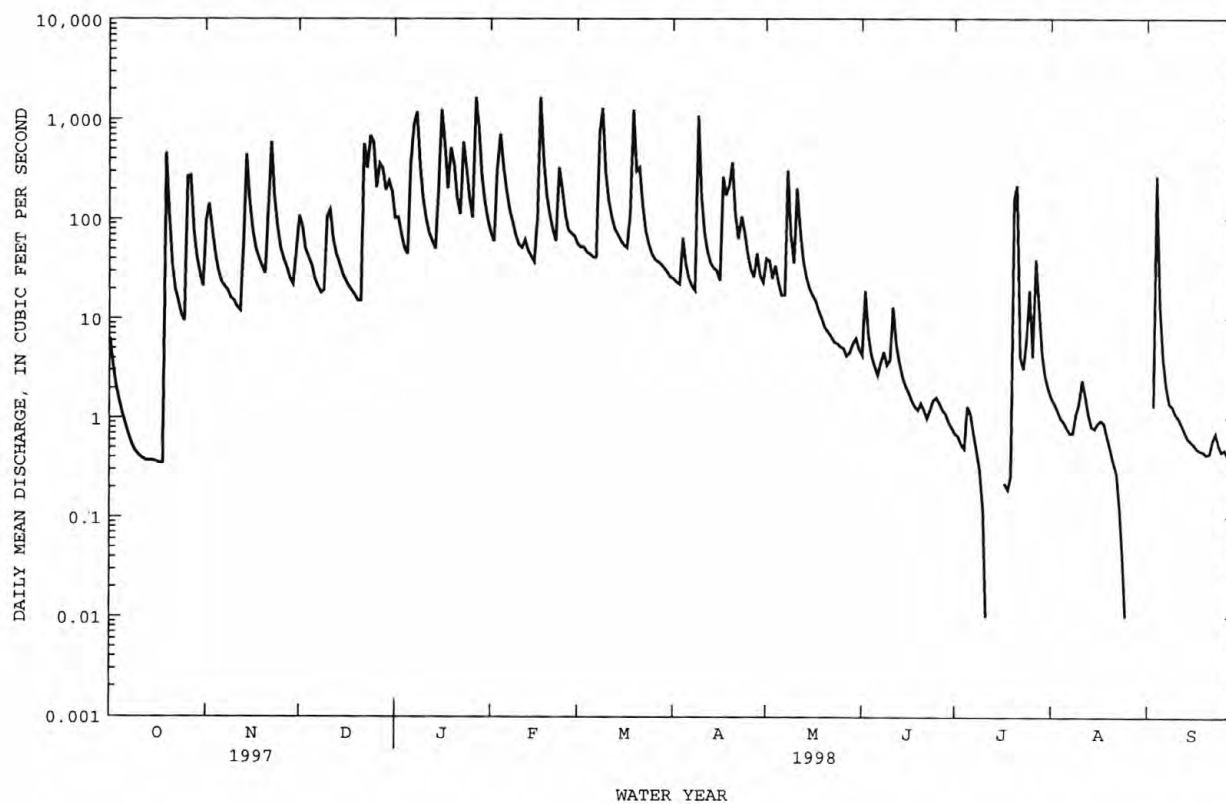
## PEE DEE RIVER BASIN

02125000 BIG BEAR CREEK NEAR RICHFIELD, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1954 - 1998
ANNUAL TOTAL	29468.02	36096.19	
ANNUAL MEAN	80.7	98.9	60.5
HIGHEST ANNUAL MEAN			112 1984
LOWEST ANNUAL MEAN			27.3 1976
HIGHEST DAILY MEAN	3660 Jul 23	1640 Jan 27	5240 Oct 11 1990
LOWEST DAILY MEAN	.05 Sep 9	0 Jul 12	0 Sep 12 1954
ANNUAL SEVEN-DAY MINIMUM	.13 Sep 3	0 Aug 26	0 Sep 12 1954
INSTANTANEOUS PEAK FLOW		4820 Feb 17	11400 Jul 23 1997
INSTANTANEOUS PEAK STAGE		10.84 Feb 17	16.54 Jul 23 1997
INSTANTANEOUS LOW FLOW		0* Jul 11	0* Sep 12 1954
ANNUAL RUNOFF (CFSM)	1.45	1.78	1.09
ANNUAL RUNOFF (INCHES)	19.72	24.15	14.78
10 PERCENT EXCEEDS	150	283	122
50 PERCENT EXCEEDS	20	24	12
90 PERCENT EXCEEDS	.48	.43	.46

e Estimated.

\* See REMARKS.



## PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, NC

LOCATION.--Lat 35°08'54", long 80°10'33", Stanly County, Hydrologic Unit 03040105, on left bank 1,000 ft downstream of Lanes Creek, 1.5 mi upstream from bridge on Secondary Road 1935, 6 mi southwest of Norwood, and 11.2 mi upstream from mouth.

DRAINAGE AREA.--1,372 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 852: 1937. WSP 1052: 1936(M). WSP 1503: 1935, 1945. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 212.91 ft above sea level (levels by U.S. Army Corps of Engineers). Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum gage height for period of record, from floodmark. Minimum discharge for the current water year not determined but likely occurred during period of Jun. 27 to Jul. 18.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1908 reached a stage of 35 ft, from information by local residents; discharge, 67,600 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	274	441	1980	1950	1730	1390	982	1220	682	e140	918	92
2	192	1230	2980	1410	1420	1130	840	1570	344	e160	309	93
3	161	1130	1470	1210	2250	975	796	1020	341	e145	215	564
4	147	656	1000	1090	19300	856	1960	860	313	e125	163	29900
5	138	453	853	993	15100	845	1790	825	303	e150	e120	11400
6	133	361	703	4780	5720	937	979	763	526	e115	e105	941
7	129	322	588	20700	3210	702	756	670	474	e90	110	467
8	125	305	510	19000	2240	6420	729	1820	299	e78	778	301
9	122	287	486	9290	1800	26700	20100	1910	238	e72	847	237
10	124	267	702	3650	1460	9900	11500	1200	542	e69	1450	211
11	122	249	1910	2120	1380	3340	2600	2490	2260	e62	616	186
12	118	242	1200	1580	1590	2160	1580	2230	819	e57	429	156
13	115	495	825	1320	1320	1610	1180	1080	455	e52	260	140
14	116	6870	679	1160	1080	1260	1160	691	321	e47	185	e115
15	118	3810	582	1680	942	1120	1170	611	253	e45	243	e112
16	118	1380	508	17400	1170	975	880	537	215	e100	198	e110
17	120	835	472	21800	24100	892	4740	552	189	e150	648	e107
18	129	619	451	6810	14600	6640	6690	464	212	e100	729	e103
19	3050	520	414	9300	4070	25600	3300	405	192	167	312	e101
20	4820	466	392	11200	2360	12100	5860	353	164	638	226	114
21	947	496	383	4170	1730	6270	3300	393	169	1800	166	114
22	489	8780	3580	2610	1390	3310	1790	367	169	680	138	116
23	367	4440	7740	6690	3940	2080	3550	285	165	256	126	178
24	298	1730	6350	8010	4780	1620	3670	253	194	204	117	159
25	234	1060	16900	3910	2400	1350	1670	243	196	313	107	136
26	849	804	5220	2430	1550	1160	1060	241	171	729	108	122
27	6770	675	3500	12800	1340	1050	847	236	e130	3260	102	115
28	1960	589	5810	32800	1470	972	985	267	e120	5040	97	112
29	828	523	3170	13000	---	905	990	310	e100	816	95	109
30	530	595	3770	3900	---	830	834	258	e93	369	93	123
31	413	---	3080	2450	---	897	---	501	---	247	97	---
TOTAL	24056	40630	78208	231213	125442	125996	88288	24625	10649	16276	10107	46734
MEAN	776	1354	2523	7458	4480	4064	2943	794	355	525	326	1558
MAX	6770	8780	16900	32800	24100	26700	20100	2490	2260	5040	1450	29900
MIN	115	242	383	993	942	702	729	236	93	45	93	92
CFSM	.57	.99	1.84	5.44	3.27	2.96	2.14	.58	.26	.38	.24	1.14
IN.	.65	1.10	2.12	6.27	3.40	3.42	2.39	.67	.29	.44	.27	1.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1998, BY WATER YEAR (WY)

MEAN	904	809	1313	2513	2808	2776	1773	837	687	784	757	666
MAX	6837	4763	4564	7458	7922	7674	7097	3998	3017	3479	2917	8262
(WY)	1991	1949	1933	1998	1960	1993	1936	1975	1982	1997	1967	1945
MIN	45.9	54.1	105	152	321	412	234	142	88.5	95.6	82.4	41.0
(WY)	1931	1942	1934	1934	1938	1981	1967	1981	1986	1986	1957	1954

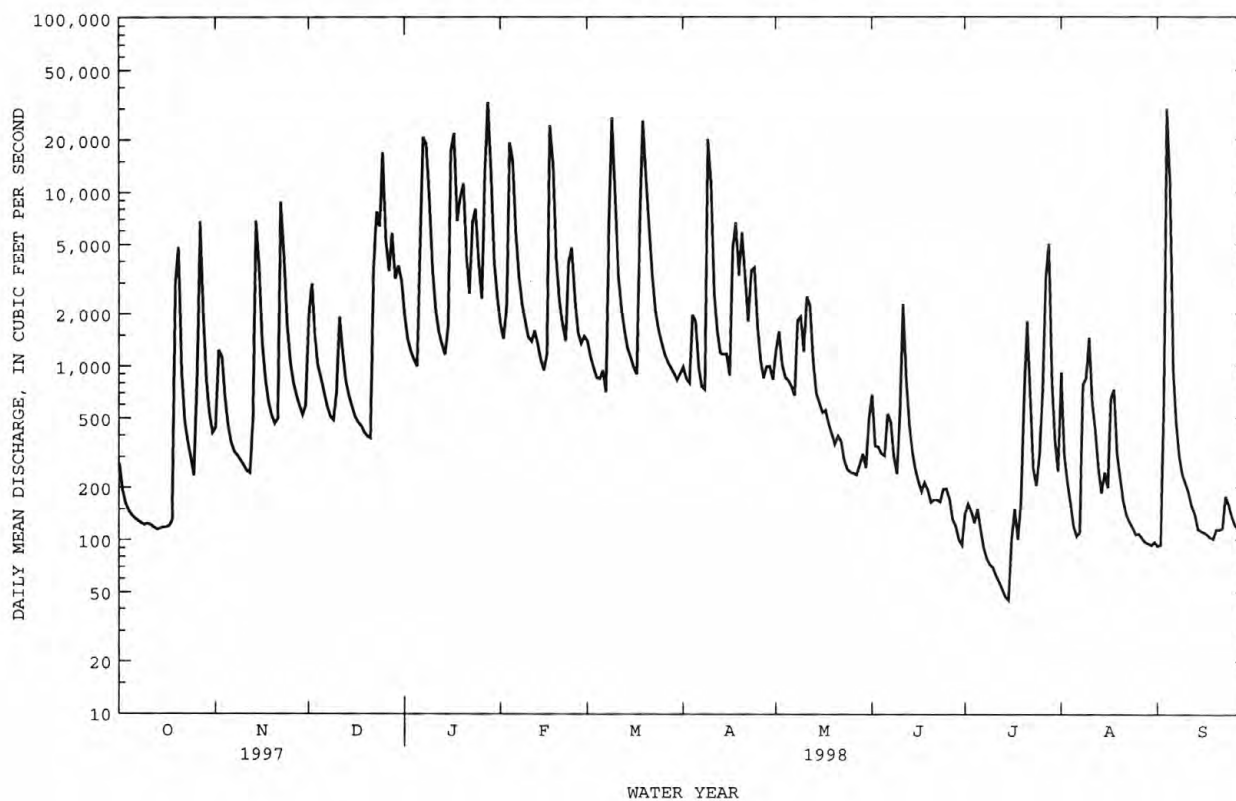
## PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1930 - 1998	
ANNUAL TOTAL	576762		822224		1379	
ANNUAL MEAN	1580		2253		2492	1975
HIGHEST ANNUAL MEAN					449	1951
LOWEST ANNUAL MEAN					85600	Sep 18 1945
HIGHEST DAILY MEAN	48700	Jul 24	32800	Jan 28	19	Oct 28 1931
LOWEST DAILY MEAN	93	Sep 5	e45	Jul 15	26	Oct 7 1954
ANNUAL SEVEN-DAY MINIMUM	94	Sep 3	58	Jul 9	105000	Sep 18 1945
INSTANTANEOUS PEAK FLOW			39900	Jan 28	46.37*	Sep 18 1945
INSTANTANEOUS PEAK STAGE			24.43	Jan 28	17	Oct 8 1954
INSTANTANEOUS LOW FLOW			NOT DETERMINED*		1.01	
ANNUAL RUNOFF (CFSM)	1.15		1.64		13.66	
ANNUAL RUNOFF (INCHES)	15.64		22.29		3010	
10 PERCENT EXCEEDS	3240		5830		411	
50 PERCENT EXCEEDS	501		703		106	
90 PERCENT EXCEEDS	128		115			

e Estimated.

\* See REMARKS.



## PEE DEE RIVER BASIN

02128000 LITTLE RIVER NEAR STAR, NC

LOCATION.--Lat 35°23'11", long 79°49'56", Montgomery County, Hydrologic Unit 03040104, on left bank 9 ft downstream from bridge on Secondary Road 1340, 50 ft upstream from Black Rock Branch, 0.2 mi upstream from Norfolk Southern Railway bridge, 0.3 mi downstream from West Fork Little River, and 3 mi west of Star.

DRAINAGE AREA.--106 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-54. April 1954 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 409.00 ft above sea level. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Minimum discharge for period of record also occurred Oct. 5, 1968, as a result of upstream withdrawals for water supply.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of about 20 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	32	122	131	144	124	136	119	57	20	14	2.3
2	29	49	104	108	130	117	127	151	52	22	13	2.2
3	25	45	79	100	132	112	119	124	49	16	11	e20
4	24	34	72	95	926	105	225	139	58	15	8.9	e1200
5	23	28	68	91	1110	100	163	119	75	22	7.8	118
6	22	27	61	93	366	97	122	98	69	24	6.7	36
7	20	27	56	630	217	96	112	101	59	18	6.5	19
8	20	27	54	1680	176	1430	108	153	52	14	6.2	14
9	19	27	55	606	150	2080	972	114	48	12	8.3	11
10	19	26	86	234	133	504	374	97	51	12	11	17
11	18	25	156	157	139	237	185	446	58	11	18	13
12	17	25	93	129	218	172	145	229	55	9.2	17	9.7
13	17	65	74	117	158	146	129	125	43	8.6	13	8.2
14	18	469	67	107	132	136	124	101	37	7.7	9.8	7.5
15	77	171	61	214	119	127	128	91	66	7.1	7.9	6.9
16	79	77	57	2400	167	119	120	85	45	17	7.7	6.6
17	36	51	56	1980	4420	117	650	80	36	10	8.6	6.5
18	29	42	56	351	1070	3480	445	77	32	7.0	8.1	6.1
19	242	38	53	608	315	7810	323	73	29	6.4	7.2	6.0
20	251	36	52	578	210	703	388	68	28	6.2	5.9	6.0
21	64	49	51	239	168	1230	216	75	26	146	5.1	6.2
22	38	1540	240	167	145	484	159	71	25	48	4.5	6.7
23	29	294	345	473	299	269	357	69	23	25	4.0	8.2
24	25	137	244	446	307	206	306	82	22	25	3.7	7.6
25	23	98	653	230	166	173	173	75	20	21	3.3	6.9
26	35	82	216	161	138	158	139	67	19	16	2.9	6.7
27	157	74	210	1070	130	149	124	97	17	16	2.2	6.7
28	84	66	386	1790	134	141	129	102	16	22	2.3	6.4
29	42	63	249	443	---	135	119	74	14	32	2.0	6.0
30	32	80	368	240	---	129	111	65	14	20	2.2	41
31	28	---	186	175	---	123	---	62	---	18	2.4	---
TOTAL	1579	3804	4630	15843	11919	21009	6928	3429	1195	654.2	231.2	1618.4
MEAN	50.9	127	149	511	426	678	231	111	39.8	21.1	7.46	53.9
MAX	251	1540	653	2400	4420	7810	972	446	75	146	18	1200
MIN	17	25	51	91	119	96	108	62	14	6.2	2.0	2.2
CFSM	.48	1.20	1.41	4.82	4.02	6.39	2.18	1.04	.38	.20	.07	.51
IN.	.55	1.33	1.62	5.56	4.18	7.37	2.43	1.20	.42	.23	.08	.57

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1998, BY WATER YEAR (WY)

	MEAN	70.5	69.0	98.9	173	218	228	176	101	73.4	70.1	52.7	47.2
MAX	337	366	361	511	467	678	430	296	273	578	249	261	
(WY)	1991	1986	1973	1998	1960	1998	1958	1990	1972	1997	1985	1979	
MIN	4.03	10.7	18.7	26.7	56.1	47.0	38.0	30.3	12.8	6.37	4.80	.76	
(WY)	1987	1962	1966	1981	1986	1967	1967	1981	1967	1977	1983	1968	

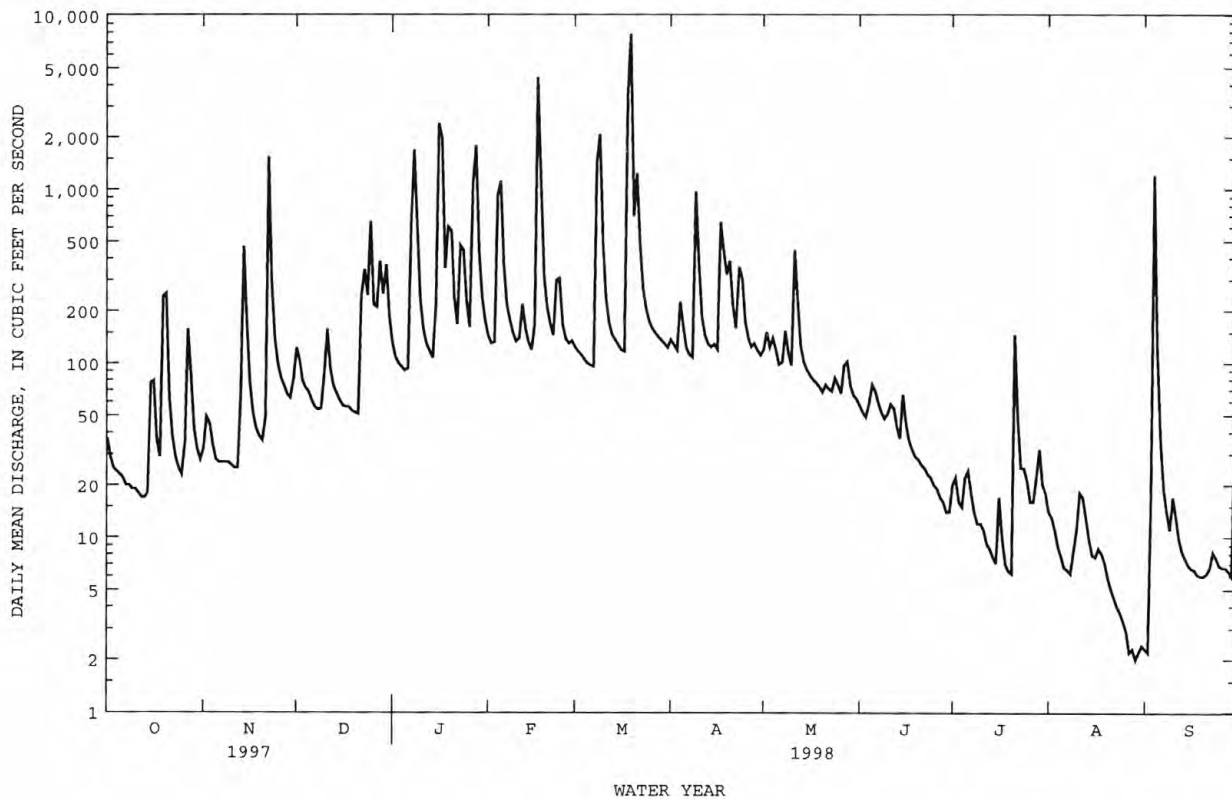
## PEE DEE RIVER BASIN

02128000 LITTLE RIVER NEAR STAR, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1954 - 1998	
ANNUAL TOTAL	63824.1		72839.8		115	
ANNUAL MEAN	175		200		209	
HIGHEST ANNUAL MEAN					42.4	
LOWEST ANNUAL MEAN					9800	
HIGHEST DAILY MEAN	9800	Jul 23	7810	Mar 19	9800	Jul 23 1997
LOWEST DAILY MEAN	8.4	Jul 15	2.0	Aug 29	.27	Oct 4 1968
ANNUAL SEVEN-DAY MINIMUM	10	Jul 10	2.2	Aug 27	.30	Sep 28 1968
INSTANTANEOUS PEAK FLOW			11300	Mar 19	15400	Jul 23 1997
INSTANTANEOUS PEAK STAGE			15.84	Mar 19	18.60	Jul 23 1997
INSTANTANEOUS LOW FLOW			1.8	Aug 27	.24*	Oct 4 1968
ANNUAL RUNOFF (CFSM)	1.65		1.88		1.08	
ANNUAL RUNOFF (INCHES)	22.40		25.56		14.71	
10 PERCENT EXCEEDS	252		367		198	
50 PERCENT EXCEEDS	66		72		51	
90 PERCENT EXCEEDS	18		7.6		9.8	

e Estimated.

\* See REMARKS.



## PEE DEE RIVER BASIN

02129000 PEE DEE RIVER NEAR ROCKINGHAM, NC

LOCATION.--Lat 34°56'46", long 79°52'11", Richmond County, Hydrologic Unit 03040201, on left bank at bridge on U.S. Highway 74, 2.5 mi upstream from Falling Creek, 3.3 mi downstream of Blewett Falls hydroelectric plant, 6 mi west of Rockingham, and 192 mi upstream from mouth in Winyah Bay.

DRAINAGE AREA.--6,863 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1906 to January 1912, October 1927 to current year. August 1906 to January 1912 published as "Yadkin River near Pee Dee, NC".

REVISED RECORDS.--WSP 1203: 1928-37. WSP 1303: 1928-42 (monthly and yearly runoff), 1943-46 (adjusted monthly runoff). WSP 1503: 1906-12, 1928-32(m). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 120.68 ft above sea level (levels by U.S. Army Corps of Engineers). August 1906 to January 1912 nonrecording gage at site 3.3 mi upstream at different datum. Sept. 1927 to Sept. 30, 1931, water-stage recorder at present site at 121.68 ft. Telephone telemetry at station.

REMARKS.--Records good except for estimated daily discharges and those below 1000 ft<sup>3</sup>/s, which are poor. Flow regulated since 1928 by Blewett Falls Lake and five other reservoirs upstream. Prior to regulation, maximum discharge: 276,000 ft<sup>3</sup>/s, Aug. 27, 1908; gage height: 31.28 ft, present site and datum, from records of State Highway Commission. Prior to regulation, minimum discharge: 2,210 ft<sup>3</sup>/s, Sept. 3, 1907. Minimum discharge for period of record also occurred Dec. 2, 3, 1951; minimum daily discharge for period of record: 58 ft<sup>3</sup>/s, Dec 2, 1951, a result of abnormally low flow during shutdown of Blewett Falls hydroelectric plant to produce steady flow for current-meter measurements at this gaging station. Minimum discharge from normal regulations: 96 ft<sup>3</sup>/s, Oct. 25, 1943; minimum daily discharge: 120 ft<sup>3</sup>/s, Oct. 8, 1961.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4430	5660	4460	10900	17100	13300	11300	8370	e7600	3940	2630	3780
2	3460	973	7450	9390	16600	13100	10800	7410	6520	3980	427	4090
3	1830	2910	8360	8700	17900	12400	10600	7680	7420	4320	3300	4900
4	1080	7790	4900	2470	26000	12400	9530	9180	6290	2390	4140	36000
5	1180	5680	5330	3010	42300	11800	6600	10200	7160	1460	3170	34200
6	3570	6870	2580	7740	34700	11500	3320	11300	1670	671	3050	12400
7	2050	5190	1120	30900	25400	6890	5090	11500	1170	1770	2110	5670
8	2550	771	4270	62400	17800	5020	6310	15000	5260	1640	610	4810
9	2760	348	4630	47200	16000	49800	18900	30100	5840	2670	712	3040
10	3130	3820	4060	25600	14500	49000	42800	28500	5820	1990	2670	1610
11	1530	4500	4630	17600	15800	30400	17400	17000	7950	766	5400	850
12	792	4660	7250	15100	15100	19500	11100	19600	9630	572	3930	401
13	1640	7930	1120	12400	15400	14900	5800	15700	4190	1800	4400	335
14	1270	9700	1220	12500	14000	14800	8920	12700	1460	1350	3010	2260
15	2180	14000	4460	11900	13400	13500	8840	11600	5010	2740	3140	2410
16	2750	7840	6890	26900	13200	13600	9450	11200	5350	3170	675	1980
17	2070	5880	6970	60900	40800	12900	10600	10700	7660	3090	1680	2320
18	763	6570	6950	39200	68700	18200	25500	10600	7590	647	3190	1780
19	2830	4070	4540	24700	35800	81300	39300	10400	7020	567	7000	641
20	7760	3110	354	35200	21100	74900	43900	9570	1700	3700	4270	390
21	7780	2560	256	24200	14700	38500	44500	9280	761	4040	3690	1490
22	5300	8860	5020	19400	15700	25600	31600	1630	4770	5710	568	2370
23	2610	13700	12500	19600	15300	17500	22400	3290	4740	5330	424	1810
24	3100	8620	13500	29500	18400	15300	21700	1690	5630	4190	3670	1930
25	646	7750	27400	22900	17500	13500	17600	3780	6030	1160	4350	2190
26	1320	9090	19200	16200	14100	13800	14900	4940	5700	741	4000	606
27	5980	5210	12700	18400	14800	12800	14300	6140	2240	4100	6050	304
28	8120	3210	10600	66000	13800	12600	13200	7820	407	9750	4310	2680
29	8560	4320	12000	77900	---	13300	11500	6240	4170	7370	1130	2770
30	7200	643	15600	57200	---	11800	9430	e666	3200	3880	415	2890
31	6880	---	13900	28300	---	13100	---	e1050	---	5420	324	---
TOTAL	107121	172235	234220	844310	605900	667010	507190	314836	149958	94924	88445	142907
MEAN	3456	5741	7555	27240	21640	21520	16910	10160	4999	3062	2853	4764
MAX	8560	14000	27400	77900	68700	81300	44500	30100	9630	9750	7000	36000
MIN	646	348	256	2470	13200	5020	3320	666	407	567	324	304
†	-268	-459	+517	+1787	-853	-756	+1005	+71	-409	-156	-243	-530

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1998\*, BY WATER YEAR (WY)

	MEAN	6060	5668	7638	11240	12780	13720	10990	7361	6014	5377	5512	5453
MAX	25850	16120	20300	31270	36040	34480	31340	15630	15210	16790	19180	35690	
(WY)	1991	1958	1933	1937	1960	1993	1936	1958	1972	1975	1928	1928	
MIN	1293	1607	2640	2475	3704	4117	2692	2026	1853	1692	1456	1008	
(WY)	1954	1954	1940	1956	1934	1981	1981	1986	1986	1986	1954	1954	

## PEE DEE RIVER BASIN

02129000 PEE DEE RIVER NEAR ROCKINGHAM, NC--Continued

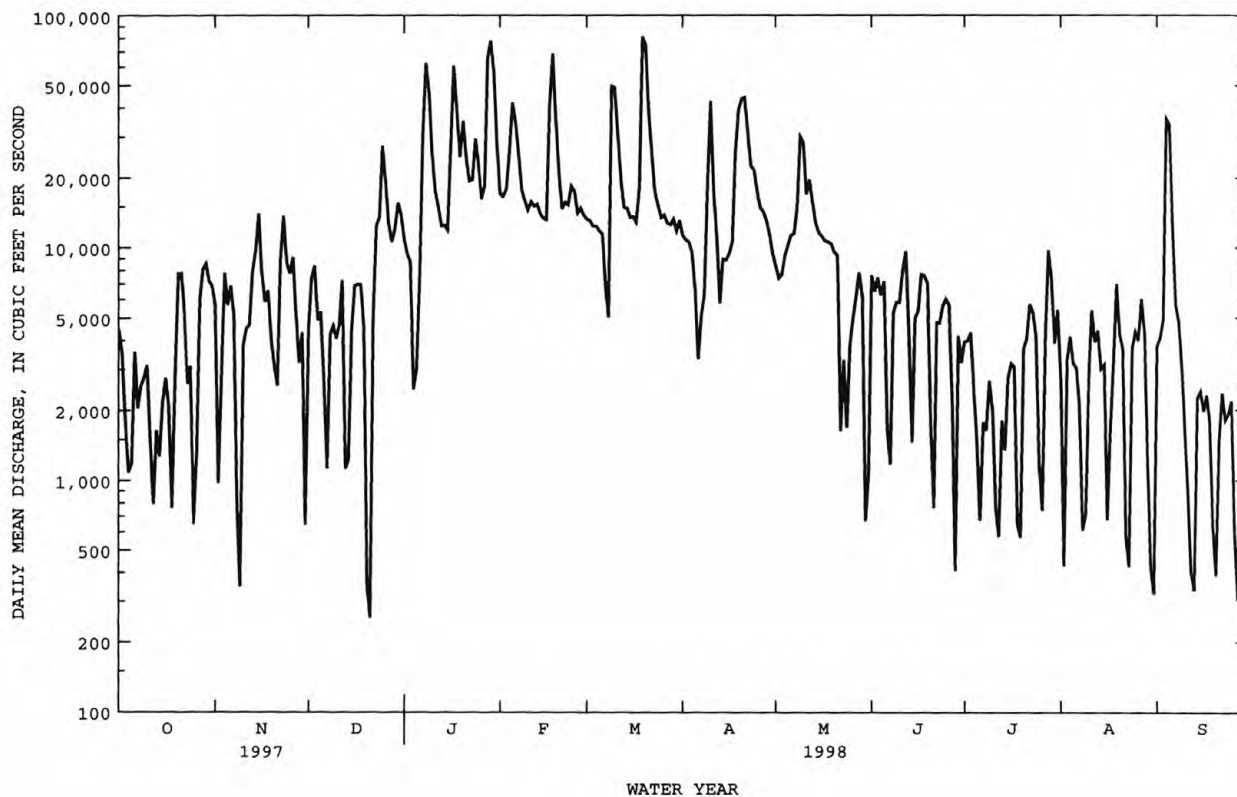
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1928 - 1998*	
ANNUAL TOTAL	2989432		3929056		8129	(UNADJUSTED)
ANNUAL MEAN	8190		10760		13000	1975
HIGHEST ANNUAL MEAN			‡10759		3944	1981
LOWEST ANNUAL MEAN					242000	Sep 18 1945
HIGHEST DAILY MEAN	89500	Jul 25	81300	Mar 19	58*	Dec 2 1951
LOWEST DAILY MEAN	256	Dec 21	256	Dec 21	185	Sep 28 1985
ANNUAL SEVEN-DAY MINIMUM	1570	Aug 27	1410	Sep 10	270000*	Sep 18 1945
INSTANTANEOUS PEAK FLOW			97200	Mar 19	30.80*	Sep 18 1945
INSTANTANEOUS PEAK STAGE			14.95	Mar 19	50*	Dec 2 1951
INSTANTANEOUS LOW FLOW			196	Oct 25	14600	
10 PERCENT EXCEEDS	14000		25500		5700	
50 PERCENT EXCEEDS	5680		6520		1780	
90 PERCENT EXCEEDS	1350		1120			

e Estimated.

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir, provided by U.S. Army Corps of Engineers; High Rock Lake, Tuckertown Reservoir, and Badin Lake, provided by Yadkin Inc.; Lake Tillery and Blewett Falls Lake, provided by Carolina Power and Light Co.

‡ Adjusted for change in contents.

\* Regulated period only (1928-1998). See REMARKS.





## PEE DEE RIVER BASIN

02132320 BIG SHOE HEEL CREEK NEAR LAURINBURG, NC

LOCATION.--Lat 34°45'01", long 79°23'12", Scotland County, Hydrologic Unit 03040204, at downstream side of bridge near center of span on U.S. Highway 74, 2.5 mi downstream of Jordan Creek, and 4.5 mi southeast of Laurinburg.

DRAINAGE AREA.-- 83.3 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional discharge measurements, water years 1949-54, 1959, 1962, 1968-69. June 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 170 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum discharge for current year and period of record from rating curve extended above 600 ft<sup>3</sup>/s by logarithmic plotting. Minimum discharge for current year also occurred July 9-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	87	129	176	253	197	165	145	98	23	91	56
2	39	96	151	140	221	191	166	144	91	25	94	66
3	36	98	167	120	195	185	172	145	76	26	86	74
4	38	88	163	110	288	177	216	151	66	23	72	121
5	38	75	138	103	507	168	230	154	69	25	60	143
6	36	67	111	100	818	159	239	147	79	28	52	218
7	34	65	97	108	627	154	240	136	82	22	51	313
8	33	64	88	128	480	168	225	127	76	19	56	280
9	31	62	84	155	362	370	222	119	65	18	51	210
10	30	60	88	177	294	748	214	115	66	18	55	154
11	30	58	93	197	228	909	226	122	84	18	e88	106
12	29	57	94	192	199	597	287	133	84	18	e84	77
13	27	74	93	169	190	396	280	152	72	18	e78	65
14	25	113	88	144	184	290	248	160	61	18	88	59
15	29	129	82	127	182	243	217	146	56	19	94	55
16	44	138	78	133	343	216	193	125	51	18	74	52
17	48	131	76	151	604	202	201	110	45	21	64	50
18	42	106	73	172	741	208	216	99	40	28	67	49
19	48	86	71	194	545	265	279	90	38	26	61	48
20	73	77	70	218	394	400	361	82	38	29	49	47
21	91	73	68	216	327	816	332	75	38	48	43	47
22	105	92	67	238	297	696	281	65	36	51	39	48
23	94	97	77	251	225	480	270	58	31	36	36	52
24	73	93	108	258	214	403	246	57	29	25	33	49
25	63	82	134	243	220	324	230	59	31	31	30	45
26	74	75	171	249	221	252	219	58	26	53	29	43
27	116	72	189	257	214	207	194	57	28	61	34	41
28	130	69	217	271	203	189	181	75	26	68	37	40
29	141	69	223	274	---	179	161	90	22	67	35	39
30	134	94	221	300	---	173	148	86	20	53	32	42
31	100	---	205	275	---	168	---	87	---	56	33	---
TOTAL	1873	2547	3714	5846	9576	10130	6859	3369	1624	989	1796	2689
MEAN	60.4	84.9	120	189	342	327	229	109	54.1	31.9	57.9	89.6
MAX	141	138	223	300	818	909	361	160	98	68	94	313
MIN	25	57	67	100	182	154	148	57	20	18	29	39
CFSM	.73	1.02	1.44	2.26	4.11	3.92	2.74	1.30	.65	.38	.70	1.08
IN.	.84	1.14	1.66	2.61	4.28	4.52	3.06	1.50	.73	.44	.80	1.20

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1998, BY WATER YEAR (WY)

	MEAN	78.5	87.7	97.7	134	139	159	115	71.6	65.0	62.7	69.2	69.0
MAX	154	143	141	223	342	327	229	157	122	175	171	161	
(WY)	1997	1996	1990	1993	1998	1998	1998	1989	1995	1989	1991	1996	
MIN	41.3	54.1	50.2	69.3	62.0	72.0	61.9	38.5	28.3	15.6	26.8	20.3	
(WY)	1988	1995	1989	1989	1989	1988	1995	1995	1990	1990	1988	1990	

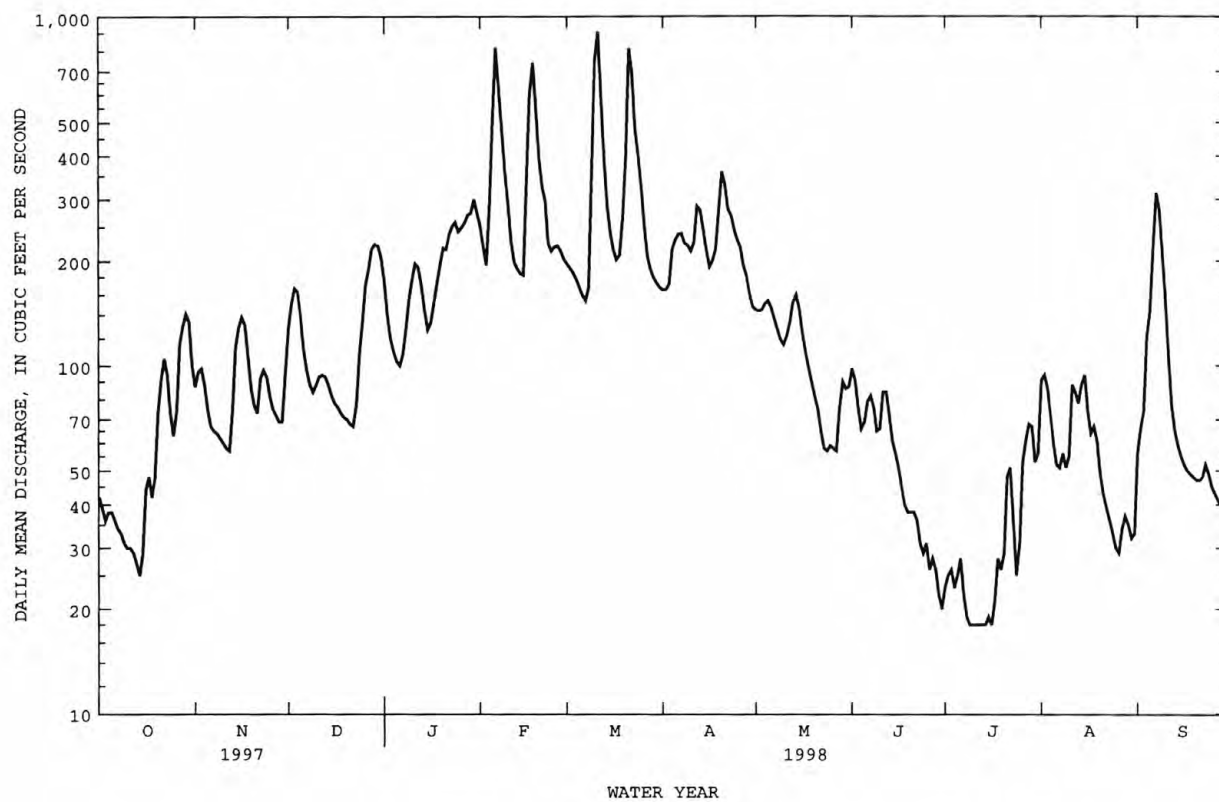
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1987 - 1998
ANNUAL TOTAL	35353	51012	
ANNUAL MEAN	96.9	140	95.6
HIGHEST ANNUAL MEAN			140
LOWEST ANNUAL MEAN			63.6
HIGHEST DAILY MEAN	370	Feb 17	909
LOWEST DAILY MEAN	21	Aug 28	18
ANNUAL SEVEN-DAY MINIMUM	22	Aug 24	18
INSTANTANEOUS PEAK FLOW			970*
INSTANTANEOUS PEAK STAGE			4.75
INSTANTANEOUS LOW FLOW			18*
ANNUAL RUNOFF (CFSM)	1.16		1.68
ANNUAL RUNOFF (INCHES)	15.79		22.78
10 PERCENT EXCEEDS	188		274
50 PERCENT EXCEEDS	84		93
90 PERCENT EXCEEDS	32		31

e Estimated.

\* See REMARKS.

## PEE DEE RIVER BASIN

02132320 BIG SHOE HEEL CREEK NEAR LAURINBURG, NC--Continued



## PEE DEE RIVER BASIN

02133500 DROWNING CREEK NEAR HOFFMAN, NC

LOCATION.--Lat 35°03'38", long 79°29'39", Richmond County, Hydrologic Unit 03040203, on right bank 10 ft downstream of bridge on U.S. Highway 1, 1 mi upstream from Seaboard Coast Line Railroad bridge, 0.8 mi downstream of Deep Creek, and 4 mi northeast of Hoffman.

DRAINAGE AREA.--183 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 972: 1941(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 270 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Since 1984, the town of Southern Pines has withdrawn water for public supply 0.5 mi upstream from the gage. These withdrawals cause some diurnal fluctuation at low to medium flow and may affect yearly minimums. A daily average of 4.5 ft<sup>3</sup>/s was diverted during the year. Minimum discharge for period of record also occurred Aug. 18, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	164	282	349	549	460	485	467	398	90	164	93
2	97	218	323	312	493	455	527	451	393	98	127	99
3	83	254	305	270	475	440	593	446	272	84	103	100
4	79	227	265	257	622	418	553	444	215	74	91	455
5	76	173	229	253	905	399	508	433	220	78	85	977
6	72	150	209	249	980	384	510	400	289	87	70	776
7	69	145	193	270	778	371	495	370	313	79	78	500
8	65	148	179	358	623	426	456	432	271	69	87	310
9	63	147	177	586	544	800	595	794	217	67	92	237
10	63	143	191	842	501	1370	1180	811	204	70	130	198
11	66	139	219	714	480	1120	1140	570	246	67	228	156
12	64	136	235	524	473	762	782	473	249	65	251	129
13	62	181	218	437	485	596	604	445	195	61	205	115
14	65	303	195	394	478	524	535	419	160	60	165	111
15	144	453	182	381	452	502	507	374	149	57	146	107
16	249	520	170	452	431	490	499	333	134	62	117	103
17	290	445	165	589	600	473	521	308	127	212	137	98
18	162	331	162	747	1180	513	595	291	115	305	159	94
19	168	250	158	735	1340	1110	716	279	108	159	122	94
20	261	224	151	727	877	2760	648	266	132	160	101	97
21	330	211	151	767	661	1690	549	246	130	105	90	98
22	269	233	182	690	563	1040	493	239	107	90	81	112
23	171	267	261	596	543	856	529	232	97	84	76	130
24	145	276	350	590	560	739	700	229	90	81	76	125
25	128	268	432	685	597	661	819	241	82	189	71	100
26	148	217	501	660	563	612	667	238	80	244	70	86
27	257	188	494	595	492	572	526	225	80	193	79	82
28	353	184	501	730	463	542	483	288	74	176	80	79
29	330	174	472	1030	---	520	479	397	70	151	69	79
30	225	211	432	918	---	502	484	344	68	123	64	226
31	163	---	408	671	---	486	---	307	---	143	67	---
TOTAL	4835	6980	8392	17378	17708	22593	18178	11792	5285	3583	3481	5966
MEAN	156	233	271	561	632	729	606	380	176	116	112	199
MAX	353	520	501	1030	1340	2760	1180	811	398	305	251	977
MIN	62	136	151	249	431	371	456	225	68	57	64	79
CFSM	.85	1.27	1.48	3.06	3.46	3.98	3.31	2.08	.96	.63	.61	1.09
IN.	.98	1.42	1.71	3.53	3.60	4.59	3.70	2.40	1.07	.73	.71	1.21

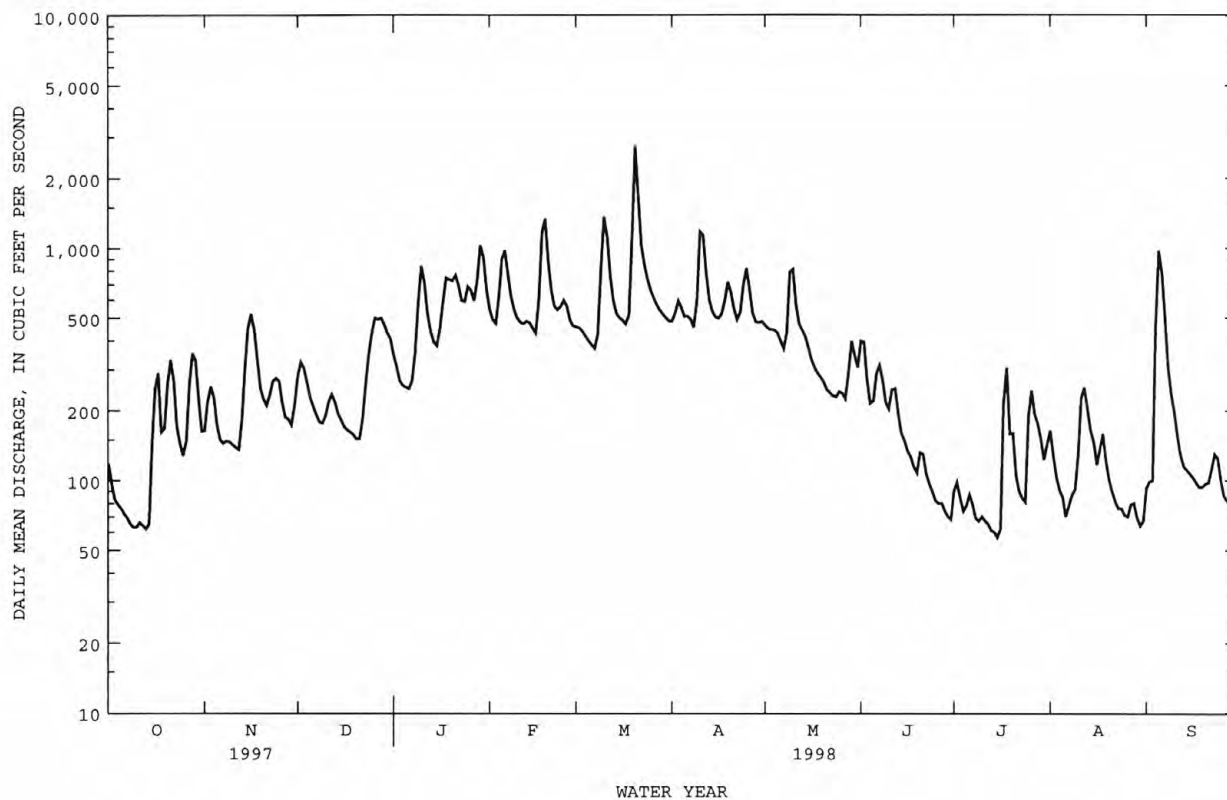
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

	197	232	264	327	361	384	328	230	173	197	188	181
MEAN	197	232	264	327	361	384	328	230	173	197	188	181
MAX	595	499	530	561	687	729	842	465	421	624	497	932
(WY)	1965	1980	1973	1998	1960	1998	1973	1958	1976	1944	1985	1945
MIN	48.5	93.4	135	151	147	173	111	84.5	34.5	32.9	43.4	28.8
(WY)	1941	1942	1989	1942	1992	1981	1986	1988	1988	1986	1968	1968

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1940 - 1998	
ANNUAL TOTAL	85387		126171			
ANNUAL MEAN	234		346		255	
HIGHEST ANNUAL MEAN					397	
LOWEST ANNUAL MEAN					129	
HIGHEST DAILY MEAN	1340		2760		8530	
LOWEST DAILY MEAN	55		57		20	
ANNUAL SEVEN-DAY MINIMUM	61		63		24	
INSTANTANEOUS PEAK FLOW			3070		10900	
INSTANTANEOUS PEAK STAGE			7.94		10.29	
INSTANTANEOUS LOW FLOW			55		19*	
ANNUAL RUNOFF (CFSM)	1.28		1.89		1.39	
ANNUAL RUNOFF (INCHES)	17.36		25.65		18.91	
10 PERCENT EXCEEDS	424		687		482	
50 PERCENT EXCEEDS	201		254		206	
90 PERCENT EXCEEDS	78		79		80	

\* See REMARKS.

PEE DEE RIVER BASIN  
02133500 DROWNING CREEK NEAR HOFFMAN, NC--Continued



## PEE DEE RIVER BASIN

02133624 LUMBER RIVER NEAR MAXTON, NC

LOCATION.--Lat 34°46'22", long 79°19'55", Robeson County, Hydrologic Unit 03040203, at downstream side of bridge, near right center of span, on State Highway 71, 2.6 mi north of Maxton, and 7.5 mi upstream from Gum Swamp.

DRAINAGE AREA.--365 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional discharge measurements, water years 1974, 1980-85. June 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 180 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

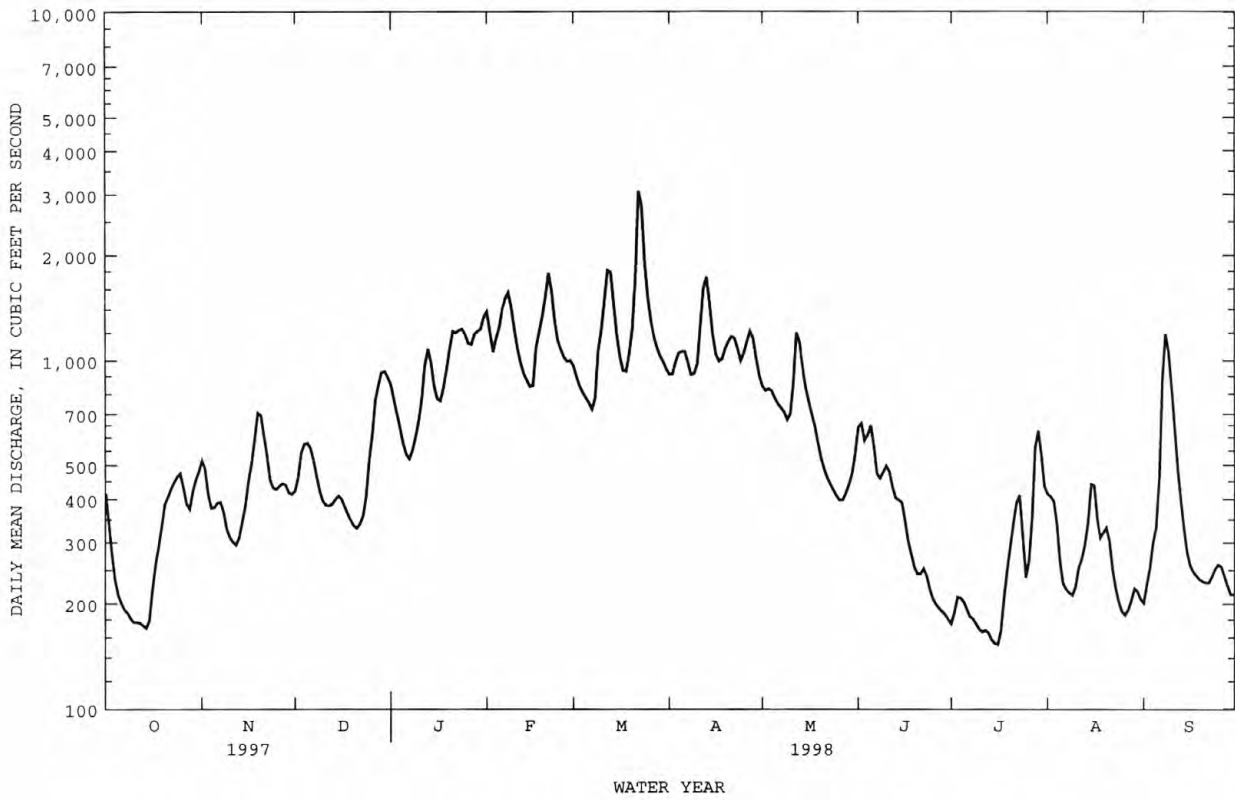
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	415	517	422	854	1380	966	912	844	643	175	414	201
2	340	490	462	772	1210	900	914	819	658	188	406	227
3	276	413	543	702	1060	845	991	828	588	209	394	253
4	233	377	574	638	1160	807	1050	817	609	208	338	299
5	211	378	578	577	1240	781	1060	780	650	203	264	331
6	200	390	560	536	1400	754	1060	751	565	193	229	464
7	192	392	516	522	1500	724	985	730	473	184	220	876
8	188	367	462	552	1560	776	910	710	459	181	215	1190
9	181	329	419	602	1420	1060	917	675	478	175	212	1060
10	177	310	394	668	1230	1210	978	701	497	169	224	835
11	177	301	384	771	1080	1480	1260	863	480	166	254	631
12	176	295	383	962	979	1810	1610	1200	432	168	269	482
13	173	310	387	1080	914	1790	1730	1130	403	165	295	390
14	170	344	399	984	877	1460	1460	954	398	158	340	325
15	179	382	408	842	840	1190	1190	836	392	154	441	279
16	219	447	400	775	847	1030	1040	761	349	153	437	257
17	259	508	380	765	1090	936	996	700	305	167	350	247
18	291	594	362	832	1210	930	1010	647	280	209	310	241
19	335	706	348	937	1340	1050	1080	580	255	251	320	235
20	387	695	336	1080	1520	1230	1130	525	244	293	331	232
21	405	606	330	1210	1780	1720	1170	486	244	342	303	230
22	427	534	339	1200	1580	3070	1160	460	252	391	250	230
23	446	453	358	1220	1300	2790	1080	441	241	410	221	240
24	464	430	406	1230	1140	1920	999	424	221	317	202	252
25	474	426	517	1190	1070	1510	1050	408	207	238	190	259
26	429	436	610	1120	1020	1300	1130	397	199	266	186	256
27	387	443	766	1110	994	1170	1210	398	194	352	192	240
28	375	439	846	1190	999	1090	1160	415	190	561	204	225
29	420	417	922	1210	---	1030	1020	442	186	627	221	213
30	455	412	929	1230	---	994	904	474	180	534	217	213
31	481	---	895	1330	---	945	---	541	---	435	206	---
TOTAL	9542	13141	15635	28691	33740	39268	33166	20737	11272	8242	8655	11413
MEAN	308	438	504	926	1205	1267	1106	669	376	266	279	380
MAX	481	706	929	1330	1780	3070	1730	1200	658	627	441	1190
MIN	170	295	330	522	840	724	904	397	180	153	186	201
CFSM	.84	1.20	1.38	2.54	3.30	3.47	3.03	1.83	1.03	.73	.76	1.04
IN.	.97	1.34	1.59	2.92	3.44	4.00	3.38	2.11	1.15	.84	.88	1.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1998, BY WATER YEAR (WY)

	MEAN	379	436	458	609	619	703	596	390	306	317	306	338
MAX	696	661	650	926	1205	1267	1106	769	575	690	577	915	
(WY)	1997	1996	1990	1998	1998	1998	1998	1989	1995	1995	1989	1996	
MIN	184	267	282	364	300	363	303	202	135	147	154	130	
(WY)	1988	1992	1992	1992	1992	1992	1992	1994	1988	1990	1988	1990	

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1987 - 1998			
ANNUAL TOTAL	162086				233502							
ANNUAL MEAN	444				640				455			
HIGHEST ANNUAL MEAN									640			
LOWEST ANNUAL MEAN									283			
HIGHEST DAILY MEAN	1710				3070				3070			
LOWEST DAILY MEAN	147				153				86			
ANNUAL SEVEN-DAY MINIMUM	164				162				91			
INSTANTANEOUS PEAK FLOW					3380				3380			
INSTANTANEOUS PEAK STAGE					13.52				13.52			
INSTANTANEOUS LOW FLOW					152				83			
ANNUAL RUNOFF (CFSM)	1.22				1.75				1.25			
ANNUAL RUNOFF (INCHES)	16.52				23.80				16.93			
10 PERCENT EXCEEDS	739				1210				800			
50 PERCENT EXCEEDS	400				474				395			
90 PERCENT EXCEEDS	193				205				163			

PEE DEE RIVER BASIN  
02133624 LUMBER RIVER NEAR MAXTON, NC--Continued



## PEE DEE RIVER BASIN

02134480 BIG SWAMP NEAR TARHEEL, NC

LOCATION.--Lat 34°42'37", long 78°50'14", Robeson County, Hydrologic Unit 03040203, on left bank at downstream side of bridge on Secondary Road 1004, and 2.8 mi southwest of Tarheel.

DRAINAGE AREA.--229 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-54, 1957-58, 1962-68. October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 105 ft above sea level, from topographic map.

REMARKS.--Records fair except those below 4.0 ft<sup>3</sup>/s, which are poor. Minimum discharge for period of record, no flow, also occurred Sept. 1-4, 1993.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	173	176	559	1370	521	385	275	123	13	20	55
2	11	176	223	495	1070	482	357	255	74	15	43	42
3	8.9	173	283	439	912	449	347	238	49	13	62	37
4	14	164	336	387	1810	420	376	230	36	9.5	76	80
5	8.7	151	358	346	3440	390	381	218	40	17	82	107
6	7.8	133	342	330	3900	359	376	203	49	23	76	119
7	7.6	117	317	440	3370	338	394	192	52	17	58	124
8	6.8	99	288	666	2480	350	404	191	47	12	49	125
9	7.4	84	265	1020	1770	1250	473	189	41	9.0	52	105
10	6.9	73	245	1260	1310	3430	536	185	35	7.9	52	73
11	6.2	64	233	1170	1030	3850	617	193	37	6.8	47	52
12	6.6	58	234	1010	872	3110	665	198	37	5.0	42	40
13	5.6	79	241	823	750	2300	628	200	32	4.7	34	31
14	5.1	143	248	677	655	1580	550	204	31	4.0	27	25
15	4.3	188	251	581	581	1120	485	204	28	2.9	21	21
16	5.4	240	248	558	543	850	427	199	25	3.0	20	16
17	8.6	304	238	547	909	691	424	189	20	6.3	22	13
18	11	330	224	553	1720	632	448	173	16	16	28	12
19	17	308	211	600	2040	746	466	150	13	17	29	11
20	29	263	198	681	1920	1290	536	121	14	12	22	9.7
21	46	218	187	721	1550	2170	569	90	16	8.4	17	8.8
22	60	186	186	725	1240	2430	549	69	18	5.9	14	8.0
23	57	161	203	852	1020	1990	519	53	15	4.4	11	7.6
24	45	140	237	1240	857	1480	476	42	12	3.4	8.5	6.9
25	35	129	344	1510	751	1110	429	39	9.8	2.3	7.4	6.5
26	33	122	514	1540	670	885	390	38	8.3	1.8	8.2	5.2
27	77	115	662	1440	600	736	357	44	9.1	1.5	36	4.7
28	114	108	703	1790	560	622	337	145	8.6	1.4	71	4.3
29	133	103	724	2170	---	542	316	171	7.7	1.8	91	3.9
30	151	133	697	2130	---	479	292	175	8.0	4.1	96	5.0
31	166	---	628	1760	---	426	---	162	---	8.5	74	---
TOTAL	1107.9	4735	10244	29020	39700	37028	13509	5035	911.5	257.6	1296.1	1158.6
MEAN	35.7	158	330	936	1418	1194	450	162	30.4	8.31	41.8	38.6
MAX	166	330	724	2170	3900	3850	665	275	123	23	96	125
MIN	4.3	58	176	330	543	338	292	38	7.7	1.4	7.4	3.9
CFSM	.16	.69	1.44	4.09	6.19	5.22	1.97	.71	.13	.04	.18	.17
IN.	.18	.77	1.66	4.71	6.45	6.02	2.19	.82	.15	.04	.21	.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1998, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	150	169	242	451	412	466	276	113	97.0	97.2	140	168	
MAX	741	382	396	1001	1418	1194	571	358	475	407	358	836	
(WY)	1997	1993	1990	1993	1998	1998	1993	1989	1995	1995	1991	1996	
MIN	5.05	33.5	68.8	92.9	127	138	66.8	17.1	15.0	8.31	17.6	6.98	
(WY)	1988	1988	1988	1986	1986	1988	1986	1986	1986	1998	1987	1997	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

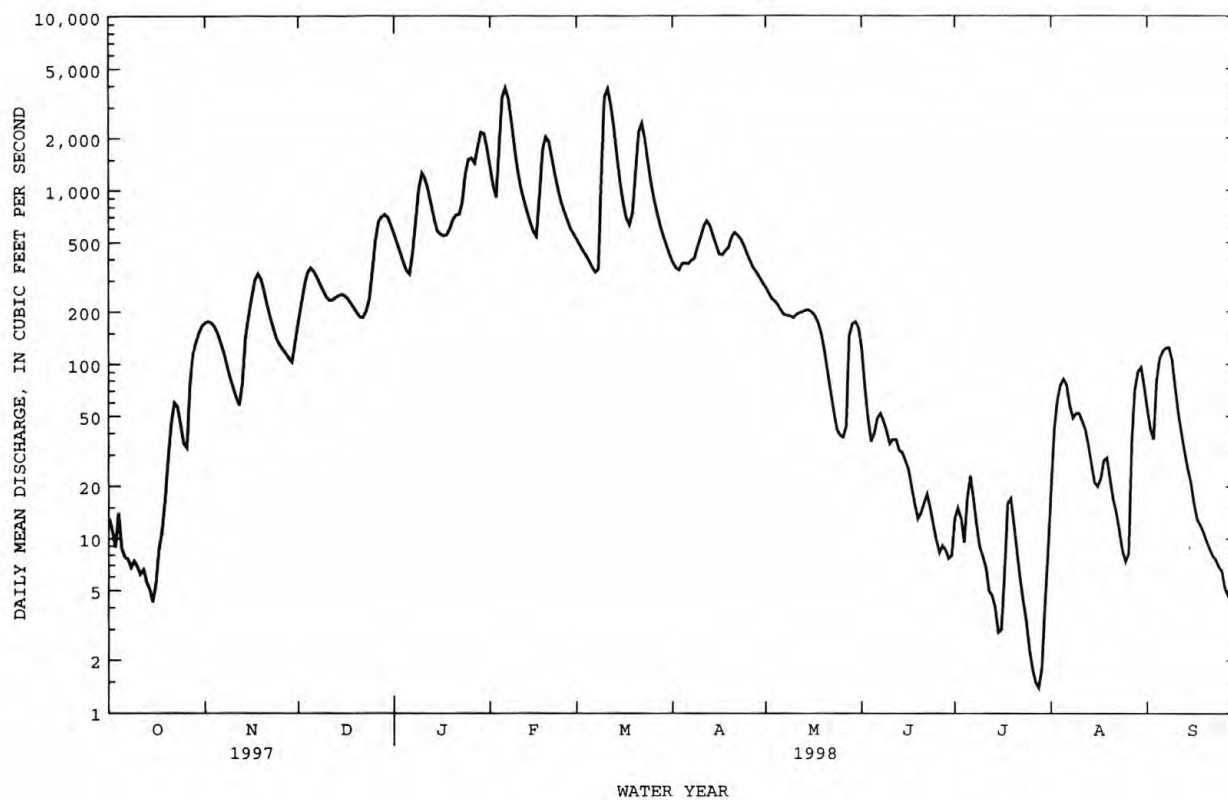
## WATER YEARS 1986 - 1998

ANNUAL TOTAL	72205.3	144002.7	
ANNUAL MEAN	198	395	
HIGHEST ANNUAL MEAN			231
LOWEST ANNUAL MEAN			395
HIGHEST DAILY MEAN	866	Feb 17	3900
LOWEST DAILY MEAN	1.8	Sep 10	0*
ANNUAL SEVEN-DAY MINIMUM	2.9	Aug 23	2.3
INSTANTANEOUS PEAK FLOW			3980
INSTANTANEOUS PEAK STAGE			13.10
INSTANTANEOUS LOW FLOW			1.7
ANNUAL RUNOFF (CFSM)	.86		1.72
ANNUAL RUNOFF (INCHES)	11.73		23.39
10 PERCENT EXCEEDS	460		1090
50 PERCENT EXCEEDS	143		166
90 PERCENT EXCEEDS	5.0		7.8

\* See REMARKS.



PEE DEE RIVER BASIN  
02134480 BIG SWAMP NEAR TARHEEL, NC--Continued



## PEE DEE RIVER BASIN

02134500 LUMBER RIVER AT BOARDMAN, NC

LOCATION.--Lat 34°26'32", long 78°57'38", Robeson County, Hydrologic Unit 03040203, on right bank 150 ft downstream of bridge on U.S. Highway 74, 1 mi downstream of Seaboard Coast Line Railroad bridge at Boardman, 1.5 mi downstream of Big Swamp, and 40.5 mi upstream from mouth.

DRAINAGE AREA.--1,228 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1929 to current year.

REVISED RECORDS.--WSP 1303: 1932 (M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 72.05 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Sept. 30, 1936, nonrecording gage at site 100 ft downstream at same datum. Sept. 30, 1936, to June 8, 1943, nonrecording gage at present site and datum. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for the current water year also occurred July 16.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1928 reached a stage of 11.8 ft, from floodmark witnessed by local resident; discharge, 25,000 ft<sup>3</sup>/s. Flood of July 22, 1901, the highest during the period 1896-1913, reached a stage of 10.8 ft, from observations by Butters Lumber Co.; discharge, 14,800 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	418	879	1220	3210	6360	3640	3160	2180	797	239	339	593
2	426	925	1270	3210	5960	3300	2830	2150	766	231	387	676
3	437	922	1340	3160	5640	3030	2600	2100	745	222	444	803
4	446	925	1400	3050	6280	2800	2530	2110	730	214	497	919
5	452	941	1440	2910	7330	2630	2400	2070	764	208	539	916
6	453	948	1450	2790	8230	2470	2280	1920	814	211	552	927
7	445	961	1480	2770	8830	2310	2180	1800	849	219	549	967
8	408	975	1530	2820	8810	2300	2130	1750	846	223	534	972
9	346	957	1580	3040	8980	3760	2230	1670	823	219	531	946
10	297	917	1620	3310	8160	5760	2520	1600	820	211	533	935
11	267	877	1630	3520	6810	6000	2900	1630	813	205	517	990
12	247	845	1670	3660	5910	6740	3150	1720	773	201	464	1040
13	235	887	1660	3720	5200	7310	3180	1810	712	192	425	1120
14	224	945	1620	3700	4590	7540	3060	1930	669	183	395	1240
15	217	950	1570	3590	4050	7330	2940	1950	642	181	378	1300
16	213	975	1500	3690	3650	5870	2920	1900	646	181	380	1270
17	212	1030	1440	3430	3940	5560	3190	1880	618	191	385	1160
18	213	1070	1370	3440	4550	5080	3530	1840	579	214	393	1040
19	229	1090	1320	3460	5140	4880	3560	1730	538	220	400	891
20	254	1110	1280	3420	5680	4920	3510	1570	522	205	409	757
21	285	1140	1240	3380	5970	5430	3320	1420	522	201	423	642
22	318	1170	1270	3350	5990	5820	3140	1290	536	207	424	557
23	359	1210	1350	3540	5910	6050	3020	1170	516	217	398	489
24	401	1250	1410	3900	5660	6140	2970	1080	448	229	361	438
25	441	1290	1630	4370	5360	6330	2950	979	373	270	337	397
26	493	1300	1840	4770	4950	6510	2920	882	329	307	327	365
27	576	1280	2160	5180	4470	6320	2800	824	305	326	389	344
28	631	1220	2460	5910	4030	5690	2610	989	284	345	402	333
29	696	1150	2730	6520	---	4910	2400	940	264	338	416	327
30	773	1180	2970	6750	---	4170	2240	888	249	319	418	331
31	811	---	3120	6600	---	3600	---	840	---	313	509	---
TOTAL	12223	31319	51570	120170	166440	154200	85170	48612	18292	7242	13455	23685
MEAN	394	1044	1664	3876	5944	4974	2839	1568	610	234	434	790
MAX	811	1300	3120	6750	8980	7540	3560	2180	849	345	552	1300
MIN	212	845	1220	2770	3650	2300	2130	824	249	181	327	327
CFSM	.32	.85	1.35	3.16	4.84	4.05	2.31	1.28	.50	.19	.35	.64
IN.	.37	.95	1.56	3.64	5.04	4.67	2.58	1.47	.55	.22	.41	.74

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1998, BY WATER YEAR (WY)

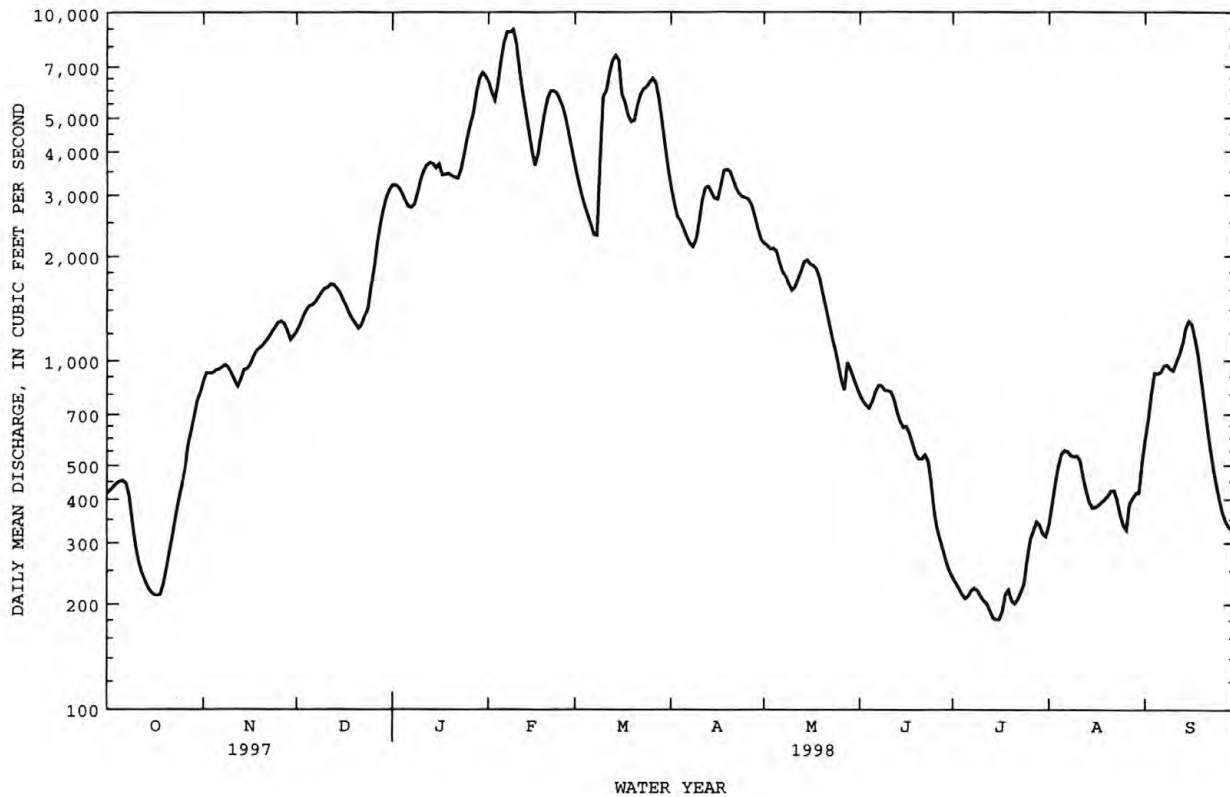
MEAN	836	896	1321	1882	2241	2381	1880	996	764	807	944	1010
MAX	4721	4142	3977	4575	5944	5259	5688	3430	2587	2808	3741	4787
(WY)	1965	1948	1949	1993	1998	1983	1936	1978	1969	1943	1974	1945
MIN	141	211	237	262	429	611	420	276	215	174	138	92.2
(WY)	1941	1934	1934	1934	1934	1934	1981	1986	1941	1990	1954	1968

## PEE DEE RIVER BASIN

02134500 LUMBER RIVER AT BOARDMAN, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1930 - 1998	
ANNUAL TOTAL	456116		732378		1325	
ANNUAL MEAN	1250		2007		2391	
HIGHEST ANNUAL MEAN					524	
LOWEST ANNUAL MEAN					13400	
HIGHEST DAILY MEAN	4190	Feb 20	8980	Feb 9	68	Sep 24 1945
LOWEST DAILY MEAN	189	Sep 6	181	Jul 15	72	Oct 1 1968
ANNUAL SEVEN-DAY MINIMUM	193	Sep 6	191	Jul 11	10.64	Oct 3 1968
INSTANTANEOUS PEAK FLOW			9590	Feb 9	66	Sep 24 1945
INSTANTANEOUS PEAK STAGE			9.79	Feb 9	10.08	Sep 24 1945
INSTANTANEOUS LOW FLOW			179*	Jul 15	14.66	Oct 9 1968
ANNUAL RUNOFF (CFSM)	1.02		1.63			
ANNUAL RUNOFF (INCHES)	13.82		22.19			
10 PERCENT EXCEEDS	2860		5480			
50 PERCENT EXCEEDS	957		1180			
90 PERCENT EXCEEDS	253		269			

\* See REMARKS.



## SANTÉE RIVER BASIN

02137727 CATAWBA RIVER NEAR PLEASANT GARDENS, NC

LOCATION.--Lat 35°41'09", long 82°03'40", McDowell County, Hydrologic Unit 03050101, on right bank 18 ft downstream of bridge on Secondary Road 1221, 0.8 mi upstream from Buck Creek, 0.8 mi southeast of Pleasant Gardens, and at mile 297.

DRAINAGE AREA.--126 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1963, 1970-73, 1975. October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,230 ft above sea level, from topographic map. Telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	122	106	132	336	379	295	540	198	122	106	70
2	101	133	100	128	306	360	275	559	185	115	96	68
3	98	118	100	127	1130	341	284	463	184	113	91	69
4	96	113	135	127	2940	322	328	455	188	111	89	76
5	91	109	112	132	1170	312	276	403	251	110	87	67
6	88	108	105	145	713	301	265	375	217	109	90	73
7	87	109	101	1570	562	294	259	435	190	109	90	81
8	85	107	100	6010	472	744	264	454	177	109	103	67
9	85	103	105	861	412	1190	471	398	184	115	97	67
10	86	102	122	511	374	661	334	382	206	110	108	64
11	87	102	120	384	384	510	297	386	200	101	92	63
12	85	101	110	321	366	438	279	351	178	101	88	62
13	84	116	106	280	330	399	267	330	170	99	89	59
14	84	131	104	247	309	376	265	309	163	98	93	57
15	84	113	101	461	291	352	259	296	168	98	141	57
16	82	105	100	566	930	339	261	289	178	94	208	58
17	82	103	100	473	2980	329	1310	280	166	139	188	57
18	81	102	98	369	1290	367	610	271	151	105	110	57
19	94	102	97	362	756	607	1560	261	149	96	100	58
20	90	100	95	310	603	870	1170	244	148	115	96	56
21	83	101	95	277	510	678	691	226	146	95	91	75
22	82	118	129	319	454	523	567	226	150	126	88	84
23	80	105	116	745	735	446	498	223	141	110	85	65
24	89	101	161	489	563	405	439	221	136	109	83	64
25	111	99	234	384	479	375	399	222	139	121	83	63
26	527	99	163	330	431	357	375	209	133	109	79	62
27	375	97	239	637	449	343	364	207	141	175	76	60
28	185	96	207	827	406	329	346	210	126	118	74	86
29	149	96	176	565	---	315	323	204	123	106	74	89
30	131	105	160	449	---	305	410	205	121	101	71	77
31	122	---	144	383	---	294	---	281	---	99	71	---
TOTAL	3712	3216	3941	18921	20681	13861	13741	9915	5007	3438	3037	2011
MEAN	120	107	127	610	739	447	458	320	167	111	98.0	67.0
MAX	527	133	239	6010	2980	1190	1560	559	251	175	208	89
MIN	80	96	95	127	291	294	259	204	121	94	71	56
CFSM	.94	.84	1.00	4.81	5.82	3.52	3.61	2.52	1.31	.87	.77	.53
IN.	1.09	.94	1.15	5.54	6.06	4.06	4.02	2.90	1.47	1.01	.89	.59

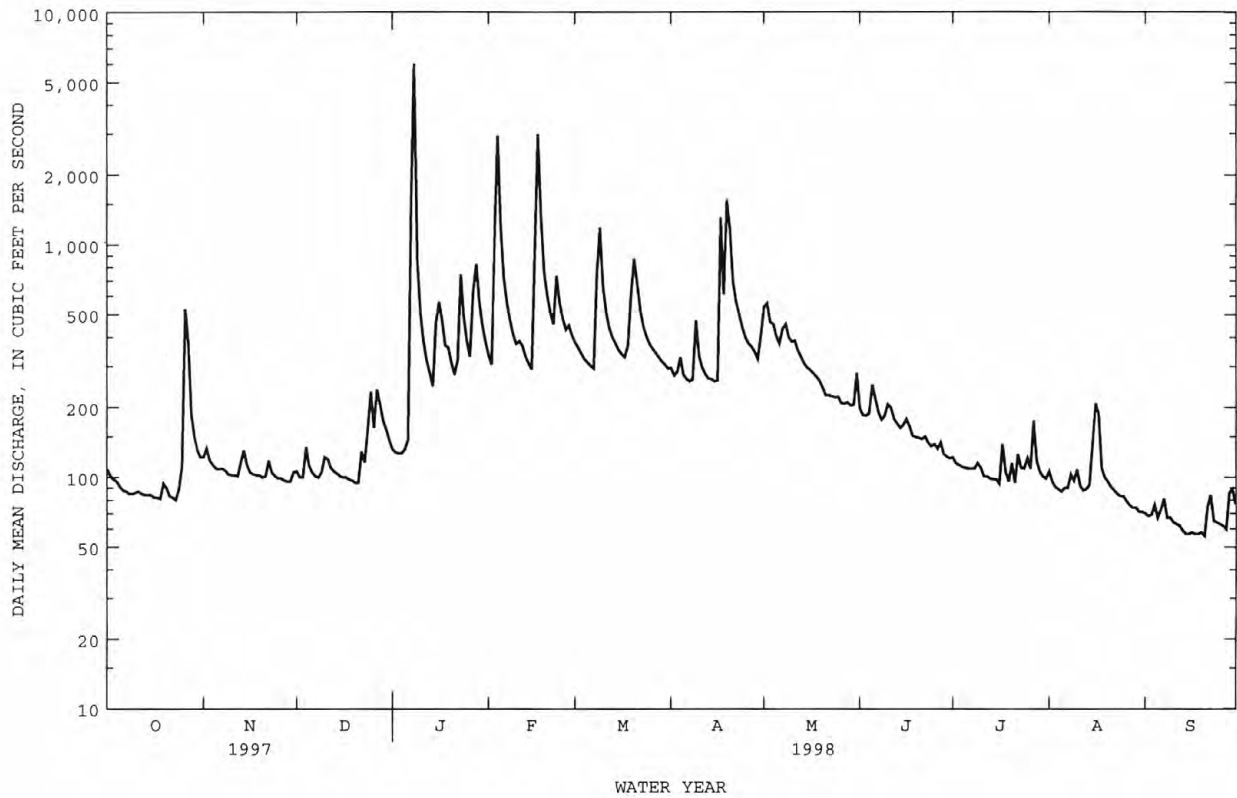
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1998, BY WATER YEAR (WY)

	205	223	244	304	364	371	334	259	221	168	209	175
MEAN	205	223	244	304	364	371	334	259	221	168	209	175
MAX	550	606	573	620	739	622	688	444	652	339	513	435
(WY)	1996	1986	1984	1995	1998	1990	1983	1984	1992	1991	1995	1989
MIN	67.5	69.0	77.6	107	159	130	138	109	70.7	57.9	50.5	67.0
(WY)	1994	1982	1989	1981	1988	1988	1986	1988	1988	1988	1988	1998

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1981 - 1998	
ANNUAL TOTAL	74360		101481			
ANNUAL MEAN	204		278		256	
HIGHEST ANNUAL MEAN					351	
LOWEST ANNUAL MEAN					126	
HIGHEST DAILY MEAN	1960	Mar 14	6010	Jan 8	7250	Aug 17 1994
LOWEST DAILY MEAN	65	Sep 21	56	Sep 20	33	Aug 19 1988
ANNUAL SEVEN-DAY MINIMUM	68	Sep 17	57	Sep 14	42	Jul 18 1986
INSTANTANEOUS PEAK FLOW			13600	Jan 8	13700	Aug 17 1994
INSTANTANEOUS PEAK STAGE			15.15	Jan 8	15.22	Aug 17 1994
INSTANTANEOUS LOW FLOW			54	Sep 21	32	Aug 28 1988
ANNUAL RUNOFF (CFSM)	1.60		2.19		2.01	
ANNUAL RUNOFF (INCHES)	21.78		29.73		27.35	
10 PERCENT EXCEEDS	348		516		440	
50 PERCENT EXCEEDS	172		144		187	
90 PERCENT EXCEEDS	85		82		90	

## Santee River Basin

02137727 CATAWBA RIVER NEAR PLEASANT GARDENS, NC--Continued



## SANTÉE RIVER BASIN

02138500 LINVILLE RIVER NEAR NEBO, NC

LOCATION.--Lat 35°47'41", long 81°53'25", Burke County, Hydrologic Unit 03050101, in Pisgah National Forest on right bank 370 ft upstream from bridge on State Highway 126, 0.2 mi downstream of Shooks Creek, 0.5 mi upstream from Lake James, 2.0 mi northeast of Longtown, and 6.0 mi northeast of Nebo.

DRAINAGE AREA.--66.7 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1907 to August 1908 (fragmentary). June 1922 to current year. Prior to 1908 published as "Linville River at Fonta Flora" and as "Linville River at Branch" 1923-70. Records for October to December 1908 "Linville River at Fonta Flora" published in WSP 242 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 892: 1929, 1935, 1937. WSP 1503: 1923(M), 1924-28, 1930, 1932-33(M), 1938(M), 1939(P). WDR NC-80-1: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1,203.87 ft above sea level. May 1907 to August 1908, nonrecording gage about 1.2 mi downstream at different datum. June 1922 to Aug. 27, 1937, nonrecording gage and Aug. 28, 1937, to Sept. 30, 1970, water-stage recorder at site on right bank 20 ft downstream of bridge on State Highway 126 at 1,204.87 ft. Oct. 1, 1970, to Sept. 30, 1973, at present site at 1,204.87 ft. Oct. 1, 1973, to Aug. 25, 1981, at present site at 1,204.87 ft.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge for period of record, site and datum then in use, from rating curve extended above 6,400 ft<sup>3</sup>/s on basis of slope area measurement of peak flow. Minimum discharge for period of record, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of about 11 ft at former site and datum; discharge, 34,600 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	43	41	e77	197	257	151	252	87	52	87	33
2	35	59	41	e72	180	233	138	292	76	46	69	31
3	26	62	41	e69	519	213	123	250	73	42	51	31
4	24	57	52	e66	2500	198	159	287	68	43	44	30
5	22	53	54	71	982	186	147	259	115	43	41	30
6	20	44	52	109	538	176	129	221	118	46	39	28
7	19	41	47	435	395	169	120	239	95	44	36	26
8	18	41	e42	4550	326	345	126	361	80	44	41	30
9	17	39	e42	734	285	1010	204	297	75	45	40	77
10	16	38	49	408	257	555	168	275	109	44	42	61
11	16	36	55	294	266	380	151	256	221	41	37	47
12	16	35	54	237	353	310	142	219	134	39	35	42
13	16	37	52	206	306	272	131	194	109	39	34	38
14	15	42	50	184	272	248	126	178	100	35	108	32
15	14	44	e47	299	245	226	119	164	90	33	338	28
16	13	40	e45	457	343	208	116	152	80	24	197	27
17	13	36	42	350	2760	197	1550	142	82	21	113	26
18	13	33	e40	281	1240	205	558	131	64	20	92	26
19	26	32	40	254	644	321	1170	122	59	18	76	25
20	32	33	38	219	484	654	1050	115	58	19	64	24
21	28	33	41	197	388	601	538	106	64	27	57	26
22	28	41	61	193	325	381	412	102	62	31	53	29
23	18	44	86	378	445	298	331	98	66	33	50	31
24	18	42	87	338	452	262	271	96	61	37	48	27
25	23	37	155	279	349	234	238	91	59	71	45	26
26	105	33	118	238	304	211	213	87	56	67	46	25
27	192	33	117	338	290	188	196	86	54	76	47	24
28	92	33	118	404	279	169	186	81	52	90	45	22
29	68	31	99	285	---	160	169	81	50	61	42	23
30	49	35	89	256	---	151	177	84	50	48	39	24
31	43	---	79	225	---	143	---	123	---	46	36	---
TOTAL	1078	1207	1974	12503	15924	9161	9309	5441	2467	1325	2092	949
MEAN	34.8	40.2	63.7	403	569	296	310	176	82.2	42.7	67.5	31.6
MAX	192	62	155	4550	2760	1010	1550	361	221	90	338	77
MIN	13	31	38	66	180	143	116	81	50	18	34	22
CFSM	.52	.60	.95	6.05	8.53	4.43	4.65	2.63	1.23	.64	1.01	.47
IN.	.60	.67	1.10	6.97	8.88	5.11	5.19	3.03	1.38	.74	1.17	.53

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1998, BY WATER YEAR (WY)

	MEAN	127	138	140	178	195	234	203	151	131	97.8	121	113
MAX	433	678	349	664	569	632	479	369	598	449	1084	606	
(WY)	1937	1978	1984	1995	1998	1979	1983	1976	1972	1989	1940	1979	
MIN	18.9	27.8	30.9	31.8	60.8	74.3	62.0	48.9	33.7	23.0	15.5	13.8	
(WY)	1955	1932	1940	1940	1941	1988	1986	1941	1941	1930	1925	1925	

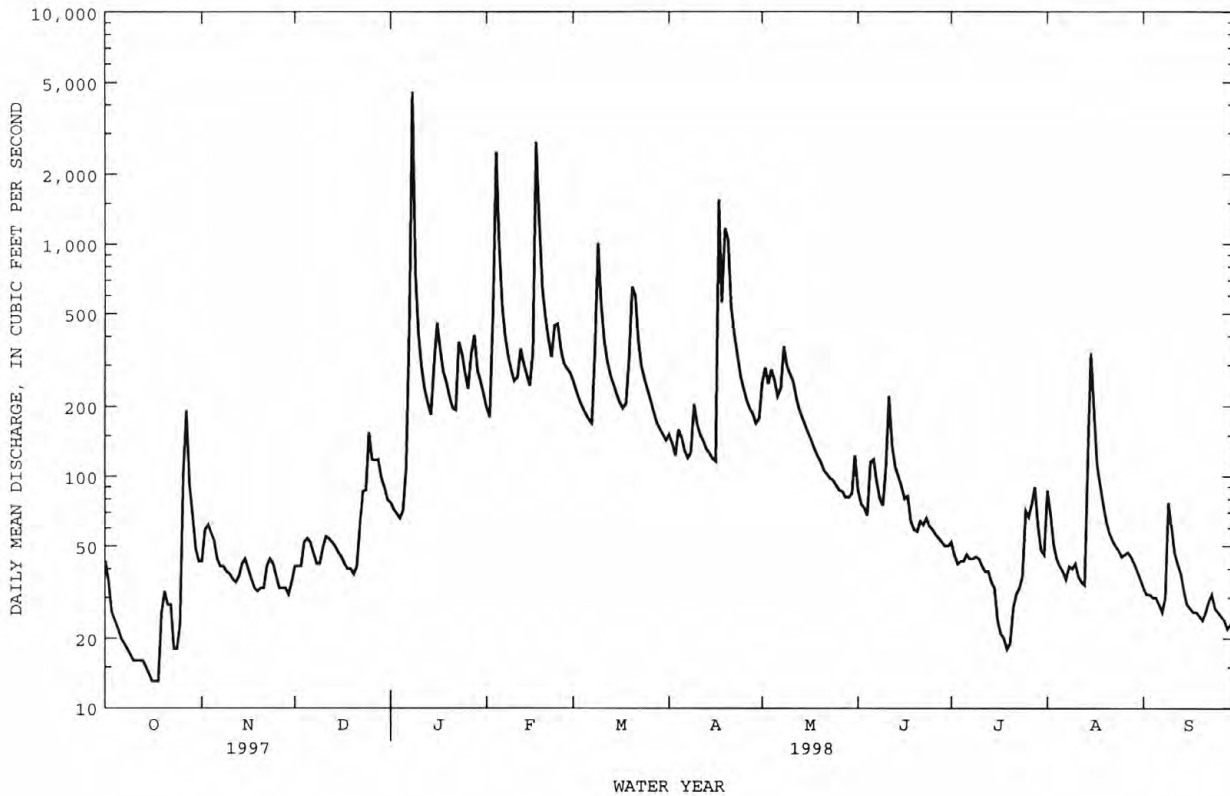
## SANTEE RIVER BASIN

02138500 LINVILLE RIVER NEAR NEBO, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1922 - 1998	
ANNUAL TOTAL	42834		63430		152	
ANNUAL MEAN	117		174		246	
HIGHEST ANNUAL MEAN					77.6	
LOWEST ANNUAL MEAN					14000	
HIGHEST DAILY MEAN	1600	Mar 14	4550	Jan 8	8.0	Aug 13 1940
LOWEST DAILY MEAN	13	Oct 16	13	Oct 16	10	Sep 7 1925
ANNUAL SEVEN-DAY MINIMUM	14	Oct 12	14	Oct 12	39500*	Aug 22 1925
INSTANTANEOUS PEAK FLOW			8580	Jan 8	11.40	Aug 13 1940
INSTANTANEOUS PEAK STAGE			7.19	Jan 8	2.0*	Aug 13 1940
INSTANTANEOUS LOW FLOW			12	Oct 16	2.28	Jan 9 1956
ANNUAL RUNOFF (CFSM)	1.76		2.61		31.00	
ANNUAL RUNOFF (INCHES)	23.89		35.38		270	
10 PERCENT EXCEEDS	224		344		100	
50 PERCENT EXCEEDS	91		76		38	
90 PERCENT EXCEEDS	26		26			

e Estimated.

\* See REMARKS.





## SANTEE RIVER BASIN

0213903612 CATAWBA RIVER AT CALVIN, NC

LOCATION.--Lat 35°44'23", long 81°43'44", Burke County, Hydrologic Unit 03050101, on right bank at City of Morganton's water intake, 0.5 mi upstream from Canoe Creek, and 0.5 mi north of Calvin.

DRAINAGE AREA.--508 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,002.40 ft above sea level (levels by City of Morganton).

REMARKS.--No estimated daily discharges. Records good. City of Morganton diverted about 15.2 ft<sup>3</sup>/s from Catawba River for municipal water supply. Considerable regulation, at times, caused by Lake James (station 02138519), 6.5 mi upstream. Minimum discharge for all water years affected by regulation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	504	471	322	578	1720	2510	1310	1510	887	541	599	501
2	438	323	577	686	2260	2490	1420	1480	1080	410	492	553
3	335	481	386	275	2850	2430	1250	1410	961	437	490	339
4	501	685	402	248	4450	2530	608	2070	672	387	676	270
5	282	701	497	879	3030	2530	812	1320	961	305	697	281
6	373	1060	305	584	2760	2530	774	1530	674	482	402	262
7	236	620	283	685	2010	1650	1230	1620	919	472	326	349
8	362	656	371	3330	1790	1890	1150	1090	663	553	369	321
9	278	425	413	3540	2310	1250	666	1480	662	525	290	325
10	261	857	556	3240	2490	1090	585	1090	580	270	569	261
11	211	686	480	2480	2330	2010	620	1250	781	310	685	434
12	235	759	615	2180	2490	2350	745	1780	759	310	589	273
13	362	663	342	2130	2440	2460	1450	1750	613	421	408	233
14	259	563	304	2270	2430	2540	1740	1630	392	657	484	482
15	238	258	378	2530	2430	1830	1710	1360	743	441	747	687
16	213	288	358	2660	3020	1940	1220	1030	865	335	581	559
17	257	507	562	2010	3220	2050	1220	759	744	403	816	648
18	214	481	511	1790	3210	2330	1900	1250	917	333	808	244
19	240	471	333	2260	3000	1930	3400	1640	933	286	801	278
20	320	358	210	2340	2850	1870	4380	1520	422	696	534	414
21	262	488	201	2380	2690	1230	3860	1530	430	680	515	328
22	260	332	382	2350	2610	1020	3220	1230	693	924	371	340
23	303	279	440	2940	2870	1530	2760	789	589	944	367	343
24	307	532	677	1970	2790	2040	2420	396	779	600	836	378
25	291	567	522	1800	2660	1720	2280	319	969	370	1070	328
26	589	496	469	2220	2600	1740	2150	837	1160	409	1090	390
27	874	333	599	2690	2590	1810	2290	982	548	651	695	301
28	678	352	1070	2100	2540	1650	2320	801	479	784	780	318
29	425	289	812	2300	---	1080	1900	1040	862	712	428	229
30	284	279	742	2460	---	1420	1670	776	845	607	235	266
31	673	---	907	1880	---	1250	---	497	---	621	986	---
TOTAL	11065	15260	15026	61785	74440	58700	53060	37766	22582	15876	18736	10935
MEAN	357	509	485	1993	2659	1894	1769	1218	753	512	604	365
MAX	874	1060	1070	3540	4450	2540	4380	2070	1160	944	1090	687
MIN	211	258	201	248	1720	1020	585	319	392	270	235	229
†	+60	-133	+10	+189	+101	-71	+95	0	-63	-41	-150	-111

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

	MEAN	755	768	958	1559	1486	1485	1198	975	971	630	890	661
MAX	1943	1615	1700	2438	2659	2093	1855	1597	2103	785	2078	1146	
(WY)	1996	1993	1993	1995	1998	1993	1993	1993	1992	1995	1994	1995	
MIN	228	379	485	923	799	1141	689	470	428	460	364	331	
(WY)	1994	1994	1998	1997	1992	1992	1995	1996	1994	1993	1997	1993	

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1991 - 1998
ANNUAL TOTAL	289888	395231	
ANNUAL MEAN	794	1083	1025 (UNADJUSTED)
HIGHEST ANNUAL MEAN			1230 1993
LOWEST ANNUAL MEAN			855 1994
HIGHEST DAILY MEAN	2530	Mar 20	4450 Feb 4 12300 Aug 18 1994
LOWEST DAILY MEAN	201	Dec 21	201 Dec 21 86 Oct 12 1993
ANNUAL SEVEN-DAY MINIMUM	249	Oct 14	249 Oct 14 112 Oct 10 1993
INSTANTANEOUS PEAK FLOW			5610 Apr 19 12300 Aug 18 1994
INSTANTANEOUS PEAK STAGE			6.28 Apr 19 16.40 Aug 18 1994
INSTANTANEOUS LOW FLOW			61* Oct 1 61* Oct 1 1997
10 PERCENT EXCEEDS	1500	2490	1970
50 PERCENT EXCEEDS	674	686	791
90 PERCENT EXCEEDS	281	287	305

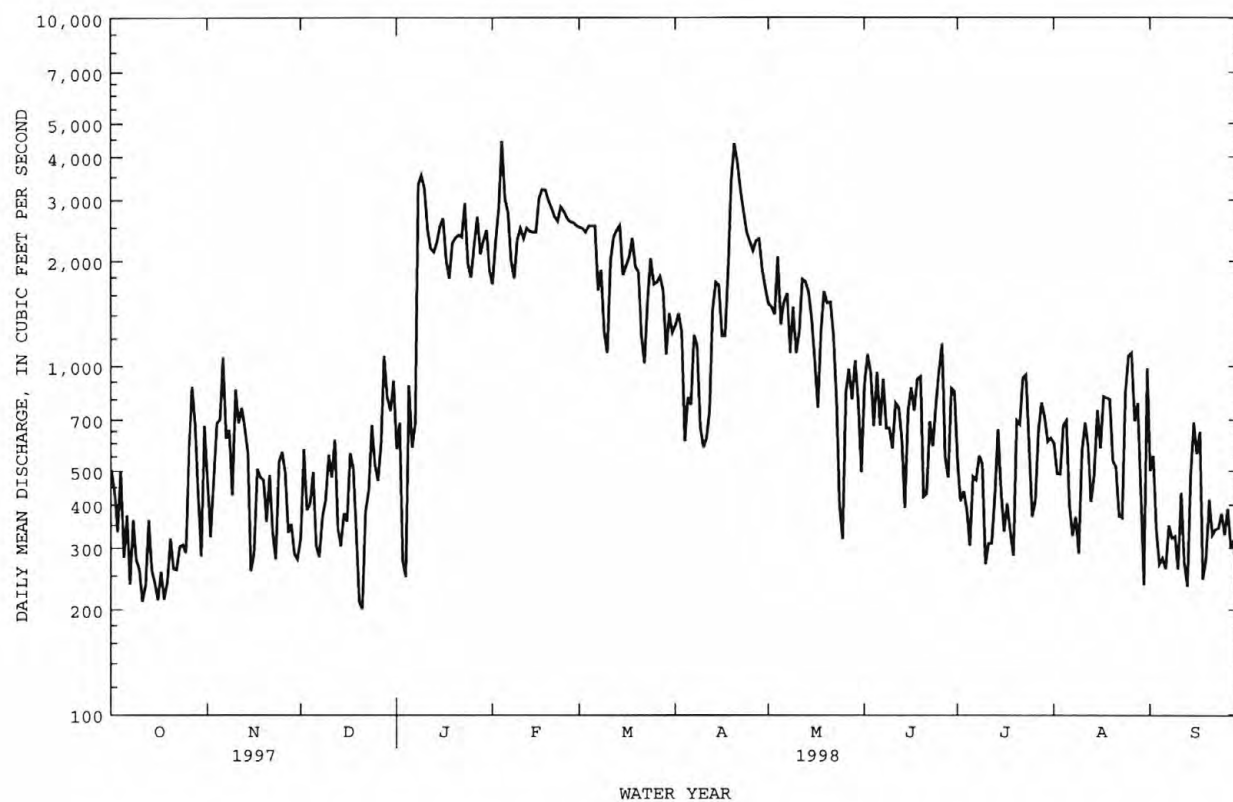
† Change in contents, equivalent in cubic feet per second, in Lake James, provided by Duke Power Company.

‡ Adjusted for change in contents.

\* See REMARKS.

## SANTEE RIVER BASIN

0213903612 CATAWBA RIVER AT CALVIN, NC--Continued



## SANTÉE RIVER BASIN

02140991 JOHNS RIVER AT ARNEYS STORE, NC

LOCATION.--Lat 35°50'01", long 81°42'43", Burke County, Hydrologic Unit 03050101, on right bank 12 ft downstream of bridge on Secondary Road 1438, 0.2 mi downstream of Sims Branch, and 0.8 mi northeast of Arneys Store.

DRAINAGE AREA.--201 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional discharge measurements, water years 1974-84. May 1985 to current year.

REVISED RECORDS.--WDR NC-87-1: 1985-86 (P).

GAGE.--Water-stage recorder. Datum of gage is 1,001.74 ft above sea level. Telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge for period of record from rating curve extended above 11,000 ft<sup>3</sup>/s on basis of slope-area measurement; maximum gage height from high-water mark in gage house. Minimum discharge for period of record also occurred Aug. 20, 1988. Minimum discharge for current water year also occurred Sept. 7, 8, 17, 18, 19, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	142	150	163	429	471	436	749	292	195	205	86
2	108	179	136	159	384	438	389	826	280	185	145	86
3	107	170	127	160	533	413	368	658	266	174	124	86
4	107	146	175	158	2280	387	445	747	262	167	113	86
5	103	135	175	163	1440	367	390	712	370	165	106	85
6	100	131	145	199	892	350	355	627	336	171	103	78
7	97	132	132	635	697	341	340	707	294	168	100	77
8	96	145	127	5140	588	966	336	998	252	165	107	81
9	96	131	128	1230	510	2360	692	775	249	172	128	170
10	99	126	139	674	452	1330	515	726	525	166	142	125
11	99	125	154	487	447	879	434	689	543	150	134	106
12	96	122	142	395	545	709	393	616	439	140	109	96
13	99	128	131	339	450	614	368	555	327	141	100	90
14	99	153	127	296	420	559	359	518	289	138	326	85
15	98	152	123	501	388	510	350	496	278	134	637	81
16	95	133	120	734	574	470	354	467	300	129	392	79
17	96	123	119	541	2680	448	3860	448	318	128	230	79
18	100	122	117	436	1930	467	1340	423	249	122	193	77
19	140	120	116	415	1080	777	2210	405	236	118	156	79
20	165	119	114	367	826	1690	2660	382	236	119	139	82
21	114	120	113	325	692	1530	1290	368	221	108	128	88
22	105	149	148	308	601	944	957	359	221	138	118	115
23	100	148	188	617	793	750	796	350	236	120	112	98
24	103	129	175	574	745	650	693	344	217	130	107	87
25	139	122	387	486	635	574	620	332	208	188	101	84
26	382	119	246	419	570	525	566	323	201	156	99	84
27	433	119	282	809	548	493	535	364	194	244	96	81
28	204	117	302	1500	518	467	522	329	186	197	91	107
29	159	116	234	784	---	442	478	307	180	146	90	170
30	142	128	209	610	---	419	504	311	185	128	86	100
31	133	---	185	500	---	402	---	306	---	144	87	---
TOTAL	4130	4001	5166	20124	22647	21742	23555	16217	8390	4746	4804	2828
MEAN	133	133	167	649	809	701	785	523	280	153	155	94.3
MAX	433	179	387	5140	2680	2360	3860	998	543	244	637	170
MIN	95	116	113	158	384	341	336	306	180	108	86	77
CFSM	.66	.66	.83	3.23	4.02	3.49	3.91	2.60	1.39	.76	.77	.47
IN.	.76	.74	.96	3.72	4.19	4.02	4.36	3.00	1.55	.88	.89	.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1998, BY WATER YEAR (WY)

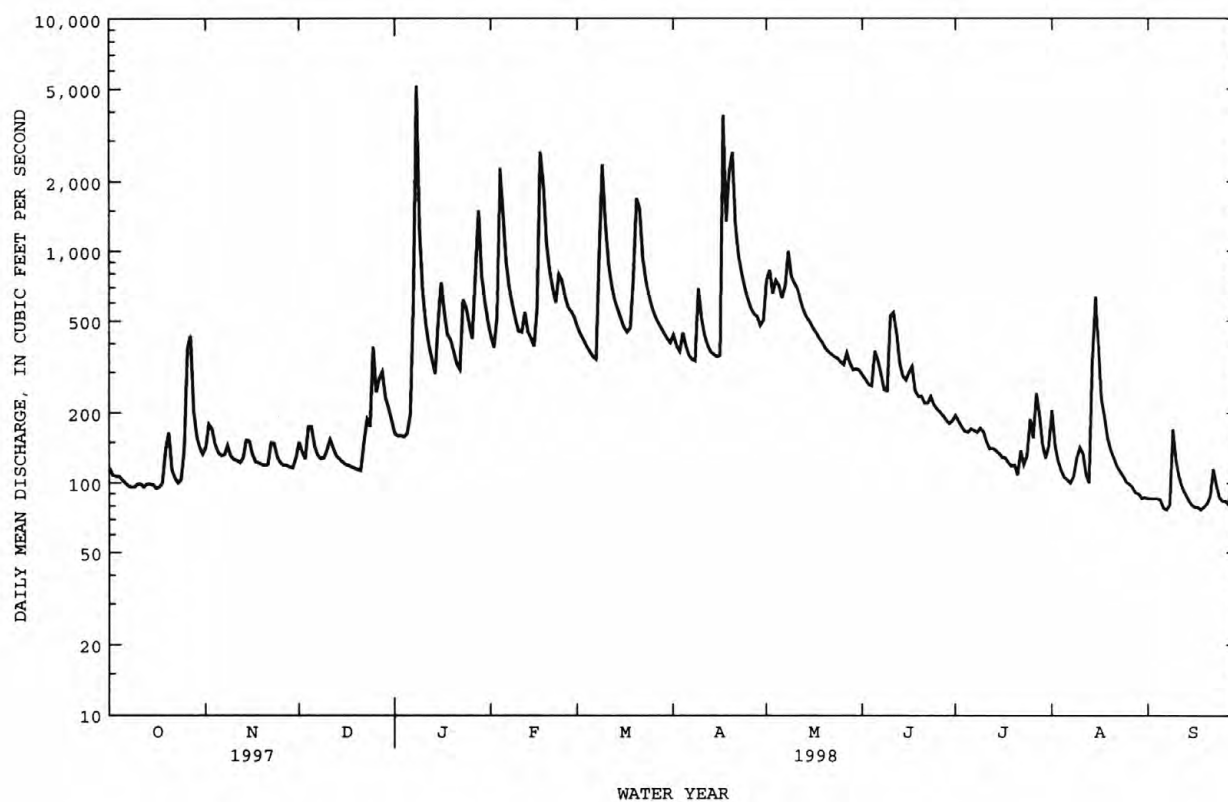
MEAN	305	359	337	494	456	603	502	376	356	248	323	241
MAX	890	938	602	1388	838	1151	883	595	963	570	1070	808
(WY)	1991	1993	1997	1995	1990	1993	1987	1993	1992	1989	1994	1989
MIN	85.7	133	113	180	206	179	206	166	96.9	75.5	65.5	94.3
(WY)	1989	1998	1989	1989	1988	1988	1986	1988	1988	1988	1988	1998

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1985 - 1998
ANNUAL TOTAL	115575	138350	
ANNUAL MEAN	317	379	385
HIGHEST ANNUAL MEAN			502
LOWEST ANNUAL MEAN			169
HIGHEST DAILY MEAN	3420	5140	16100
LOWEST DAILY MEAN	87	77	35
ANNUAL SEVEN-DAY MINIMUM	95	80	45
INSTANTANEOUS PEAK FLOW		8570	42300*
INSTANTANEOUS PEAK STAGE		15.74	25.23*
INSTANTANEOUS LOW FLOW		77*	33*
ANNUAL RUNOFF (CFSM)	1.58	1.89	1.91
ANNUAL RUNOFF (INCHES)	21.39	25.61	26.01
10 PERCENT EXCEEDS	566	729	657
50 PERCENT EXCEEDS	283	208	270
90 PERCENT EXCEEDS	103	99	118

\* See REMARKS.

## SANTÉE RIVER BASIN

02140991 JOHNS RIVER AT ARNEYS STORE, NC--Continued



## SANTÉE RIVER BASIN

02142000 LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, NC

LOCATION.--Lat 35°56'44", long 81°14'13", Alexander County, Hydrologic Unit 03050101, on left bank at upstream side of bridge on Secondary Road 1313, 0.3 mi downstream of Grassy Creek, 0.4 mi upstream from Lambert Creek, 2.2 mi northeast of All Healing Springs, and 4 mi northwest of Taylorsville.

DRAINAGE AREA.--28.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October to December 1952 (monthly discharge only), January 1953 to September 1995, October 1997 to current year.

REVISED RECORDS.--WDR NC-79-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,070 ft above sea level, by barometer. Prior to June 13, 1953, nonrecording gage at same site and datum. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Minimum discharge for period of record also occurred Sept. 21, 1955. Minimum discharge for current water year also occurred on Sept. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	18	21	65	58	49	159	58	31	21	12
2	15	30	16	20	59	56	46	112	53	30	17	11
3	16	23	16	21	89	54	47	81	50	28	16	13
4	15	21	21	21	207	52	57	80	51	28	15	18
5	15	19	18	21	128	51	47	73	54	28	15	13
6	14	19	17	22	91	49	46	64	59	27	15	13
7	14	19	16	33	77	50	45	478	53	25	14	13
8	14	18	16	500	69	196	47	249	49	27	15	28
9	14	17	16	94	63	194	63	117	50	27	22	18
10	14	17	19	60	59	105	52	112	163	25	28	e15
11	15	17	18	47	61	77	48	108	71	23	22	e14
12	15	17	16	41	61	66	46	84	55	23	17	e13
13	15	19	15	37	56	60	45	75	50	23	17	e13
14	17	20	15	34	53	56	45	70	44	22	17	e12
15	17	18	15	102	51	53	45	65	47	22	29	12
16	15	17	15	102	78	51	47	62	46	21	29	12
17	15	16	15	63	176	50	923	58	41	22	22	11
18	e16	17	14	49	117	54	143	55	38	20	19	11
19	e23	16	14	47	84	122	285	53	37	19	18	11
20	e20	16	14	40	74	141	185	52	36	18	17	11
21	16	17	14	37	66	114	104	51	35	18	16	16
22	16	22	19	39	61	82	83	50	35	19	16	16
23	15	18	17	93	91	70	72	50	39	19	15	13
24	16	17	25	66	78	63	65	50	44	20	15	13
25	18	16	36	51	69	58	59	49	40	23	14	13
26	37	16	25	43	64	55	55	49	35	20	14	12
27	37	16	51	313	66	53	55	60	33	26	13	12
28	23	16	41	295	62	51	53	54	32	20	13	12
29	20	16	32	120	---	49	50	50	32	19	13	12
30	19	18	27	88	---	48	55	127	31	17	12	13
31	18	---	23	73	---	48	---	76	---	25	12	---
TOTAL	550	548	634	2593	2275	2286	2962	2873	1461	715	538	406
MEAN	17.7	18.3	20.5	83.6	81.3	73.7	98.7	92.7	48.7	23.1	17.4	13.5
MAX	37	30	51	500	207	196	923	478	163	31	29	28
MIN	14	16	14	20	51	48	45	49	31	17	12	11
CFSM	.63	.65	.73	2.97	2.88	2.61	3.50	3.29	1.73	.82	.62	.48
IN.	.73	.72	.84	3.42	3.00	3.02	3.91	3.79	1.93	.94	.71	.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	28.9	28.9	36.6	44.0	52.7	60.9	59.9	43.4	38.2	28.1	27.7	26.1
MAX	103	115	76.3	117	134	153	137	98.5	106	88.1	123	102	
(WY)	1965	1978	1984	1978	1960	1975	1958	1975	1975	1984	1970	1979	
MIN	6.04	7.03	8.16	9.36	22.4	21.1	18.8	16.4	10.1	9.11	4.86	4.75	
(WY)	1955	1956	1956	1956	1956	1956	1966	1956	1956	1954	1956	1954	

## Santee River Basin

02142000 LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, NC--Continued

## SUMMARY STATISTICS

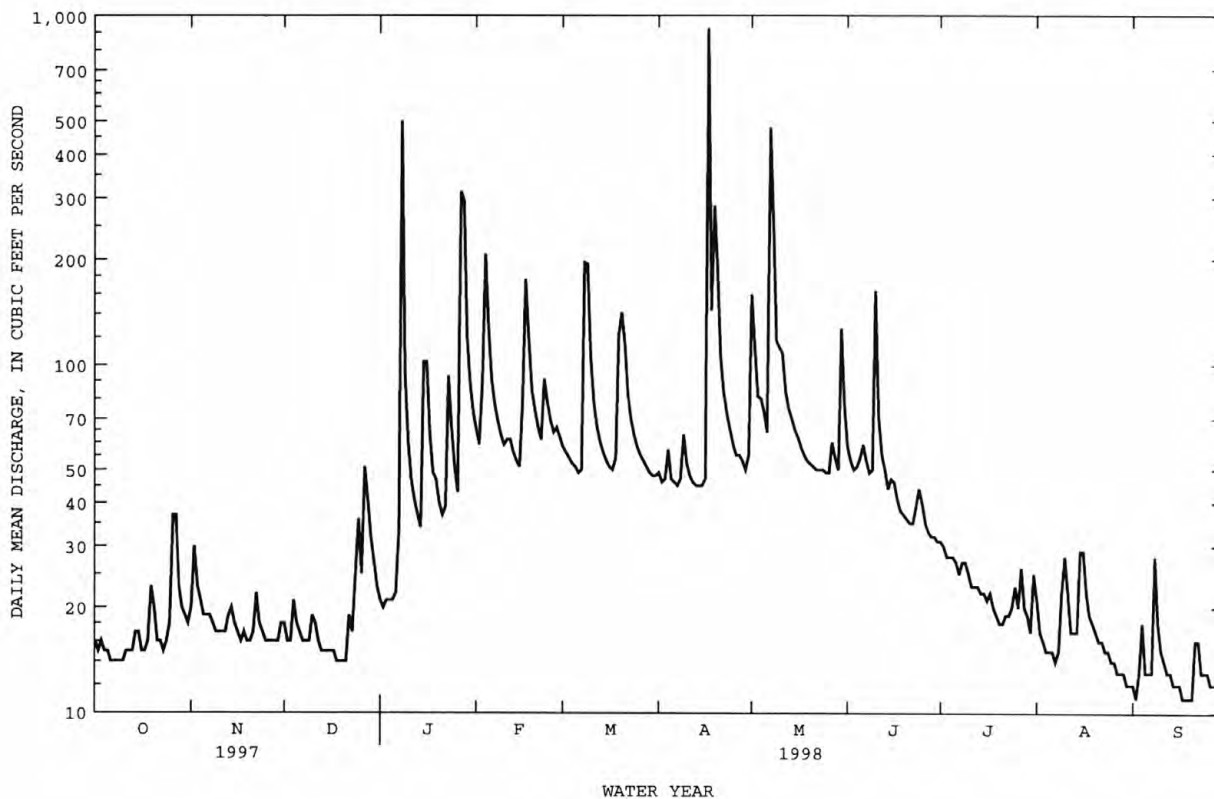
FOR 1998 WATER YEAR

WATER YEARS 1953 - 1998<sup>e</sup>

ANNUAL TOTAL	17841		
ANNUAL MEAN	48.9		39.7
HIGHEST ANNUAL MEAN			65.2
LOWEST ANNUAL MEAN			14.9
HIGHEST DAILY MEAN	923	Apr 17	2270
LOWEST DAILY MEAN	11	Sep 2	3.1
ANNUAL SEVEN-DAY MINIMUM	11	Sep 14	3.4
INSTANTANEOUS PEAK FLOW	2690	Apr 17	4850
INSTANTANEOUS PEAK STAGE	12.63	Apr 17	15.68
INSTANTANEOUS LOW FLOW	9.4*	Sep 2	2.9*
ANNUAL RUNOFF (CFSM)	1.73		1.41
ANNUAL RUNOFF (INCHES)	23.53		19.15
10 PERCENT EXCEEDS	86		68
50 PERCENT EXCEEDS	30		27
90 PERCENT EXCEEDS	14		13

<sup>e</sup> Estimated.<sup>ee</sup> See PERIOD OF RECORD.

\* See REMARKS.



## SANTEE RIVER BASIN

0214253830 NORWOOD CREEK NEAR TROUTMAN, NC

LOCATION.--Lat 35°40'48", long 80°56'44", Iredell County, Hydrologic Unit 03040102, on left upstream wingwall of culvert on Secondary Road 1328, 0.4 mi upstream from Lake Norman, 0.7 mi downstream of Powder Spring Branch, 1.0 mi northeast of East Monbo, and 3.7 mi southwest of Troutman.

DRAINAGE AREA.--7.18 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 761.09 ft above sea level.

REMARKS.--No estimated daily discharges. Records fair. Maximum discharge for period of record, from rating curve extended above 400 ft<sup>3</sup>/s by logarithmic plotting. Minimum discharge for current water year also occurred Aug. 28, 31, and Sept. 1, 2, 3, 27, 28. Maximum discharge for current water year also occurred Mar. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	4.8	6.1	5.9	9.9	5.9	7.9	9.7	6.4	3.9	3.4	2.1
2	3.5	5.0	5.4	5.8	9.5	5.7	7.5	9.4	6.1	3.8	3.0	2.1
3	3.5	4.5	5.3	5.7	23	5.4	7.2	8.5	6.0	3.7	2.9	3.0
4	3.5	4.3	6.2	5.8	44	5.2	8.2	8.5	6.0	3.7	2.8	4.0
5	3.5	4.2	5.6	5.7	19	5.1	7.2	9.0	6.5	3.6	2.7	2.7
6	3.5	4.2	5.4	5.6	13	5.0	7.0	8.0	8.8	3.5	2.7	2.5
7	3.4	4.3	5.2	6.5	11	5.1	6.8	9.3	7.3	3.5	2.6	2.5
8	3.4	4.2	5.1	24	9.9	55	6.6	8.9	6.4	3.6	2.7	2.9
9	3.4	4.2	5.2	10	9.1	99	9.8	8.2	6.3	3.6	3.0	2.7
10	3.5	4.1	5.5	7.2	8.6	15	7.6	7.8	31	3.4	3.2	2.5
11	3.5	4.1	5.3	6.3	9.1	11	7.1	8.2	11	3.2	3.1	2.5
12	3.5	4.1	5.1	5.8	11	10	6.7	7.5	8.1	3.3	2.8	2.5
13	3.5	4.8	5.1	5.6	9.0	9.5	6.6	7.2	6.9	3.2	2.7	2.4
14	3.6	5.5	5.0	5.4	8.4	9.2	6.6	7.0	6.3	3.2	2.7	2.3
15	3.7	4.7	5.0	29	7.7	9.1	6.4	6.9	6.2	3.1	3.4	2.3
16	3.6	4.5	4.9	38	8.8	8.9	7.0	6.7	5.9	3.6	3.6	2.3
17	3.6	4.3	4.9	17	25	8.7	44	6.5	5.6	3.4	3.3	2.3
18	3.7	4.3	4.9	8.8	13	8.7	12	6.4	5.5	3.2	3.0	2.3
19	6.2	4.2	4.9	12	8.2	12	53	6.2	5.5	3.1	2.8	2.3
20	4.2	4.2	4.9	8.4	6.9	18	22	6.1	5.3	3.0	2.7	2.3
21	3.9	4.6	4.9	6.8	6.3	13	12	6.1	5.2	3.0	2.6	2.4
22	4.0	8.8	6.1	6.4	5.7	10	10	6.0	5.1	2.9	2.6	2.6
23	3.9	6.1	5.6	17	7.2	9.7	10	5.9	5.0	2.9	2.5	2.3
24	4.0	5.6	10	9.6	6.3	9.1	9.5	5.9	4.8	3.0	2.4	2.2
25	4.1	5.3	13	7.1	6.0	8.8	9.2	5.9	4.7	3.9	2.4	2.3
26	9.7	5.2	7.6	6.2	5.8	8.7	8.8	8.8	4.6	4.0	2.3	2.2
27	9.3	5.1	18	136	6.7	8.5	8.7	10	4.5	3.4	2.2	2.1
28	4.9	5.0	12	59	6.4	8.4	8.7	7.5	4.2	3.3	2.1	2.1
29	4.5	5.0	8.5	12	---	8.3	8.2	7.1	4.1	3.3	2.2	2.2
30	4.3	5.2	7.2	13	---	8.0	8.6	6.9	4.1	3.0	2.2	2.3
31	4.3	---	6.4	11	---	8.0	---	6.6	---	3.4	2.1	---
TOTAL	130.7	144.4	204.3	502.6	314.5	412.0	340.9	232.7	203.4	104.7	84.7	73.2
MEAN	4.22	4.81	6.59	16.2	11.2	13.3	11.4	7.51	6.78	3.38	2.73	2.44
MAX	9.7	8.8	18	136	44	99	53	10	31	4.0	3.6	4.0
MIN	3.4	4.1	4.9	5.4	5.7	5.0	6.4	5.9	4.1	2.9	2.1	2.1
CFSM	.59	.67	.92	2.26	1.56	1.85	1.58	1.05	.94	.47	.38	.34
IN.	.68	.75	1.06	2.60	1.63	2.13	1.77	1.21	1.05	.54	.44	.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1998, BY WATER YEAR (WY)

	MEAN	9.87	8.08	9.03	11.8	14.4	14.8	11.8	7.75	6.96	5.97	5.80	4.75
MAX	36.1	16.9	15.8	21.0	25.1	35.2	24.2	15.2	24.4	22.1	13.0	10.5	
(WY)	1991	1993	1984	1993	1990	1993	1997	1990	1992	1989	1994	1989	
MIN	3.01	3.88	4.23	4.97	5.14	6.23	3.60	2.86	1.61	1.90	2.62	2.43	
(WY)	1987	1994	1989	1986	1986	1985	1986	1986	1986	1986	1987	1986	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1984 - 1998

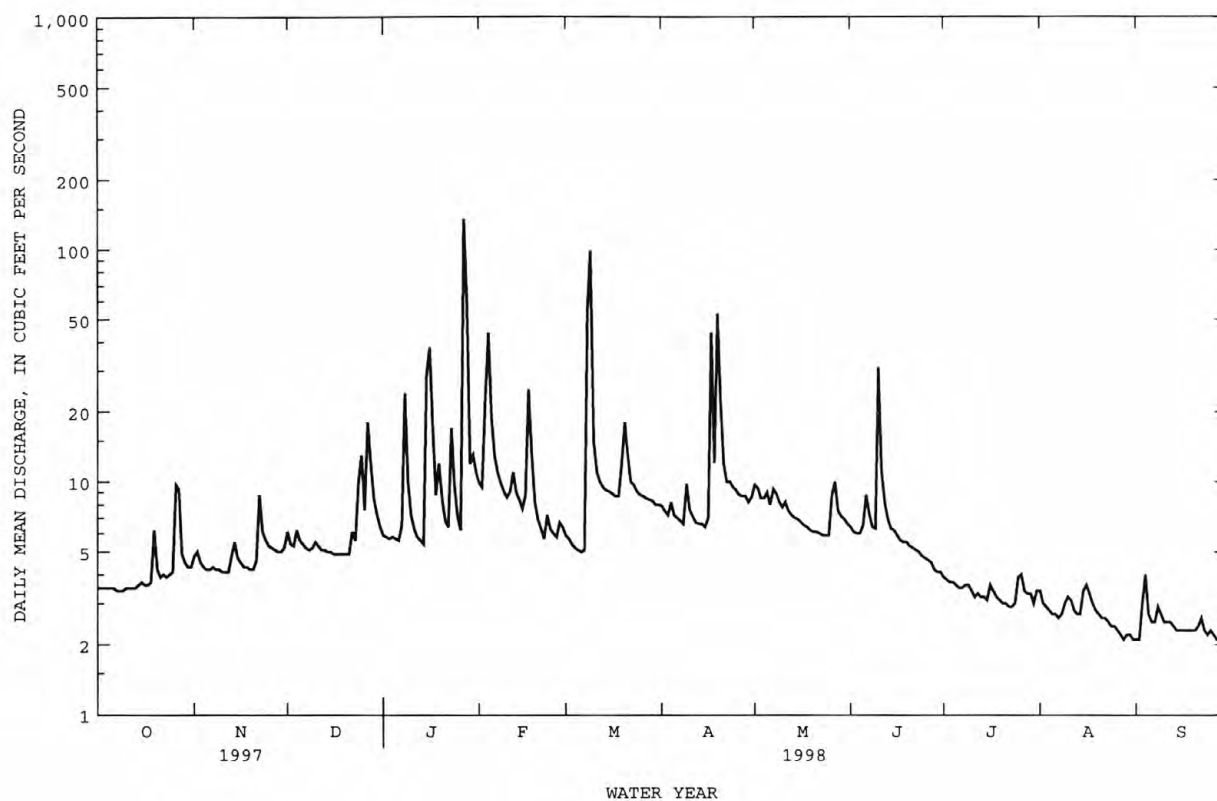
ANNUAL TOTAL	3086.4	2748.1	
ANNUAL MEAN	8.46	7.53	9.04
HIGHEST ANNUAL MEAN			13.1
LOWEST ANNUAL MEAN			4.73
HIGHEST DAILY MEAN	275	136	387
LOWEST DAILY MEAN	3.1	2.1	.82
ANNUAL SEVEN-DAY MINIMUM	3.1	2.1	.99
INSTANTANEOUS PEAK FLOW		394*	1480*
INSTANTANEOUS PEAK STAGE		6.66	9.20
INSTANTANEOUS LOW FLOW		2.0*	.67
ANNUAL RUNOFF (CFSM)	1.18	1.05	1.26
ANNUAL RUNOFF (INCHES)	15.99	14.24	17.12
10 PERCENT EXCEEDS	9.9	10	13
50 PERCENT EXCEEDS	5.7	5.5	5.8
90 PERCENT EXCEEDS	3.5	2.6	3.3

\* See REMARKS.



## SANTEE RIVER BASIN

0214253830 NORWOOD CREEK NEAR TROUTMAN, NC--Continued



## SANTEE RIVER BASIN

0214266000 MCDOWELL CREEK NEAR CHARLOTTE, NC

LOCATION.--Lat 35°23'22", long 80°55'16", Mecklenburg County, Hydrologic Unit 03050101, on right bank at downstream side of bridge on Secondary Road 2074, 2.1 mi downstream of Torrence Creek, 2.8 mi south of Hicks Crossroads, 12.1 mi northwest of City Hall, Charlotte.

DRAINAGE AREA.--26.3-mi<sup>2</sup>.

PERIOD OF RECORD.--November 1996 to current year. Streamflow data for November 1996 through September 1997 previously published in U.S. Geological Survey Open-File Report 98-67.

GAGE.--Water-stage recorder. Elevation of gage is 635 ft above sea level, from topographic map. Telephone telemetry at site.

REMARKS.--Records fair. Minimum discharge for current water year also occurred Sept 3, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	38	90	33	42	28	21	46	11	8.4	7.9	4.3
2	18	58	41	34	39	25	18	27	9.4	5.4	4.8	3.2
3	18	37	33	34	196	23	20	23	12	5.5	5.1	39
4	17	34	34	33	410	22	29	20	12	5.0	4.6	52
5	17	32	30	31	151	21	20	23	28	4.9	4.4	7.8
6	17	31	26	42	69	20	17	17	13	5.3	3.8	5.9
7	16	33	24	93	44	23	17	82	10	4.6	5.7	5.6
8	17	29	24	99	36	365	17	75	9.1	5.0	8.2	14
9	16	29	26	54	30	260	117	33	8.8	4.8	25	7.7
10	15	27	34	40	27	52	29	22	36	5.0	18	5.0
11	15	21	31	35	27	35	22	23	13	3.7	7.6	5.0
12	16	20	27	33	29	30	19	17	12	5.0	5.7	4.3
13	15	43	27	32	25	27	19	16	13	4.5	10	4.5
14	25	93	26	30	23	27	20	15	8.6	4.0	5.7	4.4
15	15	33	26	96	22	23	19	15	9.1	4.3	18	4.3
16	42	26	26	357	90	23	19	14	7.9	7.5	18	4.7
17	15	26	25	224	324	22	122	14	7.6	5.4	14	4.4
18	16	25	25	52	77	35	42	14	7.7	3.9	6.1	4.1
19	91	25	25	123	41	134	131	15	7.5	4.3	5.4	4.1
20	104	25	26	56	33	45	82	12	7.0	11	5.1	3.7
21	24	56	25	35	29	36	33	11	6.8	18	4.6	10
22	26	223	127	44	26	28	25	11	7.0	5.3	4.7	6.3
23	23	39	53	226	77	25	23	11	11	4.8	4.4	4.0
24	24	31	190	74	38	23	20	11	6.5	5.0	4.2	4.2
25	25	30	153	55	29	21	19	11	6.6	11	4.0	3.6
26	233	31	49	48	27	20	18	10	5.6	8.4	3.7	4.1
27	105	26	90	364	57	20	25	12	6.0	14	4.0	3.4
28	42	26	58	373	35	20	25	13	5.6	6.1	3.4	3.3
29	37	24	46	67	---	19	17	11	6.0	5.1	3.3	4.9
30	32	49	53	51	---	19	33	72	8.9	4.7	5.7	5.3
31	31	---	45	46	---	18	---	18	---	14	4.3	---
TOTAL	1126	1220	1515	2914	2053	1489	1038	714	312.7	203.9	229.4	237.1
MEAN	36.3	40.7	48.9	94.0	73.3	48.0	34.6	23.0	10.4	6.58	7.40	7.90
MAX	233	223	190	373	410	365	131	82	36	18	25	52
MIN	15	20	24	30	22	18	17	10	5.6	3.7	3.3	3.2
CFSM	1.38	1.55	1.86	3.57	2.79	1.83	1.32	.88	.40	.25	.28	.30
IN.	1.59	1.73	2.14	4.12	2.90	2.11	1.47	1.01	.44	.29	.32	.34

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

	MEAN	36.3	40.7	40.0	64.4	67.3	43.2	36.3	25.2	10.7	17.2	7.08	16.0
MAX	36.3	40.7	48.9	94.0	73.3	48.0	37.9	27.4	10.9	27.9	7.40	24.0	
(WY)	1998	1998	1998	1998	1998	1998	1997	1997	1997	1997	1998	1997	
MIN	36.3	40.7	31.1	34.7	61.2	38.3	34.6	23.0	10.4	6.58	6.77	7.90	
(WY)	1998	1998	1997	1997	1997	1997	1998	1998	1998	1998	1997	1998	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

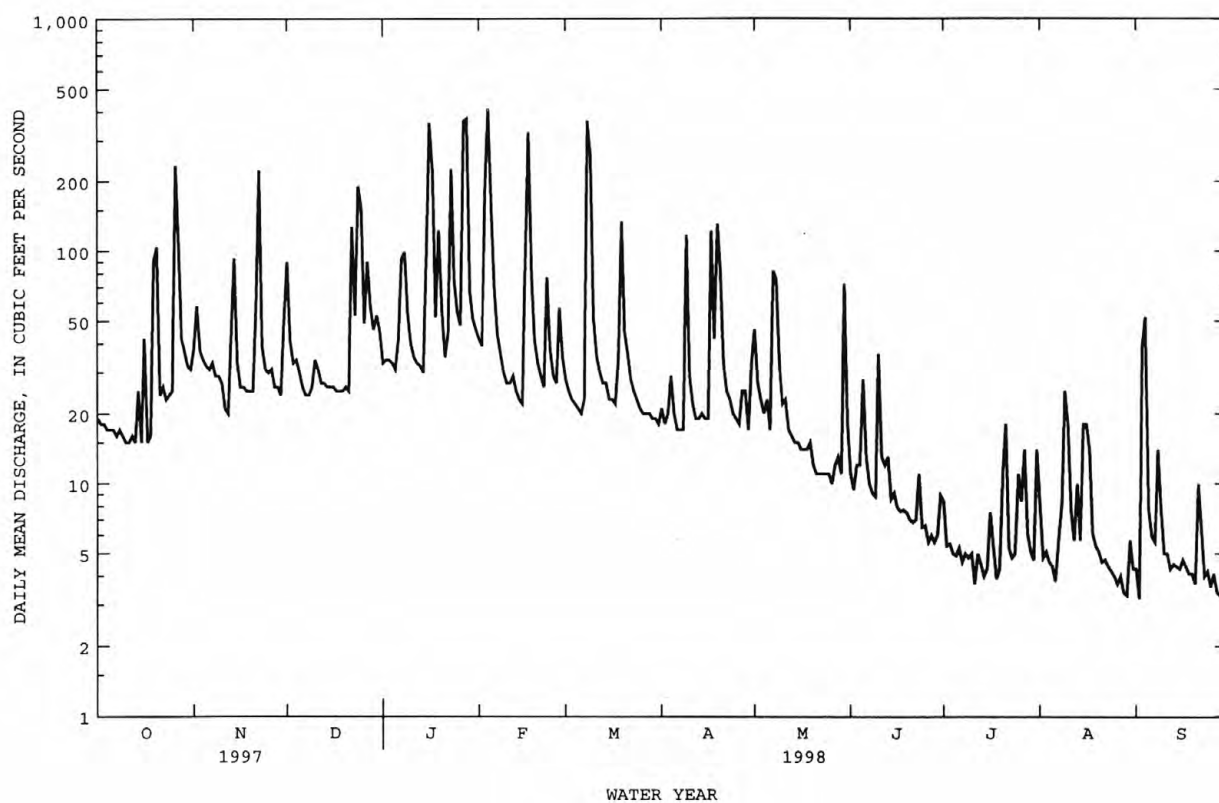
## WATER YEARS 1997 - 1998

ANNUAL TOTAL	11950.1	13052.1	
ANNUAL MEAN	32.7	35.8	
HIGHEST ANNUAL MEAN			35.8
LOWEST ANNUAL MEAN			35.8
HIGHEST DAILY MEAN	477	Jul 23	477
LOWEST DAILY MEAN	2.6	Sep 5	2.6
ANNUAL SEVEN-DAY MINIMUM	3.1	Sep 1	3.1
INSTANTANEOUS PEAK FLOW			995
INSTANTANEOUS PEAK STAGE			11.11
INSTANTANEOUS LOW FLOW			2.4*
ANNUAL RUNOFF (CFSM)	1.24		1.36
ANNUAL RUNOFF (INCHES)	16.90		18.46
10 PERCENT EXCEEDS	53		74
50 PERCENT EXCEEDS	18		22
90 PERCENT EXCEEDS	5.2		4.7

\* See REMARKS.

## SANTEE RIVER BASIN

0214266000 MCDOWELL CREEK NEAR CHARLOTTE, NC--Continued



## SANTEE RIVER BASIN

0214269560 KILLIAN CREEK NEAR MARIPOSA, NC

LOCATION.--Lat 35°26'03", long 81°01'49", Lincoln County, Hydrologic Unit 03050305, on right bank, 1,000 ft upstream from Forney Creek, 1.5 mi northwest of Lowesville, 1.7 mi upstream from bridge on Secondary Road 1511, and 2.4 mi northeast of Mariposa.

DRAINAGE AREA.--36.4 mi<sup>2</sup>.

PERIOD OF RECORD.-- October 1990 to June 1993, December 1994 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 643.085 ft above sea level (levels by Duke Power Co). Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Station was established to study low-flow conditions for Duke Power Co., no structure exists near the site for measuring high-stage flow; therefore, a peak flow was not determined to coincide with the peak stage for the year. Missing values on the daily values table are days when the flow exceeded the rating. Minimum discharges may be affected by diversions by Duke Power.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	25	32	34	46	55	47	---	27	17	13	6.4
2	11	27	28	32	43	53	45	59	25	17	11	6.1
3	12	23	25	32	---	52	40	---	25	18	10	10
4	12	20	34	31	---	50	47	---	27	16	9.9	28
5	12	19	29	31	---	50	41	---	32	15	9.6	11
6	e11	19	26	31	---	49	43	51	31	15	9.4	9.3
7	e11	19	24	33	---	50	40	---	28	14	9.2	9.7
8	e10	19	24	---	64	---	39	---	25	14	10	12
9	e11	18	24	58	59	---	---	58	24	14	12	12
10	11	18	28	43	56	---	53	48	34	14	13	9.7
11	12	18	26	39	55	---	46	45	32	13	9.8	9.3
12	12	18	24	35	61	66	43	41	25	13	8.6	8.9
13	12	25	23	34	55	61	42	39	24	14	8.1	8.9
14	13	36	23	31	53	58	42	38	24	13	8.2	8.4
15	13	26	22	---	51	55	41	37	23	11	25	7.5
16	12	22	22	---	---	54	41	36	22	11	35	6.8
17	13	21	23	---	---	53	---	34	21	13	18	7.2
18	13	21	22	58	---	53	---	33	19	13	13	7.1
19	24	20	22	---	70	---	---	30	18	11	11	6.5
20	20	20	21	59	62	---	---	27	20	9.5	11	7.1
21	14	25	21	48	57	---	---	28	19	9.2	11	8.4
22	14	---	46	44	55	61	67	29	20	9.4	10	10
23	13	40	40	---	---	57	62	28	22	9.3	8.5	8.6
24	13	31	---	---	63	55	58	28	19	11	7.7	8.4
25	15	27	---	50	56	53	55	28	17	14	7.8	8.0
26	---	25	50	44	54	52	53	27	17	12	7.1	7.9
27	---	24	55	---	62	51	54	27	15	17	6.3	7.1
28	33	23	57	---	60	50	58	29	16	15	6.6	6.1
29	25	22	45	---	---	50	53	24	16	13	6.6	8.6
30	23	26	41	58	---	49	56	31	16	12	8.1	8.9
31	21	---	39	50	---	47	---	32	---	12	7.3	---

## SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1991 - 1998<sup>a</sup>

LOWEST DAILY MEAN  
INSTANTANEOUS PEAK STAGE  
INSTANTANEOUS LOW FLOW

8.0 Sep 9

6.1 Sep 2  
9.12 Mar 8  
5.7 Sep 2

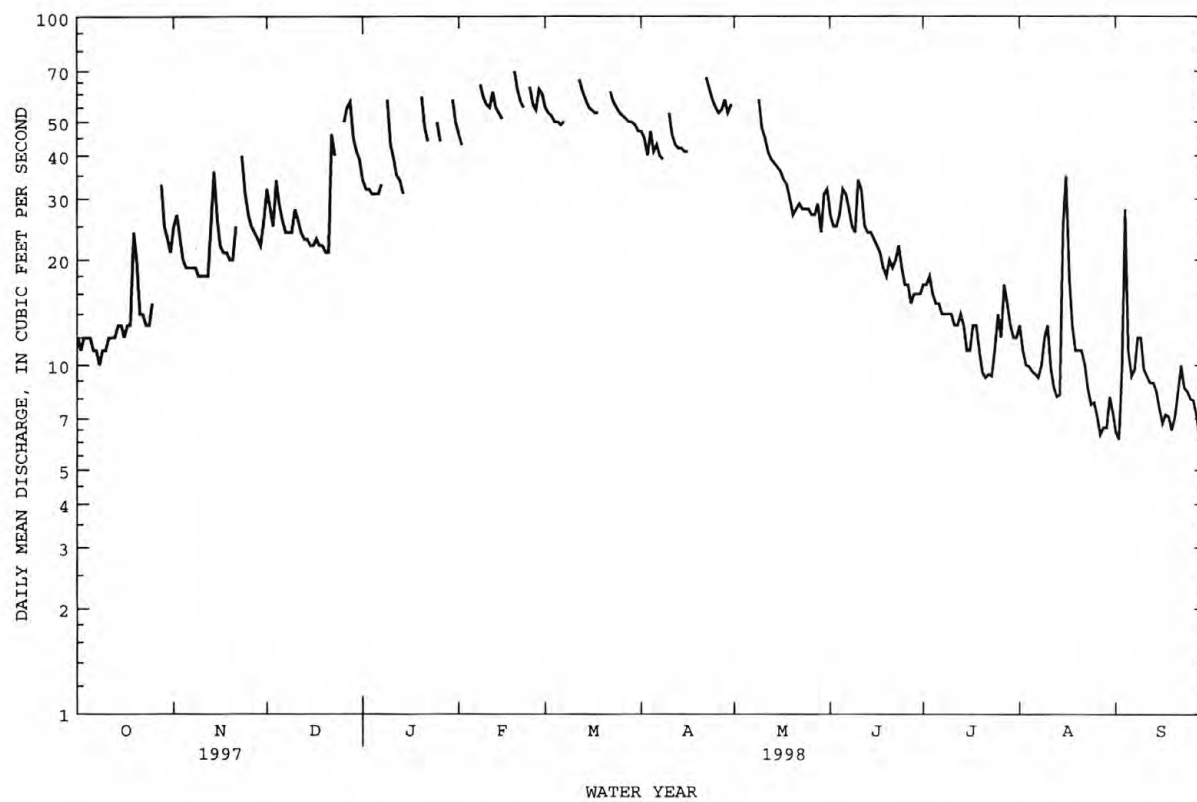
6.1 Sep 2 1998  
15.25 Apr 29 1997  
5.7 Sep 2 1998

e Estimated.

<sup>a</sup> See PERIOD OF RECORD.

## SANTÉE RIVER BASIN

0214269560 KILLIAN CREEK NEAR MARIPOSA, NC--Continued



## SANTÉE RIVER BASIN

02142900 LONG CREEK NEAR PAW CREEK, NC

LOCATION.--Lat 35°19'42", long 80°54'35", Mecklenburg County, Hydrologic Unit 03050101, on right bank at upstream side of bridge on Secondary Road 2042, 600 ft downstream of McIntyre Creek, 1.2 mi upstream from Gutter Branch, and 3.6 mi north of Paw Creek.

DRAINAGE AREA.--16.4 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1965 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 648.7 ft above sea level. Telephone telemetry at station.

REMARKS.--Records fair, except those for estimated daily discharges, which are poor. Frequent diversions during summer months for irrigation by upstream golf course. Minimum discharge for period of record also occurred Oct. 2, 3, 1986, and Sept. 3, 1987. Minimum discharge for current water year affected by regulation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	17	102	16	13	e24	13	35	9.1	8.7	8.1	1.3
2	4.9	27	26	14	12	e20	11	16	6.9	2.6	2.7	1.1
3	3.8	7.4	14	13	185	e18	12	12	5.8	2.4	2.1	57
4	3.6	8.2	13	12	263	e16	39	10	7.2	2.0	1.8	74
5	3.5	4.3	12	11	72	15	13	10	25	1.9	1.6	12
6	3.4	3.9	10	38	43	15	10	8.8	14	1.7	1.3	5.6
7	3.3	4.6	9.7	89	27	16	9.5	29	8.7	1.6	2.2	4.4
8	3.3	3.8	9.6	216	20	312	9.0	28	5.7	2.0	18	4.6
9	3.4	3.5	13	42	17	184	259	16	5.3	1.5	16	3.8
10	3.6	3.4	25	24	15	44	31	11	21	.85	5.6	2.9
11	3.9	3.4	18	18	16	27	18	18	13	1.1	2.7	2.9
12	4.0	3.4	14	15	20	21	14	10	7.8	1.1	1.9	2.9
13	4.0	23	13	e14	13	18	13	8.9	11	1.1	12	2.6
14	4.3	68	e12	e16	11	16	14	8.3	4.7	2.7	6.4	2.2
15	4.2	12	e11	e60	10	15	12	7.7	4.4	1.3	20	2.2
16	3.3	7.6	e10	e300	74	15	9.9	7.2	4.1	16	32	1.9
17	3.2	5.9	e9.0	e150	358	14	77	6.4	3.8	7.9	34	2.4
18	4.2	5.4	e8.0	e60	53	37	29	5.6	3.7	2.7	7.0	2.8
19	77	5.1	e7.0	e100	34	118	71	5.2	3.6	1.9	4.2	2.0
20	14	5.0	e6.0	e50	29	34	52	4.9	3.8	2.5	3.2	1.9
21	6.2	35	e5.0	e20	25	24	22	4.8	3.4	38	3.0	8.0
22	6.5	134	170	18	23	19	15	4.6	3.2	3.8	2.9	5.5
23	4.9	19	55	174	56	16	21	4.7	15	2.9	2.6	2.1
24	4.9	11	226	39	30	14	14	4.4	4.1	2.8	2.3	1.6
25	8.9	9.3	110	21	22	13	11	4.6	3.5	4.1	2.1	1.6
26	211	8.5	e56	15	20	13	10	4.3	3.1	3.1	1.8	1.6
27	38	7.6	e44	473	39	13	19	11	2.7	25	1.4	1.4
28	8.6	7.0	e40	118	e30	12	18	11	2.6	5.5	1.4	1.2
29	5.4	7.0	e34	36	---	12	10	5.2	2.6	3.1	1.6	1.1
30	4.4	69	e40	22	---	11	25	30	6.6	2.4	1.5	12
31	3.9	---	17	16	---	11	---	18	---	13	1.4	---
TOTAL	461.8	529.3	1139.3	2210	1530	1137	881.4	360.6	215.4	167.25	204.8	226.6
MEAN	14.9	17.6	36.8	71.3	54.6	36.7	29.4	11.6	7.18	5.40	6.61	7.55
MAX	211	134	226	473	358	312	259	35	25	38	34	74
MIN	3.2	3.4	5.0	11	10	11	9.0	4.3	2.6	.85	1.3	1.1
CFSM	.91	1.08	2.24	4.35	3.33	2.24	1.79	.71	.44	.33	.40	.46
IN.	1.05	1.20	2.58	5.01	3.47	2.58	2.00	.82	.49	.38	.46	.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1998, BY WATER YEAR (WY)

MEAN	14.9	15.2	19.8	31.2	35.3	35.8	20.3	16.7	12.0	8.54	9.83	8.17
MAX	70.8	91.3	59.5	74.4	78.4	86.8	44.3	101	66.5	58.4	59.0	66.2
(WY)	1991	1986	1984	1993	1979	1993	1987	1975	1982	1997	1967	1975
MIN	1.48	2.42	2.53	4.04	8.92	8.80	4.38	3.60	1.68	1.08	1.44	1.27
(WY)	1984	1982	1966	1981	1968	1967	1967	1981	1986	1986	1987	1986

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1965 - 1998

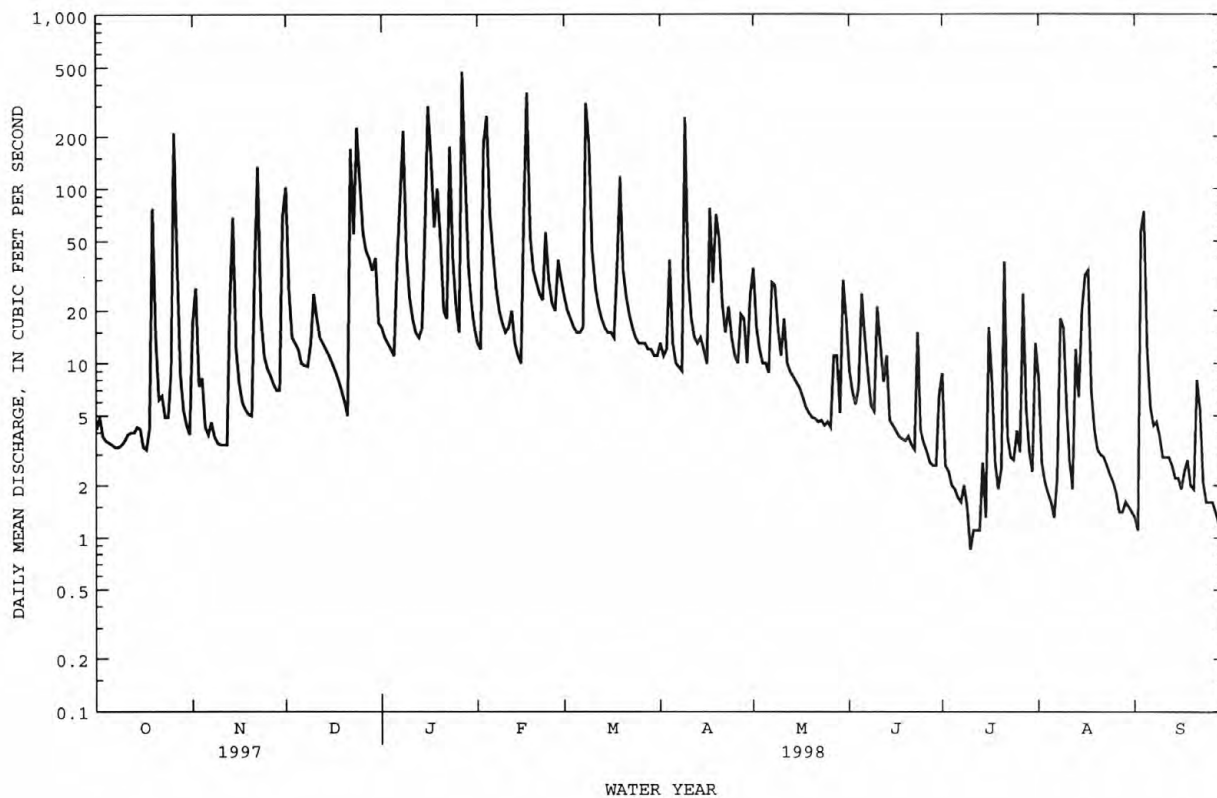
ANNUAL TOTAL	9433.3	9063.45	
ANNUAL MEAN	25.8	24.8	19.1
HIGHEST ANNUAL MEAN			36.2
LOWEST ANNUAL MEAN			6.79
HIGHEST DAILY MEAN	1390	473	1600
LOWEST DAILY MEAN	1.4	.85	.43
ANNUAL SEVEN-DAY MINIMUM	1.5	1.3	.49
INSTANTANEOUS PEAK FLOW		1220	4300
INSTANTANEOUS PEAK STAGE		10.09	13.45
INSTANTANEOUS LOW FLOW		.43*	.35*
ANNUAL RUNOFF (CFSM)	1.58	1.51	1.16
ANNUAL RUNOFF (INCHES)	21.40	20.56	15.79
10 PERCENT EXCEEDS	39	52	31
50 PERCENT EXCEEDS	9.8	10	6.9
90 PERCENT EXCEEDS	2.4	2.2	1.9

e Estimated.

\* See REMARKS.

## SANTÉE RIVER BASIN

02142900 LONG CREEK NEAR PAW CREEK, NC--Continued





## SANTEE RIVER BASIN

0214295600 PAW CREEK AT WILKINSON BOULEVARD NEAR CHARLOTTE, NC

LOCATION.--Lat 35°14'24", long 80°58'29", Mecklenburg County, Hydrologic Unit 03050103, near right bank on downstream side of culvert at U.S. Highway 74, 0.7 mi downstream of Interstate Highway 85, and 2.5 mi northwest of airport in Charlotte.

DRAINAGE AREA.--10.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 570 ft above sea level, from topographic map. Telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records poor, except those above 200 ft<sup>3</sup>/s, which are fair. Minimum discharge for period of record also occurred Sept. 21-23, 1997. Minimum discharge for current water year also occurred Oct. 10,11,12,14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	7.6	30	3.2	10	8.4	8.1	20	.93	2.3	2.6	.89
2	1.2	12	8.4	2.8	9.7	7.4	5.8	8.9	1.2	1.9	2.3	.91
3	1.1	3.9	5.6	2.5	75	6.9	9.4	7.2	.89	2.1	2.0	39
4	1.0	2.9	5.6	2.3	86	6.3	28	6.8	4.1	4.9	1.7	43
5	.91	2.5	4.7	2.1	33	6.0	9.1	6.3	11	6.7	1.5	7.0
6	.87	2.5	3.9	20	13	5.8	7.2	5.7	2.8	2.5	1.2	5.0
7	.86	2.9	3.3	29	10	8.1	6.3	16	1.2	2.3	3.9	4.2
8	.88	2.4	3.2	37	9.6	149	6.0	8.4	.83	2.1	5.6	3.8
9	.81	2.2	4.9	7.4	9.0	99	218	6.0	.84	2.2	11	3.8
10	.81	2.1	12	4.0	8.6	24	30	6.1	61	2.3	6.0	3.5
11	.78	2.1	6.0	3.0	8.2	15	21	8.4	7.4	2.1	1.9	3.4
12	.76	2.4	4.4	2.6	7.8	11	18	5.1	4.1	1.8	1.3	3.1
13	1.1	14	3.8	2.4	7.5	9.6	16	4.6	2.8	1.8	1.4	3.0
14	.85	33	3.5	2.2	6.8	8.7	16	4.2	2.3	1.7	2.1	3.0
15	1.5	7.1	3.1	20	6.5	8.1	14	3.9	2.1	1.7	22	2.8
16	.92	4.8	2.9	143	38	7.6	12	3.6	1.8	1.9	31	2.7
17	.92	3.7	2.9	49	93	7.0	45	3.2	1.9	2.6	22	3.0
18	1.6	3.6	2.8	23	24	20	20	2.9	1.6	2.4	3.7	2.3
19	34	3.4	2.5	56	13	61	35	2.6	5.4	1.8	2.6	2.2
20	4.4	2.9	2.4	27	10	20	27	2.2	2.5	2.2	2.1	2.2
21	2.0	19	2.4	18	8.8	15	13	2.0	1.9	5.6	1.7	5.5
22	2.0	56	107	17	7.8	11	11	1.9	1.8	1.7	1.4	4.3
23	1.4	8.4	12	89	27	9.6	15	1.8	22	1.5	1.4	2.2
24	1.2	5.6	101	25	12	8.4	9.3	1.6	4.7	1.4	1.3	1.8
25	2.6	4.3	38	17	8.9	7.4	7.9	1.5	3.9	22	1.2	1.7
26	76	3.8	7.7	14	7.8	7.0	7.1	1.6	2.7	5.5	1.5	1.6
27	16	3.6	23	173	20	7.1	8.6	4.2	2.5	57	1.4	1.5
28	5.6	3.5	9.2	61	11	6.5	8.4	3.1	2.3	6.0	.96	1.4
29	3.9	3.1	6.8	20	---	6.2	6.3	1.4	3.0	4.1	.97	1.4
30	3.2	28	7.0	13	---	6.0	21	3.3	3.9	3.3	.97	7.2
31	2.8	---	4.5	11	---	5.9	---	1.6	---	2.9	.93	---
TOTAL	173.17	253.3	434.5	896.5	582.0	579.0	659.5	156.1	165.39	160.3	141.63	167.40
MEAN	5.59	8.44	14.0	28.9	20.8	18.7	22.0	5.04	5.51	5.17	4.57	5.58
MAX	76	56	107	173	93	149	218	20	61	57	31	43
MIN	.76	2.1	2.4	2.1	6.5	5.8	5.8	1.4	.83	1.4	.93	.89
CFSM	.52	.78	1.30	2.68	1.92	1.73	2.04	.47	.51	.48	.42	.52
IN.	.60	.87	1.50	3.09	2.00	1.99	2.27	.54	.57	.55	.49	.58

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1998, BY WATER YEAR (WY)

	1995	1996	1997	1998	1995	1996	1997	1998	1995	1996	1997	1998
MEAN	10.1	11.1	8.85	20.3	24.3	16.4	16.6	7.68	8.78	12.0	5.66	5.00
MAX	23.0	26.1	14.0	28.9	33.4	18.7	22.0	13.2	11.6	35.2	9.92	5.68
(WY)	1996	1996	1998	1998	1995	1998	1998	1995	1995	1997	1995	1996
MIN	5.59	4.93	3.63	13.4	18.5	14.3	5.18	5.04	5.51	3.69	2.21	3.73
(WY)	1998	1997	1995	1997	1996	1995	1995	1998	1998	1996	1997	1997

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

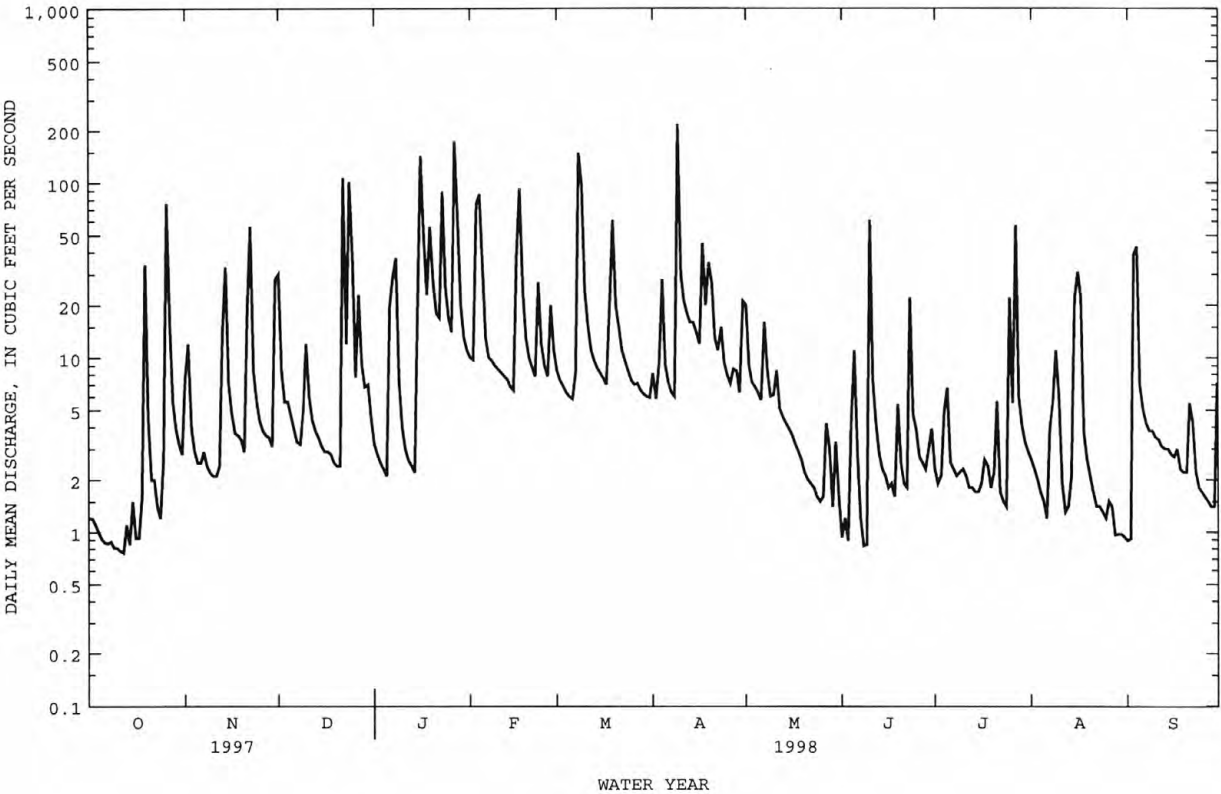
## WATER YEARS 1995 - 1998

ANNUAL TOTAL	4767.04	4368.79	
ANNUAL MEAN	13.1	12.0	12.2
HIGHEST ANNUAL MEAN			13.6
LOWEST ANNUAL MEAN			10.7
HIGHEST DAILY MEAN	835	218	835
LOWEST DAILY MEAN	.70	.76	.70
ANNUAL SEVEN-DAY MINIMUM	.82	.82	.82
INSTANTANEOUS PEAK FLOW		1150	2740
INSTANTANEOUS PEAK STAGE		7.87	9.77
INSTANTANEOUS LOW FLOW		.75*	.69*
ANNUAL RUNOFF (CFSM)	1.21	1.11	1.13
ANNUAL RUNOFF (INCHES)	16.42	15.05	15.29
10 PERCENT EXCEEDS	22	27	22
50 PERCENT EXCEEDS	3.8	4.4	4.4
90 PERCENT EXCEEDS	1.1	1.4	1.6

\* See REMARKS.

SANTEE RIVER BASIN

0214295600 PAW CREEK AT WILKINSON BOULEVARD NEAR CHARLOTTE, NC--Continued



## SANTÉE RIVER BASIN

02143000 HENRY FORK NEAR HENRY RIVER, NC

LOCATION.--Lat 35°41'03", long 81°24'10", Catawba County, Hydrologic Unit 03050102, on left bank 325 ft downstream of bridge on Secondary Road 1124, at site of Old Link Ford, 1.2 mi downstream of Burke-Catawba County line, and 2 mi southeast of Henry River.

DRAINAGE AREA.--83.2 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1925 to November 1931, December 1941 to current year.

REVISED RECORDS.--WSP 952: 1928, 1930. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 891.0 ft above sea level. July 1925 to November 1931, at site 450 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge for period of record, from rating curve extended above 2,300 ft/s on basis of computation of peak flow over dam at Henry River; gage height: 29.2 ft. Minimum discharge for current water year also occurred Sept. 28, 29.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known: 29.2 ft, Aug. 13, 1940, at former site, from floodmarks; discharge: 31,300 ft<sup>3</sup>/s. The flood of July 16, 1916, reached a stage of about 23 ft at former site; discharge: 20,700 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	67	66	118	167	184	172	432	149	90	82	54
2	49	75	66	108	150	175	156	414	146	86	79	53
3	49	82	66	96	463	167	154	282	143	84	69	55
4	49	79	72	85	1980	158	179	257	141	82	66	77
5	49	72	77	80	607	153	158	242	143	80	65	75
6	48	66	77	80	324	149	151	211	145	78	65	62
7	48	65	74	86	244	147	147	232	143	77	64	63
8	47	65	70	1460	207	1120	145	423	137	77	67	64
9	47	64	67	323	184	1090	194	253	132	79	71	67
10	47	62	69	180	167	435	171	215	261	79	80	59
11	46	61	72	139	170	285	156	209	193	75	92	53
12	46	61	71	117	190	234	147	188	166	70	83	52
13	47	64	69	105	165	211	144	176	157	70	69	50
14	47	73	67	96	155	201	143	170	150	69	67	49
15	47	77	66	218	144	189	142	165	143	67	219	48
16	47	76	64	375	292	181	144	160	136	68	184	48
17	46	71	63	279	1510	176	816	157	128	139	163	47
18	47	68	61	186	604	184	359	153	121	157	139	46
19	61	65	59	175	316	392	922	148	113	134	92	46
20	69	64	58	155	245	337	798	146	108	101	77	46
21	64	63	57	135	210	298	341	143	104	75	72	47
22	57	69	64	129	190	238	262	139	101	73	70	61
23	51	74	71	462	305	207	228	137	107	73	67	59
24	49	72	81	301	286	193	205	133	108	80	66	49
25	58	69	186	196	222	180	190	131	108	84	64	47
26	87	66	148	156	197	173	180	132	104	97	63	47
27	194	65	209	864	207	171	187	135	98	110	60	45
28	137	63	215	914	196	168	208	141	92	120	58	44
29	120	62	151	341	---	164	177	144	88	109	57	46
30	99	62	133	239	---	160	186	171	88	89	55	52
31	68	---	124	195	---	158	---	178	---	75	55	---
TOTAL	1970	2042	2793	8393	10097	8278	7562	6217	3953	2747	2580	1611
MEAN	63.5	68.1	90.1	271	361	267	252	201	132	88.6	83.2	53.7
MAX	194	82	215	1460	1980	1120	922	432	261	157	219	77
MIN	46	61	57	80	144	147	142	131	88	67	55	44
CFSM	.76	.82	1.08	3.25	4.33	3.21	3.03	2.41	1.58	1.07	1.00	.65
IN.	.88	.91	1.25	3.75	4.51	3.70	3.38	2.78	1.77	1.23	1.15	.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1998<sup>a</sup>, BY WATER YEAR (WY)

MEAN	110	105	128	157	191	208	187	140	119	90.7	100	94.3
MAX	562	392	276	380	473	583	471	322	392	203	554	594
(WY)	1930	1978	1984	1996	1960	1975	1983	1984	1947	1949	1928	1945
MIN	25.6	34.8	31.1	32.3	50.0	69.7	61.6	44.8	34.4	34.9	39.4	25.4
(WY)	1927	1932	1956	1956	1931	1985	1967	1927	1926	1986	1988	1954

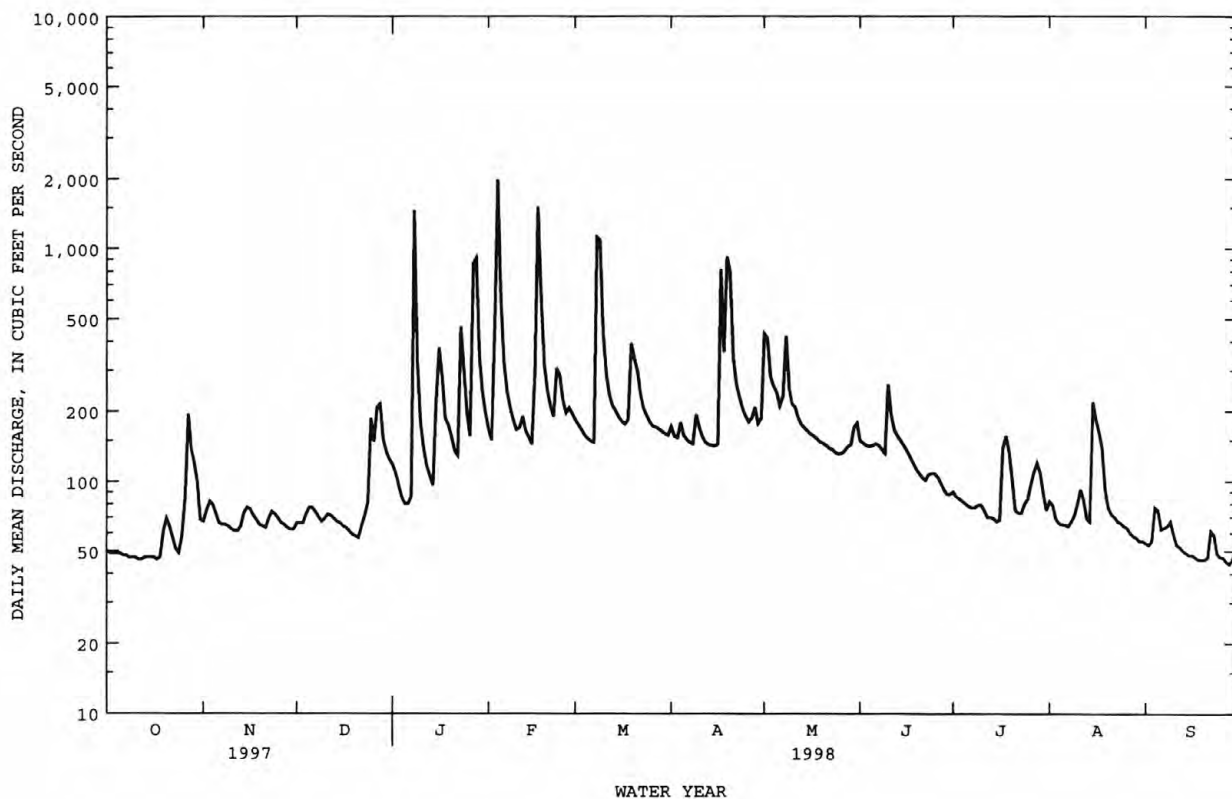
## SANTÉE RIVER BASIN

02143000 HENRY FORK NEAR HENRY RIVER, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1926 - 1998 <sup>a</sup>	
ANNUAL TOTAL	47009		58243		136	
ANNUAL MEAN	129		160		221	
HIGHEST ANNUAL MEAN					59.7	
LOWEST ANNUAL MEAN					1993	
HIGHEST DAILY MEAN	1120	Apr 23	1980	Feb 4	10100	Oct 2 1929
LOWEST DAILY MEAN	42	Sep 7	44	Sep 28	4.0	Nov 15 1942
ANNUAL SEVEN-DAY MINIMUM	43	Sep 3	47	Oct 11	14	Jul 18 1926
INSTANTANEOUS PEAK FLOW			3760	Jan 8	15300*	Oct 2 1929
INSTANTANEOUS PEAK STAGE			8.67	Jan 8	18.71	Oct 12 1990
INSTANTANEOUS LOW FLOW			44*	Sep 27	3.0	Dec 20 1942
ANNUAL RUNOFF (CFSM)	1.55		1.92		1.64	
ANNUAL RUNOFF (INCHES)	21.02		26.04		22.26	
10 PERCENT EXCEEDS	216		261		222	
50 PERCENT EXCEEDS	111		108		94	
90 PERCENT EXCEEDS	49		52		45	

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.



## SANTEE RIVER BASIN

02143040 JACOB FORK AT RAMSEY, NC

LOCATION.--Lat 35°35'26", long 81°34'02", Burke County, Hydrologic Unit 03050102, on left bank 16 ft downstream of bridge on Secondary Road 1924, 0.6 mi downstream of Queens Creek, and 0.6 mi north of Ramsey.

DRAINAGE AREA.--25.7 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1960-61. October 1961 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,103.00 ft above sea level. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge for period of record, from rating curve extended above 3,400 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow. Minimum discharge for current water year also occurred Sept. 28.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1940 reached a stage of about 39 ft, from information by local resident. Flood of July 1916 reached a stage of about 19 ft, from information by North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	20	21	28	48	59	49	292	38	25	27	16
2	13	46	18	26	40	53	41	172	37	23	22	16
3	13	32	18	26	226	48	44	107	34	22	21	20
4	13	24	34	27	550	43	56	111	36	22	20	31
5	13	20	28	28	210	41	45	94	57	22	19	18
6	12	19	23	31	111	39	41	77	45	22	18	17
7	12	19	21	109	79	40	39	100	39	21	19	16
8	12	18	19	593	63	452	37	118	34	21	21	16
9	12	17	20	123	52	422	117	82	34	22	28	15
10	12	16	26	58	45	170	75	70	57	20	26	14
11	12	16	27	39	49	104	53	67	45	19	23	14
12	13	16	24	31	52	81	45	57	38	19	20	14
13	13	23	22	27	44	69	41	52	35	19	19	13
14	14	30	21	23	40	64	41	49	32	18	34	13
15	14	24	19	71	36	57	39	47	33	18	181	13
16	13	21	18	155	95	52	55	44	31	18	58	13
17	13	19	18	116	429	50	446	44	30	57	38	13
18	14	18	17	62	198	62	156	41	28	23	30	13
19	25	18	17	56	103	178	310	39	28	20	25	13
20	17	17	16	49	76	128	270	38	28	19	23	12
21	13	18	16	40	61	115	129	37	27	18	22	15
22	13	31	30	41	52	84	94	37	27	19	21	15
23	12	23	27	158	105	67	78	36	28	18	20	13
24	14	20	59	102	99	58	66	35	27	24	19	13
25	20	19	137	59	74	51	57	34	26	51	19	13
26	129	18	60	43	60	49	53	46	25	39	18	12
27	74	18	98	199	71	47	65	74	24	75	17	12
28	30	17	96	272	65	46	68	62	23	36	16	16
29	22	17	60	140	---	44	55	43	26	27	16	20
30	19	20	44	89	---	42	63	51	28	23	16	17
31	18	---	34	62	---	43	---	45	---	26	18	---
TOTAL	638	634	1088	2883	3133	2858	2728	2201	1000	806	874	456
MEAN	20.6	21.1	35.1	93.0	112	92.2	90.9	71.0	33.3	26.0	28.2	15.2
MAX	129	46	137	593	550	452	446	292	57	75	181	31
MIN	12	16	16	23	36	39	37	34	23	18	16	12
CFSM	.80	.82	1.37	3.62	4.35	3.59	3.54	2.76	1.30	1.01	1.10	.59
IN.	.92	.92	1.57	4.17	4.53	4.14	3.95	3.19	1.45	1.17	1.27	.66

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

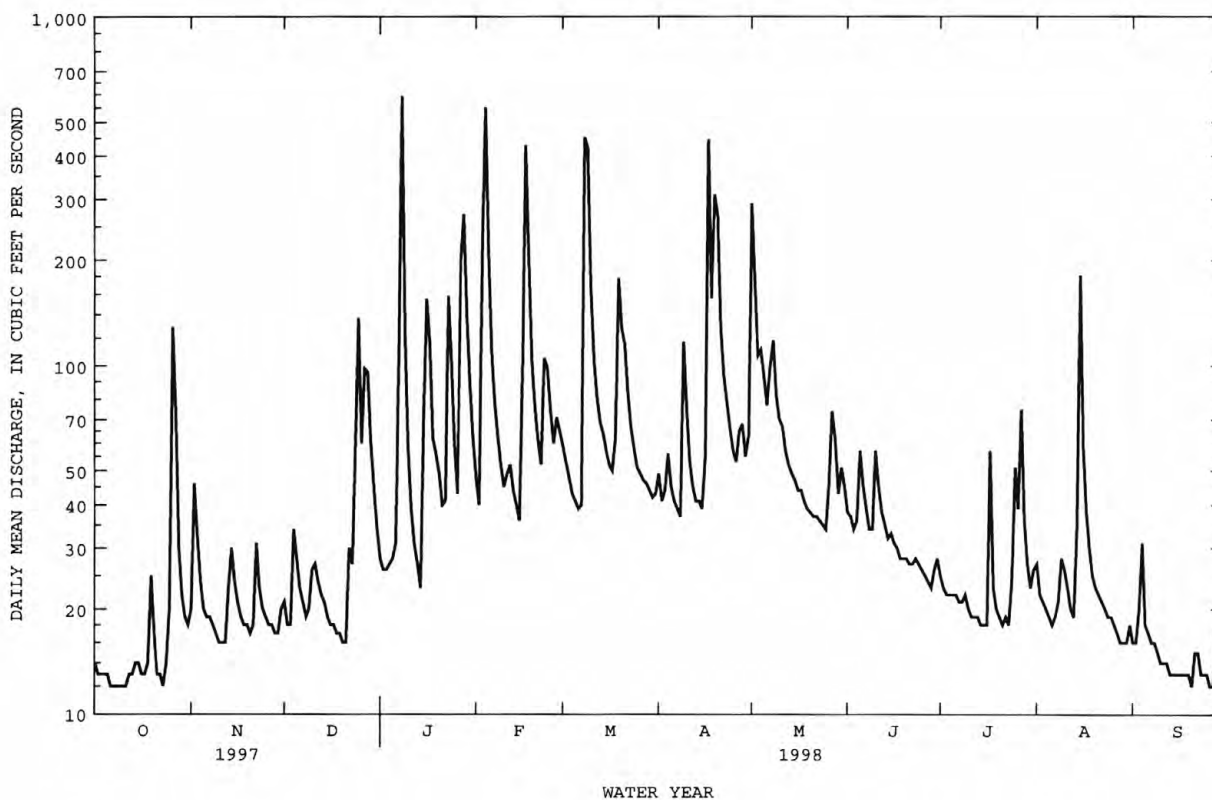
	MEAN	42.6	43.1	49.0	61.6	69.1	79.3	69.6	54.7	43.2	35.2	34.5	29.1
MAX	154	130	92.6	131	134	177	157	109	82.3	72.7	152	102	
(WY)	1965	1978	1984	1993	1966	1975	1983	1984	1972	1985	1970	1989	
MIN	11.2	12.7	14.8	20.9	27.9	27.4	22.6	19.9	11.9	9.23	8.81	13.1	
(WY)	1994	1982	1989	1981	1986	1988	1967	1988	1988	1988	1988	1993	

## SANTEE RIVER BASIN

02143040 JACOB FORK AT RAMSEY, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1962 - 1998
ANNUAL TOTAL	17268	19299	
ANNUAL MEAN	47.3	52.9	50.8
HIGHEST ANNUAL MEAN			80.8
LOWEST ANNUAL MEAN			23.8
HIGHEST DAILY MEAN	368 Apr 23	593 Jan 8	1730 Nov 6 1977
LOWEST DAILY MEAN	11 Sep 8	12 Oct 6	4.7 Aug 27 1988
ANNUAL SEVEN-DAY MINIMUM	12 Sep 3	12 Oct 5	5.7 Aug 15 1988
INSTANTANEOUS PEAK FLOW		1740 Jan 8	7220* Oct 17 1975
INSTANTANEOUS PEAK STAGE		9.27 Jan 8	19.74 Oct 17 1975
INSTANTANEOUS LOW FLOW		11* Sep 27	4.4 Aug 28 1988
ANNUAL RUNOFF (CFSM)	1.84	2.06	1.98
ANNUAL RUNOFF (INCHES)	24.99	27.93	26.87
10 PERCENT EXCEEDS	92	104	87
50 PERCENT EXCEEDS	34	31	34
90 PERCENT EXCEEDS	13	14	16

\* See REMARKS.



## SANTÉE RIVER BASIN

02143500 INDIAN CREEK NEAR LABORATORY, NC

LOCATION.--Lat 35°25'20", long 81°15'52", Lincoln County, Hydrologic Unit 03050102, on left bank 250 ft upstream from remains of Rudisill Mill dam, 0.5 mi upstream from bridge on Secondary Road 1252, 1.5 mi south of Laboratory, 1.5 mi upstream from mouth, and 3.5 mi south of Lincolnton.

DRAINAGE AREA.--69.2 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1951 to current year.

REVISED RECORDS.--WDR NC-71-1: 1970(M). WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 736 ft above sea level, by barometer. Satellite telemetry at station.

REMARKS.--Records good, except those for estimated daily discharges, which are poor. Minimum discharge for current water year also occurred Sept. 21.

EXTREMES OUTSIDE PERIOD OF RECORD--Peak discharge of flood in October 1929 was 9,920 ft<sup>3</sup>/s; flood in July 1916, 7,840 ft<sup>3</sup>/s; flood in August 1940, 6,000 ft<sup>3</sup>/s. Discharge based on computation of peak flow over dam 1 mi downstream, using floodmarks and information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	39	52	73	126	118	102	263	56	36	31	23
2	17	60	44	72	116	105	95	164	52	29	29	21
3	19	46	42	67	429	96	92	123	52	32	28	25
4	19	39	74	67	1460	88	125	116	48	28	26	73
5	17	34	58	65	687	86	95	118	74	29	24	35
6	19	32	51	71	277	83	91	99	74	26	24	27
7	17	36	47	74	167	85	88	128	60	25	24	26
8	17	35	45	905	133	1090	88	139	52	26	26	25
9	17	33	46	327	119	1550	220	107	51	27	29	24
10	17	33	50	156	107	543	117	92	104	27	52	23
11	28	32	51	120	104	303	97	98	92	25	55	23
12	19	32	45	99	130	208	92	80	70	23	30	23
13	18	45	44	86	100	156	88	75	57	22	23	22
14	19	69	42	81	91	139	88	75	49	21	24	21
15	20	51	41	286	84	128	88	76	49	20	e80	20
16	21	43	42	822	151	118	85	73	44	19	e300	19
17	20	40	43	562	586	115	589	71	42	55	e80	20
18	21	37	42	220	307	120	258	64	40	30	e50	20
19	31	37	42	240	149	553	408	63	39	26	40	21
20	30	36	41	162	121	251	632	61	40	29	36	20
21	e30	40	41	118	108	178	244	59	38	36	34	25
22	e25	125	85	112	99	135	156	57	40	23	33	28
23	22	71	77	405	278	121	133	57	49	30	31	22
24	21	56	217	261	174	117	117	57	37	66	29	21
25	28	47	349	140	118	110	111	58	37	33	27	20
26	286	43	132	112	107	109	102	54	34	73	26	19
27	447	43	161	749	217	106	104	58	34	210	25	20
28	85	42	148	1470	181	104	133	89	32	76	24	19
29	52	41	111	353	---	102	100	64	34	42	23	22
30	39	45	95	195	---	98	125	62	61	32	35	25
31	36	---	82	144	---	94	---	69	---	29	28	---
TOTAL	1474	1362	2440	8614	6726	7209	4863	2769	1541	1205	1326	732
MEAN	47.5	45.4	78.7	278	240	233	162	89.3	51.4	38.9	42.8	24.4
MAX	447	125	349	1470	1460	1550	632	263	104	210	300	73
MIN	17	32	41	65	84	83	85	54	32	19	23	19
CFSM	.69	.66	1.14	4.02	3.47	3.36	2.34	1.29	.74	.56	.62	.35
IN.	.79	.73	1.31	4.63	3.62	3.88	2.61	1.49	.83	.65	.71	.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

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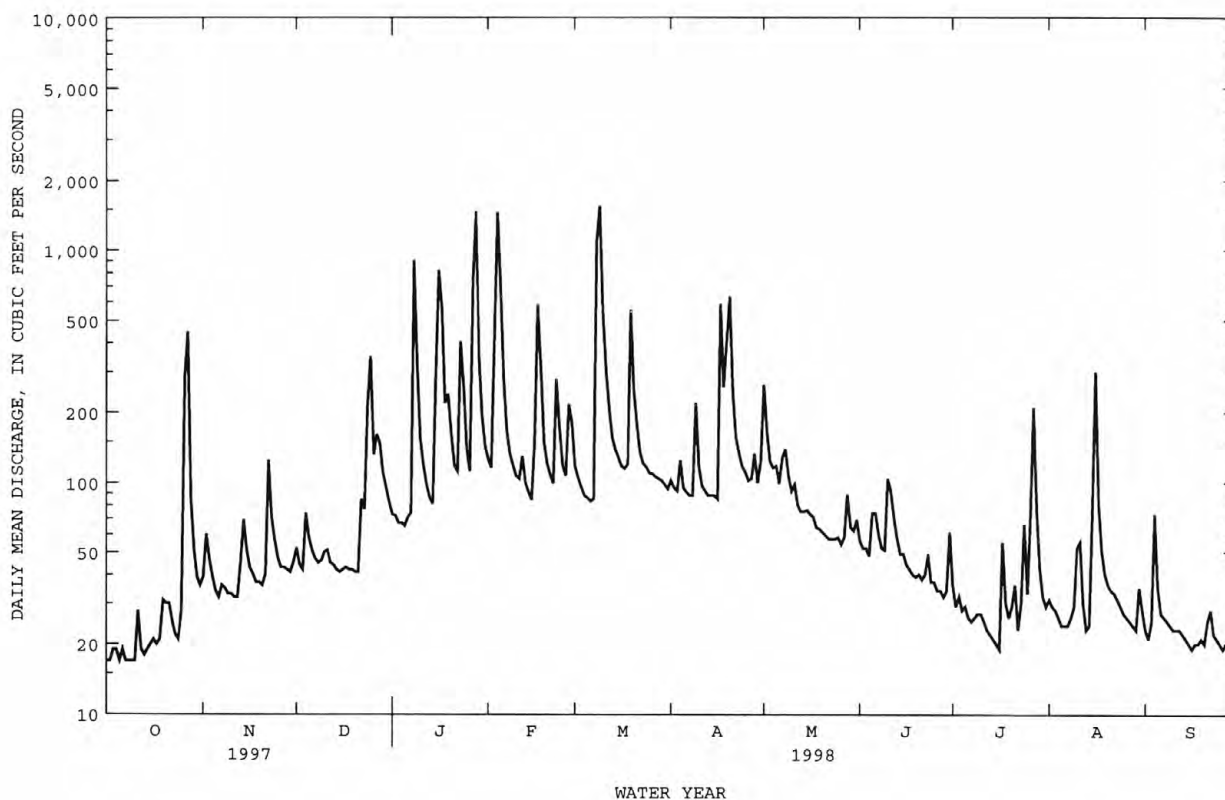
## SANTÉE RIVER BASIN

02143500 INDIAN CREEK NEAR LABORATORY, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1951 - 1998	
ANNUAL TOTAL	31218.5		40261		90.4	
ANNUAL MEAN	85.5		110		145	
HIGHEST ANNUAL MEAN					40.4	
LOWEST ANNUAL MEAN					4350	
HIGHEST DAILY MEAN	1200	Apr 29	1550	Mar 9	2.1	Aug 10 1970
LOWEST DAILY MEAN	9.5	Sep 9	17	Oct 1	3.1	Jul 20 1986
ANNUAL SEVEN-DAY MINIMUM	11	Sep 3	18	Oct 4	8450	Aug 10 1970
INSTANTANEOUS PEAK FLOW			1990	Jan 28	10.61	Aug 10 1970
INSTANTANEOUS PEAK STAGE			5.35	Jan 28	1.7	Jul 21 1986
INSTANTANEOUS LOW FLOW			15*	Oct 2	1.31	
ANNUAL RUNOFF (CFSM)	1.24		1.59		17.75	
ANNUAL RUNOFF (INCHES)	16.78		21.64		151	
10 PERCENT EXCEEDS	152		218		58	
50 PERCENT EXCEEDS	60		57		25	
90 PERCENT EXCEEDS	17		22			

e Estimated.

\* See REMARKS.



## SANTÉE RIVER BASIN

0214399575 LONG CREEK TRIBUTARY AT HEADWATERS NEAR BESSEMER CITY, NC

LOCATION.--Lat 35°18'12", long 81°16'42", Gaston County, Hydrologic Unit 03050102, on left bank at headwaters, 1.4 mi north of Bessemer City, NC.

DRAINAGE AREA.--0.16 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 830 ft above sea level, from topographic map.

REMARKS.--Records poor. Maximum gage height for period of record from floodmark inside of stilling well. Minimum discharge for period of record occurred each year and may have been less than 0.01 ft<sup>3</sup>/s. Minimum discharge for current water year also occurred several days in Oct., July, Aug., and Sept.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 19, 1993 reached a stage of 3.11 ft, from floodmark; discharge, 120 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.11	.16	e.05	.07	.10	.08	.19	.06	.04	.04	.03
2	.02	.09	.08	.07	.07	.09	.07	.07	.05	.04	.04	.03
3	.02	.06	.18	.06	3.0	.08	.13	.08	.04	.04	.04	.29
4	.02	.04	.23	.06	2.5	.08	.11	.06	.38	.03	.03	.12
5	.01	.03	.09	.07	.22	.08	.06	.06	.19	.03	.02	.04
6	.01	.03	.08	.07	.11	.08	.06	.05	.07	.03	.02	.04
7	.01	.04	.07	.14	.08	.29	.06	.29	.06	.03	.03	.04
8	.01	.04	.07	4.6	.08	6.4	.06	.10	.06	.03	.03	.03
9	.01	.04	.08	e.10	.07	e.10	.49	.06	.05	.03	.03	.03
10	.01	.04	.22	e.07	.07	e.09	.10	.06	.06	.02	.03	.03
11	.01	.04	.08	e.07	.29	e.08	.09	.06	.07	.02	.03	.03
12	.01	.06	.07	e.06	.10	e.07	.09	.05	.05	.02	.02	.03
13	.01	.13	.06	e.06	.08	e.07	.08	.05	.05	.02	.02	.02
14	.02	.19	.05	.05	.08	e.06	.09	.05	.04	.02	.06	.02
15	.02	.06	.05	1.1	.07	e.06	.06	.05	.04	.02	2.6	.02
16	.02	.05	.05	3.9	.78	e.06	.06	.05	.04	.02	.62	.02
17	.02	.05	.05	.21	1.5	e.07	.77	.05	.04	.02	.09	.02
18	.04	.04	e.05	.12	.24	e.20	.10	.04	.03	.01	.06	.02
19	.14	.04	e.04	.41	.12	.97	.79	.04	.03	.01	.05	.02
20	.02	.03	.04	.09	.09	.24	.12	.04	.03	.39	.05	.02
21	.02	1.6	.04	.08	.08	.13	.08	.04	.03	.07	.05	.11
22	.02	.55	.95	.24	.08	.12	.08	.04	.08	.37	.04	.04
23	.02	.17	.09	.85	.70	.13	.09	.04	.06	.04	.04	.03
24	.02	.09	3.0	.11	.11	.13	.09	.04	.03	.06	.04	.03
25	.02	.06	.39	.06	.09	.10	.09	.05	.03	.04	.04	.02
26	3.1	.07	e.09	.05	.08	.07	.09	.04	.03	.03	.03	.02
27	.19	.06	e.50	6.5	.52	.07	.11	.14	.03	.94	.03	.02
28	.06	.05	e.13	.26	.12	.09	.06	.04	.03	.04	.03	.02
29	.04	.05	e.11	.11	---	.08	.06	.04	.28	.04	.03	.02
30	.02	.06	e.19	.09	---	.08	.38	1.3	.09	.04	.03	1.1
31	.05	---	e.09	.09	---	.09	---	.12	---	.04	.03	---
TOTAL	4.01	3.97	7.38	19.80	11.40	10.36	4.60	3.39	2.13	2.58	4.30	2.31
MEAN	.13	.13	.24	.64	.41	.33	.15	.11	.071	.083	.14	.077
MAX	3.1	1.6	3.0	6.5	3.0	6.4	.79	1.3	.38	.94	2.6	1.1
MIN	.01	.03	.04	.05	.07	.06	.06	.04	.03	.01	.02	.02
CFSM	.81	.83	1.49	3.99	2.54	2.09	.96	.68	.44	.52	.87	.48
IN.	.93	.92	1.72	4.60	2.65	2.41	1.07	.79	.50	.60	1.00	.54

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1998, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998
MEAN	.13	.14	.13	.36	.33
MAX	.38	.42	.24	.64	.43
(WY)	1996	1996	1998	1998	1997
MIN	.025	.051	.079	.14	.15
(WY)	1994	1995	1994	1994	1994

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1994 - 1998

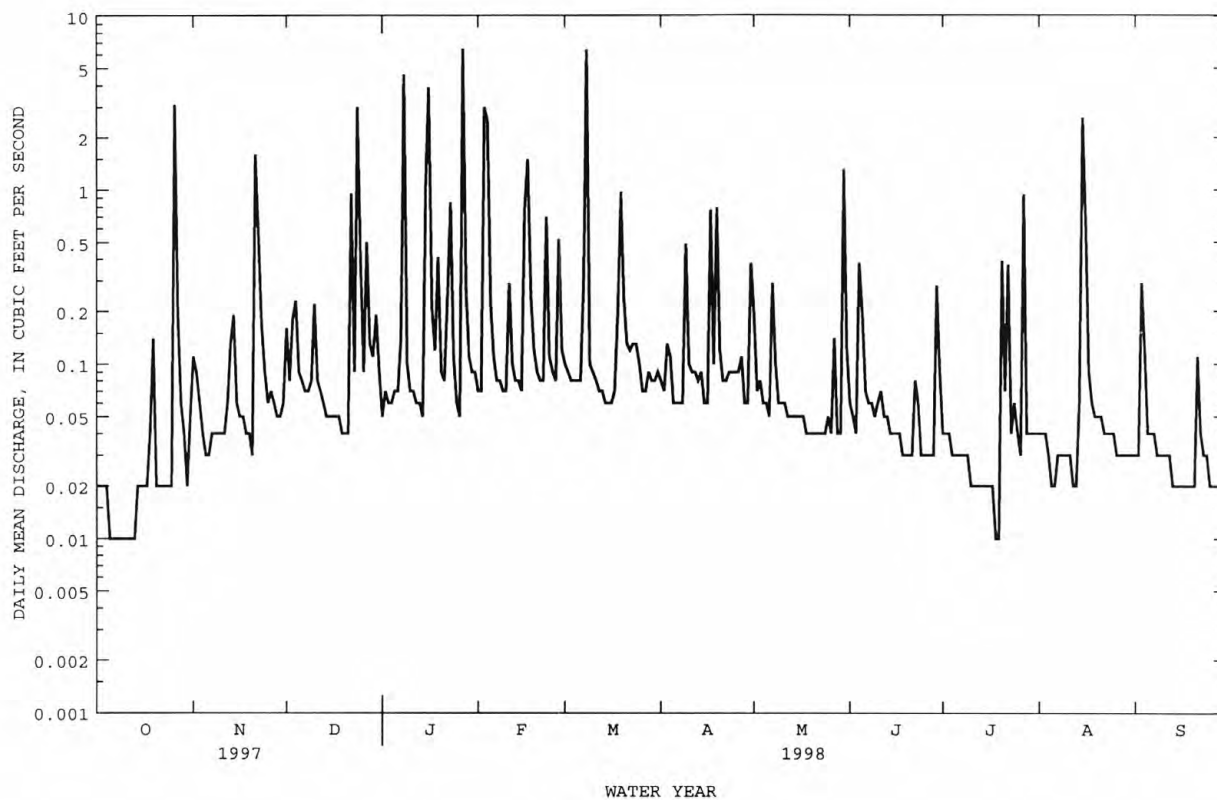
ANNUAL TOTAL	50.85	76.23		
ANNUAL MEAN	.14	.21		
HIGHEST ANNUAL MEAN			.16	
LOWEST ANNUAL MEAN			.11	
HIGHEST DAILY MEAN	4.0	Feb 28	9.0	Aug 27 1995
LOWEST DAILY MEAN	.01	Aug 23	.01	Oct 2 1993
ANNUAL SEVEN-DAY MINIMUM	.01	Sep 1	.01	Oct 5 1993
INSTANTANEOUS PEAK FLOW			98	Jan 8 1997
INSTANTANEOUS PEAK STAGE			2.92	Jan 8 1997
INSTANTANEOUS LOW FLOW			.01*	Oct 1 1993
ANNUAL RUNOFF (CFSM)	.87		1.31	
ANNUAL RUNOFF (INCHES)	11.82		17.72	
10 PERCENT EXCEEDS	.19		.29	
50 PERCENT EXCEEDS	.05		.06	
90 PERCENT EXCEEDS	.02		.02	

e Estimated.

\* See REMARKS.

## SANTÉE RIVER BASIN

0214399575 LONG CREEK TRIBUTARY AT HEADWATERS NEAR BESSEMER CITY, NC--Continued



## SANTEE RIVER BASIN

0214399580 LONG CREEK TRIBUTARY BELOW HEADWATERS NEAR BESSEMER CITY, NC

LOCATION.--Lat 35°18'20", long 81°16'32", Gaston County, Hydrologic Unit 03050102, on left bank downstream end of culvert, 0.3 mi below headwaters and 1.6 mi north of Bessemer City, NC.

DRAINAGE AREA.--0.22 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 805 ft above sea level, from topographic map.

REMARKS.--Records poor. Maximum gage height for period of record from high-water mark in gage well. Maximum discharge for period of record from rating curve extended above 549 ft<sup>3</sup>/s. Minimum discharge for current water year also occurred several days in Oct., July and Aug., and may have occurred during period of missing record in Aug. and Sept. Minimum discharge for period of record has occurred several days during 1993-97 water years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 19, 1993 reached a stage of 5.29 ft, from floodmark; discharge, 549 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.18	.22	.09	.09	.14	.20	.24	.07	.05	.04	e.03
2	.04	.13	.09	.09	.09	.14	.19	.08	.07	.06	.04	e.03
3	.04	.07	.25	.09	3.4	.13	.30	.08	.07	.05	.04	e.40
4	.04	.06	.33	.09	2.8	.11	.23	.07	.45	.05	.04	e.15
5	.04	.05	.10	.09	.32	.10	.14	.07	.27	.05	.04	e.05
6	.03	.05	.09	.09	.14	.10	.14	.07	.08	.04	.04	e.05
7	.03	.05	.09	.21	.12	.65	.14	.40	.07	.04	.04	e.05
8	.03	.05	.09	5.9	.10	9.9	.14	.12	.06	.04	.04	e.05
9	.03	.05	.10	.17	.10	1.3	.84	.08	.06	.03	.04	e.04
10	.03	.05	.44	.09	.11	.13	.10	.08	.07	.03	.04	e.04
11	.03	.05	.15	.09	.59	.10	.10	.08	.08	.03	.04	e.04
12	.04	.06	e.10	.08	.14	.10	.10	.07	.06	.03	.03	e.04
13	.04	.18	e.10	.08	.10	.10	.10	.08	.06	.03	.03	e.04
14	.04	.29	e.09	.08	.11	.10	.11	.08	.06	.03	.06	e.04
15	.04	.08	e.09	1.7	.10	.10	.10	.08	.05	.03	3.3	e.03
16	.04	.07	.08	3.6	1.5	.10	.10	.08	.05	.03	.72	e.03
17	.04	.06	.08	.22	2.1	.10	.63	.08	.05	.04	e.20	e.03
18	.08	.06	.08	.11	.34	.35	.13	.07	.05	.03	e.10	e.03
19	.32	.06	.08	.74	.14	1.1	.84	.07	.06	.03	e.09	e.03
20	.05	.06	.08	.12	.15	.44	.17	.07	.05	.59	e.08	e.03
21	.05	2.3	.08	.09	.12	.16	.10	.07	.06	.04	e.07	e.15
22	.05	.70	1.9	.51	.12	.14	.10	.07	.13	.53	e.07	e.05
23	.05	.11	.12	1.6	1.5	.14	.10	.07	.11	.04	e.06	e.04
24	.06	.09	4.9	.16	.18	.14	.11	.07	.06	.04	e.06	e.04
25	.06	.09	.49	.10	.16	.12	.09	.07	.05	.04	e.06	e.04
26	3.8	.09	.12	.09	.14	.10	.08	.06	.05	.04	e.05	e.03
27	.21	.08	.84	5.7	1.2	.10	.11	.20	.05	1.6	e.05	e.03
28	.08	.08	.17	.35	.18	.12	.07	.07	.05	.05	e.05	e.03
29	.06	.08	.15	.11	---	.14	.06	.07	.40	.04	e.04	e.03
30	.05	.10	.23	.09	---	.15	.62	1.1	.07	.04	e.04	e1.5
31	.06	---	.11	.10	---	.16	---	.08	---	.04	e.04	---
TOTAL	5.60	5.43	11.84	22.63	16.14	16.76	6.24	3.98	2.87	3.81	5.64	3.17
MEAN	.18	.18	.38	.73	.58	.54	.21	.13	.096	.12	.18	.11
MAX	3.8	2.3	4.9	5.9	3.4	9.9	.84	1.1	.45	1.6	3.3	1.5
MIN	.03	.05	.08	.08	.09	.10	.06	.06	.05	.03	.03	.03
CFSM	.82	.82	1.74	3.32	2.62	2.46	.95	.58	.43	.56	.83	.48
IN.	.95	.92	2.00	3.83	2.73	2.83	1.06	.67	.49	.64	.95	.54

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1998, BY WATER YEAR (WY)

	MEAN	.26	.29	.21	.55	.53	.33	.30	.14	.28	.15	.32	.13
MAX	.80	.91	.38	.77	.74	.54	.80	.29	.83	.24	.70	.25	
(WY)	1996	1996	1998	1995	1997	1998	1997	1995	1995	1994	1994	1995	
MIN	.070	.083	.14	.27	.29	.17	.070	.075	.096	.11	.030	.084	
(WY)	1994	1997	1996	1997	1994	1997	1995	1996	1998	1997	1997	1996	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1994 - 1998

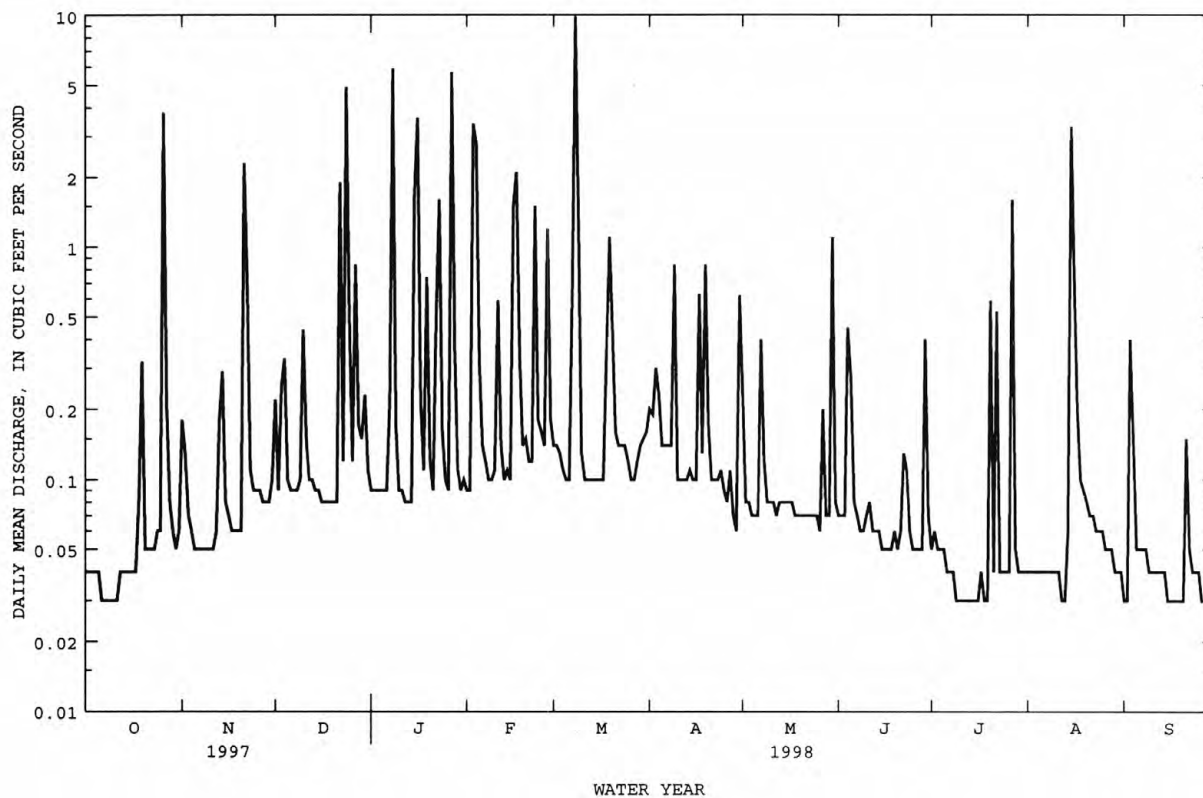
ANNUAL TOTAL	97.02	104.11	
ANNUAL MEAN	.27	.29	
HIGHEST ANNUAL MEAN			.29
LOWEST ANNUAL MEAN			.35
HIGHEST DAILY MEAN	19	Apr 28	1997
LOWEST DAILY MEAN	.02	Aug 18	1997
ANNUAL SEVEN-DAY MINIMUM	.02	Aug 18	1997
INSTANTANEOUS PEAK FLOW		137	Jan 8
INSTANTANEOUS PEAK STAGE		3.32	Jan 8
INSTANTANEOUS LOW FLOW		.03*	Oct 1
ANNUAL RUNOFF (CFSM)	1.21	1.30	1.31
ANNUAL RUNOFF (INCHES)	16.41	17.60	17.86
10 PERCENT EXCEEDS	.28	.47	.40
50 PERCENT EXCEEDS	.07	.08	.09
90 PERCENT EXCEEDS	.03	.04	.04

e Estimated.

\* See REMARKS.

## SANTEE RIVER BASIN

0214399580 LONG CREEK TRIBUTARY BELOW HEADWATERS NEAR BESSEMER CITY, NC--Continued



## SANTÉE RIVER BASIN

02144000 LONG CREEK NEAR BESSEMER CITY, NC

LOCATION.--Lat 35°18'23", long 81°14'05", Gaston County, Hydrologic Unit 03050102, on right bank 700 ft upstream from bridge on Secondary Road 1456, 3.3 mi northeast of Bessemer City, and 8.2 mi upstream from mouth.

DRAINAGE AREA.--31.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1952 to current year. Monthly discharge only for some periods, published in WSP 1723.

REVISED RECORDS.--WSP 1723: 1959-60 (M). WSP 1904: 1959-60. WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 706.1 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Bessemer City diverts water upstream from gaging station for water supply and returns treated effluent to South Fork Catawba River downstream of mouth of Long Creek causing some diurnal fluctuation; a daily average of 2.04 ft<sup>3</sup>/s was diverted during the year. Minimum discharge for current water year also occurred Oct. 10-13, 15-16.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 26 ft, from high-water mark on left bank 1,500 ft upstream, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	25	21	32	47	51	35	92	26	15	9.0	6.6
2	6.0	31	17	30	44	47	33	51	23	10	7.7	7.4
3	5.2	22	14	30	209	44	34	44	21	11	7.0	14
4	8.0	14	32	31	500	42	48	40	24	8.5	6.5	36
5	7.2	12	24	29	141	41	36	33	38	10	6.1	15
6	7.6	13	21	30	78	39	33	32	28	7.7	5.2	10
7	6.0	13	19	31	59	43	32	47	22	8.2	5.5	8.9
8	4.2	12	21	439	53	592	32	42	20	6.9	7.0	11
9	3.8	11	21	99	48	478	81	36	19	6.3	7.4	8.7
10	3.8	12	24	55	46	94	43	30	23	5.9	7.6	7.7
11	4.6	12	22	44	49	62	37	32	22	6.8	7.2	7.6
12	4.1	12	18	40	53	52	34	29	23	6.0	5.1	8.2
13	4.4	19	16	38	44	46	33	26	17	6.0	4.3	7.9
14	4.1	34	17	34	41	42	34	27	17	5.3	5.2	6.1
15	3.9	23	17	96	39	41	33	26	16	6.1	173	5.3
16	3.8	17	16	301	82	40	31	24	12	5.0	433	4.9
17	3.9	16	16	146	197	42	95	24	11	9.8	52	5.5
18	5.3	14	14	59	89	46	51	24	11	5.9	31	5.6
19	13	14	13	70	58	250	108	21	12	6.3	23	5.4
20	8.3	14	13	54	52	85	86	20	13	10	17	6.4
21	6.0	25	14	43	47	64	49	19	13	24	14	15
22	5.9	133	80	43	44	51	43	20	17	20	14	11
23	5.8	34	44	138	104	45	43	18	34	14	12	7.1
24	5.6	23	188	68	65	42	38	18	16	10	13	5.8
25	8.2	18	175	49	52	38	34	22	14	9.0	11	5.4
26	169	16	55	43	47	37	33	19	12	7.9	9.7	6.3
27	86	14	64	414	78	36	34	20	11	92	9.4	5.2
28	30	12	59	344	60	36	36	24	9.9	26	9.0	5.2
29	24	12	46	85	---	34	31	21	21	13	7.1	6.2
30	21	16	44	64	---	34	53	75	34	9.5	7.3	20
31	21	---	39	55	---	33	---	51	---	8.2	7.1	---
TOTAL	494.2	643	1184	3034	2426	2627	1343	1007	579.9	390.3	933.4	275.4
MEAN	15.9	21.4	38.2	97.9	86.6	84.7	44.8	32.5	19.3	12.6	30.1	9.18
MAX	169	133	188	439	500	592	108	92	38	92	433	36
MIN	3.8	11	13	29	39	33	31	18	9.9	5.0	4.3	4.9
CFSM	.50	.67	1.20	3.08	2.72	2.66	1.41	1.02	.61	.40	.95	.29
IN.	.58	.75	1.39	3.55	2.84	3.07	1.57	1.18	.68	.46	1.09	.32

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998, BY WATER YEAR (WY)

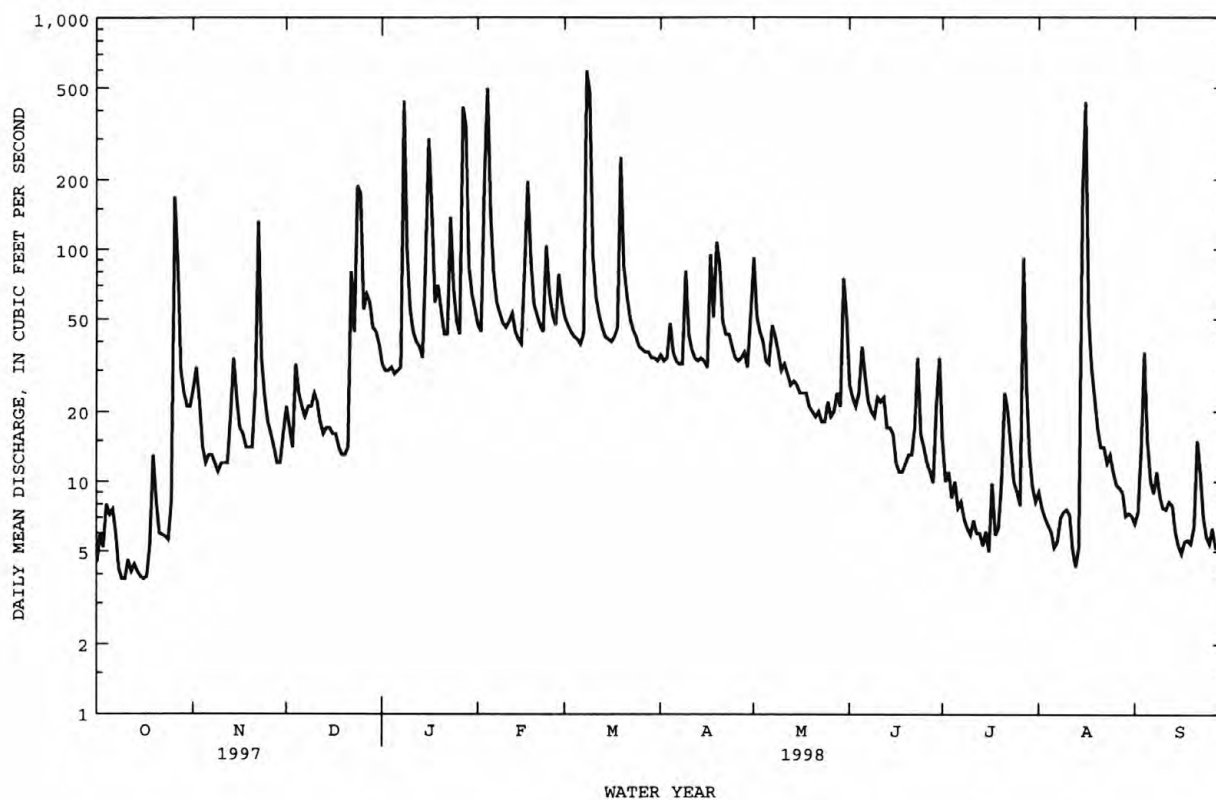
	MEAN	26.4	27.0	34.5	51.0	60.0	62.8	48.6	32.9	25.9	18.6	20.8	15.9
MAX	147	128	85.2	135	137	146	142	89.2	72.5	65.9	81.7	59.3	
(WY)	1972	1958	1977	1993	1960	1993	1958	1975	1962	1975	1985	1971	
MIN	2.37	7.09	7.37	8.17	22.5	22.8	14.3	10.0	3.74	2.41	4.14	1.99	
(WY)	1955	1954	1956	1956	1986	1955	1967	1986	1986	1986	1987	1954	

## SANTÉE RIVER BASIN

02144000 LONG CREEK NEAR BESSEMER CITY, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1953 - 1998
ANNUAL TOTAL	12620.8	14937.2	35.4
ANNUAL MEAN	34.6	40.9	58.6
HIGHEST ANNUAL MEAN			16.7
LOWEST ANNUAL MEAN			2940
HIGHEST DAILY MEAN	1050 Apr 29	592 Mar 8	Oct 16 1971
LOWEST DAILY MEAN	1.9 Sep 5	3.8 Oct 9	.55 Jul 14 1986
ANNUAL SEVEN-DAY MINIMUM	2.3 Sep 2	4.1 Oct 9	.76 Jul 9 1986
INSTANTANEOUS PEAK FLOW		970 Mar 8	6500 Oct 16 1971
INSTANTANEOUS PEAK STAGE		5.32 Mar 8	9.10 Oct 16 1971
INSTANTANEOUS LOW FLOW		3.7* Oct 9	.40 Oct 7 1954
ANNUAL RUNOFF (CFSM)	1.09	1.29	1.11
ANNUAL RUNOFF (INCHES)	14.76	17.47	15.10
10 PERCENT EXCEEDS	58	78	57
50 PERCENT EXCEEDS	22	23	21
90 PERCENT EXCEEDS	4.3	6.0	6.8

\* See REMARKS.





## SANTÉE RIVER BASIN

02145000 SOUTH FORK CATAWBA RIVER AT LOWELL, NC

LOCATION.--Lat 35°17'10", long 81°06'00", Gaston County, Hydrologic Unit 03050102, on right bank 50 ft north of private mill road, 120 ft downstream of Housers Creek, 1.0 mi north of Lowell, 2.5 mi upstream from bridge on Interstate Highway 85, and 3.0 mi downstream of Long Creek.

DRAINAGE AREA.--628 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1942 to September 1971, October 1983 to current year.

REVISED RECORDS.--WSP 1002: 1943(M). WSP 1303: 1950(M).

GAGE.--Water-stage recorder. Datum of gage is 603.10 ft above sea level. Telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Considerable diurnal fluctuation and slight regulation for short periods at low flow caused by power plant upstream from station. For diversion by Town of Bessemer City, see Long Creek near Bessemer City (station 021440000). Minimum discharge for all water years affected by regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 15, 1940, reached a stage of 21.33 ft, from floodmarks; discharge, 34,000 ft<sup>3</sup>/s. Depth of flow over dam during the July 1916 flood at High Shoals, 11 mi upstream, was about 1 ft higher than that for August 1940, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	332	540	565	782	1230	1200	930	1520	821	505	416	288
2	281	595	544	731	1050	1100	947	1830	717	462	407	291
3	296	589	495	706	1700	1040	906	1650	667	447	384	322
4	285	520	642	685	6630	984	1080	1360	691	436	367	634
5	297	476	668	653	5980	951	998	1290	786	425	351	512
6	293	438	574	668	4520	918	915	1180	869	408	335	399
7	293	431	526	706	2180	904	870	1260	838	391	309	354
8	283	434	518	4310	1460	4550	860	1710	730	395	332	332
9	284	430	518	4180	1250	8650	1410	1700	657	380	339	366
10	288	415	543	2390	1140	5710	1350	1310	957	391	447	361
11	274	408	584	1270	1050	3220	1070	1250	1310	378	451	318
12	275	403	548	1030	1330	1700	946	1120	1320	350	409	299
13	268	463	510	891	1210	1420	887	1010	950	350	363	282
14	274	647	500	799	1040	1270	889	955	754	351	329	279
15	289	617	487	1140	961	1180	896	929	682	338	667	277
16	317	491	475	3520	1130	1110	871	882	648	322	2030	272
17	299	471	467	3430	2750	1080	2510	840	618	450	1060	259
18	293	458	462	1720	3080	1070	3150	805	592	553	685	248
19	358	447	457	1520	2790	2350	2560	780	598	490	557	257
20	529	444	449	1410	1640	1950	4190	752	600	434	472	243
21	386	476	434	1140	1310	1710	3340	726	547	602	415	276
22	336	1260	792	1040	1150	1450	2210	715	548	392	390	360
23	318	756	814	1800	1530	1270	1510	707	567	365	364	299
24	320	593	1060	1990	1700	1150	1320	698	575	429	364	294
25	348	533	2370	1500	1390	1090	1200	690	529	429	368	287
26	1140	507	1360	1160	1230	1040	1100	668	507	753	333	253
27	2370	482	1230	3000	1320	1010	1020	809	490	862	323	259
28	1040	473	1520	8290	1400	976	1240	923	464	842	310	252
29	677	459	1230	4910	---	959	1130	851	438	600	298	352
30	557	488	1030	2760	---	943	1100	737	523	486	329	347
31	519	---	888	1520	---	923	---	919	---	437	297	---
TOTAL	14119	15744	23260	61651	55151	54878	43405	32576	20993	14453	14501	9572
MEAN	455	525	750	1989	1970	1770	1447	1051	700	466	468	319
MAX	2370	1260	2370	8290	6630	8650	4190	1830	1320	862	2030	634
MIN	268	403	434	653	961	904	860	668	438	322	297	243
CFSM	.73	.84	1.19	3.17	3.14	2.82	2.30	1.67	1.11	.74	.74	.51
IN.	.84	.93	1.38	3.65	3.27	3.25	2.57	1.93	1.24	.86	.86	.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998<sup>a</sup>, BY WATER YEAR (WY)

MEAN	649	642	801	1033	1255	1325	1073	760	644	545	592	503
MAX	2862	2034	1748	2468	3204	3511	2676	1759	1424	1361	2266	2460
(WY)	1965	1958	1968	1993	1960	1952	1958	1984	1962	1943	1970	1945
MIN	104	215	235	242	499	561	390	337	196	162	182	110
(WY)	1955	1955	1956	1956	1986	1955	1967	1986	1986	1986	1956	1954

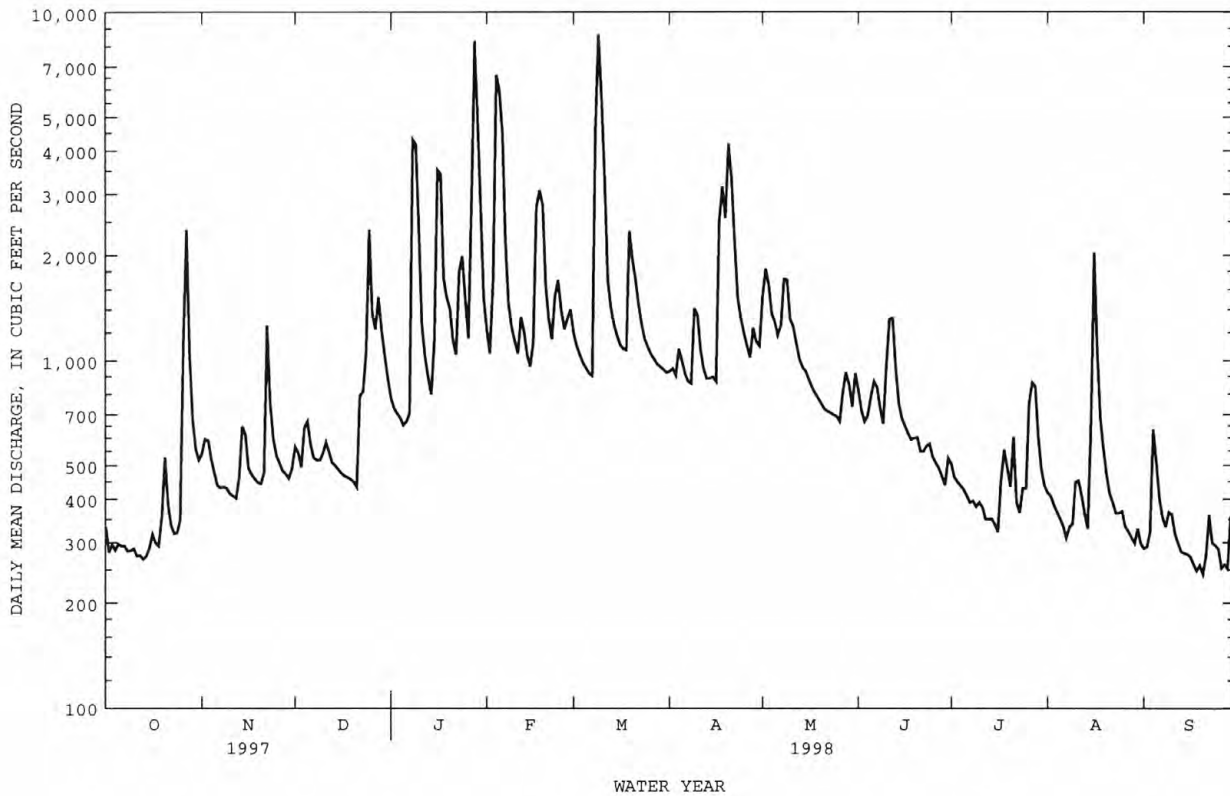
## SANTEE RIVER BASIN

02145000 SOUTH FORK CATAWBA RIVER AT LOWELL, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1942 - 1998 <sup>a</sup>	
ANNUAL TOTAL	307410		360303		818	
ANNUAL MEAN	842		987		1341	
HIGHEST ANNUAL MEAN					418	
LOWEST ANNUAL MEAN					1993	
HIGHEST DAILY MEAN	10800	Apr 29	8650	Mar 9	21700	Aug 11 1970
LOWEST DAILY MEAN	207	Sep 23	243	Sep 20	31	Oct 8 1954
ANNUAL SEVEN-DAY MINIMUM	241	Sep 2	262	Sep 15	73	Oct 8 1954
INSTANTANEOUS PEAK FLOW			9480	Mar 9	24800	Aug 11 1970
INSTANTANEOUS PEAK STAGE			11.04	Mar 9	17.38	Aug 11 1970
INSTANTANEOUS LOW FLOW			194*	Oct 2	13*	Aug 22 1988
ANNUAL RUNOFF (CFSM)	1.34		1.57		1.30	
ANNUAL RUNOFF (INCHES)	18.21		21.34		17.69	
10 PERCENT EXCEEDS	1420		1710		1400	
50 PERCENT EXCEEDS	668		677		574	
90 PERCENT EXCEEDS	293		305		283	

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.



## SANTEE RIVER BASIN

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC

LOCATION.--Lat 35°15'43", long 80°50'15", Mecklenburg County, Hydrologic Unit 03050103, on right bank 50 ft upstream from bridge on Statesville Avenue (U.S. Highway 21), 1,000 ft upstream from Kennedy Branch, 0.2 mi upstream from Interstate Highway 77, and 2.5 mi north of Trade and Tryon Street intersection in downtown Charlotte.

DRAINAGE AREA.--5.97 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1969-80, October 1981 to September 1994, November 1997 to September 1998.

REVISED RECORDS.--WDR NC-84-1: 1982.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 656.85 ft above sea level (levels by City of Charlotte). Telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. A 140-acre solid-waste landfill, used 1940 to 1970, is located just upstream from station. No flow for parts of Aug. 1,3,4, 1987, occurred as a result of upstream construction; minimum discharge not affected by construction: 0.12 ft<sup>3</sup>/s, Aug. 30,31, 1987. Minimum discharge for current water year also occurred Sept. 2.

DISCHARGE, CUBIC FEET PER SECOND, FOR PERIOD NOVEMBER TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e14	27	3.7	5.0	5.5	12	8.4	e3.5	2.0	1.6	.58
2	---	e10	5.8	3.4	4.6	4.9	5.5	3.8	2.0	1.5	1.2	.54
3	---	e1.5	3.3	3.2	64	5.4	14	3.0	1.4	1.2	.90	45
4	---	e.96	2.9	2.9	81	4.1	21	2.8	3.9	1.2	.79	41
5	---	e.89	2.3	2.7	25	4.0	6.0	2.5	11	1.2	.76	2.2
6	---	.90	1.9	21	12	3.9	4.8	2.3	3.0	1.1	.90	1.2
7	---	.91	1.7	31	8.4	9.1	4.3	9.8	1.8	1.1	8.5	.94
8	---	.87	1.6	66	6.7	114	4.0	4.8	1.4	1.2	42	.93
9	---	.82	2.8	11	5.7	58	153	3.5	1.3	1.1	6.2	.85
10	---	.85	10	6.0	5.3	13	12	3.9	11	1.1	2.6	.80
11	---	.80	3.6	4.5	6.3	8.0	7.3	4.8	3.3	1.1	1.2	.78
12	---	1.4	2.5	3.8	5.6	6.5	7.1	2.5	1.9	1.1	1.0	.77
13	---	12	2.1	3.5	4.5	5.6	8.8	2.2	1.4	1.0	2.7	.73
14	---	22	1.9	3.1	4.2	5.4	9.6	2.1	1.3	.99	2.8	.68
15	---	2.5	1.7	33	3.9	4.7	7.8	2.0	1.2	.96	13	.72
16	---	1.4	1.7	114	25	4.5	7.4	2.0	1.1	1.2	24	.67
17	---	1.1	1.6	24	117	4.4	37	1.8	1.1	1.4	10	.66
18	---	1.0	1.5	9.2	19	18	13	1.7	1.0	.82	2.0	.65
19	---	1.0	1.5	34	9.4	48	41	2.0	1.9	.73	1.3	.70
20	---	1.0	1.5	12	7.1	13	17	2.5	1.2	13	1.0	.62
21	---	21	1.5	6.9	5.8	9.2	8.0	2.3	1.0	4.2	.91	6.6
22	---	37	77	9.3	5.3	6.9	14	2.3	4.4	1.1	.89	1.3
23	---	4.9	10	45	23	5.7	19	2.2	27	.90	.84	.83
24	---	2.6	59	13	8.0	5.2	7.2	1.5	3.9	.85	.78	.75
25	---	2.0	24	7.4	5.6	4.6	6.0	1.5	2.0	5.8	.74	.69
26	---	1.8	7.1	5.5	5.2	4.6	5.1	1.4	1.7	1.6	.72	.76
27	---	1.7	22	137	13	4.7	e4.8	4.2	1.5	36	.63	.60
28	---	1.6	9.4	37	7.0	4.4	e4.6	1.9	1.4	2.2	.64	.65
29	---	1.6	8.4	12	---	4.2	4.1	1.6	8.5	1.3	.61	.61
30	---	21	9.0	7.8	---	4.1	15	e20	3.7	1.0	.60	2.4
31	---	---	5.4	6.0	---	4.1	---	e6.0	---	4.2	.60	---
TOTAL	---	171.10	311.7	678.9	492.6	397.7	480.4	113.3	110.8	94.15	132.41	116.21
MEAN	---	5.70	10.1	21.9	17.6	12.8	16.0	3.65	3.69	3.04	4.27	3.87
MAX	---	37	77	137	117	114	153	20	27	36	42	45
MIN	---	.80	1.5	2.7	3.9	3.9	4.0	1.4	1.0	.73	.60	.54
IN.	---	1.07	1.94	4.23	3.07	2.48	2.99	.71	.69	.59	.83	.72

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1998, BY WATER YEAR (WY)

	5.57	6.74	7.62	11.9	15.2	14.9	8.03	6.92	6.65	3.68	4.32	3.48
MEAN	5.57	6.74	7.62	11.9	15.2	14.9	8.03	6.92	6.65	3.68	4.32	3.48
MAX	23.8	27.9	21.3	22.9	38.8	30.6	16.0	16.5	24.9	8.15	11.3	16.2
(WY)	1991	1986	1984	1993	1995	1993	1998	1990	1982	1984	1985	1987
MIN	.97	1.08	2.97	4.04	4.71	2.99	2.71	1.94	.88	.93	.39	.47
(WY)	1992	1982	1995	1986	1986	1985	1986	1986	1986	1986	1987	1983

## Santee River Basin

02146211 IRWIN CREEK AT STATESVILLE AVENUE AT CHARLOTTE, NC--Continued

## SUMMARY STATISTICS

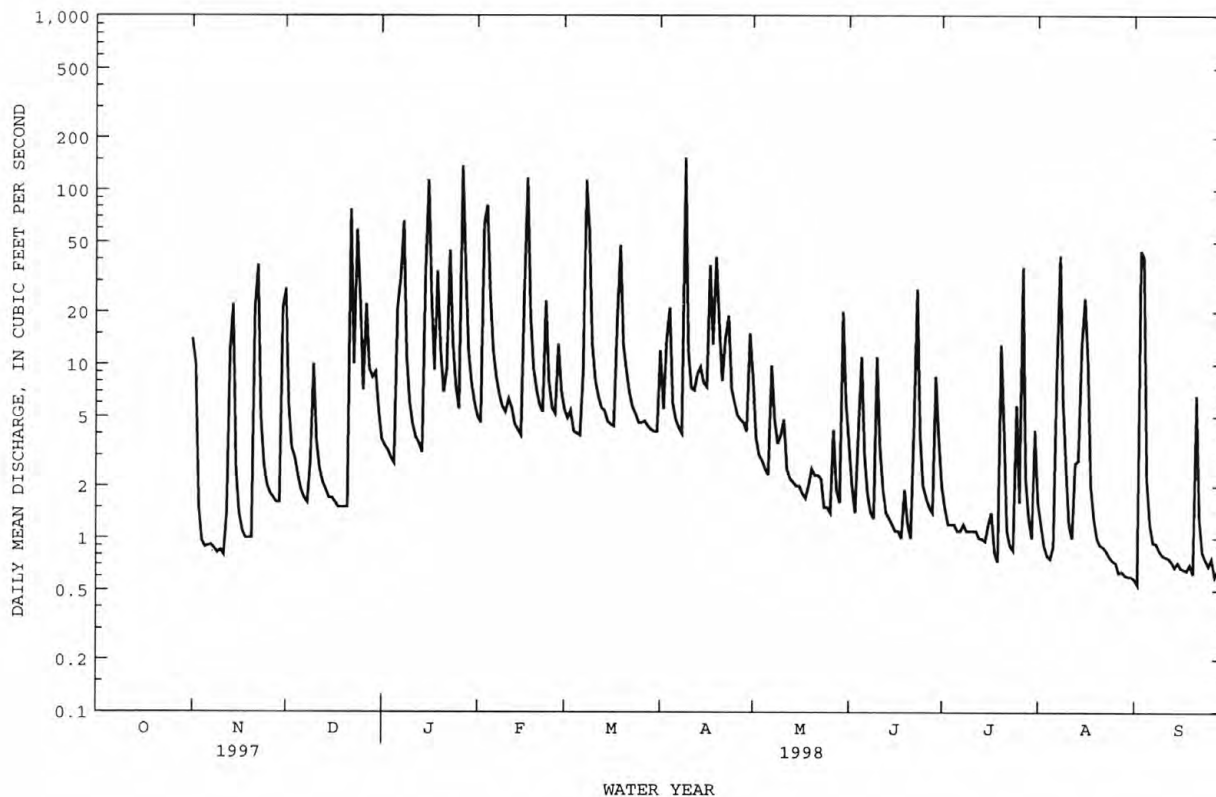
FOR PERIOD NOVEMBER TO SEPTEMBER 1998

WATER YEARS 1981 - 1998<sup>e</sup>

ANNUAL MEAN			7.72	
HIGHEST ANNUAL MEAN			10.7	1984
LOWEST ANNUAL MEAN			5.44	1986
HIGHEST DAILY MEAN	153	Apr 9	388	Nov 21 1985
LOWEST DAILY MEAN	.54	Sep 2	.16	Aug 1 1986
ANNUAL SEVEN-DAY MINIMUM	.60	Aug 27	.26	Jul 28 1986
INSTANTANEOUS PEAK FLOW	868	Apr 9	1430	Jun 18 1982
INSTANTANEOUS PEAK STAGE	5.39	Apr 9	7.58	Jun 18 1982
INSTANTANEOUS LOW FLOW	.46*	Sep 1	0*	Aug 1 1987
ANNUAL RUNOFF (INCHES)			17.58	
10 PERCENT EXCEEDS	22		15	
50 PERCENT EXCEEDS	3.5		2.7	
90 PERCENT EXCEEDS	.82		.77	

<sup>e</sup> Estimated.

\* See REMARKS.

<sup>e</sup> See PERIOD OF RECORD.

## SANTEE RIVER BASIN

02146300 IRWIN CREEK NEAR CHARLOTTE, NC

LOCATION.--Lat 35°11'50", long 80°54'18", Mecklenburg County, Hydrologic Unit 03050103, on left bank at sewage-disposal plant of city of Charlotte, 2,200 ft upstream from Southern Railway bridge, 0.7 mi upstream from Taggart Creek, and 4.2 mi southwest of City Hall, Charlotte.

DRAINAGE AREA.--30.7 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1962 to current year. Prior to October 1963, published as "Sugar (Irwin) Creek at Charlotte".

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 591.53 ft above sea level (levels by City of Charlotte). Telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge for period of record from rating curve extended above 7,500 ft<sup>3</sup>/s on basis of step-backwater computation. Minimum discharge for period of record also occurred July 14, 1986.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 6, 1936, reached a stage of about 17.3 ft at site 400 ft downstream, from information by plant employee. Peak may have been affected by failure of Lakewood Dam, 5 mi upstream. Flood of Jan. 6, 1962, reached a stage of 14.32 ft, from floodmarks; discharge, 4,120 ft<sup>3</sup>/s. Flood of April 11, 1962, reached a stage of 15.18 ft, from floodmarks; discharge, 4,740 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	74	152	28	34	28	72	75	18	15	12	9.6
2	14	70	37	28	30	30	32	35	21	13	8.1	21
3	12	16	27	24	291	28	134	30	14	12	8.2	279
4	11	14	24	22	306	23	151	25	36	26	9.8	229
5	10	13	19	22	120	26	33	24	85	16	8.8	19
6	16	13	17	124	59	25	28	23	23	9.8	8.9	13
7	10	12	17	133	45	52	25	86	16	12	49	13
8	12	12	16	356	36	541	24	42	14	11	172	11
9	11	11	26	60	31	264	983	27	14	12	102	10
10	11	12	78	39	30	63	67	29	249	11	47	10
11	11	11	23	32	41	40	45	35	31	9.5	14	10
12	11	14	19	27	36	38	39	21	18	10	13	9.3
13	10	100	18	27	28	36	36	18	15	11	20	8.6
14	23	128	17	25	29	33	46	20	15	11	16	16
15	26	21	17	170	25	29	33	20	16	11	128	9.6
16	11	16	17	596	131	30	30	17	15	48	153	12
17	9.8	14	21	109	498	31	193	17	13	14	79	10
18	18	14	24	49	87	105	67	18	13	11	16	9.2
19	293	14	23	172	46	211	159	18	24	11	16	8.9
20	22	15	18	59	36	60	75	18	14	74	14	8.4
21	18	118	18	40	34	44	41	19	11	56	13	63
22	23	210	437	51	32	35	63	17	13	11	11	17
23	14	30	58	236	127	31	93	17	130	12	10	11
24	16	21	312	66	42	30	38	18	48	10	14	10
25	16	20	116	42	32	29	33	19	23	144	11	9.1
26	421	16	47	33	30	29	31	20	15	17	12	11
27	53	15	120	661	75	28	48	28	15	367	10	9.8
28	22	15	54	157	34	27	38	22	14	17	9.1	9.2
29	19	14	60	57	---	27	29	16	31	12	8.8	8.7
30	14	119	57	43	---	27	119	142	20	9.5	8.8	20
31	13	---	36	36	---	24	---	29	---	19	12	---
TOTAL	1180.5	1172	1925	3524	2345	2024	2805	945	984	1022.8	1014.5	885.4
MEAN	38.1	39.1	62.1	114	83.8	65.3	93.5	30.5	32.8	33.0	32.7	29.5
MAX	421	210	437	661	498	541	983	142	249	367	172	279
MIN	9.7	11	16	22	25	23	24	16	11	9.5	8.1	8.4
CFSM	1.24	1.27	2.02	3.70	2.73	2.13	3.05	.99	1.07	1.07	1.07	.96
IN.	1.43	1.42	2.33	4.27	2.84	2.45	3.40	1.15	1.19	1.24	1.23	1.07

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

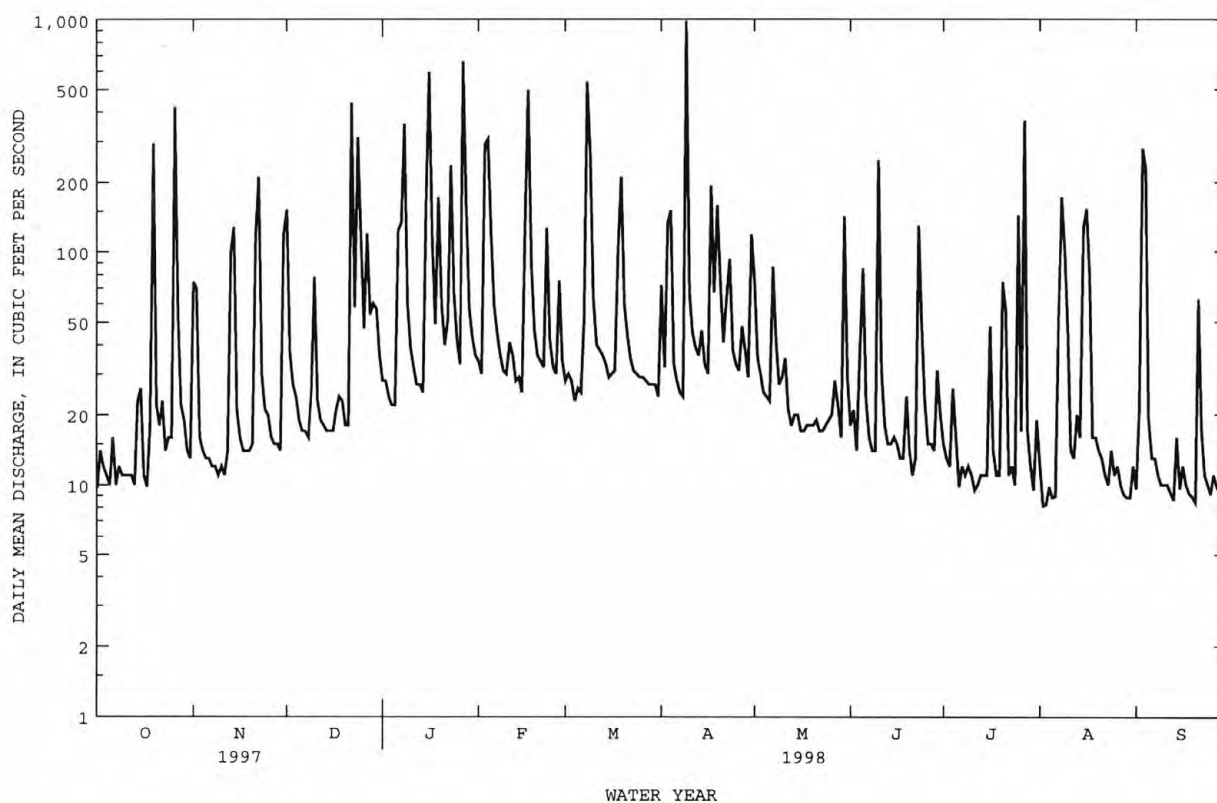
MEAN	38.6	37.5	41.9	60.5	66.5	71.3	43.8	41.4	36.7	35.1	34.3	32.8
MAX	157	137	107	123	124	161	93.5	204	123	215	118	135
(WY)	1991	1986	1984	1993	1979	1993	1998	1975	1982	1997	1995	1975
MIN	9.00	9.32	10.2	13.4	20.7	18.5	14.9	14.0	6.95	6.67	7.97	6.00
(WY)	1992	1982	1966	1981	1968	1985	1981	1986	1986	1986	1987	1983

## SANTÉE RIVER BASIN

02146300 IRWIN CREEK NEAR CHARLOTTE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1962 - 1998	
ANNUAL TOTAL	21753.0		19827.2		45.1	
ANNUAL MEAN	59.6		54.3		78.6	1975
HIGHEST ANNUAL MEAN					24.0	1981
LOWEST ANNUAL MEAN					5010	Jul 23 1997
HIGHEST DAILY MEAN	5010	Jul 23	983	Apr 9	3.1	Sep 25 1983
LOWEST DAILY MEAN	8.1	Sep 20	8.1	Aug 2	3.5	Oct 5 1993
ANNUAL SEVEN-DAY MINIMUM	9.6	Sep 14	9.8	Sep 23	11600*	Jul 23 1997
INSTANTANEOUS PEAK FLOW			5110	Apr 9	20.38	Jul 23 1997
INSTANTANEOUS PEAK STAGE			14.50	Apr 9	2.8*	Jul 13 1986
INSTANTANEOUS LOW FLOW			5.6	Nov 12	1.47	
ANNUAL RUNOFF (CFSM)	1.94		1.77		19.97	
ANNUAL RUNOFF (INCHES)	26.36		24.03		81	
10 PERCENT EXCEEDS	103		128		18	
50 PERCENT EXCEEDS	19		24		8.6	
90 PERCENT EXCEEDS	11		11			

\* See REMARKS.





## SANTÉE RIVER BASIN

02146381 SUGAR CREEK AT NC 51 NEAR PINEVILLE, NC

LOCATION.--Lat 35°05'20", long 80°54'00", Mecklenburg County, Hydrologic Unit 03050103, on right bank on upstream side of bridge at N.C. Highway 51, 0.3 mi upstream from McCullough Branch, and 0.6 mi northwest of City Hall in Pineville.

DRAINAGE AREA.--65.3 mi<sup>2</sup>.

PERIOD OF RECORD.-- Occasional discharge measurements, water years 1978-94. October 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 525 ft above sea level, from topographic map. Telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. A daily average of 12.0 ft<sup>3</sup>/s of treated effluent from Irwin Creek wastewater treatment plant was discharged into the stream above the gage. Maximum discharge for period of record from rating curve extended above 9,710 ft<sup>3</sup>/s. Minimum discharge for current water year also occurred Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	128	258	62	70	72	118	178	46	46	53	36
2	26	127	92	56	65	70	84	81	48	33	33	36
3	27	39	61	54	336	70	104	63	44	37	29	313
4	24	28	56	50	767	66	538	58	49	33	28	943
5	23	26	49	48	264	65	89	52	182	56	27	78
6	27	24	45	163	127	65	69	50	66	33	25	52
7	22	25	43	286	91	68	62	114	47	32	107	46
8	23	24	42	739	77	1170	57	109	42	32	123	43
9	24	23	55	144	68	700	1930	74	40	32	234	41
10	22	25	162	85	61	164	228	54	568	33	161	39
11	23	22	77	70	65	110	135	104	115	33	53	38
12	22	23	51	63	80	96	109	54	82	33	48	39
13	23	136	45	59	61	86	98	46	52	33	44	37
14	27	256	44	57	58	84	106	46	46	33	53	40
15	104	48	42	233	55	78	92	44	44	33	155	39
16	30	31	43	996	191	74	81	43	45	50	328	37
17	24	27	42	609	856	75	407	41	41	57	164	39
18	25	25	47	120	189	181	153	41	36	48	56	38
19	509	24	46	329	104	389	256	42	45	34	47	36
20	73	24	44	145	84	128	219	42	54	147	44	34
21	37	151	41	87	75	108	94	42	38	709	42	88
22	42	513	790	74	70	86	76	42	36	37	39	84
23	31	91	165	483	219	78	164	41	150	35	36	45
24	27	61	597	131	107	73	83	40	44	41	36	37
25	30	57	425	91	80	70	66	39	71	158	38	35
26	661	48	113	68	74	70	60	41	37	60	37	34
27	180	45	200	990	130	69	61	40	37	1740	36	35
28	54	44	134	749	93	67	89	52	35	127	34	34
29	37	42	92	134	---	64	56	42	37	64	34	35
30	31	181	122	94	---	64	190	113	54	49	32	48
31	29	---	84	77	---	63	---	107	---	61	34	---
TOTAL	2267	2318	4107	7346	4517	4623	5874	1935	2231	3949	2210	2479
MEAN	73.1	77.3	132	237	161	149	196	62.4	74.4	127	71.3	82.6
MAX	661	513	790	996	856	1170	1930	178	568	1740	328	943
MIN	22	22	41	48	55	63	56	39	35	32	25	34
CFSM	1.12	1.18	2.03	3.63	2.47	2.28	3.00	.96	1.14	1.95	1.09	1.27
IN.	1.29	1.32	2.34	4.18	2.57	2.63	3.35	1.10	1.27	2.25	1.26	1.41

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1998, BY WATER YEAR (WY)

	1995	1996	1997	1998
MEAN	98.4	96.5	85.0	159
MAX	154	183	132	237
(WY)	1996	1997	1998	1999
MIN	73.1	60.2	56.3	106
(WY)	1998	1999	2000	2001

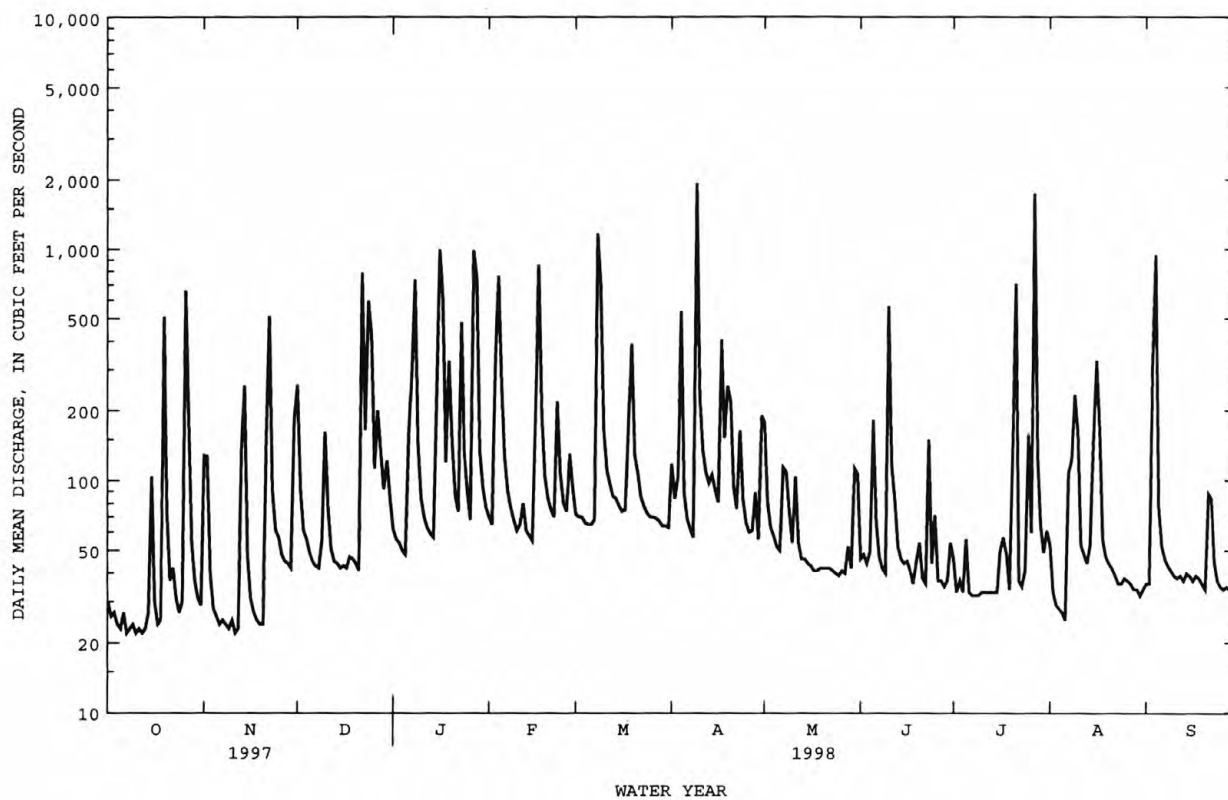
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1995 - 1998
ANNUAL TOTAL	42598	43856	
ANNUAL MEAN	117	120	112
HIGHEST ANNUAL MEAN			120
LOWEST ANNUAL MEAN			104
HIGHEST DAILY MEAN	4790	1930	4790
LOWEST DAILY MEAN	19	22	19
ANNUAL SEVEN-DAY MINIMUM	22	23	22
INSTANTANEOUS PEAK FLOW		3510	9890*
INSTANTANEOUS PEAK STAGE		12.94	18.68
INSTANTANEOUS LOW FLOW		20*	15
ANNUAL RUNOFF (CFSM)	1.79	1.84	1.71
ANNUAL RUNOFF (INCHES)	24.27	24.98	23.23
10 PERCENT EXCEEDS	180	223	182
50 PERCENT EXCEEDS	51	56	53
90 PERCENT EXCEEDS	24	30	30

\* See REMARKS.



## SANTÉE RIVER BASIN

02146381 SUGAR CREEK AT NC 51 NEAR PINEVILLE, NC--Continued



## SANTEE RIVER BASIN

02146409 LITTLE SUGAR CREEK AT MEDICAL CENTER DRIVE AT CHARLOTTE, NC

LOCATION.--Lat 35°12'11", long 80°50'15", Mecklenburg County, Hydrologic Unit 03050103, on left bank on upstream side of bridge at Medical Center Drive, 3.3 mi upstream from Briar Creek, and 1.3 mi south of City Hall in Charlotte.

DRAINAGE AREA.--11.8 mi<sup>2</sup>, revised.

PERIOD OF RECORD.--October 1994 to current year. Fragmentary records 1964-1966, in files of Geological Survey as "Little Sugar Creek at Brunswick Avenue at Charlotte".

GAGE.--Water-stage recorder. Elevation of gage is 610 ft above sea level, from topographic map. Telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good except those below 2.0 ft<sup>3</sup>/sec and above 2500 ft<sup>3</sup>/sec, which are fair. Minimum discharge for period of record also occurred Sept. 6, 8, 1997 and may have been affected by regulation of unknown origin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	55	60	8.0	9.3	8.6	22	40	8.6	6.4	5.1	2.5
2	2.8	30	7.9	7.3	8.7	8.4	8.4	11	11	3.9	3.0	2.6
3	3.0	5.4	5.7	7.1	166	8.2	99	8.7	8.1	3.4	2.9	206
4	2.8	4.1	5.8	6.5	136	8.0	57	8.6	17	17	3.0	129
5	2.6	3.7	4.7	6.1	36	7.8	9.7	8.5	48	4.7	3.9	5.5
6	2.4	3.5	4.4	118	15	7.6	8.8	8.5	11	3.0	3.6	3.8
7	2.5	3.8	4.1	64	12	29	8.2	33	8.0	2.9	28	3.3
8	2.4	3.6	4.2	190	11	250	7.8	28	7.4	2.9	104	3.2
9	2.4	3.4	8.9	15	9.8	97	426	11	7.0	2.9	34	3.0
10	2.5	3.2	40	9.9	9.1	15	15	14	122	2.7	51	2.9
11	2.6	3.2	6.5	8.3	14	12	10	18	11	2.6	4.2	3.2
12	2.2	8.2	4.6	7.6	11	11	8.9	10	7.8	3.2	3.3	3.0
13	2.4	61	4.6	7.1	8.6	10	8.4	9.5	6.8	2.7	13	2.7
14	11	61	4.2	6.5	8.1	9.4	14	9.2	6.2	2.9	5.5	2.9
15	8.8	7.3	3.9	101	7.7	8.9	8.0	9.2	6.7	2.8	40	3.0
16	2.6	5.5	3.7	229	56	8.5	7.2	8.8	6.0	14	32	2.8
17	2.2	4.9	3.8	24	223	8.7	128	8.7	5.8	4.0	27	2.8
18	10	4.2	5.4	13	22	54	25	8.8	6.0	2.9	4.0	2.9
19	192	4.5	3.4	85	12	130	104	8.6	9.4	2.4	3.3	2.8
20	6.6	4.0	3.4	16	11	18	23	8.3	6.6	92	3.2	2.8
21	3.7	98	3.5	12	9.5	14	13	8.8	5.3	21	2.7	41
22	8.8	73	202	25	10	11	46	8.4	15	3.7	2.6	7.2
23	3.3	7.6	12	103	59	10	62	8.4	97	3.5	2.5	3.2
24	3.9	5.7	152	19	13	9.4	13	8.5	19	3.1	2.6	2.9
25	4.0	4.9	27	12	9.7	8.9	10	8.6	8.1	43	2.7	2.8
26	227	4.4	10	10	9.1	8.7	9.1	8.4	6.5	4.7	2.6	2.6
27	16	4.0	54	315	24	8.6	19	11	6.0	201	2.5	2.6
28	5.6	3.9	13	42	9.7	8.2	11	10	6.0	6.4	2.5	2.7
29	4.2	3.8	23	15	---	8.0	8.2	7.6	52	4.3	2.5	2.6
30	3.7	47	19	12	---	7.9	70	129	10	3.6	2.4	7.7
31	5.2	---	11	10	---	7.8	---	13	---	9.7	3.6	---
TOTAL	552.6	531.8	715.7	1504.4	930.3	812.6	1259.7	492.1	545.3	483.3	403.2	466.0
MEAN	17.8	17.7	23.1	48.5	33.2	26.2	42.0	15.9	18.2	15.6	13.0	15.5
MAX	227	98	202	315	223	250	426	129	122	201	104	206
MIN	2.2	3.2	3.4	6.1	7.7	7.6	7.2	7.6	5.3	2.4	2.4	2.5
CFSM	1.46	1.45	1.89	3.98	2.72	2.15	3.44	1.30	1.49	1.28	1.07	1.27
IN.	1.68	1.62	2.18	4.59	2.84	2.48	3.84	1.50	1.66	1.47	1.23	1.42

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1998, BY WATER YEAR (WY)

	1995	1996	1997	1998
MEAN	19.6	17.6	13.4	28.9
MAX	28.9	30.3	23.1	48.5
(WY)	1996	1996	1998	1995
MIN	13.6	9.75	8.15	15.5
(WY)	1995	1995	1995	1997

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

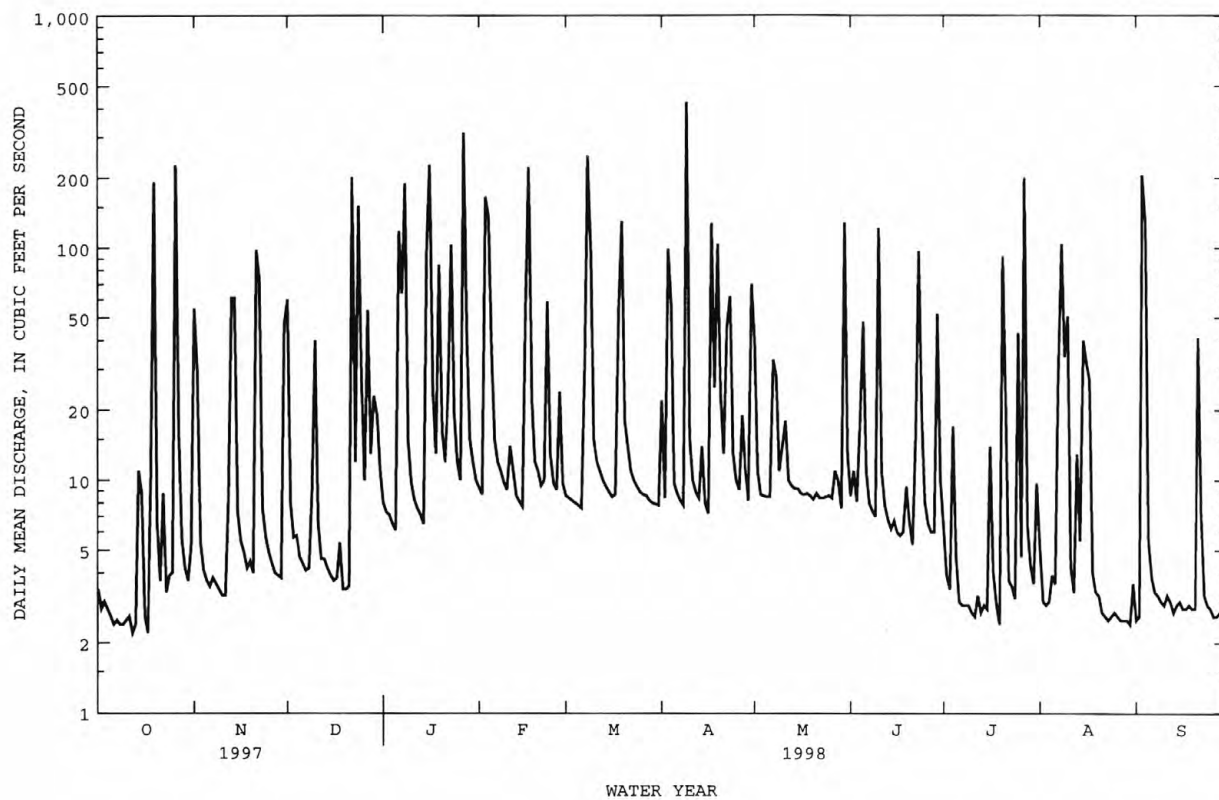
## WATER YEARS 1995 - 1998

ANNUAL TOTAL	8446.2	8697.0		
ANNUAL MEAN	23.1	23.8		21.5
HIGHEST ANNUAL MEAN				23.8
LOWEST ANNUAL MEAN				19.6
HIGHEST DAILY MEAN	1970	Jul 23	426	Apr 9
LOWEST DAILY MEAN	1.5	Sep 21	2.2	Oct 12
ANNUAL SEVEN-DAY MINIMUM	2.0	Sep 17	2.4	Oct 6
INSTANTANEOUS PEAK FLOW			3080	Apr 9
INSTANTANEOUS PEAK STAGE			12.09	Apr 9
INSTANTANEOUS LOW FLOW			1.9	Oct 7
ANNUAL RUNOFF (CFSM)	1.90		1.95	
ANNUAL RUNOFF (INCHES)	25.75		26.52	
10 PERCENT EXCEEDS	41		60	
50 PERCENT EXCEEDS	5.1		8.4	
90 PERCENT EXCEEDS	2.6		2.8	

\* See REMARKS.

## Santee River Basin

02146409 LITTLE SUGAR CREEK AT MEDICAL CENTER DRIVE AT CHARLOTTE, NC--Continued



## SANTEE RIVER BASIN

0214645022 BRIAR CREEK AT SECOND FOOTBRIDGE UPSTREAM OF COLONY ROAD AT CHARLOTTE, NC

LOCATION.--Lat 35°10'30", long 80°49'55", Mecklenburg County, Hydrologic Unit 03050103, on right bank on downstream side of second footbridge 700 feet upstream of Colony Road at Charlotte. Located within Myers Park Country Club.

DRAINAGE AREA.--19.0 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 610 ft above sea level, from topographic map. Telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum gage height for period of record 15.41 ft, from floodmarks. Maximum discharge for period of record from slope-area measurement of peak flow. Minimum discharge for period of record also occurred several days in September, 1997.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 27, 1995 reached a stage of 15.6 ft, present site and datum, from floodmarks; discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	53	61	13	16	15	17	41	7.2	9.6	6.6	4.1
2	3.4	36	13	12	15	15	12	18	8.9	5.1	4.3	4.3
3	3.4	7.6	9.7	12	193	14	139	18	6.7	4.6	4.1	168
4	3.3	5.8	9.9	11	214	13	179	15	13	13	3.9	172
5	3.3	5.3	9.1	11	60	13	20	14	48	8.5	3.8	8.4
6	3.2	5.3	7.8	70	29	13	16	12	9.7	4.1	3.6	5.7
7	4.3	5.3	7.6	73	23	24	14	38	6.7	3.9	20	5.0
8	3.7	5.3	7.6	206	20	288	13	52	6.0	3.9	23	4.8
9	3.2	5.1	12	28	18	168	839	15	6.0	3.8	21	4.7
10	3.1	5.0	58	18	18	29	30	14	122	3.5	55	4.5
11	3.2	5.3	13	14	21	22	20	23	13	3.5	6.0	4.4
12	3.1	7.9	9.9	13	19	20	16	12	7.4	3.5	4.6	4.4
13	3.3	54	9.2	11	16	18	15	11	7.0	3.4	108	4.3
14	14	60	8.6	10	15	17	20	11	6.1	3.3	14	4.3
15	13	10	8.9	123	14	16	14	10	5.9	3.2	45	4.4
16	3.5	7.2	8.5	308	65	15	13	10	5.5	3.2	19	4.1
17	3.1	6.3	7.9	44	275	15	138	9.5	5.5	8.4	27	4.0
18	8.1	6.4	6.8	22	35	42	41	9.1	5.3	3.4	5.9	3.8
19	196	6.8	6.6	112	22	147	118	8.7	7.0	2.9	5.1	3.8
20	11	6.9	6.5	31	19	41	41	8.5	6.1	e10	4.5	4.1
21	6.1	78	6.5	20	17	31	20	8.4	5.0	e80	4.3	25
22	9.9	99	214	25	17	22	86	8.1	6.1	e10	4.2	9.6
23	4.9	13	24	173	74	19	141	7.7	91	3.8	5.1	4.7
24	4.4	9.9	212	34	21	16	28	7.3	10	3.5	5.6	4.0
25	4.9	8.5	53	22	17	14	19	7.3	6.1	25	3.7	3.9
26	229	7.9	20	18	16	14	16	6.7	5.0	4.6	3.6	3.8
27	25	7.2	65	440	29	14	26	6.6	4.6	252	3.6	3.7
28	8.5	6.9	25	80	16	14	18	7.5	4.4	8.6	4.0	3.7
29	6.1	6.7	30	28	---	13	14	6.8	69	5.9	4.0	3.8
30	5.5	40	27	21	---	13	84	72	15	5.1	4.5	15
31	5.2	---	17	18	---	13	---	12	---	6.7	4.2	---
TOTAL	602.2	581.6	975.1	2021	1314	1128	2167	500.2	519.2	510.0	431.2	500.3
MEAN	19.4	19.4	31.5	65.2	46.9	36.4	72.2	16.1	17.3	16.5	13.9	16.7
MAX	229	99	214	440	275	288	839	72	122	252	108	172
MIN	3.1	5.0	6.5	10	14	13	12	6.6	4.4	2.9	3.6	3.7
CFSM	1.02	1.02	1.66	3.44	2.47	1.92	3.81	.85	.91	.87	.73	.88
IN.	1.18	1.14	1.91	3.96	2.58	2.21	4.25	.98	1.02	1.00	.85	.98

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998
MEAN	19.9	17.0	20.0	40.1	39.3	33.1	46.6	15.1	16.7	46.2	12.9	14.7
MAX	20.4	19.4	31.5	65.2	46.9	36.4	72.2	16.6	19.4	114	19.1	17.2
(WY)	1997	1998	1998	1998	1998	1998	1998	1996	1997	1997	1996	1996
MIN	19.4	14.7	14.0	19.4	30.4	27.1	31.9	12.5	13.4	8.57	5.79	10.4
(WY)	1998	1997	1997	1997	1996	1997	1996	1997	1996	1996	1997	1997

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1996 - 1998

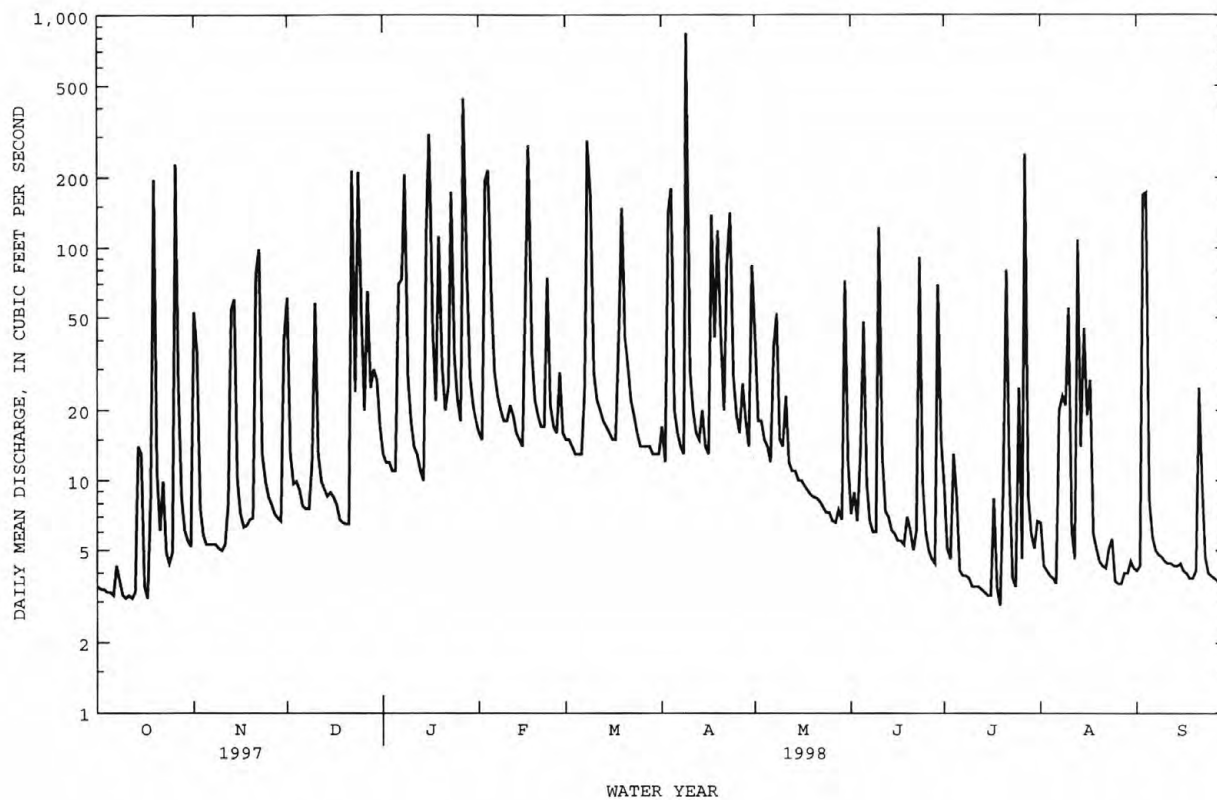
ANNUAL TOTAL	10799.6	11249.8	
ANNUAL MEAN	29.6	30.8	29.3
HIGHEST ANNUAL MEAN			30.8
LOWEST ANNUAL MEAN			27.8
HIGHEST DAILY MEAN	2610	839	2610
LOWEST DAILY MEAN	2.0	2.9	2.0
ANNUAL SEVEN-DAY MINIMUM	2.2	3.4	2.2
INSTANTANEOUS PEAK FLOW		3680	5680*
INSTANTANEOUS PEAK STAGE		12.49	15.41*
INSTANTANEOUS LOW FLOW		2.6	1.9*
ANNUAL RUNOFF (CFSM)	1.56	1.62	1.54
ANNUAL RUNOFF (INCHES)	21.18	22.06	20.99
10 PERCENT EXCEEDS	50	72	50
50 PERCENT EXCEEDS	8.6	11	10
90 PERCENT EXCEEDS	3.2	3.8	3.7

e Estimated.

\* See REMARKS.

## SANTEE RIVER BASIN

0214645022 BRIAR CREEK AT SECOND FOOTBRIDGE UPSTREAM OF COLONY ROAD AT CHARLOTTE, NC--Continued



## SANTEE RIVER BASIN

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC

LOCATION.--Lat 35°09'53", long 80°51'12", Mecklenburg County, Hydrologic Unit 03050103, on right bank at downstream side of bridge on Seneca Place, 0.8 mi upstream from mouth, and 4 mi south of City Hall in Charlotte.

DRAINAGE AREA.--2.63 mi<sup>2</sup>, revised.

PERIOD OF RECORD.--Water years 1967 to 1970 (annual maximum), December 1982 to September 1990, October 1994 to current year.

REVISED RECORDS.--WDR NC-85-1: 1984 (P). WDR NC-88-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 597.77 ft above sea level (North Carolina Coast and Geodetic Survey bench mark). Telephone telemetry at station.

REMARKS.--Records good. No flow occurred periodically in 1986, 1987, and 1988. Minimum discharge for current water year also occurred July 14, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	8.8	11	1.5	1.5	1.6	2.3	4.2	.99	.80	.90	.56
2	.41	4.3	1.4	1.5	1.5	1.5	1.3	1.8	1.5	.53	.66	.78
3	.40	.72	1.3	1.3	29	1.5	39	1.6	.89	.59	.59	35
4	.37	.66	1.3	1.2	23	1.5	12	1.7	5.1	.51	.55	22
5	.36	.63	1.1	1.2	5.3	1.5	1.9	1.6	9.3	.63	.59	1.1
6	.36	.64	1.1	22	2.5	1.4	1.5	1.4	1.3	.45	.56	.90
7	.39	.63	1.0	9.2	2.0	5.7	1.4	4.7	.98	.45	18	.80
8	.34	.59	1.0	37	1.7	58	1.3	2.4	.94	.44	5.4	.79
9	.32	.59	1.7	2.8	1.5	18	112	1.5	.98	.46	21	.74
10	.35	.57	10	1.8	1.4	2.7	2.6	1.9	39	.43	19	.73
11	.31	.55	1.5	1.6	1.8	1.8	2.0	4.3	4.8	.40	1.4	.73
12	.31	1.3	1.3	1.4	1.4	1.6	1.8	1.4	1.5	.40	1.2	.70
13	.34	8.2	1.1	1.4	1.1	1.5	1.6	1.3	1.1	.41	1.1	.65
14	5.3	11	1.1	1.2	1.1	1.5	2.2	1.3	.96	.37	.92	.61
15	1.0	1.0	1.0	18	1.0	1.4	1.6	1.2	.95	.41	6.1	.59
16	.37	.85	.99	54	9.2	1.3	1.5	1.2	.90	.46	6.5	.54
17	.36	.75	.99	4.1	43	1.3	21	1.1	.81	2.9	3.3	.52
18	1.5	.74	.97	2.1	3.5	9.8	3.9	1.1	.77	.67	1.1	.48
19	31	.73	.92	17	1.9	20	22	1.0	3.4	.43	1.1	.45
20	.79	.73	.97	2.8	1.7	2.6	3.8	.98	.98	31	.91	.55
21	.55	23	.89	1.9	1.5	2.0	2.2	.96	.96	4.1	.88	6.9
22	1.2	10	36	5.3	1.6	1.7	2.4	.90	1.0	.65	.80	.99
23	.45	1.4	2.3	21	9.6	1.5	6.5	.91	1.9	1.0	.79	.61
24	.49	1.1	37	3.6	2.0	1.5	1.9	.96	2.8	.65	.75	.51
25	.52	.91	5.4	2.2	1.8	1.4	1.7	.90	.92	15	.78	.54
26	38	.85	2.2	1.8	1.7	1.4	1.6	.86	.69	.93	.76	.49
27	1.7	.77	9.8	62	4.2	1.4	2.7	.83	.65	85	.87	.55
28	.73	.73	2.3	6.3	1.7	1.4	1.6	.84	.61	1.2	.81	.70
29	.63	.74	4.9	2.4	---	1.4	1.5	.85	.59	.90	.89	.60
30	.60	7.8	3.0	2.0	---	1.4	15	4.5	2.1	.82	.86	.88
31	.65	---	1.9	1.7	---	1.3	---	1.2	---	5.3	1.0	---
TOTAL	90.52	91.28	147.43	293.3	159.2	152.6	273.8	51.39	89.37	158.29	100.07	81.99
MEAN	2.92	3.04	4.76	9.46	5.69	4.92	9.13	1.66	2.98	5.11	3.23	2.73
MAX	38	23	37	62	43	58	112	4.7	39	85	21	35
MIN	.31	.55	.89	1.2	1.0	1.3	1.3	.83	.59	.37	.55	.45
CFSM	1.07	1.12	1.75	3.48	2.09	1.81	3.36	.61	1.10	1.88	1.19	1.00
IN.	1.24	1.25	2.02	4.01	2.18	2.09	3.74	.70	1.22	2.16	1.37	1.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	2.51	3.34	3.31	4.53	6.07	4.77	3.41	2.93	2.50	3.20	2.97	2.44
MEAN	2.51	3.34	3.31	4.53	6.07	4.77	3.41	2.93	2.50	3.20	2.97	2.44
MAX	5.05	10.5	10.5	9.46	8.96	9.04	9.13	6.65	7.18	13.8	9.12	8.17
(WY)	1990	1986	1984	1998	1990	1984	1998	1990	1985	1997	1995	1989
MIN	.57	.95	1.38	1.70	1.59	1.03	1.24	.88	.22	.31	.19	.34
(WY)	1988	1985	1989	1986	1986	1985	1985	1987	1986	1986	1987	1983

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

WATER YEARS 1983 - 1998<sup>a</sup>

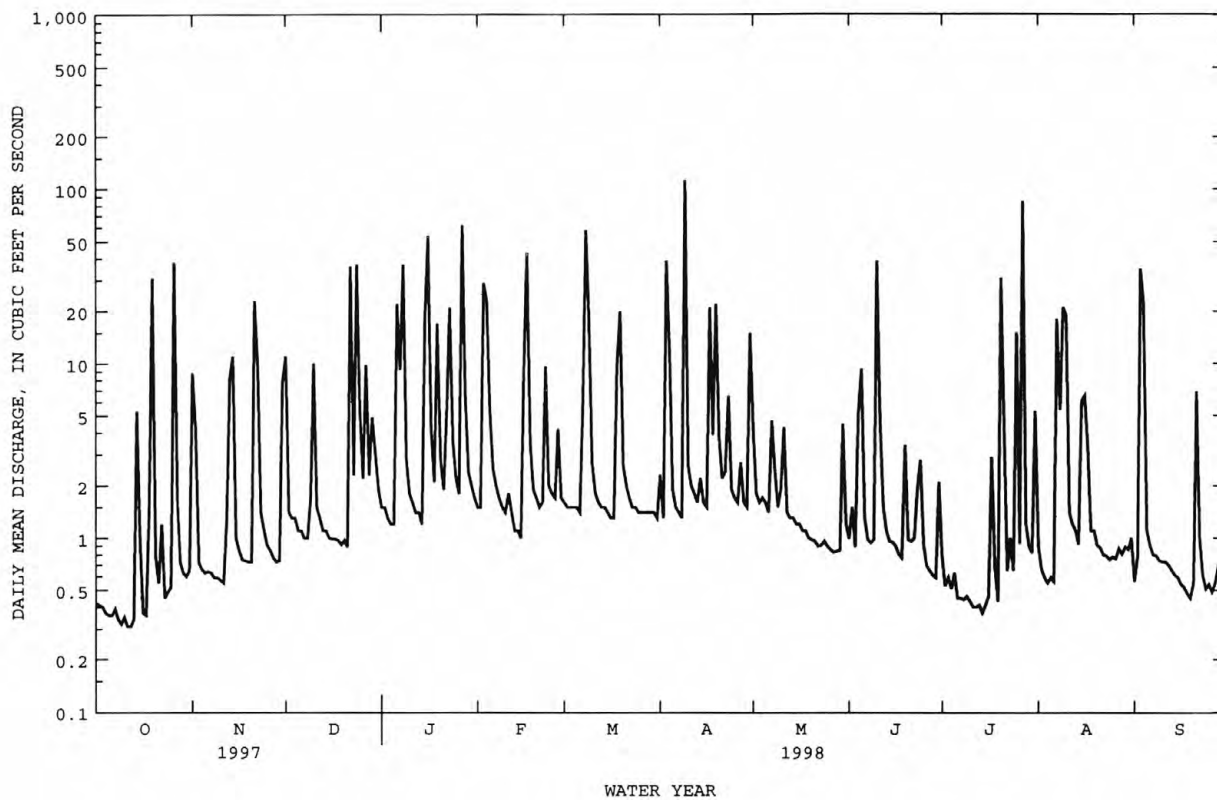
ANNUAL TOTAL	1507.20	1689.24	
ANNUAL MEAN	4.13	4.63	3.51
HIGHEST ANNUAL MEAN			4.87
LOWEST ANNUAL MEAN			2.31
HIGHEST DAILY MEAN	282	112	282
LOWEST DAILY MEAN	.24	.31	0
ANNUAL SEVEN-DAY MINIMUM	.34	.34	0
INSTANTANEOUS PEAK FLOW		1350	1700
INSTANTANEOUS PEAK STAGE		7.91	8.50
INSTANTANEOUS LOW FLOW		.29*	0*
ANNUAL RUNOFF (CFSM)	1.52	1.70	1.29
ANNUAL RUNOFF (INCHES)	20.61	23.10	17.53
10 PERCENT EXCEEDS	7.9	10	6.4
50 PERCENT EXCEEDS	.99	1.3	1.0
90 PERCENT EXCEEDS	.47	.53	.28

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.

## SANTÉE RIVER BASIN

02146470 LITTLE HOPE CREEK AT SENECA PLACE AT CHARLOTTE, NC--Continued





## SANTEE RIVER BASIN

02146507 LITTLE SUGAR CREEK AT ARCHDALE DRIVE AT CHARLOTTE, NC

LOCATION.--Lat 35°08'52", long 80°51'29", Mecklenburg County, Hydrologic Unit 03050103, on left bank at downstream side of bridge on Archdale Drive (Secondary Road 3657) in Charlotte, 0.7 mi downstream of Little Hope Creek, and 5.0 mi south of City Hall, Charlotte.

DRAINAGE AREA.--42.6 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 564.46 ft above sea level (levels by City of Charlotte). Telephone telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. A daily average of 21.3 ft<sup>3</sup>/s of treated sewage effluent from Little Sugar Creek wastewater treatment plant was discharged into the stream 0.4 mi upstream from gage. Minimum discharge for period of record also occurred Oct. 14, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 22, 1975, reached a stage of about 12.7 ft, from floodmarks, discharge, 7,360 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	175	198	55	70	66	90	140	38	46	43	26
2	30	128	54	49	69	65	63	65	46	34	28	26
3	30	38	42	53	555	63	428	61	37	33	27	638
4	30	34	42	49	535	60	503	54	70	46	30	572
5	30	33	39	49	186	60	81	51	180	50	27	39
6	30	33	35	266	104	59	71	48	49	31	28	31
7	31	33	35	234	85	93	66	138	34	32	154	29
8	31	32	33	588	78	907	62	132	34	32	194	29
9	29	31	51	96	74	488	2060	58	34	29	229	28
10	27	32	171	61	70	115	116	53	547	28	209	28
11	25	32	44	56	79	84	72	91	83	27	37	28
12	24	37	36	53	79	80	57	47	43	28	31	28
13	24	194	36	55	68	73	55	44	36	27	158	27
14	57	214	35	50	67	71	71	43	34	27	59	27
15	61	59	34	323	67	69	53	42	34	26	140	28
16	28	48	37	881	202	74	51	41	33	39	95	23
17	26	39	39	153	904	66	453	40	32	54	112	21
18	42	37	40	89	134	180	123	39	32	30	34	26
19	568	36	38	305	88	483	360	39	37	28	30	27
20	44	34	37	111	76	118	126	39	29	362	32	26
21	33	246	36	82	72	101	67	e40	30	193	28	114
22	46	318	601	95	72	78	161	e35	31	36	27	49
23	31	55	92	453	212	73	307	35	276	36	27	28
24	25	42	532	117	86	68	80	34	62	33	30	26
25	32	36	177	86	72	64	62	35	42	202	26	26
26	682	40	73	76	69	58	54	36	34	38	27	26
27	93	38	208	1230	110	63	85	35	30	1270	26	25
28	38	38	91	228	72	62	69	41	30	49	27	26
29	33	38	107	101	---	61	50	35	149	35	26	26
30	32	162	103	83	---	60	260	270	69	32	26	45
31	32	---	72	77	---	61	---	60	---	55	28	---
TOTAL	2273	2312	3168	6204	4355	4023	6156	1921	2215	2988	1995	2098
MEAN	73.3	77.1	102	200	156	130	205	62.0	73.8	96.4	64.4	69.9
MAX	682	318	601	1230	904	907	2060	270	547	1270	229	638
MIN	24	31	33	49	67	58	50	34	29	26	26	21
CFSM	1.72	1.81	2.40	4.70	3.65	3.05	4.82	1.45	1.73	2.26	1.51	1.64
IN.	1.98	2.02	2.77	5.42	3.80	3.51	5.38	1.68	1.93	2.61	1.74	1.83

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1998, BY WATER YEAR (WY)

	MEAN	72.9	74.4	70.1	111	118	123	86.0	71.8	72.6	71.1	75.8	61.9
MAX	258	197	164	207	194	245	205	119	152	310	227	147	
(WY)	1991	1986	1984	1978	1979	1993	1998	1985	1992	1997	1995	1979	
MIN	25.7	22.6	32.8	31.6	44.8	40.0	30.8	33.8	20.5	27.2	29.5	21.7	
(WY)	1992	1982	1981	1981	1986	1985	1981	1986	1986	1986	1987	1986	

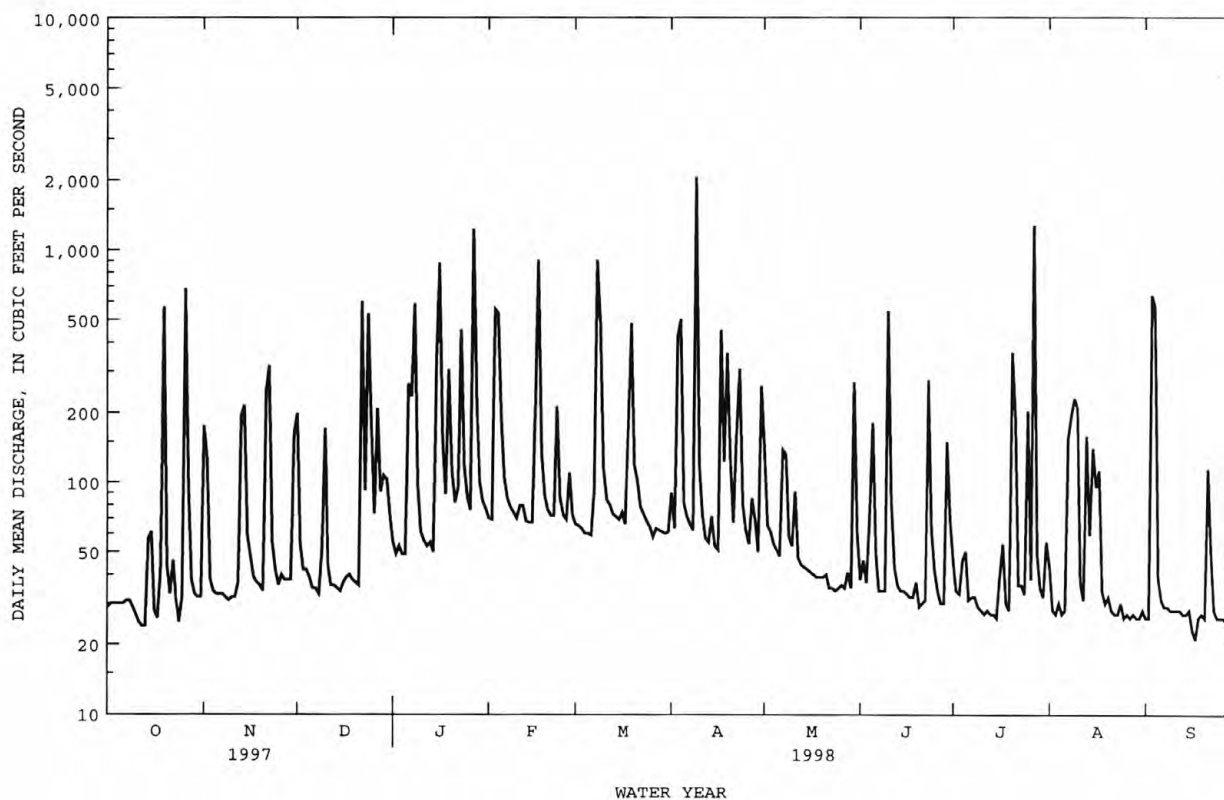
## SANTÉE RIVER BASIN

02146507 LITTLE SUGAR CREEK AT ARCHDALE DRIVE AT CHARLOTTE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1978 - 1998	
ANNUAL TOTAL	38146			39708				
ANNUAL MEAN	105			109			83.9	
HIGHEST ANNUAL MEAN							110	
LOWEST ANNUAL MEAN							51.7	
HIGHEST DAILY MEAN	6160	Jul 23		2060	Apr 9		6160	Jul 23 1997
LOWEST DAILY MEAN	24	Sep 17		21	Sep 17		15	Sep 20 1981
ANNUAL SEVEN-DAY MINIMUM	25	Sep 17		25	Sep 14		15	May 28 1994
INSTANTANEOUS PEAK FLOW				10300	Apr 9		13600	Jul 23 1997
INSTANTANEOUS PEAK STAGE				13.28	Apr 9		15.06	Jul 23 1997
INSTANTANEOUS LOW FLOW				12	Sep 17		11*	Sep 24 1981
ANNUAL RUNOFF (CFSM)	2.45			2.55			1.97	
ANNUAL RUNOFF (INCHES)	33.31			34.67			26.77	
10 PERCENT EXCEEDS	176			220			151	
50 PERCENT EXCEEDS	43			50			38	
90 PERCENT EXCEEDS	30			28			25	

e Estimated.

\* See REMARKS.



## SANTÉE RIVER BASIN

02146530 LITTLE SUGAR CREEK AT HIGHWAY 51 AT PINEVILLE, NC

LOCATION.--Lat 35°05'06", long 80°52'58", Mecklenburg County, Hydrologic Unit 03050103, on left bank on upstream side of bridge on State Highway 51, 0.5 mi east of intersection of State Highway 51 and U.S. Highway 521 at Pineville.,

DRAINAGE AREA.--49.2 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional discharge measurements , water years 1966-97. June 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 530 ft above sea level, from topographic map. Telephone telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. A daily average of 21.3 ft<sup>3</sup>/s of treated effluent from Little Sugar Creek wastewater treatment plant was discharged into the stream 5.2 mi upstream from the gage. Maximum gage height for period of record from floodmarks. Maximum discharge for period of record from rating curve extended above 10,120 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	221	262	66	66	60	75	185	45	56	59	31
2	35	158	75	59	63	58	55	77	50	38	36	31
3	34	50	57	61	505	56	172	68	43	40	34	557
4	34	42	56	57	719	53	672	60	76	35	36	712
5	33	38	51	56	265	53	80	56	229	69	34	54
6	32	38	47	289	120	51	65	53	61	35	35	39
7	33	38	44	324	88	69	59	144	43	35	185	35
8	33	37	44	773	77	979	55	162	40	35	192	34
9	32	35	62	137	69	613	1960	74	40	33	e245	33
10	29	35	231	79	64	133	159	55	541	32	e240	33
11	27	35	67	66	73	85	93	105	115	31	49	32
12	25	37	49	62	82	77	72	52	57	31	39	32
13	26	214	46	63	60	68	66	48	44	31	145	31
14	36	279	45	57	56	65	81	47	40	30	89	30
15	86	72	44	374	55	61	63	47	39	30	151	31
16	31	56	46	1000	218	65	57	46	40	39	122	29
17	26	48	48	235	975	58	484	44	37	57	133	26
18	38	44	48	100	165	192	144	43	37	42	42	29
19	707	43	46	405	93	497	338	43	41	31	37	30
20	64	40	45	146	73	149	189	43	37	231	37	29
21	43	273	44	87	66	114	79	41	35	449	34	126
22	52	474	721	82	64	75	95	42	36	48	33	72
23	38	72	121	563	261	67	423	40	265	48	32	38
24	30	54	656	149	88	62	98	40	61	51	35	31
25	36	46	277	98	67	57	71	41	65	203	31	30
26	794	47	94	76	64	52	62	40	42	54	31	30
27	140	47	249	1210	115	55	82	40	38	1670	31	29
28	49	46	125	367	69	54	89	44	37	81	31	29
29	41	45	120	121	---	53	57	40	104	49	31	29
30	38	186	132	87	---	52	265	240	121	43	30	43
31	37	---	86	76	---	51	---	90	---	86	32	---
TOTAL	2695	2850	4038	7325	4680	4134	6260	2150	2459	3743	2291	2315
MEAN	86.9	95.0	130	236	167	133	209	69.4	82.0	121	73.9	77.2
MAX	794	474	721	1210	975	979	1960	240	541	1670	245	712
MIN	25	35	44	56	55	51	55	40	35	30	30	26
CFSM	1.77	1.93	2.65	4.80	3.40	2.71	4.24	1.41	1.67	2.45	1.50	1.57
IN.	2.04	2.15	3.05	5.54	3.54	3.13	4.73	1.63	1.86	2.83	1.73	1.75

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

	MEAN	86.9	95.0	130	236	167	133	209	69.4	86.3	228	56.6	67.4
MAX	86.9	95.0	130	236	167	133	209	69.4	90.6	336	73.9	77.2	
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1997	1998	1998	
MIN	86.9	95.0	130	236	167	133	209	69.4	82.0	121	39.2	57.7	
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1997	1997	

## SUMMARY STATISTICS

## FOR 1998 WATER YEAR

## WATER YEARS 1997 - 1998

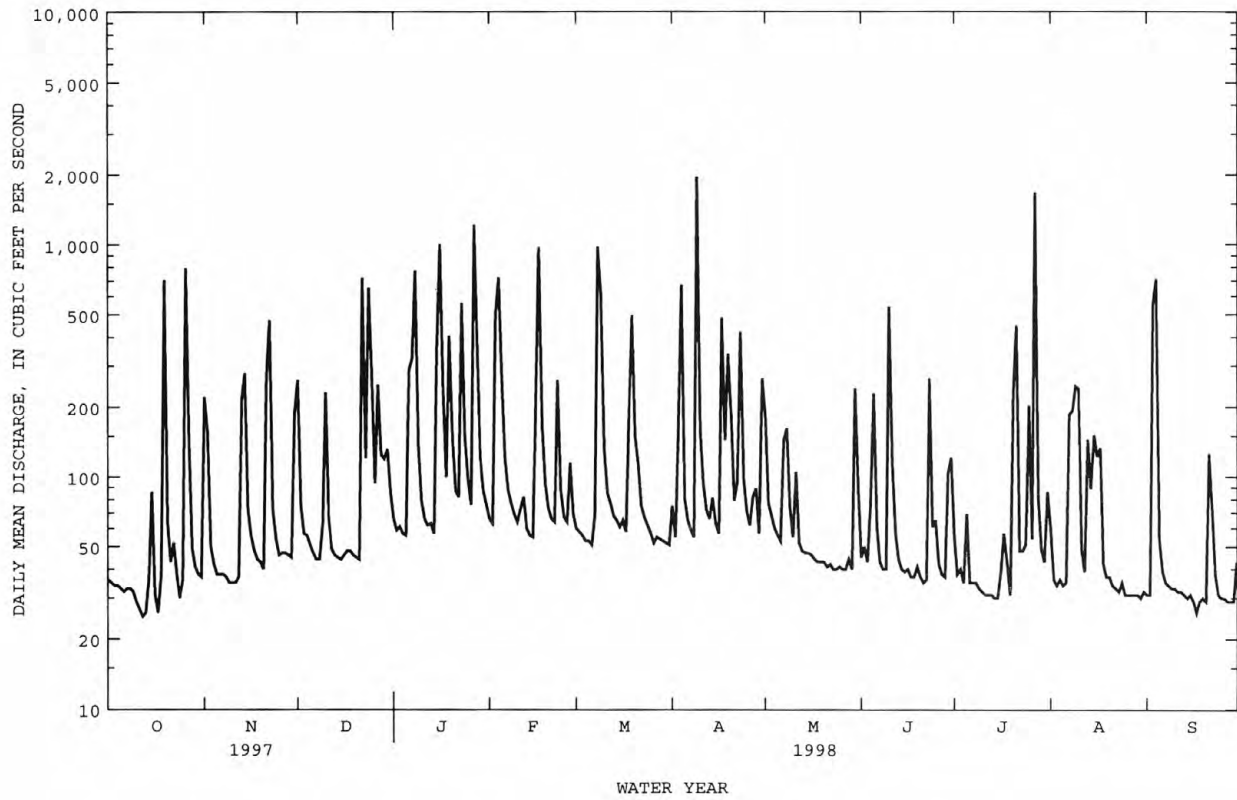
ANNUAL TOTAL	44940		
ANNUAL MEAN	123		
HIGHEST ANNUAL MEAN		123	
LOWEST ANNUAL MEAN		123	1998
HIGHEST DAILY MEAN	1960	Apr 9	6780 Jul 23 1997
LOWEST DAILY MEAN	25	Oct 12	25 Oct 12 1997
ANNUAL SEVEN-DAY MINIMUM	29	Sep 14	28 Sep 2 1997
INSTANTANEOUS PEAK FLOW	5830	Jul 27	11200* Jul 23 1997
INSTANTANEOUS PEAK STAGE	17.47	Jul 27	23.04* Jul 23 1997
INSTANTANEOUS LOW FLOW	17	Oct 17	17 Oct 17 1997
ANNUAL RUNOFF (CFSM)	2.50		2.50
ANNUAL RUNOFF (INCHES)	33.98		34.00
10 PERCENT EXCEEDS	263		240
50 PERCENT EXCEEDS	56		48
90 PERCENT EXCEEDS	32		31

e Estimated.

\* See REMARKS.

## SANTÉE RIVER BASIN

02146530 LITTLE SUGAR CREEK AT HIGHWAY 51 AT PINEVILLE, NC--Continued



## SANTÉE RIVER BASIN

02146600 MCALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE, NC

LOCATION.--Lat 35°08'14", long 80°46'05", Mecklenburg County, Hydrologic Unit 03050103, near left bank on downstream end of bridge pier at Sardis Road (Secondary Road 3356), 1.7 mi downstream of Irvins Creek, and 7 mi southeast of City Hall, Charlotte.

DRAINAGE AREA.--39.6 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1962 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 553.39 ft above sea level (levels by City of Charlotte). Telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Occasional minor fluctuation and regulation of unknown origin. No flow for part of Nov. 15, 1972, was result of upstream construction; minimum discharge for period of record not affected by construction.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1962, reached a stage of about 14.0 ft, from floodmarks; discharge, 4,150 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	113	162	30	28	25	30	86	15	22	15	5.3
2	6.7	112	38	25	26	22	23	38	18	11	9.4	4.9
3	6.4	25	21	23	381	21	79	56	13	9.5	8.0	313
4	6.4	17	21	23	556	19	298	38	38	8.7	7.4	585
5	6.3	14	16	22	185	19	39	27	105	17	7.3	27
6	5.6	13	14	107	65	19	27	23	23	8.4	7.4	14
7	5.5	13	13	196	43	30	23	54	15	8.2	56	11
8	6.9	14	13	135	36	587	22	83	12	10	17	9.5
9	6.4	13	23	51	30	450	1340	37	12	9.2	57	9.1
10	5.3	13	147	31	26	76	73	25	257	7.6	198	8.7
11	5.2	13	38	25	30	46	40	73	38	7.0	16	9.0
12	5.2	14	20	22	67	40	31	28	17	6.7	9.8	8.8
13	5.1	115	16	21	27	36	26	22	14	6.0	14	7.0
14	19	237	15	20	23	36	33	20	12	5.9	12	6.9
15	29	35	13	246	21	35	27	18	11	5.4	321	6.4
16	3.7	21	13	667	144	33	24	18	15	6.1	146	6.3
17	3.5	17	12	158	570	33	286	17	11	11	142	6.7
18	16	15	12	54	98	88	74	16	9.5	6.7	16	6.6
19	856	15	11	295	45	608	443	16	19	7.8	10	5.5
20	45	14	11	103	34	292	176	15	11	109	8.2	5.5
21	18	167	12	47	28	157	51	14	8.6	132	7.6	37
22	21	306	418	41	26	67	126	14	8.1	38	7.1	16
23	12	40	72	396	131	52	413	14	93	32	6.9	8.7
24	9.9	24	583	103	45	47	77	14	14	13	6.4	6.8
25	11	18	205	59	29	39	42	15	14	216	5.5	5.9
26	510	15	51	36	24	38	34	13	11	21	5.8	5.5
27	94	15	162	1060	41	30	52	13	9.9	1230	5.5	5.3
28	24	14	75	263	30	31	41	13	9.1	41	5.5	5.7
29	17	13	69	70	---	29	26	12	69	20	4.6	5.5
30	15	64	78	46	---	28	134	155	53	15	4.8	8.3
31	13	---	49	34	---	26	---	33	---	18	5.1	---
TOTAL	1796.4	1519	2403	4409	2789	3059	4110	1020	955.2	2059.2	1142.3	1160.9
MEAN	57.9	50.6	77.5	142	99.6	98.7	137	32.9	31.8	66.4	36.8	38.7
MAX	856	306	583	1060	570	608	1340	155	257	1230	321	585
MIN	3.5	13	11	20	21	19	22	12	8.1	5.4	4.6	4.9
CFSM	1.46	1.28	1.96	3.59	2.52	2.49	3.46	.83	.80	1.68	.93	.98
IN.	1.69	1.43	2.26	4.14	2.62	2.87	3.86	.96	.90	1.93	1.07	1.05

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

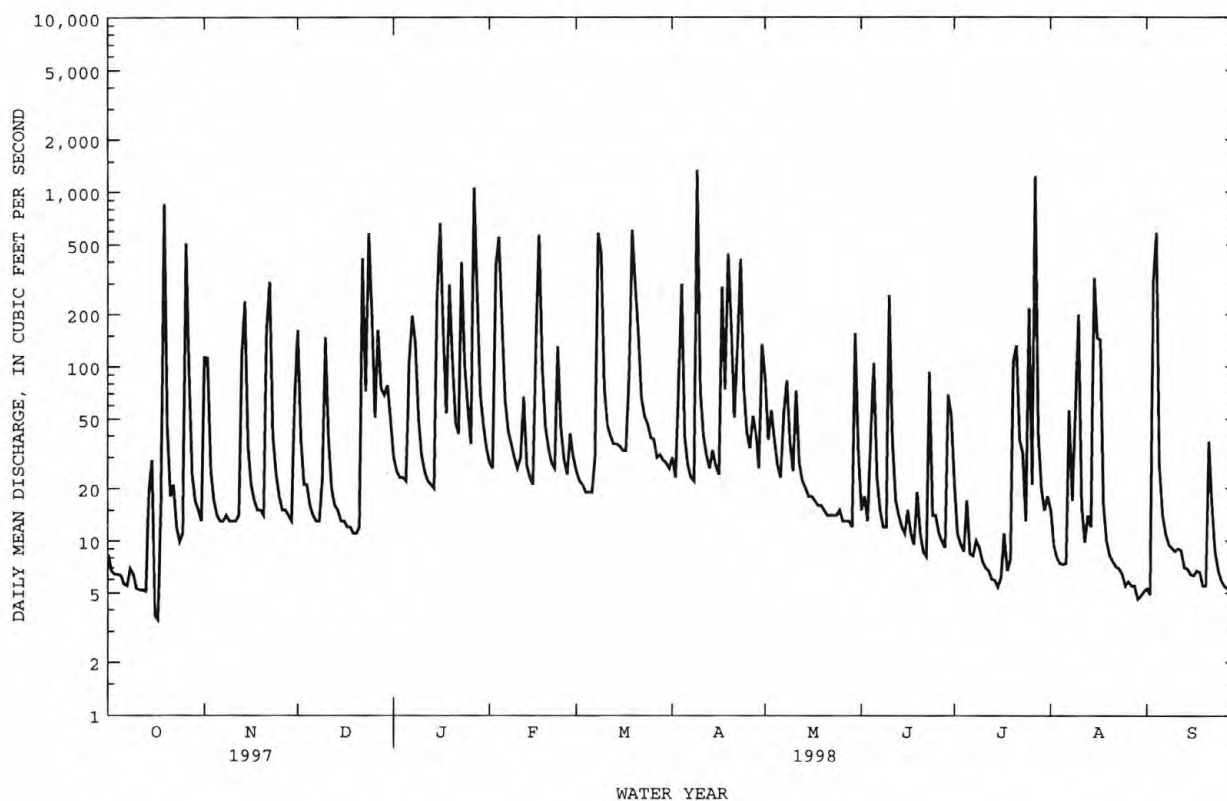
MEAN	34.9	30.7	40.7	68.9	77.2	86.0	50.1	33.3	30.6	29.1	34.3	23.4
MAX	212	109	128	157	169	200	137	173	123	140	178	162
(WY)	1991	1986	1984	1978	1979	1977	1998	1975	1992	1997	1994	1987
MIN	3.16	4.65	7.55	7.46	16.9	13.6	7.45	8.04	3.60	4.04	3.42	1.46
(WY)	1963	1982	1966	1981	1968	1985	1967	1968	1986	1977	1968	1968

## Santee River Basin

02146600 MCALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1962 - 1998	
ANNUAL TOTAL	19795.6		26423.0		44.9	
ANNUAL MEAN	54.2		72.4		72.4	
HIGHEST ANNUAL MEAN					19.6	
LOWEST ANNUAL MEAN					1970	
HIGHEST DAILY MEAN	2520	Jul 23	1340	Apr 9	4490	Aug 27 1995
LOWEST DAILY MEAN	1.7	Sep 22	3.5	Oct 17	.26	Jul 19 1986
ANNUAL SEVEN-DAY MINIMUM	2.3	Sep 17	5.1	Aug 27	.40	Jul 14 1986
INSTANTANEOUS PEAK FLOW			4050	Jul 27	9040	Aug 27 1995
INSTANTANEOUS PEAK STAGE			13.12	Jul 27	17.79	Aug 27 1995
INSTANTANEOUS LOW FLOW			2.0	Oct 17	.17*	Jul 19 1986
ANNUAL RUNOFF (CFSM)	1.37		1.83		1.13	
ANNUAL RUNOFF (INCHES)	18.60		24.82		15.40	
10 PERCENT EXCEEDS	93		164		75	
50 PERCENT EXCEEDS	17		22		14	
90 PERCENT EXCEEDS	5.2		6.7		3.9	

\* See REMARKS.



## SANTEE RIVER BASIN

02146670 FOUR MILE CREEK NEAR PINEVILLE, NC

LOCATION.--Lat 35°04'30", long 80°49'20", Mecklenburg County, Hydrologic Unit 03050103, on left bank on downstream side of bridge at Elm Lane W. (Secondary Road 3649), 0.5 mi south of State Highway 51, 1.25 mi upstream of McAlpine Creek, and 4.5 mi east of U.S. Highway 521 at Pineville.

DRAINAGE AREA.--17.8 mi<sup>2</sup>.

PERIOD OF RECORD.-- July 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 528.19 ft above sea level (City of Charlotte Benchmark). Telephone telemetry at site.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	9.5	2.0	e2.2
2	---	---	---	---	---	---	---	---	---	5.6	1.4	e1.8
3	---	---	---	---	---	---	---	---	---	2.4	1.7	e2.0
4	---	---	---	---	---	---	---	---	---	1.9	2.0	e1.6
5	---	---	---	---	---	---	---	---	---	1.8	8.4	e1.5
6	---	---	---	---	---	---	---	---	---	3.8	3.7	e1.7
7	---	---	---	---	---	---	---	---	---	1.9	1.2	e1.5
8	---	---	---	---	---	---	---	---	---	1.7	1.1	e1.4
9	---	---	---	---	---	---	---	---	---	1.7	1.1	e1.2
10	---	---	---	---	---	---	---	---	---	1.9	3.0	e1.6
11	---	---	---	---	---	---	---	---	---	2.1	1.7	e3.0
12	---	---	---	---	---	---	---	---	---	2.0	.91	e4.0
13	---	---	---	---	---	---	---	---	---	2.3	.94	3.0
14	---	---	---	---	---	---	---	---	---	2.3	1.0	1.6
15	---	---	---	---	---	---	---	---	---	2.6	.96	1.1
16	---	---	---	---	---	---	---	---	---	18	.97	1.3
17	---	---	---	---	---	---	---	---	---	9.5	.96	1.3
18	---	---	---	---	---	---	---	---	---	3.7	1.1	1.4
19	---	---	---	---	---	---	---	---	---	1.9	.97	1.4
20	---	---	---	---	---	---	---	---	---	1.5	1.4	1.2
21	---	---	---	---	---	---	---	---	---	1.6	1.7	1.2
22	---	---	---	---	---	---	---	---	---	1.5	1.2	1.1
23	---	---	---	---	---	---	---	---	---	241	1.2	.99
24	---	---	---	---	---	---	---	---	---	602	1.4	32
25	---	---	---	---	---	---	---	---	---	16	1.2	21
26	---	---	---	---	---	---	---	---	---	6.9	2.4	7.6
27	---	---	---	---	---	---	---	---	---	4.3	2.0	5.1
28	---	---	---	---	---	---	---	---	---	2.7	4.6	33
29	---	---	---	---	---	---	---	---	---	2.0	e12	12
30	---	---	---	---	---	---	---	---	---	19	e6.0	4.6
31	---	---	---	---	---	---	---	---	---	5.6	e3.0	---
TOTAL	---	---	---	---	---	---	---	---	---	980.7	73.21	195.79
MEAN	---	---	---	---	---	---	---	---	---	31.6	2.36	6.53
MAX	---	---	---	---	---	---	---	---	---	602	12	33
MIN	---	---	---	---	---	---	---	---	---	1.5	.91	.99
CFSM	---	---	---	---	---	---	---	---	---	1.78	.13	.37
IN.	---	---	---	---	---	---	---	---	---	2.05	.15	.41

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

	MEAN	MAX	(WY)	MIN	(WY)
1997	31.6	31.6	1997	31.6	1997
1997	2.36	2.36	1997	2.36	1997
1997	6.53	6.53	1997	6.53	1997

## SUMMARY STATISTICS

## FOR 1997 WATER YEAR

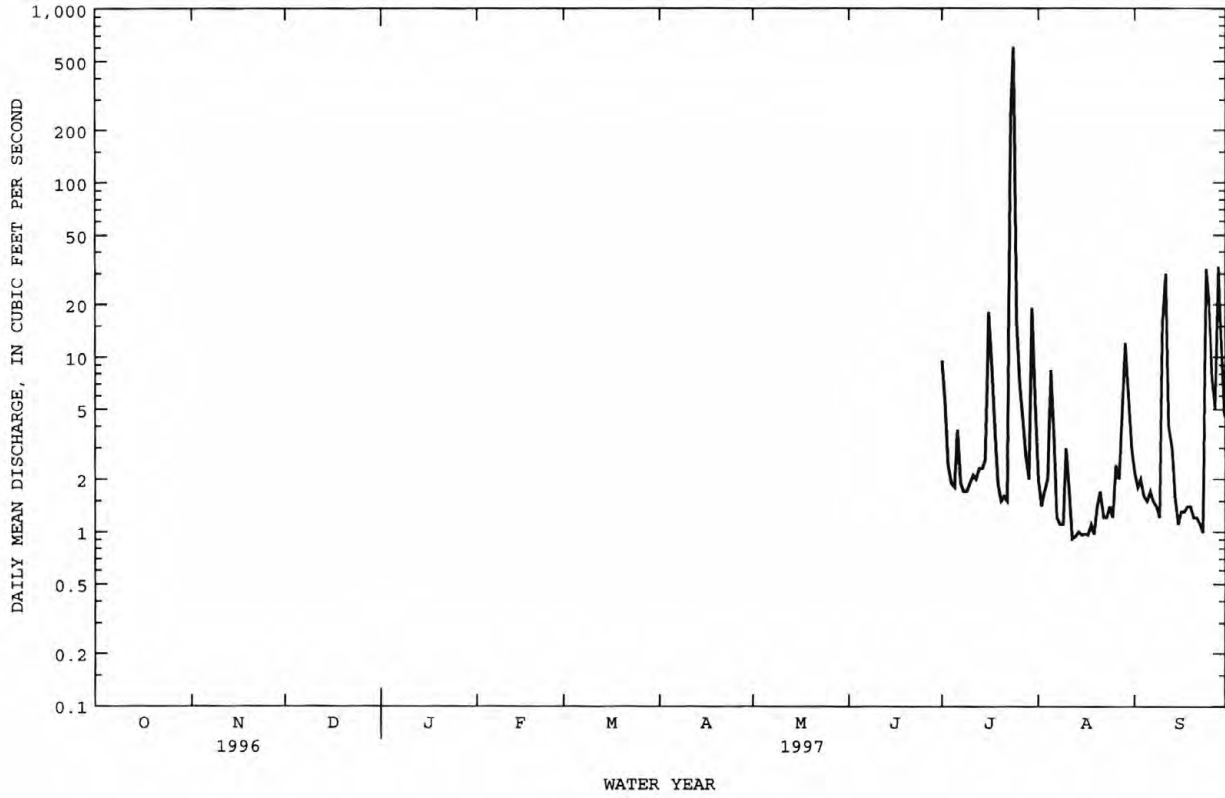
ANNUAL TOTAL	1249.70
ANNUAL MEAN	13.6
HIGHEST DAILY MEAN	602 Jul 24
LOWEST DAILY MEAN	.91 Aug 12
ANNUAL SEVEN-DAY MINIMUM	.98 Aug 12
INSTANTANEOUS PEAK FLOW	1470 Jul 24
INSTANTANEOUS PEAK STAGE	11.32 Jul 24
INSTANTANEOUS LOW FLOW	.89 Aug 13
ANNUAL RUNOFF (CFSM)	.76
ANNUAL RUNOFF (INCHES)	2.61
10 PERCENT EXCEEDS	16
50 PERCENT EXCEEDS	1.9
90 PERCENT EXCEEDS	1.1

e Estimated.



SANTEE RIVER BASIN

02146670 FOUR MILE CREEK NEAR PINEVILLE, NC--Continued



## SANTÉE RIVER BASIN

02146670 FOUR MILE CREEK NEAR PINEVILLE, NC--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	42	60	13	15	14	20	73	8.0	5.3	36	2.3
2	4.6	52	16	11	14	12	18	42	7.4	2.2	9.8	2.5
3	4.8	12	9.3	10	119	11	37	34	6.1	2.9	6.2	142
4	4.4	8.7	9.2	9.7	194	10	47	34	6.6	1.9	4.3	311
5	4.2	7.4	7.9	9.2	85	11	21	22	32	1.7	3.4	24
6	3.7	6.5	7.1	48	39	10	15	15	9.5	1.6	2.9	12
7	3.2	6.3	6.6	77	25	14	14	29	5.6	1.4	76	8.2
8	3.1	6.7	6.3	60	19	224	13	45	4.1	1.4	46	6.9
9	2.9	6.8	10	25	16	179	361	33	3.4	1.8	60	6.0
10	2.7	6.8	62	14	16	54	57	12	145	1.7	50	5.2
11	2.3	6.7	20	12	16	34	36	51	19	1.3	12	4.7
12	2.3	7.7	9.5	11	37	28	27	14	7.6	1.2	7.5	5.0
13	1.9	47	7.8	10	19	24	20	9.8	6.5	1.2	6.5	4.5
14	1.8	104	7.0	9.8	15	19	23	9.1	5.9	1.1	6.1	3.8
15	5.0	16	6.2	73	13	17	21	8.2	4.3	1.2	79	3.7
16	7.7	11	5.6	230	53	15	16	8.2	4.3	1.3	50	3.1
17	7.2	9.4	5.5	76	280	14	143	8.0	4.6	1.3	105	2.9
18	14	9.7	4.4	28	62	44	69	8.0	3.7	1.2	15	2.9
19	326	9.9	5.2	127	33	229	174	6.6	3.4	1.1	9.5	2.8
20	22	9.7	5.6	59	24	73	95	5.5	3.7	13	6.7	2.8
21	7.7	62	5.0	26	17	55	50	5.4	3.0	72	5.0	12
22	8.7	183	132	22	14	34	35	5.6	2.7	5.7	3.8	23
23	6.0	21	33	148	60	26	124	6.5	9.2	4.3	3.4	18
24	5.1	12	234	48	30	27	59	7.2	4.0	6.8	3.1	5.1
25	5.5	10	97	29	17	21	34	6.4	4.7	9.1	2.9	4.4
26	191	9.1	26	17	14	19	24	6.0	2.9	5.5	2.9	3.3
27	41	8.5	59	342	25	18	27	6.1	2.5	521	2.7	3.0
28	12	8.1	34	114	19	16	36	6.2	2.2	43	2.6	3.0
29	8.7	8.0	26	40	---	15	19	9.6	2.1	15	2.7	3.1
30	8.1	25	39	25	---	15	54	36	2.9	8.7	2.7	3.7
31	8.1	---	22	17	---	17	---	31	---	79	2.4	---
TOTAL	730.9	733.0	978.2	1740.7	1290	1299	1689	593.4	326.9	815.9	626.1	634.9
MEAN	23.6	24.4	31.6	56.2	46.1	41.9	56.3	19.1	10.9	26.3	20.2	21.2
MAX	326	183	234	342	280	229	361	73	145	521	105	311
MIN	1.8	6.3	4.4	9.2	13	10	13	5.4	2.1	1.1	2.4	2.3
CFSM	1.32	1.37	1.77	3.15	2.59	2.35	3.16	1.08	.61	1.48	1.13	1.19
IN.	1.53	1.53	2.04	3.64	2.70	2.71	3.53	1.24	.68	1.71	1.31	1.33

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

	MEAN	23.6	24.4	31.6	56.2	46.1	41.9	56.3	19.1	10.9	29.0	11.3	13.8
MAX	23.6	24.4	31.6	56.2	46.1	41.9	56.3	19.1	10.9	31.6	20.2	21.2	
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	
MIN	23.6	24.4	31.6	56.2	46.1	41.9	56.3	19.1	10.9	26.3	2.36	6.53	
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1997	1997	

## SUMMARY STATISTICS

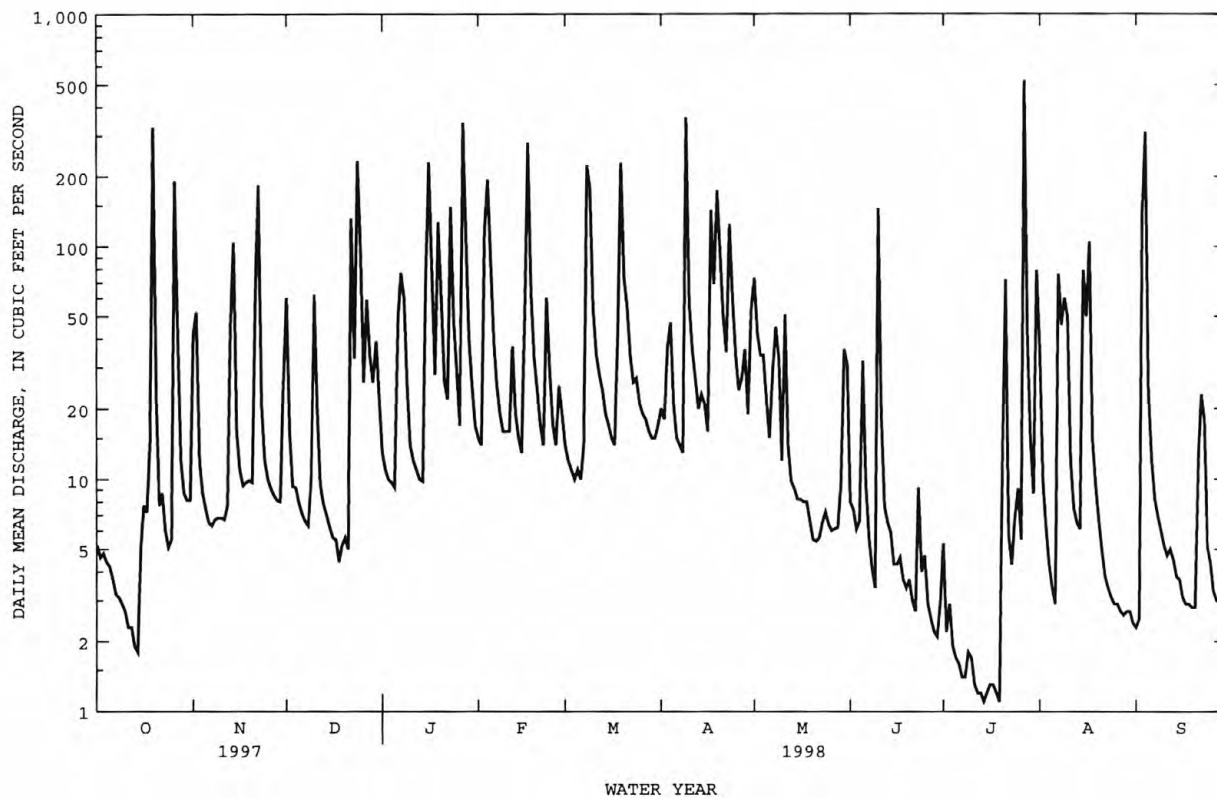
## FOR 1998 WATER YEAR

## WATER YEARS 1997 - 1998

ANNUAL TOTAL	11458.0		
ANNUAL MEAN	31.4		
HIGHEST ANNUAL MEAN		31.4	
LOWEST ANNUAL MEAN		31.4	1998
HIGHEST DAILY MEAN	521	Jul 27	
LOWEST DAILY MEAN	1.1	Jul 14	
ANNUAL SEVEN-DAY MINIMUM	1.2	Jul 13	.91
INSTANTANEOUS PEAK FLOW	1630	Jul 27	.98
INSTANTANEOUS PEAK STAGE	11.58	Jul 27	11.58
INSTANTANEOUS LOW FLOW	.94	Oct 14	.89
ANNUAL RUNOFF (CFSM)	1.76		1.76
ANNUAL RUNOFF (INCHES)	23.95		23.96
10 PERCENT EXCEEDS	73		60
50 PERCENT EXCEEDS	11		8.5
90 PERCENT EXCEEDS	2.9		1.6

## SANTÉE RIVER BASIN

02146670 FOUR MILE CREEK NEAR PINEVILLE, NC--Continued



## SANTEE RIVER BASIN

02146700 MCMULLEN CREEK AT SHARON VIEW ROAD NEAR CHARLOTTE, NC

LOCATION.--Lat 35°08'27", long 80°49'13", Mecklenburg County, Hydrologic Unit 03050103, on left bank downstream of culvert wingwall at Sharon View Road (Secondary Road 3673), 3.3 mi south of Queens College, Charlotte, and 6.9 mi upstream from mouth.

DRAINAGE AREA.--6.95 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1962 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 592.91 ft above sea level (levels by city of Charlotte). Prior to Oct. 13, 1970, at site 73 ft upstream at same datum. Oct. 13, 1970, to Dec. 30, 1971, at site 154 ft downstream at 590.91 ft. Telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum discharge for period of record from rating curve extended above 2,650 ft<sup>3</sup>/s on basis of computation of peak flow through culvert. No flow occurred periodically from 1962 to 1973. Minimum discharge for current water year also occurred Oct. 6-12, July 13, and Aug. 31.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1962, reached a stage of 7.5 ft, former site and datum, from floodmarks; discharge, 1,040 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	23	28	3.4	3.6	3.7	4.7	10	1.8	2.1	1.5	.98
2	.59	13	3.8	3.1	3.3	3.2	3.9	4.7	2.9	1.3	1.3	.59
3	.75	1.9	2.5	2.8	78	3.1	69	22	1.6	1.1	1.2	79
4	.75	1.8	2.8	2.6	79	3.0	58	5.8	12	.81	1.0	83
5	.58	2.0	2.0	2.5	18	3.5	6.4	3.9	24	1.4	.85	2.4
6	.49	1.9	1.6	21	7.1	2.9	4.9	3.4	3.5	.78	.86	1.5
7	.56	1.3	1.8	26	5.2	8.8	4.2	11	1.8	.70	28	1.4
8	.47	1.3	1.7	58	4.4	131	3.8	12	1.5	.68	11	1.4
9	.51	1.3	4.1	7.4	3.9	61	295	4.3	1.5	.68	24	1.2
10	.48	1.3	32	4.3	3.5	8.0	7.7	3.6	95	.67	36	1.1
11	.47	1.3	4.4	3.6	5.4	5.1	4.8	8.2	4.5	.65	2.4	1.0
12	.52	2.6	2.7	3.1	5.0	4.7	3.9	2.9	2.5	.56	1.7	.97
13	.54	20	2.3	3.1	3.3	4.0	3.7	2.5	1.9	.57	13	.84
14	13	29	2.0	2.7	3.1	3.8	5.4	2.3	1.6	.56	2.6	.82
15	5.3	2.9	2.1	54	2.8	3.6	3.5	2.3	1.6	.67	e25	.80
16	.99	1.8	1.9	125	24	3.4	3.2	2.3	1.8	.73	e18	.82
17	.88	1.4	1.7	14	142	3.3	60	2.2	1.3	4.8	e5.0	.79
18	3.6	1.4	1.6	6.2	11	14	12	2.1	1.4	1.4	1.9	.79
19	93	1.5	1.6	50	5.4	75	64	2.4	5.8	1.2	1.4	.76
20	2.6	1.5	1.5	9.6	4.4	53	14	2.4	1.8	81	1.3	.77
21	1.3	43	1.6	5.4	3.8	15	5.7	1.9	1.3	14	1.2	10
22	3.2	34	75	10	3.8	6.8	6.1	1.7	1.5	1.7	1.1	3.7
23	1.1	3.6	6.7	69	25	5.1	42	1.7	30	3.0	.96	1.2
24	.91	2.4	106	12	5.4	4.8	6.7	1.6	3.0	2.0	.94	.71
25	1.1	1.9	19	6.4	3.9	4.1	4.5	1.8	1.9	64	.99	.62
26	104	1.6	5.3	4.6	3.5	4.0	3.8	1.8	1.4	2.8	.92	.71
27	6.4	1.6	28	184	8.7	4.1	12	1.8	1.2	426	.77	.76
28	2.0	1.4	7.3	23	4.1	4.0	4.8	1.8	1.1	3.6	.72	.90
29	1.3	1.5	12	7.6	---	4.9	3.7	1.6	2.4	1.9	.67	.79
30	1.2	16	9.7	5.3	---	3.8	32	31	4.6	1.3	.60	2.8
31	1.9	---	5.2	4.2	---	3.7	---	4.0	---	4.3	.57	---
TOTAL	251.24	219.2	377.9	733.9	470.6	458.4	753.4	161.0	218.2	626.96	187.45	203.12
MEAN	8.10	7.31	12.2	23.7	16.8	14.8	25.1	5.19	7.27	20.2	6.05	6.77
MAX	104	43	106	184	142	131	295	31	95	426	36	83
MIN	.47	1.3	1.5	2.5	2.8	2.9	3.2	1.6	1.1	.56	.57	.59
CFSM	1.17	1.05	1.75	3.41	2.42	2.13	3.61	.75	1.05	2.91	.87	.97
IN.	1.34	1.17	2.02	3.93	2.52	2.45	4.03	.86	1.17	3.36	1.00	1.09

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

	MEAN	6.36	5.98	7.92	12.7	13.9	15.5	7.93	6.60	6.75	6.48	6.01	5.37
MAX	30.4	21.3	24.3	33.5	28.1	38.8	25.1	31.3	27.3	27.7	32.1	23.8	
(WY)	1991	1986	1977	1978	1979	1977	1998	1975	1992	1997	1995	1987	
MIN	.21	.54	.86	1.02	1.77	1.74	1.13	1.08	.75	.61	.24	.084	
(WY)	1964	1970	1966	1981	1968	1985	1981	1962	1966	1963	1968	1970	

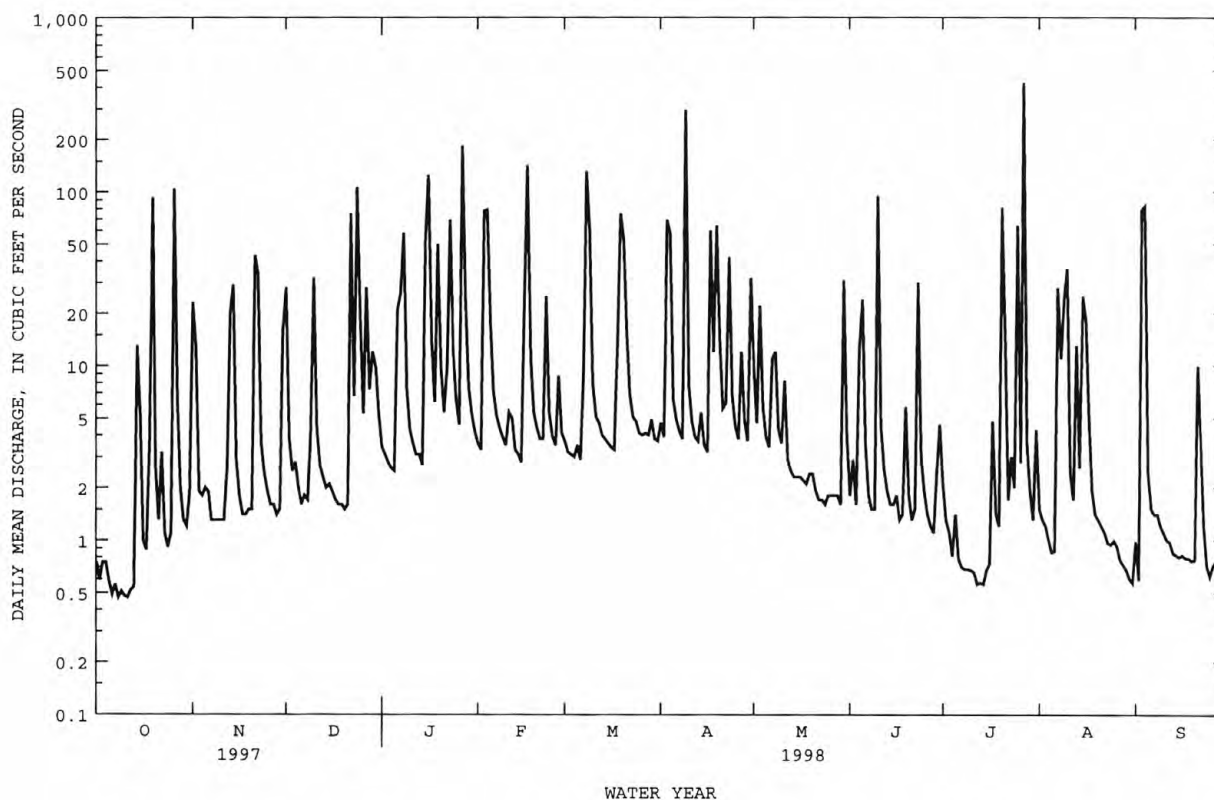
## Santee River Basin

02146700 MCMULLEN CREEK AT SHARON VIEW ROAD NEAR CHARLOTTE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1962 - 1998
ANNUAL TOTAL	3747.31	4661.37	
ANNUAL MEAN	10.3	12.8	8.46
HIGHEST ANNUAL MEAN			13.8
LOWEST ANNUAL MEAN			3.19
HIGHEST DAILY MEAN	600 Jul 23	426 Jul 27	868 Aug 27 1995
LOWEST DAILY MEAN	.34 Sep 8	.47 Oct 8	0 Aug 31 1962
ANNUAL SEVEN-DAY MINIMUM	.39 Sep 17	.50 Oct 6	.01 Sep 19 1968
INSTANTANEOUS PEAK FLOW		3230 Jul 27	3470* Aug 27 1995
INSTANTANEOUS PEAK STAGE		10.64 Jul 27	11.03 Aug 27 1995
INSTANTANEOUS LOW FLOW		.45* Oct 5	0* Aug 31 1962
ANNUAL RUNOFF (CFSM)	1.48	1.84	1.22
ANNUAL RUNOFF (INCHES)	20.06	24.95	16.53
10 PERCENT EXCEEDS	20	29	16
50 PERCENT EXCEEDS	2.1	3.1	1.6
90 PERCENT EXCEEDS	.65	.79	.30

e Estimated.

\* See REMARKS.



## SANTÉE RIVER BASIN

02146750 MCALPINE CREEK BELOW MCMULLEN CREEK NEAR PINEVILLE, NC

LOCATION.--Lat 35°03'59", long 80°52'12", Mecklenburg County, Hydrologic Unit, 03050103, on right bank at McAlpine Creek Wastewater Treatment Plant of Charlotte, 150 ft downstream of McMullen Creek, 735 ft upstream from effluent outfall, and 2.1 mi south of Pineville.

DRAINAGE AREA.--92.4 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1974 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 516.38 ft above sea level. Prior to Oct. 1, 1977, present site at 517.38 ft. Telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Records for periods of heavy overbank flow may be affected by variable backwater not adequately defined. Maximum stage for period of record from high-water mark in gage house. Maximum discharge for period of record from rating curve extended above 11,600 ft<sup>3</sup>/s.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1964, about 12.9 ft. (former datum), Apr. 1, 1973, from information by wastewater treatment plant operator.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	228	313	72	70	51	46	344	36	46	143	8.1
2	11	336	121	56	58	46	42	109	36	15	26	8.2
3	11	65	37	51	298	41	101	93	32	15	17	346
4	9.1	28	34	49	1500	38	599	100	50	11	14	2020
5	8.3	20	27	45	771	37	79	60	240	15	12	200
6	7.9	16	22	92	184	37	56	51	83	11	12	40
7	7.2	15	20	421	105	43	43	99	40	9.4	178	26
8	7.3	14	19	683	78	1100	40	165	28	10	275	21
9	8.1	14	33	198	64	1390	2540	159	26	11	147	20
10	7.1	13	349	90	59	242	561	59	638	11	769	18
11	7.0	12	151	71	64	104	98	158	301	8.8	63	16
12	6.9	12	54	51	169	77	68	62	55	8.0	28	17
13	6.9	148	41	46	65	54	54	46	38	7.8	36	15
14	6.8	667	37	45	52	56	61	42	34	7.8	35	14
15	59	94	33	350	45	51	58	39	28	7.5	270	13
16	12	38	30	1210	220	45	46	37	32	7.9	440	14
17	8.4	27	28	1040	1670	43	767	36	24	15	399	14
18	19	22	26	150	492	143	226	35	21	15	51	14
19	1550	20	25	650	125	1230	456	32	26	7.9	29	14
20	567	19	26	494	87	457	1100	30	32	38	20	13
21	35	221	25	127	70	539	134	29	19	755	16	55
22	32	1050	766	95	59	121	83	28	17	49	14	91
23	22	114	474	965	284	79	883	28	92	57	13	64
24	16	43	742	345	125	75	305	28	26	52	12	19
25	14	30	1340	173	65	57	108	28	25	163	11	15
26	750	27	181	88	53	56	79	28	17	223	9.9	14
27	789	24	325	1220	79	53	88	25	16	3130	9.4	12
28	62	22	263	1840	67	45	126	29	13	1080	8.6	12
29	30	20	130	217	---	43	64	25	12	65	8.3	13
30	22	103	212	118	---	39	217	64	82	37	7.6	15
31	19	---	129	85	---	40	---	163	---	117	8.5	---
TOTAL	4124.0	3462	6013	11137	6978	6432	9128	2231	2119	6006.1	3082.3	3161.3
MEAN	133	115	194	359	249	207	304	72.0	70.6	194	99.4	105
MAX	1550	1050	1340	1840	1670	1390	2540	344	638	3130	769	2020
MIN	6.8	12	19	45	45	37	40	25	12	7.5	7.6	8.1
CFSM	1.44	1.25	2.10	3.89	2.70	2.25	3.29	.78	.76	2.10	1.08	1.14
IN.	1.66	1.39	2.42	4.48	2.81	2.59	3.67	.90	.85	2.42	1.24	1.27

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1998, BY WATER YEAR (WY)

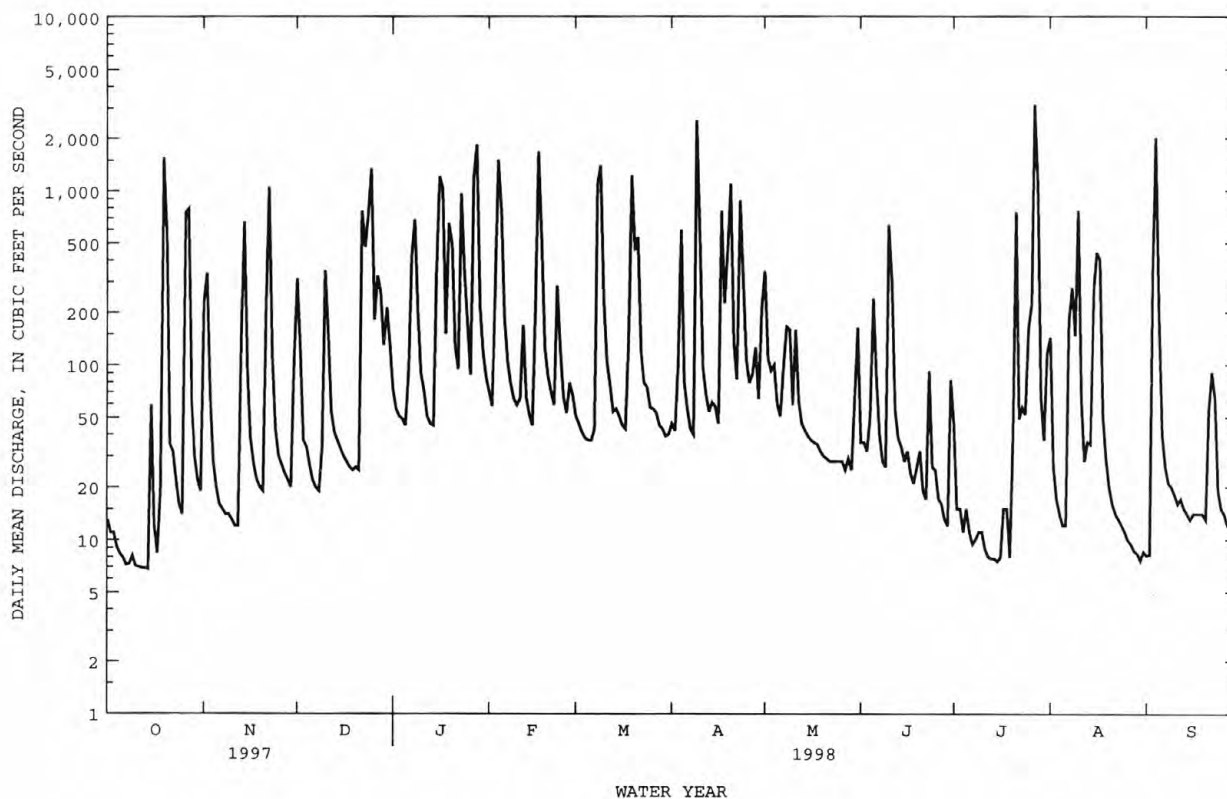
MEAN	107	113	134	240	231	266	132	99.0	77.4	94.1	114	84.2
MAX	540	414	497	550	506	544	304	397	258	400	597	510
(WY)	1991	1986	1984	1978	1984	1980	1998	1975	1992	1997	1994	1987
MIN	6.82	11.5	24.0	18.6	39.0	35.8	21.9	18.2	7.43	7.07	8.66	5.03
(WY)	1979	1982	1981	1981	1978	1981	1981	1981	1986	1977	1977	1983

## SANTEE RIVER BASIN

02146750 MCALPINE CREEK BELOW MCMULLEN CREEK NEAR PINEVILLE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1974 - 1998	
ANNUAL TOTAL	54420.0		63873.7		141	
ANNUAL MEAN	149		175		235	1984
HIGHEST ANNUAL MEAN					70.6	1976
LOWEST ANNUAL MEAN					7740	Aug 27 1995
HIGHEST DAILY MEAN	7050	Jul 24	3130	Jul 27	.46	Sep 30 1983
LOWEST DAILY MEAN	5.7	Sep 22	6.8	Oct 14	.76	Sep 28 1983
ANNUAL SEVEN-DAY MINIMUM	6.9	Sep 17	7.2	Oct 8	12500*	Aug 27 1995
INSTANTANEOUS PEAK FLOW			5250	Jul 27	19.40*	Aug 27 1995
INSTANTANEOUS PEAK STAGE			12.81	Jul 27	.45	Sep 30 1983
INSTANTANEOUS LOW FLOW			5.2	Oct 14	1.53	
ANNUAL RUNOFF (CFSM)	1.61		1.89		20.78	
ANNUAL RUNOFF (INCHES)	21.91		25.72		286	
10 PERCENT EXCEEDS	280		493		34	
50 PERCENT EXCEEDS	34		46		9.0	
90 PERCENT EXCEEDS	9.5		12			

\* See REMARKS.





## SANTEE RIVER BASIN

0214677974 STEELE CREEK ABOVE SECONDARY ROAD 1344 NEAR SHOPTON, NC

LOCATION.--Lat 35°07'45", long 80°57'12", Mecklenburg County, Hydrologic Unit 03050103, on right bank 1,500 ft upstream from bridge on Secondary Road 1344 (John Price Road), and 2.9 mi south of Shopton.

DRAINAGE AREA.--3.57 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to September 1998 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 580.69 ft above sea level.

REMARKS.--Records poor. Maximum gage height for period of record from floodmarks. Maximum discharge for period of record from culvert computation of peak flow adjusted for drainage area.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.40	5.7	8.9	2.4	2.4	2.5	3.2	5.2	.43	.35	1.3	.10
2	e.40	5.5	2.7	2.0	2.2	2.3	1.9	2.3	.85	.14	.77	.08
3	e.38	1.5	1.8	1.8	41	2.0	14	1.7	.35	.13	.57	26
4	e.39	1.2	1.8	1.7	34	1.9	22	1.6	3.9	1.0	.45	20
5	e.38	.95	1.4	1.6	14	e1.8	4.0	1.4	6.3	.77	.39	1.1
6	e.31	.87	1.1	31	5.3	e1.8	3.0	1.3	1.0	.14	.34	.58
7	e.38	.90	1.0	20	3.8	e3.1	2.5	2.8	.52	.12	8.8	.41
8	e.38	.79	.99	46	3.0	77	2.3	4.4	.37	.14	1.5	.48
9	e.33	.74	2.0	5.9	2.5	32	133	1.8	.25	.16	1.1	.38
10	e.33	.71	10	3.3	2.2	5.2	4.4	1.6	9.9	.18	3.2	.33
11	e.34	.67	3.1	2.6	2.9	3.4	2.6	8.1	2.6	.17	.71	.36
12	e.38	1.5	2.0	2.2	2.7	2.9	2.1	1.6	1.2	.16	.55	.31
13	e.42	8.6	1.6	2.2	2.4	2.5	1.9	1.3	.57	.19	.45	.30
14	e.40	15	1.4	2.0	2.3	2.4	2.2	1.1	.45	.20	.47	.24
15	e.52	3.0	1.2	21	2.1	2.2	1.7	1.1	.43	.21	1.1	.24
16	e.41	1.7	1.3	115	14	2.1	1.6	.99	.47	.22	3.4	.26
17	e.42	1.4	1.2	11	41	2.0	18	.93	.35	7.7	2.0	.22
18	e.60	2.0	.99	5.0	8.5	6.2	5.7	.82	.30	1.5	.44	.25
19	e20	1.2	.96	24	4.0	16	14	.78	1.3	.43	.32	.20
20	e1.5	.98	.95	6.8	3.1	5.0	6.0	.72	.51	74	.26	.20
21	e.81	19	.91	3.9	2.5	3.7	2.7	.65	.23	21	.23	2.2
22	1.3	22	43	5.5	2.4	2.7	2.3	.63	.16	1.6	.22	1.4
23	.42	2.9	5.7	33	12	2.3	2.8	.58	.34	2.4	.19	.30
24	.47	2.5	52	7.9	4.0	2.2	1.9	.61	.23	6.5	.15	.18
25	.51	1.4	15	4.8	2.9	1.9	1.6	.59	.23	2.3	.19	.19
26	43	1.4	4.2	3.4	2.5	1.9	1.4	.50	.23	1.5	.14	.19
27	4.0	1.0	14	94	5.3	1.9	2.0	.47	.21	194	.12	.19
28	1.5	.87	5.4	14	3.1	1.8	1.5	.48	.28	4.5	.12	.15
29	.99	.80	5.2	4.9	---	1.8	1.2	.46	.18	2.2	.14	.16
30	.79	6.9	7.3	3.6	---	1.8	12	.50	.52	1.5	.11	1.2
31	.87	---	4.0	2.9	---	2.0	---	.54	---	2.6	.08	---
TOTAL	83.33	113.68	203.10	485.4	228.1	198.3	275.5	47.55	34.66	328.01	29.81	58.20
MEAN	2.69	3.79	6.55	15.7	8.15	6.40	9.18	1.53	1.16	10.6	.96	1.94
MAX	43	22	52	115	41	77	133	8.1	9.9	194	8.8	26
MIN	.31	.67	.91	1.6	2.1	1.8	1.2	.46	.16	.12	.08	.08
CFSM	.75	1.06	1.84	4.39	2.28	1.79	2.57	.43	.32	2.96	.27	.54
IN.	.87	1.18	2.12	5.06	2.38	2.07	2.87	.50	.36	3.42	.31	.61

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

	MEAN	7.40	5.30	4.09	10.1	8.48	8.83	4.88	2.63	3.30	3.67	5.15	2.47
MAX	26.3	13.2	6.55	16.9	12.8	21.3	9.18	8.85	10.7	10.6	17.4	8.33	
(WY)	1991	1996	1998	1993	1995	1993	1998	1991	1992	1998	1994	1992	
MIN	.57	1.01	1.94	3.56	4.96	3.30	.86	.99	.42	.44	.37	.41	
(WY)	1992	1992	1994	1992	1991	1995	1995	1994	1993	1993	1997	1993	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1991 - 1998

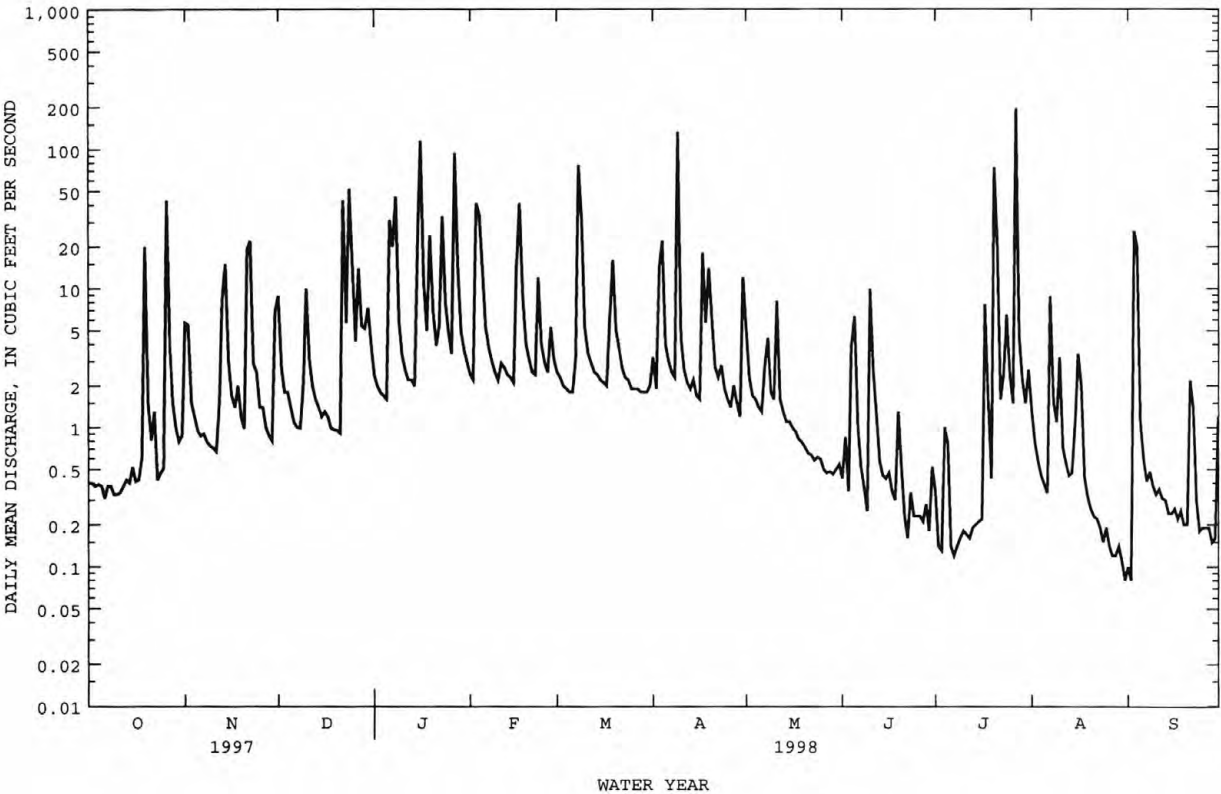
ANNUAL TOTAL	1831.31	2085.64	
ANNUAL MEAN	5.02	5.71	5.52
HIGHEST ANNUAL MEAN			8.53
LOWEST ANNUAL MEAN			4.16
HIGHEST DAILY MEAN	195	Jul 23	333
LOWEST DAILY MEAN	.11	Aug 24	.03
ANNUAL SEVEN-DAY MINIMUM	.22	Aug 19	.05
INSTANTANEOUS PEAK FLOW			1370
INSTANTANEOUS PEAK STAGE			9.80
INSTANTANEOUS LOW FLOW			.04
ANNUAL RUNOFF (CFSM)	1.41	1.60	1.55
ANNUAL RUNOFF (INCHES)	19.08	21.73	21.00
10 PERCENT EXCEEDS	7.2	13	9.8
50 PERCENT EXCEEDS	1.5	1.6	1.3
90 PERCENT EXCEEDS	.30	.22	.30

e Estimated.

\* See REMARKS.

SANTEE RIVER BASIN

0214677974 STEELE CREEK ABOVE SECONDARY ROAD 1344 NEAR SHOPTON, NC--Continued



## SANTÉE RIVER BASIN

02146900 TWELVE MILE CREEK NEAR WAXHAW, NC

LOCATION.--Lat 34°57'08", long 80°45'21", Union County, Hydrologic Unit 03050103, on left bank at downstream side of bridge on State Highway 16, 680 ft downstream of West Fork Twelve Mile Creek, and 2.5 mi north of Waxhaw.

DRAINAGE AREA.--76.5 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-60. October 1960 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 489.04 ft above sea level. Prior to Mar. 13, 1962, water-stage recorder at site 20 ft upstream, Mar. 13, 1962 to June 4, 1997, water-stage recorder at site 100 feet upstream at same datum. Telephone telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No flow also occurred Oct. 6, 1968, Oct. 7-15, 1970, and Oct. 1-22, 1983. Minimum discharge for current water year also occurred Oct.10,11.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1900 is 23.6 ft, Sept. 7, 1949, from floodmarks. No flow observed on Oct. 6, 1954.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	14	72	33	73	51	34	169	30	6.8	232	21
2	3.4	37	52	26	67	44	35	76	19	6.4	39	23
3	3.0	21	27	23	231	41	e50	48	17	6.1	25	203
4	2.8	13	22	21	1210	37	e350	48	15	6.0	20	1960
5	2.4	11	20	19	495	34	e90	34	53	6.2	17	84
6	1.8	9.3	e19	131	154	33	e50	29	50	6.1	15	26
7	1.5	8.7	e18	277	100	33	e40	29	25	5.4	59	15
8	1.5	8.3	e17	200	81	865	e36	41	18	5.3	244	12
9	1.4	8.3	18	90	67	1730	e2000	50	15	5.0	123	10
10	1.3	8.1	43	41	57	189	e400	29	249	4.9	146	9.1
11	1.4	8.0	51	29	53	98	e100	52	90	4.8	71	8.4
12	1.4	7.9	26	23	57	74	e50	34	28	4.2	34	8.2
13	1.4	25	21	21	48	61	e40	25	18	3.8	24	8.3
14	1.5	210	19	19	43	55	e36	23	15	3.5	22	8.5
15	1.7	38	17	95	39	50	40	21	13	3.4	135	8.5
16	1.9	18	16	1030	70	45	34	21	13	7.5	360	7.8
17	2.0	14	15	904	1330	43	1180	20	12	12	171	7.6
18	2.4	13	15	88	252	56	232	19	11	5.6	55	7.7
19	248	12	14	810	107	874	197	18	11	5.4	44	7.8
20	54	12	14	298	78	171	159	17	11	12	24	7.6
21	16	27	13	81	62	151	73	16	11	99	18	8.3
22	11	471	308	55	52	86	55	16	11	19	16	11
23	9.3	64	117	310	197	61	230	15	10	12	15	11
24	8.5	33	676	123	121	58	103	15	9.4	9.3	15	8.5
25	8.9	23	880	64	69	52	56	15	12	43	15	7.1
26	262	21	84	44	55	44	42	15	11	237	14	7.0
27	124	19	98	998	58	42	36	14	8.9	1440	14	6.9
28	23	17	89	1640	66	39	44	14	7.9	631	16	6.9
29	14	16	51	190	---	37	34	13	7.3	58	18	6.9
30	11	24	92	e120	---	36	51	114	6.9	30	21	7.2
31	9.3	---	57	85	---	33	---	177	---	124	21	---
TOTAL	835.9	1211.6	2981	7888	5292	5223	5877	1227	808.4	2822.7	2043	2524.3
MEAN	27.0	40.4	96.2	254	189	168	196	39.6	26.9	91.1	65.9	84.1
MAX	262	471	880	1640	1330	1730	2000	177	249	1440	360	1960
MIN	1.3	7.9	13	19	39	33	34	13	6.9	3.4	14	6.9
CFM	.35	.53	1.26	3.33	2.47	2.20	2.56	.52	.35	1.19	.86	1.10
IN.	.41	.59	1.45	3.84	2.57	2.54	2.86	.60	.39	1.37	.99	1.23

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1998, BY WATER YEAR (WY)

	MEAN	54.1	38.4	67.6	138	166	170	95.8	45.8	34.0	37.7	44.9	30.9
MAX	372	161	261	331	351	425	289	178	111	238	318	161	
(WY)	1991	1986	1984	1978	1990	1980	1973	1989	1992	1978	1995	1987	
MIN	.39	2.18	5.97	11.5	22.7	25.8	14.3	6.19	1.26	2.33	.93	.15	
(WY)	1984	1962	1966	1981	1986	1985	1981	1981	1986	1986	1983	1968	

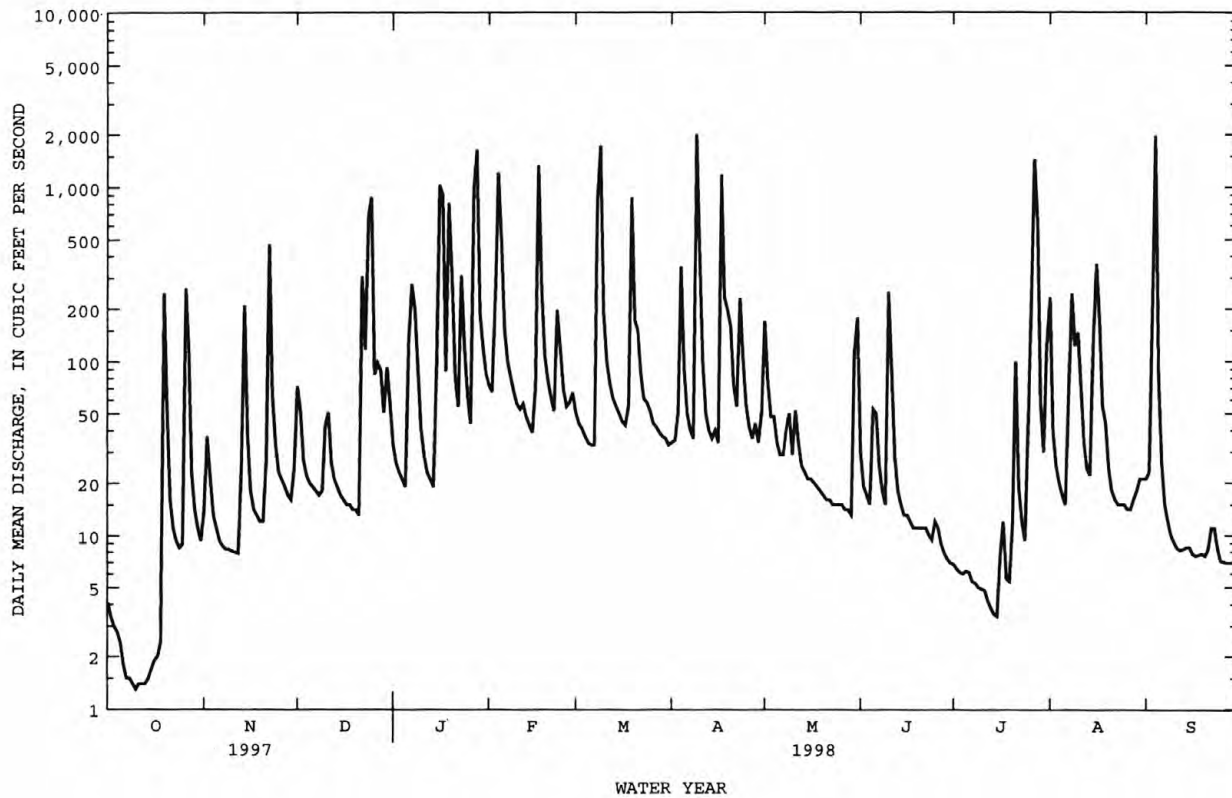
## Santee River Basin

02146900 TWELVE MILE CREEK NEAR WAXHAW, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1961 - 1998	
ANNUAL TOTAL	26963.9		38733.9		76.5	
ANNUAL MEAN	73.9		106		150	
HIGHEST ANNUAL MEAN					25.4	
LOWEST ANNUAL MEAN					1991	
HIGHEST DAILY MEAN	2600	Apr 28	2000	Apr 9	6700	Aug 27 1995
LOWEST DAILY MEAN	1.3	Oct 10	1.3	Oct 10	0	Oct 6 1968
ANNUAL SEVEN-DAY MINIMUM	1.4	Oct 7	1.4	Oct 7	0	Oct 7 1970
INSTANTANEOUS PEAK FLOW			3200	Jan 28	9970	Aug 27 1995
INSTANTANEOUS PEAK STAGE			14.83	Jan 28	21.94	Aug 27 1995
INSTANTANEOUS LOW FLOW			1.2*	Oct 9	0*	Oct 5 1968
ANNUAL RUNOFF (CFSM)	.97		1.39		1.00	
ANNUAL RUNOFF (INCHES)	13.11		18.84		13.59	
10 PERCENT EXCEEDS	117		218		138	
50 PERCENT EXCEEDS	19		27		20	
90 PERCENT EXCEEDS	2.5		6.9		2.6	

e Estimated.

\* See REMARKS.



## SANTEE RIVER BASIN

02149000 COVE CREEK NEAR LAKE LURE, NC

LOCATION.--Lat 35°25'24", long 82°06'42", Rutherford County, Hydrologic Unit 03050105, on left bank 40 ft upstream from bridge on U.S. Highways 64 and 74, 1.0 mi upstream from mouth, and 5.0 mi east of town of Lake Lure.

DRAINAGE AREA.--79.0 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-50. October 1950 to current year. Monthly discharge only for some periods, published in WSP 1723.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 815.4 ft above sea level. Prior to Dec. 20, 1954, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record occurred several days in Sept. and Oct. 1954. Minimum discharge for current water year also occurred Sept. 16, 17, 18, 19, 21.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 reached a stage of about 23 ft, from records of North Carolina State Highway Commission.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	83	77	87	165	198	169	314	143	91	78	59
2	70	95	72	84	153	187	160	279	136	87	71	57
3	73	82	72	84	693	178	164	230	129	85	68	58
4	72	79	92	83	1240	170	174	221	131	83	66	62
5	71	77	78	85	508	165	158	198	171	83	64	55
6	69	77	74	86	311	162	154	186	146	82	63	57
7	69	78	71	408	250	163	150	198	132	80	62	64
8	68	80	72	1710	215	569	150	194	123	81	74	56
9	68	75	75	354	193	809	214	178	125	86	77	53
10	68	74	84	213	178	385	169	180	133	79	90	52
11	72	73	81	169	189	274	159	195	129	74	73	52
12	70	73	76	146	186	235	153	171	121	73	70	51
13	70	85	74	131	167	214	149	164	117	72	70	49
14	71	87	72	121	159	203	151	161	113	71	69	48
15	71	79	71	185	150	191	148	158	114	71	110	47
16	69	75	70	259	482	185	149	153	109	69	146	48
17	69	74	69	222	1080	180	806	150	109	99	131	47
18	70	73	68	171	538	202	348	145	103	83	84	47
19	78	74	68	173	318	293	687	141	104	73	76	47
20	73	73	67	152	257	501	605	139	105	79	72	48
21	69	74	67	138	222	362	337	137	103	71	68	83
22	69	92	94	157	203	265	276	134	109	70	67	71
23	67	79	82	511	357	228	245	134	99	71	65	56
24	75	75	112	262	274	210	221	132	99	83	63	55
25	92	73	159	191	232	197	206	131	105	107	61	54
26	339	73	110	163	210	189	196	168	97	90	60	53
27	219	72	157	497	236	184	190	179	101	122	58	51
28	115	71	137	542	213	180	187	147	93	90	56	53
29	96	71	116	280	---	174	177	340	91	79	56	60
30	87	76	103	217	---	170	235	168	91	74	55	60
31	82	---	94	184	---	167	---	169	---	75	88	---
TOTAL	2723	2322	2714	8065	9379	7790	7287	5594	3481	2533	2311	1653
MEAN	87.8	77.4	87.5	260	335	251	243	180	116	81.7	74.5	55.1
MAX	339	95	159	1710	1240	809	806	340	171	122	146	83
MIN	67	71	67	83	150	162	148	131	91	69	55	47
CF5M	1.11	.98	1.11	3.29	4.24	3.18	3.07	2.28	1.47	1.03	.94	.70
IN.	1.28	1.09	1.28	3.80	4.42	3.67	3.43	2.63	1.64	1.19	1.09	.78

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

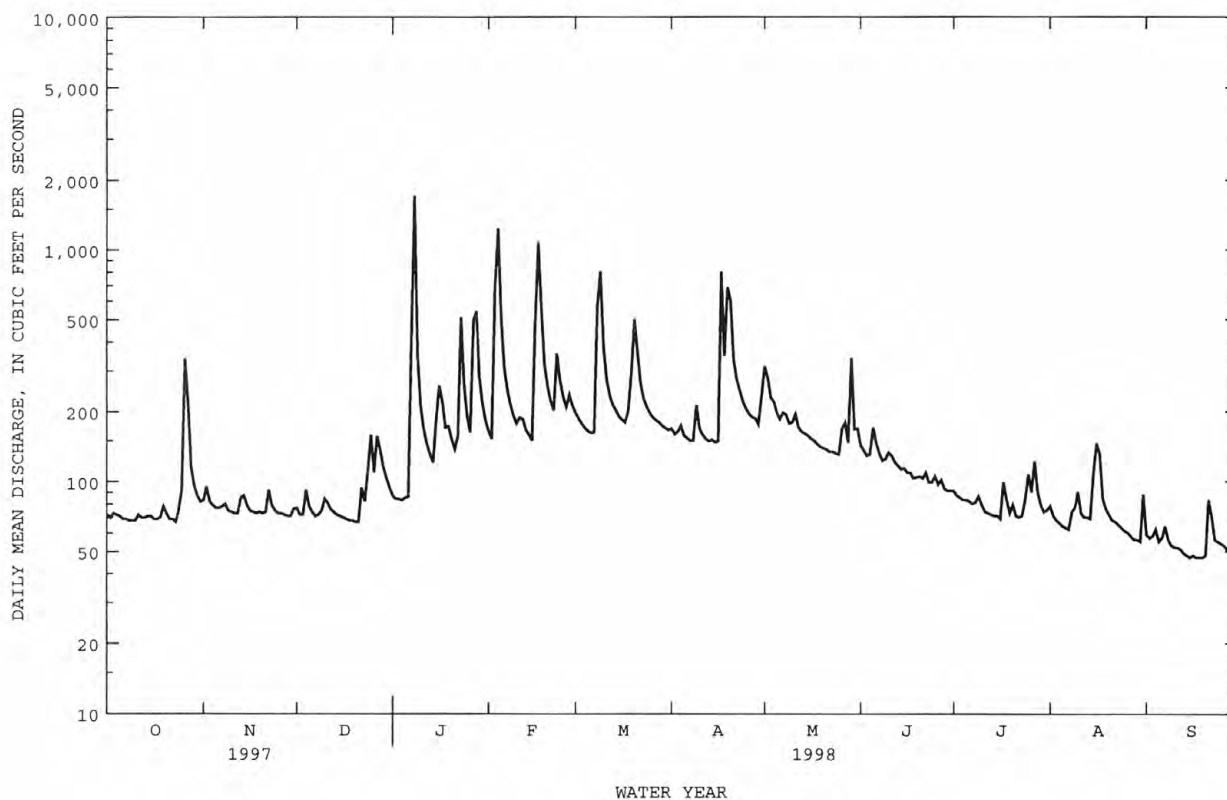
	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
MEAN	116	118	131	147	174	201	186	152	134	100	110	98.1
MAX	381	334	278	314	335	479	391	384	309	189	377	333
(WY)	1965	1993	1984	1993	1998	1979	1980	1975	1992	1974	1974	1979
MIN	24.5	33.1	38.2	39.5	79.8	68.6	69.6	59.2	37.3	33.1	31.5	24.5
(WY)	1955	1955	1989	1956	1988	1988	1989	1988	1988	1988	1956	1954

## SANTÉE RIVER BASIN

02149000 COVE CREEK NEAR LAKE LURE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1951 - 1998	
ANNUAL TOTAL	47968		55852		139	
ANNUAL MEAN	131		153		231	
HIGHEST ANNUAL MEAN					65.3	
LOWEST ANNUAL MEAN					1993	
HIGHEST DAILY MEAN	1390	Mar 14	1710	Jan 8	3190	Oct 4 1964
LOWEST DAILY MEAN	56	Sep 7	47	Sep 15	21	Sep 8 1954
ANNUAL SEVEN-DAY MINIMUM	58	Sep 3	47	Sep 14	21	Sep 30 1954
INSTANTANEOUS PEAK FLOW			3910	Jan 8	7050	Jun 5 1957
INSTANTANEOUS PEAK STAGE			13.96	Jan 8	18.53	Jun 5 1957
INSTANTANEOUS LOW FLOW			45*	Sep 15	21*	Sep 8 1954
ANNUAL RUNOFF (CFSM)	1.66		1.94		1.77	
ANNUAL RUNOFF (INCHES)	22.59		26.30		23.99	
10 PERCENT EXCEEDS	218		260		230	
50 PERCENT EXCEEDS	110		103		107	
90 PERCENT EXCEEDS	68		64		54	

\* See REMARKS.



## SANTEE RIVER BASIN

02151500 BROAD RIVER NEAR BOILING SPRINGS, NC

LOCATION.--Lat 35°12' 39", long 81°41'52", Cleveland County, Hydrologic Unit 03050105, on right bank 0.5 mi upstream from Sandy Run Creek, 3 mi downstream of Second Broad River, and 3.5 mi southwest of Boiling Springs.

DRAINAGE AREA.--875 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1925 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area. WDR NC-88: 1986(m).

GAGE.--Water-stage recorder. Datum of gage is 639.92 ft above sea level (Duke Power Company bench mark). Prior to July 20, 1934, at site 500 ft upstream at 640.92 ft. Telephone telemetry at station.

REMARKS.--Records good except those estimated daily discharges, which are poor. Considerable diurnal fluctuation and some regulation caused by power plants upstream from station. Maximum discharge and gage height for period of record from former site, present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	914	1320	757	1260	2350	2280	2120	3420	1420	1040	902	692
2	860	985	988	1120	1970	1840	1990	3530	1450	930	715	637
3	762	793	1120	1100	3860	1820	1800	2840	1420	897	551	634
4	739	1050	1290	916	14900	1980	2190	2210	1400	1160	700	1100
5	617	885	1220	767	8550	1930	1690	2360	1960	780	705	752
6	503	889	1180	1270	4570	1720	1350	2180	2000	633	695	496
7	686	968	1130	1150	3480	1990	1770	2110	1550	991	607	462
8	693	1000	911	11200	3030	7190	2050	2340	1200	971	817	508
9	613	862	834	10400	2670	10500	2640	2070	1470	902	655	569
10	579	584	968	3540	2520	5880	2400	1990	1430	829	547	598
11	766	905	953	2660	2670	3870	2110	2060	1650	926	887	545
12	522	759	883	2010	2710	3230	1810	1830	1320	703	807	590
13	486	1020	1040	1950	2120	2870	1420	1760	1410	564	775	445
14	707	1010	855	1830	2290	2770	2040	1820	1100	779	779	424
15	730	1000	632	2240	2210	2460	1900	1760	858	799	1900	528
16	633	851	859	4430	2970	2390	1730	1840	1330	826	1390	540
17	656	627	877	4100	10800	2800	3700	1640	1310	874	1410	529
18	683	822	892	2630	8730	2590	3730	1160	1160	1080	1090	535
19	533	1000	810	2160	4580	3410	3640	1590	1030	748	980	450
20	532	619	1040	2410	3600	2790	6280	1630	1400	563	823	522
21	716	780	759	1930	3210	3600	3860	1500	1050	852	755	540
22	646	1210	760	1800	3130	2950	3440	1610	861	730	864	695
23	628	993	1140	3960	3550	2520	3120	1530	1350	632	657	707
24	702	829	1350	3670	3380	2430	2740	1440	1220	1110	525	504
25	915	961	2660	2790	2850	2180	2450	1320	1300	1180	705	e500
26	2000	859	1660	2270	2510	2250	2050	1290	1070	916	726	e480
27	6570	885	1820	4670	2820	2230	1920	1770	1240	755	648	e470
28	2330	764	1850	7470	2810	2220	2250	1720	938	1200	596	e500
29	1220	929	1290	3720	---	1820	2030	2100	707	1010	611	e550
30	1090	813	1540	2900	---	1680	2040	2270	1010	875	483	700
31	942	---	1370	2540	---	1860	---	1700	---	864	469	---
TOTAL	30973	26972	35438	96863	114840	92050	74260	60390	38614	27119	24774	17202
MEAN	999	899	1143	3125	4101	2969	2475	1948	1287	875	799	573
MAX	6570	1320	2660	11200	14900	10500	6280	3530	2000	1200	1900	1100
MIN	486	584	632	767	1970	1680	1350	1160	707	563	469	424
CFSM	1.14	1.03	1.31	3.57	4.69	3.39	2.83	2.23	1.47	1.00	.91	.66
IN.	1.32	1.15	1.51	4.12	4.88	3.91	3.16	2.57	1.64	1.15	1.05	.73

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1998, BY WATER YEAR (WY)

	MEAN	1295	1244	1467	1793	1942	2131	1954	1566	1332	1115	1244	1079
MAX	5499	3275	2875	4750	4304	4868	4525	3441	2812	2505	6893	3100	
(WY)	1965	1993	1984	1937	1960	1975	1936	1973	1973	1949	1928	1945	
MIN	237	407	449	422	820	783	821	682	420	351	295	288	
(WY)	1955	1955	1956	1956	1941	1988	1986	1988	1988	1986	1956	1954	

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1925 - 1998	
ANNUAL TOTAL	520367		639495		1514	
ANNUAL MEAN	1426		1752		2328	
HIGHEST ANNUAL MEAN					768	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	6570	Oct 27	14900	Feb 4	63900	Aug 16 1928
LOWEST DAILY MEAN	403	Sep 8	424	Sep 14	105	Oct 10 1954
ANNUAL SEVEN-DAY MINIMUM	547	Aug 25	493	Sep 13	185	Aug 27 1956
INSTANTANEOUS PEAK FLOW			18600	Jan 9	73300*	Aug 16 1928
INSTANTANEOUS PEAK STAGE			10.71	Jan 9	24.30*	Aug 16 1928
INSTANTANEOUS LOW FLOW			331	Sep 15	40	Oct 17 1954
ANNUAL RUNOFF (CFSM)	1.63		2.00		1.73	
ANNUAL RUNOFF (INCHES)	22.12		27.19		23.51	
10 PERCENT EXCEEDS	2330		3290		2530	
50 PERCENT EXCEEDS	1240		1210		1190	
90 PERCENT EXCEEDS	630		597		587	

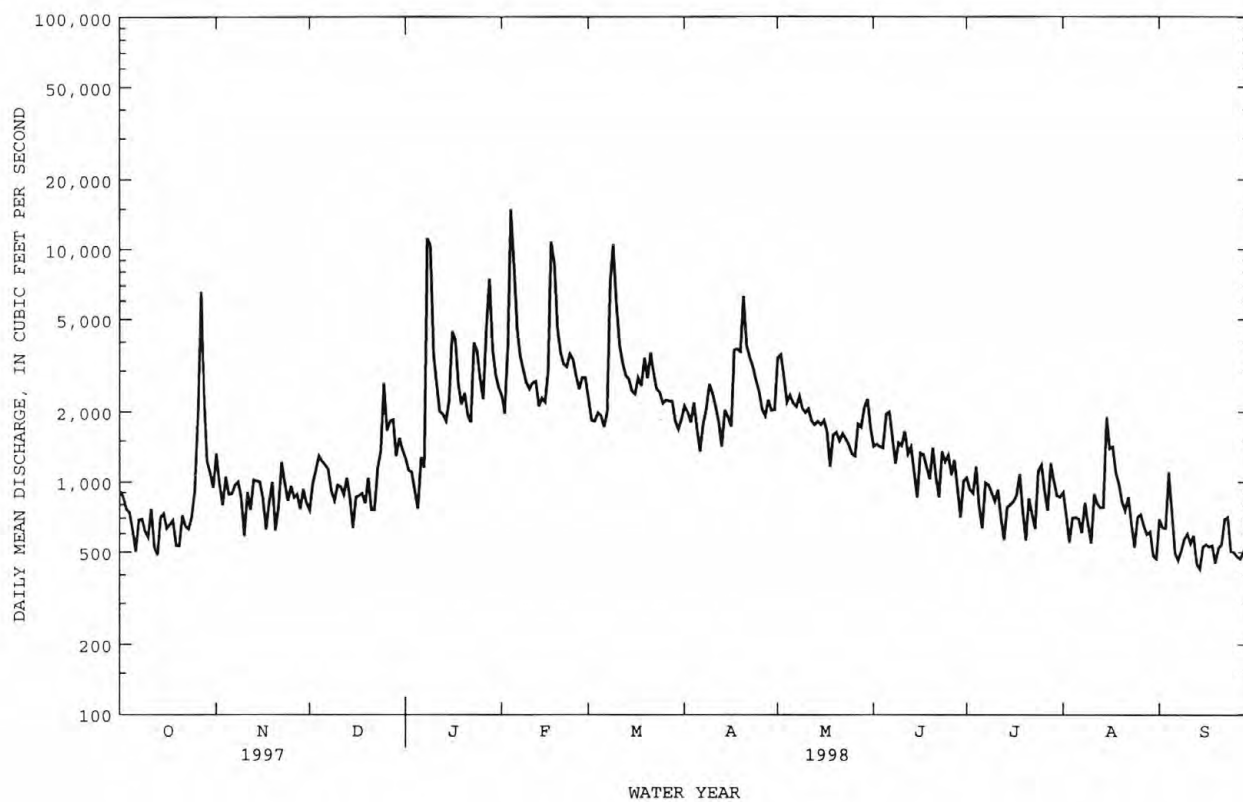
e Estimated.

\* See REMARKS.



## SANTEE RIVER BASIN

02151500 BROAD RIVER NEAR BOILING SPRINGS, NC--Continued



## SANTÉE RIVER BASIN

02152100 FIRST BROAD RIVER NEAR CASAR, NC

LOCATION.--Lat 35°29'35", long 81°40'56", Cleveland County, Hydrologic Unit 03050105, on right bank 570 ft upstream from bridge on Secondary Road 1530, 0.5 mi upstream from No Business Creek, and 4.0 mi southwest of Casar.

DRAINAGE AREA.--60.5 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-56, March 1959 to current year.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 890 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for current water year also occurred Sept. 28.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 and August 1940 reached a stage of about 25 ft, from information by local resident. A discharge of 14.5 ft<sup>3</sup>/s was measured on Sept. 21, 1955.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	48	46	59	103	111	105	368	107	60	58	42
2	37	71	44	56	93	105	94	330	95	61	51	40
3	37	57	43	56	301	99	95	203	89	64	48	42
4	37	49	61	56	633	93	122	205	86	60	46	66
5	36	46	51	55	293	90	100	165	118	69	43	44
6	36	45	46	54	178	87	95	144	99	63	41	41
7	35	46	44	84	138	88	92	161	87	59	42	41
8	35	50	43	1160	118	714	91	151	80	58	46	45
9	34	45	45	236	105	873	262	135	81	61	47	39
10	34	44	51	125	96	325	152	127	92	55	47	38
11	34	42	53	96	99	195	119	131	88	51	46	37
12	34	43	48	81	111	150	107	115	80	51	41	37
13	34	50	46	74	96	132	101	110	79	51	40	35
14	37	53	44	70	91	122	100	107	75	51	57	34
15	39	49	43	138	85	113	98	104	77	52	272	34
16	36	45	42	258	192	108	102	101	73	51	79	34
17	35	43	41	199	765	104	1000	98	71	115	64	34
18	37	43	41	129	365	111	327	94	69	57	56	33
19	42	43	40	125	197	265	416	92	69	49	54	33
20	40	42	40	106	149	204	468	89	69	46	52	34
21	36	43	39	92	125	180	251	87	67	46	49	39
22	35	62	56	92	112	146	188	85	70	43	48	45
23	35	50	54	300	152	127	159	84	99	44	47	36
24	36	46	72	191	132	116	138	82	69	46	45	35
25	49	44	145	127	119	109	125	82	72	86	44	34
26	181	44	78	103	110	105	118	95	65	99	43	33
27	115	43	119	338	127	102	120	199	62	156	42	32
28	59	42	111	514	119	101	127	138	59	80	40	32
29	50	41	83	233	---	99	112	376	59	64	41	33
30	46	45	71	155	---	97	128	177	61	55	43	36
31	44	---	64	122	---	98	---	136	---	54	59	---
TOTAL	1413	1414	1804	5484	5204	5369	5512	4571	2367	1957	1731	1138
MEAN	45.6	47.1	58.2	177	186	173	184	147	78.9	63.1	55.8	37.9
MAX	181	71	145	1160	765	873	1000	376	118	156	272	66
MIN	34	41	39	54	85	87	91	82	59	43	40	32
CFSM	.75	.78	.96	2.92	3.07	2.86	3.04	2.44	1.30	1.04	.92	.63
IN.	.87	.87	1.11	3.37	3.20	3.30	3.39	2.81	1.46	1.20	1.06	.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1998, BY WATER YEAR (WY)

	MEAN	77.3	70.3	86.2	109	127	143	129	101	81.6	63.6	69.8	56.1
MAX	318	191	185	273	286	386	291	254	168	138	262	132	
(WY)	1965	1978	1962	1995	1960	1975	1983	1975	1975	1984	1970	1959	
MIN	24.7	27.3	26.6	44.4	50.8	44.6	48.1	33.9	23.4	19.2	19.5	27.2	
(WY)	1964	1982	1989	1989	1988	1988	1967	1988	1988	1988	1988	1988	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

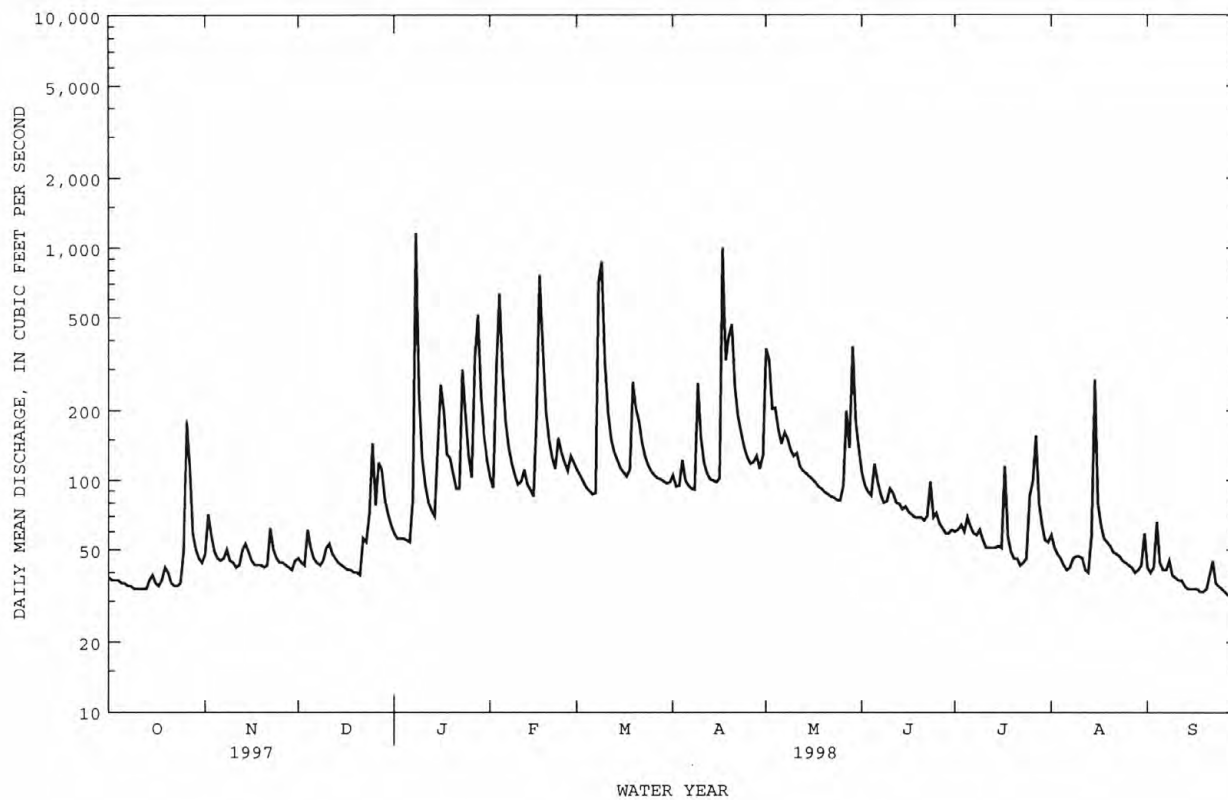
## WATER YEARS 1959 - 1998

ANNUAL TOTAL	33881	37964	
ANNUAL MEAN	92.8	104	92.7
HIGHEST ANNUAL MEAN			139
LOWEST ANNUAL MEAN			43.4
HIGHEST DAILY MEAN	583	Apr 23	1160
LOWEST DAILY MEAN	33	Sep 21	32
ANNUAL SEVEN-DAY MINIMUM	34	Oct 7	34
INSTANTANEOUS PEAK FLOW			2740
INSTANTANEOUS PEAK STAGE			8.13
INSTANTANEOUS LOW FLOW			31*
ANNUAL RUNOFF (CFSM)	1.53		1.72
ANNUAL RUNOFF (INCHES)	20.83		23.34
10 PERCENT EXCEEDS	162		184
50 PERCENT EXCEEDS	73		69
90 PERCENT EXCEEDS	38		37
			150
			66
			36

\* See REMARKS.

## SANTEE RIVER BASIN

02152100 FIRST BROAD RIVER NEAR CASAR, NC--Continued



## Lakes and Reservoirs in South Atlantic Slope Basin

**02067800; 02067820 TALBOTT AND TOWNES RESERVOIRS**

These two reservoirs on the Dan River are operated as a unit for storage of water for Pinnacles hydroelectric plant.

**TALBOTT DAM**

LOCATION.--Lat 36°40'36", long 80°23'51", Patrick County, Va, Hydrologic Unit 03010103, 4.5 mi northeast of Kibler.

DRAINAGE AREA.--20.2 mi<sup>2</sup>.

**TOWNES DAM**

LOCATION.--Lat 36°41'11", long 80°25'49", Patrick County, Va, Hydrologic Unit 03010103, 4 mi north of Kibler.

DRAINAGE AREA.--32.9 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1939 to December 1945 and January 1948 to September 1960 (combined monthend contents only published in WSP 1723), October 1960 to current year.

REMARKS.--Total capacity of Talbott Reservoir is 350,000,000 ft<sup>3</sup> and Townes Reservoir is 60,000,000 ft<sup>3</sup>. Filling was started in Talbott Reservoir Feb. 13, 1939, and in Townes Reservoir several months earlier. Records furnished by city of Danville, Virginia. (See station 02068500.)

**02077280 HYCO LAKE**

LOCATION.--Lat 36°30'28", long 79°02'48", Person County, Hydrologic Unit 03010104, at outlet control structure 0.4 mi northwest of dam on Hyco River, 1.1 mi southwest of McGehees Mill, and 8 mi northwest of Roxboro.

DRAINAGE AREA.--189 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to current year. Prior to October 1970, published as "Roxboro Steam-Electric Generating Plant Lake."

GAGE.--Water-stage recorder and tape gage. Prior to Feb. 11, 1965, staff gage at upstream end of outlet control structure. Datum of gage is 399.79 ft above sea level (levels by Carolina Power and Light Co.).

REMARKS.--Lake, used for cooling water at the Roxboro Steam-Electric Generating Plant of Carolina Power and Light Co., first began to fill Sept. 19, 1964, and first reached spillway elevation (9.97 ft gage height) Mar. 19, 1965. Total capacity at top of spillway is 3,288,000,000 ft<sup>3</sup>. Lake cannot be drawn below -0.03 ft (bottom of gated flume).

**02079964 LAKE GASTON**

LOCATION.--Lat 36°30'04", long 77°48'43", Halifax County, Hydrologic Unit 03010106, at Gaston Dam on Roanoke River, 0.2 mi upstream from Black Gut Creek, and 2.7 mi northwest of Thelma.

DRAINAGE AREA.--8,339 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and staff gage. Datum of gage is sea level.

REMARKS.--Lake, used mainly for hydroelectric power development, was first filled Oct. 13-15, 1962, and has a total capacity of 22,434,000,000 ft<sup>3</sup>. Usable capacity at top of spillway gates, 20,127,000,000 ft<sup>3</sup>, is between elevations 165 and 203 ft. Capacity reserved for flood control, 2,788,000 ft<sup>3</sup>, is between elevations 200 and 203 ft. Storage for power generation, 10,673,000,000 ft<sup>3</sup>, is between elevations 185 and 200 ft.

COOPERATION.--Records furnished by Virginia Electric and Power Co. (See station 02080500.)

**02080100 ROANOKE RAPIDS LAKE**

LOCATION.--Lat 36°29'10", long 77°39'31", Halifax County, Hydrologic Unit 03010107, at Roanoke Rapids Dam on Roanoke River, 1.5 mi upstream from bridge on State Highway 48, and 2.2 mi north of Roanoke Rapids.

DRAINAGE AREA.--8,371 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1955 to September 1960 (monthend contents only published in WSP 1723), October 1960 to current year.

GAGE.--Water-stage recorder and staff gage. Datum of gage is sea level.

REMARKS.--Lake, used for hydroelectric power development, was put in operation June 25, 1955, and has a total capacity of 3,360,220,000 ft<sup>3</sup> at elevation 132.0 ft (normal high water). Usable capacity is 3,515,290,000 ft<sup>3</sup> at 132.75 ft (top of gates).

COOPERATION.--Records furnished by Virginia Electric and Power Co. (See station 02080500.)

**02087182 FALLS LAKE**

LOCATION.--Lat 35°56'00", long 78°35'00", Wake County, Hydrologic Unit 03020201, at Falls Dam on Neuse River at Falls, 10 mi north of Raleigh, and 235 mi upstream from mouth.

DRAINAGE AREA.--770 mi<sup>2</sup>.

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

GAGE.--Datum of gage is sea level.

REMARKS.--Lake is used for flood control, water supply, low-flow augmentation, and recreation. Temporary filling began May 1981 for water supply for city of Raleigh during drought conditions. Jan. 13, 1983, gates closed and normal pool elevation of 250.1 ft was reached Dec. 7, 1983. (See station 02087183.) Total capacity of reservoir is 4,998,074,400 ft<sup>3</sup> at elevation of 250.1 ft.

COOPERATION.--Records furnished by Corps of Engineers. (See station 02087183.)

## Lakes and Reservoirs in South Atlantic Slope Basin--Continued

**02098197 B. EVERETT JORDAN LAKE**

LOCATION.--Lat 35°39'17", long 79°04'02", Chatham County, Hydrologic Unit 03030002, at B. Everett Jordan Dam on Haw River, 0.3 mi downstream of mouth of New Hope River, 2.5 mi north of Moncure, 4.2 mi upstream from mouth of Haw River, and 202.2 mi upstream from mouth of Cape Fear River.

DRAINAGE AREA.--1,689 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1972 to current year.

GAGE.--Water-stage recorder and staff gage at dam. Datum of gage is sea level.

REMARKS.--Lake is used for flood control, water supply, low-flow augmentation, and recreation. Some storage was affected during construction and then operated temporarily as a "dry reservoir" January 1975 to August 1981. Reservoir began filling September 1981 and reached normal pool elevation, 216 ft, Feb. 4, 1982. Total capacity is 32,825,074,000 ft<sup>3</sup> at 240.0 ft, of which 23,454,011,000 ft<sup>3</sup> is controlled flood storage. (See station 02098198.)

**02111391 W. KERR SCOTT RESERVOIR**

LOCATION.--Lat 36°08'04", long 81°13'30", Wilkes County, Hydrologic Unit 03040101, at W. Kerr Scott Dam on Yadkin River, 0.1 mi upstream from Fish Trap Creek, 2.0 mi upstream from Millers Creek, and 4.0 mi west of Wilkesboro.

DRAINAGE AREA.--350 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--August 1962 to current year.

GAGE.--Water-stage recorder and staff gage at dam. Datum of gage is sea level.

REMARKS.--Lake is used for flood control, low-flow augmentation, recreation, and water supply. Some storage was affected during construction in July 1962, but gates were closed Aug. 22, 1962. Reservoir reached normal pool elevation on Jan. 19, 1963. Total capacity at elevation 1075.0 ft is 6,664,680,000 ft<sup>3</sup> of which 4,878,720,000 ft<sup>3</sup> is controlled flood storage.

COOPERATION.--Records furnished by Corps of Engineers. (See station 02129000.)

**02122400 HIGH ROCK LAKE**

LOCATION.--Lat 35°36'02", long 80°14'06", Davidson County, Hydrologic Unit 03040103, at High Rock Dam on Yadkin River, 2 mi upstream from Lick Creek, 0.8 mi northwest of High Rock, and 256 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--4,000 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--November 1927 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year.

GAGE.--Water-stage recorder and staff gage at dam. Datum of gage is 30.9 ft below sea level.

REMARKS.--Lake, used for hydroelectric power development, was first put in operation Nov. 7, 1927. Total capacity is 11,090,000,000 ft<sup>3</sup>. Usable capacity, 10,230,000,000 ft<sup>3</sup>, is between 625 and 655 ft gage datum (top of gates).

COOPERATION.--Records furnished by Yadkin, Inc. (See station 02129000.)

**02122699 TUCKERTOWN RESERVOIR**

LOCATION.--Lat 35°29'03", long 80°10'30", Stanly County, Hydrologic Unit 03040103, at Tuckertown Dam on Yadkin River, 2.5 mi upstream from Garr Creek, 3.8 mi northeast of New London, and 250 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--4,120 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Remote water-stage recorder in powerhouse. Datum of gage is 30.9 ft below sea level.

REMARKS.--Lake, used for hydroelectric power development, was first filled Apr. 6, 1962. Total capacity is 1,852,400,000 ft<sup>3</sup>. Usable capacity, 293,800,000 ft<sup>3</sup>, is between 593 and 596 ft gage datum.

COOPERATION.--Records furnished by Yadkin, Inc. (See station 02129000.)

**02122844 BADIN LAKE**

LOCATION.--Lat 35°35'10", long 80°05'34", Stanly County, Hydrologic Unit 03040103, at Badin Dam on Yadkin River, 2.5 mi upstream from Falls Dam, 1.5 mi northeast of Badin, and 242 mi upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--4,180 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--December 1917 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year.

GAGE.--Water-stage recorder and staff gage at dam. Datum of gage is 30.9 ft below sea level.

REMARKS.--Lake, generally known as Narrows Reservoir, used for hydroelectric power development, was first put in operation July 12, 1917. Total capacity is 10,497,960,000 ft<sup>3</sup>. Usable capacity, 5,616,584,000 ft<sup>3</sup>, is between 510.00 and 541.10 ft.

COOPERATION.--Records furnished by Yadkin, Inc. (See station 02129000.)



## Lakes and Reservoirs in South Atlantic Slope Basin--Continued

**02123736 LAKE TILLERY**

LOCATION.--Lat 35°12'24", long 80°03'57", Stanly County, Hydrologic Unit 03040104, at Norwood Dam on Pee Dee River, 700 ft upstream from Norfolk Southern Railroad bridge, 5 mi upstream from Rocky River, 3.5 mi southeast of Norwood, and 224 mi upstream from mouth in Winyah Bay.

DRAINAGE AREA.--4,600 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--February 1928 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year.

GAGE.--Water-stage recorder and float-tape gage at dam. Datum of gage is 38.67 ft above sea level (levels by Carolina Power and Light Co.).

REMARKS.--Lake, used for hydroelectric power development, was first put in operation during January 1928. Total capacity is 7,274,520,000 ft<sup>3</sup>. Usable capacity, 5,927,040,000 ft<sup>3</sup>, is between elevations 200.5 and 239.5 ft gage datum (top of gates).

COOPERATION.--Records furnished by Carolina Power and Light Co. (See station 02129000.)

**02128800 BLEWETT FALLS LAKE**

LOCATION.--Lat 34°58'58", long 79°52'40", Richmond County, Hydrologic Unit 03040104, at Blewett Falls Dam on Pee Dee River, 1.2 mi upstream from Cartledge Creek, 6.5 mi northwest of Rockingham, and 195 mi upstream from mouth in Winyah Bay.

DRAINAGE AREA.--6,830 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--December 1929 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year.

GAGE.--Self-synchronous motor, dial indicator, and staff gage at dam. Datum of gage is 39.08 ft above sea level (levels by Carolina Power and Light Co.).

REMARKS.--Lake, used for hydroelectric power development, was first put in use during 1911. Total capacity is 4,225,320,000 ft<sup>3</sup>. Usable capacity, 1,850,000,000 ft<sup>3</sup>, is between 120.0 and 139.0 ft gage datum (top of flashboards).

COOPERATION.--Records furnished by Carolina Power and Light Co. (See station 02129000.)

**02138519 LAKE JAMES**

LOCATION.--Lat 35°44'36", long 81°50'22", Burke County, Hydrologic Unit 03050101, at Linville Dam at intake tower on Catawba River, 2.1 mi northeast of Bridgewater, and 279 mi upstream from mouth of Wateree River.

DRAINAGE AREA.--380 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--March 1920 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year.

GAGE.--Float gage with self-synchronous motor to indicator in powerhouse. Staff gage at Catawba River Dam is also read when lake elevation drops below 1,160 ft, 60 ft gage datum, and lake becomes two separate reservoirs. Datum of gage is 1,100.00 ft above sea level (levels by Duke Power Co.).

REMARKS.--Lake, generally known as Bridgewater Reservoir, used for hydroelectric power development, was first put in operation May 5, 1919. The total capacity is 12,581,800,000 ft<sup>3</sup> at 100.0 ft gage datum (crest of spillway). Usable capacity, 7,943,700,000 ft<sup>3</sup>, is between 65.0 and 100.0 ft gage datum.

COOPERATION.--Records furnished by Duke Power Co.

**02141490 RHODHISS LAKE**

LOCATION.--Lat 35°46'54", long 81°26'42", Caldwell County, Hydrologic Unit 03030101, at Rhodhiss Dam on Catawba River, 0.8 mi west of Rhodhiss, 1.8 mi south of Granite Falls, and 243 mi upstream from mouth of Wateree River.

DRAINAGE AREA.--1,090 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--September 1935 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year.

GAGE.--Float gage, indicator, and reference point at dam. Datum of gage is 895.1 ft above sea level (levels by Duke Power Co.).

REMARKS.--Lake, used for hydroelectric power development, was first put in operation Feb. 18, 1925. Total capacity is 3,188,592,000 ft<sup>3</sup>. Usable capacity, 1,717,000,000 ft<sup>3</sup>, is between elevations 85.0 and 100.0 ft gage datum (crest of spillway).

COOPERATION.--Records furnished by Duke Power Co.

**02141961 LAKE HICKORY**

LOCATION.--Lat 35°49'28", long 81°11'28", Alexander County, Hydrologic Unit 03050101, at Oxford Dam on Catawba River, 2 mi upstream from Lower Little River, 7 mi south of Taylorsville, and 226 mi upstream from mouth of Wateree River.

DRAINAGE AREA.--1,310 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--September 1935 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year.

GAGE.--Float gage and indicator at dam. Datum of gage is 835.0 ft above sea level (levels by Duke Power Co.).

REMARKS.--Lake, generally known as Oxford Reservoir, used for hydroelectric power development, was first put in operation Apr. 5, 1928. Total capacity is 5,552,985,000 ft<sup>3</sup>. The usable capacity from Sept. 1, 1935, to Sept. 30, 1957, was considered to be 2,277,970,200 ft<sup>3</sup> between 85.0 and 100.0 ft gage datum (top of flood gates). Usable capacity from Apr. 30, 1928, to Aug. 31, 1935, Oct. 1, 1957, to Sept. 30, 1964, was considered to be 3,378,400,000 ft<sup>3</sup> between 75.0 and 100.0 ft gage datum (top of flood gates); and from Oct. 1, 1964, to present, is considered to be 2,277,800,000 ft<sup>3</sup> between 85.0 and 100.0 ft gage datum (top of flood gates).

COOPERATION.--Records furnished by Duke Power Co.

## Lakes and Reservoirs in South Atlantic Slope Basin--Continued

**02142441 LOOKOUT SHOALS LAKE**

LOCATION.--Lat 35°45'57", long 81°05'36", Catawba County, Hydrologic Unit 03050101, at Lookout Shoals Dam on Catawba River, 4 mi upstream from bridge on U.S. Highways 64 and 70, 4.2 mi north of Catawba, and 216 mi upstream from mouth of Wateree River.

DRAINAGE AREA.--1,450 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--December 1915 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year.

GAGE.--Float gage, indicator, and staff gage at dam. Datum of gage is 738.1 ft above sea level (levels by Duke Power Co.).

REMARKS.--Lake, used for hydroelectric power development, was first put in operation Dec. 2, 1915. Total capacity was originally 1,355,190,000 ft<sup>3</sup>. Capacity has been reduced by silting. The usable capacity prior to October 1957 was considered to be 473,980,000 ft<sup>3</sup> and from October 1957 to Sept. 30, 1964, was considered to be 388,300,000 ft<sup>3</sup> between elevations 90.0 and 100.0 ft gage datum (crest of spillway). Usable capacity from Oct. 1, 1964, to present is considered to be 208,200,000 ft<sup>3</sup> between 95.0 and 100.0 ft gage datum (crest of spillway). Flood of July 16, 1916, washed out an earth dike.

COOPERATION.--Records furnished by Duke Power Co.

**02142647 LAKE NORMAN**

LOCATION.--Lat 35°26'05", long 80°57'28", Mecklenburg County, Hydrologic Unit 03050101, at Cowans Ford Dam on Catawba River, 0.8 mi upstream from Derr Creek, 7.8 mi southwest of Davidson, and 182 mi upstream from mouth of Wateree River.

DRAINAGE AREA.--1,790 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--March 1962 to current year.

GAGE.--Float gage with transmitter to dial meter in control room. Datum of gage is 660 ft above sea level (levels by Duke Power Co.).

REMARKS.--Lake, used for hydroelectric power development, began filling in March 1962. Total capacity is 47,586,200,000 ft<sup>3</sup>. Usable capacity, 26,910,400,000 ft<sup>3</sup>, is between 75.0 and 100.0 ft gage datum (top of flood gates).

COOPERATION.--Records furnished by Duke Power Co.

**02142676 MOUNTAIN ISLAND LAKE**

LOCATION.--Lat 35°20'03", long 80°59'12", Gaston County, Hydrologic Unit 03050101, at Mountain Island Dam on Catawba River, 1.5 mi downstream from bridge on State Highway 16, 3 mi northeast of Mount Holly, and 167 mi upstream from mouth of Wateree River.

DRAINAGE AREA.--1,860 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--December 1923 to September 1960 (monthend contents only, published in WSP 1723), October 1960 to current year.

GAGE.--Float gage, indicator, and stage gage at dam. Datum of gage is 547.5 ft above sea level (levels by Duke Power Co.).

REMARKS.--Lake, used for hydroelectric power development, was first put in operation Dec. 16, 1923. Total capacity is 2,495,988,000 ft<sup>3</sup>. Usable capacity prior to October 1964 was considered to be 1,132,000,000 ft<sup>3</sup> between 90.0 and 100.0 ft gage datum (crest of spillway) and from October 1964 to present, 845,000,000 ft<sup>3</sup>, is considered to be between 93.0 and 100.0 ft gage datum (crest of spillway).

COOPERATION.--Records furnished by Duke Power Co.

**OTHER RESERVOIRS**

The following smaller reservoirs in the South Atlantic Slope basin are described below. Records of contents are not published herein.

**02077229 LAKE ROXBORO**

LOCATION.--Lat 79°08'26", long 36°20'55", Caswell County, Hydrologic Unit 03010104, on South Hyco Creek near Roseville.

DRAINAGE AREA.--23.2 mi<sup>2</sup>.

REMARKS.--Lake is part of Roxboro's municipal water supply. Total capacity is 380,991,000 ft<sup>3</sup>. Dam was completed and filled April 1978. (See station 02077250.)

**02077302 ROXBORO STEAM-ELECTRIC GENERATING PLANT AFTERBAY RESERVOIR**

LOCATION.--Lat 36°31'51", long 78°59'50", Person County, Hydrologic Unit 03010104, on Hyco River near McGehees Mill.

DRAINAGE AREA.--196 mi<sup>2</sup>.

REMARKS.--Lake is used as a cooling-water reservoir for Carolina Power and Light Co. powerplant. Total capacity is approximately 522,720,000 ft<sup>3</sup> with a surface area of about 650 acres at a normal elevation of 385 ft above sea level. Dam completed May 30, 1974, and filling began Apr. 26, 1974. Water in reservoir first reached normal water-level elevation, 385 ft, on Aug. 22, 1974.

**02077665 MAYO STEAM-ELECTRIC GENERATING PLANT LAKE.**

LOCATION.--Lat 36°32'15", long 78°52'30", Person County, Hydrologic Unit 03010104, on Mayo Creek near Bethel Hill.

DRAINAGE AREA.--52.2 mi<sup>2</sup>.

REMARKS.--Lake is used as cooling-water reservoir for Carolina Power and Light Co. powerplant. Total capacity is 3,831,000,000 ft<sup>3</sup> with a surface area of 2,800 acres at a normal elevation of 434 ft above sea level. Dam was completed and filling began Aug. 1, 1980. Water in reservoir first reached normal water-level elevation of 434 ft on April 16, 1983. (See station 02077660.)



## Lakes and Reservoirs in South Atlantic Slope Basin--Continued

**02086490 LAKE MICHIE**

LOCATION.--Lat 36°09'02", long 79°49'49", Durham County, Hydrologic Unit 03020201, at Durham municipal dam on Flat River, 3 mi southeast of Bahama, and 5 mi upstream from confluence with Eno River.

DRAINAGE AREA.--170 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1962 to April 1975.

REMARKS.--Lake, used for municipal water supply, began filling in May 1926 and reached spillway elevation Dec. 26, 1926. Total capacity, 618,000,000 ft<sup>3</sup>, is between 300.0 and 341.0 ft gage datum (crest of spillway). (See station 02087000.)

**02087339 LAKE JOHNSON**

LOCATION.--Lat 35°45'44", long 78°42'17", Wake County, Hydrologic Unit 03020201, on Walnut Creek near Raleigh.

DRAINAGE AREA.--7.05 mi<sup>2</sup>.

REMARKS.--Lake is part of Raleigh's municipal water supply. Total capacity is 98,900,000 ft<sup>3</sup>. Dam was completed in 1923 and spillway raised to its present elevation in 1951. (See station 02087500.)

**02087344 LAKE RALEIGH**

LOCATION.--Lat 35°45'56", long 78°40'38", Wake County, Hydrologic Unit 03020201, on Walnut Creek near Raleigh.

DRAINAGE AREA.--12.3 mi<sup>2</sup>.

REMARKS.--Lake is part of Raleigh's municipal water supply. Total capacity is 13,400,000 ft<sup>3</sup>. Dam was completed in 1914 and raised to its present elevation in 1919. (See station 02087500.)

**02087588 LAKE WHEELER**

LOCATION.--Lat 35°41'30", long 78°41'31", Wake County, Hydrologic Unit 03020201, on Swift Creek near Raleigh.

DRAINAGE AREA.--38 mi<sup>2</sup>, approximately.

REMARKS.--Lake is part of Raleigh's municipal water supply. Total capacity is 267,400,000 ft<sup>3</sup>. Dam was completed and filling began in 1956. (See station 02087500.)

**02087701 LAKE BENSON**

LOCATION.--Lat 35°39'44", long 78°36'42", Wake County, Hydrologic Unit 03020201, on Swift Creek near Garner.

DRAINAGE AREA.--67 mi<sup>2</sup>, approximately.

REMARKS.--Lake is part of Raleigh's municipal water supply. Total capacity is 133,700,000 ft<sup>3</sup>. Lake, formerly known as Rand's Mill, acquired by city of Raleigh in 1927 and spillway raised to its present elevation in 1954. (See station 02087500.)

**02090370 BUCKHORN RESERVOIR**

LOCATION.--Lat 35°41'22", long 78°07'33", Wilson County, Hydrologic Unit 03020203, on Contentnea Creek near Lucama.

DRAINAGE AREA.--155 mi<sup>2</sup>.

REMARKS.--Lake is part of Wilson's municipal water supply. Total capacity is 133,680,000 ft<sup>3</sup>. Dam was completed Nov. 12, 1976, and reservoir filled Dec. 1, 1976. (See station 02090380.)

**02093981 LAKE HIGGINS**

LOCATION.--Lat 36°10'11", long 79°52'49", Guilford County, Hydrologic Unit 03030002, on Brush Creek near Greensboro.

DRAINAGE AREA.--12 mi<sup>2</sup>, approximately.

REMARKS.--Lake is part of Greensboro's municipal water supply. Total capacity is 107,000,000 ft<sup>3</sup>. Reservoir was first filled Mar. 1, 1957. (See station 02094500.)

**02094117 LAKE BRANDT**

LOCATION.--Lat 36°10'20", long 79°50'20", Guilford County, Hydrologic Unit 03030002, on Reedy Fork and Horsepen Creek near Greensboro.

DRAINAGE AREA.--70.0 mi<sup>2</sup>, approximately.

REMARKS.--Total capacity is 294,000,000 ft<sup>3</sup>. Dam was completed February 1923 and raised to present level 1959-60.

Reservoir first filled to present level on Oct. 8, 1960. Lake is part of Greensboro's municipal water supply. (See station 02094500.)

**02094305 LAKE TOWNSEND**

LOCATION.--Lat 36°11'25", long 79°43'57", Guilford County, Hydrologic Unit 03030002, on Reedy Fork near Greensboro.

DRAINAGE AREA.--105 mi<sup>2</sup>.

REMARKS.--Lake is part of Greensboro's municipal water supply. Total capacity is 869,000,000 ft<sup>3</sup>. Dam was completed Oct. 18, 1968, and reservoir was first filled on Aug. 17, 1969. (See station 02094500.)

**02096003 LAKE BURLINGTON**

LOCATION.--Lat 36°10'25", long 79°24'53", Alamance County, Hydrologic Unit 03030002, on Stony Creek near Burlington.

DRAINAGE AREA.--44 mi<sup>2</sup>, approximately.

REMARKS.--Lake is part of Burlington's municipal water supply. Prior to October 1971 published as "Stony Creek Reservoir." Total capacity is 427,800,000 ft<sup>3</sup>. Dam completed August 1960 and reservoir first filled Jan. 28, 1961. (See station 02096500.)

## Lakes and Reservoirs in South Atlantic Slope Basin--Continued

**02096432 STONY CREEK RESERVOIR**

LOCATION.--Lat 36°07'37", long 79°24'20", Alamance County, Hydrologic Unit 03030002, on Stony Creek near Burlington.

DRAINAGE AREA.--95.0 mi<sup>2</sup>, approximately.

REMARKS.--Lake is part of Burlington's water supply. Prior to October 1971 published as "Lake Burlington." Total capacity is 64,900,000 ft<sup>3</sup>. Dam completed and reservoir filled in 1928. (See station 02096500.)

**02098495 OAK HOLLOW RESERVOIR**

LOCATION.--Lat 36°00'42", long 79°59'11", Guilford County, Hydrologic Unit 03030003, on West Fork Deep River and 1.8 mi southwest of Deep River.

DRAINAGE AREA.--32 mi<sup>2</sup>, approximately.

REMARKS.--Lake is part of High Point's municipal water supply. Total capacity is 468,000,000 ft<sup>3</sup>. Dead storage (nonwithdrawal) is minor. Total surface area, about 725 acres. Dam completed and filling began in May 1970. Reservoir first filled Dec. 24, 1970. (See station 02099500.)

**02099096 HIGH POINT MUNICIPAL LAKE**

LOCATION.--Lat 35°59'43", long 79°56'42", Guilford County, Hydrologic Unit 03030003, on Deep River near High Point, High Point's municipal water supply.

DRAINAGE AREA.--61.4 mi<sup>2</sup>.

REMARKS.--Total capacity is 220,588,000 ft<sup>3</sup>. Dam completed in 1926 and reservoir first filled in 1927. (See station 02099500)

**02102178 BUCKHORN RESERVOIR**

LOCATION.--Lat 35°31'35", long 78°59'22", Chatham County, Hydrologic Unit 03030004, on Cape Fear River near Corinth.

DRAINAGE AREA.--3,200 mi<sup>2</sup>, approximately.

REMARKS.-- Usable capacity is 69,700,000 ft<sup>3</sup>. Completed and filled in 1908. Hydroelectric power operation stopped Dec. 31, 1962.

**02102190 SHEARON HARRIS MAIN RESERVOIR**

LOCATION.--Lat 35°34'00", long 78°57'55", Chatham County, Hydrologic Unit 03030004, on Buckhorn Creek near Corinth.

DRAINAGE AREA.--71 mi<sup>2</sup>.

REMARKS.--Lake is a cooling-water reservoir for Carolina Power and Light Co. powerplant. Total capacity is 3,136,320,000 ft<sup>3</sup> with a surface area of 4,150 acres at a normal elevation of 220 ft above sea level. Dam was completed Dec. 23, 1981, and filling began Dec. 1, 1980. (See station 02102192.)

**02121461 LEXINGTON-THOMASVILLE RESERVOIR**

LOCATION.--Lat 35°51'54", long 80°11'41", Davidson County, Hydrologic Unit 03050103, on Abbotts Creek near Lexington.

DRAINAGE AREA.--70.3 mi<sup>2</sup>.

REMARKS.--Total capacity is 284,100,000 ft<sup>3</sup> of which 281,400,000 ft<sup>3</sup> is usable. Dam completed Aug. 8, 1957, and reservoir first filled Nov. 23, 1957. Lexington and Thomasville's municipal water supply.

**02184122 LAKE TOXAWAY**

LOCATION.--Lat 35°07'27", long 82°55'56", Transylvania County, Hydrologic Unit 03060101, on Toxaway River at town of Lake Toxaway.

DRAINAGE AREA.--7.79 mi<sup>2</sup>.

REMARKS.--A recreation lake. Total surface area is about 640 acres. Lake reached spillway elevation September 1961.

## SOUTH ATLANTIC SLOPE BASIN

## Lakes and Reservoirs in South Atlantic Slope Basin--Continued

## MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
02067800 & 02067820 Talbot & Townes Reservoir				02077280 Hyc0 Lake		
Sept. 30.....		206	-	8.33	3,019	-
Oct. 31.....		186	-20	8.18	2,994	-25
Nov. 30.....		162	-24	9.43	3,200	+206
Dec. 31.....		154	-8	10.57	3,381	+181
CAL YR 1997			-52		-	+6
Jan. 31.....		265	+111	10.91	3,434	+53
Feb. 28.....		336	+71	10.65	3,394	-40
Mar. 31.....		308	-28	-	-	-
Apr. 30.....		297	-11	-	-	-
May 31.....		339	+42	-	-	-
June 30.....		321	-18	10.21	3,326	-
July 31.....		275	-46	9.79	3,258	-68
Aug. 31.....		261	-14	9.52	3,215	-43
Sept. 30.....		221	-40	8.94	3,120	-95
WTR YR 1998		-	+15		-	+101
Date	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
02079964 Lake Gaston				02080100 Roanoke Rapids Lake		
Sept. 30.....	199.66	19,306	-	130.3	3,026	-
Oct. 31.....	199.42	19,096	-210	130.1	2,990	-36
Nov. 30.....	199.51	19,175	+79	129.2	2,826	-164
Dec. 31.....	199.84	19,462	+287	129.9	2,953	+127
CAL YR 1997		-	+427		-	-55
Jan. 31.....	199.54	19,201	-261	131.6	3,274	+321
Feb. 28.....	200.83	20,325	+1,124	130.9	3,142	-132
Mar. 31.....	200.69	20,203	-122	132.1	3,382	+240
Apr. 30.....	199.17	18,879	-1,324	129.6	2,898	-484
May 31.....	199.43	19,105	+226	131.5	3,252	+354
June 30.....	199.41	19,088	-17	129.8	2,935	-317
July 31.....	199.78	19,411	+323	130.0	2,972	+37
Aug. 31.....	199.53	19,192	-219	130.1	2,990	+18
Sept. 30.....	199.57	19,228	+36	131.4	3,234	+244
WTR YR 1998		-	-78		-	+208

## SOUTH ATLANTIC SLOPE BASIN

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## Lakes and Reservoirs in South Atlantic Slope Basin--Continued

## MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
02087182 Falls Lake			02098197 B. Everett Jordan Lake			
Sept. 30 .....	248.99	4,235	-	214.6	8,555	-
Oct. 31 .....	248.21	3,910	-325	214.0	8,216	-339
Nov. 30 .....	248.98	4,231	+321	216.2	9,497	+1,281
Dec. 31 .....	249.85	4,639	+408	217.9	10,578	+1,081
CAL YR 1997		-	-374		-	+1,019
Jan. 31 .....	258.02	9,570	+4,931	224.5	15,561	+4,983
Feb. 28 .....	256.94	8,816	-754	218.2	10,777	-4,784
Mar. 31 .....	257.83	9,437	+621	219.6	11,747	+970
Apr. 30 .....	250.81	5,120	-4,317	216.2	9,497	-2,250
May 31 .....	251.47	5,470	+350	216.4	9,622	+125
June 30 .....	250.85	5,140	-330	216.1	9,434	-188
July 31 .....	249.97	4,696	-444	214.9	8,724	-710
Aug. 31 .....	249.09	4,281	-415	213.7	8,052	-672
Sept. 30 .....	248.40	3,989	-292	213.2	7,780	-272
WTR YR 1998		-	-246		-	-775
Date	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
02111391 W. Kerr Scott Reservoir			02122400 High Rock Lake			
Sept. 30 .....	1,030.17	1,807.17	-	649.2	7,669	-
Oct. 31 .....	1,030.03	1,792.77	-14	647.6	6,866	-803
Nov. 30 .....	1,030.18	1,805.47	+13	644.1	5,292	-1,574
Dec. 31 .....	1,029.90	1,785.90	-20	646.2	6,203	+911
CAL YR 1997		-	-13		-	+1,776
Jan. 31 .....	1,030.95	1,870.69	+85	654.8	10,947	+4,744
Feb. 28 .....	1,030.23	1,809.71	-61	652.1	9,275	-1,672
Mar. 31 .....	1,030.30	1,815.64	+6	648.6	7,363	-1,912
Apr. 30 .....	1,030.26	1,812.25	-3	653.7	10,243	+2,880
May 31 .....	1,030.29	1,814.79	+3	654.1	10,490	+247
June 30 .....	1,030.11	1,799.55	-15	652.8	9,698	-792
July 31 .....	1,030.34	1,819.03	+19	651.9	9,155	-543
Aug. 31 .....	1,029.78	1,780.69	-38	651.3	8,813	-342
Sept. 30 .....	1,028.58	1,722.53	-58	648.9	7,514	-1,299
WTR YR 1998		-	-83		-	-155

## SOUTH ATLANTIC SLOPE BASIN

## Lakes and Reservoirs in South Atlantic Slope Basin--Continued

## MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
02122699 Tuckertown Reservoir			02122844 Badin Lake			
Sept. 30 .....	595.32	1,782	-	539.5	10,124	-
Oct. 31 .....	594.81	1,729	-53	539.9	10,217	+93
Nov. 30 .....	594.77	1,725	-4	539.4	10,101	-116
Dec. 31 .....	595.26	1,776	+51	540.5	10,357	+256
CAL YR 1997		-	-2		-	+233
Jan. 31 .....	595.71	1,822	+46	541.1	10,498	+141
Feb. 28 .....	595.09	1,758	-64	541.0	10,474	-24
Mar. 31 .....	595.11	1,760	+2	540.6	10,381	-93
Apr. 30 .....	595.04	1,753	-7	540.5	10,357	-24
May 31 .....	595.00	1,749	-4	539.9	10,217	-140
June 30 .....	594.56	1,705	-44	539.5	10,124	-93
July 31 .....	594.68	1,717	+12	540.0	10,241	+117
Aug. 31 .....	594.30	1,693	-24	538.8	9,961	-280
Sept. 30 .....	594.38	1,688	-5	538.7	9,937	-24
WTR YR 1998		-	-94		-	-187
Date	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
02123736 Lake Tillery			02128800 Blewett Falls Lake			
Sept. 30 .....	277.6	5,794	-	172.4	1,270	-
Oct. 31 .....	277.6	5,794	0	173.0	1,330	+60
Nov. 30 .....	278.0	5,881	+87	177.0	1,734	+404
Dec. 31 .....	278.0	5,581	0	178.8	1,920	+186
CAL YR 1997		-	+22		-	+400
Jan. 31 .....	277.8	5,837	-44	177.0	1,734	-186
Feb. 28 .....	277.2	5,708	-129	175.9	1,620	-114
Mar. 31 .....	277.4	5,750	+42	175.2	1,550	-70
Apr. 30 .....	277.2	5,708	-42	173.2	1,350	-200
May 31 .....	278.0	5,881	+173	177.2	1,756	+406
June 30 .....	277.9	5,859	-22	176.3	1,661	-95
July 31 .....	277.7	5,815	-44	176.5	1,682	+21
Aug. 31 .....	278.0	5,881	+66	176.2	1,650	-32
Sept. 30 .....	278.0	5,881	0	176.3	1,661	+11
WTR YR 1998		-	+87		-	+391



## SOUTH ATLANTIC SLOPE BASIN

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## Lakes and Reservoirs in South Atlantic Slope Basin--Continued

## MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
02138519 Lake James			02141490 Rhodhiss Lake			
Sept. 30 .....	96.0	11,487	-	97.7	1,381	-
Oct. 31 .....	96.6	11,647	+160	96.6	1,230	-151
Nov. 30 .....	95.3	11,303	-344	97.4	1,339	+109
Dec. 31 .....	95.4	11,329	+26	97.3	1,325	-14
CAL YR 1997		-	+131		-	+68
Jan. 31 .....	97.3	11,835	+506	97.0	1,284	-41
Feb. 28 .....	98.2	12,080	+245	97.3	1,325	+41
Mar. 31 .....	97.5	11,889	-191	97.2	1,311	-14
Apr. 30 .....	98.4	12,135	+246	97.0	1,284	-27
May 31 .....	98.4	12,135	0	98.4	1,480	+196
June 30 .....	97.8	11,971	-164	96.8	1,257	-223
July 31 .....	97.4	11,862	-109	97.4	1,339	+82
Aug. 31 .....	95.9	11,460	-402	97.0	1,284	-55
Sept. 30 .....	94.8	11,173	-287	96.9	1,270	-14
WTR YR 1998		-	-314		-	-111
Date	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
02141961 Lake Hickory			02142441 Lookout Shoals Lake			
Sept. 30 .....	97.2	1,791	-	98.0	121	-
Oct. 31 .....	96.8	1,724	-67	97.2	88	-33
Nov. 30 .....	96.9	1,741	+17	97.6	105	+17
Dec. 31 .....	96.9	1,941	+200	96.7	67	-38
CAL YR 1997		-	+217		-	-25
Jan. 31 .....	98.4	1,996	+55	100.2	217	+150
Feb. 28 .....	97.2	1,791	-205	97.9	117	-100
Mar. 31 .....	97.1	1,775	-16	97.7	109	-8
Apr. 30 .....	97.8	1,893	+118	98.4	138	+29
May 31 .....	98.4	1,996	+103	98.3	138	0
June 30 .....	97.5	1,842	-154	97.4	94	-44
July 31 .....	97.4	1,825	-17	98.1	121	+27
Aug. 31 .....	97.1	1,775	-50	96.5	59	-62
Sept. 30 .....	97.0	1,758	-17	97.1	84	+25
WTR YR 1998		-	-33		-	-37

## SOUTH ATLANTIC SLOPE BASIN

## Lakes and Reservoirs in South Atlantic Slope Basin--Continued

## MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Gage Height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
02142647 Lake Norman			02142676 Mountain Island Lake			
Sept. 30 .....	97.0	43,470	-	98.1	588	-
Oct. 31 .....	97.2	43,740	+270	96.6	402	-186
Nov. 30 .....	96.1	42,290	-1,450	96.7	414	+12
Dec. 31 .....	95.7	41,780	-510	96.5	390	-24
CAL YR 1997		-	-1,690		-	+12
Jan. 31 .....	99.1	46,330	+4,550	98.1	588	+198
Feb. 28 .....	98.1	44,960	-1,370	97.5	512	-76
Mar. 31 .....	97.5	44,140	-820	97.2	475	-37
Apr. 30 .....	98.7	45,780	+1,640	97.4	500	+25
May 31 .....	98.4	45,370	-410	97.6	525	+25
June 30 .....	97.9	44,680	-690	97.5	512	-13
July 31 .....	97.4	44,010	-670	97.7	538	+26
Aug. 31 .....	96.0	42,160	-1,850	96.9	438	-100
Sept. 30 .....	95.5	41,520	-640	96.1	342	-96
WTR YR 1998		-	-1,950		-	-246





## KANAWHA RIVER BASIN

03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, NC

LOCATION.--Lat 36°23'35", long 81°24'26", Ashe County, Hydrologic Unit 05050001, on right bank 600 ft upstream from bridge on State Highways 16 and 88, 0.2 mi downstream of Bear Creek, and 4 mi southeast of Jefferson.

DRAINAGE AREA.--205 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1925-26(M), 1928-30(M), 1931-32, 1933-35(M), 1941-42(m), 1944(m). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,657.04 ft above sea level. Prior to Oct. 14, 1934, nonrecording gage on bridge 400 ft downstream at same datum. Oct. 14, 1934, to Mar. 25, 1935, nonrecording gage at present site and datum. U.S. Army Corps of Engineers satellite telemetry at station.

REMARKS.--Records good except those during periods of ice effect, which are poor. Maximum discharge for period of record, from rating curve extended above 14,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record result of freezeup. Minimum discharge for current water year result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 15, 1916, reached a stage of 18.0 ft, from floodmarks witnessed by local resident; discharge, 35,200 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215	216	197	e264	425	776	637	785	449	588	371	190
2	190	325	211	e268	408	740	637	879	431	432	270	189
3	185	349	193	e268	526	701	571	755	477	366	232	185
4	181	253	206	e268	2840	662	651	1140	616	340	217	187
5	175	226	219	e268	2030	631	677	1060	1130	328	213	187
6	170	212	e210	340	1130	605	578	870	645	331	207	176
7	166	206	e213	661	890	581	548	853	533	315	203	174
8	166	207	e213	6480	768	938	524	1370	486	310	201	176
9	162	201	e216	1910	734	1850	740	1340	461	320	246	231
10	162	193	215	942	709	1440	742	1230	785	305	281	192
11	164	190	217	681	727	1010	667	1270	846	281	300	174
12	161	186	205	567	1070	858	622	1040	616	276	231	170
13	162	191	188	524	892	767	576	905	543	275	210	164
14	162	218	181	469	771	722	560	820	546	267	364	159
15	166	221	e179	598	698	679	557	763	500	268	597	156
16	160	200	e176	929	816	645	541	716	472	261	665	154
17	159	188	e176	636	3570	639	1710	678	447	258	448	154
18	162	182	e173	533	3110	658	1270	637	416	247	359	150
19	223	181	e170	479	1650	970	2120	607	400	238	290	149
20	299	181	169	460	1290	1960	3100	577	399	229	260	156
21	205	179	164	413	1110	2380	1470	625	378	229	242	165
22	179	209	208	397	963	1220	1160	569	379	259	234	219
23	173	219	264	674	1150	982	1010	577	577	225	227	195
24	170	194	244	688	1170	862	893	630	464	232	234	162
25	200	182	402	585	934	786	813	543	395	287	284	157
26	269	180	326	501	840	745	752	530	374	306	251	157
27	471	177	293	494	807	714	715	536	353	317	217	154
28	291	175	333	526	811	679	735	532	339	303	206	149
29	228	171	280	487	---	653	668	479	330	250	199	146
30	209	179	e261	461	---	623	653	472	356	231	199	159
31	198	---	e261	451	---	597	---	487	---	251	196	---
TOTAL	6183	6191	6963	23222	32839	28073	26897	24275	15143	9125	8654	5136
MEAN	199	206	225	749	1173	906	897	783	505	294	279	171
MAX	471	349	402	6480	3570	2380	3100	1370	1130	588	665	231
MIN	159	171	164	264	408	581	524	472	330	225	196	146
CFSM	.97	1.01	1.10	3.65	5.72	4.42	4.37	3.82	2.46	1.44	1.36	.84
IN.	1.12	1.12	1.26	4.21	5.96	5.09	4.88	4.41	2.75	1.66	1.57	.93

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1998, BY WATER YEAR (WY)

	MEAN	364	409	411	478	525	596	570	465	395	334	358	328
MAX	901	1889	797	1346	1173	1316	1350	1052	1036	904	2613	1212	
(WY)	1991	1978	1958	1995	1998	1979	1983	1992	1941	1940	1979		
MIN	117	124	146	140	197	222	236	220	158	111	93.7	99.5	
(WY)	1955	1932	1934	1940	1934	1988	1986	1941	1988	1930	1925	1954	

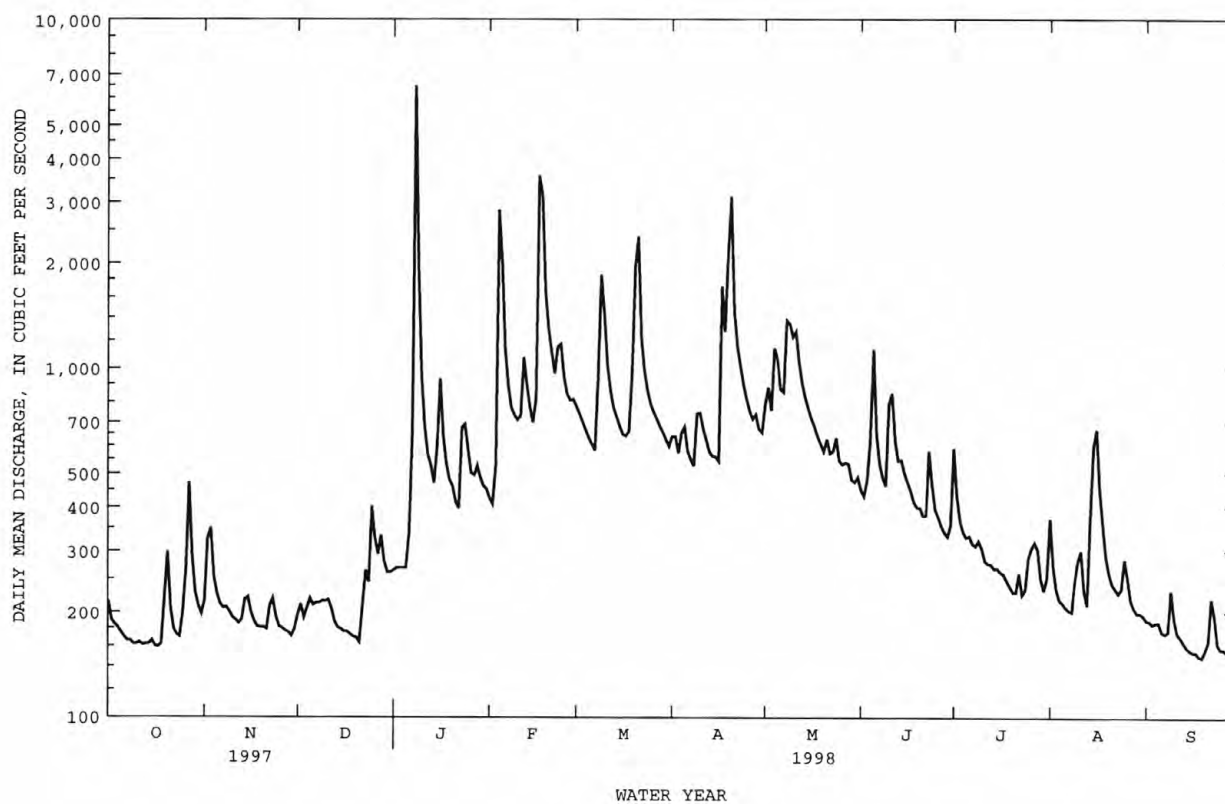
## KANAWHA RIVER BASIN

03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1925 - 1998	
ANNUAL TOTAL	139352		192701		435	
ANNUAL MEAN	382		528		669	
HIGHEST ANNUAL MEAN					233	
LOWEST ANNUAL MEAN					1949	
HIGHEST DAILY MEAN	2390	Mar 14	6480	Jan 8	27700	Aug 14 1940
LOWEST DAILY MEAN	147	Sep 8	146	Sep 29	65	Sep 9 1925
ANNUAL SEVEN-DAY MINIMUM	160	Sep 17	154	Sep 14	72	Aug 21 1925
INSTANTANEOUS PEAK FLOW			8410	Jan 8	52800*	Aug 14 1940
INSTANTANEOUS PEAK STAGE			9.03	Jan 8	22.50	Aug 14 1940
INSTANTANEOUS LOW FLOW			112*	Dec 8	52*	Dec 24 1943
ANNUAL RUNOFF (CFSM)	1.86		2.58		2.12	
ANNUAL RUNOFF (INCHES)	25.29		34.97		28.85	
10 PERCENT EXCEEDS	597		966		718	
50 PERCENT EXCEEDS	349		356		351	
90 PERCENT EXCEEDS	175		173		173	

e Estimated.

\* See REMARKS.



## TENNESSEE RIVER BASIN

03439000 FRENCH BROAD RIVER AT ROSMAN, NC

LOCATION.--Lat 35°08'32", long 82°49'28", Transylvania County, Hydrologic Unit 06010105, on left bank 50 ft upstream from bridge on U.S. Highway 178 at Rosman, 1.0 mi upstream from East Fork, and at mile 216.4.

DRAINAGE AREA.--67.9 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1907 to June 1909, October 1935 to current year. Monthly discharge only for some periods published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1908(M). WSP 1910: 1936(M), 1938(M), 1939-40, 1942-43.

GAGE.--Water-stage recorder. Datum of gage is 2,173.83 ft above sea level. Prior to June 30, 1909, nonrecording gage at site 500 ft downstream at different datum. Jan. 1, 1936, to July 6, 1937, nonrecording gage at present site and datum. Satellite telemetry at station. National Weather Service telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record result of freezeup. Minimum daily discharge occurred several days in Sept. and Oct. 1954. Minimum discharge for current water year also occurred Sept. 11, 12.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 13.9 ft, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	129	104	129	352	425	380	490	170	118	87	56
2	89	163	96	129	340	400	334	436	212	116	84	56
3	86	134	103	126	943	380	396	402	171	114	82	57
4	83	123	145	126	1300	363	393	379	187	112	79	60
5	81	116	113	154	797	350	353	351	255	114	77	56
6	79	116	105	272	617	341	336	329	184	110	76	58
7	77	117	100	3180	536	347	323	340	168	109	75	66
8	77	110	99	3150	483	958	314	332	161	109	97	58
9	76	105	109	989	445	1310	499	309	186	110	95	58
10	75	103	142	662	413	685	359	323	209	105	88	54
11	77	101	129	528	442	546	333	325	188	101	78	54
12	76	102	117	449	419	479	316	291	167	105	80	55
13	76	125	111	397	385	438	304	275	159	163	86	56
14	78	136	107	360	363	411	307	263	155	105	147	58
15	76	117	103	651	346	386	290	251	161	101	97	60
16	74	109	100	757	926	374	294	238	150	97	115	60
17	75	104	98	607	1320	371	721	229	147	125	94	60
18	75	103	96	488	874	494	445	218	145	111	83	59
19	121	101	95	449	659	578	925	210	150	100	83	77
20	83	98	94	398	570	710	711	202	149	128	82	62
21	77	102	93	365	509	594	536	196	142	150	73	172
22	76	115	151	584	476	505	586	192	143	109	71	95
23	74	101	119	885	623	458	572	189	141	102	68	73
24	120	97	217	580	499	428	506	186	140	101	67	69
25	128	95	210	481	456	400	453	183	138	137	65	67
26	721	94	160	429	428	382	418	178	142	119	64	66
27	363	94	211	501	547	369	396	175	141	98	62	64
28	181	93	170	471	463	357	373	193	131	95	61	65
29	153	92	157	423	---	345	357	206	125	92	61	70
30	137	109	147	400	---	335	487	185	121	98	59	80
31	125	---	140	373	---	331	---	173	---	89	59	---
TOTAL	3781	3304	3941	19493	16531	14850	13017	8249	4838	3443	2495	2001
MEAN	122	110	127	629	590	479	434	266	161	111	80.5	66.7
MAX	721	163	217	3180	1320	1310	925	490	255	163	147	172
MIN	74	92	93	126	340	331	290	173	121	89	59	54
CFSM	1.80	1.62	1.87	9.26	8.70	7.05	6.39	3.92	2.38	1.64	1.19	.98
IN.	2.07	1.81	2.16	10.68	9.06	8.14	7.13	4.52	2.65	1.89	1.37	1.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 1998<sup>9</sup>, BY WATER YEAR (WY)

MEAN	179	205	248	288	324	343	328	266	222	177	189	165
MAX	734	635	489	672	648	787	582	551	882	624	543	447
(WY)	1965	1993	1993	1937	1939	1979	1983	1909	1909	1989	1994	1950
MIN	42.2	56.7	72.6	72.0	130	135	108	114	79.8	75.8	65.3	43.6
(WY)	1955	1955	1940	1981	1963	1988	1986	1941	1988	1986	1954	1954

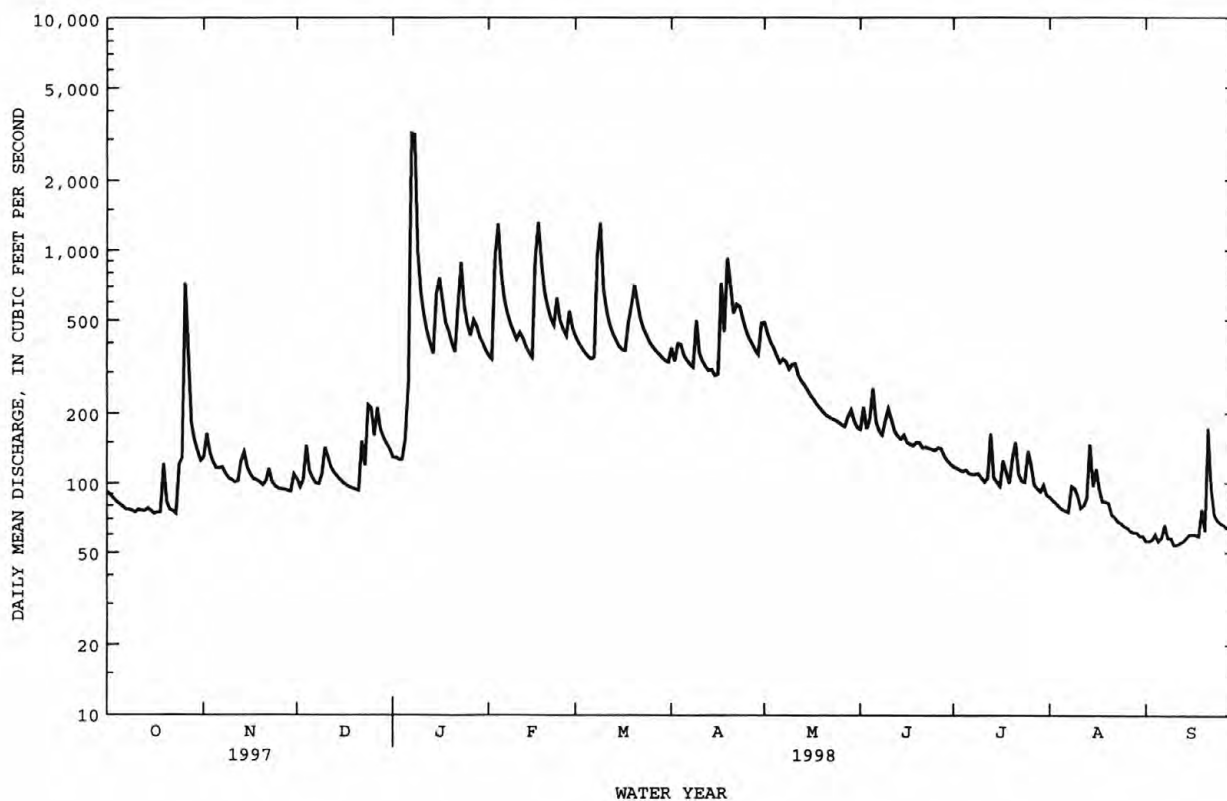
## TENNESSEE RIVER BASIN

03439000 FRENCH BROAD RIVER AT ROSMAN, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1908 - 1998 <sup>a</sup>	
ANNUAL TOTAL	85429		95943		242	
ANNUAL MEAN	234		263		370	
HIGHEST ANNUAL MEAN					136	
LOWEST ANNUAL MEAN					5630	
HIGHEST DAILY MEAN	2180	Mar 14	3180	Jan 7	37*	Oct 4 1964
LOWEST DAILY MEAN	72	Sep 20	54	Sep 10	38	Sep 25 1954
ANNUAL SEVEN-DAY MINIMUM	73	Sep 17	56	Sep 8	13500	Sep 23 1954
INSTANTANEOUS PEAK FLOW			7930	Jan 7	14.95	Oct 4 1964
INSTANTANEOUS PEAK STAGE			12.12	Jan 7	23*	Oct 4 1964
INSTANTANEOUS LOW FLOW			52*	Sep 10	3.57	Jan 3 1940
ANNUAL RUNOFF (CFSM)	3.45		3.87		48.50	
ANNUAL RUNOFF (INCHES)	46.80		52.56		426	
10 PERCENT EXCEEDS	413		531		194	
50 PERCENT EXCEEDS	195		147		89	
90 PERCENT EXCEEDS	83		73			

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.



## TENNESSEE RIVER BASIN

03440000 CATHEYS CREEK NEAR BREVARD, NC

LOCATION.--Lat 35°12'40", long 82°47'00", Transylvania County, Hydrologic Unit 06010105, on right bank 1,200 ft downstream of Kuykendall Creek, 1.0 mi upstream from U.S. Highway 64, 2.1 mi upstream from mouth, and 3.2 mi southwest of Brevard.

DRAINAGE AREA.--11.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1944 to September 1955, November 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,230 ft above sea level, from topographic map. Prior to Oct. 2, 1946, at site 0.9 mi downstream at different datum. October 2, 1946, to Jan. 9, 1947, at site 0.8 mi downstream of present gage at different datum. Jan. 10, 1947, to Oct. 3, 1951, at present site at different datum. Oct. 3, 1951, to Sept. 30, 1955, at site 40 ft downstream at different datum. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum discharge for period of record from rating curve extended above 600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. City of Brevard diverted about 1.8 ft<sup>3</sup>/s from Catheys Creek for municipal water supply. Minimum discharge for current water year also occurred Sept. 17, 18, 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	20	16	20	51	61	61	88	34	e24	15	13
2	14	24	15	19	49	57	48	81	42	e23	15	13
3	14	19	18	19	158	54	61	75	34	21	14	12
4	14	18	20	19	216	51	58	69	40	22	14	11
5	13	17	16	21	130	49	52	65	47	22	13	10
6	13	18	16	28	99	47	48	61	37	21	13	12
7	13	17	15	449	87	49	46	66	33	21	13	12
8	13	17	16	435	78	134	46	68	e32	21	16	10
9	13	16	17	130	70	168	73	61	e36	21	15	9.6
10	13	16	22	87	64	97	54	65	e41	20	15	9.2
11	13	16	19	69	69	80	50	63	e37	19	13	8.8
12	13	16	17	58	63	71	47	58	e33	19	13	8.9
13	13	19	17	51	57	66	46	55	30	25	16	8.4
14	13	21	17	47	54	63	47	53	30	19	32	8.2
15	13	18	16	96	51	59	45	51	32	19	16	8.1
16	12	17	15	99	140	57	49	50	29	18	16	7.9
17	13	16	15	81	193	56	119	49	27	19	14	7.9
18	13	16	15	66	128	75	75	47	27	18	16	7.7
19	19	16	15	61	98	81	155	46	32	17	15	8.7
20	14	16	15	53	85	84	122	44	28	27	14	8.1
21	13	16	15	49	76	74	94	43	27	23	13	28
22	13	17	25	79	72	65	110	42	28	18	13	12
23	12	16	19	111	90	60	102	41	26	18	12	10
24	23	15	36	79	73	57	88	40	27	18	12	9.7
25	18	15	31	65	66	53	79	39	26	18	12	9.1
26	108	15	24	58	62	52	75	38	25	18	11	9.2
27	45	15	37	76	78	50	72	38	24	17	11	8.6
28	25	15	29	71	67	49	67	37	24	17	11	8.9
29	20	15	25	64	---	47	63	41	23	16	11	9.5
30	19	17	23	60	---	46	89	37	23	16	11	11
31	18	---	21	55	---	46	---	35	---	16	10	---
TOTAL	584	509	617	2675	2524	2058	2141	1646	934	611	435	310.5
MEAN	18.8	17.0	19.9	86.3	90.1	66.4	71.4	53.1	31.1	19.7	14.0	10.4
MAX	108	24	37	449	216	168	155	88	47	27	32	28
MIN	12	15	15	19	49	46	45	35	23	16	10	7.7
CFSM	1.61	1.45	1.70	7.38	7.70	5.67	6.10	4.54	2.66	1.68	1.20	.88
IN.	1.86	1.62	1.96	8.51	8.03	6.54	6.81	5.23	2.97	1.94	1.38	.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1998<sup>g</sup>, BY WATER YEAR (WY)[illegible]

## TENNESSEE RIVER BASIN

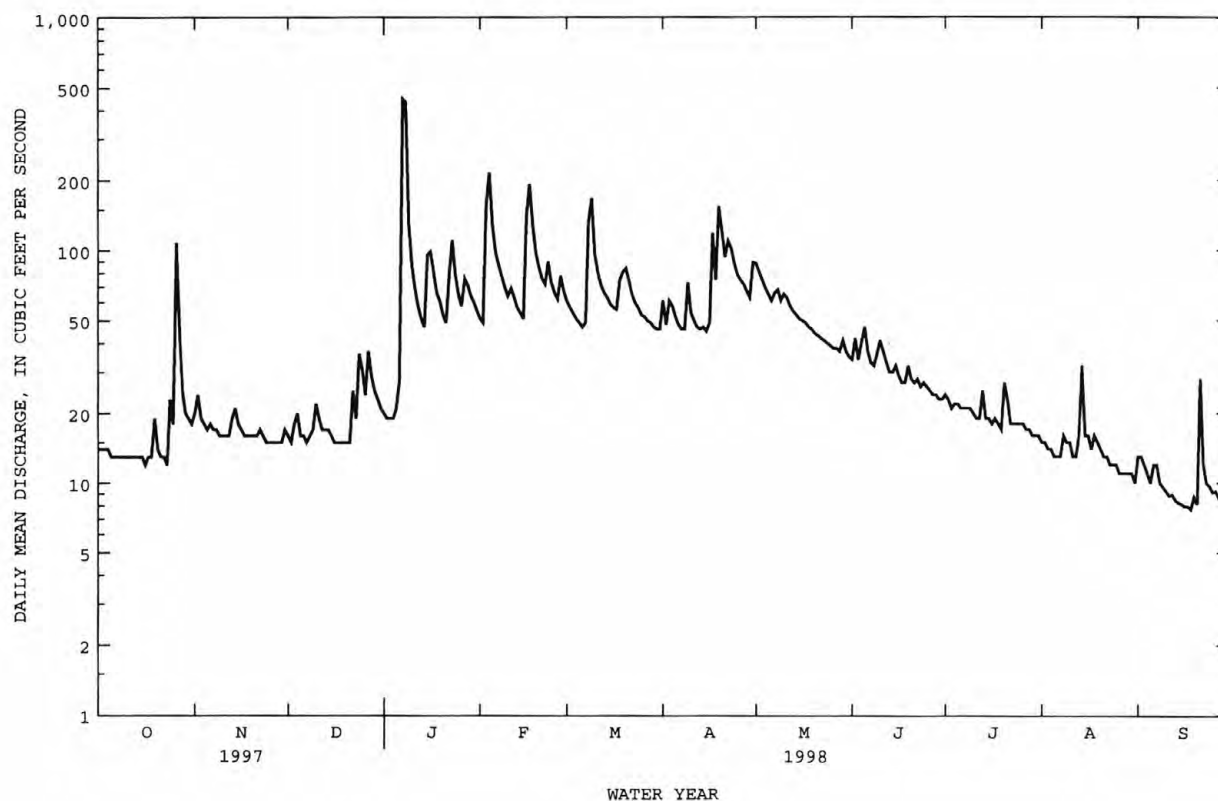
03440000 CATHEYS CREEK NEAR BREVARD, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1945 - 1998 <sup>a</sup>	
ANNUAL TOTAL	13817		15044.5		37.9	
ANNUAL MEAN	37.9		41.2		59.7	
HIGHEST ANNUAL MEAN					18.3	
LOWEST ANNUAL MEAN					814	
HIGHEST DAILY MEAN	210	Mar 14	449	Jan 7	6.6	Aug 17 1994
LOWEST DAILY MEAN	12	Oct 16	7.7	Sep 18	6.6	Sep 28 1954
ANNUAL SEVEN-DAY MINIMUM	13	Oct 10	8.1	Sep 14	6.6	Oct 20 1954
INSTANTANEOUS PEAK FLOW			1880	Jan 7	2410*	Aug 17 1994
INSTANTANEOUS PEAK STAGE			6.33	Jan 7	7.28	Aug 17 1994
INSTANTANEOUS LOW FLOW			4.3*	Sep 16	3.6	Sep 28 1988
ANNUAL RUNOFF (CFPM)	3.24		3.52		3.24	
ANNUAL RUNOFF (INCHES)	43.93		47.83		43.96	
10 PERCENT EXCEEDS	66		79		65	
50 PERCENT EXCEEDS	33		25		31	
90 PERCENT EXCEEDS	14		12		13	

e Estimated.

a See PERIOD OF RECORD.

\* See REMARKS.





## TENNESSEE RIVER BASIN

03441000 DAVIDSON RIVER NEAR BREVARD, NC

LOCATION.--Lat 35°16'23", long 83°42'21", Transylvania County, Hydrologic Unit 06010105, on right bank 150 ft upstream of bridge on State Highway 280, 2.1 mi downstream of Avery Creek, 3.3 mi northeast of Brevard, and at mile 2.2.

DRAINAGE AREA.--40.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1920 to September 1990. October 1993 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage Area. WSP 1336: 1921, 1922 (M), 1923, 1924-25(M), 1926, 1927(M), 1929-32(M).

GAGE.--Water-stage recorder. Datum of gage is 2,115.13 ft above sea level (levels by Tennessee Valley Authority). Prior to May 17, 1934, nonrecording gage at site 50 ft downstream at same datum. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for current water year also occurred Sept. 17, 18, 19, 21.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, 11.9 ft June 1876 (from studies by Tennessee Valley Authority).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	77	63	82	182	226	203	291	93	49	34	27
2	44	109	55	80	175	210	162	252	112	49	32	36
3	43	80	59	76	590	196	209	231	89	48	31	29
4	42	72	100	75	908	185	215	221	106	48	29	29
5	39	67	69	91	526	177	181	199	139	51	29	26
6	38	66	62	150	386	171	167	187	104	46	29	28
7	37	66	58	1600	324	175	158	196	89	46	29	40
8	37	61	58	1750	287	515	153	190	84	48	38	28
9	36	59	66	590	261	741	210	173	98	47	35	26
10	36	57	100	374	238	387	164	195	108	44	35	24
11	36	56	84	289	262	307	153	207	99	41	32	24
12	36	56	74	240	247	268	147	176	84	42	31	23
13	36	75	69	209	221	244	141	165	78	52	37	23
14	36	91	65	185	203	229	144	158	74	44	86	22
15	35	72	61	408	189	212	136	149	78	42	48	22
16	33	65	59	427	526	203	138	144	70	40	47	22
17	34	61	57	339	926	196	386	138	68	42	45	21
18	34	59	56	269	561	281	238	131	66	39	36	21
19	85	57	54	247	401	338	622	126	71	39	36	21
20	41	56	53	213	337	366	458	122	69	40	37	22
21	37	58	53	192	295	301	324	118	64	40	33	126
22	36	67	105	278	273	255	413	115	64	42	31	41
23	35	57	75	437	346	229	392	112	69	39	30	28
24	59	54	153	298	280	212	319	110	61	38	29	26
25	70	52	156	246	253	196	277	106	58	38	28	25
26	508	52	111	217	235	185	250	103	56	40	27	24
27	265	51	155	292	289	177	234	102	55	38	26	23
28	125	50	122	269	247	171	216	99	52	38	25	22
29	96	50	107	233	---	164	201	98	51	36	26	26
30	81	62	95	217	---	158	292	98	51	34	28	30
31	72	---	87	197	---	155	---	92	---	34	28	---
TOTAL	2190	1915	2541	10570	9968	7830	7303	4804	2360	1314	1067	885
MEAN	70.6	63.8	82.0	341	356	253	243	155	78.7	42.4	34.4	29.5
MAX	508	109	156	1750	926	741	622	291	139	52	86	126
MIN	33	50	53	75	175	155	136	92	51	34	25	21
CFSM	1.75	1.58	2.03	8.44	8.81	6.25	6.03	3.84	1.95	1.05	.85	.73
IN.	2.02	1.76	2.34	9.73	9.18	7.21	6.72	4.42	2.17	1.21	.98	.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1998<sup>g</sup>, BY WATER YEAR (WY)

	MEAN	97.3	106	132	158	171	187	175	143	114	92.8	100	89.8
	MAX	379	362	323	374	363	466	349	293	254	285	404	297
	(WY)	1965	1980	1933	1937	1939	1929	1957	1923	1967	1989	1928	1928
	MIN	18.2	24.5	31.7	37.8	66.5	74.1	57.7	54.6	37.9	37.2	24.0	17.5
	(WY)	1955	1955	1940	1956	1941	1988	1986	1941	1988	1986	1925	1954

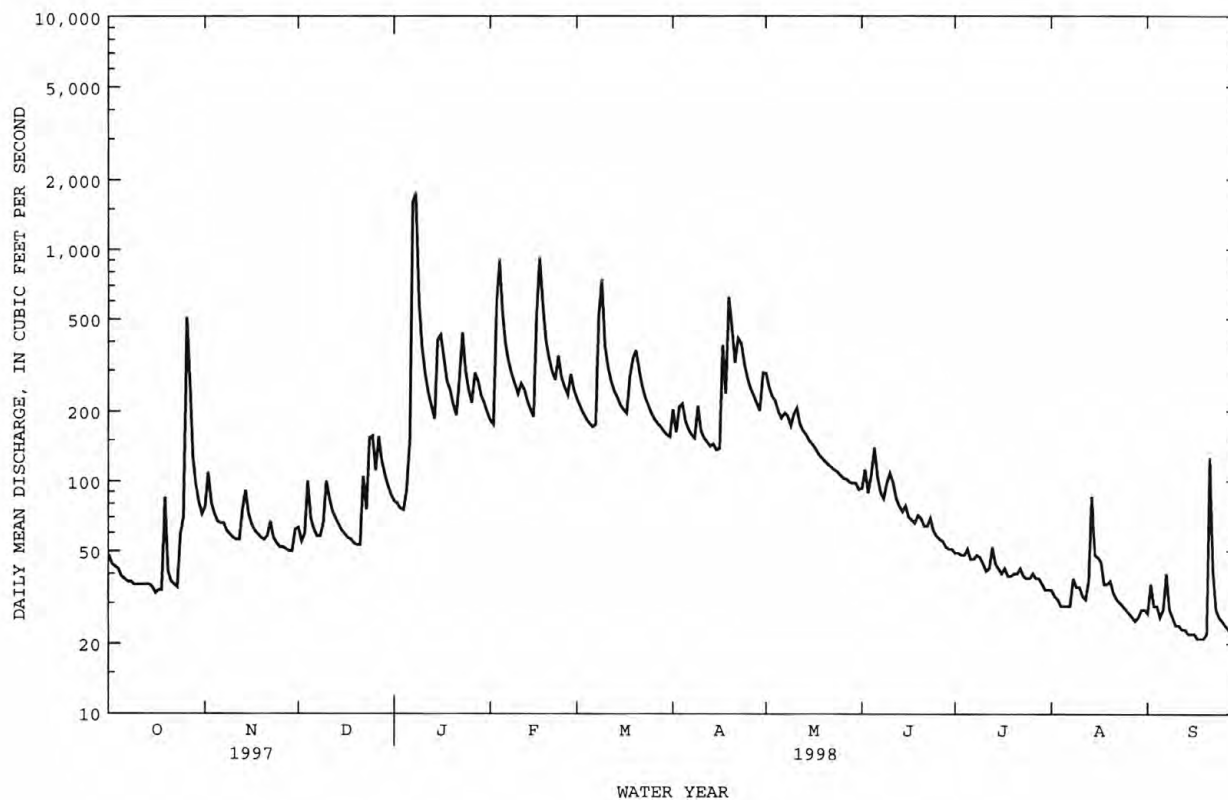
## TENNESSEE RIVER BASIN

03441000 DAVIDSON RIVER NEAR BREVARD, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1921 - 1998 <sup>a</sup>	
ANNUAL TOTAL	48729		52747		130	
ANNUAL MEAN	134		145		208	
HIGHEST ANNUAL MEAN					70.6	
LOWEST ANNUAL MEAN					1949	
HIGHEST DAILY MEAN	1050	Mar 14	1750	Jan 8	2940	Aug 17 1994
LOWEST DAILY MEAN	33	Oct 16	21	Sep 17	14	Sep 28 1954
ANNUAL SEVEN-DAY MINIMUM	35	Sep 17	22	Sep 14	15	Sep 25 1954
INSTANTANEOUS PEAK FLOW			4710	Jan 7	8400	Aug 15 1928
INSTANTANEOUS PEAK STAGE			8.44	Jan 7	12.08	Aug 17 1994
INSTANTANEOUS LOW FLOW			20*	Sep 15	13	Oct 11 1954
ANNUAL RUNOFF (CFSM)	3.30		3.58		3.23	
ANNUAL RUNOFF (INCHES)	44.87		48.57		43.83	
10 PERCENT EXCEEDS	252		293		232	
50 PERCENT EXCEEDS	108		80		101	
90 PERCENT EXCEEDS	42		29		43	

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.



## TENNESSEE RIVER BASIN

03443000 FRENCH BROAD RIVER AT BLANTYRE, NC

LOCATION.--Lat 35°17'56", long 82°37'26", Transylvania County, Hydrologic Unit 06010105, on left bank 40 ft upstream from bridge on Secondary Road 1503, 700 ft east of railroad at Blantyre, 3.5 mi downstream of Little River, and at mile 183.7.

DRAINAGE AREA.--296 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 923: 1921-23, 1929, 1933, 1935-36(M), 1938, 1940.

GAGE.--Water-stage recorder. Datum of gage is 2,060.32 ft above sea level (levels by Tennessee Valley Authority). Prior to July 5, 1930, nonrecording gage at same site and datum. National Weather Service has telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, and those above 2,600 ft<sup>3</sup>/s, which are fair. Considerable diurnal fluctuation at low flow caused by power plant about 8 mi upstream from station. Maximum gage height for period of record, 25.50 ft, from floodmarks.

EXTREMES OUTSIDE PERIOD OF RECORD.--Since at least 1791, maximum stage 27.1 ft, July 16, 1916, from floodmarks (from studies by Tennessee Valley Authority).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	482	689	544	681	e1700	1810	1370	2390	819	515	353	244
2	418	864	500	657	e1600	1690	1320	2140	935	503	335	280
3	401	790	491	647	e3300	1600	1350	1820	876	500	312	240
4	380	697	700	631	4990	1510	1670	1700	746	487	306	249
5	367	637	635	647	5400	1450	1420	1570	1140	538	298	238
6	346	608	550	846	4300	1410	1300	1470	1030	477	291	238
7	325	613	520	2790	3040	1390	1240	1480	852	465	282	255
8	346	577	504	11400	2360	3000	1200	1520	775	454	326	247
9	326	555	537	7810	2070	4260	2030	1390	780	465	380	223
10	322	541	655	4610	1880	4380	1550	1370	966	464	375	212
11	318	530	730	2880	1870	3310	1330	1500	976	422	366	205
12	314	520	628	2010	1950	2340	1240	1310	834	417	319	205
13	318	604	585	1650	1710	2020	1170	1230	768	638	310	199
14	311	705	560	1470	1600	1860	1170	1180	714	540	645	196
15	320	638	532	2340	1490	1740	1160	1140	727	452	560	185
16	303	581	518	3200	2790	1650	1120	1110	704	421	551	184
17	307	543	510	3120	4710	1590	2600	1070	694	409	464	184
18	304	535	496	2320	5020	1940	2290	1040	646	484	404	188
19	518	521	478	1900	4200	2670	2640	1010	660	435	396	187
20	478	511	471	1700	3060	2540	3720	988	721	446	412	203
21	347	503	464	1510	2380	2600	2970	964	631	606	357	366
22	330	601	652	1760	2110	2090	2560	938	643	476	316	495
23	319	578	726	3470	2630	1840	2700	916	716	448	300	270
24	349	521	814	3320	2370	1710	2360	889	595	425	284	231
25	706	500	1470	e2800	2030	1600	1990	861	660	404	273	225
26	2060	487	999	e2000	1860	1510	1800	832	604	546	262	213
27	3270	484	1060	e1800	2110	1460	1670	825	651	449	259	210
28	1460	467	1060	e2700	2060	1410	1600	864	580	406	247	203
29	937	465	883	e2600	---	1350	1500	939	556	388	251	199
30	777	486	800	e1900	---	1300	1760	971	544	366	245	267
31	697	---	735	e1800	---	1270	---	869	---	365	244	---
TOTAL	18456	17351	20807	78969	76590	62300	53800	38296	22543	14411	10723	7041
MEAN	595	578	671	2547	2735	2010	1793	1235	751	465	346	235
MAX	3270	864	1470	11400	5400	4380	3720	2390	1140	638	645	495
MIN	303	465	464	631	1490	1270	1120	825	544	365	244	184
CFSM	2.01	1.95	2.27	8.61	9.24	6.79	6.06	4.17	2.54	1.57	1.17	.79
IN.	2.32	2.18	2.61	9.92	9.63	7.83	6.76	4.81	2.83	1.81	1.35	.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1998, BY WATER YEAR (WY)

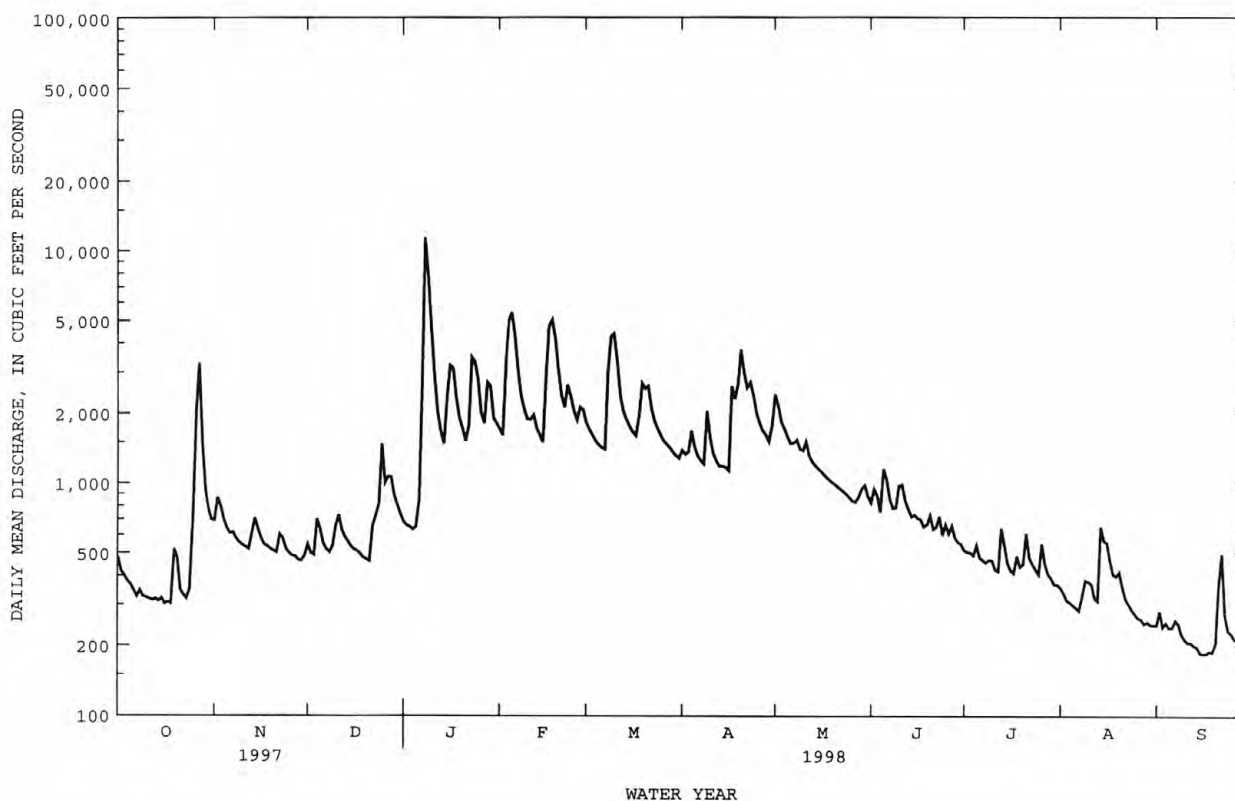
MEAN	774	848	1037	1223	1293	1412	1317	1075	887	733	785	694
MAX	3504	2486	2142	2783	2735	3169	2509	2339	1872	2214	2363	1828
(WY)	1965	1980	1962	1937	1998	1979	1936	1973	1989	1949	1994	1979
MIN	157	235	301	260	561	550	473	434	278	290	191	169
(WY)	1955	1955	1956	1956	1941	1988	1986	1988	1988	1925	1925	1954

## TENNESSEE RIVER BASIN

03443000 FRENCH BROAD RIVER AT BLANTYRE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1921 - 1998	
ANNUAL TOTAL	375774		421287		1005	
ANNUAL MEAN	1030		1154		1564	
HIGHEST ANNUAL MEAN					1949	
LOWEST ANNUAL MEAN					534	
HIGHEST DAILY MEAN	4550	Mar 15	11400	Jan 8	22700	Oct 5 1964
LOWEST DAILY MEAN	267	Sep 21	184	Sep 16	123	Oct 10 1954
ANNUAL SEVEN-DAY MINIMUM	279	Sep 16	189	Sep 13	133	Oct 8 1954
INSTANTANEOUS PEAK FLOW			19400	Jan 8	30000	Oct 5 1964
INSTANTANEOUS PEAK STAGE			22.61	Jan 8	25.50*	Oct 5 1964
INSTANTANEOUS LOW FLOW			179	Sep 18	119	Oct 1 1954
ANNUAL RUNOFF (CFSM)	3.48		3.90		3.40	
ANNUAL RUNOFF (INCHES)	47.23		52.95		46.13	
10 PERCENT EXCEEDS	1790		2550		1740	
50 PERCENT EXCEEDS	892		704		814	
90 PERCENT EXCEEDS	348		283		363	

e Estimated.  
 \* See REMARKS.



## TENNESSEE RIVER BASIN

03446000 MILLS RIVER NEAR MILLS RIVER, NC

LOCATION.--Lat 35°23'55", long 82°35'42", Henderson County, Hydrologic Unit 06010105, on right bank 1.5 mi downstream of confluence of North and South Forks, 1.8 mi northwest of Mills River, 4.2 mi northwest of Horseshoe, and at mile 4.6.

DRAINAGE AREA.--66.7 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1924 to September 1926, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 923: 1935, 1937, 1939. WSP 1003: 1938, 1940-42. WSP 1143: 1940(P). WSP 1276: 1926.

GAGE.--Water-stage recorder. Datum of gage is 2,088.47 ft above sea level (levels by Tennessee Valley Authority). Prior to Oct. 1, 1926, nonrecording gage at site 500 ft upstream at 2,091.44 ft. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. City of Hendersonville diverted about 6.7 ft<sup>3</sup>/s from North Fork and Bradley Creek for municipal water supply. Maximum discharge for period of record, from rating curve extended above 6,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record result of freezeup. Minimum discharge for current water year also occurred Sept. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	101	87	99	285	343	281	408	159	86	54	37
2	70	126	79	110	273	324	247	376	191	84	51	35
3	67	102	76	100	690	307	279	352	156	82	48	35
4	64	93	106	96	1230	292	303	344	177	81	47	36
5	59	89	86	101	791	279	266	317	229	82	46	34
6	57	87	79	133	588	272	250	300	182	78	45	32
7	56	88	75	1400	497	270	239	309	158	78	45	32
8	54	83	75	2710	440	572	233	308	146	78	51	34
9	54	80	78	819	402	838	298	281	149	79	50	33
10	53	78	95	532	370	559	249	311	172	73	54	31
11	53	76	91	415	385	455	234	354	167	70	55	30
12	53	76	81	349	377	403	227	303	144	70	47	30
13	53	88	77	313	346	370	220	281	134	71	46	29
14	52	103	76	283	322	347	218	267	127	68	124	28
15	52	88	72	432	302	326	211	254	127	66	89	27
16	50	81	70	515	568	310	220	241	121	63	87	28
17	51	77	70	480	1020	300	578	230	116	69	78	27
18	51	76	68	386	755	361	382	219	110	63	60	28
19	94	75	67	357	574	431	794	212	112	61	58	33
20	66	73	65	316	497	435	712	204	112	71	54	30
21	55	75	65	287	441	410	509	198	115	58	49	82
22	54	84	117	331	405	365	528	193	114	66	47	66
23	51	75	96	542	481	336	527	189	159	75	45	39
24	67	71	149	428	411	316	463	182	114	65	43	34
25	102	70	209	366	379	296	420	177	108	67	42	33
26	453	70	146	328	356	283	386	171	100	74	40	33
27	336	68	179	376	407	273	371	171	97	64	39	31
28	168	66	155	387	368	264	356	168	92	64	37	49
29	129	66	136	335	---	255	328	161	92	59	37	51
30	110	75	122	324	---	247	382	157	92	55	37	45
31	99	---	111	303	---	242	---	153	---	54	40	---
TOTAL	2810	2460	3058	13953	13960	11081	10711	7791	4072	2174	1645	1092
MEAN	90.6	82.0	98.6	450	499	357	357	251	136	70.1	53.1	36.4
MAX	453	126	209	2710	1230	838	794	408	229	86	124	82
MIN	50	66	65	96	273	242	211	153	92	54	37	27
CFSM	1.36	1.23	1.48	6.75	7.47	5.36	5.35	3.77	2.03	1.05	.80	.55
IN.	1.57	1.37	1.71	7.78	7.79	6.18	5.97	4.35	2.27	1.21	.92	.61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1998<sup>e</sup>, BY WATER YEAR (WY)

MEAN	129	145	165	203	224	249	238	190	154	121	130	116
MAX	465	510	338	534	499	520	468	412	359	356	506	354
(WY)	1965	1980	1962	1937	1998	1979	1957	1973	1992	1989	1940	1979
MIN	24.8	35.2	40.7	43.5	88.9	87.5	79.7	76.2	41.7	38.6	25.4	22.8
(WY)	1955	1955	1940	1956	1941	1988	1986	1988	1988	1988	1925	1925

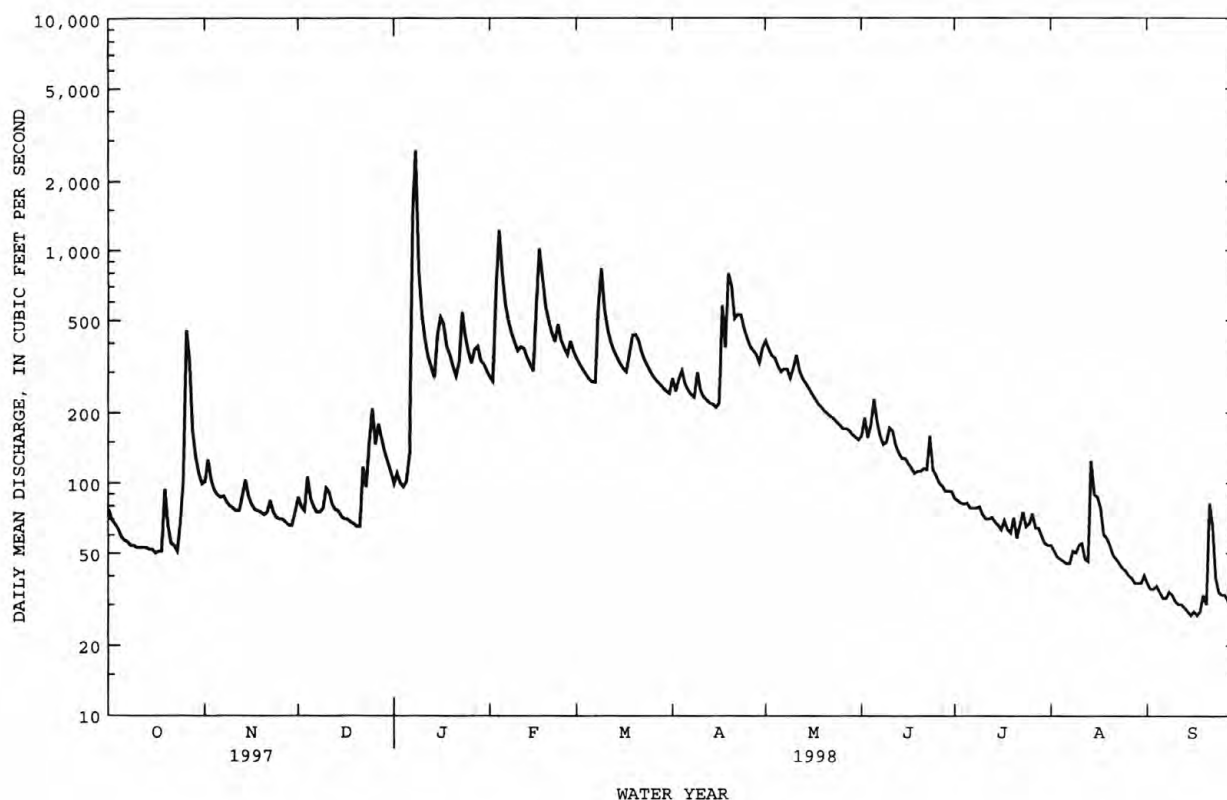
## TENNESSEE RIVER BASIN

03446000 MILLS RIVER NEAR MILLS RIVER, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1925 - 1998 <sup>a</sup>	
ANNUAL TOTAL	65475		74807		172	
ANNUAL MEAN	179		205		272	
HIGHEST ANNUAL MEAN					86.8	
LOWEST ANNUAL MEAN					4470	
HIGHEST DAILY MEAN	1150	Mar 14	2710	Jan 8	19	Aug 13 1940
LOWEST DAILY MEAN	49	Sep 21	27	Sep 15	18	Sep 30 1954
ANNUAL SEVEN-DAY MINIMUM	51	Sep 17	28	Sep 12	19	Sep 24 1954
INSTANTANEOUS PEAK FLOW			5060	Jan 8	13400*	Aug 30 1940
INSTANTANEOUS PEAK STAGE			10.97	Jan 8	13.62	Aug 30 1940
INSTANTANEOUS LOW FLOW			26*	Sep 17	16*	Dec 24 1943
ANNUAL RUNOFF (CFSM)	2.69		3.07		2.57	
ANNUAL RUNOFF (INCHES)	36.52		41.72		34.98	
10 PERCENT EXCEEDS	320		423		305	
50 PERCENT EXCEEDS	161		112		138	
90 PERCENT EXCEEDS	63		45		56	

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.





## TENNESSEE RIVER BASIN

0344894205 NORTH FORK SWANNANOA RIVER NEAR WALKERTOWN, NC

LOCATION.--Lat 35°41'07", long 82°19'58", Buncombe County, Hydrologic Unit 06010105, on left bank 400 ft downstream of Sugar Springs Cove, 0.6 mi upstream from Burnette Reservoir, and 2.3 mi north of Walkertown.

DRAINAGE AREA.--14.5 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1989 to current year.

REVISED RECORDS.--WDR NC-91-1: 1989(M).

GAGE.--Water-stage recorder. Elevation of gage is 2,650 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good except those above 1,000 ft<sup>3</sup>/s, which are poor. Maximum discharge for period of record, from rating curve extended above 1,000 ft<sup>3</sup>/s by logarithmic plotting. Minimum discharge for current water year and period of record also occurred Sept. 15, 16, 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	16	25	19	45	69	43	120	19	7.6	5.4	2.0
2	8.2	28	20	19	42	59	36	126	17	6.9	4.7	1.8
3	7.8	22	20	20	222	51	37	112	16	6.5	4.2	2.0
4	7.2	18	37	22	345	45	58	102	18	6.2	3.8	2.1
5	6.5	16	26	45	185	42	48	84	23	6.2	3.6	1.9
6	6.2	15	21	77	126	39	41	73	20	6.1	3.4	2.0
7	5.9	14	19	549	98	39	37	105	18	6.0	3.4	1.9
8	5.8	13	18	600	81	155	34	135	16	6.2	4.1	2.4
9	5.6	12	18	158	72	233	66	133	17	6.2	4.3	2.7
10	5.5	13	24	95	63	101	58	102	20	5.8	4.5	2.1
11	5.5	12	24	70	69	75	58	99	21	5.4	3.7	1.9
12	5.4	12	21	56	76	62	60	81	17	5.3	3.3	1.7
13	5.4	13	19	46	62	55	54	70	15	5.1	3.7	1.7
14	5.4	20	18	40	54	49	49	61	14	5.0	8.4	1.5
15	5.4	18	16	125	49	44	44	54	14	4.8	7.1	1.5
16	5.2	15	15	114	98	42	43	48	13	4.7	7.6	1.6
17	5.1	13	15	92	382	39	301	43	12	4.9	5.9	1.6
18	5.2	13	14	71	177	70	132	39	11	4.4	4.9	1.5
19	6.7	12	13	62	125	119	251	35	11	4.1	4.3	1.7
20	6.2	12	12	51	105	174	185	32	10	3.9	3.9	1.7
21	5.4	12	12	44	84	113	130	30	9.6	4.4	3.5	2.6
22	5.4	17	18	61	72	82	111	28	9.4	7.4	3.2	3.0
23	5.1	14	17	146	87	68	107	26	9.9	5.2	2.9	2.2
24	5.8	13	30	92	76	60	89	25	8.9	7.0	2.8	1.9
25	7.9	12	43	69	67	54	77	23	8.5	6.8	2.6	1.9
26	111	12	30	58	64	50	68	22	8.0	6.8	2.5	1.8
27	60	11	32	67	89	48	62	21	7.6	6.3	2.4	1.6
28	28	11	26	60	81	45	57	19	7.2	6.5	2.3	1.5
29	20	10	24	54	---	41	52	19	7.3	5.4	2.2	1.8
30	17	13	22	54	---	38	79	19	7.5	4.8	2.1	2.1
31	15	---	20	49	---	35	---	18	---	5.0	2.1	---
TOTAL	404.0	432	669	3085	3096	2196	2467	1904	405.9	176.9	122.8	57.7
MEAN	13.0	14.4	21.6	99.5	111	70.8	82.2	61.4	13.5	5.71	3.96	1.92
MAX	111	28	43	600	382	233	301	135	23	7.6	8.4	3.0
MIN	5.1	10	12	19	42	35	34	18	7.2	3.9	2.1	1.5
CFSM	.90	.99	1.49	6.87	7.63	4.89	5.68	4.24	.93	.39	.27	.13
IN.	1.04	1.11	1.72	7.92	7.95	5.64	6.33	4.89	1.04	.45	.32	.15

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

	MEAN	34.5	35.1	47.1	74.1	67.9	80.6	56.5	49.3	39.7	19.4	34.0	20.3
MAX	79.1	84.6	79.8	134	120	111	82.2	74.4	78.0	43.0	123	64.3	
(WY)	1996	1993	1993	1995	1990	1993	1998	1992	1995	1989	1994	1989	
MIN	3.60	10.7	20.1	45.1	35.0	46.5	18.6	19.6	13.5	5.71	3.96	1.92	
(WY)	1994	1994	1996	1997	1993	1996	1995	1994	1998	1998	1998	1998	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

## WATER YEARS 1989 - 1998

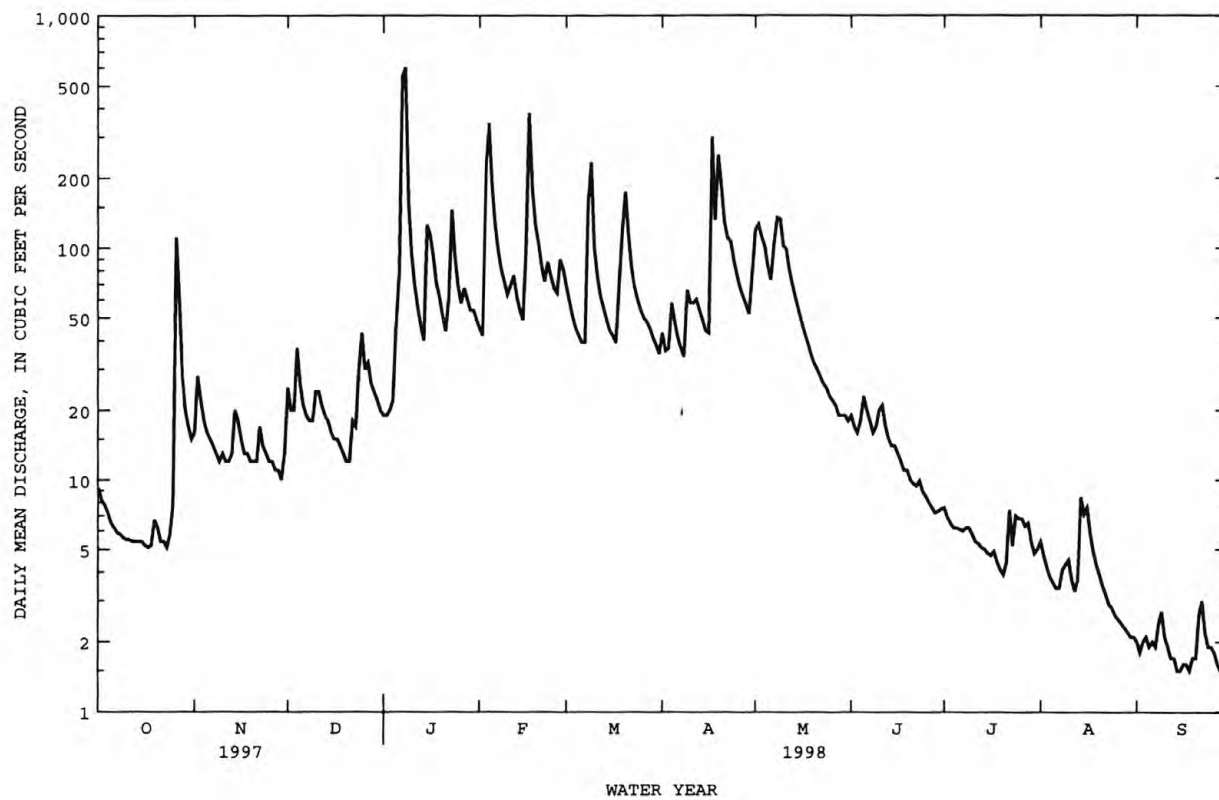
ANNUAL TOTAL	13026.7	15016.3	
ANNUAL MEAN	35.7	41.1	46.1
HIGHEST ANNUAL MEAN			51.9
LOWEST ANNUAL MEAN			40.9
HIGHEST DAILY MEAN	315	Feb 28	600
LOWEST DAILY MEAN	3.9	Sep 20	1.5
ANNUAL SEVEN-DAY MINIMUM	4.3	Sep 17	1.6
INSTANTANEOUS PEAK FLOW			3360
INSTANTANEOUS PEAK STAGE			7.56
INSTANTANEOUS LOW FLOW			1.5*
ANNUAL RUNOFF (CFSM)	2.46		2.84
ANNUAL RUNOFF (INCHES)	33.44		38.55
10 PERCENT EXCEEDS	70		100
50 PERCENT EXCEEDS	29		18
90 PERCENT EXCEEDS	5.6		2.8

\* See REMARKS.



## TENNESSEE RIVER BASIN

0344894205 NORTH FORK SWANNANOA RIVER NEAR WALKERTOWN, NC--Continued



## TENNESSEE RIVER BASIN

03450000 BEETREE CREEK NEAR SWANNANOA, NC

LOCATION.--Lat 35°39'11", long 82°24'20", Buncombe County, Hydrologic Unit 06010105, on left bank 0.5 mi downstream of Wolfe Branch, 0.8 mi upstream from Beetree Reservoir dam, 3.8 mi north of Swannanoa, and 4.8 mi above mouth.

DRAINAGE AREA.--5.46 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1926 to September 1975, October 1979 to September 1981, October 1985 to September 1986, and May 1987 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 893: 1928, 1936-37 (M). WSP 953: 1929 (M). WSP 1276: 1932.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 2,728.39 ft above sea level.

REMARKS.--No estimated daily discharges. Records fair. Maximum discharge for period of record, from rating curve extended above 240 ft<sup>3</sup>/s on basis of computation of peak flow over weir. Minimum discharge for period of record also occurred July 25, 1996. Minimum discharge for current water year also occurred Sept. 13, 14, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	4.1	6.0	5.0	19	20	13	33	4.3	1.2	1.1	.53
2	1.2	7.9	4.6	4.8	18	18	10	38	3.4	1.1	.93	.50
3	.91	5.5	4.8	5.2	68	16	12	34	3.1	1.0	.88	.51
4	.79	4.7	6.5	7.3	98	14	17	32	4.5	.98	.86	.55
5	.58	4.2	5.4	13	59	13	15	28	7.7	1.0	.82	.48
6	.50	3.9	4.9	17	42	12	14	25	4.9	.94	.81	.47
7	.50	3.8	4.7	118	35	12	12	27	3.8	.91	.79	.47
8	.55	3.5	4.6	173	29	24	12	25	3.3	1.1	.81	.78
9	.57	3.4	4.8	58	26	41	24	26	4.2	1.1	.82	.60
10	.57	3.3	7.2	37	23	28	23	26	5.4	.96	.86	.51
11	.59	3.1	6.8	29	25	24	24	30	4.3	.90	.78	.49
12	.63	3.1	6.0	23	25	21	23	27	3.4	.89	.76	.43
13	.69	3.6	5.5	20	23	19	21	24	2.9	.88	.72	.41
14	.77	4.1	5.0	17	21	17	19	21	2.6	.89	1.5	.41
15	.78	3.7	4.7	28	19	14	17	19	2.9	.88	1.5	.42
16	.72	3.4	4.4	34	26	13	16	17	2.4	.84	1.2	.44
17	.71	3.2	4.1	34	77	12	73	15	2.1	.83	.99	.48
18	.84	3.2	3.9	28	57	16	45	12	2.0	.79	.86	.50
19	2.1	3.1	3.7	25	42	26	66	11	1.9	.76	.80	.50
20	1.5	3.0	3.5	21	35	36	62	9.4	1.8	.79	.79	.50
21	1.3	3.1	3.5	19	29	35	44	8.6	1.7	4.5	.75	.90
22	1.2	3.8	4.2	20	26	28	39	7.8	1.7	1.5	.72	.71
23	1.1	3.2	3.7	31	32	24	37	7.1	2.3	1.3	.69	.56
24	1.3	3.1	5.3	27	28	22	31	6.3	1.6	2.7	.66	.53
25	1.6	2.9	6.3	23	26	20	27	5.6	1.4	1.5	.68	.54
26	21	2.9	5.3	20	24	19	25	5.1	1.3	1.2	.64	.50
27	11	2.8	8.1	25	24	17	23	4.7	1.3	1.1	.63	.45
28	5.4	2.7	6.7	24	22	15	21	4.3	1.2	1.1	.62	.48
29	4.2	2.6	6.2	22	---	14	19	4.0	1.1	.99	.60	.57
30	3.6	3.1	5.6	23	---	12	24	3.7	1.3	.92	.58	.63
31	3.2	---	5.2	21	---	11	---	3.4	---	1.1	.57	---
TOTAL	71.80	108.0	161.2	952.3	978	613	808	540.0	85.8	36.65	25.72	15.85
MEAN	2.32	3.60	5.20	30.7	34.9	19.8	26.9	17.4	2.86	1.18	.83	.53
MAX	21	7.9	8.1	173	98	41	73	38	7.7	4.5	1.5	.90
MIN	.50	2.6	3.5	4.8	18	11	10	3.4	1.1	.76	.57	.41
CFSM	.42	.66	.95	5.63	6.40	3.62	4.93	3.19	.52	.22	.15	.10
IN.	.49	.74	1.10	6.49	6.66	4.18	5.51	3.68	.58	.25	.18	.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	6.39	8.41	10.6	13.8	15.8	19.2	16.8	12.0	8.57	6.04	6.65	5.01
MAX	33.9	45.3	25.4	38.5	43.0	43.1	34.2	28.5	27.0	37.9	61.8	21.3	
(WY)	1930	1980	1933	1937	1990	1975	1936	1973	1949	1949	1940	1928	
MIN	.65	1.23	1.58	1.99	4.46	5.25	5.21	4.68	1.82	1.18	.83	.51	
(WY)	1955	1955	1940	1940	1941	1988	1986	1948	1988	1998	1998	1954	

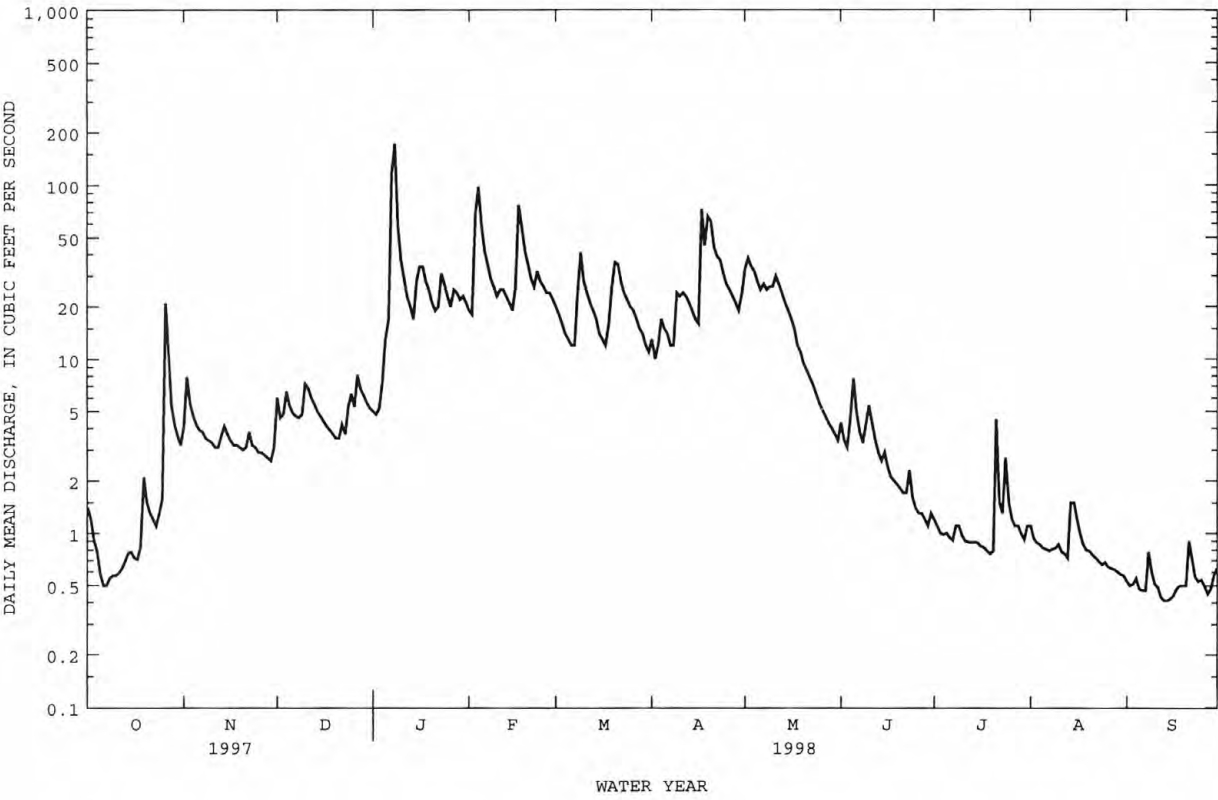
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1926 - 1998 <sup>a</sup>
ANNUAL TOTAL	3723.03	4396.32	
ANNUAL MEAN	10.2	12.0	10.8
HIGHEST ANNUAL MEAN			17.8
LOWEST ANNUAL MEAN			6.18
HIGHEST DAILY MEAN	80	173	528
LOWEST DAILY MEAN	.44	.41	.30
ANNUAL SEVEN-DAY MINIMUM	.51	.44	.40
INSTANTANEOUS PEAK FLOW		534	1370*
INSTANTANEOUS PEAK STAGE		4.70	6.20
INSTANTANEOUS LOW FLOW		.39*	.28*
ANNUAL RUNOFF (CFSM)	1.87	2.21	1.98
ANNUAL RUNOFF (INCHES)	25.37	29.95	26.86
10 PERCENT EXCEEDS	23	28	22
50 PERCENT EXCEEDS	7.0	4.3	7.4
90 PERCENT EXCEEDS	1.1	.61	1.7

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.

TENNESSEE RIVER BASIN

03450000 BEETREE CREEK NEAR SWANNANOVA, NC--Continued



## TENNESSEE RIVER BASIN

03451000 SWANNANOA RIVER AT BILTMORE, NC

LOCATION.--Lat 35°34'06", long 82°32'42", Buncombe County, Hydrologic Unit 06010105, on left bank at Biltmore, 100 ft downstream of Biltmore Avenue Bridge, 200 ft upstream from Southern Railway bridge, and 1.6 mi upstream from mouth.

DRAINAGE AREA.--130 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1920 to September 1926, May 1934 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1921(M), 1923(M), 1925(M). WSP 823: Drainage area. WSP 1306: 1921(M), 1924(M), 1926(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,976.58 ft above sea level (levels by Tennessee Valley Authority). Dec. 1, 1920, to Sept. 30, 1926, nonrecording gage at site 100 ft upstream at same datum. National Weather Service telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Considerable regulation from 1925-50 (reservoir silted) by Lake Craig, 3.6 mi upstream from station. City of Asheville diverted an average of 35.2 ft<sup>3</sup>/s from Burnett Lake (station 03448959) on North Fork Swannanoa River, 20 mi upstream from station and Bee Tree Lake on Beetree Creek (station 03450000), 13 mi upstream from station for water supply. An average of 38.0 ft<sup>3</sup>/s was discharged downstream of station into the French Broad River as treated sewage effluent. Maximum discharge for period of record, from rating curve extended above 9,100 ft<sup>3</sup>/s on basis of computation of peak flow over dam 3.6 mi upstream from station. Minimum discharge for period of record occurred several days in Oct. 1941. Minimum discharge for current water year also occurred Sept. 15, 18, 19.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed: 26 ft; discharge: 40,000 ft<sup>3</sup>/s in April 1791, from studies by Tennessee Valley Authority. Flood of July 1916 reached a stage of 20.7 ft; discharge, 23,000 ft<sup>3</sup>/s, from flood profile by Tennessee Valley Authority. Flood of Aug. 16, 1928 reached a stage of 18.74 ft, from floodmarks; discharge, 17,800 ft<sup>3</sup>/s. High stages are subject to backwater from French Broad River.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	95	75	73	297	331	230	560	149	65	46	27
2	49	132	60	72	274	308	216	584	121	58	43	26
3	50	84	61	73	1360	290	251	498	111	55	40	26
4	50	71	79	74	2200	275	296	465	127	65	37	29
5	47	66	66	75	1100	262	255	402	195	70	36	26
6	46	64	60	79	717	256	237	368	140	56	35	27
7	45	65	56	1030	555	245	219	404	124	54	34	27
8	44	62	57	2770	462	444	209	390	111	65	36	28
9	43	60	61	667	401	669	358	384	114	63	36	29
10	42	59	82	450	356	509	290	374	129	53	41	25
11	44	58	72	353	375	395	283	401	120	50	37	25
12	42	59	64	291	359	340	273	332	104	48	35	25
13	42	67	61	246	328	305	264	303	98	47	34	25
14	42	68	61	211	308	283	250	279	96	46	68	24
15	43	61	59	385	289	263	242	261	101	44	50	24
16	41	56	57	529	468	249	279	246	100	43	57	27
17	44	56	56	441	1120	239	1250	231	93	43	46	28
18	46	56	55	357	938	278	685	214	84	41	40	25
19	57	56	55	345	637	436	1180	200	82	49	40	27
20	50	54	54	283	515	559	995	186	82	42	36	27
21	44	58	58	248	445	566	667	176	79	39	35	73
22	43	72	84	269	394	445	602	168	81	65	33	49
23	41	59	66	380	492	376	581	163	82	65	32	33
24	49	55	100	356	420	333	490	158	72	74	31	30
25	56	54	113	310	372	304	423	152	69	72	31	30
26	491	54	80	272	341	286	380	145	67	53	31	30
27	186	55	165	286	365	272	345	131	64	53	29	29
28	92	54	108	369	353	261	323	126	61	51	28	39
29	77	54	91	334	---	251	300	125	59	46	28	37
30	68	59	87	330	---	237	379	145	67	43	28	38
31	63	---	81	323	---	224	---	129	---	46	28	---
TOTAL	2128	1923	2284	12281	16241	10491	12752	8700	2982	1664	1161	915
MEAN	68.6	64.1	73.7	396	580	338	425	281	99.4	53.7	37.5	30.5
MAX	491	132	165	2770	2200	669	1250	584	195	74	68	73
MIN	41	54	54	72	274	224	209	125	59	39	28	24
CFSM	.53	.49	.57	3.05	4.46	2.60	3.27	2.16	.76	.41	.29	.23
IN.	.61	.55	.65	3.51	4.65	3.00	3.65	2.49	.85	.48	.33	.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
MEAN	101	120	142	199	233	283	253	190	138	101	103	87.4
MAX	569	604	385	610	598	740	560	480	387	503	828	421
(WY)	1965	1980	1962	1995	1990	1975	1936	1973	1949	1949	1940	1979
MIN	13.7	27.0	35.3	32.3	65.7	45.7	55.6	45.5	17.7	18.2	18.8	13.8
(WY)	1955	1982	1989	1956	1988	1988	1986	1988	1988	1986	1956	1954

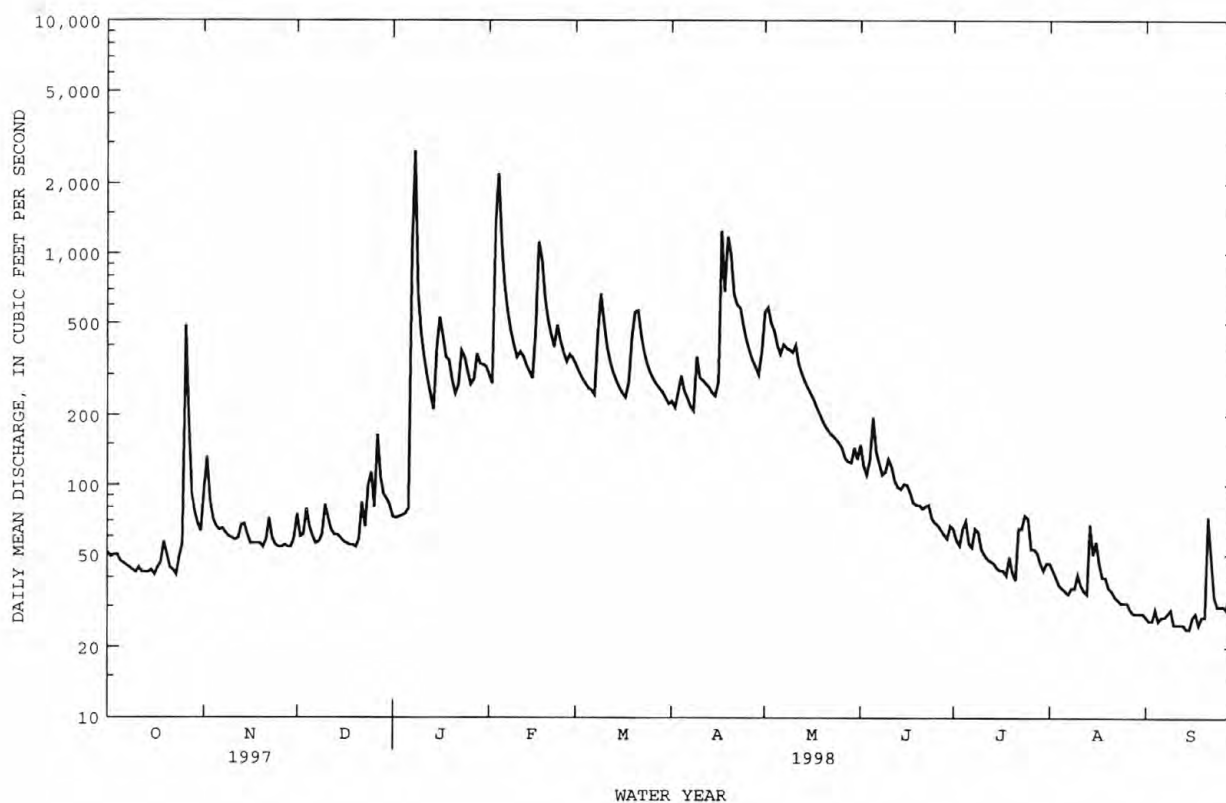
## TENNESSEE RIVER BASIN

03451000 SWANNANOA RIVER AT BILTMORE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1921 - 1998 <sup>a</sup>	
ANNUAL TOTAL	61706		73522		162	
ANNUAL MEAN	169		201		277	
HIGHEST ANNUAL MEAN					55.9	
LOWEST ANNUAL MEAN					1949	
HIGHEST DAILY MEAN	1040	Feb 28	2770	Jan 8	7560	Aug 13 1940
LOWEST DAILY MEAN	34	Sep 8	24	Sep 14	1.2	Oct 14 1941
ANNUAL SEVEN-DAY MINIMUM	37	Sep 17	25	Sep 10	7.3	Sep 13 1953
INSTANTANEOUS PEAK FLOW			5720	Jan 7	18400*	Aug 13 1940
INSTANTANEOUS PEAK STAGE			12.17	Jan 7	19.00	Aug 13 1940
INSTANTANEOUS LOW FLOW			24*	Sep 14	1.1*	Oct 9 1941
ANNUAL RUNOFF (CFSM)	1.30		1.55		1.25	
ANNUAL RUNOFF (INCHES)	17.66		21.04		16.92	
10 PERCENT EXCEEDS	348		444		313	
50 PERCENT EXCEEDS	127		80		107	
90 PERCENT EXCEEDS	44		34		38	

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.



## TENNESSEE RIVER BASIN

03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC

LOCATION.--Lat 35°36'33", long 82°34'43", Buncombe County, Hydrologic Unit 06010105, on right bank 27 ft upstream from Pearson Bridge (Secondary Road 1348) at Asheville, 1.4 mi downstream of bridge on U.S. Highways 19 and 23, 3.2 mi downstream of Swannanoa River, and at mile 145.8.

DRAINAGE AREA.--945 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1895 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1895-1909, 1901(M), 1914-15(M), 1917(M), 1920-22(M),

GAGE.--Water-stage recorder. Datum of gage is 1,950.28 ft above sea level. Sept. 17, 1895, to Dec. 31, 1901, nonrecording gage at present site at different datum. Mar. 19, 1903, to July 15, 1916, and Jan. 1, 1917, to Sept. 30, 1922, nonrecording gage at Smith Bridge 1.5 mi upstream at datum 1961.80 ft. Oct. 1, 1922, to Aug. 9, 1930, nonrecording gage at present site and datum. Satellite telemetry at station. National Weather Service also has telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Many small diversions from tributaries upstream from station for water supply. Diversions by City of Asheville and others from upstream tributaries in the Swannanoa River basin (station 03451000) totaled about 35.2 ft<sup>3</sup>/s and 38.0 ft<sup>3</sup>/s was discharged 4 mi downstream from station as treated effluent. Slight diurnal fluctuation and occasional slight regulation at low flow caused by power plant 46 mi upstream and small reservoirs upstream from station. Maximum discharge for period of record, from rating curve extended above 43,000 ft<sup>3</sup>/s, by logarithmic plotting; maximum gage height, 23.10, from floodmarks. Minimum discharge for period of record occurred several days in Aug. and Sept. 1925. Minimum discharge for current water year also occurred Sept. 17, 18, 19.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791, that of July 16, 1916, and flood of June 17, 1876, reached a stage of 18 ft, from studies by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1280	1580	1260	1560	3510	4190	2940	4330	2050	1370	883	506
2	1140	1840	1250	1500	3280	3890	3000	4810	2010	1300	840	484
3	1070	1850	1180	1480	6910	3700	2920	4670	2160	1270	796	521
4	1040	1570	1340	1460	15000	3550	3320	4360	1940	1300	757	506
5	1000	1460	1490	1440	12900	3420	3390	4050	2790	1420	724	497
6	972	1380	1320	1550	10600	3340	3120	3680	2770	1320	707	476
7	947	1380	1220	6150	8510	3270	2900	3540	2210	1240	663	492
8	925	1350	1180	22600	6140	4870	2760	3640	1940	1220	647	498
9	931	1290	1200	21900	4580	7700	3070	3410	1870	1250	722	485
10	909	1260	1340	15500	4090	8140	3620	3280	2090	1250	800	453
11	903	1240	1550	8510	4000	7700	3260	3710	2430	1230	782	434
12	899	1220	1450	5170	4200	6510	2920	3320	2080	1200	719	422
13	894	1280	1340	3560	3840	4890	2740	3070	1860	1240	654	416
14	890	1460	1290	3130	3540	4250	2630	2930	1760	1380	969	412
15	887	1480	1240	3940	3330	3950	2600	2800	1750	1170	1190	403
16	884	1340	1200	6140	4950	3730	2550	2710	1750	1070	1340	399
17	870	1270	1180	6300	10400	3590	6760	2630	1660	1030	1110	406
18	882	1220	1160	5110	11300	3620	5920	2510	1590	1000	866	397
19	1020	1210	1140	4190	9850	4970	7270	2420	1540	1050	783	404
20	1260	1190	1120	3700	8240	5680	9070	2340	1630	1030	821	425
21	1060	1180	1120	3300	6280	6270	7990	2290	1600	994	750	634
22	939	1290	1310	3190	4860	5320	6670	2240	1660	1290	702	1150
23	911	1330	1620	5600	5020	4500	6160	2190	1780	1170	649	815
24	922	1240	1630	5930	5330	4030	5790	2150	1700	1220	621	562
25	1220	1170	2760	5190	4700	3740	5010	2100	1540	1170	587	506
26	3400	1150	2410	3930	4240	3520	4400	2040	1530	1050	545	492
27	5460	1140	2450	3680	4170	3360	3980	1990	1480	1150	515	480
28	4100	1120	2510	4930	4420	3270	3780	2040	1470	1050	498	496
29	2290	1110	2070	4720	---	3150	3560	2010	1400	953	485	577
30	1810	1150	1860	4180	---	3040	3480	2140	1470	903	487	568
31	1580	---	1720	3830	---	2940	---	2050	---	884	524	---
TOTAL	43295	39750	46910	173370	178190	138100	127580	91450	55510	36174	23136	15316
MEAN	1397	1325	1513	5593	6364	4455	4253	2950	1850	1167	746	511
MAX	5460	1850	2760	22600	15000	8140	9070	4810	2790	1420	1340	1150
MIN	870	1110	1120	1440	3280	2940	2550	1990	1400	884	485	397
CFSM	1.48	1.40	1.60	5.92	6.73	4.71	4.50	3.12	1.96	1.23	.79	.54
IN.	1.70	1.56	1.85	6.82	7.01	5.44	5.02	3.60	2.19	1.42	.91	.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 1998, BY WATER YEAR (WY)

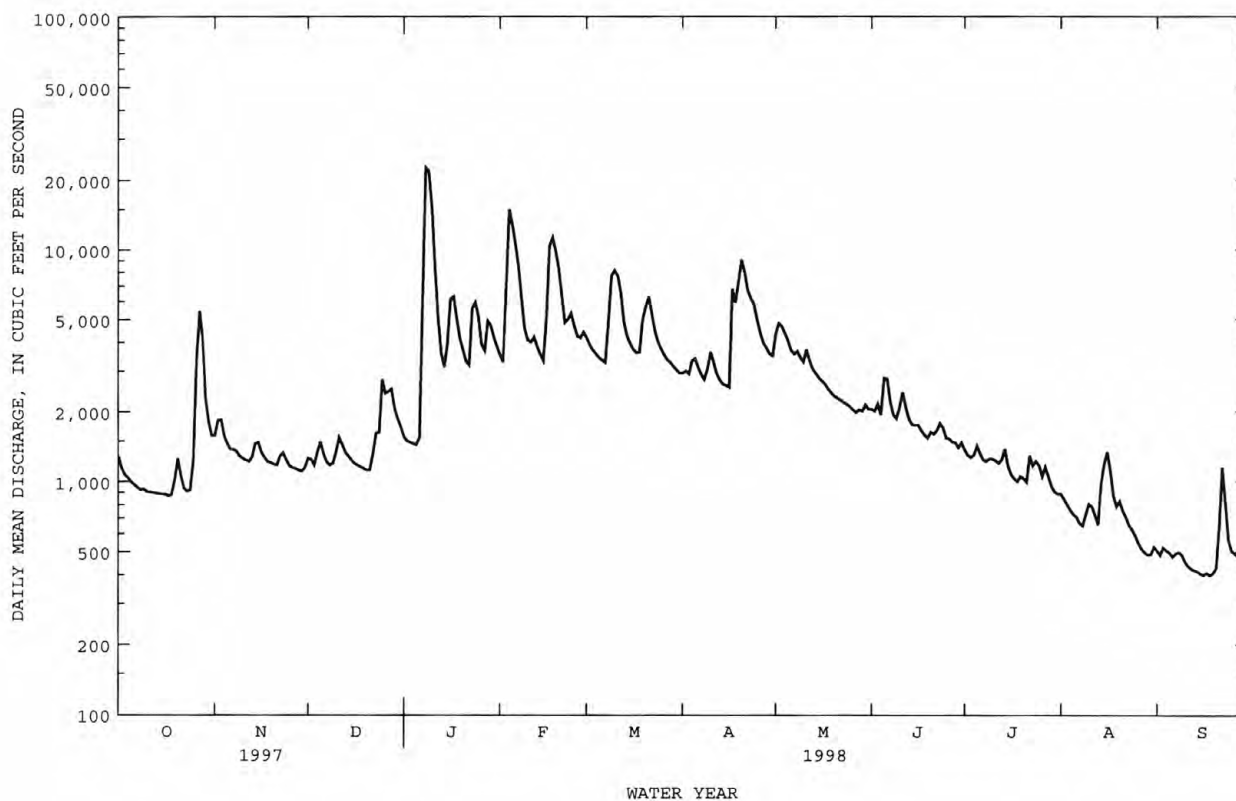
	MEAN	MAX	(WY)	MIN	(WY)
1896	1607	7025	1965	353	1955
1897	1637	5121	1980	507	1932
1898	2115	5700	1915	636	1956
1899	2458	6068	1937	548	1956
1900	2698	6364	1998	1083	1931
1901	3049	7928	1899	1037	1988
1902	2776	5705	1899	973	1986
1903	2207	4961	1973	859	1988
1904	1902	5774	1909	547	1988
1905	1711	11500	1916	559	1986
1906	1707	8362	1901	328	1925
1907	1473	4967	1906	346	1954

## TENNESSEE RIVER BASIN

03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1896 - 1998	
ANNUAL TOTAL	838372		968781		2109	
ANNUAL MEAN	2297		2654		3671	
HIGHEST ANNUAL MEAN					1004	
LOWEST ANNUAL MEAN					1988	
HIGHEST DAILY MEAN	8750	Mar 14	22600	Jan 8	66000	Jul 16 1916
LOWEST DAILY MEAN	748	Sep 22	397	Sep 18	239	Sep 21 1925
ANNUAL SEVEN-DAY MINIMUM	785	Sep 17	405	Sep 13	258	Aug 24 1925
INSTANTANEOUS PEAK FLOW			24600	Jan 8	110000*	Jul 16 1916
INSTANTANEOUS PEAK STAGE			10.37	Jan 8	23.10*	Jul 16 1916
INSTANTANEOUS LOW FLOW			396*	Sep 16	239*	Aug 28 1925
ANNUAL RUNOFF (CFSM)	2.43		2.81		2.23	
ANNUAL RUNOFF (INCHES)	33.00		38.14		30.33	
10 PERCENT EXCEEDS	3950		5320		3690	
50 PERCENT EXCEEDS	2050		1600		1640	
90 PERCENT EXCEEDS	933		642		785	

\* See REMARKS.





## TENNESSEE RIVER BASIN

03453000 IVY RIVER NEAR MARSHALL, NC

LOCATION.--Lat 35°46'10", long 82°37'16", Madison County, Hydrologic Unit 06010105, on right bank 0.2 mi downstream from bridge on U.S. Highway 25-70, 1.9 mi upstream from mouth, and 4.0 mi southeast of Marshall.

DRAINAGE AREA.--158 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1933 to September 1973. July 1, 1994 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,700.41 ft above sea level (levels by Tennessee Valley Authority).

REVISED RECORDS.--WSP 803: 1934(M), 1935. WSP 1910: 1936(P), 1937(M), 1940(M), 1946(M), 1957(P).

REMARKS.--No estimated daily discharges. Records good. Considerable low flow regulation, at times, caused by small power plant at Ivy Dam, 0.4 mi upstream. Minimum discharge for period of record and current water year affected by regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June, 1876, reached a stage of 16.0 ft, from studies by Tennessee Valley Authority (discharge 14,000 ft<sup>3</sup>/s). An outstanding but lesser flood occurred in July, 1916 (stage and discharge unknown).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	57	105	71	322	230	228	378	117	81	48	20
2	43	156	83	86	277	203	191	388	98	62	39	19
3	41	104	66	97	638	190	225	384	90	56	33	19
4	40	77	72	109	1420	173	526	389	89	55	31	22
5	38	65	67	133	875	161	409	348	213	61	29	20
6	35	60	60	175	568	154	341	304	162	54	28	18
7	36	58	57	1060	427	154	289	597	124	53	27	19
8	35	57	52	2710	343	270	252	897	98	52	28	21
9	34	55	60	802	291	486	345	621	107	58	28	26
10	34	53	93	429	253	347	324	505	133	56	32	21
11	34	51	91	291	271	279	338	478	135	51	28	20
12	35	49	75	226	296	241	319	381	104	49	26	19
13	33	52	67	182	261	212	282	326	97	47	25	18
14	33	54	63	155	232	198	274	279	88	45	29	17
15	35	54	57	343	205	181	237	242	95	43	36	16
16	33	50	58	671	243	172	241	216	97	41	57	16
17	35	46	57	581	692	161	1630	196	104	41	39	20
18	34	49	52	391	602	168	795	171	74	40	32	19
19	38	46	50	370	448	406	1750	158	72	37	28	19
20	42	46	49	303	370	972	1540	145	76	38	27	19
21	36	46	49	245	309	1120	819	137	67	35	25	22
22	37	54	82	228	261	633	644	131	66	41	24	31
23	35	51	71	371	391	453	605	126	97	48	22	25
24	35	47	77	317	394	366	496	118	80	55	28	22
25	41	45	124	262	331	307	412	112	74	50	35	21
26	271	45	91	220	288	271	355	107	62	52	30	21
27	185	45	156	351	277	249	316	104	60	61	42	19
28	88	44	149	455	264	229	293	98	57	52	25	21
29	68	43	113	402	---	209	252	92	58	43	22	21
30	58	52	100	437	---	188	281	98	69	37	22	23
31	52	---	88	394	---	176	---	92	---	42	21	---
TOTAL	1643	1711	2434	12867	11549	9559	15009	8618	2863	1536	946	614
MEAN	53.0	57.0	78.5	415	412	308	500	278	95.4	49.5	30.5	20.5
MAX	271	156	156	2710	1420	1120	1750	897	213	81	57	31
MIN	33	43	49	71	205	154	191	92	57	35	21	16
CFSM	.34	.36	.50	2.63	2.61	1.95	3.17	1.76	.60	.31	.19	.13
IN.	.39	.40	.57	3.03	2.72	2.25	3.53	2.03	.67	.36	.22	.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	79.5	94.0	137	220	271	318	243	157	112	94.6	88.7	61.4
MAX	367	229	407	636	563	848	574	328	272	280	444	141	
(WY)	1965	1950	1962	1937	1957	1963	1936	1946	1950	1949	1940	1949	
MIN	19.3	28.9	39.8	46.4	60.9	129	76.1	58.6	43.3	29.8	22.8	20.5	
(WY)	1953	1940	1940	1940	1941	1970	1942	1941	1953	1952	1956	1998	

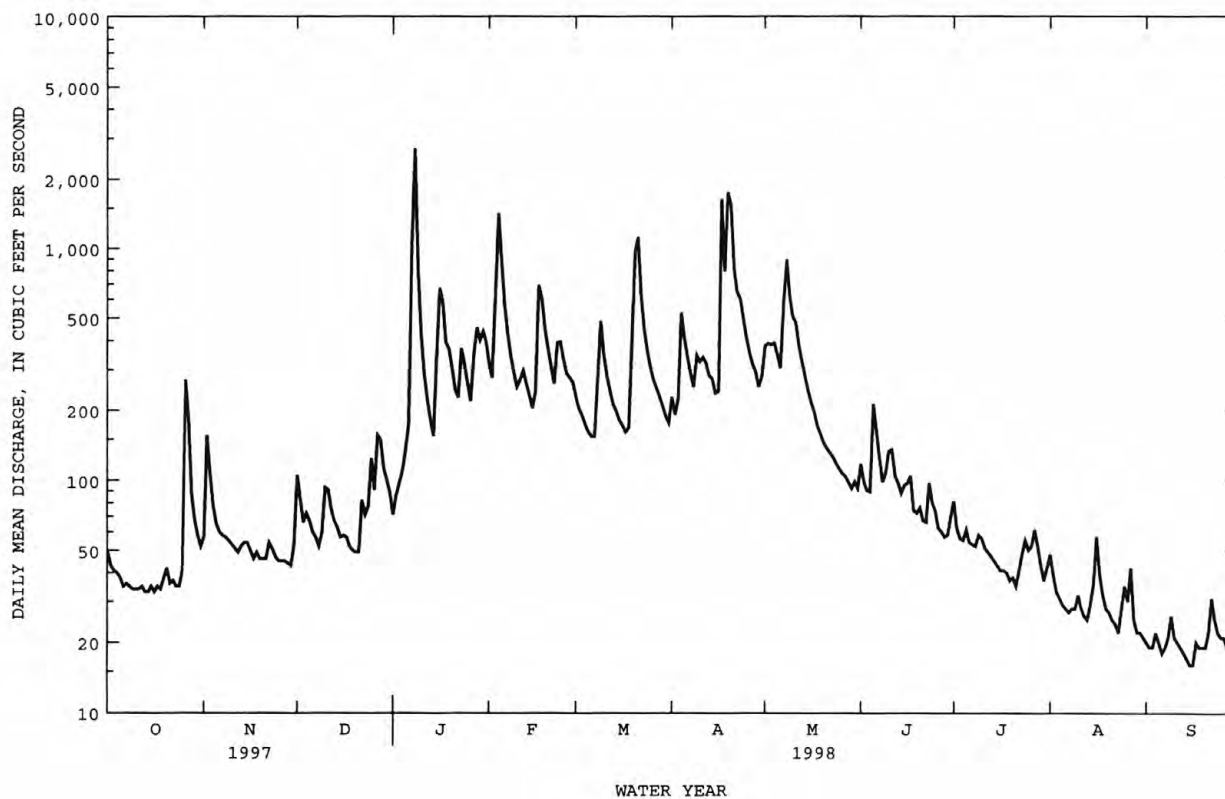
## TENNESSEE RIVER BASIN

03453000 IVY RIVER NEAR MARSHALL, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1934 - 1998 <sup>g</sup>	
ANNUAL TOTAL	51875		69349		155	
ANNUAL MEAN	142		190		232	
HIGHEST ANNUAL MEAN					92.1	
LOWEST ANNUAL MEAN					8010	
HIGHEST DAILY MEAN	1430	Feb 28	2710	Jan 8	8.5	Mar 12 1963
LOWEST DAILY MEAN	23	Sep 8	16	Sep 15	9.8	Sep 2 1953
ANNUAL SEVEN-DAY MINIMUM	25	Sep 16	18	Sep 12	14400	Aug 28 1953
INSTANTANEOUS PEAK FLOW			5660	Jan 8	17.21	Mar 26 1965
INSTANTANEOUS PEAK STAGE			14.63	Jan 8	3.0*	Jan 14 1995
INSTANTANEOUS LOW FLOW			3.0*	Aug 26	3.0*	Jan 20 1940
ANNUAL RUNOFF (CFSM)	.90		1.20		.98	
ANNUAL RUNOFF (INCHES)	12.21		16.33		13.37	
10 PERCENT EXCEEDS	283		410		305	
50 PERCENT EXCEEDS	110		86		97	
90 PERCENT EXCEEDS	35		26		35	

<sup>g</sup> See PERIOD OF RECORD.

\* See REMARKS.



## TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, NC

LOCATION.--Lat 35°47'10", long 82°39'39", Madison County, Hydrologic Unit 06010105, on right bank 0.7 mi upstream from Hayes Creek, 1.0 mi downstream of Ivy River, 1.5 mi southeast of Marshall, and at mile 126.7.

DRAINAGE AREA.--1,332 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1942 to current year.

REVISED RECORDS.--WSP 1436: 1954(M).

GAGE.--Electronic data logger. Datum of gage is 1,646.79 ft above sea level (levels by Tennessee Valley Authority). National Weather Service telephone telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Small diversions from tributaries for water supply. Slight diurnal fluctuation and occasional slight regulation at low flow caused by small reservoirs upstream from station. Prior to July 1963, some regulation by Weaver plant of Carolina Power and Light Company 15 mi upstream, after November 1986 the same power plant was operated by the Metropolitan Sewage Treatment Plant. Minimum discharge for period of record also occurred Sept. 14, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791: 22.0 ft, July 16, 1916; discharge: 115,000 ft<sup>3</sup>/s. Flood of Aug. 30, 1940, reached a stage of 16.6 ft; discharge, 70,000 ft<sup>3</sup>/s, from high water marks, flood profiles, and studies by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1350	1560	1330	1620	4680	4710	3530	6400	2300	1460	1010	729
2	1180	1930	1290	1540	4060	4320	3470	6540	2130	1310	941	675
3	1080	1990	1210	1550	7890	4070	3560	5740	2370	1260	892	710
4	1030	1660	1270	1550	18200	3840	5220	5430	2110	1260	853	709
5	990	1480	1470	1570	14700	3650	4450	4960	3360	1440	817	698
6	955	1400	1360	1660	11700	3520	3840	4490	3330	1320	806	673
7	934	1370	1230	6320	9330	3420	3530	4690	2570	1230	788	672
8	913	1350	1170	25200	7110	5000	3330	5360	2170	1230	777	712
9	905	1290	1190	20600	5610	8470	4410	4710	2090	1290	826	712
10	890	1250	1320	16100	5050	8530	4750	4310	2320	1220	921	671
11	874	1240	1540	9440	4880	7940	3980	4840	2700	1160	922	631
12	866	1220	1500	6210	5160	6810	3600	4310	2350	1080	895	608
13	857	1250	1340	4470	5000	5200	3390	3840	2070	1080	830	596
14	868	1380	1290	3720	4710	4610	3280	3560	1900	1250	990	579
15	854	1470	1250	4190	4150	4300	3220	3370	1900	1220	1330	566
16	854	1340	1210	7510	5040	4060	3130	3190	1880	1070	1580	565
17	847	1250	1170	7690	11500	3880	9540	3060	1830	1050	1360	575
18	846	1210	1150	6210	12400	3980	7460	2900	1690	1000	1120	574
19	921	1190	1130	5270	10700	6130	10700	2760	1620	1020	972	569
20	1140	1180	1100	4640	8850	7620	12300	2640	1690	1030	997	594
21	1090	1150	1090	4030	6980	8570	9330	2590	1690	1030	947	671
22	928	1220	1250	3640	5590	6710	7940	2500	1730	1210	886	1310
23	871	1300	1550	5830	6250	5530	7970	2430	1840	1220	828	1080
24	865	1250	1610	6600	6370	4910	7120	2370	1880	1310	809	816
25	1010	1150	2690	5990	5530	4480	6130	2300	1620	1290	792	682
26	3470	1130	2780	4740	4980	4160	5460	2250	1580	1140	763	674
27	6180	1120	2490	4430	4880	3920	5030	2190	1480	1200	779	667
28	4780	1090	2900	5950	5150	3720	4840	2200	1480	1170	708	673
29	2650	1070	2330	5930	---	3580	4470	2170	1410	1050	691	864
30	1880	1100	2030	5420	---	3440	4590	2280	1530	988	686	760
31	1610	---	1830	5030	---	3310	---	2240	---	967	688	---
TOTAL	44488	39590	48070	194650	206450	156390	163570	112620	60620	36555	28204	21015
MEAN	1435	1320	1551	6279	7373	5045	5452	3633	2021	1179	910	701
MAX	6180	1990	2900	25200	18200	8570	12300	6540	3360	1460	1580	1310
MIN	846	1070	1090	1540	4060	3310	3130	2170	1410	967	686	565
CFSM	1.08	.99	1.16	4.71	5.54	3.79	4.09	2.73	1.52	.89	.68	.53
IN.	1.24	1.11	1.34	5.44	5.77	4.37	4.57	3.15	1.69	1.02	.79	.59

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1998, BY WATER YEAR (WY)

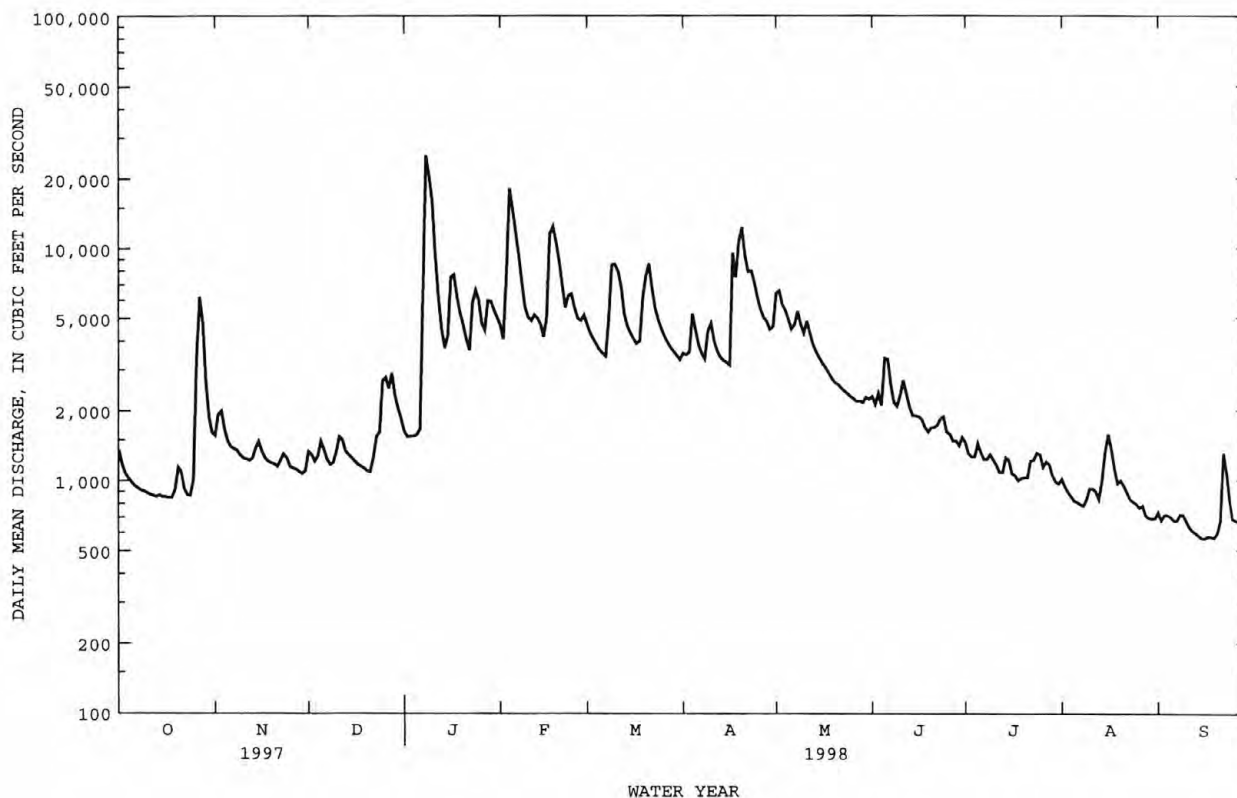
	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
MEAN	1811	2045	2462	2976	3406	3826	3453	2707	2222	1770	1795	1559
MAX	8172	5640	5465	6279	7373	7170	6149	5478	4191	5071	4905	3857
(WY)	1965	1980	1962	1998	1998	1975	1983	1973	1989	1949	1994	1950
MIN	450	651	778	715	1571	1235	1191	1066	700	708	635	384
(WY)	1955	1955	1956	1956	1988	1988	1986	1988	1988	1986	1956	1954

## TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1943 - 1998	
ANNUAL TOTAL	950295		1112222		2498	
ANNUAL MEAN	2604		3047		3573	
HIGHEST ANNUAL MEAN					1229	
LOWEST ANNUAL MEAN					1949	
HIGHEST DAILY MEAN	9630	Mar 1	25200	Jan 8	30800	Oct 5 1964
LOWEST DAILY MEAN	743	Sep 22	565	Sep 16	292	Sep 27 1954
ANNUAL SEVEN-DAY MINIMUM	776	Sep 17	575	Sep 14	313	Sep 24 1954
INSTANTANEOUS PEAK FLOW			32500	Jan 8	54000	Nov 6 1977
INSTANTANEOUS PEAK STAGE			10.22	Jan 8	13.64	Nov 6 1977
INSTANTANEOUS LOW FLOW			516	Sep 25	193*	Sep 13 1954
ANNUAL RUNOFF (CFSM)	1.95		2.29		1.88	
ANNUAL RUNOFF (INCHES)	26.54		31.06		25.48	
10 PERCENT EXCEEDS	4830		6340		4470	
50 PERCENT EXCEEDS	2280		1660		1990	
90 PERCENT EXCEEDS	918		808		920	

\* See REMARKS.



## TENNESSEE RIVER BASIN

03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN NEAR HAZELWOOD, NC

LOCATION.--Lat 35°23'46", long 82°56'17", Haywood County, Hydrologic Unit 06010106, on right bank at upstream side of bridge on Secondary Road 1216, 600 ft upstream from Big Creek, 1.1 mi upstream from Lake Logan, 6.7 mi southeast of Hazelwood, and at mile 9.3.

DRAINAGE AREA.--27.6 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1954 to current year.

REVISED RECORDS.--WDR NC-95-1: 1994(M).

GAGE.--Water-stage recorder. Datum of gage is 2,976.00 ft above sea level. Telephone telemetry at station.

REMARKS.--Records good except those during periods of ice effect, and those for period of no gage-height record, which are fair. Maximum gage height for period of record, from floodmarks. Minimum discharge for period of record also occurred Sept 30, 1954. Minimum discharge for current water year also occurred Sept. 13, 14, 15, 16, 17, 18, 19, 20, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	54	54	e48	97	198	182	177	50	30	19	13
2	27	117	43	e48	97	173	111	140	67	28	17	12
3	25	62	64	48	412	154	183	133	48	27	17	12
4	24	55	91	52	368	140	195	140	102	27	16	13
5	22	51	54	145	223	131	133	122	130	28	16	12
6	22	51	e49	204	177	128	119	114	91	26	16	12
7	21	52	e48	2170	155	142	109	125	64	25	16	14
8	21	48	e48	1040	141	556	101	125	55	25	22	13
9	21	45	58	467	136	625	159	108	73	26	19	13
10	20	45	86	296	130	225	113	117	88	24	18	12
11	20	43	60	229	195	182	103	135	78	23	17	11
12	20	44	53	188	188	163	96	107	60	22	16	11
13	20	72	50	163	152	157	91	100	54	24	16	11
14	21	86	48	143	138	139	100	96	48	22	20	10
15	22	59	45	365	126	127	88	92	60	21	18	11
16	20	52	44	318	489	132	85	87	50	21	22	11
17	21	48	42	247	978	129	331	83	46	22	21	11
18	20	46	41	191	434	297	168	78	41	21	17	11
19	62	45	40	170	335	290	484	75	46	20	16	11
20	30	43	39	147	285	530	257	70	43	20	16	11
21	26	48	40	134	239	242	199	68	46	28	15	43
22	26	62	73	232	217	190	271	66	43	24	14	19
23	25	47	49	327	260	166	244	63	46	22	14	14
24	43	43	121	187	204	153	198	61	36	22	14	13
25	50	41	88	152	185	142	172	57	34	25	14	13
26	503	41	62	136	184	130	156	e55	36	25	14	12
27	144	40	63	139	338	122	146	e53	35	21	13	12
28	72	39	54	124	235	115	135	e52	31	21	13	17
29	59	39	51	114	---	108	126	50	30	20	13	16
30	52	50	49	110	---	101	186	49	29	19	13	15
31	48	---	50	102	---	98	---	47	---	19	15	---
TOTAL	1536	1568	1757	8436	7118	6185	5041	2845	1660	728	507	409
MEAN	49.5	52.3	56.7	272	254	200	168	91.8	55.3	23.5	16.4	13.6
MAX	503	117	121	2170	978	625	484	177	130	30	22	43
MIN	20	39	39	48	97	98	85	47	29	19	13	10
CFSM	1.80	1.89	2.05	9.86	9.21	7.23	6.09	3.33	2.00	.85	.59	.49
IN.	2.07	2.11	2.37	11.37	9.59	8.34	6.79	3.83	2.24	.98	.68	.55

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1998, BY WATER YEAR (WY)

	MEAN	74.8	90.3	112	130	157	168	145	110	84.7	59.2	59.6	56.8
MAX	229	301	234	272	355	312	291	289	213	207	187	260	
(WY)	1965	1980	1962	1998	1966	1975	1983	1976	1967	1967	1994	1979	
MIN	13.5	26.8	29.7	34.0	68.7	53.8	47.8	51.6	30.8	23.3	16.4	13.0	
(WY)	1955	1979	1966	1981	1968	1988	1986	1988	1988	1993	1998	1954	

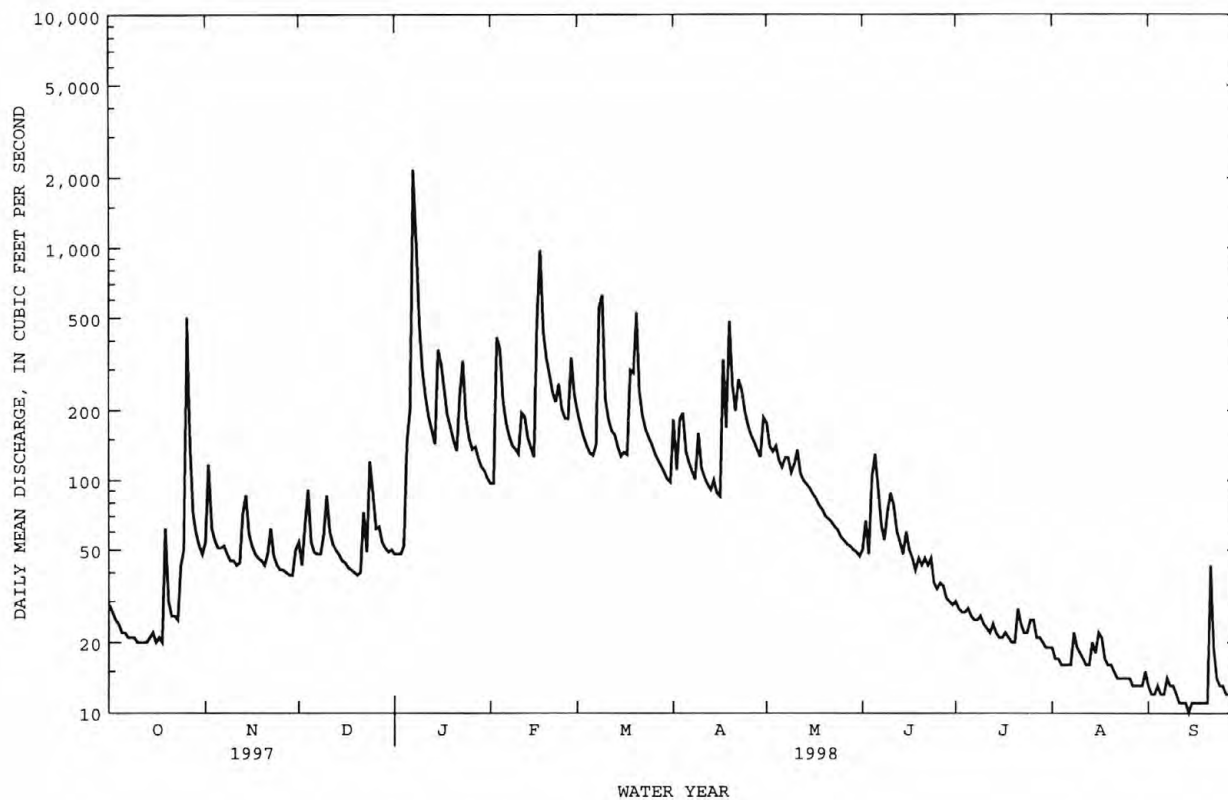
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1954 - 1998	
ANNUAL TOTAL	37007		37790			
ANNUAL MEAN	101		104		104	
HIGHEST ANNUAL MEAN					143	
LOWEST ANNUAL MEAN					59.6	
HIGHEST DAILY MEAN	1080		2170		4500	
LOWEST DAILY MEAN	17		10		10	
ANNUAL SEVEN-DAY MINIMUM	18		11		11	
INSTANTANEOUS PEAK FLOW			5140		9740	
INSTANTANEOUS PEAK STAGE			7.74		9.50*	
INSTANTANEOUS LOW FLOW			10*		9.4*	
ANNUAL RUNOFF (CFSM)	3.67		3.75		3.77	
ANNUAL RUNOFF (INCHES)	49.88		50.93		51.26	
10 PERCENT EXCEEDS	191		209		190	
50 PERCENT EXCEEDS	72		52		72	
90 PERCENT EXCEEDS	24		15		26	

e Estimated.

\* See REMARKS.

## TENNESSEE RIVER BASIN

03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN NEAR HAZELWOOD, NC--Continued



## TENNESSEE RIVER BASIN

03455773 LAKE LOGAN AT DAM NEAR HAZELWOOD, NC

LOCATION.--Lat 35°25'15", long 82°55'30", Haywood County, Hydrologic Unit 06010106, at Lake Logan Dam on West Fork Pigeon River near Hazelwood, and at river mi 7.0.

DRAINAGE AREA.--33.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1986 to January 1991, November 1995 to current year. Records for October 1986 to January 1991 and November 1995 to September 1997 are unpublished and available in the USGS District Office, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is 2,856.23 ft above sea level. Telephone telemetry at station.

REMARKS.--Records good. Total capacity is 1,040 ft<sup>3</sup>/s-day (top of flashboards), all of which is usable. Filling began November 1931 (see station 0345577330).

EXTREMES FOR CURRENT YEAR.--Maximum, 56.46 ft, Jan. 7; minimum, 46.42 ft, Sept. 21.

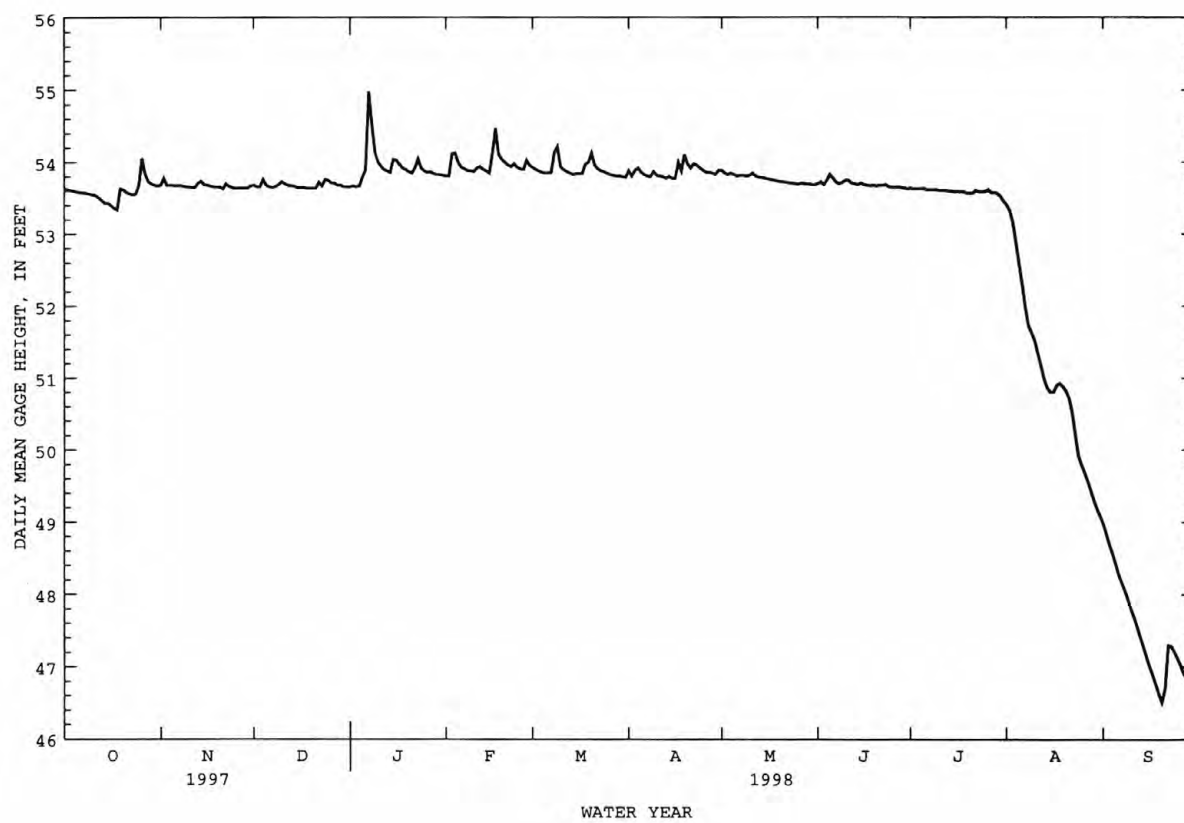
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.63	53.68	53.68	53.66	53.81	53.93	53.88	53.89	53.70	53.64	53.41	48.98
2	53.62	53.78	53.66	53.67	53.81	53.90	53.81	53.85	53.73	53.63	53.32	48.84
3	53.61	53.68	53.66	53.66	54.12	53.88	53.89	53.83	53.69	53.63	53.16	48.69
4	53.60	53.68	53.76	53.67	54.13	53.86	53.92	53.85	53.75	53.63	52.87	48.57
5	53.59	53.68	53.68	53.79	53.99	53.85	53.86	53.83	53.83	53.64	52.58	48.43
6	53.58	53.67	53.66	53.89	53.93	53.85	53.83	53.81	53.78	53.62	52.29	48.28
7	53.58	53.68	53.65	54.98	53.91	53.86	53.81	53.82	53.72	53.62	51.97	48.16
8	53.57	53.67	53.66	54.53	53.88	54.14	53.80	53.82	53.70	53.62	51.72	48.05
9	53.56	53.66	53.69	54.15	53.88	54.22	53.87	53.81	53.72	53.62	51.62	47.93
10	53.55	53.66	53.73	54.01	53.87	53.94	53.82	53.82	53.75	53.61	51.51	47.80
11	53.54	53.65	53.70	53.95	53.92	53.90	53.81	53.85	53.75	53.61	51.33	47.69
12	53.51	53.65	53.68	53.90	53.94	53.87	53.80	53.81	53.71	53.61	51.16	47.56
13	53.47	53.71	53.67	53.88	53.90	53.85	53.78	53.79	53.70	53.60	50.98	47.42
14	53.43	53.74	53.67	53.86	53.88	53.83	53.80	53.79	53.69	53.60	50.86	47.28
15	53.43	53.69	53.65	54.04	53.85	53.84	53.78	53.78	53.71	53.59	50.80	47.14
16	53.40	53.68	53.65	54.03	54.13	53.84	53.78	53.77	53.69	53.59	50.80	47.01
17	53.36	53.67	53.65	53.97	54.47	53.84	54.00	53.76	53.68	53.59	50.90	46.89
18	53.34	53.66	53.64	53.92	54.11	53.97	53.88	53.75	53.67	53.59	50.92	46.76
19	53.63	53.66	53.64	53.90	54.04	54.00	54.11	53.74	53.68	53.57	50.88	46.63
20	53.62	53.66	53.64	53.87	54.00	54.13	53.98	53.73	53.67	53.57	50.82	46.51
21	53.58	53.63	53.64	53.85	53.96	53.96	53.92	53.73	53.68	53.57	50.72	46.70
22	53.56	53.70	53.72	53.92	53.94	53.91	53.98	53.72	53.68	53.61	50.53	47.30
23	53.55	53.67	53.67	54.05	53.98	53.88	53.96	53.71	53.69	53.59	50.21	47.29
24	53.56	53.65	53.76	53.92	53.93	53.87	53.92	53.71	53.66	53.59	49.92	47.21
25	53.68	53.64	53.75	53.88	53.91	53.85	53.89	53.70	53.66	53.59	49.80	47.12
26	54.06	53.64	53.71	53.86	53.90	53.83	53.86	53.70	53.65	53.62	49.69	47.02
27	53.84	53.64	53.71	53.87	54.03	53.82	53.86	53.71	53.66	53.58	49.57	46.91
28	53.73	53.64	53.68	53.84	53.96	53.81	53.85	53.70	53.65	53.58	49.44	46.84
29	53.70	53.64	53.68	53.83	---	53.81	53.83	53.70	53.64	53.57	49.31	47.04
30	53.68	53.67	53.66	53.83	---	53.80	53.89	53.69	53.63	53.53	49.19	47.06
31	53.67	---	53.66	53.82	---	53.79	---	53.69	---	53.46	49.09	---
MEAN	53.59	53.67	53.68	53.94	53.97	53.90	53.87	53.77	53.70	53.60	51.01	47.50
MAX	54.06	53.78	53.76	54.98	54.47	54.22	54.11	53.89	53.83	53.64	53.41	48.98
MIN	53.34	53.63	53.64	53.66	53.81	53.79	53.78	53.69	53.63	53.46	49.09	46.51



## TENNESSEE RIVER BASIN

03455773 LAKE LOGAN AT DAM NEAR HAZELWOOD, NC--Continued



## TENNESSEE RIVER BASIN

0345577330 WEST FORK PIGEON RIVER NEAR RETREAT, NC

LOCATION.--Lat 35°25'36", long 82°55'12", Haywood County, Hydrologic Unit 06010106, on right bank at upstream side of bridge on State Highway 215, and 1.6 mi southwest of Retreat.

DRAINAGE AREA.--33.5 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1988 to current year.

REVISED RECORDS.--WDR NC-95-1: 1994(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,839 ft above sea level, from topographic map. Telephone telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, and those above 4000 ft<sup>3</sup>/s, which are poor. Some low flow regulation, at times, caused by Lake Logan (station 03455773). Maximum discharge for period of record from rating curve extended above 4,000 ft<sup>3</sup>/s by logarithmic plotting.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	64	63	41	90	241	282	188	57	43	26	19
2	36	148	48	51	101	214	167	145	81	41	26	19
3	35	77	58	49	488	195	200	145	53	40	32	19
4	33	69	121	53	544	180	218	150	113	41	35	20
5	30	63	59	139	351	170	149	123	191	44	35	e18
6	31	61	48	225	284	167	134	114	132	38	34	e17
7	30	65	44	2060	252	176	124	128	90	37	36	e17
8	29	58	46	1160	232	519	120	132	74	37	34	e18
9	30	54	63	522	223	733	175	112	92	38	27	e18
10	30	55	97	313	213	e310	129	119	122	34	26	e17
11	30	52	70	248	295	e260	119	141	119	31	26	e16
12	31	52	59	211	304	e220	111	106	86	32	24	e16
13	32	86	54	187	253	e190	104	95	76	35	24	e16
14	32	107	50	181	237	e180	119	87	67	30	25	e16
15	33	75	47	416	220	e170	102	83	81	28	e24	e16
16	32	64	45	385	621	e170	95	76	69	28	e23	e16
17	31	56	43	308	1080	e160	320	74	65	29	e22	e16
18	30	52	42	246	562	e320	189	73	58	27	e21	e16
19	68	52	39	220	463	e330	429	68	65	26	e21	e16
20	42	50	39	191	409	e560	286	68	62	26	e22	e16
21	34	54	40	168	363	e320	222	66	63	31	e21	e22
22	31	76	82	252	335	e260	281	69	66	37	e23	e19
23	31	55	53	375	382	e220	257	65	70	30	e24	e18
24	43	50	124	196	281	241	214	62	57	30	e23	e17
25	78	48	109	145	236	224	185	57	50	30	e20	e16
26	465	46	71	132	235	208	170	56	49	37	e19	e16
27	188	44	73	144	354	192	158	63	54	27	e19	e15
28	88	41	57	124	276	175	144	60	46	27	e19	e16
29	72	41	55	125	---	160	130	55	43	25	e18	e20
30	62	54	50	111	---	150	188	55	42	25	19	e18
31	58	---	49	94	---	150	---	50	---	27	19	---
TOTAL	1835	1869	1898	9072	9684	7765	5521	2885	2293	1011	767	519
MEAN	59.2	62.3	61.2	293	346	250	184	93.1	76.4	32.6	24.7	17.3
MAX	465	148	124	2060	1080	733	429	188	191	44	36	22
MIN	29	41	39	41	90	150	95	50	42	25	18	15

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	MEAN	101	108	127	199	215	216	161	124	111	70.0	88.1	64.2
MAX	262	265	239	314	360	309	268	193	210	209	220	137	
(WY)	1996	1993	1993	1996	1990	1990	1994	1990	1989	1989	1994	1989	
MIN	26.5	52.0	52.1	115	116	62.6	72.2	62.9	40.0	31.3	24.7	17.3	
(WY)	1994	1994	1989	1992	1992	1988	1995	1988	1988	1993	1998	1998	

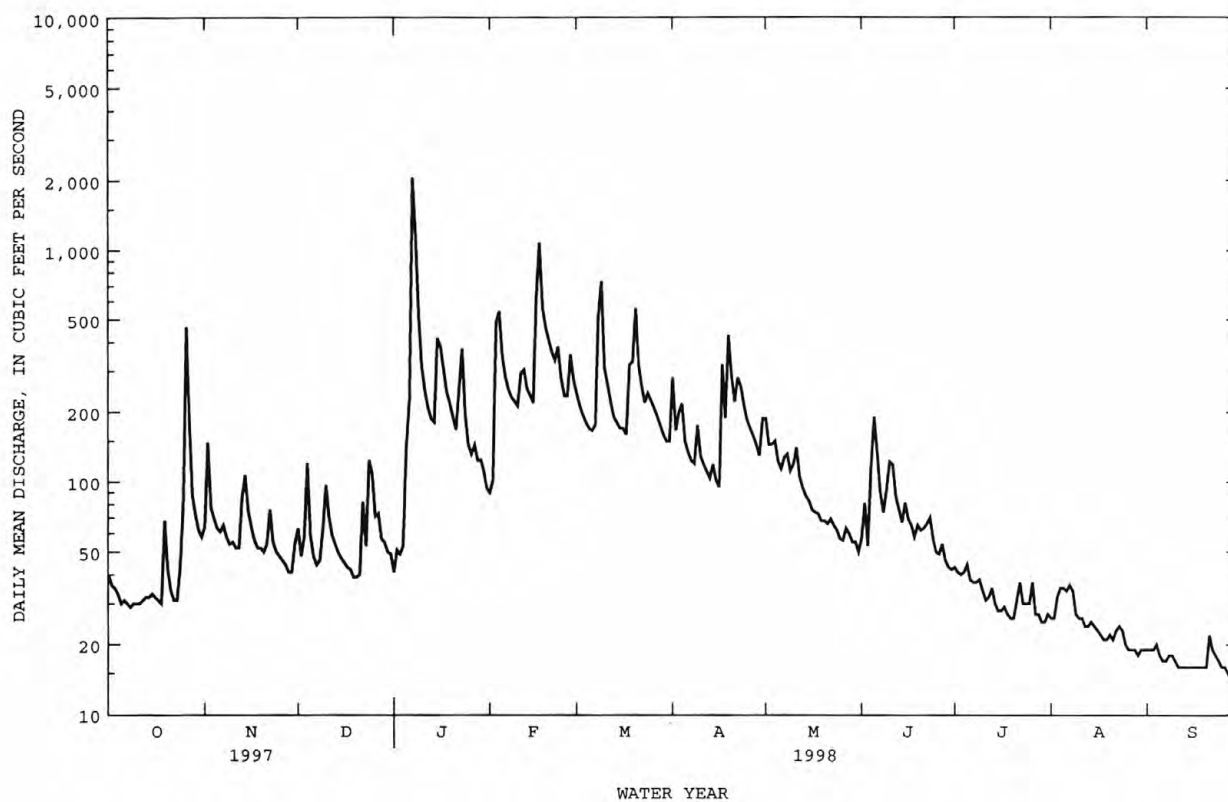
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1988 - 1998
ANNUAL TOTAL	42074	45119	
ANNUAL MEAN	115	124	135
HIGHEST ANNUAL MEAN			157
LOWEST ANNUAL MEAN			118
HIGHEST DAILY MEAN	1070	2060	2940
LOWEST DAILY MEAN	26	15	15
ANNUAL SEVEN-DAY MINIMUM	28	16	16
INSTANTANEOUS PEAK FLOW		5840	7960*
INSTANTANEOUS PEAK STAGE		7.56	8.97
INSTANTANEOUS LOW FLOW		NOT DETERMINED	17
10 PERCENT EXCEEDS	217	281	245
50 PERCENT EXCEEDS	90	63	91
90 PERCENT EXCEEDS	34	21	34

e Estimated.

\* See REMARKS.

## TENNESSEE RIVER BASIN

0345577330 WEST FORK PIGEON RIVER NEAR RETREAT, NC--Continued



## TENNESSEE RIVER BASIN

03456100 WEST FORK PIGEON RIVER AT BETHEL, NC

LOCATION.--Lat 35°27'48", long 82°54'00", Haywood County, Hydrologic Unit 06010106, on left bank 20 ft downstream of bridge on Secondary Road 1112, 0.6 mi southwest of Bethel, 1.6 mi upstream from confluence with East Fork Pigeon River, and 5.6 mi downstream of Lake Logan.

DRAINAGE AREA.--58.4 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1981 to current year.

REVISED RECORDS.--WDR NC-95-1: 1994(M).

GAGE.--Water-stage recorder. Datum of gage is 2,667.78 ft above sea level (levels by Tennessee Valley Authority). Telephone telemetry at station.

REMARKS.--Records good except those during periods of ice effect, which are fair. Considerable regulation, at times, caused by Lake Logan (station 03455773). Minimum discharge for current water year also occurred Sept. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	87	92	e83	199	384	318	313	100	62	40	29
2	58	166	79	e81	197	347	222	255	133	62	38	29
3	56	104	78	85	869	312	317	240	99	58	41	29
4	54	93	154	88	1040	287	386	251	143	64	43	30
5	52	88	90	156	613	270	285	220	256	67	43	29
6	50	86	80	264	441	256	255	207	179	56	43	28
7	50	88	74	2730	369	257	232	221	132	55	44	28
8	50	83	76	2060	324	714	216	216	113	55	47	29
9	49	79	89	911	303	1050	305	200	125	56	40	29
10	49	79	120	562	285	454	232	215	157	52	38	27
11	49	76	99	424	379	370	214	254	152	50	38	26
12	50	76	87	346	413	323	205	206	116	50	36	26
13	50	106	83	297	342	294	194	193	105	50	36	26
14	50	128	80	261	307	277	203	182	97	47	36	26
15	50	98	76	511	285	258	187	171	114	45	36	26
16	50	86	73	553	756	257	180	163	97	44	36	26
17	52	81	73	472	1640	244	509	155	93	44	34	26
18	52	79	71	363	961	409	304	146	84	43	32	26
19	92	78	70	323	712	521	694	140	91	42	32	26
20	63	76	69	279	600	782	530	126	90	42	34	26
21	54	79	69	252	502	486	384	122	86	46	33	32
22	51	105	111	325	446	378	471	127	91	54	35	30
23	50	81	85	525	512	328	467	120	99	45	37	28
24	58	76	150	323	416	301	389	115	78	45	35	27
25	93	72	159	272	378	280	340	108	73	43	30	26
26	621	72	108	246	364	259	304	105	69	51	30	26
27	273	72	114	264	537	241	283	105	73	43	30	25
28	128	70	97	241	438	226	263	107	66	42	30	26
29	103	70	93	221	---	214	243	98	64	40	29	31
30	90	78	89	216	---	204	306	96	63	39	29	29
31	84	---	86	207	---	196	---	92	---	40	29	---
TOTAL	2693	2612	2874	13941	14628	11179	9438	5269	3238	1532	1114	827
MEAN	86.9	87.1	92.7	450	522	361	315	170	108	49.4	35.9	27.6
MAX	621	166	159	2730	1640	1050	694	313	256	67	47	32
MIN	49	70	69	81	197	196	180	92	63	39	29	25
CFSM	1.49	1.49	1.59	7.70	8.95	6.17	5.39	2.91	1.85	.85	.62	.47
IN.	1.72	1.66	1.83	8.88	9.32	7.12	6.01	3.36	2.06	.98	.71	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1998, BY WATER YEAR (WY)

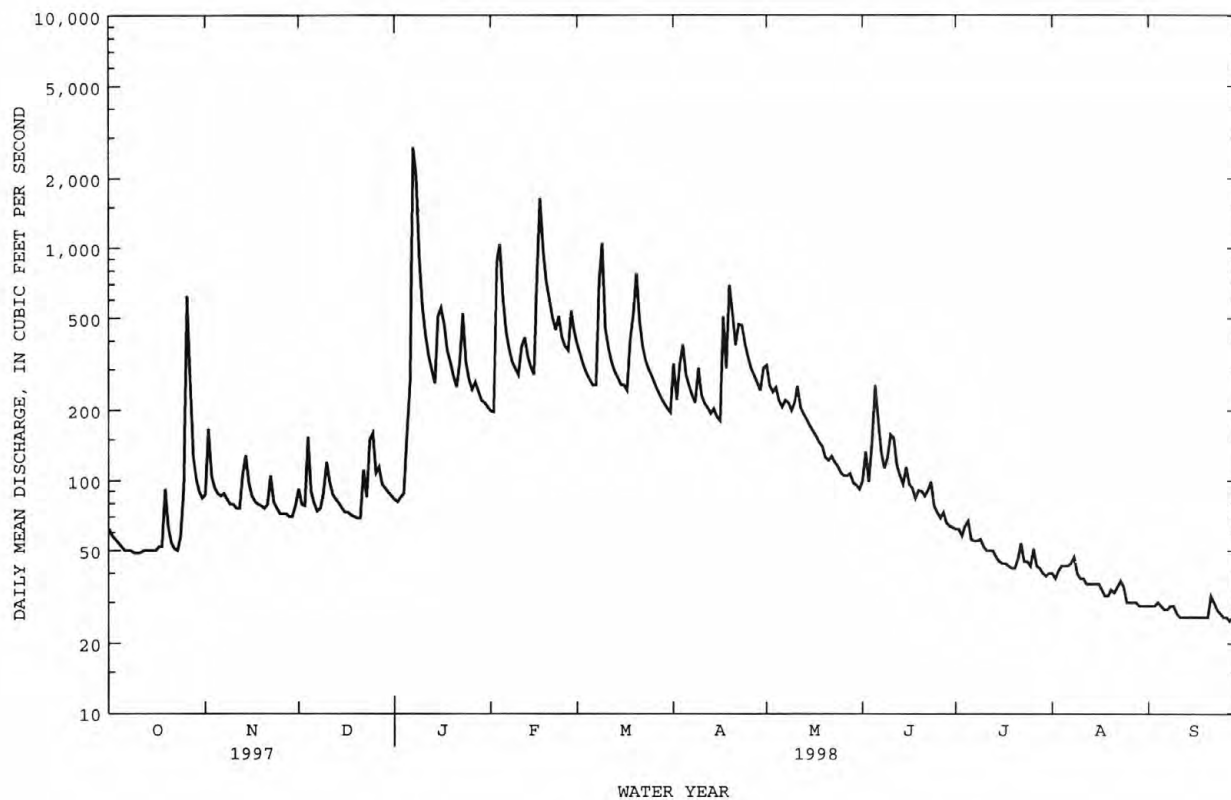
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	103	133	178	220	273	283	231	173	124	86.9	97.5	73.9						
MAX	336	341	334	450	522	461	481	368	287	281	317	207						
(WY)	1996	1993	1984	1998	1998	1997	1983	1984	1992	1989	1994	1989						
MIN	33.2	43.0	83.5	53.5	102	83.6	83.5	81.7	53.0	45.8	29.3	27.6						
(WY)	1994	1982	1989	1981	1986	1988	1986	1986	1988	1993	1993	1998						

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1981 - 1998
ANNUAL TOTAL	64544	69345	
ANNUAL MEAN	177	190	167
HIGHEST ANNUAL MEAN			211
LOWEST ANNUAL MEAN			87.5
HIGHEST DAILY MEAN	1620	Mar 14	2730
LOWEST DAILY MEAN	44	Sep 7	25
ANNUAL SEVEN-DAY MINIMUM	45	Sep 14	26
INSTANTANEOUS PEAK FLOW			7340
INSTANTANEOUS PEAK STAGE			10.68
INSTANTANEOUS LOW FLOW			25*
ANNUAL RUNOFF (CFSM)	3.03	3.25	4.2
ANNUAL RUNOFF (INCHES)	41.11	44.17	2.86
10 PERCENT EXCEEDS	338	414	318
50 PERCENT EXCEEDS	128	93	112
90 PERCENT EXCEEDS	50	32	47

e Estimated.  
\* See REMARKS.

## TENNESSEE RIVER BASIN

03456100 WEST FORK PIGEON RIVER AT BETHEL, NC--Continued



## TENNESSEE RIVER BASIN

03456500 EAST FORK PIGEON RIVER NEAR CANTON, NC

LOCATION.--Lat 35°27'42", long 82°52'13", Haywood County, Hydrologic Unit 06010106, on right bank 800 ft upstream from bridge on U.S. Highway 276, 0.3 mi downstream of Dix Creek, 1.6 mi upstream from confluence with West Fork Pigeon River, and 5.2 mi southwest of Canton.

DRAINAGE AREA.--51.5 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1954 to current year.

REVISED RECORDS.--WDR NC-73-1: 1966(M), 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 2,674.34 ft above sea level (Tennessee Valley Authority bench mark). Telephone telemetry at station.

REMARKS.--Records good except those during period of ice effect, which are fair. Maximum discharge for period of record, from rating curve extended above 5,470 ft<sup>3</sup>/s, on basis of contracted-opening measurement of peak flow. Minimum discharge for period of record also occurred Dec. 11, 1981, result of freezeup, and Oct. 9, 1994. Minimum discharge for current water year also occurred Sept. 14, 15, 16, 17, 18, 19, 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	77	72	e78	196	360	239	276	89	50	32	16
2	46	109	62	e76	193	326	192	241	118	49	29	16
3	44	83	60	74	895	296	243	226	85	48	28	16
4	42	76	97	74	1220	271	279	222	103	53	26	17
5	40	72	71	112	683	251	232	204	183	59	25	15
6	39	71	66	198	480	237	214	193	132	49	25	15
7	39	72	62	2660	395	232	200	200	105	47	24	25
8	38	67	62	2540	346	640	190	197	93	46	31	21
9	38	65	66	924	319	1090	243	179	95	47	31	19
10	38	64	78	565	294	540	198	190	116	44	29	16
11	38	61	70	427	352	427	187	225	115	43	26	15
12	38	61	65	346	384	368	179	191	94	42	24	14
13	38	74	63	294	339	327	170	180	85	41	24	13
14	39	89	61	254	306	296	169	170	80	40	41	13
15	39	73	59	382	277	269	161	162	82	40	36	13
16	38	67	58	412	627	252	157	156	76	39	45	13
17	39	65	57	373	1600	239	393	149	73	43	36	13
18	39	63	56	316	993	324	252	139	68	38	28	13
19	80	62	55	289	696	394	594	132	70	35	26	14
20	46	60	54	253	568	643	492	124	71	35	27	15
21	40	60	54	229	481	469	378	117	65	42	24	30
22	39	72	86	289	428	381	434	112	69	43	22	34
23	38	61	69	503	457	335	426	108	83	40	21	19
24	43	58	122	357	392	301	370	103	64	38	20	16
25	71	57	143	304	357	272	328	98	60	38	20	16
26	402	56	103	270	337	251	294	95	57	43	19	16
27	234	55	106	275	449	233	271	92	56	38	17	14
28	123	54	92	247	399	220	250	93	53	38	17	33
29	98	54	87	223	---	208	230	88	52	34	17	34
30	85	64	82	215	---	196	271	85	51	32	17	25
31	77	---	79	203	---	188	---	81	---	32	17	---
TOTAL	2098	2022	2317	13762	14463	10836	8236	4828	2543	1306	804	549
MEAN	67.7	67.4	74.7	444	517	350	275	156	84.8	42.1	25.9	18.3
MAX	402	109	143	2660	1600	1090	594	276	183	59	45	34
MIN	38	54	54	74	193	188	157	81	51	32	17	13
CFSM	1.31	1.31	1.45	8.62	10.0	6.79	5.33	3.02	1.65	.82	.50	.36
IN.	1.52	1.46	1.67	9.94	10.45	7.83	5.95	3.49	1.84	.94	.58	.40

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1998, BY WATER YEAR (WY)

	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
MEAN	114	135	148	172	211	240	212	158	119	73.8	79.3	81.8
MAX	363	484	337	444	517	541	480	453	339	268	263	436
(WY)	1965	1980	1962	1998	1998	1979	1957	1976	1967	1989	1994	1979
MIN	17.1	27.9	42.4	33.8	71.9	60.9	63.2	59.8	35.7	25.3	25.9	16.0
(WY)	1955	1955	1956	1956	1986	1988	1986	1986	1988	1986	1998	1954

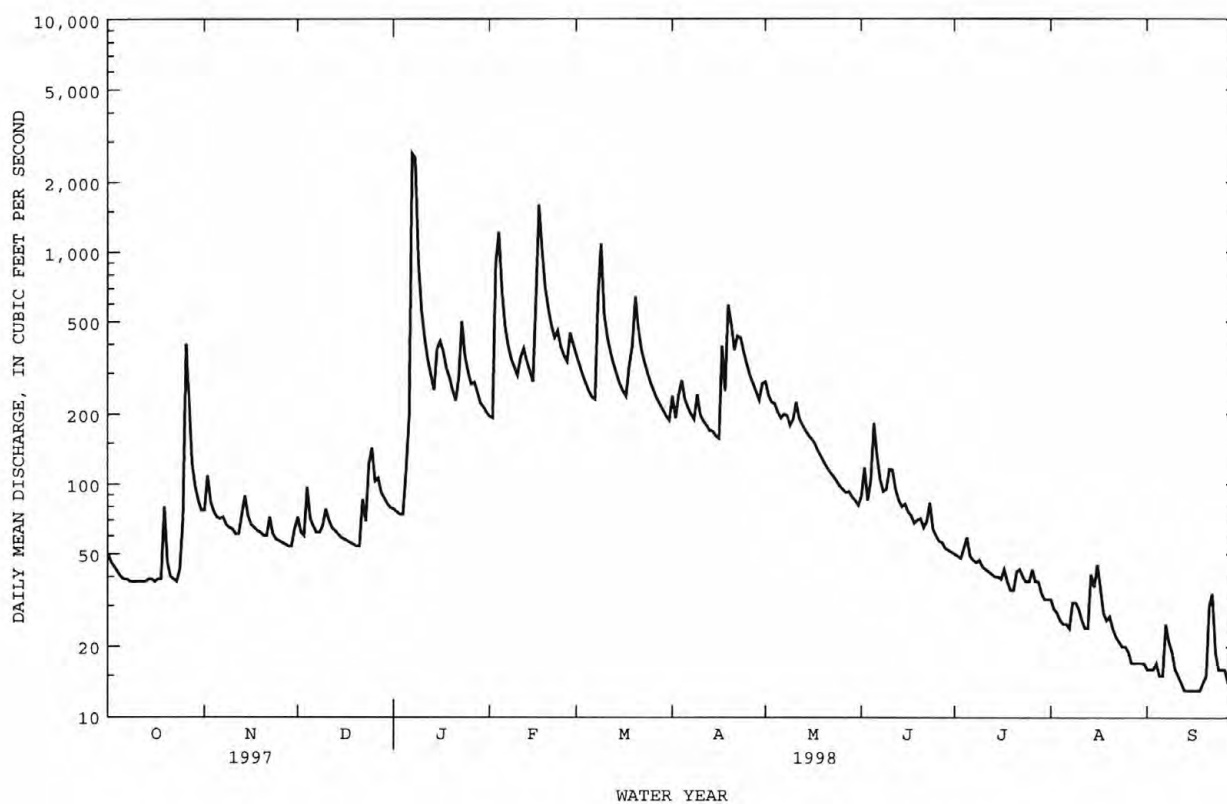
## TENNESSEE RIVER BASIN

03456500 EAST FORK PIGEON RIVER NEAR CANTON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1954 - 1998	
ANNUAL TOTAL	51861		63764		146	
ANNUAL MEAN	142		175		204	1979
HIGHEST ANNUAL MEAN					71.9	1988
LOWEST ANNUAL MEAN					4390	Feb 13 1966
HIGHEST DAILY MEAN	1700	Mar 14	2660	Jan 7	13	Sep 13 1998
LOWEST DAILY MEAN	31	Sep 20	13	Sep 12	13	Sep 12 1998
ANNUAL SEVEN-DAY MINIMUM	32	Sep 17	13	Jan 7	12000*	May 28 1973
INSTANTANEOUS PEAK FLOW			7910	Jan 7	11.19	May 28 1973
INSTANTANEOUS PEAK STAGE			8.95	Jan 7	12*	Jan 9 1956
INSTANTANEOUS LOW FLOW			13*	Sep 13	2.83	
ANNUAL RUNOFF (CFSM)	2.76		3.39		38.41	
ANNUAL RUNOFF (INCHES)	37.46		46.06		272	
10 PERCENT EXCEEDS	258		387		102	
50 PERCENT EXCEEDS	110		78		36	
90 PERCENT EXCEEDS	39		24			

e Estimated

\* See REMARKS.





## TENNESSEE RIVER BASIN

03456991 PIGEON RIVER NEAR CANTON, NC

LOCATION.--Lat 35°31'19", long 82°50'53", Haywood County, Hydrologic Unit 06010106, on right bank 600 ft upstream from State Highway 215 bridge, 1.3 mi upstream from U.S. Highways 19 and 23 at Canton, and at mile 64.9.

DRAINAGE AREA.--130 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1907 to June 1909, October 1928 to current year. Monthly discharge only for some periods published in WSP 1306. Published as Pigeon River at Canton, NC (03457000) May 1907 to June 1909, October 1928 to September 1983.

REVISED RECORDS.--WSP 823: Drainage area. WSP 853: 1929-37(M). WSP 1306: 1903(M). WDR NC-91-1: 1984-89(M).

GAGE.--Water-stage recorder. Datum of gage is 2,581.66 ft above sea level (Tennessee Valley Authority bench mark). Prior to June 1909, nonrecording gage at bridge 1.2 mi downstream at different datum. Dec. 6, 1928, to Jan. 3, 1929, nonrecording gage at site 0.8 mi downstream at different datum. Prior to Oct. 1, 1983, water-stage recorder at site 0.8 mi downstream at different datum. Telephone telemetry at station.

REMARKS.--Records good except those during periods of ice effect, which are fair. Occasional diurnal fluctuation and considerable regulation at low flow, since 1932, caused by Lake Logan (station 03455773) on West Fork Pigeon River 11.2 mi upstream. Prior to regulation, maximum discharge: 21,500 ft<sup>3</sup>/s, Aug. 16, 1928; gage height: 16.40 ft; minimum discharge: 39 ft<sup>3</sup>/s, Sept. 3, 1930. Maximum discharge and gage height for period of record, at former site from high water mark in gage well; minimum discharge for period of record, at former site, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about 1810 is believed to have been approximately equal to that of Aug. 30, 1940, and flood of June 15, 1876, reached a stage of 18.3 ft; discharge, 25,700 ft<sup>3</sup>/s, at former site, from studies by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	191	182	e194	413	745	566	634	243	133	79	49
2	93	316	161	e190	407	662	446	543	314	134	73	48
3	88	225	149	185	2170	612	566	514	245	128	73	48
4	83	198	275	189	2780	567	705	519	263	144	75	51
5	79	186	187	263	1410	528	555	473	560	167	74	46
6	73	181	165	501	974	502	502	447	395	131	73	46
7	72	186	e161	5000	804	492	469	465	307	125	73	51
8	71	172	e158	6010	692	1290	442	464	264	124	86	54
9	69	163	171	1910	644	2210	575	432	262	125	78	52
10	66	162	218	1120	602	1010	469	454	339	115	75	46
11	64	155	200	847	726	808	440	547	343	109	71	44
12	64	154	173	687	816	693	418	454	270	107	66	43
13	64	194	164	595	687	626	401	427	242	105	65	41
14	64	243	160	522	627	583	407	408	225	101	78	40
15	64	200	151	830	581	540	385	392	245	98	77	40
16	62	175	147	1000	1380	520	389	377	220	93	85	40
17	64	164	145	854	3530	492	984	363	209	100	74	41
18	64	160	142	673	2100	675	607	345	192	92	62	40
19	149	157	138	616	1440	946	1350	332	195	84	58	39
20	97	152	135	541	1180	1440	1100	311	206	84	61	42
21	72	156	136	491	988	981	816	300	182	87	57	54
22	68	198	211	546	879	776	949	299	203	114	58	72
23	64	164	181	1010	983	669	967	289	229	96	63	48
24	71	151	256	669	825	615	816	277	180	91	62	44
25	140	144	378	573	738	569	710	264	164	85	52	43
26	956	143	252	516	693	527	641	256	156	104	50	43
27	629	141	265	539	935	494	598	250	159	90	50	40
28	308	137	227	501	839	467	564	259	148	89	50	57
29	244	136	213	457	---	444	523	240	141	82	49	76
30	210	151	203	451	---	423	599	234	138	75	49	57
31	191	---	193	429	---	406	---	225	---	77	49	---
TOTAL	4506	5255	5897	28909	30843	22312	18959	11794	7239	3289	2045	1435
MEAN	145	175	190	933	1102	720	632	380	241	106	66.0	47.8
MAX	956	316	378	6010	3530	2210	1350	634	560	167	86	76
MIN	62	136	135	185	407	406	385	225	138	75	49	39
CFSM	1.12	1.35	1.46	7.17	8.47	5.54	4.86	2.93	1.86	.82	.51	.37
IN.	1.29	1.50	1.69	8.27	8.83	6.38	5.43	3.37	2.07	.94	.59	.41

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1998\*, BY WATER YEAR (WY)

	MEAN	228	268	327	431	487	544	472	339	267	192	205	191
MAX	787	964	872	1017	1151	1058	1005	981	781	583	1476	818	
(WY)	1965	1980	1933	1937	1939	1975	1983	1976	1967	1989	1940	1979	
MIN	48.2	59.2	64.5	85.3	150	155	167	132	96.5	89.7	65.9	47.8	
(WY)	1955	1955	1940	1956	1941	1988	1986	1941	1941	1993	1954	1998	

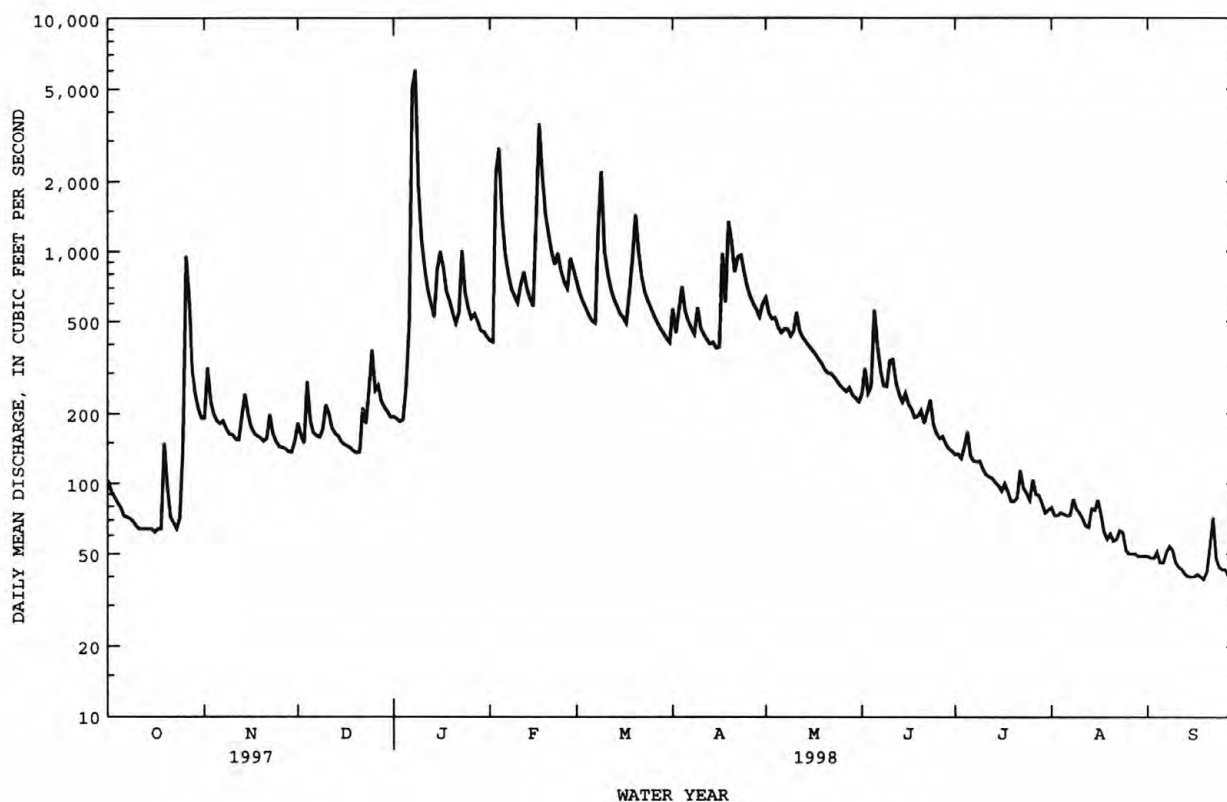
## TENNESSEE RIVER BASIN

03456991 PIGEON RIVER NEAR CANTON, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1932 - 1998*	
ANNUAL TOTAL	123495		142483		328	
ANNUAL MEAN	338		390		503	
HIGHEST ANNUAL MEAN					170	
LOWEST ANNUAL MEAN					1949	
HIGHEST DAILY MEAN	3530	Mar 14	6010	Jan 8	12800	Aug 13 1940
LOWEST DAILY MEAN	59	Sep 20	39	Sep 19	27	Sep 7 1954
ANNUAL SEVEN-DAY MINIMUM	61	Sep 17	40	Sep 13	40	Sep 13 1998
INSTANTANEOUS PEAK FLOW			16200	Jan 8	31600*	Aug 30 1940
INSTANTANEOUS PEAK STAGE			12.96	Jan 8	20.75*	Aug 30 1940
INSTANTANEOUS LOW FLOW			34	Sep 19	15*	Jan 8 1956
ANNUAL RUNOFF (CFSM)	2.60		3.00		2.53	
ANNUAL RUNOFF (INCHES)	35.34		40.77		34.32	
10 PERCENT EXCEEDS	618		820		619	
50 PERCENT EXCEEDS	275		206		233	
90 PERCENT EXCEEDS	75		58		88	

e Estimated.

\* Regulated period only (1932-1998). See REMARKS.



## TENNESSEE RIVER BASIN

03459500 PIGEON RIVER NEAR HEPCO, NC

LOCATION.--Lat 35°38'05", long 82°59'21", Haywood County, Hydrologic Unit 06010106, on left bank 95 ft east of Interstate Highway 40, 0.8 mi downstream of Jonathan Creek, 2.0 mi south of Hepco, 2.4 mi upstream from Fines Creek, and at mile 45.1.

DRAINAGE AREA.--350 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1927 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 893: 1928-31, 1932(M), 1933-36, 1937-39(M).

GAGE.--Water-stage recorder. Datum of gage is 2,335.95 ft above sea level (levels by Tennessee Valley Authority). Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Considerable regulation by Lake Junaluska (station 03458319) on Richland Creek and Lake Logan (station 03455773) on West Fork Pigeon River for periods at low flow, combined capacity of reservoirs, about 2,000 ft<sup>3</sup>/s-day. Maximum discharge for period of record, from rating curve extended above 12,000 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 14.94 and 15.82 ft. Maximum gage height for period of record and current water year from high-water mark in gage house.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 1876 and February 1902 reached a stage of about 18 ft, from flood profiles by Tennessee Valley Authority; discharge, about 42,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	315	418	398	410	1130	1260	1520	1420	558	359	230	124
2	288	638	360	430	1360	1150	1380	1220	747	344	212	123
3	273	507	337	441	4520	1070	1260	1150	589	333	203	122
4	259	443	536	448	5600	995	1540	1180	629	353	201	129
5	248	408	423	483	2980	992	1320	1060	1640	421	195	120
6	234	400	374	808	2050	1050	1210	993	1110	340	192	121
7	231	402	350	5280	1800	1010	929	1130	779	324	186	125
8	226	390	340	8080	1680	2020	802	1120	651	339	202	143
9	220	370	371	3230	1430	3030	1100	977	675	341	203	143
10	216	359	449	2180	1420	1880	1050	1110	821	312	211	126
11	217	350	456	1690	1600	1540	984	1360	806	292	193	120
12	213	341	391	1380	1860	1380	925	1060	657	290	182	115
13	210	388	374	1190	1600	1260	883	972	591	287	210	111
14	213	446	363	1030	1450	1170	918	912	550	277	221	108
15	220	424	349	1640	1330	1080	869	864	585	270	211	104
16	211	374	339	2350	2050	1050	874	827	568	259	278	111
17	218	354	332	1980	4590	999	2770	791	518	270	218	122
18	215	343	331	1530	3420	1350	1660	752	472	257	189	112
19	373	338	322	1400	2660	1940	2680	720	476	242	174	108
20	321	332	315	1200	2230	2330	2530	689	494	256	166	111
21	247	336	313	1070	1880	1960	1940	685	458	295	165	209
22	236	431	450	1120	1710	1580	2380	674	479	300	154	194
23	223	375	437	1790	2100	1380	2540	647	578	282	156	148
24	241	342	592	1370	1810	1270	2070	624	456	298	170	133
25	342	326	830	1170	1530	1170	1760	603	415	282	159	125
26	1980	321	566	1050	1450	1080	1560	588	406	269	143	123
27	1490	317	622	1110	1610	1020	1440	553	412	271	136	118
28	693	309	545	1080	1470	972	1340	546	383	279	133	191
29	540	305	492	994	---	925	1220	522	392	247	129	263
30	462	319	473	1050	---	888	1310	511	374	230	128	187
31	416	---	459	1130	---	852	---	501	---	231	123	---
TOTAL	11791	11406	13289	50114	60320	41653	44764	26761	18269	9150	5673	4089
MEAN	380	380	429	1617	2154	1344	1492	863	609	295	183	136
MAX	1980	638	830	8080	5600	3030	2770	1420	1640	421	278	263
MIN	210	305	313	410	1130	852	802	501	374	230	123	104

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1998, BY WATER YEAR (WY)

	MEAN	423	505	677	895	1044	1171	1000	730	548	424	432	381
MAX	1353	1627	2125	2275	2227	2455	2010	1630	1502	1141	2246	1214	
(WY)	1965	1980	1933	1937	1990	1929	1936	1984	1967	1989	1940	1928	
MIN	122	133	193	194	319	346	359	283	200	183	163	129	
(WY)	1955	1954	1940	1940	1941	1988	1986	1941	1988	1986	1953	1954	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

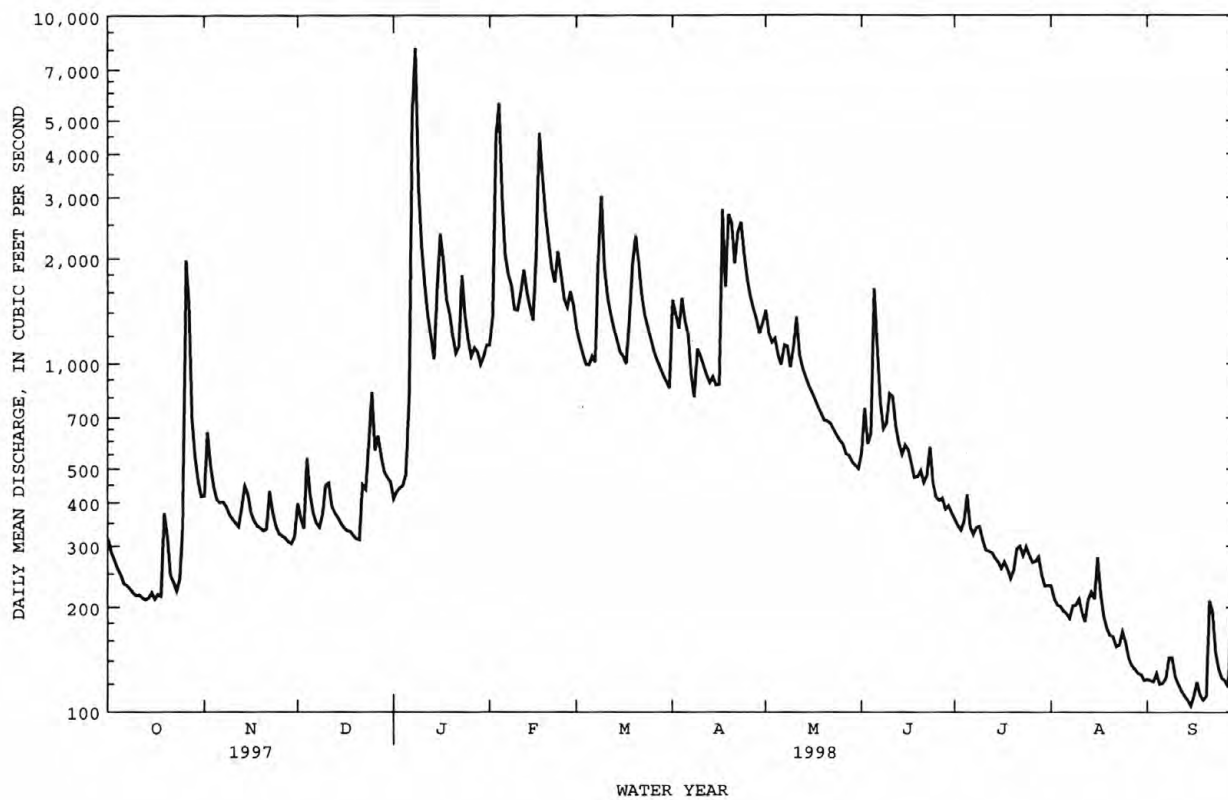
## FOR 1998 WATER YEAR

## WATER YEARS 1927 - 1998

ANNUAL TOTAL	281237	297279	
ANNUAL MEAN	771	814	684
HIGHEST ANNUAL MEAN			943
LOWEST ANNUAL MEAN			341
HIGHEST DAILY MEAN	4910	Feb 28	17100
LOWEST DAILY MEAN	177	Sep 8	95
ANNUAL SEVEN-DAY MINIMUM	186	Sep 14	109
INSTANTANEOUS PEAK FLOW			32700*
INSTANTANEOUS PEAK STAGE			11.90* Jan 8
INSTANTANEOUS LOW FLOW			15.82* Aug 30 1940
10 PERCENT EXCEEDS	1490	99	81
50 PERCENT EXCEEDS	622	1730	1270
90 PERCENT EXCEEDS	221	472	510
		168	209

\* See REMARKS.

TENNESSEE RIVER BASIN  
03459500 PIGEON RIVER NEAR HEPCO, NC--Continued



## TENNESSEE RIVER BASIN

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, NC

(Hydrologic Benchmark Network station)

LOCATION.--Lat 35°40'02", long 83°04'22", Haywood County, Hydrologic Unit 06010106, in Great Smoky Mountains National Park, on left bank 20 ft downstream of bridge on State Highway 284, 500 ft upstream from Little Cataloochee Creek, 2 mi north of Cataloochee, and 3.7 mi upstream from mouth.

DRAINAGE AREA.--49.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1933 to September 1952, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,456.88 ft above sea level (levels by Tennessee Valley Authority). Satellite telemetry at station.

REMARKS.--Records good except those during period of ice effect, which are fair. Minimum discharge for period of record also occurred Jan. 2, 1940, and Dec. 17, 24, 1943, result of freezeup. Minimum discharge for current water year also occurred Sept. 16, 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	64	61	e79	129	212	198	186	83	60	41	22
2	45	83	51	e77	130	195	142	179	109	55	37	22
3	43	65	54	e75	453	180	196	176	77	53	35	22
4	42	62	77	e77	468	166	323	183	94	53	33	23
5	40	58	59	87	298	155	248	166	274	56	33	21
6	39	60	56	109	230	147	212	157	177	50	32	23
7	38	58	e56	494	200	139	189	205	128	50	31	25
8	37	59	e56	877	183	219	172	187	107	58	30	32
9	37	56	59	439	175	286	192	180	136	52	30	26
10	36	56	102	294	167	213	165	192	165	48	31	23
11	36	54	85	231	232	191	151	240	174	46	29	22
12	36	54	79	192	325	177	141	206	141	45	29	21
13	35	57	75	171	266	169	134	188	121	44	56	21
14	38	66	72	148	225	156	149	172	111	43	39	20
15	42	58	65	272	195	144	132	158	119	43	33	20
16	36	54	62	301	250	145	134	146	104	42	48	20
17	36	51	60	285	430	134	747	136	92	42	39	21
18	36	52	58	240	477	229	412	126	84	40	31	20
19	53	52	56	215	377	343	475	118	86	39	30	20
20	39	50	54	183	321	361	476	113	79	38	29	21
21	36	57	54	163	273	326	377	108	79	41	27	41
22	37	75	75	177	245	266	387	106	74	40	27	27
23	34	57	58	193	262	226	414	100	103	51	26	23
24	41	54	108	181	225	200	372	96	75	46	26	22
25	59	53	108	167	206	177	314	92	70	45	25	22
26	252	52	91	156	196	161	271	91	71	41	24	22
27	174	51	99	164	224	151	249	89	70	44	24	21
28	97	50	87	156	225	143	221	85	61	49	24	22
29	80	49	83	140	---	136	197	82	65	40	23	30
30	69	51	e83	139	---	129	203	80	63	40	23	29
31	63	---	e81	134	---	123	---	77	---	41	23	---
TOTAL	1734	1718	2224	6616	7387	5999	7993	4420	3192	1435	968	704
MEAN	55.9	57.3	71.7	213	264	194	266	143	106	46.3	31.2	23.5
MAX	252	83	108	877	477	361	747	240	274	60	56	41
MIN	34	49	51	75	129	123	132	77	61	38	23	20
CFSM	1.14	1.16	1.46	4.34	5.36	3.93	5.42	2.90	2.16	.94	.63	.48
IN.	1.31	1.30	1.68	5.00	5.59	4.54	6.04	3.34	2.41	1.09	.73	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1998<sup>a</sup>, BY WATER YEAR (WY)

MEAN	54.7	72.1	114	168	182	207	157	112	85.6	72.2	72.2	53.7
MAX	146	159	302	392	394	496	305	283	252	182	223	123
(WY)	1990	1980	1973	1937	1990	1963	1936	1984	1967	1949	1940	1989
MIN	22.3	22.3	26.0	35.5	49.5	63.2	58.8	46.2	34.7	29.6	26.9	23.5
(WY)	1940	1940	1940	1940	1941	1988	1986	1986	1986	1986	1987	1998

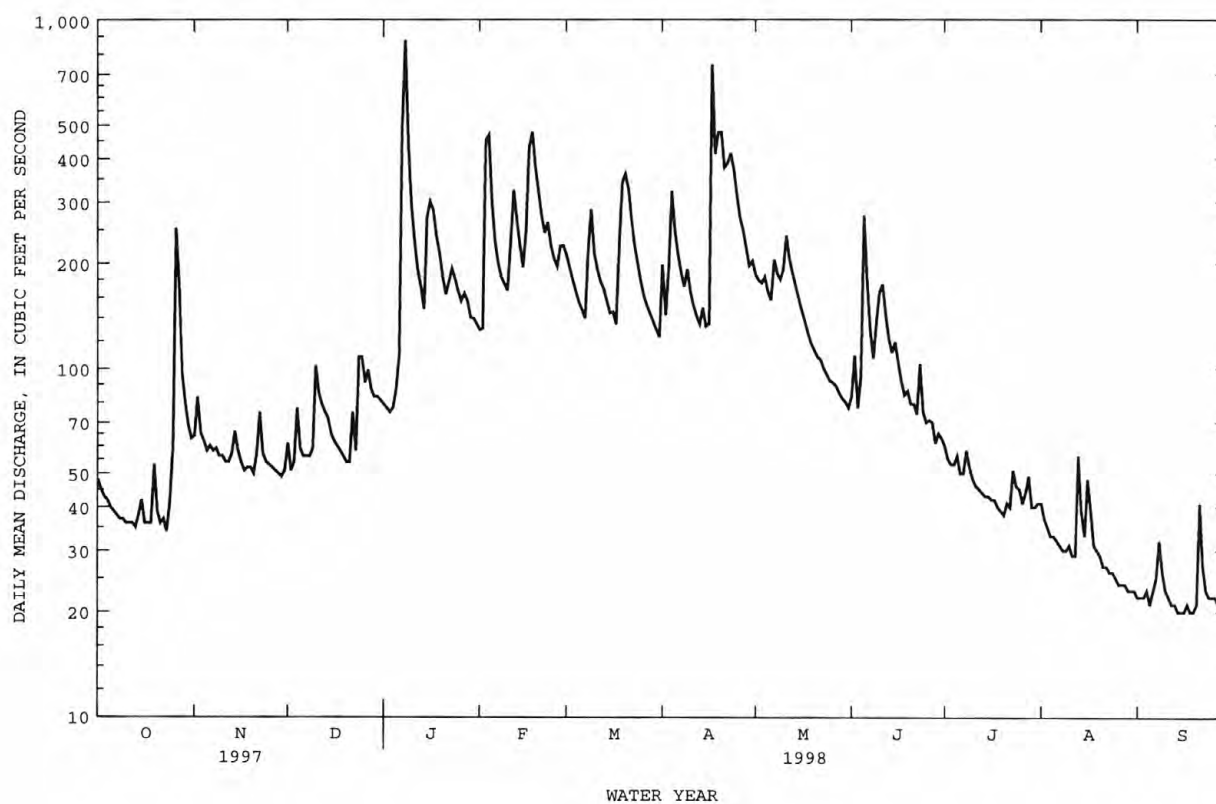
## TENNESSEE RIVER BASIN

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1934 - 1998 <sup>a</sup>	
ANNUAL TOTAL	46420		44390		112	
ANNUAL MEAN	127		122		171	1994
HIGHEST ANNUAL MEAN					51.5	1986
LOWEST ANNUAL MEAN					2690	Mar 16 1973
HIGHEST DAILY MEAN	1120	Mar 3	877	Jan 8	12	Jan 2 1940
LOWEST DAILY MEAN	29	Sep 17	20	Sep 14	19	Dec 31 1939
ANNUAL SEVEN-DAY MINIMUM	31	Sep 2	20	Sep 13	5080	Mar 6 1963
INSTANTANEOUS PEAK FLOW			1520	Apr 17	8.08	Mar 6 1963
INSTANTANEOUS PEAK STAGE			5.24	Apr 17	9.4*	Jan 2 1940
INSTANTANEOUS LOW FLOW			18*	Sep 15	2.28	
ANNUAL RUNOFF (CFSM)	2.58		2.47		31.03	
ANNUAL RUNOFF (INCHES)	35.10		33.56		208	
10 PERCENT EXCEEDS	250		251		82	
50 PERCENT EXCEEDS	97		79		34	
90 PERCENT EXCEEDS	36		27			

<sup>a</sup> Estimated.

\* See REMARKS.

<sup>e</sup> See PERIOD OF RECORD.



## TENNESSEE RIVER BASIN

03460795 PIGEON RIVER BELOW POWER PLANT NEAR WATERVILLE, NC

LOCATION.--Lat 35°47'02", long 83°06'44", Cocke County Tennessee, Hydrologic Unit 06010105, on left bank, 550 ft upstream of Browns Bridge on Waterville Road, 0.9 mi downstream of North Carolina and Tennessee state lines, 1.0 mi northwest of Waterville, and at mile 25.

DRAINAGE AREA.--538 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1997 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,360 ft above sea level, from topographic map. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Considerable regulation, caused by Walters Hydroelectric Plant, 1.0 mi upstream. Minimum discharge for period of record and for current water year affected by regulation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	943	668	387	588	1970	2090	1840	2040	653	e650	590	390
2	591	397	287	411	2060	2340	1790	2200	713	675	163	466
3	463	1320	e800	181	3040	2420	2120	1720	1120	294	155	393
4	181	814	803	237	7240	1690	2930	2100	e910	672	446	127
5	146	943	668	1740	4520	1460	2560	1870	e1610	177	817	413
6	742	857	459	2030	3010	1640	2460	1540	e1990	275	417	110
7	609	657	289	3270	2600	2360	2280	1510	e1180	574	148	110
8	315	876	445	10800	2530	2590	2150	2090	e640	758	424	325
9	131	504	255	3700	2510	2770	1900	1920	1310	640	142	333
10	207	1240	225	2380	2520	2540	2220	1580	e1650	489	142	371
11	184	1070	665	2010	2640	2300	923	2960	1380	755	e135	126
12	123	850	636	2000	2900	1970	1320	2530	1260	198	e570	117
13	134	978	541	2030	2690	2130	1410	1510	1260	480	690	114
14	453	803	625	2080	2580	2380	1240	1540	700	484	204	390
15	536	122	871	2330	2500	1960	1180	1510	819	589	569	120
16	611	203	383	2480	2520	1960	1470	1270	623	530	205	120
17	241	397	379	2530	4450	1730	4600	1110	1230	187	242	114
18	126	474	514	2100	5410	1990	3070	1260	1080	556	156	120
19	152	1180	528	2090	3940	2810	4240	1420	940	140	404	121
20	707	538	319	2390	3300	2860	4770	973	954	460	433	122
21	772	190	481	2070	2790	2880	3270	1410	202	638	135	128
22	291	225	481	2340	2570	2620	3440	797	480	797	494	133
23	284	190	800	2460	2850	2270	4210	678	1020	747	131	138
24	212	648	723	2420	3080	2110	3550	349	1280	225	719	126
25	150	638	772	1980	2680	1810	2940	1070	1350	458	417	125
26	1620	902	664	2050	2600	1570	2630	1090	435	140	382	132
27	1850	150	1200	1410	2620	1490	2550	1080	627	433	379	130
28	1120	174	1470	1740	2580	1530	2530	851	284	771	128	128
29	1100	131	1040	e1120	---	1740	2380	568	627	476	503	119
30	581	133	1080	e1460	---	1640	2240	796	e630	421	136	113
31	1170	---	867	e1360	---	1890	---	210	---	156	133	---
TOTAL	16745	18272	19657	67787	86700	65540	76213	43552	28957	14845	10609	5774
MEAN	540	609	634	2187	3096	2114	2540	1405	965	479	342	192
MAX	1850	1320	1470	10800	7240	2880	4770	2960	1990	797	817	466
MIN	123	122	225	181	1970	1460	923	210	202	140	128	110
†	+16	-29	-5	-48	+86	-11	-3	+13	+10	-12	-48	+10

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

	1997	1998	1998	1998	1997	1998	1997	1998	1997	1998	1997	1998
MEAN	540	609	634	2187	2423	2810	2191	1446	1199	648	379	334
MAX	540	609	634	2187	3096	3505	2540	1488	1432	818	416	476
(WY)	1998	1998	1998	1998	1998	1997	1998	1998	1997	1997	1997	1997
MIN	540	609	634	2187	1749	2114	1842	1405	965	479	342	192
(WY)	1998	1998	1998	1998	1997	1998	1997	1998	1998	1998	1998	1998

## SUMMARY STATISTICS

## FOR 1998 WATER YEAR

## WATER YEARS 1997 - 1998

ANNUAL TOTAL	454651			
ANNUAL MEAN	1246	†1165	1246	(UNADJUSTED)
HIGHEST ANNUAL MEAN			1246	1998
LOWEST ANNUAL MEAN			1246	1998
HIGHEST DAILY MEAN	10800	Jan 8	10800	Jan 8 1998
LOWEST DAILY MEAN	110	Sep 6	100	Sep 15 1997
ANNUAL SEVEN-DAY MINIMUM	121	Sep 15	121	Sep 15 1998
INSTANTANEOUS PEAK FLOW	18400	Jan 8	18400	Jan 8 1998
INSTANTANEOUS PEAK STAGE	13.42	Jan 8	13.42	Jan 8 1998
INSTANTANEOUS LOW FLOW	59*	Aug 3	25*	Aug 25 1997
10 PERCENT EXCEEDS	2610		2670	
50 PERCENT EXCEEDS	814		1020	
90 PERCENT EXCEEDS	140		154	

e Estimated.

† Change in contents, equivalent in cubic feet per second, in Walters Reservoir, provided by Carolina Power and Light Company.

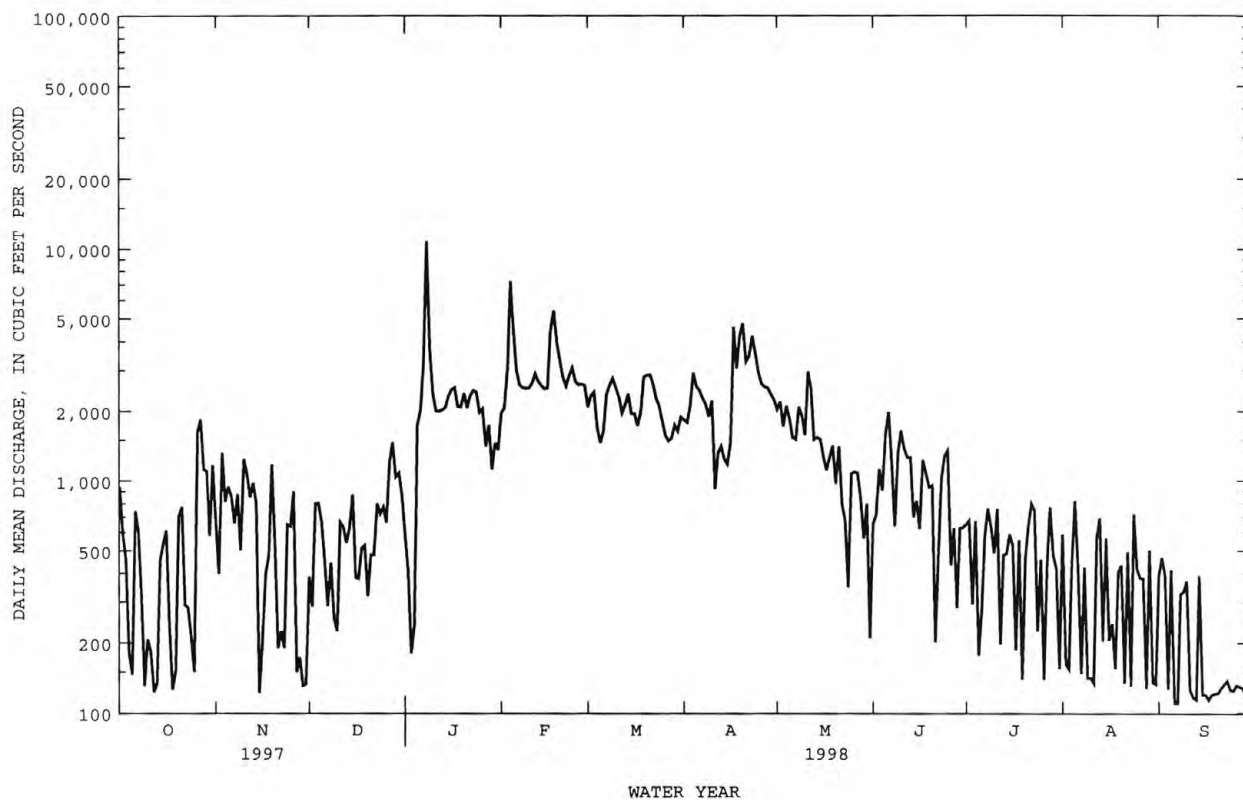
‡ Adjusted for change in contents.

\* See REMARKS.



## TENNESSEE RIVER BASIN

03460795 PIGEON RIVER BELOW POWER PLANT NEAR WATERVILLE, NC--Continued



DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
1	18.5	17.4	18.2		---	---	---		---	---	---		---	---	---
2	18.4	16.9	17.9		---	---	---		---	---	---		---	---	---
3	18.3	16.8	17.7		---	---	---		---	---	---		---	---	---
4	18.2	17.1	17.6		---	---	---		---	---	---		---	---	---
5	18.1	16.5	17.3		---	---	---		---	---	---		---	---	---
6	17.9	16.7	17.5		---	---	---		---	---	---		---	---	---
7	18.0	17.3	17.7		---	---	---		---	---	---		---	---	---
8	18.1	17.3	17.7		---	---	---		---	---	---		---	---	---
9	18.7	17.3	17.9		---	---	---		---	---	---		---	---	---
10	18.5	17.3	17.8		---	---	---		---	---	---		---	---	---
11	18.8	17.4	18.0		---	---	---		---	---	---		---	---	---
12	18.6	17.5	18.0		---	---	---		---	---	---		---	---	---
13	18.6	17.4	17.9		---	---	---		---	---	---		---	---	---
14	17.7	17.6	17.6		---	---	---		---	---	---		---	---	---
15	17.9	16.6	17.5		---	---	---		---	---	---		---	---	---
16	17.9	16.2	17.2		---	---	---		---	---	---		---	---	---
17	17.8	16.6	16.9		---	---	---		---	---	---		---	---	---
18	17.0	16.1	16.5		---	---	---		---	---	---		---	---	---
19	16.3	15.6	16.0		---	---	---		---	---	---		---	---	---
20	16.6	15.1	16.0		---	---	---		---	---	---		---	---	---
21	16.3	15.4	16.0		---	---	---		---	---	---		---	---	---
22	16.0	14.5	15.3		---	---	---		---	---	---		---	---	---
23	15.7	13.7	14.7		---	---	---		---	---	---		---	---	---
24	15.3	13.9	14.5		---	---	---		---	---	---		---	---	---
25	14.5	13.6	14.0		---	---	---		---	---	---		---	---	---
26	14.4	12.8	13.9		---	---	---		---	---	---		---	---	---
27	14.4	12.5	13.8		---	---	---		---	---	---		---	---	---
28	13.8	11.9	13.2		---	---	---		---	---	---		---	---	---
29	13.0	11.5	12.5		---	---	---		---	---	---		---	---	---
30	12.5	10.2	11.8		---	---	---		---	---	---		---	---	---
31	12.5	11.3	12.1		---	---	---		---	---	---		---	---	---
MONTH	18.8	10.2	16.2		---	---	---		---	---	---		---	---	---

## TENNESSEE RIVER BASIN

03460795 PIGEON RIVER BELOW POWER PLANT NEAR WATERVILLE, NC--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	13.5	13.1	13.3
2	---	---	---	---	---	---	---	---	---	13.4	13.3	13.4
3	---	---	---	---	---	---	---	---	---	13.4	13.0	13.2
4	---	---	---	---	---	---	---	---	---	13.4	12.9	13.2
5	---	---	---	---	---	---	---	---	---	13.5	12.7	13.2
6	---	---	---	---	---	---	---	---	---	13.6	12.9	13.3
7	---	---	---	---	---	---	---	---	---	14.0	12.7	13.5
8	---	---	---	---	---	---	12.7	12.1	12.4	14.1	13.4	13.9
9	---	---	---	---	---	---	13.1	12.3	12.8	14.5	13.6	14.0
10	---	---	---	---	---	---	13.1	12.5	12.9	14.6	14.0	14.3
11	---	---	---	---	---	---	12.5	8.5	11.4	14.8	13.6	14.3
12	---	---	---	---	---	---	11.9	8.6	11.1	15.3	14.4	14.9
13	---	---	---	---	---	---	12.0	9.7	11.6	15.6	13.9	14.9
14	---	---	---	---	---	---	---	---	---	16.1	14.9	15.6
15	---	---	---	---	---	---	12.6	11.2	12.1	16.4	15.6	16.1
16	---	---	---	---	---	---	12.9	12.3	12.7	16.8	15.9	16.4
17	---	---	---	---	---	---	13.4	12.0	12.8	17.2	16.3	16.8
18	---	---	---	---	---	---	13.2	12.6	12.8	17.8	16.4	17.2
19	---	---	---	---	---	---	13.3	12.6	13.1	18.3	16.7	17.6
20	---	---	---	---	---	---	13.1	12.3	12.7	18.6	17.1	18.0
21	---	---	---	---	---	---	12.4	11.7	12.1	19.1	18.0	18.7
22	---	---	---	---	---	---	12.2	11.9	12.0	19.3	17.6	18.7
23	---	---	---	---	---	---	11.9	11.1	11.5	19.3	17.6	18.7
24	---	---	---	---	---	---	11.4	10.6	11.0	20.2	18.6	19.1
25	---	---	---	---	---	---	11.5	10.6	11.0	19.9	18.7	19.4
26	---	---	---	---	---	---	11.7	11.2	11.5	20.1	19.0	19.7
27	---	---	---	---	---	---	11.9	11.5	11.7	20.3	18.8	19.9
28	---	---	---	---	---	---	12.4	11.9	12.2	20.7	19.3	20.1
29	---	---	---	---	---	---	13.1	12.3	12.7	---	---	---
30	---	---	---	---	---	---	13.3	12.9	13.1	20.7	20.0	20.4
31	---	---	---	---	---	---	---	---	---	21.9	19.7	20.7
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	20.8	19.9	20.4	---	---	---	---	---	---	24.1	22.8	23.4
2	20.7	19.4	20.1	---	---	---	---	---	---	24.0	23.0	23.6
3	21.1	19.4	20.5	---	---	---	---	---	---	24.0	23.0	23.5
4	---	---	---	---	---	---	---	---	---	24.5	23.1	23.7
5	---	---	---	---	---	---	---	---	---	24.0	22.8	23.4
6	---	---	---	---	---	---	---	---	---	24.7	23.1	23.8
7	---	---	---	---	---	---	---	---	---	24.6	22.7	23.5
8	---	---	---	---	---	---	---	---	---	23.5	22.8	23.1
9	---	---	---	---	---	---	---	---	---	23.4	21.8	22.6
10	---	---	---	---	---	---	---	---	---	23.1	21.5	22.3
11	---	---	---	---	---	---	---	---	---	22.8	21.4	22.0
12	---	---	---	---	---	---	---	---	---	22.7	20.9	21.7
13	---	---	---	---	---	---	---	---	---	22.7	20.9	21.7
14	---	---	---	23.1	22.4	22.7	---	---	---	22.6	20.9	21.6
15	---	---	---	23.4	22.1	22.9	---	---	---	22.8	21.3	22.0
16	---	---	---	23.6	22.5	23.0	---	---	---	22.7	21.3	21.9
17	---	---	---	24.1	22.7	23.2	---	---	---	22.9	21.5	22.0
18	---	---	---	23.7	22.2	23.0	---	---	---	22.8	21.6	22.0
19	---	---	---	24.8	22.6	23.5	23.2	22.3	22.7	22.9	21.5	22.0
20	---	---	---	24.4	22.4	23.1	23.6	22.3	22.8	23.0	21.5	22.1
21	---	---	---	24.7	22.7	23.4	24.0	22.4	23.0	22.5	21.7	22.0
22	---	---	---	24.1	23.1	23.5	23.4	21.9	22.7	22.3	21.4	21.7
23	---	---	---	---	---	---	24.4	22.6	23.4	22.4	21.1	21.6
24	---	---	---	---	---	---	24.1	22.5	23.1	22.2	20.9	21.4
25	---	---	---	---	---	---	24.6	23.0	23.5	22.5	20.9	21.6
26	---	---	---	---	---	---	---	---	---	22.7	21.2	21.8
27	---	---	---	---	---	---	24.6	23.3	23.7	22.6	21.0	21.7
28	---	---	---	---	---	---	24.8	23.1	23.8	22.7	21.4	21.8
29	---	---	---	---	---	---	24.1	22.8	23.5	22.5	21.4	21.8
30	---	---	---	---	---	---	24.6	23.3	23.8	22.3	21.0	21.5
31	---	---	---	---	---	---	24.3	22.9	23.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	24.7	20.9	22.3



## TENNESSEE RIVER BASIN

03460795 PIGEON RIVER BELOW POWER PLANT NEAR WATERVILLE, NC--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

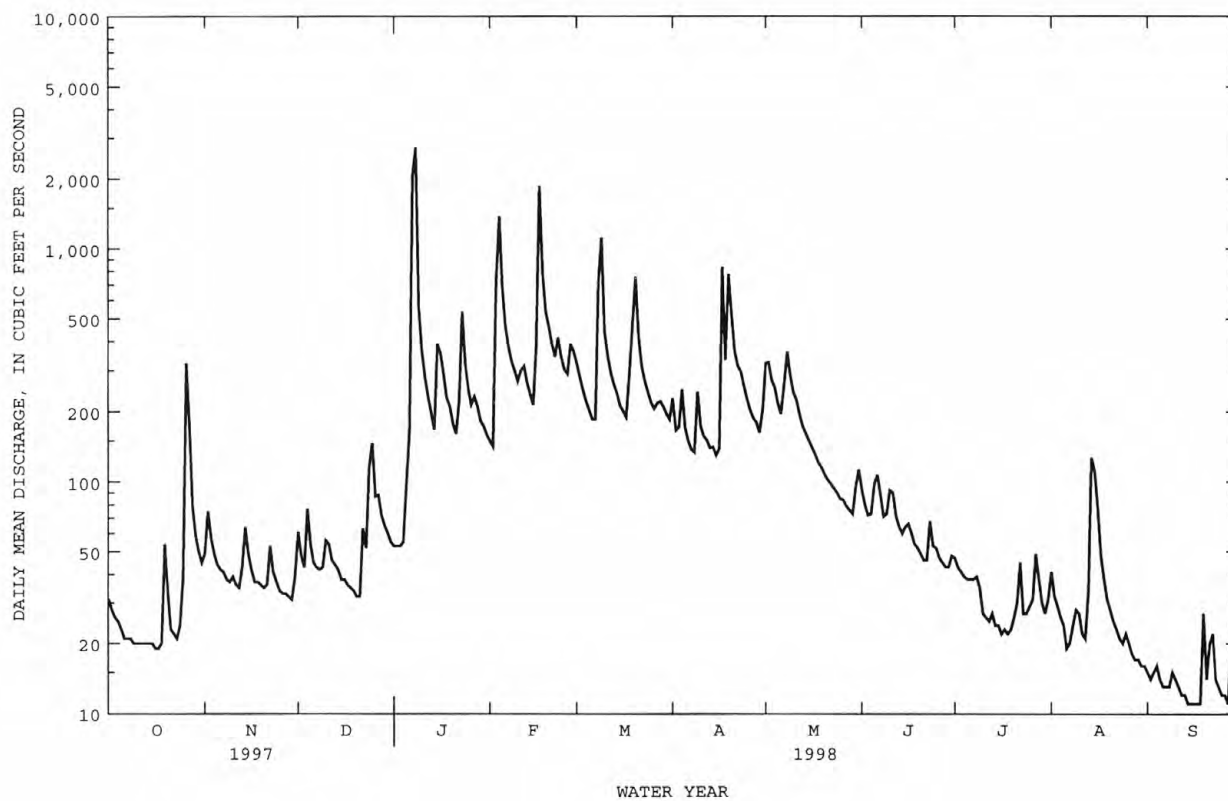
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	---	---	---	7.5	4.3	5.5
2	---	---	---	---	---	---	---	---	---	6.4	4.1	5.1
3	---	---	---	---	---	---	---	---	---	6.3	3.9	4.8
4	---	---	---	---	---	---	---	---	---	6.3	4.4	5.2
5	---	---	---	---	---	---	---	---	---	6.8	4.7	5.5
6	---	---	---	---	---	---	---	---	---	7.0	5.5	6.1
7	---	---	---	---	---	---	---	---	---	7.4	5.8	6.4
8	---	---	---	---	---	---	---	---	---	8.1	5.3	6.1
9	---	---	---	---	---	---	---	---	---	7.6	5.7	6.4
10	---	---	---	---	---	---	---	---	---	7.7	5.7	6.6
11	---	---	---	---	---	---	---	---	---	7.6	6.3	6.9
12	---	---	---	---	---	---	---	---	---	8.2	6.8	7.2
13	---	---	---	---	---	---	---	---	---	8.5	6.8	7.6
14	---	---	---	---	---	---	---	---	---	8.6	6.4	7.3
15	---	---	---	---	---	---	---	---	---	8.3	6.8	7.5
16	---	---	---	---	---	---	---	---	---	8.7	7.0	7.8
17	---	---	---	---	---	---	---	---	---	9.1	6.7	7.8
18	---	---	---	---	---	---	---	---	---	8.9	6.7	7.6
19	---	---	---	---	---	---	---	---	---	8.9	7.0	7.7
20	---	---	---	---	---	---	---	---	---	8.6	6.8	7.5
21	---	---	---	---	---	---	---	---	---	8.4	6.7	7.5
22	---	---	---	---	---	---	---	---	---	8.2	6.6	7.2
23	---	---	---	---	---	---	---	---	---	7.7	6.1	6.7
24	---	---	---	---	---	---	---	---	---	7.3	6.4	6.7
25	---	---	---	---	---	---	---	---	---	7.5	6.3	6.8
26	---	---	---	---	---	---	---	---	---	7.3	6.3	6.6
27	---	---	---	---	---	---	7.1	4.3	5.4	7.3	6.2	6.6
28	---	---	---	---	---	---	7.3	5.2	6.0	7.4	6.1	6.5
29	---	---	---	---	---	---	7.1	3.8	5.3	7.5	6.1	6.6
30	---	---	---	---	---	---	7.0	5.0	5.9	7.6	6.5	6.9
31	---	---	---	---	---	---	7.3	5.3	6.0	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	9.1	3.9	6.7

REMARKS.--Records good except those during periods of ice effect, which are poor. Maximum discharge for period of record, from rating curve extended above 5,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; gage height from outside floodmarks. Minimum discharge for period of record and current water year also occurred Sept. 15, 16, 17, 18, 19, 27, 28.

e Estimated.  
\* See REMARKS.

## TENNESSEE RIVER BASIN

03463300 SOUTH TOE RIVER NEAR CELO, NC--Continued





## TENNESSEE RIVER BASIN

03479000 WATAUGA RIVER NEAR SUGAR GROVE, NC

LOCATION.--Lat 36°14'18", long 81°49'22", Watauga County, Hydrologic Unit 06010103, on right bank 250 ft upstream from bridge on Secondary Road 1121, 300 ft downstream of Cove Creek, 2.3 mi southwest of Sugar Grove, and at mile 64.4.

DRAINAGE AREA.--92.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,607.84 ft above sea level. Satellite telemetry at station.

REMARKS.--Records good except those during periods of ice effect, which are poor. Slight diurnal fluctuation at low flow caused by small mills above station. Maximum discharge for period of record from rating curve extended above 4,900 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow, from profile based on floodmarks. Minimum discharge for period of record, result of freezeup. Minimum discharge for current water year also occurred Sept. 19, 21, 28, 29.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 22.1 ft, from floodmarks on barn 0.25 mi upstream from station, as witnessed by local resident; discharge, 28,000 ft<sup>3</sup>/s, from rating curve extended above 4,900 ft<sup>3</sup>/s, on basis of slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	59	71	e89	217	298	205	271	114	253	84	31
2	54	104	58	e87	213	266	177	274	110	157	60	30
3	51	79	53	e84	751	243	167	282	123	123	50	29
4	49	66	69	86	2260	218	246	452	442	109	45	31
5	45	58	64	124	1040	201	206	401	353	137	42	28
6	44	56	e60	178	582	187	185	327	220	103	40	26
7	41	55	59	1580	431	178	174	461	173	93	38	26
8	41	54	e56	5070	359	474	167	748	149	92	38	54
9	40	53	57	876	331	1410	291	677	145	94	42	47
10	39	51	66	455	321	673	254	586	424	82	53	35
11	39	49	67	318	429	447	238	512	348	74	55	32
12	38	48	61	254	601	352	217	418	248	71	43	30
13	37	50	57	219	468	295	201	342	255	66	39	27
14	38	56	55	190	369	264	193	292	206	63	141	25
15	39	53	e54	381	310	232	180	256	186	59	200	23
16	36	50	e54	436	674	214	214	227	155	56	127	23
17	37	47	e54	335	2660	203	1240	208	137	54	111	23
18	38	46	e52	272	1400	220	628	189	117	52	80	23
19	71	46	e52	248	769	393	1920	177	111	49	64	22
20	55	47	e51	216	571	1440	1420	167	104	48	57	23
21	44	48	48	192	453	1050	697	167	98	45	53	29
22	42	60	68	190	374	599	515	154	102	44	49	41
23	39	55	68	382	558	436	427	170	181	50	45	31
24	39	50	71	321	489	352	356	150	112	68	46	26
25	51	47	136	270	391	298	306	135	105	67	44	25
26	128	47	95	233	334	263	274	140	89	58	41	25
27	133	47	124	305	321	239	275	153	82	82	37	23
28	76	45	120	1240	321	223	262	131	75	65	35	23
29	59	45	101	303	---	208	228	120	72	53	34	22
30	53	50	95	239	---	193	242	124	220	49	33	23
31	50	---	e91	232	---	182	---	130	---	83	33	---
TOTAL	1606	1621	2187	15405	17997	12251	12105	8841	5256	2499	1859	856
MEAN	51.8	54.0	70.5	497	643	395	404	285	175	80.6	60.0	28.5
MAX	133	104	136	5070	2660	1440	1920	748	442	253	200	54
MIN	36	45	48	84	213	178	167	120	72	44	33	22
CFSM	.56	.59	.77	5.40	6.98	4.29	4.38	3.10	1.90	.88	.65	.31
IN.	.65	.65	.88	6.22	7.27	4.95	4.89	3.57	2.12	1.01	.75	.35

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
MEAN	115	154	176	216	271	312	261	185	148	110	121	111
MAX	380	662	434	817	643	858	689	411	583	461	1169	691
(WY)	1965	1978	1951	1995	1998	1979	1987	1973	1992	1989	1940	1979
MIN	19.2	34.6	45.6	55.5	67.5	77.0	82.1	67.5	41.4	35.0	25.6	18.1
(WY)	1955	1982	1964	1956	1941	1988	1986	1941	1988	1944	1956	1954

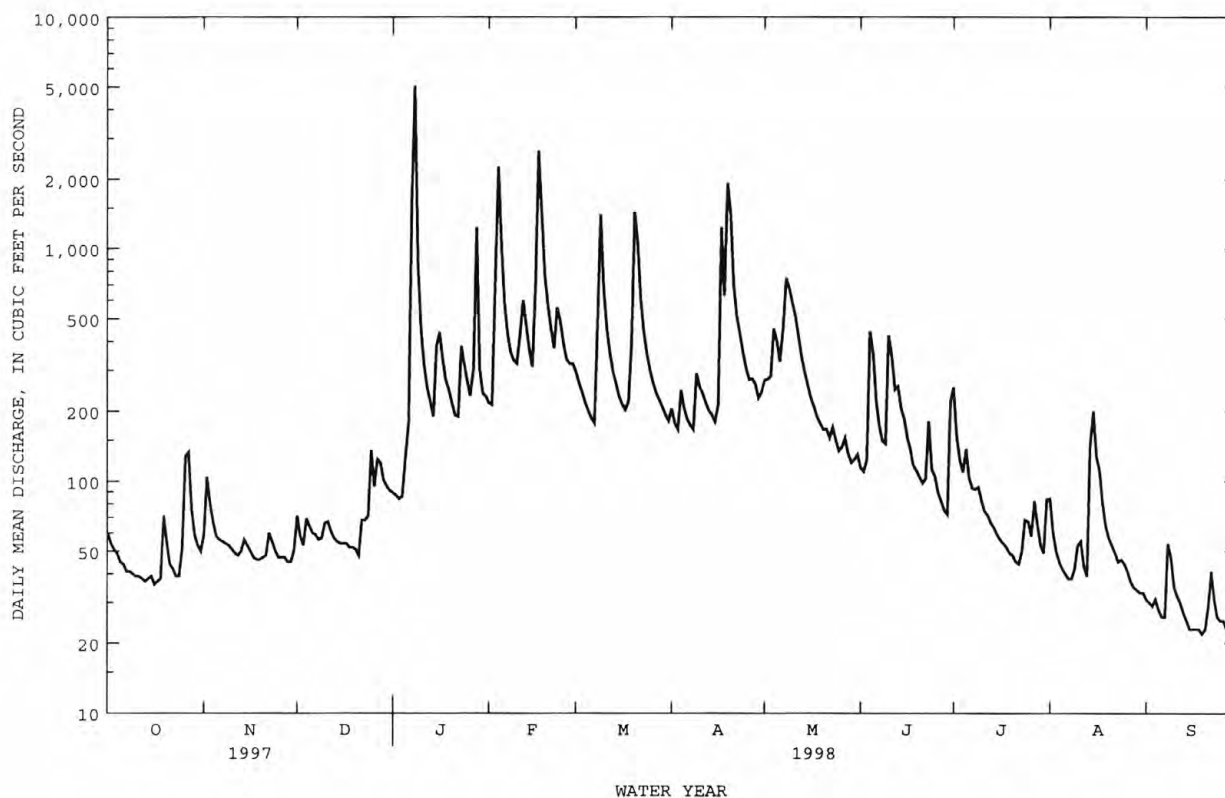
## TENNESSEE RIVER BASIN

03479000 WATAUGA RIVER NEAR SUGAR GROVE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1940 - 1998	
ANNUAL TOTAL	54383		82483		179	
ANNUAL MEAN	149		226		297	1979
HIGHEST ANNUAL MEAN					84.7	1988
LOWEST ANNUAL MEAN						
HIGHEST DAILY MEAN	1720	Mar 14	5070	Jan 8	15900	Aug 13 1940
LOWEST DAILY MEAN	36	Sep 9	22	Sep 19	13	Sep 19 1954
ANNUAL SEVEN-DAY MINIMUM	38	Oct 12	23	Sep 14	15	Sep 13 1954
INSTANTANEOUS PEAK FLOW			12900	Jan 8	50800*	Aug 13 1940
INSTANTANEOUS PEAK STAGE			16.60	Jan 8	29.60	Aug 13 1940
INSTANTANEOUS LOW FLOW			21*	Sep 18	6.5*	Jan 1 1954
ANNUAL RUNOFF (CFSM)	1.62		2.45		1.95	
ANNUAL RUNOFF (INCHES)	21.97		33.32		26.46	
10 PERCENT EXCEEDS	269		452		331	
50 PERCENT EXCEEDS	121		109		117	
90 PERCENT EXCEEDS	45		38		40	

e Estimated.

\* See REMARKS.



## TENNESSEE RIVER BASIN

03500000 LITTLE TENNESSEE RIVER NEAR PRENTISS, NC

LOCATION.--Lat 35°08'59", long 83°22'47", Macon County, Hydrologic Unit 06010202, on left bank 600 ft upstream from Owenby Branch, 0.5 mi upstream from Cartoogechaye Creek, 2 mi north of Prentiss, and at mile 119.5.

DRAINAGE AREA.--140 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 1236: 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 2,008.39 ft above sea level (levels by Tennessee Valley Authority). Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1898 reached a stage of about 15 ft, from profiles by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	268	231	276	505	674	650	1020	345	221	150	96
2	196	383	205	267	482	634	544	804	355	216	135	94
3	188	296	204	265	1080	603	712	721	325	208	129	94
4	182	265	299	266	2380	577	788	675	329	203	130	100
5	175	247	245	277	1740	556	638	625	507	228	128	89
6	170	244	229	395	1130	539	578	589	469	204	123	119
7	168	261	218	1700	935	534	541	636	341	199	125	131
8	165	244	213	4790	829	1340	516	821	312	197	135	102
9	165	234	247	1730	753	2060	762	638	345	200	144	91
10	163	226	283	1070	696	1280	598	642	692	189	181	86
11	162	218	277	847	703	987	547	677	714	183	141	86
12	162	214	249	726	677	860	513	582	408	182	163	85
13	158	249	238	646	619	789	491	542	343	176	251	82
14	157	265	231	588	584	742	547	517	310	173	158	80
15	151	244	221	813	553	700	518	494	345	176	151	78
16	141	231	214	997	1120	668	495	474	325	165	172	79
17	142	221	210	787	1830	643	1620	454	357	171	162	81
18	140	214	204	662	1450	715	1080	437	288	161	137	78
19	167	209	199	623	1050	850	1040	421	293	156	144	75
20	146	203	196	583	898	938	992	409	310	151	169	75
21	138	209	195	570	806	835	828	395	276	147	130	106
22	137	268	301	677	747	731	890	389	278	162	121	115
23	133	232	257	953	964	672	899	377	285	163	117	88
24	159	216	435	707	802	648	800	364	255	170	112	85
25	264	205	575	608	727	607	729	357	246	155	109	84
26	1230	203	378	576	685	580	680	348	240	154	106	83
27	1060	200	454	707	831	560	643	350	236	149	102	79
28	475	195	400	728	730	541	614	343	229	177	99	78
29	352	193	346	624	---	521	584	331	225	149	99	85
30	298	216	323	579	---	504	829	323	223	139	100	157
31	266	---	302	537	---	494	---	321	---	153	102	---
TOTAL	7826	7073	8579	25574	26306	23382	21666	16076	10206	5477	4225	2761
MEAN	252	236	277	825	940	754	722	519	340	177	136	92.0
MAX	1230	383	575	4790	2380	2060	1620	1020	714	228	251	157
MIN	133	193	195	265	482	494	491	321	223	139	99	75
CFSM	1.80	1.68	1.98	5.89	6.71	5.39	5.16	3.70	2.43	1.26	.97	.66
IN.	2.08	1.88	2.28	6.80	6.99	6.21	5.76	4.27	2.71	1.46	1.12	.73

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1998, BY WATER YEAR (WY)

	MEAN	254	305	400	499	575	620	571	433	347	259	245	224
MAX	1078	815	841	1008	1252	1199	1015	999	694	772	695	671	
(WY)	1965	1980	1962	1946	1990	1952	1964	1976	1949	1989	1974	1950	
MIN	70.5	101	154	120	222	244	172	157	110	94.8	78.3	80.2	
(WY)	1955	1955	1981	1981	1986	1988	1986	1986	1988	1986	1986	1954	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

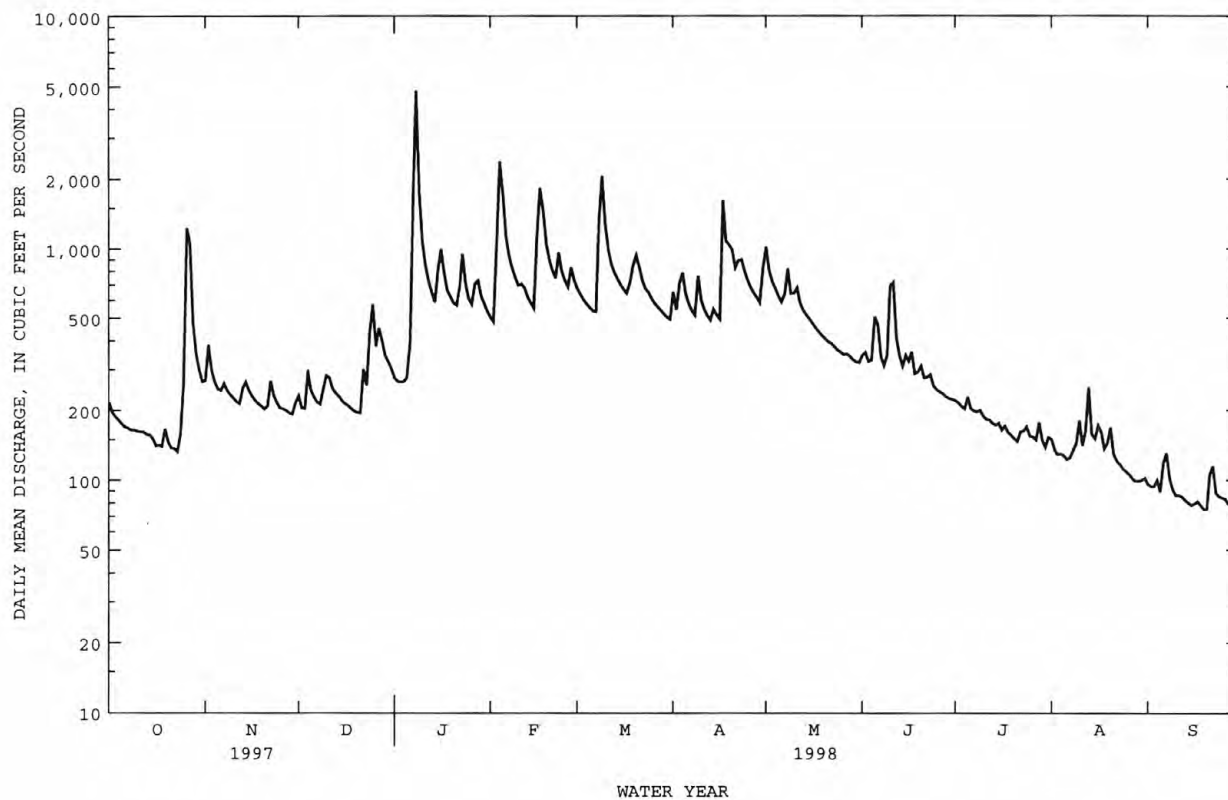
## FOR 1998 WATER YEAR

## WATER YEARS 1944 - 1998

ANNUAL TOTAL	156114	159151		
ANNUAL MEAN	428	436		
HIGHEST ANNUAL MEAN			394	
LOWEST ANNUAL MEAN			588	1949
HIGHEST DAILY MEAN	2410	Mar 14	4790	Jan 8
LOWEST DAILY MEAN	123	Sep 21	75	Sep 19
ANNUAL SEVEN-DAY MINIMUM	127	Sep 17	78	Sep 14
INSTANTANEOUS PEAK FLOW			6190	Jan 8
INSTANTANEOUS PEAK STAGE			11.73	Jan 8
INSTANTANEOUS LOW FLOW			73	Sep 20
ANNUAL RUNOFF (CFSM)	3.06		3.11	
ANNUAL RUNOFF (INCHES)	41.48		42.29	
10 PERCENT EXCEEDS	749		830	707
50 PERCENT EXCEEDS	376		288	311
90 PERCENT EXCEEDS	162		118	132

## TENNESSEE RIVER BASIN

03500000 LITTLE TENNESSEE RIVER NEAR PRENTISS, NC--Continued



## TENNESSEE RIVER BASIN

03500240 CARTOOGEC HAYE CREEK NEAR FRANKLIN, NC

LOCATION.--Lat 35°09'31", long 83°23'40", Macon County, Hydrologic Unit 06010202, on downstream side of center pier of bridge on Secondary Road 1152, 0.1 mi downstream of unnamed creek, 1.8 mi south of Franklin, and 1.9 mi upstream from mouth.

DRAINAGE AREA.--57.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1944, 1947, 1953-55, 1958, 1960. June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,017.18 ft above sea level. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Minimum discharge for period of record also occurred Oct. 8, 1986. Minimum discharge for current water year also occurred Sept. 15, 16, 18, 19.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1949 reached a stage of 15.6 ft, from studies by Tennessee Valley Authority; discharge, about 7,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	107	91	105	176	227	305	279	126	85	64	35
2	72	201	82	103	169	215	229	235	134	83	55	34
3	69	129	86	102	402	205	332	222	102	78	54	35
4	67	115	122	104	993	197	358	215	125	77	49	39
5	65	103	95	114	654	191	284	198	266	80	48	33
6	63	109	88	160	432	188	244	187	240	75	47	37
7	62	124	85	1070	345	186	221	219	146	74	46	44
8	61	110	85	1560	295	483	207	244	125	75	48	38
9	60	102	104	644	259	664	244	203	178	76	49	35
10	61	96	113	393	236	397	202	201	425	69	54	34
11	61	92	106	296	254	307	190	192	437	67	48	34
12	60	92	99	246	233	267	182	174	229	67	45	33
13	59	107	94	218	212	244	176	167	173	65	52	32
14	59	105	90	192	199	229	192	160	150	62	49	32
15	60	96	86	448	189	213	177	153	176	62	55	31
16	59	91	84	461	545	211	175	148	142	62	69	32
17	60	89	82	355	819	201	317	142	133	66	53	32
18	59	86	80	279	657	242	272	138	122	58	48	31
19	67	84	78	256	450	272	382	131	127	56	47	32
20	60	82	77	220	360	418	355	127	120	53	46	32
21	58	92	78	199	308	340	289	123	119	72	44	72
22	62	123	140	270	284	277	336	133	117	78	42	46
23	57	98	103	321	432	246	338	122	112	77	40	38
24	75	91	206	256	319	235	291	114	102	71	40	36
25	98	87	206	222	282	215	258	112	97	67	38	35
26	562	85	153	202	258	203	234	110	94	62	38	35
27	316	83	174	260	273	196	219	106	90	63	37	33
28	156	81	143	249	240	189	205	103	88	72	37	33
29	121	80	130	221	---	183	194	100	99	58	36	39
30	106	90	122	205	---	178	261	100	90	56	36	51
31	96	---	116	188	---	178	---	98	---	69	36	---
TOTAL	2967	3030	3398	9919	10275	7997	7669	4956	4684	2135	1450	1103
MEAN	95.7	101	110	320	367	258	256	160	156	68.9	46.8	36.8
MAX	562	201	206	1560	993	664	382	279	437	85	69	72
MIN	57	80	77	102	169	178	175	98	88	53	36	31
CFSM	1.68	1.77	1.92	5.60	6.43	4.52	4.48	2.80	2.73	1.21	.82	.64
IN.	1.93	1.97	2.21	6.46	6.69	5.21	5.00	3.23	3.05	1.39	.94	.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1998, BY WATER YEAR (WY)

	MEAN	87.9	111	154	198	229	251	208	158	123	88.6	85.0	73.8
MAX	295	266	317	336	460	440	375	339	259	195	185	161	
(WY)	1965	1993	1962	1996	1990	1980	1964	1976	1989	1989	1994	1989	
MIN	33.9	41.5	52.2	55.2	102	84.7	72.9	61.2	42.3	33.1	33.1	34.7	
(WY)	1979	1979	1966	1981	1986	1988	1986	1986	1988	1986	1986	1986	

## SUMMARY STATISTICS

## FOR 1997 CALENDAR YEAR

## FOR 1998 WATER YEAR

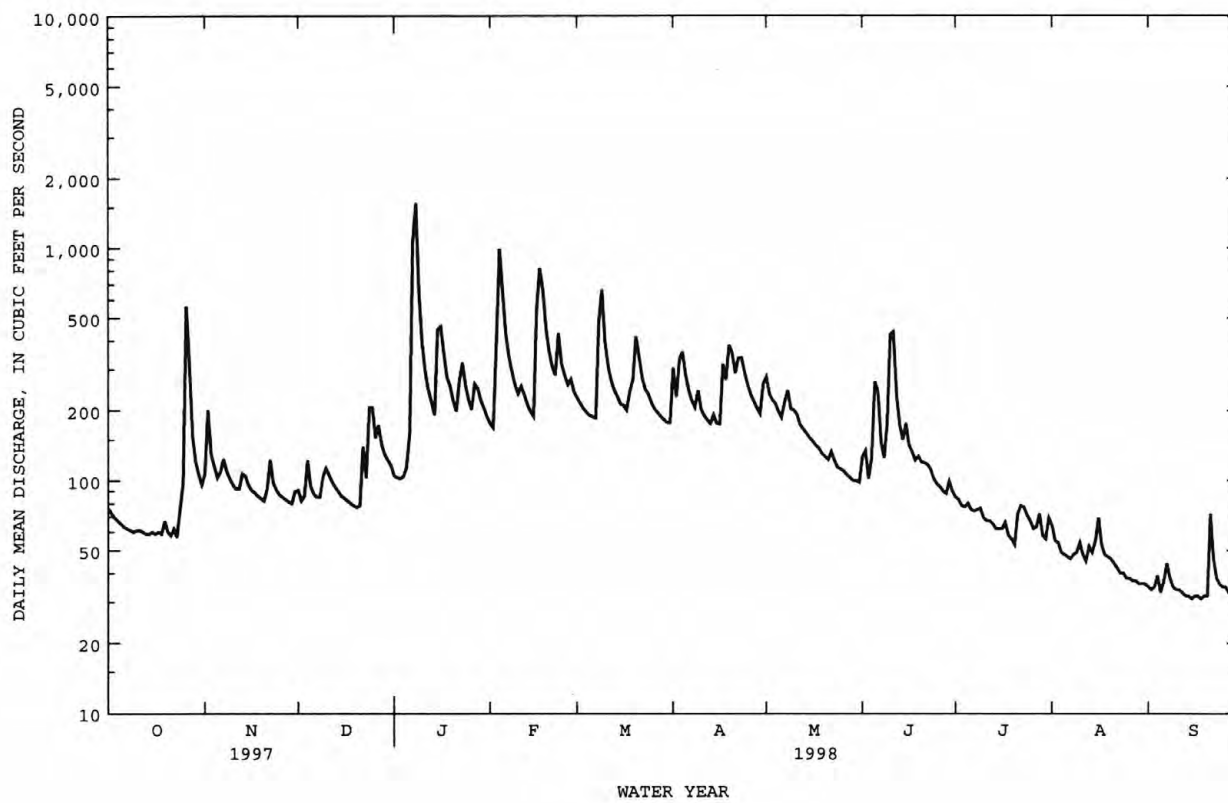
## WATER YEARS 1961 - 1998

ANNUAL TOTAL	63035	59583	
ANNUAL MEAN	173	163	
HIGHEST ANNUAL MEAN			147
LOWEST ANNUAL MEAN			204
HIGHEST DAILY MEAN	1100	Feb 28	1560
LOWEST DAILY MEAN	52	Sep 20	31
ANNUAL SEVEN-DAY MINIMUM	53	Sep 17	32
INSTANTANEOUS PEAK FLOW			2630
INSTANTANEOUS PEAK STAGE			11.19
INSTANTANEOUS LOW FLOW			29*
ANNUAL RUNOFF (CFSM)	3.02		2.86
ANNUAL RUNOFF (INCHES)	41.07		38.82
10 PERCENT EXCEEDS	305		311
50 PERCENT EXCEEDS	148		112
90 PERCENT EXCEEDS	63		43

\* See REMARKS.

## TENNESSEE RIVER BASIN

03500240 CARTOOGECHAYE CREEK NEAR FRANKLIN, NC--Continued



## TENNESSEE RIVER BASIN

03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, NC

LOCATION.--Lat 35°20'11", long 83°31'37", Swain County, Hydrologic Unit 06010202, on left bank on Secondary Road 1113, 0.8 mi downstream of DeHart Creek, 0.8 mi north of Needmore, 2.4 mi downstream of Brush Creek, 6.3 mi downstream of Tellico Creek, and at mile 92.9.

DRAINAGE AREA.--436 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1943 to December 1981, October 1983 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,761.19 ft above sea level (levels by Tennessee Valley Authority). Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Considerable diurnal fluctuation caused by Porters Bend power plant at Lake Emory, 20 mi upstream. Minimum discharge for period of record also occurred Nov. 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of October 1898 and Aug. 30, 1940, reached stages of about 13 and 11.5 ft, respectively, from flood profiles by Tennessee Valley Authority.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	581	652	590	719	1460	1700	1900	2480	e840	605	444	278
2	538	1080	597	687	1400	1580	1660	1980	e880	569	406	208
3	509	831	534	689	2550	1520	1920	1750	e800	561	375	214
4	509	709	698	692	7060	1430	2430	e1600	e810	543	361	268
5	479	664	669	708	5380	1390	1800	e1550	e1300	570	360	223
6	466	645	585	1000	3380	1350	1530	e1500	e1200	539	347	249
7	475	685	554	4860	2750	1310	1410	1530	e850	527	342	313
8	454	672	554	13400	2410	3160	1320	1860	e770	519	351	273
9	440	615	575	5700	2160	5500	1880	1530	e840	546	362	246
10	453	613	716	3130	1980	3590	1580	1480	e1600	503	410	228
11	434	571	748	2370	1930	2640	1430	1700	e1700	495	406	217
12	437	564	666	1940	1950	2260	1340	e1450	e1370	487	363	219
13	456	610	616	1720	1740	2010	1280	1330	1090	474	475	215
14	423	664	601	1500	1660	1870	1340	1260	956	459	447	209
15	442	643	566	2380	1560	1750	1360	1210	e920	456	396	204
16	438	597	563	3500	2640	1670	1290	1160	e880	452	449	193
17	424	583	544	3050	4920	1600	3260	1110	940	520	468	204
18	440	521	539	2240	4050	1770	2680	1070	775	492	394	214
19	454	565	523	1970	2910	2300	2760	1050	792	436	360	199
20	490	525	516	1740	2540	e2600	3070	993	834	419	416	201
21	434	548	515	1550	2210	e2300	2340	955	820	481	358	295
22	422	674	722	1600	2000	e2000	2500	965	e740	e440	325	402
23	431	610	779	3160	2630	e1850	2570	925	767	e450	313	261
24	425	596	920	2280	2240	1770	2270	892	716	e460	303	246
25	753	540	1740	1900	1950	1640	2000	e880	693	e420	291	239
26	2880	544	1050	1710	1800	1540	1820	e850	665	e415	279	229
27	3040	532	1120	e1860	2010	1510	1640	e870	643	e400	269	218
28	1200	519	1050	2140	1880	1450	1590	e840	621	451	253	220
29	868	509	906	1810	---	1420	1450	e810	580	422	222	233
30	751	536	847	1680	---	1370	1820	e800	615	408	249	352
31	652	---	794	1580	---	1340	---	e780	---	409	270	---
TOTAL	21198	18617	22397	75265	73150	61190	57240	39160	27007	14928	11064	7270
MEAN	684	621	722	2428	2613	1974	1908	1263	900	482	357	242
MAX	3040	1080	1740	13400	7060	5500	3260	2480	1700	605	475	402
MIN	422	509	515	687	1400	1310	1280	780	580	400	222	193
CFSM	1.57	1.42	1.66	5.57	5.99	4.53	4.38	2.90	2.06	1.10	.82	.56
IN.	1.81	1.59	1.91	6.42	6.24	5.22	4.88	3.34	2.30	1.27	.94	.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1998<sup>8</sup>, BY WATER YEAR (WY)

	MEAN	662	814	1062	1395	1614	1772	1560	1192	940	703	655	588
MAX	2557	2169	2231	2570	3718	3372	2746	2573	2061	2136	1670	1605	
(WY)	1965	1980	1962	1946	1990	1990	1964	1976	1949	1989	1967	1950	
MIN	192	282	368	349	660	596	553	489	351	238	213	208	
(WY)	1955	1955	1966	1981	1986	1988	1986	1986	1988	1986	1986	1954	

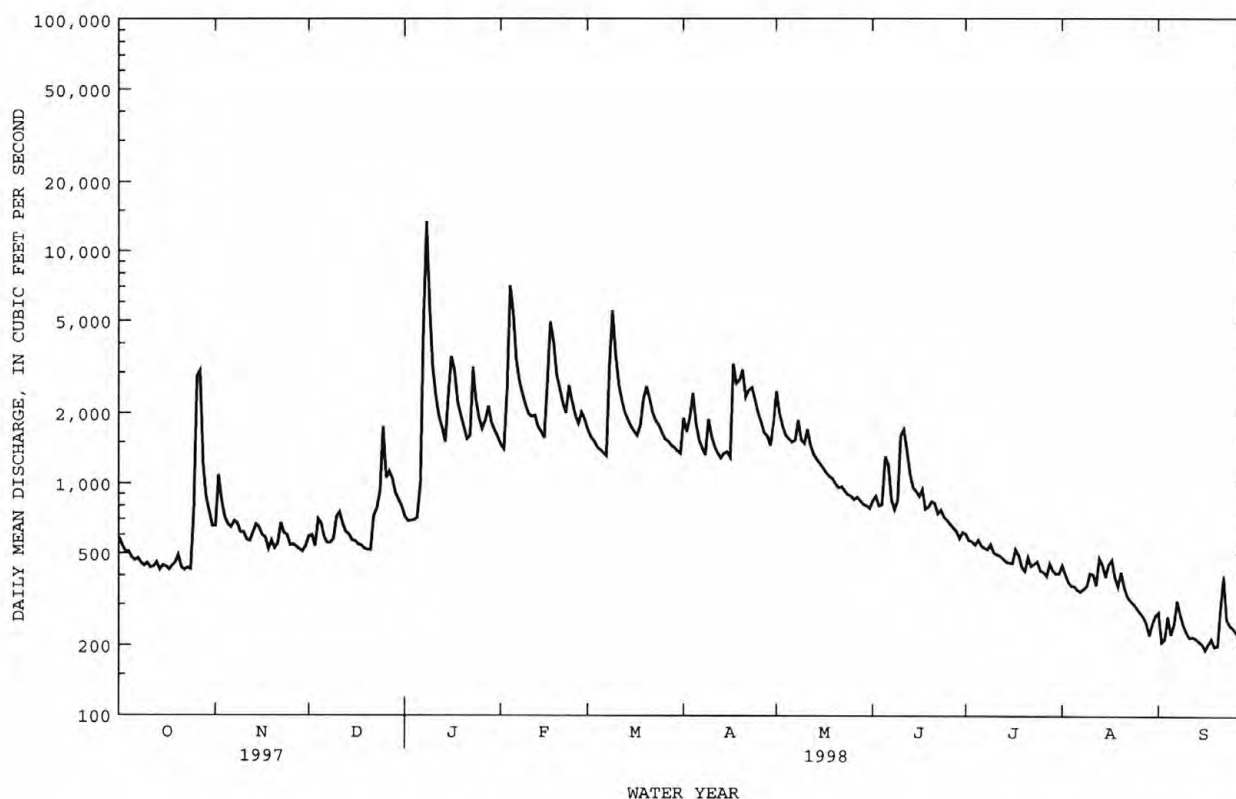


## TENNESSEE RIVER BASIN

03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1944 - 1998 <sup>a</sup>		
ANNUAL TOTAL	441089		428486		1080		
ANNUAL MEAN	1208		1174		1565		1973
HIGHEST ANNUAL MEAN					495		1986
LOWEST ANNUAL MEAN					17200	Oct 5	1964
HIGHEST DAILY MEAN	5390	Mar 14	13400	Jan 8	71	Nov 7	1954
LOWEST DAILY MEAN	198	Sep 23	193	Sep 16	142	Oct 2	1986
ANNUAL SEVEN-DAY MINIMUM	315	Sep 17	203	Sep 14	22100	Oct 5	1964
INSTANTANEOUS PEAK FLOW			15500	Jan 8	12.87	Oct 5	1964
INSTANTANEOUS PEAK STAGE			10.09	Jan 8	52*	Nov 7	1954
INSTANTANEOUS LOW FLOW			96	Aug 29	2.48		
ANNUAL RUNOFF (CFSM)	2.77		2.69		33.67		
ANNUAL RUNOFF (INCHES)	37.63		36.56		1940		
10 PERCENT EXCEEDS	2200		2350		824		
50 PERCENT EXCEEDS	1100		767		370		
90 PERCENT EXCEEDS	467		313				

e Estimated.  
<sup>a</sup> See PERIOD OF RECORD.  
 \* See REMARKS.



## TENNESSEE RIVER BASIN

03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, NC

LOCATION.--Lat 35°07'37", long 83°37'09", Macon County, Hydrologic Unit 06010202, on right bank on Forest Service Road 437 in Nantahala National Forest, 300 ft upstream from Roaring Fork, 0.2 mi downstream of Buck Creek, 4 mi northwest of town of Rainbow Springs, and at mile 34.3.

DRAINAGE AREA.--51.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 973: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 3,072.97 ft above sea level.

REMARKS.--Records good except those during periods of ice effect, Jan. 1-3, and those for period of no gage height record, Nov. 2-4, which are poor. Occasional slight diurnal fluctuation at low flow caused by small ponds on tributaries upstream from station. Maximum discharge for period of record from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Minimum discharge for current water year also occurred Sept. 21. Minimum discharge for period of record occurred several days in Oct. 1987.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	150	126	e139	247	297	426	417	175	135	78	41
2	90	e270	111	e139	243	280	298	352	149	122	70	41
3	85	e185	134	e136	897	266	408	331	136	117	67	42
4	82	e160	173	139	1270	256	401	317	203	127	64	43
5	78	146	133	190	804	247	344	294	384	141	63	46
6	76	158	125	306	604	240	315	278	297	114	62	70
7	74	182	119	1730	507	240	292	335	201	110	61	51
8	72	155	122	1700	449	519	276	344	174	109	64	48
9	71	145	150	881	405	748	326	295	236	108	69	44
10	69	139	179	624	370	476	275	313	566	101	94	40
11	69	133	152	505	379	401	258	295	468	99	63	40
12	68	134	141	433	344	362	246	270	314	98	61	38
13	68	152	136	386	321	333	237	256	262	93	89	37
14	71	154	131	348	301	317	291	245	232	92	66	36
15	68	138	125	552	285	296	248	235	263	90	74	36
16	66	131	122	490	551	289	245	225	246	90	94	36
17	68	126	118	417	758	273	498	217	218	95	68	36
18	65	122	115	377	613	331	396	209	196	86	60	35
19	74	120	111	357	506	340	537	200	201	82	60	35
20	64	116	110	327	450	477	474	191	186	80	61	35
21	62	145	113	306	405	389	417	185	175	89	55	123
22	65	168	177	375	382	346	482	192	169	87	52	54
23	62	134	128	410	455	323	434	176	164	91	51	43
24	86	126	235	349	374	314	390	170	154	86	49	41
25	109	121	199	325	347	291	359	165	150	80	48	40
26	605	118	167	304	326	274	337	161	145	77	47	38
27	311	115	173	329	348	263	321	157	140	103	45	36
28	183	112	155	296	308	253	301	152	134	103	45	36
29	152	111	149	279	---	242	285	147	130	78	44	64
30	135	128	146	272	---	233	398	146	134	74	44	68
31	125	---	142	258	---	236	---	141	---	82	43	---
TOTAL	3369	4294	4417	13679	13249	10152	10515	7411	6602	3039	1911	1373
MEAN	109	143	142	441	473	327	351	239	220	98.0	61.6	45.8
MAX	605	270	235	1730	1270	748	537	417	566	141	94	123
MIN	62	111	110	136	243	233	237	141	130	74	43	35
CFSM	2.09	2.76	2.75	8.50	9.12	6.31	6.75	4.61	4.24	1.89	1.19	.88
IN.	2.41	3.08	3.17	9.80	9.50	7.28	7.54	5.31	4.73	2.18	1.37	.98

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998, BY WATER YEAR (WY)

	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
MEAN	119	156	227	285	329	327	283	217	175	140	124	108
MAX	415	376	474	568	657	572	493	491	485	335	327	374
(WY)	1965	1978	1993	1974	1957	1979	1979	1976	1989	1989	1994	1950
MIN	42.2	56.6	77.2	84.4	115	138	118	96.8	67.1	59.0	49.5	41.8
(WY)	1955	1955	1959	1981	1941	1988	1986	1986	1986	1986	1986	1986

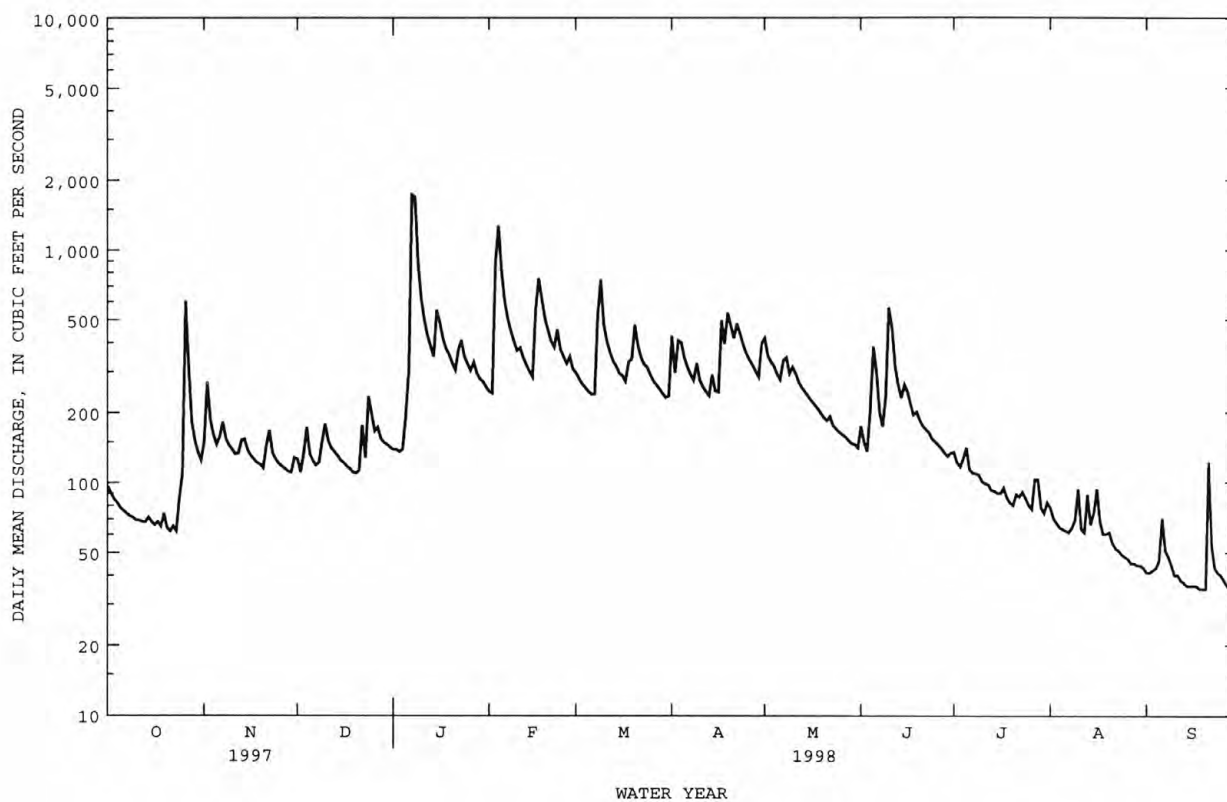
## TENNESSEE RIVER BASIN

03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1941 - 1998	
ANNUAL TOTAL	84791		80011		207	
ANNUAL MEAN	232		219		280	
HIGHEST ANNUAL MEAN					109	
LOWEST ANNUAL MEAN					1949	
HIGHEST DAILY MEAN	1310	Feb 28	1730	Jan 7	3060	Jun 16 1949
LOWEST DAILY MEAN	51	Sep 20	35	Sep 18	30	Oct 6 1986
ANNUAL SEVEN-DAY MINIMUM	53	Sep 17	36	Sep 14	31	Oct 2 1986
INSTANTANEOUS PEAK FLOW			3810	Jan 7	6300*	Jun 16 1949
INSTANTANEOUS PEAK STAGE			6.99	Jan 7	9.70	Jun 16 1949
INSTANTANEOUS LOW FLOW			33*	Sep 19	30*	Oct 4 1987
ANNUAL RUNOFF (CFSM)	4.48		4.22		3.98	
ANNUAL RUNOFF (INCHES)	60.78		57.35		54.14	
10 PERCENT EXCEEDS	419		413		376	
50 PERCENT EXCEEDS	199		154		164	
90 PERCENT EXCEEDS	73		55		69	

e Estimated.

\* See REMARKS.



## TENNESSEE RIVER BASIN

## 03512000 OCONALUFTEE RIVER AT BIRDTOWN, NC

LOCATION.--Lat 35°27'41", long 83°21'13", Swain County, Hydrologic Unit 06010203, in Cherokee Indian Reservation on left bank 200 ft upstream from bridge on Secondary Road 1359, 0.5 mi south of Birdtown, 0.6 mi downstream of Adams Creek, 0.6 mi upstream from Goose Creek, 2.2 mi southwest of Cherokee, and at mile 3.1.

DRAINAGE AREA.--184 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1945 to September 1946, July 1948 to current year.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1,843.30 ft above sea level. Prior to Oct. 1, 1946, nonrecording gage at same site and datum. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum gage height for period of record and current water year, from floodmarks. Minimum discharge for period of record also occurred Nov. 9, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Nov. 19, 1906, and Mar. 27, 1913, reached stages of 18 and 14.5 ft, respectively, from studies by Tennessee Valley Authority; discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239	310	393	521	581	695	1370	888	406	375	228	125
2	220	487	344	531	553	628	828	897	583	307	217	123
3	212	364	320	512	983	588	979	900	402	290	196	124
4	201	331	434	550	1480	548	1720	924	508	307	186	127
5	193	305	349	708	1120	518	1180	859	1470	353	180	118
6	185	318	327	1110	922	517	980	781	810	287	176	119
7	177	330	315	4420	800	500	860	997	585	281	173	129
8	174	349	313	5700	716	1310	776	916	498	298	171	134
9	170	345	325	2130	665	1860	845	885	576	306	174	154
10	163	382	539	1250	610	1050	746	902	727	270	187	122
11	149	342	477	965	672	855	693	1230	729	259	178	118
12	147	328	424	814	776	759	668	912	588	254	165	115
13	144	349	402	733	652	687	628	803	522	251	196	110
14	154	522	380	625	605	646	738	732	480	241	205	108
15	159	457	376	1300	565	605	664	669	518	234	187	104
16	143	388	417	1580	758	613	739	617	461	228	272	102
17	147	354	405	1350	1210	587	3700	579	422	225	255	105
18	145	331	395	1100	1130	1270	1810	542	395	215	189	105
19	167	317	385	975	919	1820	2570	515	411	219	174	105
20	151	300	386	815	849	1820	2200	495	396	218	167	116
21	142	308	397	713	754	1440	1630	474	388	210	161	208
22	144	e400	635	784	694	1130	1760	478	378	224	156	161
23	138	e340	524	1210	823	958	1590	448	618	285	154	122
24	159	e270	888	961	725	859	1410	429	453	261	157	115
25	307	242	1000	811	666	774	1200	413	383	241	147	113
26	1920	237	741	721	654	713	1050	410	360	226	142	111
27	1220	233	769	864	802	686	965	388	340	223	137	107
28	544	230	662	802	772	656	950	379	321	316	135	105
29	410	236	621	713	---	620	821	370	327	262	134	151
30	344	263	598	678	---	586	940	362	327	219	132	135
31	304	---	566	623	---	563	---	354	---	217	130	---
TOTAL	9072	9968	15107	36569	22456	26861	37010	20548	15382	8102	5461	3691
MEAN	293	332	487	1180	802	866	1234	663	513	261	176	123
MAX	1920	522	1000	5700	1480	1860	3700	1230	1470	375	272	208
MIN	138	230	313	512	553	500	628	354	321	210	130	102
CFSM	1.59	1.81	2.65	6.41	4.36	4.71	6.70	3.60	2.79	1.42	.96	.67
IN.	1.83	2.02	3.05	7.39	4.54	5.43	7.48	4.15	3.11	1.64	1.10	.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1998<sup>9</sup>, BY WATER YEAR (WY)

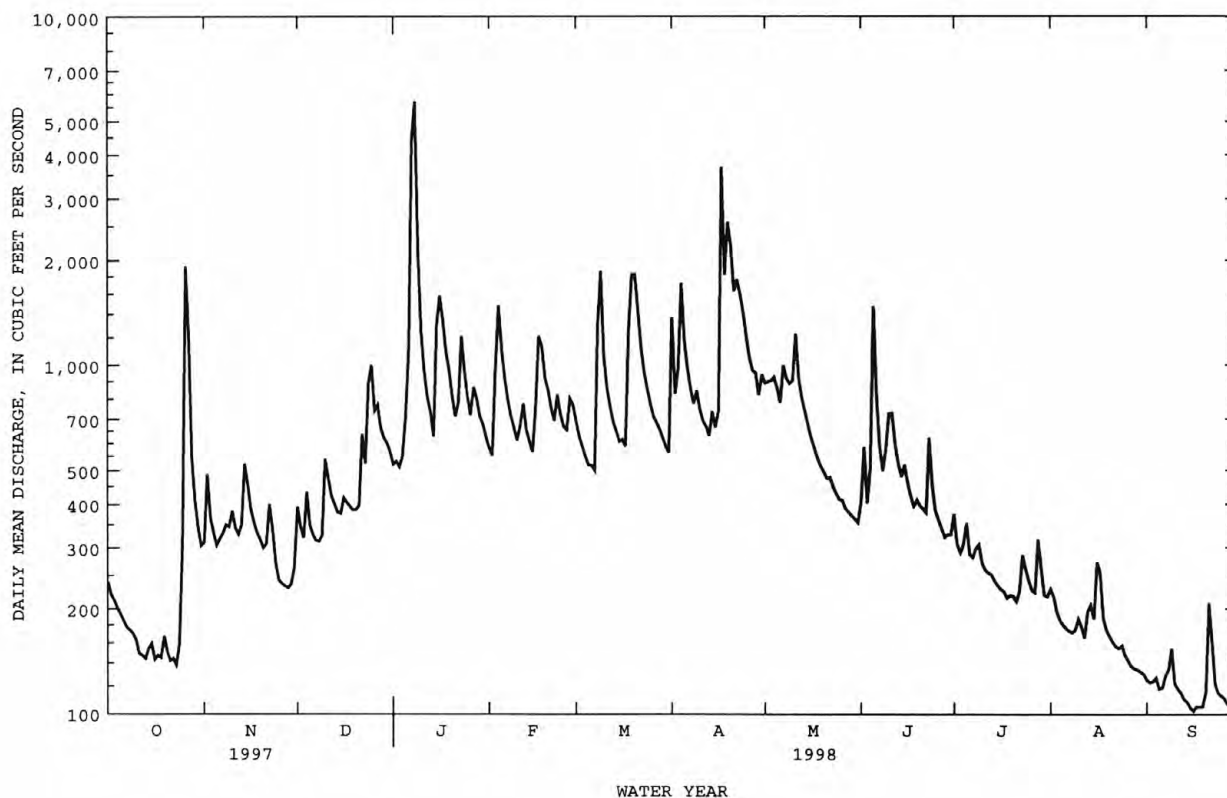
	MEAN	268	388	587	730	818	897	729	536	428	377	330	258
MAX	645	777	1266	1428	1700	1714	1315	1202	1136	938	733	584	
(WY)	1990	1958	1962	1974	1990	1963	1994	1984	1989	1989	1994	1989	
MIN	94.5	125	162	170	392	330	277	239	175	169	161	121	
(WY)	1955	1988	1966	1981	1978	1988	1986	1986	1988	1952	1987	1954	

## TENNESSEE RIVER BASIN

03512000 OCONALUFTEE RIVER AT BIRDTOWN, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1945 - 1998 <sup>e</sup>	
ANNUAL TOTAL	221875		210227		527	
ANNUAL MEAN	608		576		771	
HIGHEST ANNUAL MEAN					274	
LOWEST ANNUAL MEAN					8470	
HIGHEST DAILY MEAN	4230	Mar 3	5700	Jan 8	80	Mar 12 1963
LOWEST DAILY MEAN	117	Sep 17	102	Sep 16	82	Nov 8 1987
ANNUAL SEVEN-DAY MINIMUM	125	Sep 14	106	Sep 13	15900	Oct 16 1954
INSTANTANEOUS PEAK FLOW			10800	Jan 7	12.46*	Dec 30 1969
INSTANTANEOUS PEAK STAGE			9.48	Jan 7	79*	Nov 8 1987
INSTANTANEOUS LOW FLOW			98	Sep 16	2.87	
ANNUAL RUNOFF (CFSM)	3.30		3.13		38.94	
ANNUAL RUNOFF (INCHES)	44.86		42.50		955	
10 PERCENT EXCEEDS	1080		1100		395	
50 PERCENT EXCEEDS	519		413		169	
90 PERCENT EXCEEDS	159		144			

<sup>e</sup> Estimated.  
<sup>ee</sup> See PERIOD OF RECORD.  
 \* See REMARKS.



## TENNESSEE RIVER BASIN

03513000 TUCKASEGEE RIVER AT BRYSON CITY, NC

LOCATION.--Lat 35°25'40", long 83°26'51", Swain County, Hydrologic Unit 06010203, on left bank 400 ft downstream of bridge on Secondary Road 1364, Everett Street, in Bryson City, 0.6 mi downstream of Deep Creek, and at mile 12.6.

DRAINAGE AREA.--655 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1897 to December 1981, October 1983 to January 1995, April 1996 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 523: 1916, 1918-20. WSP 823: Drainage area. WSP 1306: 1898-1913. WSP 1336: 1907, 1915(M), 1916-20, 1921-29(M), 1933-34(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,714.54 ft above sea level (levels by Tennessee Valley Authority). Nov. 7, 1897, to Feb. 2, 1914, and May 18, 1920, to June 27, 1927, nonrecording gage at bridge 400 ft upstream at datum of 1,716.54 ft. Feb. 3, 1914, to May 17, 1920, water-stage recorder at site 200 ft upstream at datum of 1,716.54 ft. June 28, 1927, to Sept. 30, 1960, water-stage recorder at present site at datum of 1,716.54 ft. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Considerable diurnal fluctuation caused by power plants upstream from station. Flow regulated by Thorpe Reservoir, Cedar Cliff Lake, Bear Creek Lake, Tennessee Creek project lakes (stations 03507111, 03507131), and two small reservoirs with a combined capacity of 250 ft<sup>3</sup>/s-day. Maximum discharge for period of record, from rating curve extended above 28,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record and minimum daily discharge for period of record also occurred Sept. 10, 1925, caused by filling reservoir on Oconaluftee River. Minimum daily discharge during normal regulation: 186 ft<sup>3</sup>/s, Oct. 13, 1925. Minimum discharge for current water year also occurred Sept. 19.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1840, Mar. 6, 1867, and June 1876 reached stages of 22, 19, and 19 ft, respectively, present site and datum, from studies by Tennessee Valley Authority; discharge not determined. The flood in May 1840 exceeded all other observed floods at this location.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	666	1040	862	910	2550	2750	3610	3160	1160	1060	838	579
2	700	1810	792	961	2540	2630	2840	2960	1840	1030	647	647
3	680	1680	742	1170	3640	2560	3350	3080	1410	961	607	652
4	687	1190	1030	915	5930	2480	4660	3080	1700	932	686	669
5	578	1130	929	1070	4930	2340	3740	2930	4040	1030	646	572
6	566	1200	981	2260	3900	2360	3240	2770	2750	854	602	572
7	623	1320	730	7660	3430	2380	2970	3130	1820	907	595	589
8	620	1070	793	16900	3130	3810	2710	3060	1380	956	697	585
9	533	1050	911	6770	2960	4920	2710	2860	1700	1020	584	719
10	595	1150	1460	4500	2730	3630	2220	2980	2280	932	639	579
11	646	1020	1280	3530	2770	3150	2000	3330	2340	890	785	570
12	527	940	1290	3050	2960	2940	1980	2860	1880	783	898	565
13	519	983	996	2840	2680	2780	1990	2590	1700	774	690	546
14	711	1360	841	2580	2570	2640	2100	2230	1300	853	791	541
15	805	1190	877	4070	2500	2510	1790	2140	1410	839	780	425
16	699	863	1130	5420	3070	2530	2060	1990	1450	820	749	356
17	723	887	1110	5360	4910	2530	6560	1590	1430	848	701	362
18	840	969	1110	3990	4800	3250	4310	1560	1360	840	942	366
19	785	904	1030	3580	3780	4550	5420	1840	1520	687	716	359
20	733	880	749	3170	3390	4570	5320	1760	1510	708	905	375
21	854	893	696	2890	3060	4000	4270	1710	1080	832	923	556
22	820	1070	1040	3010	2910	3440	4480	1960	1130	736	579	649
23	784	808	980	3960	3370	3140	4430	1630	1790	883	520	488
24	851	804	1870	3450	3050	3010	4110	1250	1690	932	521	447
25	1090	876	2010	3110	2840	2690	3590	1240	1250	831	579	383
26	4070	864	1330	2880	2770	2680	3440	1490	1070	733	591	376
27	3510	1100	1350	3210	2960	2360	3060	1440	1100	693	574	367
28	2100	1220	1170	3220	2890	2490	2950	1410	896	778	475	366
29	1820	1040	1360	2960	---	2440	2690	1350	865	739	636	652
30	1230	717	1510	2720	---	2300	3330	1300	1110	703	592	853
31	1090	---	1340	2630	---	1900	---	1050	---	769	589	---
TOTAL	31455	32028	34299	114746	93020	91760	101930	67730	47961	26353	21077	15765
MEAN	1015	1068	1106	3701	3322	2960	3398	2185	1599	850	680	526
MAX	4070	1810	2010	16900	5930	4920	6560	3330	4040	1060	942	853
MIN	519	717	696	910	2500	1900	1790	1050	865	687	475	356

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 1998<sup>8</sup>, BY WATER YEAR (WY)

	931	1063	1597	2032	2301	2609	2251	1751	1412	1243	1165	958
MEAN	931	1063	1597	2032	2301	2609	2251	1751	1412	1243	1165	958
MAX	3654	2899	3704	4819	5847	6504	4843	3744	3199	3379	4251	3589
(WY)	1899	1907	1933	1937	1899	1899	1920	1984	1909	1916	1901	1898
MIN	347	378	457	599	736	926	841	602	531	503	220	195
(WY)	1932	1932	1940	1940	1941	1988	1986	1941	1941	1925	1925	1925

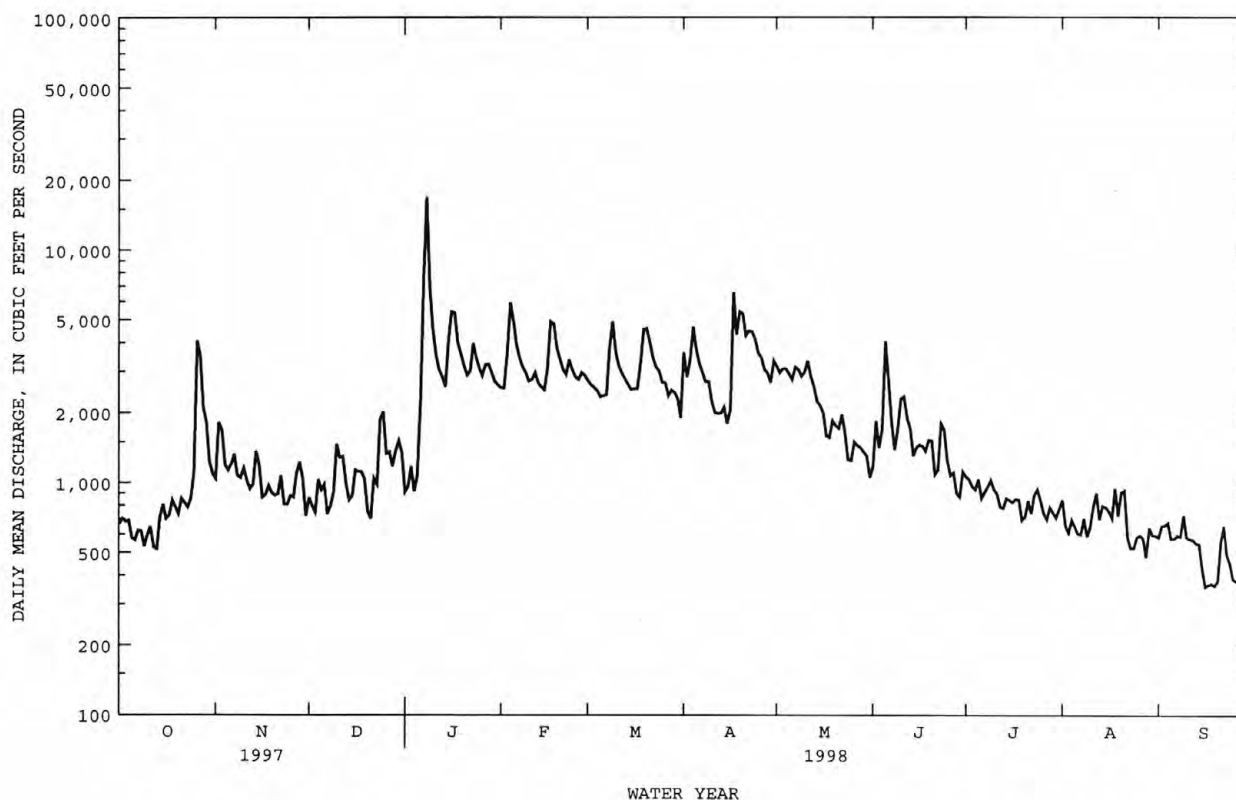
## TENNESSEE RIVER BASIN

03513000 TUCKASEGEE RIVER AT BRYSON CITY, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1898 - 1998 <sup>a</sup>	
ANNUAL TOTAL	719216		678124		1605	
ANNUAL MEAN	1970		1858		2576	1899
HIGHEST ANNUAL MEAN					879	1986
LOWEST ANNUAL MEAN					28000	Mar 4 1917
HIGHEST DAILY MEAN	10400	Feb 28	16900	Jan 8	31*	Sep 9 1925
LOWEST DAILY MEAN	406	Sep 22	356	Sep 16	97	Sep 4 1925
ANNUAL SEVEN-DAY MINIMUM	451	Sep 16	398	Sep 14	61600*	Aug 30 1940
INSTANTANEOUS PEAK FLOW			27300	Jan 8	15.96	Aug 30 1940
INSTANTANEOUS PEAK STAGE			12.67	Jan 8	27*	Sep 10 1925
INSTANTANEOUS LOW FLOW			349*	Sep 16	2870	
10 PERCENT EXCEEDS	3530		3580		1270	
50 PERCENT EXCEEDS	1730		1250		610	
90 PERCENT EXCEEDS	691		590			

<sup>a</sup> See PERIOD OF RECORD.

\* See REMARKS.





## TENNESSEE RIVER BASIN

03548500 HIWASSEE RIVER ABOVE MURPHY, NC

LOCATION.--Lat 35°04'49", long 84°00'10", Cherokee County, Hydrologic Unit 06020002, on right bank on U.S. Highway 64, 600 ft upstream from Will Scott Creek, 2.0 mi southeast of Murphy, and at mile 99.1.

DRAINAGE AREA.--406 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1896 to August 1897 (gage heights only), October 1897 to current year. Published as "Hiwassee River at Murphy" 1897-1940. Records published for both sites August 1939 to April 1940. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORD.--WSP 583: 1899(M). WSP 973: Drainage area. WSP 1003: 1943. WSP 1306: 1901-2, 1904-17, 1919(M), 1922(M), 1924-26(M). WSP 1706: 1899, 1907.

GAGE.--Water-stage recorder. Datum of gage is 1,538.23 ft above sea level (levels by Tennessee Valley Authority). Prior to Jan. 30, 1921, nonrecording gage at bridge 2.8 mi downstream at 1,507.83 ft. Jan. 30, 1921, to Nov. 8, 1926, nonrecording gage 2.8 mi downstream at 1,509.83 ft. Nov. 9, 1926, to Apr. 30, 1940, water-stage recorder 2.8 mi downstream at 1,510.03 ft.

REMARKS.--No estimated daily discharges. Records good. Considerable diurnal fluctuation since 1924 caused by Mission power plant at Andrews Dam 7 mi upstream, normal regulated storage, about 75 ft<sup>3</sup>/s-day. Flow regulated since 1942 by Chatuge Lake (station 03546500) 22 mi upstream. Prior to regulation, maximum discharge: 23,100 ft<sup>3</sup>/s, Mar. 19, 1899, from rating curve extended above 5,000 ft<sup>3</sup>/s; gage height: 18.4 ft, from graph based on gage readings, site and datum then in use; minimum daily discharge: 10 ft<sup>3</sup>/s, Dec. 3, 1924, result of freezeup and filling of Lake Andrews, site and datum then in use. Minimum discharge for current water year also occurred Sept. 12, 14, 17, 18, 19, 27, 28.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed is that of Mar. 19, 1899.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	613	498	1200	1870	599	1230	1630	615	651	706	678
2	639	982	572	970	1830	838	927	1280	1250	457	404	646
3	1020	832	572	677	1720	1390	1490	1100	1250	490	663	668
4	594	1070	733	465	2820	1250	1970	1590	1730	715	1030	688
5	448	1200	656	941	2720	1230	1370	1730	2130	711	1000	685
6	625	1110	558	1380	2350	1220	1080	2060	1330	844	1040	699
7	923	1120	383	2990	2160	815	956	2450	821	970	986	548
8	772	596	615	4760	2050	1410	834	2640	667	1020	693	469
9	931	484	943	2880	2040	2250	991	2210	1320	559	419	550
10	811	735	825	2300	2100	2170	965	2360	1850	757	664	378
11	646	887	713	2080	2080	1880	1020	2440	2240	638	987	354
12	393	820	671	1920	1950	1870	748	2180	1640	697	879	542
13	625	817	697	1870	1910	2030	806	2030	1420	741	883	660
14	894	928	522	1820	1550	1170	946	1890	1050	672	954	636
15	907	537	657	2620	1490	1090	904	1880	1020	539	702	746
16	869	504	817	3050	1660	1030	898	1790	808	533	567	866
17	886	722	788	2520	1930	1250	1390	1780	1380	528	696	625
18	655	790	776	2210	1800	1190	1210	1140	1410	519	559	670
19	387	783	757	2100	1680	1300	2260	550	1350	520	508	677
20	651	791	548	1980	1650	1290	2410	521	1240	619	482	671
21	762	748	354	1910	1590	1110	2130	504	880	907	503	955
22	747	695	490	1290	1500	1080	2390	580	1060	995	606	1090
23	853	476	486	1260	1970	1130	2200	630	1030	874	760	715
24	1040	624	703	2070	1870	1330	2000	569	1240	634	780	288
25	642	760	802	1980	1830	936	1790	532	1230	572	940	208
26	2020	774	576	1900	1820	665	1750	650	1230	420	891	214
27	1430	667	745	2460	1860	644	1650	618	1040	637	816	239
28	1250	491	612	2290	1040	623	1600	662	616	916	793	249
29	1020	439	988	2100	---	608	1580	869	1010	851	676	272
30	941	355	1420	2000	---	588	1620	818	1020	1030	649	309
31	860	---	1710	1930	---	626	---	475	---	1060	672	---
TOTAL	26291	22350	22187	61923	52840	36612	43115	42158	36877	22076	22908	16995
MEAN	848	745	716	1998	1887	1181	1437	1360	1229	712	739	567
MAX	2020	1200	1710	4760	2820	2250	2410	2640	2240	1060	1040	1090
MIN	387	355	354	465	1040	588	748	475	615	420	404	208

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	530	593	954	1149	1236	1126	1060	949	915	891	875	724
MAX	1530	1654	2532	2462	3076	2784	2155	2033	1852	1517	1674	1628	
(WY)	1990	1990	1993	1974	1990	1990	1953	1953	1989	1989	1994	1943	
MIN	98.8	106	214	223	408	373	219	212	238	228	120	141	
(WY)	1953	1954	1948	1948	1954	1988	1986	1988	1953	1953	1953	1953	

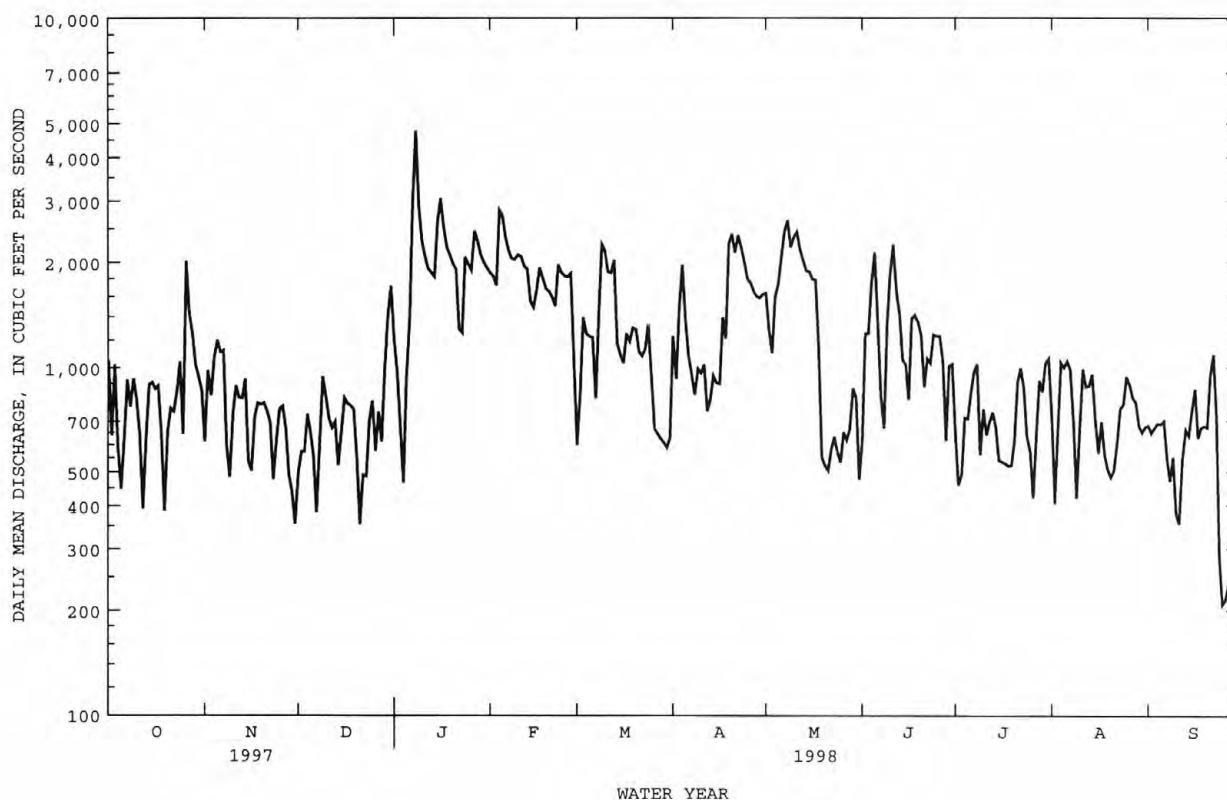
## TENNESSEE RIVER BASIN

03548500 HIWASSEE RIVER ABOVE MURPHY, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1942 - 1998 <sup>a</sup>	
ANNUAL TOTAL	416303		406332		915	
ANNUAL MEAN	1141		1113		1414	1990
HIGHEST ANNUAL MEAN					397	1988
LOWEST ANNUAL MEAN					11600	Feb 16 1990
HIGHEST DAILY MEAN	6470	Feb 28	4760	Jan 8	62	Oct 19 1952
LOWEST DAILY MEAN	350	Sep 7	208	Sep 25	80	Oct 18 1952
ANNUAL SEVEN-DAY MINIMUM	513	Nov 27	254	Sep 24	18600	May 28 1973
INSTANTANEOUS PEAK FLOW			9290	Jan 8	13.88	May 28 1973
INSTANTANEOUS PEAK STAGE			9.73	Jan 8	NOT DETERMINED	
INSTANTANEOUS LOW FLOW			143*	Sep 11		
10 PERCENT EXCEEDS	1960		2050		1640	
50 PERCENT EXCEEDS	988		907		812	
90 PERCENT EXCEEDS	572		520		221	

<sup>a</sup> Regulated period only (1942-1998). See REMARKS.

\* See REMARKS.



## TENNESSEE RIVER BASIN

## 03550000 VALLEY RIVER AT TOMOTLA, NC

LOCATION.--Lat 35°08'20", long 83°58'50", Cherokee County, Hydrologic Unit 06020002, on right bank at site of former bridge on Secondary Road 1373 at Tomotla, 600 ft upstream from bridge on U.S. Highways 19 and 74, 0.2 mi upstream from Roger Creek, 4.7 mi northeast of Murphy, and at mile 6.6.

DRAINAGE AREA.--104 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1904 to December 1909, January 1914 to April 1917, October 1918 to current year.

REVISED RECORDS.--WSP 503: 1905-9, 1915-17. WSP 823: Drainage area. WSP 1306: 1917(M), 1920(M), 1922(M), 1925(M), 1930(M), 1933(M). WSP 1626: 1907(M). WDR NC-91-1: 1979-1994(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,556.46 ft above sea level (levels by Tennessee Valley Authority). Prior to May 11, 1934, nonrecording gage at same site and datum. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge for period of record, from flood profile by Tennessee Valley Authority, from rating curve extended above 5,800 ft<sup>3</sup>/s on basis of slope-conveyance study. Minimum discharge for period of record occurred several days in Aug. and Sept. 1925. Minimum discharge for current water year also occurred Sept. 19, 20, 21.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1898 reached a stage of 21.2 ft, from floodmark by Tennessee Valley Authority; discharge, about 20,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	151	232	181	341	282	610	401	264	167	111	43
2	77	241	167	176	318	268	461	375	220	155	92	42
3	75	183	173	182	468	258	684	371	183	150	83	42
4	72	163	236	202	682	249	928	389	277	177	78	45
5	68	147	199	213	604	244	650	353	483	170	74	41
6	67	151	178	230	489	238	513	328	487	142	71	39
7	64	158	163	1030	425	238	439	460	326	134	69	64
8	63	145	157	1870	382	563	394	529	258	133	68	45
9	61	138	189	923	350	790	446	435	503	136	77	43
10	60	133	264	592	324	597	381	548	1040	125	81	39
11	59	127	245	452	344	462	350	555	1030	119	75	39
12	58	124	215	380	336	396	325	458	553	118	68	38
13	56	136	195	348	309	353	308	394	412	114	70	36
14	63	149	180	309	293	328	374	352	344	111	82	35
15	64	143	167	781	276	306	329	321	409	108	76	34
16	59	134	156	991	300	299	315	299	313	103	91	34
17	61	126	149	730	411	283	425	281	280	102	90	34
18	60	121	144	550	407	340	470	262	255	98	77	35
19	58	118	138	483	377	467	1370	248	279	93	72	33
20	57	115	134	405	348	567	1120	238	259	90	70	33
21	56	133	133	358	319	532	739	228	241	85	65	87
22	58	205	193	408	306	446	833	260	227	121	61	56
23	54	160	160	571	366	395	742	225	211	114	59	43
24	80	147	247	544	319	376	620	214	199	111	57	40
25	159	137	287	453	299	339	531	205	189	106	55	39
26	862	131	240	396	285	317	469	205	183	99	53	38
27	482	127	272	634	334	303	429	194	176	139	51	36
28	e241	122	238	595	293	289	395	185	169	131	49	35
29	e192	120	221	489	---	274	363	179	162	98	48	115
30	e158	142	213	427	---	263	421	177	168	91	47	91
31	139	---	200	378	---	258	---	173	---	106	46	---
TOTAL	3766	4327	6085	16281	10305	11320	16434	9842	10100	3746	2166	1374
MEAN	121	144	196	525	368	365	548	317	337	121	69.9	45.8
MAX	862	241	287	1870	682	790	1370	555	1040	177	111	115
MIN	54	115	133	176	276	238	308	173	162	85	46	33
CFSM	1.17	1.39	1.89	5.05	3.54	3.51	5.27	3.05	3.24	1.16	.67	.44
IN.	1.35	1.55	2.18	5.82	3.69	4.05	5.88	3.52	3.61	1.34	.77	.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1998<sup>9</sup>, BY WATER YEAR (WY)

	MEAN	99.9	160	294	402	459	466	371	261	191	168	137	102
MAX	442	685	1045	936	1022	1379	835	755	607	443	563	434	
(WY)	1907	1930	1933	1974	1957	1917	1936	1929	1989	1949	1920	1928	
MIN	25.2	38.6	57.4	69.9	92.7	155	135	88.9	44.8	42.4	24.6	21.3	
(WY)	1955	1934	1934	1981	1941	1988	1986	1941	1988	1988	1925	1925	

## TENNESSEE RIVER BASIN

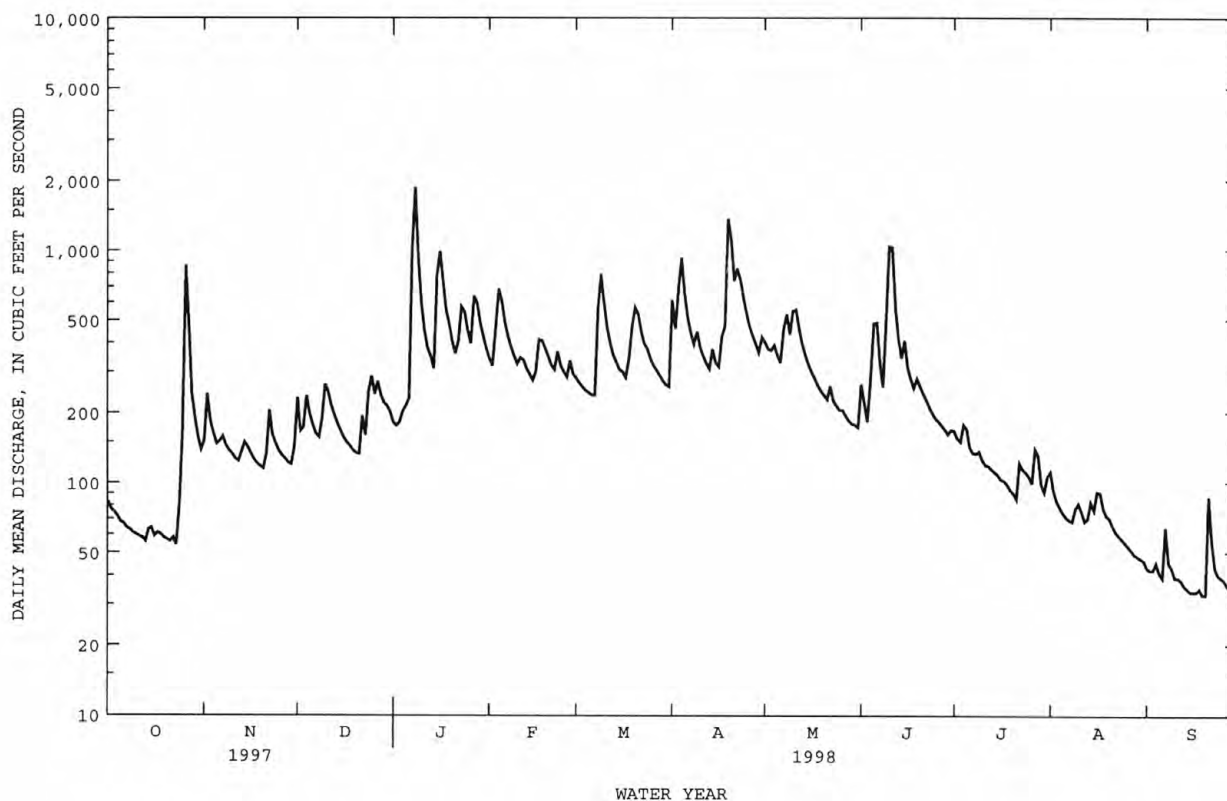
03550000 VALLEY RIVER AT TOMOTLA, NC--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1904 - 1998 <sup>e</sup>	
ANNUAL TOTAL	108735		95746		258	
ANNUAL MEAN	298		262		379	
HIGHEST ANNUAL MEAN					111	
LOWEST ANNUAL MEAN					1922	
HIGHEST DAILY MEAN	3460	Feb 28	1870	Jan 8	8190	Feb 16 1995
LOWEST DAILY MEAN	44	Sep 20	33	Sep 19	12	Aug 27 1925
ANNUAL SEVEN-DAY MINIMUM	47	Sep 17	34	Sep 14	13	Aug 24 1925
INSTANTANEOUS PEAK FLOW			3140	Jan 7	18000*	Nov 19 1906
INSTANTANEOUS PEAK STAGE			8.96	Jan 7	20.50	Nov 19 1906
INSTANTANEOUS LOW FLOW			32*	Sep 15	12*	Aug 27 1925
ANNUAL RUNOFF (CFSM)	2.86		2.52		2.48	
ANNUAL RUNOFF (INCHES)	38.89		34.25		33.74	
10 PERCENT EXCEEDS	566		530		505	
50 PERCENT EXCEEDS	241		200		178	
90 PERCENT EXCEEDS	62		57		60	

e Estimated.

a See PERIOD OF RECORD.

\* See REMARKS.



## Lakes and Reservoirs in Ohio River Basin

**03460242 WATERVILLE LAKE**

LOCATION.--Lat 35°41'41", long 83°03'02", Haywood County, Hydrologic Unit 06010206, at Waterville Dam on Pigeon River, 0.1 mi downstream from Cataloochee Creek, 5.5 mi southeast of Mount Sterling, and at river mile 38.0.

DRAINAGE AREA.--455 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year. Prior to October 1979, published as Lake Walters.

GAGE.--Nonrecording gage read once daily. Datum of gage is sea level.

REMARKS.--Reservoir is formed by a single-arch, variable-radius, concrete dam with 14 taintor gates 10 ft high by 24 ft wide. Dam was completed in 1929 and filling began October 1929; water in reservoir first reached minimum pool elevation November 1929. Total capacity is 12,800 ft<sup>3</sup>/s-day at 2,258.60 ft (top of gate), of which 10,400 ft<sup>3</sup>/s-day is controlled storage above 2,175 ft, normal minimum pool elevation. Reservoir is used for power. Prior to Jan. 1, 1971, records furnished by Carolina Power and Light Co. New capacity table was put into use Jan. 1, 1971.

COOPERATION.--Gage-height record furnished by Carolina Power and Light Co.; water-level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum content observed: 12,950 ft<sup>3</sup>/s-day, Mar. 27, 1994; elevation, 2,259.20 ft. Minimum content observed: 1,030 ft<sup>3</sup>/s-day, Sept. 16, 1980; elevation, 2,141.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum content observed: 12,860 ft<sup>3</sup>/s-day, Jan. 10 and Apr. 19; elevation, 2,258.70 ft. Minimum content observed: 8,960 ft<sup>3</sup>/s-day, Feb. 2; elevation, 2,233.70 ft.

**03514500 FONTANA LAKE**

LOCATION.--Lat 35°27'07", long 83°48'18", Graham County, Hydrologic Unit 06010202, at Fontana Dam on Little Tennessee River, 9.6 mi upstream from Cheoah Dam, 5.7 mi upstream from Twenty Mile Creek, 9.0 mi north of Robbinsville, and at river mile 61.0.

DRAINAGE AREA.--1,571 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1944 to current year. Prior to November 1944, monthend content only, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by gravity, nonoverflow-type concrete dam. Spillway is equipped with four radial gates 35 ft high by 35 ft wide. Filling began Nov. 7, 1944; dam completed March 1945; water in reservoir first reached minimum pool elevation Jan. 16, 1945. Total capacity (based on 1967 resurvey) is 727,500 ft<sup>3</sup>/s-day, at 1,710.0 ft (top of gate) of which 476,900 ft<sup>3</sup>/s-day is controlled storage above 1,580.0 ft, normal minimum pool elevation. Reservoir is used for navigation, flood control, and power. New capacity table put into use Jan. 1, 1971.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum content observed: 728,600 ft<sup>3</sup>/s-day, May 28, 1973; elevation, 1,710.20 ft. Minimum content observed (after first filling): 78,300 ft<sup>3</sup>/s-day, Jan. 29, 1955; elevation, 1,472.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum content observed: 702,700 ft<sup>3</sup>/s-day, June 11; elevation, 1,705.34 ft. Minimum content observed: 370,900 ft<sup>3</sup>/s-day, Dec. 19; elevation, 1,624.85 ft.

**03546500 CHATUGE LAKE**

LOCATION.--Lat 35°01'01", long 83°47'28", Clay County, Hydrologic Unit 06020002, at Chatuge Dam on Hiwassee River, 2.0 mi upstream from Hyatt Mill Creek, 2.5 mi downstream from Georgia-North Carolina Stateline, 2.4 mi southeast of Hayesville, and at river mile 121.0.

DRAINAGE AREA.--189 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Aug. 4, 1942, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by a rolled, earthfill dam with side-channel spillway equipped with flashboards. Dam completed and filling began Feb. 12, 1942; water in reservoir first reached minimum pool elevation Feb. 26, 1942. Total capacity (based on 1965 resurvey) is 121,200 ft<sup>3</sup>/s-day, at 1,928.0 ft (top of flashboard), of which 61,700 ft<sup>3</sup>/s-day is controlled storage above 1,905.0 ft, normal minimum pool elevation. Reservoir is used for navigation, flood control, and power. New capacity table put into use Jan. 1, 1971.

COOPERATION.--Records furnished by Tennessee Valley Authority. (See station 03548500.)

EXTREMES FOR PERIOD OF RECORD.--Maximum content observed: 124,200 ft<sup>3</sup>/s-day, Apr. 20, 1943; elevation, 1,927.80 ft. Minimum content observed (after first filling): 9,400 ft<sup>3</sup>/s-day, Sept. 5, 1947, and Jan. 27, 1956; elevation, 1,860.11 ft, Sept. 5, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum content observed: 115,300 ft<sup>3</sup>/s-day, June 16; elevation, 1,926.31 ft. Minimum content observed: 74,800 ft<sup>3</sup>/s-day, Dec. 29; elevation, 1,912.18 ft.

**03554500 HIWASSEE LAKE**

LOCATION.--Lat 35°09'01", long 84°10'40", Cherokee County, Hydrologic Unit 06020002, at Hiwassee Dam on Hiwassee River, 3.9 mi upstream from Shoal Creek, 0.3 mi northwest of village of Hiwassee Dam, and at river mile 75.8.

DRAINAGE AREA.--968 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 0.63 ft below sea level.



## Lakes Reservoirs in Ohio River Basin--Continued

REMARKS--Reservoir is formed by gravity overflow concrete dam with seven taintor gates 23 ft high by 32 ft wide. Slight filling began Apr. 13, 1939, during construction; systematic filling operation began Jan. 14, 1940; dam completed February 1940; water in reservoir and first reached minimum pool elevation Feb. 23, 1940. Total capacity (based on 1965 resurvey) is 218,800 ft<sup>3</sup>/s-day at 1,526.5 ft (top of gate), of which 154,300 ft<sup>3</sup>/s-day is controlled storage above 1,450.0 ft, normal minimum pool elevation. Reservoir is used for navigation, floodcontrol, and power. New capacity table put into use Jan. 1, 1971.

COOPERATION--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD--Maximum content observed: 223,400 ft<sup>3</sup>/s-day, May 28, 1973; elevation, 1,528.02 ft. Minimum content observed (after first filling): 35,800 ft<sup>3</sup>/s-day, Jan. 28, 1948; elevation, 1,413.41 ft.

EXTREMES FOR CURRENT YEAR--Maximum content observed: 211,600 ft<sup>3</sup>/s-day, June 11; elevation, 1,524.30 ft. Minimum content observed: 78,000 ft<sup>3</sup>/s-day, Dec. 18; elevation, 1,461.50 ft.

## OTHER RESERVOIRS

The following smaller reservoirs in the Tennessee River basin are described below. Records of content are not published herein.

## 03447832 LAKE JULIAN

LOCATION.--Lat 35°28'37", long 82°32'51", Buncombe County, Hydrologic Unit 06010105, on Pollees Creek near Skyland.

DRAINAGE AREA.--4.78 mi<sup>2</sup>.

PERIOD OF RECORD.--Prior to November 1967 published as Asheville Steam-Electric Generating Plant Lake.

REMARKS.--Total capacity is 4,540 ft<sup>3</sup>/s-day, of which 2,120 ft<sup>3</sup>/s-day is controlled storage. Filling began Mar. 27, 1963, and lake reached spillway elevation, 2,160 ft, June 3, 1963. Most of initial storage and occasional, supplemental storage provided by pumped diversion from French Broad River. Lake is a cooling-water reservoir for Carolina Power and Light Co. plant.

## 03448959 BURNETT LAKE

LOCATION.--Lat 35°39'44", long 82°20'43", Buncombe County, Hydrologic Unit 06010105, on North Fork Swannanoa River near Black Mountain.

DRAINAGE AREA.--21.9 mi<sup>2</sup>.

REMARKS.--Total capacity at crest of spillway is 11,600 ft<sup>3</sup>/s-day, of which 8,900 ft<sup>3</sup>/s-day is controlled storage. Filling began Jan. 28, 1954. Lake is part of Asheville's municipal water supply. (See station 03451000.)

## 03450134 BEETREE RESERVOIR

LOCATION.--Lat 35°38'27", long 82°24'04", Buncombe County, Hydrologic Unit 06010105, on Beetree Creek near Swannanoa.

DRAINAGE AREA.--7.62 mi<sup>2</sup>.

REMARKS.--Total capacity is 844 ft<sup>3</sup>/s-day, of which 823 ft<sup>3</sup>/s-day is controlled storage. Dam completed December 1926, and filling began Jan. 11, 1927; water in reservoir first reached maximum pool elevation Mar. 8, 1927. Lake is part of Asheville's municipal water supply. (See station 03451000.)

## 03455773 LAKE LOGAN

LOCATION.--Lat 35°25'15", long 82°55'30", Haywood County, Hydrologic Unit 06010106, on West Fork Pigeon River near Canton and at river mile 7.0.

DRAINAGE AREA.--33.3 mi<sup>2</sup>.

REMARKS.--Total capacity is 1,040 ft<sup>3</sup>/s-day (top of flashboards), all of which is usable. Filling began November 1931. (See station 0345577330.)

## 03458319 LAKE JUNALUSKA

LOCATION.--Lat 35°31'38", long 82°57'48", Haywood County, Hydrologic Unit 06010106, on Richland Creek at Lake Junaluska and at river mile 2.4.

DRAINAGE AREA.--63.6 mi<sup>2</sup>.

REMARKS.--Total surface area is about 195 acres. The lake reached spillway elevation in the spring of 1913.

## 03500466 SEQUOYAH LAKE

LOCATION.--Lat 35°04'02", long 83°13'31", Macon County, Hydrologic Unit 06010202, on Cullasaja River near Highlands, and at river mile 18.4.

DRAINAGE AREA.--14.4 mi<sup>2</sup>.

REMARKS.--Total capacity is 233 ft<sup>3</sup>/s-day (at crest of spillway), of which approximately 116 ft<sup>3</sup>/s-day is usable. Filling began in 1926.

## Lakes and Reservoirs in Ohio River Basin--Continued

**03504500 NANTAHALA LAKE**

LOCATION.--Lat 35°11'56", long 83°39'17", Macon County, Hydrologic Unit 06010202, at Nantahala Dam on Nantahala River, 5.5 mi upstream from Whiteoak Creek, 4.2 mi southeast of Topton, and at river mile 22.8.

DRAINAGE AREA.--91.0 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1942 to September 1995. Prior to October 1944 monthend content only, published in WSP 1306.

REMARKS.--Reservoir is formed by rockfill dam with side-channel, gate-controlled spillway supplemented by fuse-plug dam. Dam completed and filling began Jan. 30, 1942; water in reservoir first reached minimum pool elevation Feb. 16, 1942. Total capacity (based on 1969 resurvey) is 69,200 ft<sup>3</sup>/s-day at 2,890.0 ft (top of gates), of which 63,500 ft<sup>3</sup>/s-day is controlled storage above 2,758.84 ft, normal minimum pool elevations. Reservoir is used for flood control and power. New capacity table put into use Jan. 1, 1971.

**03507111; 03507131 EAST FORK LAKE AND WOLF CREEK LAKE**

These two reservoirs are operated as a unit for storage of water for the Tennessee Creek Project.

**EAST FORK DAM**

LOCATION.--Lat 35°12'48", long 83°00'08", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee.

DRAINAGE AREA.--24.9 mi<sup>2</sup>.

REMARKS.--Total capacity of East Fork Lake is 671 ft<sup>3</sup>/s-day, of which 625 ft<sup>3</sup>/s-day is controlled storage. Filling began April 18, 1955.

**WOLF CREEK DAM**

LOCATION.--Lat 35°13'18", long 83°00'00", on Wolf Creek near Tuckasegee.

DRAINAGE AREA.--15.2 mi<sup>2</sup>.

REMARKS.--Total capacity of Wolf Creek Lake is 5,070 ft<sup>3</sup>/s-day, of which 3,850 ft<sup>3</sup>/s-day is controlled storage. Filling began Mar. 22, 1955.

**03507216 BEAR CREEK LAKE**

LOCATION.--Lat 35°14'29", long 83°04'22", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee.

DRAINAGE AREA.--74.8 mi<sup>2</sup>.

REMARKS.--Total capacity is 17,500 ft<sup>3</sup>/s-day, of which 2,290 ft<sup>3</sup>/s-day is controlled storage. Filling began Oct. 9, 1953.

**03507289 CEDAR CLIFF LAKE**

LOCATION.--Lat 35°15'12", long 83°05'58", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee and at river mile 51.9.

DRAINAGE AREA.--80.3 mi<sup>2</sup>.

REMARKS.--Total capacity is 3,200 ft<sup>3</sup>/s-day, of which 350 ft<sup>3</sup>/s-day is controlled storage. Filling began Apr. 26, 1952.

**03507500 THORPE RESERVOIR**

LOCATION.--Lat 35°11'46", long 83°09'09", Jackson County, Hydrologic Unit 06010203, at Thorpe Dam on West Fork Tuckasegee River, 3.0 mi upstream from Shoal Creek, and 2.3 mi northwest of Glenville, and at river mile 9.7.

DRAINAGE AREA.--36.7 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1941 to September 1995. Prior to October 1944 monthend content only, published in WSP 1306. Prior to October 1948, published as Glenville Reservoir.

REMARKS.--Reservoir is formed by earth and rock dam and six 40 ft fuse-plug dams with side-channel spillway equipped with two taintor gates 12 ft high by 25 ft wide. Dam completed and storage began Feb. 12, 1941. Water in reservoir first reached minimum pool elevation Mar. 15, 1941. Total capacity (based on 1969 resurvey) is 35,500 ft<sup>3</sup>/s-day, at 3,100.0 ft (top of gate), of which 33,700 ft<sup>3</sup>/s-day is controlled storage above 3,023.25 ft, normal minimum pool elevation. Reservoir is used for flood control and power. New capacity table put into use Jan. 1, 1971.

**03515152 CHEOAH LAKE**

LOCATION.--Lat 35°26'54", long 83°56'11", Graham County, Hydrologic Unit 06010202, on Little Tennessee River at Cheoah and at river mile 51.4.

DRAINAGE AREA.--1,608 mi<sup>2</sup>.

REMARKS.--Total capacity is 17,700 ft<sup>3</sup>/s-day, of which 920 ft<sup>3</sup>/s-day is controlled storage. Filling began Dec. 8, 1918.

**03516500 SANTEETLAH LAKE**

LOCATION.--Lat 35°22'38", long 83°52'33", Graham County, Hydrologic Unit 06010204, at Santeetlah Dam on Cheoah River, 1.0 mi downstream from Santeetlah Creek, 5.5 mi northwest of Robbinsville, and at river mile 9.3.

DRAINAGE AREA.--176 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1927 to September 1995. Prior to October 1946 monthend content only, published in WSP 1306.

REMARKS.--Reservoir is formed by concrete gravity and arch dam with concrete spillway controlled by six taintor gates 12 ft high by 25 ft wide. Dam completed and filling began Dec. 7, 1927. Water in reservoir first reached minimum pool elevation December 1927. Total capacity (new capacity table put into use Jan. 1, 1971) is 78,800 ft<sup>3</sup>/s-day (top of gate) at elevation 1,817.0 ft, of which 66,600 ft<sup>3</sup>/s-day is controlled storage above 1,740.08 ft, normal minimum pool elevation. Reservoir is used for power.



## Lakes and Reservoirs in Ohio River Basin--Continued

**03555500 APPALACHIA LAKE**

LOCATION.--Lat 35°10'04", long 84°17'49", Cherokee County, Hydrologic Unit 06020002, at Appalachia Dam on Hiwassee River, 9.8 mi downstream from Hiwassee Dam, 0.1 mi upstream from North Carolina-Tennessee State line, 1.5 mi northeast of Farner, Tennessee, and at river mile 66.0.

DRAINAGE AREA.--1,018 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1943 to September 1995.

REMARKS.--Reservoir is formed by concrete gravity dam. Spillway is equipped with 10 radial gates. Dam completed and filling began Feb. 14, 1943; water in reservoir first reached minimum pool elevation Feb. 21, 1943. Total capacity (based on 1965 resurvey) is 29,100 ft<sup>3</sup>/s-day at 1,280.0 ft (top of gate), of which 4,400 ft<sup>3</sup>/s-day is controlled storage above 1,272.0 ft, normal minimum pool elevation. Reservoir is used for navigation, flood control, and power. New capacity table put into use Jan. 1, 1971.

## OHIO RIVER BASIN

## Lakes and Reservoirs in Ohio River Basin--Continued

## MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs- days)	Gage height (feet)	Contents (cfs- days)	Change in contents (cfs- days)
03460242 Waterville Lake				03524500 Fontana Lake		
Sept. 30 .....	2,250.00	11,460	---	1,667.82	527,300	---
Oct. 31 .....	2,253.10	11,950	+490	1,651.75	463,600	-63,700
Nov. 30 .....	2,247.50	11,070	-880	1,631.94	393,700	-69,900
Dec. 31 .....	2,246.40	10,900	-170	1,628.06	381,100	-12,600
CAL YR 1997		---	-1,180		---	-82,700
Jan. 31 .....	2,236.70	9,410	-1,490	1,653.51	470,300	+89,200
Feb. 28 .....	2,252.20	11,810	+2,400	1,655.66	478,600	+8,300
Mar. 31 .....	2,250.00	11,460	-350	1,659.34	493,000	+14,400
Apr. 30 .....	2,249.40	11,370	-90	1,693.52	642,800	+149,800
May 31 .....	2,251.90	11,760	+390	1,702.33	687,000	+44,200
June 30 .....	2,253.70	12,050	+290	1,700.59	678,100	-8,900
July 31 .....	2,251.30	11,670	-380	1,693.64	643,400	-34,700
Aug. 31 .....	2,241.80	10,190	-1,480	1,679.02	575,400	-68,000
Sept. 30 .....	2,243.80	10,490	+300	1,655.25	477,000	-98,400
WTR YR 1998		---	-970		---	-50,300
Date	Gage height (feet)	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs- days)
03546500 Chatuge Lake				03554500 Hiwasee Lake		
Sep. 30 .....	1,916.78	86,400	---	1,500.36	147,000	---
Oct. 31 .....	1,913.89	78,900	-7,500	1,493.02	130,700	-16,300
Nov. 30 .....	1,912.66	75,900	-3,000	1,474.21	96,500	-34,200
Dec. 31 .....	1,912.56	75,700	-200	1,462.78	79,600	-16,900
CAL YR 1997		---	-1,000		---	-8,400
Jan. 31 .....	1,913.90	79,000	+3,300	1,481.10	108,300	+28,700
Feb. 28 .....	1,915.26	82,400	+3,400	1,480.60	107,400	-900
Mar. 31 .....	1,919.59	94,200	+11,800	1,491.88	128,300	+20,900
Apr. 30 .....	1,924.55	109,400	+15,200	1,515.83	186,200	+57,900
May 31 .....	1,925.35	112,000	+2,600	1,521.08	201,400	+15,200
June 30 .....	1,925.10	111,200	-800	1,521.00	201,200	-200
July 31 .....	1,923.12	104,800	-6,400	1,517.06	189,600	-11,600
Aug. 31 .....	1,919.16	92,900	-11,900	1,506.15	161,200	-28,400
Sept. 30 .....	1,915.73	83,600	-9,300	1,491.20	126,900	-34,300
WTR YR 1998		---	-2,800		---	-20,100

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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 these events. These measurements and others collected for some special reason are called measurements at miscellaneous sites.

## PEAK DISCHARGE STATIONS

The following table contains annual maximum discharges for peak discharge stations. A peak discharge 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 floods 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 has been determined.

## ANNUAL MAXIMUM DISCHARGE AT PEAK DISCHARGE STATIONS DURING WATER YEAR 1998

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
02084540	Durham Creek at Edward	Lat 35°19'25", long 76°52'26" Beaufort County, Hydrologic Unit 03020104, on left bank 5 ft downstream of bridge on Secondary Road 1949 at Edward, and 6.8 mi upstream from mouth.	26	1950-54, 1956-65, 1966-92 <sup>†</sup> , 1993-97	8-27-98	9.92	600
02086500	Flat River at Dam near Bahama	Lat 36°08'55", long 78°49'43", Durham County, Hydrologic Unit 03020201, on right bank 900 ft downstream of Durham municipal dam, 3 mi southeast of Bahama and 5 mi upstream from confluence with Eno River.	168	1927-59 <sup>†</sup> 1961-66, <sup>†</sup> 1982-90 <sup>†</sup> 1994 <sup>†</sup> 1995, 1997	4-19-98	18.18	17,000

<sup>†</sup>Operated as a continuous-record gaging station.

## MEASUREMENTS AT MISCELLANEOUS SITES

These measurements and others collected for special reasons are called measurements at miscellaneous sites. Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Station Number and Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Date	Discharge (ft <sup>3</sup> /s)
DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1998, IN ATLANTIC SLOPE BASINS						
ROANOKE RIVER BASIN						
02077348 Marlowe Creek	Dan River	Lat 36°29'03", long 78°58'47", Person County, Hydrologic Unit 03010104, at bridge on Secondary Road 1322, downstream of Fishing Branch, and 1.2 mi west of Woodsdale.	17.8	1970, 1974, 1976, 1978, 1980-97	10-23-97 3-23-98 6-9-98 8-11-98	5.95 49.0 9.42 5.72
02079101 Grassy Creek	Roanoke River	Lat 36°29'22", long 78°37'08", Granville County, Hydrologic Unit 03010102, at bridge on Secondary Road 1436, 0.7 mi downstream of Little Grassy Creek, and 2.8 mi east-northeast of Cornwall.	61.2	1981-92, 1995-97	10-20-97 5-21-98	13.9 19.4
02079264 Nutbush Creek	Roanoke River	Lat 36°22'10", long 78°24'31", Vance County, Hydrologic Unit 03010102, at bridge on Secondary Road 1317, 0.1 mi upstream from Buggs Island Reservoir, and 3 mi north of Henderson.	6.0	1970, 1974, 1976, 1978-97	10-28-97 5-21-98 7-8-98 9-17-98	5.70 4.17 3.94 1.65
02079717 Smith Creek	Roanoke River	Lat 36°32'27", long 78°11'43", Warren County, Hydrologic Unit 03010106, at bridge on U.S. Highway 1, 0.3 mi downstream of Blue Mud Creek, and 0.1 mi west of Paschall.	52.9	1954, 1961-63, 1966, 1976, 1979-97	10-28-97 5-21-98 7-9-98 9-17-98	11.3 25.0 17.5 9.68
PAMLICO RIVER BASIN						
02081547 Fishing Creek	Tar River	Lat 36°20'09", long 78°35'38", Granville County, Hydrologic Unit 03020101, at bridge on Secondary Road 1643, 2.9 mi upstream from mouth, and 6.3 mi south of Oxford.	44.1	1970-73, 1997	10-15-97 7-8-98 9-17-98	2.25 4.04 2.45
0208273350 Sandy Creek	Swift Creek	Lat 36°10'40", long 78°11'29", Franklin County, Hydrologic Unit 03020101, at bridge on Secondary Road 1436, 2 mi southeast of Gupton.	76.2	1997	10-15-97 5-22-98 7-8-98 9-17-98	215 33.2 28.4 9.73
NEUSE RIVER BASIN						
02087251 Crabtree Creek	Neuse River	Lat 35°50'15", long 78°46'52", Wake County, Hydrologic Unit 03020201, at bridge on Secondary Road 1795, 0.3 mi downstream from Hayleys Branch, and 3.5 mi north of Cary.	52.2	1983-91, 1997	10-22-97 1-29-98 4-9-98 8-13-98	46.7 722 124 23.9
0208732544 Pigeon House Creek	Crabtree Creek	Lat 35°47'37", long 78°38'35", Wake County, Hydrologic Unit 03020201, at Dortch Street, and 1.2 mi north of Raleigh.	.59	1984-92, 1997	10-2-97 5-19-98 8-17-98	1.49 0.39 0.72

## DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1998--Continued

Station Number and Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
CAPE FEAR RIVER BASIN						
02093250 Haw River	Cape Fear River	Lat 36°12'47", long 79°57'24", Guilford County, Hydrologic Unit 03030002, on Secondary Road 2109, 0.2 mi downstream of Rocky Branch, and 3.3 mi northeast of Oak Ridge.	14.1	1971, 1973, 1984, 1986-97	2-11-98 5-22-98 8-13-98	12.8 12.4 4.41
02093423 Little Troublesome Creek	Haw River	Lat 36°16'53", long 79°36'37", Rockingham County, Hydrologic Unit 03030002, at bridge on Secondary Road 2600, 0.8 mi west of Thompsonville, and 1 mi upstream from mouth.	13.0 <sup>a</sup>	1970-73, 1976-77, 1996-97	10-2-97 2-11-98 5-28-98 8-12-98	7.31 36.8 12.1 7.22
02095091 South Buffalo Creek	Buffalo Creek	Lat 36°06'45", long 79°40'19", Guilford County, Hydrologic Unit 03030002, at bridge on Secondary Road 2821, 0.8 mi northwest of McLeansville, and 1.4 mi upstream from mouth.	43.5	1969-70, 1973, 1976-81, 1983-89, 1991-97	10-17-97 1-26-98 5-28-98	30.8 96.0 41.7
02095681 Reedy Fork	Haw River	Lat 36°10'23", long 79°30'38", Alamance County, Hydrologic Unit 03030002, at bridge on State Highway 87 at Ossipee, and 0.5 mi upstream from mouth.	256	1969-70, 1973, 1976-97	10-28-97 3-26-98 6-29-98 8-11-98	102 187 74.1 66.6
02096230 Jordan Creek	Stony Creek	Lat 36°11'20", long 79°23'43", Alamance County, Hydrologic Unit 03030002, at bridge on Secondary Road 1754, 1.0 mi south of Union Ridge, and 2.0 mi above mouth.	24.1	1949-57, 1959-62, 1966,1997	10-28-97 3-26-98 6-9-98 8-13-98	2.32 26.8 3.33 0.16
02096879 Haw River	Cape Fear River	Lat 35°53'43", long 79°15'31", Alamance County, Hydrologic Unit 03030002, at bridge on Secondary Road 1005, 0.7 mi upstream from Cane Creek, and 5.8 mi north of Terrells.	1082	1974-75, 1979-86, 1989-91, 1993, 1996-97	10-16-97 4-1-98 6-29-98 8-21-98	216 764 108 178
02097521 Morgan Creek	New Hope River	Lat 35°51'48", long 79°00'35", Chatham County, Hydrologic Unit 03030002, at bridge on Secondary Road 1726, 2 mi upstream from Cub Creek, and 4 mi north of Farrington.	45.6	1970, 1973, 1976, 1978, 1980-97	10-15-97 4-9-98 6-24-98 8-24-98	44.5 184 12.6 12.7
02099484 Richland Creek	Deep River	Lat 35°56'26", long 79°54'08", Guilford County, Hydrologic Unit 03030003, at bridge on Secondary Road 1147, 0.2 mi upstream from mouth, and 4 mi southwest of Groomtown.	16.2	1971, 1973-76, 1978-97	1-27-98 5-28-98 8-13-98	500 31.7 28.2

<sup>a</sup> Approximately.

## DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1998--Continued

Station Number and Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Date	Measurements Discharge (ft <sup>3</sup> /s)
CAPE FEAR RIVER BASIN--Continued						
02101001 Bear Creek	Deep River	Lat 35°26'26", long 79°35'20", Moore County, Hydrologic Unit 03030003, at bridge on State Highway 705, 0.5 mi north of Robbins, and 1 mi downstream of Cabin Creek.	139	1973-74, 1985-97	10-21-97 2-11-98 5-20-98	37.5 186 48.0
02102634 Upper Little River	Cape Fear River	Lat 35°19'33", long 78°43'26", Harnett County, Hydrologic Unit 03030004, at bridge on Secondary Road 2021, 1.5 mi upstream from mouth, and 2.8 mi west of Erwin.	217	1968, 1974-76, 1979, 1985-97	10-17-97 1-28-98 5-21-98 8-14-98	83.6 1,507 90.1 43.6
02102897 Lower Little River	Cape Fear River	Lat 35°12'13", long 79°12'59", Moore County, Hydrologic Unit 030300004, at bridge on Secondary Road 2023, 0.5 mi above James Creek, 1.0 mi southwest of Lobelia.	110	1997	1-26-98 3-31-98 5-11-98 8-10-98	589 295 253 18.4
02103000 Little River	Cape Fear River	Lat 35°11'38", long 78°59'14", Cumberland County, Hydrologic Unit 03030004, at bridge on State Highway 87 at Manchester, and 0.3 mi upstream from Tank Creek.	347	1939-50 <sup>†</sup> , 1978, 1980-97	1-26-98 3-31-98 5-11-98 8-10-98	1,640 617 614 115
02104279 Rockfish Creek	Cape Fear River	Lat 34°58'10", long 79°06'40", Hoke County, Hydrologic Unit 03030004, at bridge on Secondary Road 1432, 0.2 mi downstream of Puppy Creek, and 1.2 mi northeast of Arabia.	150 <sup>a</sup>	1973-74, 1978, 1980-91, 1997	2-3-98 4-6-98 5-14-98 8-14-98	286 367 289 182
PEE DEE RIVER BASIN						
02115860 Muddy Creek	Yadkin River	Lat 36°00'01", long 80°20'25", Forsyth County, Hydrologic Unit 03040101, 100 ft upstream from bridge on Secondary Road 2995, 0.2 mi downstream of Salem Creek and 1.8 mi east of Muddy Creek.	186	1964-87, 1988-93, 1996-97	2-11-98 5-27-98 8-13-98	228 267 93.2
02120521 Third Creek	South Yadkin River	Lat 35°46'13", long 80°37'34", Rowan County, Hydrologic Unit 03040102, at bridge on Secondary Road 1970, and 2.2 mi west of Woodleaf.	96.6	1985-97	2-26-98 5-22-98 6-24-98 8-14-98	131 76.3 52.7 32.1

<sup>†</sup> Operated as a continuous-record gaging station.<sup>a</sup> Approximately.



## DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1998--Continued

Station Number and Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
PEE DEE RIVER BASIN--Continued						
0212147355 Rich Fork Creek	Abbotts Creek	Lat 35°55'36", long 80°07'31", Davidson County, Hydrologic Unit 03040103, at bridge on Secondary Road 1800, 1.4 mi downstream of High Point sewage disposal plant, and 3.9 mi northwest of Thomasville.	26.6	1970-75, 1981-84, 1986-90, 1993-97	2-25-98 5-28-98 8-18-98	42.5 17.9 9.21
02123500 Uwharrie River	Pee Dee River	Lat 35°25'47", long 80°01'05", Montgomery County, Hydrologic Unit 03040103, at State Highway 109, 1 mi upstream from McLeans Creek, and 3 mi south of Eldorado.	342	1938-71 <sup>†</sup> , 1981-97	2-11-98 5-20-98 8-19-98	376 114 14.4
0212388100 Rocky River	Pee Dee River	Lat 35°28'29", long 80°46'48", Mecklenburg County, Hydrologic Unit 03040105, at bridge on Secondary Road 1608, 1.3 mi upstream from West Branch, and 4.2 mi southeast of Davidson	13.4	1970-97	10-30-97 12-3-97 4-1-98 6-30-98	10.7 11.9 15.7 9.75
02124374 Irish Buffalo Creek	Rocky River	Lat 35°20'50", long 80°32'52", Cabarrus County, Hydrologic Unit 03040105, at bridge on Secondary Road 1132, 1 mi south of Faggarts Crossroads, and 1 mi upstream from mouth.	45.4	1974-84, 1986-97	10-29-97 1-7-98 3-31-98 6-30-98	25.9 132 26.0 13.4
02124401 Rocky River	Pee Dee River	Lat 35°19'26", long 80°30'59", Cabarrus County, Hydrologic Unit 03040105, at bridge on U.S. Highway 601, 1 mi upstream from Hamby Branch, and 3 mi southeast of Faggarts Crossroads.	393	1970-71, 1973-97	10-29-97 1-13-98 3-31-98 6-30-98	252 375 532 98.1
02125126 Long Creek	Rocky River	Lat 35°13'05", long 80°15'28", Stanly County, Hydrologic Unit 03040105, at bridge on Secondary Road 1917, 1 mi upstream from mouth, and 4 mi east of Oakboro.	198	1970-71, 1973-97	10-29-97 1-31-98 3-31-98 6-30-98	162 402 163 10.3
02125482 Richardson Creek	Rocky River	Lat 35°04'16", long 80°24'25", Union County, Hydrologic Unit 03040105, at bridge on Secondary Road 1649, 1.2 mi downstream of Watson Creek, and 1.5 mi northwest of Fairfield.	153	1961-62, 1981-84, 1986-97	10-20-97 1-7-98 3-31-98 6-30-98	40.9 1,430 44.2 9.31
02129341 Hitchcock Creek	Pee Dee River	Lat 34°55'05", long 79°47'50", Richmond County, Hydrologic Unit 03040201, downstream of dam at Cordova, and 1.2 mi upstream from mouth.	134	1970-71, 1974, 1979-84, 1986-97	10-20-97 1-27-98 5-12-98 8-11-98	307 461 341 308

<sup>†</sup> Operated as a continuous-record gaging station.



## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1998--Continued

Station Number and Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Date	Discharge (ft <sup>3</sup> /s)
PEE DEE RIVER BASIN--Continued						
02129527 Jones Creek	Pee Dee River	Lat 34°54'15", long 79°55'51", Anson County, Hydrologic Unit 03040201, at bridge on State Highway 145, 2.9 mi downstream of Hale Creek, and 3.1 mi southwest of Pee Dee.	92.8	1985-97	1-27-98 5-11-98 8-11-98	1,340 301 45.5
02129558 Marks Creek	Pee Dee River	Lat 34°51'45", long 79°43'09", Richmond County, Hydrologic Unit 03040201, at bridge on Secondary Road 1812, 1.3 mi downstream of City Lake spillway, and 2.4 mi southwest of Hamlet.	12.9	1970-71, 1979-84, 1986-97	1-29-98 4-1-98 5-12-98 8-11-98 8-27-98	40.2 28.2 38.3 58.3 5.98
02132269 Leith Creek	Little Pee Dee River	Lat 34°44'37", long 79°25'13", Scotland County, Hydrologic Unit 03040204 at bridge on Secondary Road 1609, 4 mi west of Maxton, and 5.4 mi upstream from mouth.	21.8	1973-75, 1979-92, 1995-97	1-29-98 4-1-98 5-12-98 8-12-98	89.5 29.3 25.7 15.9
SANTEE RIVER BASIN						
0214031250 Wilson Creek	Johns River	Lat 35°00'07", long 81°46'29", Caldwell County, Hydrologic Unit 03050101, at Secondary Road 1358 and 0.1 mi east of Edgemont.	15.1	1992-97	3-13-98	43.9
02141245 Lower Creek	Catawba River	Lat 35°49'31", long 81°38'10", Burke County, Hydrologic Unit 03050102, at bridge on Secondary Road 1501, 0.8 mi downstream of Husband Creek, and 7 mi northeast of Morganton.	89.5	1949-50, <sup>b</sup> 1964-69, <sup>b</sup> 1972-73, 1975-84, 1986-92, 1993-94, <sup>†</sup> 1995-97	10-29-97 2-18-98 7-8-98 9-15-98	72.5 315 76.1 50.1
02142722 Dutchmans Creek	Catawba River	Lat 35°20'10", long 81°00'50", Gaston County, Hydrologic Unit 03050102, at bridge on Secondary Road 1918, and 0.7 mi west of Mountain Island.	116	1986-97	10-6-97 1-4-98 3-27-98 7-1-98	36.3 94.4 137 52.2
02143027 Henry Fork	South Fork Catabwa River	Lat 35°39'27", long 81°18'33", Catawba County, Hydrologic Unit 03050102, at bridge on Secondary Road 1143, 1.7 mi upstream from mouth and 2.5 mi northwest of Startown.	110	1970-71, 1973-74, 1978-80, 1996-97	11-17-97 2-18-98 7-6-98 9-3-98	87.4 345 103 70.2

<sup>b</sup> Baseflow.<sup>†</sup> Operated as a continuous-record gaging station.

## DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1998--Continued

Station Number and Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
SANTEE RIVER BASIN--Continued						
02143069 South Fork Catawba River	Catawba River	Lat 35°37'58", long 81°18'20", Catawba County, bridge on State Highway 10, 1 mile downstream from Henry Fork, and 2.2 miles west of Startown.	210	1974-77, 1979-88, 1991-93, 1997	10-31-97 1-5-98 3-26-98 7-14-98	181 189 370 153
02143260 Clark Creek	South Fork Catawba River	Lat 35°28'30", long 81°16'00", Lincoln County, Hydrologic Unit 03050102, at bridge on Secondary Road 1008 at Lincolnton, and 0.2 mi upstream from mouth.	91.2	1947, 1949-57, 1962-64, 1970-72, and 1975, 1978-97	10-31-97 1-5-98 3-26-98 7-2-98	55.8 76.3 124 42.6
02145640 Crowders Creek	Catawba River	Lat 35°08'15", long 81°08'15", York County, South Carolina, Hydrologic Unit 03050101, at bridge on Ridge Road, 3.4 mi upstream from Beaver Dam Creek, and 3.2 mi east-southeast of Bowling Green, South Carolina.	89	1970-77, 1979-91, 1996-97	10-30-97 1-6-98 3-30-98 6-29-98	36.3 67.7 87.4 39.1
02146530 Little Sugar Creek	Sugar Creek	Lat 35°05'06", long 80°52'58", Mecklenburg County, Hydrologic Unit 03050103, at bridge on State Highway 51, 0.5 mi east of intersection of State Highway 51 and U.S. Highway 521 at Pineville.	49.2	1966-69, 1989-95	10-10-96 4-25-97	52.1 52.8
0214676115 McAlpine Creek	Sugar Creek	Lat 35°03'12", long 80°53'06", Lancaster County, South Carolina, Hydrologic Unit 03050103, at bridge on Secondary Road 2964, 0.5 mi north of Camp Cox, South Carolina, 0.6 mi above Sugar Creek, and 1.0 mi below North Carolina-South Carolina state line.	95.4	1996-97	10-30-97 1-5-98 1-12-98 3-30-98 6-29-98	89.6 96.0 110 110 45.6
02146800 Sugar Creek	Catawba River	Lat 35°00'21", long 80°54'09", York County, Hydrologic Unit 03050103, at bridge on State Highway 160, 0.7 mi downstream from Clems Branch, and 2.6 mi east of Fort Mill, S.C.	262	1969, 1974-78 <sup>†</sup> , 1982-97	11-3-97 1-5-98 3-19-98 6-29-98	329 381 3,490 135
02152596 First Broad River	Broad River	Lat 35°13'03", long 81°36'28", Cleveland County, Hydrologic Unit 03050105, at bridge on Secondary Road 1140, 3 mi upstream from mouth, and 4.8 mi northwest of Earl.	296	1968-77, 1980-97	11-5-97 2-19-98 7-9-98 9-28-98	236 835 197 113
02153456 Buffalo Creek	Broad River	Lat 35°10'20", long 81°31'02", Cleveland County, Hydrologic Unit 03050105, at bridge on State Highway 198, 0.1 mi upstream from North Carolina-South Carolina State line, and 4 mi west of Grover.	161	1968-77, 1979-97	11-5-97 2-19-98 7-9-98 9-28-98	83.4 350 88.3 61.9

<sup>b</sup> Baseflow.

## DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1998--Continued

Station Number and Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
SAVANNAH RIVER BASIN						
02184242 Horse- pasture River	Toxaway River	Lat 35°05'33", long 82°58'04", Transylvania County, Hydrologic Unit 03060101, at bridge on State Highway 281, and 4 mi southwest of Lake Toxaway.	24.1	1985-97	10-22-97 4-21-98 7-10-98	19.5 214 21.5
KANAWA RIVER BASIN						
03160271 South Fork New River	New River	Lat 36°13'14", long 81°38'25", Watauga County, Hydrologic Unit 05050001, at bridge on U.S. Highway 421, and 2 mi east of Boone.	34.8	1925, 1955-56, 1960, 1962, 1974-97	11-10-97 2-20-98 5-29-98 9-30-98	28.1 162 67.2 20.9
03162500 North Fork New River	New River	Lat 36°30'14", long 81°23'25", Ashe County, Hydrologic Unit 05050001, 0.2 mi downstream of bridge on State Highway 16 at Crumpler, and 6 mi upstream from South Fork.	277	1930-58 <sup>†</sup> , 1977, 1981-97	11-10-97 2-20-98 7-16-98	148 903 307
TENNESSEE RIVER BASIN						
03441440 Little River	French Broad River	Lat 35°11'32", long 82°36'49", Transylvania County, Hydrologic Unit 06010105, above High Falls, 0.2 mi upstream from Grassy Creek, 1.0 mi downstream from Reasonover Creek, 3.8 mi northeast of Cedar Mountain.	26.8	1963-1990, <sup>†</sup> 1995-97	10-22-97 4-21-98 7-10-98	24.9 222 33.1
03446569 Mud Creek	French Broad River	Lat 35°21'10", long 82°27'51", Henderson County, Hydrologic Unit 06010105, at bridge on Secondary Road 1508, 0.2 mi downstream of Clear Creek, and 0.6 mi northeast of Balfour.	97.4	1968-74, 1977, 1992-97	10-22-97 7-10-98	73.7 91.6
0344776625 French Broad River	Tennessee River	Lat 35°27'11", long 82°33'00", Buncombe County, Hydrologic Unit 06010105, at Secondary Road 3495 and 2.1 mi southwest of Arden.	652	1993-97	3-19-98 7-14-98	4,300 1,020
03457124 Pigeon River	French Broad River	Lat 35°32'05", long 82°54'41", Haywood County, Hydrologic Unit 06010106, at bridge on Secondary Road 1818 at Clyde, and 0.2 mi down- stream of Chambers Branch.	162	1969-78, 1980-97	12-18-97 3-30-98 7-20-98 8-27-98	130 464 97.6 63.0

<sup>†</sup> Operated as a continuous-record gaging station.

## DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1998--Continued

Station Number and Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Date	Discharge (ft <sup>3</sup> /s)
TENNESSEE RIVER BASIN--Continued						
03458121 Richland Creek	Pigeon River	Lat 35°30'30", long 82°58'19", Haywood County, Hydrologic Unit 06010106, at bridge on Secondary Road 1184, 0.8 mi upstream from Raccoon Creek, and 1.5 mi northeast of Waynesville.	48.0	1981-97	12-18-97 3-30-98 7-20-98 9-4-98	52.4 118 41.5 18.6
03461976 North Toe River	Nolichucky River	Lat 35°58'51", long 82°00'59", Avery County, Hydrologic Unit 06010108, at bridge on U.S. Highway19E, 0.1 mi downstream of Jones Creek, 0.7 mi north of Ingalls, and at mile 50.9.	74.1	1969-71, 1973-74, 1976-97	11-4-97 3-25-98 5-13-98 7-15-98 9-30-98	66.8 280 262 63.7 36.8
03463021 North Toe River	Nolichucky River	Lat 35°55'46", long 82°06'57", Mitchell County, Hydrologic Unit 06010108, at bridge on Secondary Road 1162 at Penland, 0.4 mi down- stream of Bear Creek, and at mile 27.6	145	1969-70, 1972-75, 1978, 1982-97	11-4-97 3-25-98 5-13-98 7-13-98 9-30-98	107 517 491 121 61.1
03463162 South Toe River	Cane River	Lat 35°43'08", long 82°14'55", Yancey County, Hydrologic Unit 06010108, 3 mi southeast of Mt. Mitchell, and 4.7 mi southwest of Busick.	1.8	1985-97	1-26-98 3-13-98 5-28-98 7-13-98	9.84 12.5 2.91 1.19
03464000 Cane River	Nolichucky River	Lat 36°00'52", long 82°19'40", Yancey County, Hydrologic Unit 06010108, 1.3 mi upstream from North Toe River, and 1.5 mi east of Sioux.	157	1933-71 <sup>†</sup> , 1974-78, 1980-97	1-26-98 5-13-98 7-15-98	313 423 99.8
03464500 Nolichucky River	French Broad River	Lat 36°04'28", long 82°20'42", Mitchell County, Hydrologic Unit 06010108, at Poplar, and 0.7 mi upstream from Hollow Poplar Creek.	608	1922-45 <sup>†</sup> , 1962-63, 1968-72, 1974-78, 1980-95, 1997	7-15-98	395
03478819 Watauga River	South Fork Holston River	Lat 36°11'39", long 81°44'45", Watauga County, Hydrologic Unit 06010103, at bridge on State Highway 105, 300 ft upstream from Laurel Fork, and 1.4 mi north of Shulls Mills.	26.6	1971-73, 1975, 1986-97	11-4-97 2-20-98 5-29-98 7-16-98 9-30-98	24.0 106 43.9 17.8 9.91
03502000 Little Tennessee River	Tennessee River	Lat 35°14'01", long 83°23'35", Macon County, Hydrologic Unit 06010202, 0.2 mi upstream from State Highway 28 at Iotla, and 0.2 mi upstream from Iotla Creek.	323	1929-45 <sup>†</sup> , 1972-79, 1982-97	12-11-97 3-30-98 8-21-98 9-1-98	675 1,240 286 203
03515633 Cheoah River	Little Tennessee River	Lat 35°20'04", long 83°48'21", Graham County, Hydrologic Unit 06010204, 0.1 mi upstream from Long Creek, and 0.9 mi north of Robbinsville.	55.3	1968-71, 1973-97	12-2-97 2-25-98 7-21-98 9-2-98	57.0 123 33.9 16.5

<sup>†</sup> Operated as a continuous-record gaging station.

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SAMPLING SITES

The following miscellaneous sites were sampled during the 1998 water year for the Santee Basin and Coastal Drainage Study Unit of the National Water-Quality Assessment (NAWQA) Program. Water-quality miscellaneous sampling sites are particular locations where chemical-quality, biological or sediment data are collected once or more frequently, but not on a regular basis, to provide better areal coverage of a river basin.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT- SATUR- ATION) (COLS / 100 ML) (31625)	COLI- FORM, FECAL, 0.7 UM-MF (COLS / AS CAC03) (00900)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
0214299430 HENRY FRK AT WARLICKS CHPL RD BRDG NR VALDESE, N (LAT 35 40 27N LONG 081 30 59W)											
OCT 1997 14...	1400	28	26	6.6	17.5	748	9.0	94	130	7	1.5
02143000 HENRY FORK NEAR HENRY RIVER, NC (LAT 35 41 03N LONG 081 24 10W)											
OCT 1997 15...	1330	47	29	6.6	17.0	749	8.6	89	73	8	1.8
0214302790 HENRY FORK NR RHONEY, NC (LAT 35 38 34N LONG 081 18 24W)											
OCT 1997 15...	1130	78	221	6.4	17.5	750	7.9	83	K350	17	4.0
0214303390 JACOB FORK NR CHESTNUT KNOB, NC (LAT 35 36 07N LONG 081 37 47W)											
OCT 1997 14...	1100	3.3	17	5.8	16.5	735	7.4	67	K22	5	.85
02143040 JACOB FORK AT RAMSEY, NC (LAT 35 35 26N LONG 081 34 02W)											
OCT 1997 15...	0715	14	22	6.2	16.0	741	9.0	91	240	7	1.6
0214304580 JACOB CREEK AT SR1002 NR COOKSVILLE, NC (LAT 35 36 55N LONG 081 27 46W)											
OCT 1997 14...	1415	35	43	6.8	17.9	735	8.1	81	>20000	10	2.3
0214305145 CAMP CR AT SR1002 NR ADVENT CROSSROADS, NC (LAT 35 38 19N LONG 081 26 33W)											
OCT 1997 14...	1200	5.1	33	5.8	16.5	749	8.6	88	290	10	2.1
0214306800 JACOB FORK AT MOUTH NR STARTOWN, NC (LAT 35 38 10N LONG 081 18 31W)											
OCT 1997 15...	0945	76	35	6.4	17.5	750	8.9	93	K440	11	2.5
0214307100 SOUTH FORK CATAWBA R AT SR2021 NR PLATEAU, NC (LAT 35 35 05N LONG 081 17 03W)											
OCT 1997 15...	1015	158	107	6.6	17.5	753	7.7	81	910	14	3.3
0214307600 POTT CREEK AT LINCOLNTON, NC (LAT 35 31 25N LONG 081 17 59W)											
OCT 1997 15...	0745	15	59	6.4	16.5	753	8.1	83	--	19	4.4
02143084 SOUTH FORK CATAWBA RIVER NEAR LINCOLNTON, NC (LAT 35 29 00N LONG 081 16 50W)											
OCT 1997 16...	0845	142	108	6.5	16.0	755	8.6	87	480	15	3.4
0214309015 HOWARDS CREEK AT OWLSDEN ROAD NR LINCOLNTON, NC (LAT 35 29 31N LONG 081 18 22W)											
OCT 1997 16...	0730	11	58	5.8	3.0	761	9.6	92	480	19	4.1
02143260 CLARK CREEK AT LINCOLNTON, NC (LAT 35 28 30N LONG 081 16 00W)											
OCT 1997 16...	1015	31	466	6.9	14.5	746	8.9	95	770	50	14

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
0214299430	HENRY FRK AT WARLICKS CHPL RD BRDG NR VALDESE, N(LAT 35 40 27N LONG 081 30 59W)										
OCT 1997 14...	.90	1.8	30	.3	1.3	11	9	1.0	1.3	<.10	10
02143000	HENRY FORK NEAR HENRY RIVER, NC (LAT 35 41 03N LONG 081 24 10W)										
OCT 1997 15...	.94	1.9	29	.3	1.4	12	10	1.3	1.6	<.10	11
0214302790	HENRY FORK NR RHONEY, NC (LAT 35 38 34N LONG 081 18 24W)										
OCT 1997 15...	1.6	34	78	4	3.2	24	20	13	41	.10	12
0214303390	JACOB FORK NR CHESTNUT KNOB, NC (LAT 35 36 07N LONG 081 37 47W)										
OCT 1997 14...	.63	1.3	33	.3	.81	6	5	1.6	1.0	<.10	8.1
02143040	JACOB FORK AT RAMSEY, NC (LAT 35 35 26N LONG 081 34 02W)										
OCT 1997 15...	.73	1.7	31	.3	1.2	10	8	1.3	1.3	<.10	10
0214304580	JACOB CREEK AT SR1002 NR COOKSVILLE, NC (LAT 35 36 55N LONG 081 27 46W)										
OCT 1997 14...	1.0	1.8	25	.3	1.5	12	10	.79	1.8	<.10	10
0214305145	CAMP CR AT SR1002 NR ADVENT CROSSROADS, NC (LAT 35 38 19N LONG 081 26 33W)										
OCT 1997 14...	1.1	1.8	25	.3	1.6	13	11	.66	2.1	<.10	11
0214306800	JACOB FORK AT MOUTH NR STARTOWN, NC (LAT 35 38 10N LONG 081 18 31W)										
OCT 1997 15...	1.2	2.0	24	.3	1.7	16	13	1.1	2.1	<.10	11
0214307100	SOUTH FORK CATAWBA R AT SR2021 NR PLATEAU, NC (LAT 35 35 05N LONG 081 17 03W)										
OCT 1997 15...	1.5	13	62	1	2.3	22	18	5.5	15	.12	12
0214307600	POTT CREEK AT LINCOLNTON, NC (LAT 35 31 25N LONG 081 17 59W)										
OCT 1997 15...	2.0	2.5	19	.2	2.7	29	24	1.5	2.8	<.10	14
02143084	SOUTH FORK CATAWBA RIVER NEAR LINCOLNTON, NC (LAT 35 29 00N LONG 081 16 50W)										
OCT 1997 16...	1.6	13	61	1	2.4	21	18	5.3	15	<.10	12
0214309015	HOWARDS CREEK AT OWLSDEN ROAD NR LINCOLNTON, NC (LAT 35 29 31N LONG 081 18 22W)										
OCT 1997 16...	2.0	3.0	23	.3	2.8	24	20	1.4	3.4	.10	14
02143260	CLARK CREEK AT LINCOLNTON, NC (LAT 35 28 30N LONG 081 16 00W)										
OCT 1997 16...	3.5	66	71	4	7.0	69	56	29	72	.29	19



## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)
0214299430	HENRY FRK AT WARLICKS CHPL RD BRDG NR VALDESE, N(LAT 35 40 27N LONG 081 30 59W)									
OCT 1997 14...	23	<.010	<.050	<.015	--	--	<.20	<.20	--	--
02143000	HENRY FORK NEAR HENRY RIVER, NC (LAT 35 41 03N LONG 081 24 10W)									
OCT 1997 15...	31	<.010	.094	.018	--	--	<.20	<.20	--	--
0214302790	HENRY FORK NR RHONEY, NC (LAT 35 38 34N LONG 081 18 24W)									
OCT 1997 15...	130	<.010	.514	.025	.49	--	.51	<.20	1.0	--
0214303390	JACOB FORK NR CHESTNUT KNOB, NC (LAT 35 36 07N LONG 081 37 47W)									
OCT 1997 14...	16	<.010	.050	.021	--	--	<.20	<.20	--	--
02143040	JACOB FORK AT RAMSEY, NC (LAT 35 35 26N LONG 081 34 02W)									
OCT 1997 15...	28	<.010	<.050	<.015	--	--	<.20	<.20	--	--
0214304580	JACOB CREEK AT SR1002 NR COOKSVILLE, NC (LAT 35 36 55N LONG 081 27 46W)									
OCT 1997 14...	23	<.010	.128	<.015	--	--	<.20	<.20	--	--
0214305145	CAMP CR AT SR1002 NR ADVENT CROSSROADS, NC (LAT 35 38 19N LONG 081 26 33W)									
OCT 1997 14...	26	<.010	.210	.181	--	--	<.20	<.20	--	--
0214306800	JACOB FORK AT MOUTH NR STARTOWN, NC (LAT 35 38 10N LONG 081 18 31W)									
OCT 1997 15...	32	<.010	.220	<.015	--	--	1.0	<.20	1.3	--
0214307100	SOUTH FORK CATAWBA R AT SR2021 NR PLATEAU, NC (LAT 35 35 05N LONG 081 17 03W)									
OCT 1997 15...	70	<.010	.379	.019	.29	--	.31	<.20	.69	--
0214307600	POTT CREEK AT LINCOLNTON, NC (LAT 35 31 25N LONG 081 17 59W)									
OCT 1997 15...	47	<.010	.315	<.015	--	--	<.20	<.20	--	--
02143084	SOUTH FORK CATAWBA RIVER NEAR LINCOLNTON, NC (LAT 35 29 00N LONG 081 16 50W)									
OCT 1997 16...	69	<.010	.345	<.015	--	--	.29	<.20	.64	--
0214309015	HOWARDS CREEK AT OWLSDEN ROAD NR LINCOLNTON, NC (LAT 35 29 31N LONG 081 18 22W)									
OCT 1997 16...	47	<.010	.458	.021	.18	--	.20	<.20	.66	--
02143260	CLARK CREEK AT LINCOLNTON, NC (LAT 35 28 30N LONG 081 16 00W)									
OCT 1997 16...	264	.039	2.61	.089	.57	.27	.66	.35	3.3	3.0



## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDEDED TOTAL (MG/L AS C) (00689)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
0214299430	HENRY FRK AT WARLICKS CHPL RD BRDG NR VALDESE, N(LAT 35 40 27N LONG 081 30 59W)									
OCT 1997 14...	<.010	<.010	<.010	99	5.2	1.4	.80	2	.15	81
02143000	HENRY FORK NEAR HENRY RIVER, NC (LAT 35 41 03N LONG 081 24 10W)									
OCT 1997 15...	.014	<.010	<.010	150	16	1.3	.70	16	2.0	51
0214302790	HENRY FORK NR RHONEY, NC (LAT 35 38 34N LONG 081 18 24W)									
OCT 1997 15...	.256	.198	.171	270	71	3.6	1.3	8	1.7	75
0214303390	JACOB FORK NR CHESTNUT KNOB, NC (LAT 35 36 07N LONG 081 37 47W)									
OCT 1997 14...	.050	<.010	<.010	19	2.0	1.3	.30	7	.06	29
02143040	JACOB FORK AT RAMSEY, NC (LAT 35 35 26N LONG 081 34 02W)									
OCT 1997 15...	<.010	<.010	<.010	75	4.0	1.3	.30	3	.11	89
0214304580	JACOB CREEK AT SR1002 NR COOKSVILLE, NC (LAT 35 36 55N LONG 081 27 46W)									
OCT 1997 14...	.016	<.010	<.010	98	7.0	1.5	.30	2	.19	79
0214305145	CAMP CR AT SR1002 NR ADVENT CROSSROADS, NC (LAT 35 38 19N LONG 081 26 33W)									
OCT 1997 14...	.012	.011	<.010	78	6.7	1.3	--	1	.01	80
0214306800	JACOB FORK AT MOUTH NR STARTOWN, NC (LAT 35 38 10N LONG 081 18 31W)									
OCT 1997 15...	.325	<.010	<.010	150	14	1.5	.70	--	--	--
0214307100	SOUTH FORK CATAWBA R AT SR2021 NR PLATEAU, NC (LAT 35 35 05N LONG 081 17 03W)									
OCT 1997 15...	.202	.148	.134	230	35	2.3	--	16	6.8	80
0214307600	POTT CREEK AT LINCOLNTON, NC (LAT 35 31 25N LONG 081 17 59W)									
OCT 1997 15...	.014	<.010	<.010	140	59	2.2	.60	7	.29	73
02143084	SOUTH FORK CATAWBA RIVER NEAR LINCOLNTON, NC (LAT 35 29 00N LONG 081 16 50W)									
OCT 1997 16...	.130	.089	.081	290	28	2.3	.70	10	3.8	84
0214309015	HOWARDS CREEK AT OWLSDEN ROAD NR LINCOLNTON, NC (LAT 35 29 31N LONG 081 18 22W)									
OCT 1997 16...	<.010	<.010	<.010	270	46	2.0	.50	5	.14	87
02143260	CLARK CREEK AT LINCOLNTON, NC (LAT 35 28 30N LONG 081 16 00W)									
OCT 1997 16...	.377	.353	.318	250	44	3.6	.40	4	.33	91

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
0214334110 SOUTH FORK CATAWBA RIVER AT SCUTHSIDE, NC (LAT 35 26 15N LONG 081 14 55W)											
OCT 1997 16...	1200	203	183	7.0	17.0	750	9.1	94	570	22	5.4
0214342305 INDIAN CREEK AT SR1130 NR HULLS CROSSROADS, NC (LAT 35 30 14N LONG 081 24 33W)											
OCT 1997 16...	0715	6.1	51	6.4	13.0	750	9.0	86	74	15	3.1
02143500 INDIAN CREEK NEAR LABORATORY, NC (LAT 35 25 20N LONG 081 15 52W)											
OCT 1997 16...	1000	22	219	7.0	15.0	750	9.0	89	190	20	4.2
0214390800 SOUTH FORK CATAWBA RIVER NR STANLEY, NC (LAT 35 19 50N LONG 081 08 00W)											
OCT 1997 17...	0745	244	194	6.4	16.5	750	8.1	83	K35	22	5.3
02144000 LONG CREEK NEAR BESSEMER CITY, NC (LAT 35 18 23N LONG 081 14 05W)											
OCT 1997 17...	0730	4.1	160	6.5	14.5	752	7.3	72	190	53	13
0214463600 LONG CREEK NR DALLAS, NC (LAT 35 17 55N LONG 081 09 35W)											
OCT 1997 17...	0915	11	172	6.8	14.5	754	8.8	85	690	51	14
02145112 SOUTH FORK CATAWBA RIVER AT MCADENVILLE, NC (LAT 35 15 35N LONG 081 04 28W)											
OCT 1997 17...	0945	303	334	7.1	17.0	750	8.4	88	K500	27	6.6

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00932) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
0214334110 SOUTH FORK CATAWBA RIVER AT SOUTHSIDE, NC (LAT 35 26 15N LONG 081 14 55W)										
OCT 1997 16...	2.0	24	66	2	3.5	31	26	14	23	.12 14
0214342305 INDIAN CREEK AT SR1130 NR HULLS CROSSROADS, NC (LAT 35 30 14N LONG 081 24 33W)										
OCT 1997 16...	1.8	2.6	24	.3	2.5	14	12	1.6	4.3	<.10 11
02143500 INDIAN CREEK NEAR LABORATORY, NC (LAT 35 25 20N LONG 081 15 52W)										
OCT 1997 16...	2.3	31	73	3	4.0	39	32	47	5.9	.20 15
0214390800 SOUTH FORK CATAWBA RIVER NR STANLEY, NC (LAT 35 19 50N LONG 081 08 00W)										
OCT 1997 17...	2.1	25	62	2	8.7	38	31	17	20	.15 15
02144000 LONG CREEK NEAR BESSEMER CITY, NC (LAT 35 18 23N LONG 081 14 05W)										
OCT 1997 17...	4.6	7.6	23	.5	3.4	51	42	23	4.1	.12 19
0214463600 LONG CREEK NR DALLAS, NC (LAT 35 17 55N LONG 081 09 35W)										
OCT 1997 17...	3.5	14	35	.8	3.5	55	45	19	11	.23 20
02145112 SOUTH FORK CATAWBA RIVER AT MCADENVILLE, NC (LAT 35 15 35N LONG 081 04 28W)										
OCT 1997 17...	2.4	46	77	4	2.9	55	45	36	39	.20 15

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L) AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N) (00623)	NITRO- GEN, TOTAL (MG/L) AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L) AS N) (00602)
0214334110 SOUTH FORK CATAWBA RIVER AT SOUTHSIDE, NC (LAT 35 26 15N LONG 081 14 55W)										
OCT 1997 16...	103	.018	.674	.143	.51	.10	.65	.24	1.3	.92
0214342305 INDIAN CREEK AT SR1130 NR HULLS CROSSROADS, NC (LAT 35 30 14N LONG 081 24 33W)										
OCT 1997 16...	38	<.010	.485	.015	.19	--	.21	<.20	.69	--
02143500 INDIAN CREEK NEAR LABORATORY, NC (LAT 35 25 20N LONG 081 15 52W)										
OCT 1997 16...	136	<.010	.635	.016	.36	--	.38	<.20	1.0	--
0214390800 SOUTH FORK CATAWBA RIVER NR STANLEY, NC (LAT 35 19 50N LONG 081 08 00W)										
OCT 1997 17...	113	.039	.808	.152	.35	.25	.51	.40	1.3	1.2
02144000 LONG CREEK NEAR BESSEMER CITY, NC (LAT 35 18 23N LONG 081 14 05W)										
OCT 1997 17...	104	.010	.291	<.015	--	--	<.20	<.20	--	--
0214463600 LONG CREEK NR DALLAS, NC (LAT 35 17 55N LONG 081 09 35W)										
OCT 1997 17...	116	<.010	1.51	<.015	--	--	<.20	<.20	--	--
02145112 SOUTH FORK CATAWBA RIVER AT MCADENVILLE, NC (LAT 35 15 35N LONG 081 04 28W)										
OCT 1997 17...	194	.037	1.05	.090	.59	.47	.68	.56	1.7	1.6

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDEDED TOTAL (MG/L AS C) (00689)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
0214334110 SOUTH FORK CATAWBA RIVER AT SOUTHSIDE, NC (LAT 35 26 15N LONG 081 14 55W)										
OCT 1997 16...	.248	.171	.151	220	42	3.3	.60	13	7.1	85
0214342305 INDIAN CREEK AT SR1130 NR HULLS CROSSROADS, NC (LAT 35 30 14N LONG 081 24 33W)										
OCT 1997 16...	<.010	<.010	<.010	120	4.1	2.3	.30	1	.02	70
02143500 INDIAN CREEK NEAR LABORATORY, NC (LAT 35 25 20N LONG 081 15 52W)										
OCT 1997 16...	.254	.217	.183	400	40	2.8	--	8	.48	86
0214390800 SOUTH FORK CATAWBA RIVER NR STANLEY, NC (LAT 35 19 50N LONG 081 08 00W)										
OCT 1997 17...	.182	.137	.132	340	35	3.0	.70	8	5.3	83
02144000 LONG CREEK NEAR BESSEMER CITY, NC (LAT 35 18 23N LONG 081 14 05W)										
OCT 1997 17...	.042	.017	.016	110	66	2.4	.40	7	.08	93
0214463600 LONG CREEK NR DALLAS, NC (LAT 35 17 55N LONG 081 09 35W)										
OCT 1997 17...	.136	.112	.113	85	143	1.9	.40	8	.23	81
02145112 SOUTH FORK CATAWBA RIVER AT MCADENVILLE, NC (LAT 35 15 35N LONG 081 04 28W)										
OCT 1997 17...	.247	.196	.200	430	43	5.5	E.30	8	6.5	85

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## CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<i>Area</i>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<i>Volume</i>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<i>Mass</i>		
ton (short)	$9.072 \times 10^{-1}$	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.

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