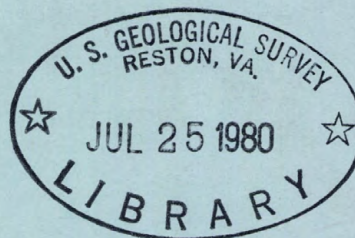


R
(200)
Ga 3
NORTH CAROLINA
1979



Water Resources Data for North Carolina



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NC-79-1 WATER YEAR 1979

Prepared in cooperation with the North Carolina
Department of Natural Resources and Community
Development, and with other State, municipal,
and Federal Agencies

CALENDAR FOR WATER YEAR 1979

1 9 7 8

OCTOBER

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

NOVEMBER

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

DECEMBER

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

1 9 7 9

JANUARY

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

FEBRUARY

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

MARCH

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

APRIL

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

MAY

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

JUNE

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

JULY

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

AUGUST

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

SEPTEMBER

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

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

For additional information write to
District Chief, Water Resources Division
U. S. Geological Survey
436 Century Station Post Office Building
300 Fayetteville Street
Raleigh, North Carolina 27602

1979

THIS PAGE IS INTENTIONALLY BLANK

Preface

This report was prepared by the U.S. Geological Survey in cooperation with the State of North Carolina and with other agencies by personnel of the North Carolina district of the Water Resources Division under the supervision of R. C. Heath, District Chief, and R. J. Dingman, Regional Hydrologist, Southeastern Region.

This report is one of a series issued State by State under the general direction of J. S. Cragwall, Jr., Chief, Hydrologist, and Philip Cohen Assistant Chief Hydrologist for Scientific Publications and Data Management.

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-80/028	2.	3. Recipient's Accession No.
4. Title and Subtitle Water Resources Data for North Carolina, Water Year 1979		5. Report Date April 1980	
7. Author(s)		6.	
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division 436 Century Station Post Office Building 300 Fayetteville Street Raleigh, North Carolina 27602		8. Performing Organization Rept. No. USGS-WDR-NC-79-1	
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division 436 Century Station Post Office Building 300 Fayetteville St., Raleigh, North Carolina 27602		10. Project/Task/Work Unit No. 11. Contract(C) or Grant(G) No. (C) (G)	
15. Supplementary Notes Prepared in cooperation with the State of North Carolina and with other agencies.		13. Type of Report & Period Covered Annual-Oct. 1, 1978 to Sept. 30, 1979	
16. Abstract (Limit: 200 words) Water resources data for the 1979 water year for North Carolina consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and ground-water levels. This report contains discharge records for 155 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 138 gaging stations; and water levels for 63 observation wells. Additional water data were collected at various 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.			
17. Document Analysis a. Descriptors *North Carolina, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses. b. Identifiers/Open-Ended Terms c. COSATI Field/Group			
18. Availability Statement No restriction on distributions This report may be purchased from: National Technical Information Service Springfield, VA 22161		19. Security Class (This Report) Unclassified 20. Security Class (This Page) Unclassified	21. No. of Pages 541 22. Price

CONTENTS

	Page
Preface.....	III
List of gaging stations, in downstream order, for which records are published.....	VI
Introduction.....	1
Cooperation.....	1
Acknowledgments.....	2
Hydrologic conditions.....	2
Definition of terms.....	3
Downstream order and station numbers.....	7
Numbering system for wells and miscellaneous sites.....	8
Special networks and programs.....	8
Explanation of stage and water-discharge records.....	9
Collection and computation of data.....	9
Accuracy of field data and computed results.....	10
Other data available.....	11
Records of discharge collected by agencies other than the Geological Survey.....	11
Explanation of water-quality records.....	11
Collection and examination of data.....	11
Water analysis.....	11
Water temperatures.....	11
Sediment.....	11
Explanation of ground-water level records.....	12
Collection of the data.....	12
Publication on techniques of water-resources investigations.....	12
Gaging station records.....	19
Discharge at partial-record stations and miscellaneous sites.....	486
Crest-stage partial-record stations.....	486
Miscellaneous sites.....	487
Analyses of samples collected at miscellaneous sites.....	499
Ground-water records.....	502
Ground-water level records.....	502
Quality of ground-water records.....	525
Appendix.....	527
Index.....	535

ILLUSTRATIONS

Figure 1. Map of western North Carolina showing areas of significant flooding on Sept. 21, 22, 1978.....	3
2. System for numbering wells and miscellaneous sites.....	8
3. Map showing location of gaging stations.....	15
4. Map showing location of water-quality stations and observation well sites.....	17

(Letter after station name designates type of data: (d) discharge, (c) chemical (b) biological, (m) microbiological, (t) water temperature, (s) sediment)

SOUTH ATLANTIC SLOPE BASINS

Page

CHOWAN RIVER BASIN

Chowan River:

Meherrin River:

Potocasi Creek near Union (d).....	19
Wiccacon River:	
Ahoskie Creek at Ahoskie (ds).....	20

ROANOKE RIVER BASIN

Roanoke River:

Dan River near Francisco (ds).....	22
Dan River near Wentworth (ds).....	24
Smith River at Eden (ds).....	26
Dan River near Mayfield (dcbmts).....	28
Hyco Creek (head of Hyco River) near Leasburg (dst).....	37
South Hyco Creek:	
Double Creek near Roseville (ds).....	40
South Hyco Creek near Roseville (dst).....	42
Hyco River below Afterbay Dam near McGehees Mill (dt).....	45
Mayo Creek near Bethel Hill (ds).....	48
Roanoke River at Roanoke Rapids (dcbmts).....	50

PAMLICO RIVER BASIN

Tar River (head of Pamlico River) near Tar River (d).....	61
Tar River at U. S. 401 at Louisburg (ds).....	62
Tar River below Tar River Reservoir near Rocky Mount (d).....	64
Tar River at N.C. 97 at Rocky Mount (d).....	65
Swift Creek at Hilliardston (ds).....	66
Fishing Creek:	
Little Fishing Creek near White Oak (ds).....	67
Fishing Creek near Enfield (ds).....	68
Tar River at Tarboro (dcbmts).....	70
Conetoe Creek near Bethel (ds).....	81
Chicod Creek at SR 1565 near Grimesland (cs).....	83
Cow Swamp near Grimesland (cs).....	87
Chicod Creek at SR 1760 near Simpson (dcts).....	91
Juniper Branch near Simpson (dcs).....	99

Pamlico River:

Runyon Creek:

Herring Run near Washington (d).....	104
Durham Creek at Edward (ds).....	105

Pungo River:

North Lake Canal, above Pungo Lake, near Wenona (dcbts).....	107
--	-----

Pantego Creek:

Cucholds Creek:

Intercepting Canal:

Albemarle Canal:

Van Swamp near Hoke (dcbts).....	115
Albemarle Canal near Swindell (dcbts).....	123

NEUSE RIVER BASIN

Eno River (head of Neuse River) near Durham (ds).....	139
Little River near Orange Factory (ds).....	140
Flat River at Bahama (d).....	141
Neuse River near Northside (ds).....	142
Neuse River near Falls (dcbmts).....	143
Neuse River near Clayton (d).....	154
Neuse River at Smithfield (d).....	155

Swift Creek:

Middle Creek near Clayton (ds).....	156
-------------------------------------	-----

Buck Swamp:

Beaverdam Creek near Grantham (ds).....	157
---	-----

Little River near Kenly (d).....	160
----------------------------------	-----

Little River near Princeton (ds).....	161
---------------------------------------	-----

Neuse River near Goldsboro (d).....	162
-------------------------------------	-----

Daileys Creek near Liddell (ds).....	163
--------------------------------------	-----

Bear Creek near Parkston (ds).....	166
------------------------------------	-----

Neuse River at Kinston (dcbmts).....	169
--------------------------------------	-----

Contentnea Creek near Lucama (d).....	181
---------------------------------------	-----

Hominy Swamp at Phillips St. at Wilson.....	182
---	-----

Turner Swamp near Eureka (d).....	185
-----------------------------------	-----

Nahunta Swamp near Shine (ds).....	186
------------------------------------	-----

Contentnea Creek at Hookerton (dcbmts).....	187
---	-----

Little Contentnea Creek near Farmville (ds).....	195
--	-----

Neuse River at Streets Ferry near Vanceboro (c).....	197
--	-----

Swift Creek:

Clayroot Swamp:

Creeping Swamp near Vanceboro (ds).....	198
---	-----

Swift Creek near Vanceboro (ds).....	199
--------------------------------------	-----

Trent River near Trenton (dcbmts).....	201
--	-----

HEWLETTS CREEK BASIN

Hewletts Creek at Secondary Road 1102 near Wilmington (ds).....	211
---	-----

CAPE FEAR RIVER BASIN

Haw River (head of Cape Fear River):

Reedy Fork near Oak Ridge (ds).....	213
-------------------------------------	-----

Reedy Fork near Gibsonville (ds).....	215
---------------------------------------	-----

Buffalo Creek:

North Buffalo Creek near Greensboro (ds).....	217
---	-----

Haw River at Haw River (ds).....	219
----------------------------------	-----

Big Alamance Creek near Elon College (ds).....	221
--	-----

<u>SOUTH ATLANTIC SLOPE BASINS--Continued</u>	Page
<u>CAPE FEAR RIVER BASIN--Continued</u>	
Haw River near Bynum (ds).....	223
Haw River below B. Everett Jordan Dam near Moncure (ds).....	225
West Fork Deep River:	
East Fork Deep River near High Point (d).....	227
Deep River near Randleman (d).....	229
Deep River at Ramseur (dcbmts).....	230
Rocky River:	
Tick Creek near Mount Vernon Springs (ds).....	241
Deep River at Moncure (ds).....	243
Cape Fear River:	
Buckhorn Creek near Corinth (d).....	244
Cape Fear River at Lillington (d).....	245
Little River:	
Flat River near Inverness (ds).....	246
Rockfish Creek:	
Little Rockfish Creek:	
Buckhead Creek near Owen (ds).....	247
Cape Fear River at William O. Huske Lock near Tarheel (ds).....	249
Cape Fear River at Lock 1 near Kelly (dcbmts).....	251
Great Coharie Creek (head of Black River):	
Little Coharie Creek near Roseboro (ds).....	263
Black River near Tomahawk (ds).....	265
South River:	
Black River at Secondary Road 1722 near Dunn (bcs).....	267
Black River near Erwin (bcs).....	271
Black River near Dunn (s).....	276
South River near Parkersburg (ds).....	277
Northeast Cape Fear River near Chingapin (ds).....	279
Rockfish Creek near Wallace (ds).....	281
Little Rockfish Creek near Wallace (ds).....	283
<u>WACCAMAW RIVER BASIN</u>	
Waccamaw River at Freeland (ds).....	285
<u>PEE DEE RIVER BASIN</u>	
Yadkin River (head of Pee Dee River) at Patterson (ds).....	287
Elk Creek at Elkhville (ds).....	289
Reddies River at North Wilkesboro (ds).....	291
Yadkin River at Wilkesboro (ds).....	293
Roaring River near Roaring River (ds).....	295
Yadkin River at Elkin (ds).....	297
Mitchell River near State Road (ds).....	299
Fisher River near Copeland (ds).....	301
Yadkin River at Siloam (ds).....	303
Ararat River at Ararat (ds).....	305
Little Yadkin River at Dalton (ds).....	307
Yadkin River at Enon (ds).....	309
Muddy Creek:	
Salem Creek near Atwood (ds).....	311
Muddy Creek near Muddy Creek (ds).....	313
South Fork Muddy Creek near Clemmons (ds).....	315
Yadkin River at Yadkin College (dcbmts).....	317
Dutchmans Creek:	
Humpy Creek near Fork (ds).....	324
South Yadkin River near Mocksville (ds).....	326
Hunting Creek near Harmony (ds).....	328
Abbotts Creek:	
Leonard Creek near Bethesda (ds).....	330
Pee Dee River:	
Rocky River:	
Long Creek:	
Big Bear Creek near Richfield (ds).....	332
Richardson Creek:	
Gourdvine Creek near Olive Branch (ds).....	334
Lane Creek near Trinity (ds).....	337
Wicker Branch near Trinity (ds).....	340
Rocky River near Norwood (dcbmts).....	343
Little River near Star (ds).....	349
Pee Dee River near Rockingham (dcbmts).....	351
Little Pee Dee River:	
Drowning Creek (head of Lumber River) near Hoffman (ds).....	363
Lumber River at Boardman (d).....	365
<u>SANTEE RIVER BASIN</u>	
Catawba River (head of Santee River) near Marion (ds).....	366
Linville River near Nebo (ds).....	368
Lower Little River near All Healing Springs (ds).....	369
Long Creek near Paw Creek (ds).....	370
Henry Fork (head of South Fork Catawba River) near Henry River (ds).....	372
Jacob Fork at Ramsey (d).....	374
South Fork Catawba River:	
Indian Creek near Laboratory (d).....	375
Long Creek near Bessemer City (ds).....	376
Irwin Creek (head of Sugar Creek) near Charlotte (ds).....	378
Sugar Creek:	
Little Sugar Creek at Archdale Road in Charlotte (ds).....	379
McAlpine Creek at Sardis Road near Charlotte (ds).....	381
McMullen Creek at Sharon View Road near Charlotte (ds).....	382
McAlpine Creek below McMullen Creek near Pineville (ds).....	384
Twelve Mile Creek near Waxhaw (ds).....	386

<u>SOUTH ATLANTIC SLOPE BASINS--Continued</u>		<u>Page</u>
<u>SANTEE RIVER BASIN--Continued</u>		
Wateree River (continuation of Catawba River):		
Broad River (head of Congaree River):		
Cove Creek near Lake Lure (ds).....	388	
Second Broad River at Cliffside (ds).....	390	
Broad River near Boiling Springs (dcbmts).....	392	
First Broad River near Casar (ds).....	400	
Beaverdam Creek:		
Sugar Branch near Boiling Springs (ds).....	402	
Lakes and reservoirs in South Atlantic slope basins.....	404	
<u>OHIO RIVER BASIN</u>		
<u>KANAWHA RIVER BASIN</u>		
South Fork New River (head of Kanawha River) near Jefferson (ds).....	409	
<u>TENNESSEE RIVER BASIN</u>		
French Broad River (head of Tennessee River) at Rosman (ds).....	411	
Davidson River near Brevard (ds).....	413	
Little River above High Falls near Cedar Mountain (d).....	415	
French Broad River at Blantyre (ds).....	416	
Mills River near Mills River (ds).....	418	
French Broad River at Bent Creek (ds).....	420	
Swannanoa River at Biltmore (ds).....	422	
French Broad River at Asheville (ds).....	424	
French Broad River at Marshall (dcbmts).....	425	
West Fork Pigeon River above Lake Logan, near Hazelwood (ds).....	433	
West Fork Pigeon River below Lake Logan, near Waynesville (ds).....	435	
East Fork Pigeon River near Canton (ds).....	437	
Pigeon River at Canton (ds).....	439	
Pigeon River near Hepco (dcbmts).....	441	
Cataloochee Creek near Cataloochee (dcbmts).....	450	
North Toe River (head of Nolichucky River):		
South Toe River near Celo (ds).....	460	
South Fork Holston River:		
Watauga River near Sugar Grove (ds).....	462	
Little Tennessee River near Prentiss (d).....	464	
Cartoogechaye Creek near Franklin (ds).....	465	
Little Tennessee River at Needmore (ds).....	467	
Nantahala River near Rainbow Springs (ds).....	469	
Nantahala River at Nantahala (ds).....	471	
Tuckasegee River at Dillsboro (ds).....	473	
Oconaluftee River at Birdtown (ds).....	475	
Tuckasegee River at Bryson City (ds).....	477	
Hiwassee River above Murphy (ds).....	479	
Valley River at Tomotla (ds).....	481	
Lakes and reservoirs in Ohio River basin.....	483	
Analyses of samples collected at miscellaneous sites (cs).....	499	

GROUND-WATER WELLS, BY COUNTY, FOR WHICH RECORDS ARE PUBLISHED

<u>BEAUFORT</u>		
North Carolina Phosphate Company No. 1 (NC-13).....	502	
City of Washington (NC-14).....	502	
City of Belhaven (NC-15).....	503	
Younce Farm (NC-75).....	503	
N. C. Department of Transportation (NC-137).....	503	
N. C. Department of Transportation (NC-138).....	504	
<u>BERTIE</u>		
Town of Windsor (NC-32).....	504	
<u>BRUNSWICK</u>		
Town of Southport (NC-22).....	504	
<u>CARTERET</u>		
N. C. Department of Natural and Economic Resources (NC-139).....	505	
<u>CHOWAN</u>		
U.S. Geological Survey (NC-31).....	505	
Chowan County High School (NC-58).....	505	
R. H. Hollowell (NC-78).....	506	
<u>CRAVEN</u>		
U.S. Geological Survey (NC-16).....	506	
City of New Bern (NC-44).....	506	
O. D. Simmons (NC-45).....	507	
International Paper Company (NC-48).....	507	
<u>CUMBERLAND</u>		
Robert Deaver (NC-84).....	508	
<u>DAVIE</u>		
H. S. Larew (NC-110).....	508	
<u>DUPLIN</u>		
Old City Well (NC-69).....	509	
<u>EDGEcombe</u>		
Melvin Howell (NC-72).....	509	
<u>GATES</u>		
Mrs. T. W. Blanchard (NC-30).....	510	
Town of Ruduco (NC-54).....	510	
<u>HARNETT</u>		

GROUND-WATER WELLS, BY COUNTY, FOR WHICH RECORDS ARE PUBLISHED

IX

	Page
<u>HARNETT</u>	
U.S. Geological Survey (HR-52).....	510
U.S. Geological Survey (HR-53).....	511
U.S. Geological Survey (HR-54).....	511
U.S. Geological Survey (HR-55).....	511
U.S. Geological Survey (HR-56).....	512
U.S. Geological Survey (HR-57).....	512
<u>HAYWOOD</u>	
Champion Paper and Fibre Company No. 1 (NC-40).....	512
<u>HERTFORD</u>	
Charles DeLoatch (NC-55).....	513
Town of Murfreesboro (NC-81).....	513
Town of Winton (NC-82).....	513
<u>HOKE</u>	
North Carolina Tuberculosis Sanitarium (NC-35).....	513
<u>JONES</u>	
Oak Grove Marine Air Station (NC-73).....	514
<u>LENOIR</u>	
Pink Hill School (NC-51).....	514
City of Kinston (NC-128).....	514
<u>MARTIN</u>	
Martin County Board of Education (NC-43).....	515
<u>MOORE</u>	
H. A. Keith (NC-122).....	515
<u>NEW HANOVER</u>	
Walter J. Hodder (NC-20).....	515
Martin Marietta (NC-61).....	516
<u>NORTHAMPTON</u>	
Boomer Ice Company. (NC-27).....	516
<u>ONSLOW</u>	
Camp Geiger, U.S. Marine Corps (NC-52).....	516
Carolina Power and Light Company (NC-85).....	517
<u>ORANGE</u>	
McCauley Chi Psi Fraternity (NC-126).....	517
<u>PASQUOTANK</u>	
C. T. Winslow (NC-86).....	517
U.S. Coast Guard (NC-141).....	518
<u>PENDER</u>	
Arvida Farms (NC-26).....	518
<u>PITT</u>	
U.S. Geological Survey (PI-527).....	518
U.S. Geological Survey (PI-528).....	519
U.S. Geological Survey (PI-529).....	519
U.S. Geological Survey (PI-530).....	519
U.S. Geological Survey (PI-531).....	520
U.S. Geological Survey (PI-532).....	520
U.S. Geological Survey (PI-533).....	520
U.S. Geological Survey (PI-534).....	521
<u>SAMPSON</u>	
City of Clinton (NC-24).....	521
<u>TRANSYLVANIA</u>	
Neal Hawkins (NC-127).....	522
<u>WASHINGTON</u>	
M. V. Cahoon Farm (NC-65).....	522
U.S. Geological Survey (WS-87).....	522
U.S. Geological Survey (WS-88).....	523
U.S. Geological Survey (WS-89).....	523
U.S. Geological Survey (WS-90).....	523
<u>WAYNE</u>	
U.S. Air Force (NC-25).....	524

THIS PAGE IS INTENTIONALLY BLANK

WATER RESOURCES DATA FOR NORTH CAROLINA 1979

INTRODUCTION

Water resources data for the 1979 water year for North Carolina consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and ground-water levels. This report contains discharge records for 155 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 138 gaging stations and 20 miscellaneous sites; and water levels for 63 observation wells. Additional water data were collected at various 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.

Records of discharge of streams, and contents and stage of 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 in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1971 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities and universities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, Va. 22202.

Beginning with the 1961 water year and continuing through water year 1974, streamflow data have been released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records beginning with the 1964 water year have been released in similar reports. These reports provided rapid release of water data in each State shortly after the end of the water year. Through 1974 the data were also released in the water-supply paper series mentioned above.

Beginning with the 1975 water year, streamflow, water quality, and ground-water data are published only in reports on a State-boundary basis. 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-78-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

Additional information including current prices, for ordering specific reports may be obtained from the district chief at the address given on the back of the title page or by telephone (919) 755-4510.

COOPERATION

Cooperative agreements between the U. S. Geological Survey and organizations of the State of North Carolina for the systematic collection of streamflow records began in 1895 and continued through 1909. After a lapse of eight 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 Survey are:

State Department of Natural Resources and Community Development,
Howard N. Lee, Secretary through the following:
Division of Environmental Management,
A. F. McRorie, director.
State Board of Transportation, Division of Highways,
Billy Rose, highway administrator.
City of Burlington, James D. Mackintosh, Jr., city manager.
City of Charlotte, Kenneth R. Harris, mayor.
City of Durham, Dean D. Hunter, city manager.
City of Greensboro, Tom Z. Osborne, city manager.
City of Rocky Mount, William H. Batchelor, mayor.
City of Winston-Salem, Wayne A. Corpening, mayor.

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

Corps of Engineers, U. S. Army
Tennessee Valley Authority
Soil Conservation Service, U.S. Department
of Agriculture
National Weather Service, NOAA, U.S.
Department of Commerce

The following organizations aided in collecting records:

Cities of Danville, Va. and Raleigh, N. C.; E. I. du Pont de Nemours and Co.; Carolina Power and Light Co.; Champion Paper and Fibre Co.; Duke Power Co.; Fiber Industries, Inc.; J. P. Stevens Co. Inc.; Olin Mathieson Chemical Corp.; P. P. G. Industries; Virginia Electric and Power Co.; and Yadkin, Inc.

ACKNOWLEDGEMENT

North Carolina district personnel who contributed significantly to the collection and preparation of the data in this report were: N. Macon Jackson, Jr., Clyde E. Simmons, Herman C. Gunter, Ernst G. Wollin, Jr., Thomas E. Dillard, William H. Eddins, Rufus G. Allen, Russell G. Barker, Willie Blount, Pam Bretton, Isaac J. Forehand, Ronald G. Garrett, Edwin D. George, Stephen S. Howe, Phyllis M. Joyner, Ruth C. Linder, Lawrence T. Mann, Donald P. McGear, Bobby C. Ragland, Clarence M. Ray, Jr., Howard E. Reeder, Joseph S. Riggsbee, Jerry F. Rinehardt, Joseph E. Shoffner, Timothy C. Stamey, Eloise H. Stephens, James M. West, and Fern S. Wilcox.

HYDROLOGIC CONDITIONS

Streamflow during the 1979 water year was excessive (in the highest 25 percent of record). Annual runoff at the three index gaging stations, as compared to long term normals, was as follows: French Broad River at Asheville, 150 percent; South Yadkin River near Mocksville, 160 percent; and Neuse River near Clayton, 135 percent.

Exceptionally dry weather in October caused streamflow to decline below normal levels and many towns in western North Carolina, including Andrews, Boone, Brevard, Robbinsville, and Sylva, experienced minor to critical water shortages. Several towns had taken emergency measures to curtail water use by the end of the month. Throughout most of the State, streamflows were at the 7-day, 2 year minimum level at the end of October. Streamflow remained below normal in November but increased sufficiently that water use restrictions were removed.

From late November to the first of July, streamflow was above normal. Minor floods occurred frequently across the State during this period. Locally intense rains on March 23 and 24 caused damaging floods in Charlotte and Mecklenburg County. The frequency of the floods in Charlotte was about 7-10 years. Heavy rains on June 11 caused some street flooding and minor property damage in Greenville.

Streamflow was variable across the State in July and August and was generally near normal in the western half and below normal in the remainder. Although flows in the Coastal Plain were about one-half normal in August there were no long dry periods and water supplies were ample.

Heavy rains on September 21, 22 caused severe flooding in the north-central and north-western Piedmont region and moderate flooding in the mountains. Flood peaks in several areas equaled or exceeded those expected to occur on the average of once in 100 years (see maps on next page). Flood peaks at 5 gaging stations located in Surry and Stokes Counties were the highest for the period of record, which began as early as 1916. The most severe flooding occurred in Mount Airy and other areas of Surry County where damage estimates exceeded 21 million dollars. Damages exceeding one million dollars were reported in the counties of Guilford, Alleghany, and Rockingham. Five deaths were attributed to the flood. Floodwaters damaged or destroyed over 47 bridges and left more than 100 people homeless.

Ground water levels were somewhat variable during the year and, like streamflow, strongly reflected climatic conditions. Because of abundant rainfall throughout the year, levels in the mountains and Piedmont were above long-term averages for the entire year. In the Coastal Plain, levels averaged near normal for the year, with no period exceeding two months of above or below long-term averages.

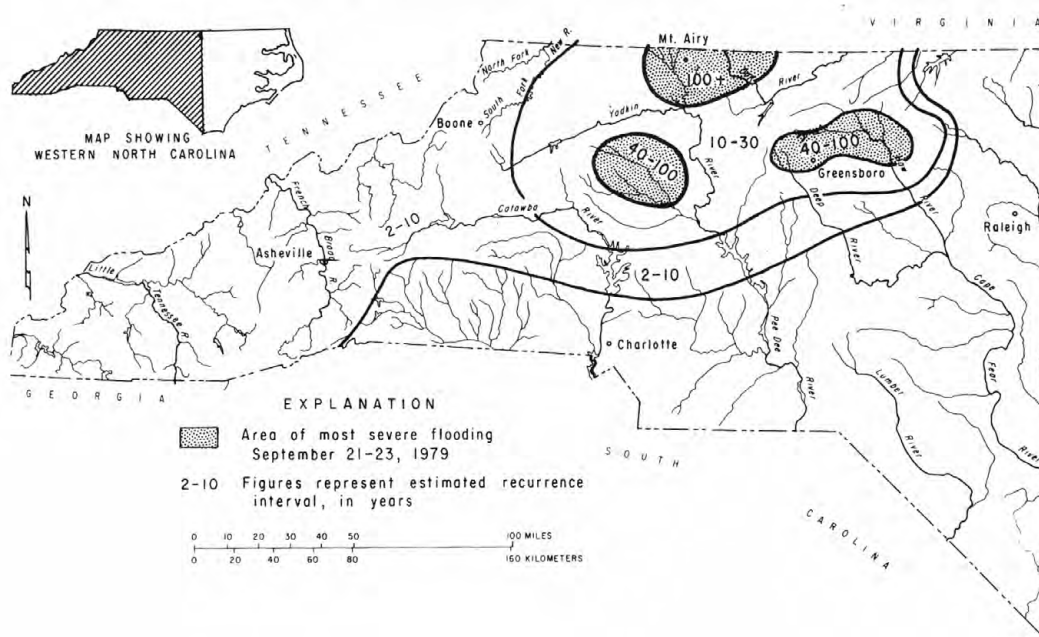


Figure 1.--Map of western North Carolina showing areas of significant flooding on Sept. 21-22, 1978

NOTICE

During water year 1978, revisions were made in the terminology used to define 143 of the water-quality parameter codes that have been used by the Geological Survey in its publication of water-quality data and in its WATSTORE data system. These revisions were made to achieve consistency in terminology and to conform to a joint USGS-EPA agreement on terminology. They do not represent a change in the way the codes have been used in the past or in the association of specific code numbers with identified analytical procedures.

Use of the new terminology began with data for the 1978 water year. Definitions on which the terminology is based are included in the "Definitions" section of this report, and a table showing both old and new terminology is attached as an appendix to the report.

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.

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 or about 326,000 gallons or 1,233 cubic meters.

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

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, 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. 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 within 24 hours when incubated at 35°C + 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines 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 which produce blue colonies within 24 hours when incubated at 44.5°C + 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 found also in intestines 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 $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material 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 microorganisms, 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^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for 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).

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 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

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 natural water color 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 pigments in plants.

Color unit is produced by one milligram per liter 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 feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (ft^3/s , ft^3/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 or 448.8 gallons per minute or 0.02832 cubic meters per second.

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.

Dissolved that material in a representative water sample which passes through a 0.45 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 river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

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.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary 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.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

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 detergent compounds.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as the weight (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of 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 (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 (mL) or liters (L). 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.

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 suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter or particles in either distilled water (chemically dispersed) or in native water (the 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.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

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 (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

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

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the 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, the phytoplankton have a profound effect upon the quality of the 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.

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

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 steepness 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 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight 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 computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

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

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos 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 about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same stream 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.

Suspended, recoverable 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 um membrane filter 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 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 would be 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 the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um 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 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 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" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines 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 mg/L of the constituent times the factor 0.027 time the number of days.

Total, recoverable 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 would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Recoverable from bottom material 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 and 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.

Total in bottom material 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 Geological Survey reports 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 ended September 30, 1978, is called the "1978 water year."

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

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

DOWNTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary 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 on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indentation in a list of stations in the front of the 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.

As an added means of identification, each gaging station, partial-record station, and water-quality station has been assigned a station number. These are in the same downstream order used in this report. In assigning station number, no distinction is made between partial-record stations and gaging stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations lo-

cated at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 03460000 which appears just to the left of the station name includes the 2-digit number "03" plus the 6-digit downstream order number "460000". In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records in this report are in Part 2 (South Atlantic Slope basins) and Part 3 (Ohio River basin). All records for a drainage basin encompassing more than one State can be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

NUMBERING SYSTEM FOR WELLS

Downstream order station numbers are not assigned to wells. The well numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits is a sequential number for wells within a 1-second grid. In the event that several wells are within the same 1-second grid, a different sequential number, such as "01", "02", etc., is assigned to each well to insure an unique station number. See figure 2 below.

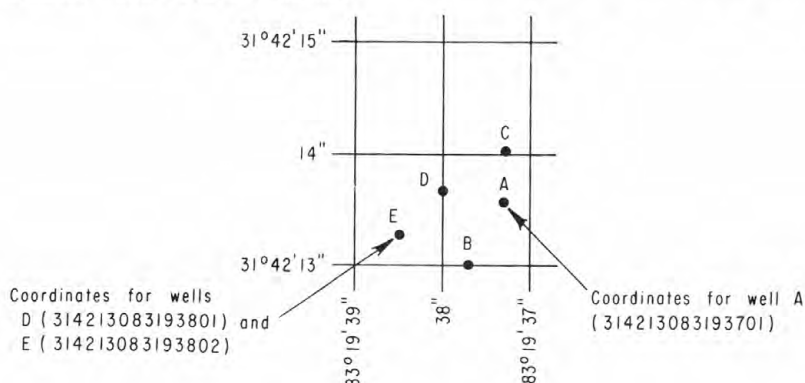


FIGURE 2.--System for numbering wells (latitude and longitude).

SPECIAL NETWORKS AND PROGRAMS

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

National stream-quality accounting network (NASQAN) is a data collection network designed by the U.S. Geological Survey to meet many of the information needs of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nation-wide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams, and stage, surface area, and contents of lake or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard text-books, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating table, then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by hydrologists and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

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

At some stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents is given. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging stations gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, general remarks, and notations of revisions of previously published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD". The type of gage currently in use, the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE". National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 5. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for the stations where changes in water development during the period of record cause the figure to have little significance. Average runoff in inches is also shown.

The maximum discharge (or contents) and the maximum gage height, the minimum instantaneous discharge if there is little or no regulation (or the minimum contents) and the minimum gage height if it is significant are given under "EXTREMES". The minimum daily discharge is given if there is extensive regulation (also the minimum instantaneous discharge and gage height if they are abnormally low). In the first paragraph headed "Current year": the data given are for the complete water year unless otherwise specified. In the second paragraph under "EXTREMES" headed

"Period of record": the data given are for the period of record given in the PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES". Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge or contents, it is given separately.

Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of water quality records, is given under "REMARKS"; for reservoir stations most of this information and information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir are contained in one or two paragraphs.

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records. To make it easier to find such revised records, a paragraph headed "REVISIONS (WATER YEARS)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only the year is given. If no daily, monthly, or annual figures of discharge were revised, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are also listed. All independent peaks above the selected base are given. The base discharge which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subjected to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas.

In the yearly summary below the monthly summary, the figures following "MAX" are the maximum daily discharges for the calendar and water years; likewise, those following "MIN" are the minimum daily discharges.

Footnotes to the table of daily discharges are introduced by the word "Note". Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of back-water from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated.

Data collected at partial-record and miscellaneous stations follow the information for continuous record sites. These data consist of site location information and listings of discharge measurements.

Accuracy of field data and computed results

The accuracy of streamflow data 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 observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good", within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

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

Other data available

Information of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge measurements, gage-height record, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

Records of discharge collected by agencies other than the Geological Survey

Records of stream stage not published by the U.S. Geological Survey were collected in North Carolina during the 1979 water year by the National Weather Service, NOAA, U.S. Department of Commerce and other Federal agencies. The National Water Data Exchange (NAWDEX), Water Resources Division, U.S. Geological Survey, National Center, Reston, Va. 22092, maintains an index of such sites. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year, and general remarks.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately 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 may 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 needed for an accurate mean concentration and for use in calculating load.

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) may be obtained from the district office.

Water temperature

Water temperatures are measured at most of the water-quality 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.

At stations where recording instruments are used, either mean temperature or maximum and minimum temperatures for each day are published.

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 loads 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 times of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

The ground-water level data from a basic network of observation wells and special project wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 2.

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum (NGVD) or land-surface datum (lsd). National Geodetic Vertical Datum is the plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (EOM).

Water levels are reported to as many significant figures as can be justified by the local conditions. Accordingly, most measurements are reported to a hundredth of a foot.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing 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) is on 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 Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 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-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.

THIS PAGE IS INTENTIONALLY BLANK

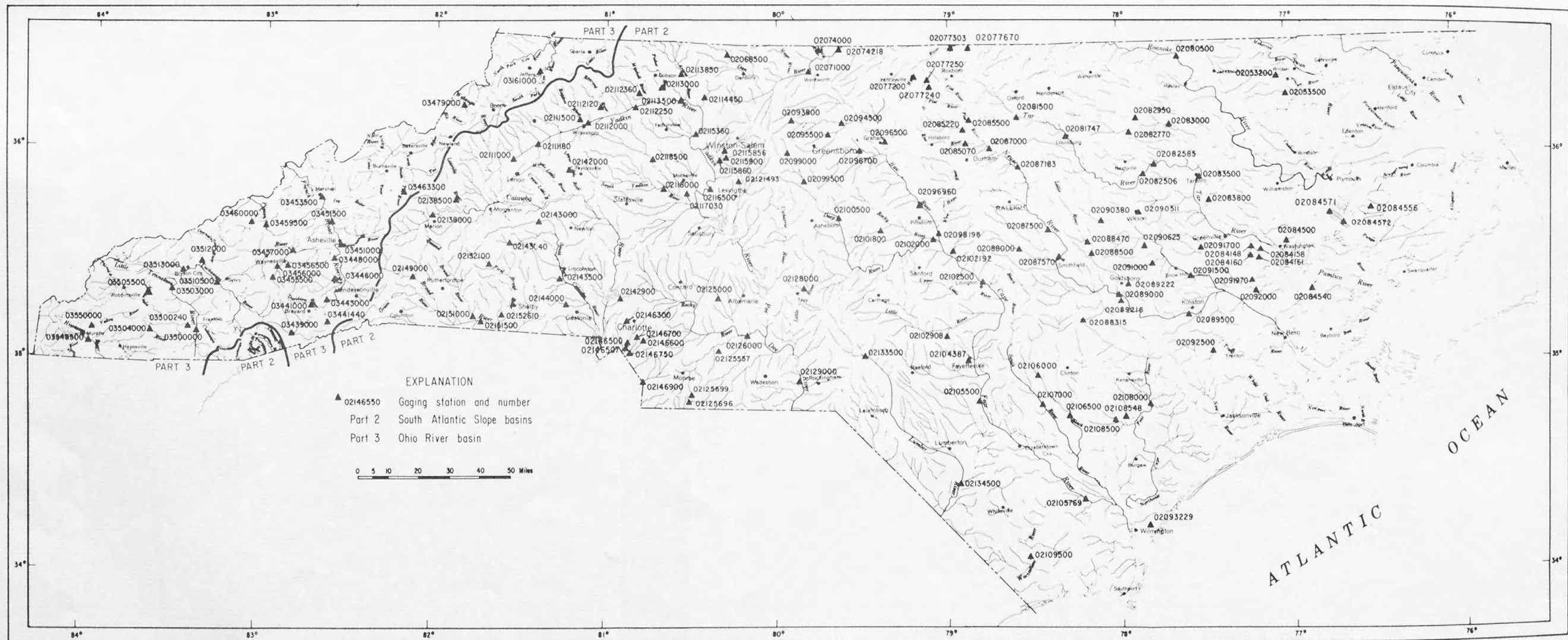


Figure 3. Map of North Carolina showing location of gaging stations.

THIS PAGE IS INTENTIONALLY BLANK

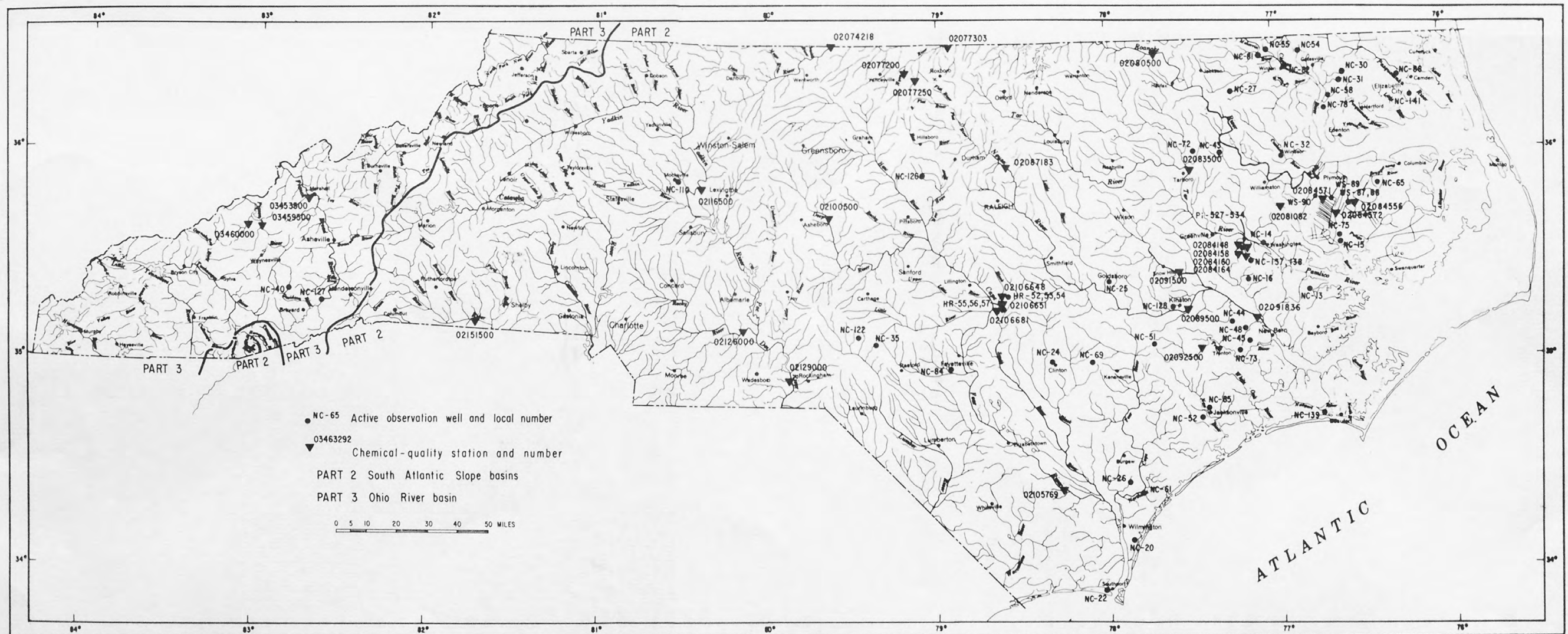


Figure 4. Map of North Carolina showing location of chemical-quality stations and observation well sites.

THIS PAGE IS INTENTIONALLY BLANK

SOUTH ATLANTIC SLOPE BASINS

19

CHOWAN RIVER BASIN

02053200 POTECAZI CREEK NEAR UNION, N. C.

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 (4.5 km) north of Union, 3 mi (4.8 km) downstream from Cutawhiskie Swamp, and 3.5 mi (5.6 km) upstream from Bells Branch.

DRAINAGE AREA.--191 mi² (495 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 3.53 ft (1.076 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1958, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--21 years, 245 ft³/s (6.938 m³/s), 17.42 in/yr (442 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,280 ft³/s (121 m³/s) Sept. 8, 1979, gage height, 19.77 ft (6.026 m); minimum, 0.2 ft³/s (0.006 m³/s) July 1, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1929 reached a stage of 19.1 ft (5.82 m), discharge, 4,050 ft³/s (115 m³/s), and flood of August 1940 reached a stage of 24.1 ft (7.35 m), discharge, 7,000 ft³/s (198 m³/s) from rating curve extended above 4,000 ft³/s (113 m³/s), from information furnished by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,280 ft³/s (121 m³/s) Sept. 8, gage height, 19.77 ft (6.026 m); minimum daily, 4.0 ft³/s (0.11 m³/s) Nov. 7; minimum gage height, 1.61 ft (0.491 m) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	4.4	251	130	378	2550	284	222	616	15	34	46
2	30	4.4	208	228	318	2030	224	177	552	17	36	47
3	29	4.3	206	922	269	1520	189	137	454	20	50	54
4	22	4.8	221	1210	231	1060	367	109	545	20	62	52
5	17	4.4	259	1210	205	740	1000	108	976	23	83	249
6	14	4.1	518	1140	181	776	1230	153	848	26	90	1960
7	12	4.0	527	1010	170	1540	1250	119	757	21	56	3380
8	10	10	478	984	176	1700	1150	89	702	16	37	4210
9	8.9	20	490	1060	210	1690	931	74	604	13	31	3850
10	8.1	18	503	904	240	1530	709	80	458	10	27	3100
11	7.3	19	475	772	230	1250	521	199	355	8.9	30	2000
12	6.9	20	391	679	220	1020	374	208	1360	7.5	32	1000
13	6.9	24	323	838	210	797	284	172	2670	6.8	34	300
14	6.9	21	272	1160	200	643	310	601	2880	8.2	34	100
15	6.7	19	225	1170	196	606	363	1410	2390	14	36	50
16	6.7	16	184	1110	188	570	336	1660	1750	25	36	25
17	6.5	31	159	989	208	493	358	1500	1160	22	36	20
18	6.3	48	139	833	220	426	346	1190	701	34	37	18
19	6.2	46	122	678	220	364	303	1260	409	45	38	16
20	6.0	33	111	541	210	301	250	1340	222	22	39	14
21	5.8	27	106	673	244	250	198	1220	160	18	49	14
22	5.6	22	102	1270	471	210	156	1100	117	23	104	16
23	5.4	18	95	1380	773	181	127	935	83	41	82	18
24	5.3	19	95	1430	1030	313	107	994	57	98	47	16
25	5.8	18	177	1470	1550	794	92	1760	46	52	39	22
26	5.6	15	232	1290	2370	799	144	2490	36	52	37	40
27	5.4	14	195	1030	2970	773	459	2650	27	38	38	30
28	5.6	41	193	812	2950	708	431	2430	24	34	40	20
29	5.3	69	185	668	---	605	328	1960	20	28	46	16
30	4.9	166	164	548	---	484	265	1420	17	28	53	20
31	4.6	---	145	452	---	371	---	921	---	34	49	---
TOTAL	285.0	764.4	7751	28591	16838	27094	13086	28688	20987	820.4	1442	20703
MEAN	9.19	25.5	250	922	601	874	436	925	700	26.5	46.5	690
MAX	30	166	527	1470	2970	2550	1250	2650	2880	98	104	4210
MIN	4.6	4.0	95	130	170	181	92	74	17	6.8	27	14
CFSM	.05	.13	1.31	4.83	3.15	4.58	2.28	4.84	3.67	.14	.24	3.61
IN.	.06	.15	1.51	5.57	3.28	5.28	2.55	5.59	4.09	.16	.28	4.03

CAL YR 1978 TOTAL 100604.1 MEAN 276 MAX 2200 MIN 4.0 CFSM 1.45 IN 19.59
WTR YR 1979 TOTAL 167049.8 MEAN 458 MAX 4210 MIN 4.0 CFSM 2.40 IN 32.54

CHOWAN RIVER BASIN

02053500 AHOSKIE CREEK AT AHOSKIE, N. C.

LOCATION.--Lat 36°16'50", long 77°00'00", Hertford County, Hydrologic Unit 03010203, on right bank 10 ft (3 m) downstream from bridge on State Highway 350, 0.5 mi (0.8 km) upstream from Seaboard Coast Line Railroad bridge, and 0.8 mi (1.3 km) southwest of Ahoskie.

DRAINAGE AREA.--57 mi² (148 km²), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 17.46 ft (5.322 m) National Geodetic Vertical Datum of 1929 (Soil Conservation Service bench mark). Prior to Jan. 4, 1963, present site at datum 4.00 ft (1.219 m) higher. Jan. 20, 1950, to May 24, 1951, nonrecording gage.

REMARKS.--Records good. Entire basin above station canalized since July 1964. Excavation began downstream in July 1962 and reached the station in December 1962. Suspended-sediment records for the current year are published on page 21 of this report.

AVERAGE DISCHARGE.--29 years, 65.9 ft³/s (1.866 m³/s), 15.70 in/yr (399 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,580 ft³/s (73.1 m³/s) Oct. 5, 1964, gage height, 10.72 ft (3.267 m); no flow at times during most years prior to canalization; minimum since canalization, 1.4 ft³/s (0.040 m³/s) Sept. 1, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1940 reached a stage of 15.1 ft (4.60 m), present datum, from floodmark witnessed by local resident (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 720 ft³/s (20.4 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	2200	731 20.7	7.74 2.359	May 14	2100	836 23.7	8.97 2.734
Jan. 21	1230	791 22.4	8.17 2.490	May 25	0230	812 23.0	8.80 2.682
Feb. 26	0230	*1100 31.2	*10.23 3.118	Sept. 6	0430	753 21.3	8.38 2.554
Mar. 7	2100	949 26.9	9.30 2.835				

Minimum discharge, 4.3 ft³/s (0.12 m³/s) Oct. 1, Aug. 17, 18, 19, 20; minimum gage height, 0.98 ft (0.299 m) Aug. 16-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	6.1	103	22	47	509	34	28	102	13	7.4	7.7
2	96	6.3	54	312	40	214	29	18	81	13	7.4	11
3	24	6.6	38	713	34	148	56	14	36	11	11	17
4	12	6.7	32	471	31	111	404	11	496	11	14	10
5	9.3	6.0	154	194	28	90	620	95	390	10	7.6	305
6	8.0	5.8	337	139	25	648	303	71	143	9.4	6.5	579
7	7.4	5.7	140	121	29	944	130	40	67	9.0	6.2	480
8	6.9	20	80	420	38	886	80	23	42	8.7	5.9	211
9	6.4	20	66	300	57	381	60	15	30	8.4	5.6	67
10	6.7	11	99	171	45	183	47	116	24	8.4	5.2	39
11	7.0	9.9	66	116	37	188	35	264	176	8.4	5.3	27
12	6.7	11	48	127	31	176	26	127	602	8.4	5.8	20
13	6.4	9.8	39	615	36	116	29	85	592	8.0	5.4	16
14	6.4	8.2	33	605	34	93	67	702	198	7.8	5.1	14
15	6.3	7.4	28	315	33	113	58	811	75	8.7	4.9	13
16	6.0	10	25	178	50	82	40	701	46	20	4.8	12
17	5.9	35	25	124	51	62	27	246	38	12	4.3	11
18	5.9	23	24	95	40	52	20	169	33	59	4.3	11
19	6.0	16	22	73	46	44	16	614	25	33	4.3	10
20	5.8	12	20	68	47	39	14	431	20	14	4.5	9.5
21	5.7	10	20	605	94	34	12	201	17	16	5.5	9.9
22	5.9	9.3	20	744	456	30	11	111	16	20	4.6	11
23	5.6	9.1	18	410	457	28	9.7	86	15	13	5.5	13
24	5.6	10	29	268	714	315	8.7	429	14	11	6.6	12
25	5.4	9.7	95	264	830	444	8.3	774	14	10	6.1	38
26	5.6	8.9	60	163	1060	191	124	676	13	9.9	6.0	23
27	5.5	20	43	111	1040	110	253	243	12	9.4	5.9	15
28	6.8	66	33	103	994	75	125	107	12	8.8	5.8	15
29	6.7	53	27	89	---	57	71	71	12	11	6.2	13
30	6.6	249	24	67	---	46	44	46	11	11	5.6	18
31	6.3	---	22	55	---	39	---	50	---	7.6	8.3	---
TOTAL	328.8	681.5	1824	8058	6424	6448	2761.7	7375	3352	408.9	191.6	2038.1
MEAN	10.6	22.7	58.8	260	229	208	92.1	238	112	13.2	6.18	67.9
MAX	96	249	337	744	1060	944	620	811	602	59	14	579
MIN	5.4	5.7	18	22	25	28	8.3	11	11	7.6	4.3	7.7
CFS-M	.19	.40	1.03	4.56	4.02	3.65	1.62	4.18	1.97	.23	.11	1.19
IN.	.21	.44	1.19	5.26	4.19	4.21	1.80	4.81	2.19	.27	.13	1.33

CAL YR 1978 TOTAL 26867.5 MEAN 73.6 MAX 822 MIN 4.3 CFSM 1.29 IN 17.53
WTR YR 1979 TOTAL 39891.6 MEAN 109 MAX 1060 MIN 4.3 CFSM 1.91 IN 26.03

CHOWAN RIVER BASIN

02053500 AHOSKIE CREEK AT AHOSKIE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
JAN				
30...	0900	69	16	3.0
FEB				
26...	1010	1060	161	461
26...	1250	992	150	402
26...	1830	1040	116	326
27...	0845	1040	214	601
28...	1705	977	196	517
28...	2400	894	68	164
MAR				
01...	0200	837	74	167
01...	0400	758	61	125
01...	0600	691	62	116
01...	0725	628	107	181
01...	0900	558	88	133
01...	1055	348	109	102
01...	1300	418	60	68

ROANOKE RIVER BASIN

02068500 DAN RIVER NEAR FRANCISCO, N. C.

LOCATION.--Lat 36°30'53", long 80°18'11", Stokes County, Hydrologic Unit 03010103, on left bank 200 ft (61 m) upstream from bridge on State Highway 704, 700 ft (213 m) downstream from Georges Mill, 0.2 mi (0.3 km) downstream from Elk Creek, 3 mi (5 km) east of Francisco, and 7.9 mi (12.7 km) downstream from Little Dan River.

DRAINAGE AREA.--124 mi² (321 km²).

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

REVISED RECORDS.--WSP 892: Drainage area. WSP 1303: 1938-50 (monthly runoff). WSP 1433: 1925-26, 1928-29, 1931, 1942, 1948.

GAGE.--Water-stage recorder. Altitude of gage is 830 ft (253 m), from topographic map. Prior to Nov. 15, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good. Considerable diurnal fluctuation and regulation from mills and powerplants above station. Talbott and Townes reservoirs above Pinnacles Hydroelectric Plant in Virginia, 28 mi (45 km) above station, were completed in 1938 (see p. 404). Suspended-sediment records for the current year are published on page 23 of this report.

AVERAGE DISCHARGE.--55 years, 191 ft³/s (5.409 m³/s), 20.92 in/yr (531 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft³/s (535 m³/s) Sept. 22, 1979, gage height, 18.11 ft (5.520 m), from rating curve extended above 8,400 ft³/s (238 m³/s) on basis of slope-area measurement of peak flow; minimum, 7.1 ft³/s (0.20 m³/s) Sept. 8, 1932, gage height, 0.43 ft (0.131 m); minimum daily, 28 ft³/s (0.79 m³/s) Aug. 17, 18, 1963, Sept. 12, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1916 reached a stage of about 15 ft (4.6 m), from information by local residents, discharge, 16,000 ft³/s (453 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0600	2850 80.7	5.40 1.646	Mar. 24	0300	2290 64.9	4.84 1.475
Feb. 24	2000	3670 104	6.18 1.884	June 3	2230	2340 66.3	4.89 1.490
Feb. 25	1630	2660 75.3	5.21 1.588	Sept. 5	1800	3010 85.2	5.56 1.695
Mar. 5	0900	3450 97.7	5.98 1.823	Sept. 22	0230	*18900 535	*18.11 5.520

Minimum discharge, 65 ft³/s (1.84 m³/s) Oct. 18, Nov. 5, gage height, 1.27 ft (0.387 m); minimum daily, 73 ft³/s (2.07 m³/s) Oct. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	79	116	122	266	466	410	325	247	204	218	143
2	83	85	90	1570	285	421	401	311	199	156	206	433
3	96	79	82	468	206	423	441	310	600	188	194	245
4	98	78	136	300	178	399	499	323	698	204	183	211
5	85	74	261	226	176	1590	457	322	322	231	137	1260
6	82	74	171	197	228	754	423	272	240	140	119	739
7	120	76	134	203	193	580	345	265	232	143	171	427
8	111	94	110	322	213	544	288	260	234	174	177	360
9	100	90	378	277	181	504	304	240	229	148	187	339
10	91	88	308	265	203	475	303	258	274	196	171	331
11	88	85	211	246	191	484	262	360	244	190	179	301
12	85	75	201	260	198	451	241	313	182	209	189	306
13	77	74	179	252	192	435	873	405	232	222	127	313
14	133	85	182	233	187	431	504	285	218	190	118	341
15	108	92	185	173	183	408	415	316	162	175	114	248
16	85	94	143	181	192	401	387	297	197	162	110	148
17	126	132	130	173	191	312	377	259	440	158	110	194
18	88	150	123	217	154	280	314	253	296	382	110	248
19	89	87	143	201	248	290	299	251	322	202	112	176
20	84	91	132	264	243	283	275	248	264	304	110	134
21	75	124	122	1030	238	270	212	248	215	337	150	860
22	75	103	125	448	273	275	229	248	230	195	142	6830
23	75	92	117	292	366	318	278	205	229	163	111	1140
24	74	99	133	555	1450	1270	269	241	218	198	109	589
25	80	90	165	510	1710	622	255	282	197	190	114	476
26	80	107	108	442	1060	508	465	251	174	184	106	433
27	78	132	123	401	576	468	613	245	155	254	103	405
28	75	144	157	392	513	447	380	253	176	195	121	444
29	74	101	153	371	---	434	306	241	173	196	140	414
30	73	165	128	302	---	424	313	244	198	139	147	399
31	77	---	139	265	---	416	---	235	---	149	106	---
TOTAL	2750	2939	4885	11158	10294	15383	11138	8566	7797	6178	4391	18887
MEAN	88.7	98.0	158	360	368	496	371	276	260	199	142	630
MAX	133	165	378	1570	1710	1590	873	405	698	382	218	6830
MIN	73	74	82	122	154	270	212	205	155	139	103	134
(+)	-2	0	-8	+13	+16	-2	-6	-7	+2	+1	-11	+26
CAL YR 1978	TOTAL	80174	MEAN 220	MAX 2970	MIN 73	MEAN# 219	CFSM# 1.77	IN# 24.03				
WTH YR 1979	TOTAL	104366	MEAN 286	MAX 6830	MIN 73	MEAN# 288	CFSM# 2.32	IN# 31.49				

+ Change in contents, equivalent in cubic feet per second, in Talbott and Townes Reservoirs furnished by city of Danville, Va.
Adjusted for change in contents.

ROANOKE RIVER BASIN

23

02068500 DAN RIVER NEAR FRANCISCO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 03...	1010	108	8	2.3
NOV 07...	1025	73	5	.99
FEB 26...	1615	855	365	843
SEP 05...	2200	1700	821	3770
06...	1510	632	146	249

02071000 DAN RIVER NEAR WENTWORTH, N. C.

LOCATION.--Lat 36°24'47", long 79°49'45", Rockingham County, Hydrologic Unit 03010103, on right bank 600 ft (183 m) downstream from Settles Bridge on Secondary Road 2150, 3.5 mi (5.6 km) northwest of Wentworth, 7.5 mi (12.1 km) downstream from Mayo River, and 103.7 mi (166.9 km) upstream from mouth.

DRAINAGE AREA.--1,050 mi² (2,720 km²), approximately.

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

REVISED RECORDS.--WRD N. C. 1972: 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 512.98 ft (156.356 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 3, 1949, water-stage recorder at site 150 ft (46 m) upstream at same datum.

REMARKS.--Records good. Diurnal fluctuation and regulation at low flow caused by mills and Talbott and Townes reservoirs. (See p. 404). Suspended-sediment records for the current year are published on page 25 of this report.

AVERAGE DISCHARGE.--40 years, 1,226 ft³/s (34.72 m³/s), 15.86 in/yr (403 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,200 ft³/s (1,530 m³/s) June 22, 1972, gage height, 31.60 ft (9.632 m), from high-water mark in well; minimum, 65 ft³/s (1.84 m³/s) Oct. 8, 1954, gage height, 0.93 ft (0.283 m); minimum daily, 107 ft³/s (3.03 m³/s) Oct. 2, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 34.9 ft (10.64 m), from information by North Carolina State Highway Commission, and flood in 1937 reached a stage of 29.8 ft (9.08 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	2400	15100 428	18.40 5.608	Mar. 6	0500	20800 589	21.84 6.657
Jan. 21	2300	18100 513	20.32 6.194	Sept. 6	0700	16000 453	18.98 5.785
Feb. 25	1300	20500 581	21.71 6.617	Sept. 23	0330	*39400 1120	*28.12 8.571

Minimum discharge, 424 ft³/s (12.0 m³/s) Oct. 25; minimum gage height, 1.54 ft (0.469 m) Feb. 19; minimum daily, 429 ft³/s (12.1 m³/s) Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	561	443	854	935	1240	2670	1560	1500	1130	1040	805	533
2	617	452	670	8010	1130	2320	1530	1410	1080	940	827	839
3	517	453	612	7840	1170	2100	1600	1350	1040	773	852	1270
4	498	451	796	2630	1060	1960	2680	1410	2010	780	710	1730
5	548	452	4420	1770	982	11800	3440	1620	1590	979	667	5130
6	532	447	2810	1490	918	16200	2280	1390	1180	877	605	11100
7	483	446	1380	1440	957	4540	1910	1280	1060	722	578	2490
8	468	482	1170	2090	1000	3180	1600	1240	1060	721	609	1600
9	482	522	2390	2300	1110	2910	1580	1210	1020	743	602	1250
10	451	489	5470	1610	848	2530	1590	1230	991	743	593	1030
11	457	480	2080	1320	894	2680	1430	1240	1190	901	573	957
12	444	478	1430	1210	899	2460	1370	2320	1040	821	664	880
13	452	469	1220	1380	950	2180	4870	2570	874	870	886	859
14	456	467	1090	2010	909	2060	5180	3920	890	805	627	979
15	566	484	889	1700	923	1970	2470	2270	857	742	566	959
16	486	511	855	1340	1270	1820	1980	1780	826	765	537	782
17	451	624	815	1250	1420	1650	1750	1520	4100	880	517	666
18	488	859	758	1190	1070	1520	1620	1370	2290	961	515	684
19	451	766	716	1160	641	1480	1480	1320	1440	1140	519	726
20	468	579	759	1690	1550	1460	1400	1290	1280	831	526	664
21	461	533	750	14000	1530	1400	1330	1250	1180	1700	510	652
22	440	553	730	12100	1880	1350	1260	1200	1300	1720	609	21300
23	440	559	686	3480	4090	1350	1340	1190	1100	1140	626	31600
24	437	600	739	3880	8460	4740	1330	1460	1140	918	640	6720
25	429	593	1460	3650	19800	3770	1280	1890	1110	875	722	3290
26	432	545	1200	2360	18200	2620	1850	1430	957	833	616	2700
27	453	630	911	1960	5880	2090	5130	1220	869	1230	549	2090
28	447	785	819	1770	3250	1850	3010	1190	819	1010	546	2050
29	442	723	779	1590	---	1730	2150	1170	834	845	591	2260
30	440	874	802	1440	---	1660	1610	1100	820	798	707	2230
31	438	---	852	1340	---	1600	---	1080	---	707	617	---
TOTAL	14735	16749	40912	91935	84031	93650	63610	47420	37077	28810	19511	110020
MEAN	475	558	1320	2966	3001	3021	2120	1530	1236	929	629	3667
MAX	617	874	5470	14000	19800	16200	5180	3920	4100	1720	886	31600
MIN	429	443	612	935	641	1350	1260	1080	819	707	510	533
CFSM	.45	.53	1.26	2.83	2.86	2.88	2.02	1.46	1.18	.89	.60	3.49
IN.	.52	.59	1.45	3.26	2.98	3.32	2.25	1.68	1.31	1.02	.69	3.90

CAL YR 1978	TOTAL	546154	MEAN	1496	MAX	20400	MIN	429	CFSM	1.43	IN	19.35
WTR YR 1979	TOTAL	648460	MEAN	1777	MAX	31600	MIN	429	CFSM	1.69	IN	22.97

ROANOKE RIVER BASIN

25

02071000 DAN RIVER NEAR WENTWORTH, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT							
04...	0845	513	19	26	--	--	--
JAN							
21...	1130	15600	1520	64000	6	18	22
21...	1400	16500	848	37800	--	--	--
21...	1530	16900	871	39700	--	--	--
22...	1115	12800	314	10900	--	--	--
22...	1630	8150	713	15700	--	--	--
23...	1300	3230	273	2380	--	--	--
24...	0830	3660	337	3330	--	--	--
24...	1040	3930	297	3150	--	--	--
FEB							
28...	1500	3140	182	1540	--	--	--
SEP							
05...	1715	7960	1000	21500	--	49	54
06...	0215	15000	1300	52700	--	--	--
06...	1315	12400	600	20100	--	--	--
		SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
OCT							
04...	--	--	--	--	--	--	--
JAN							
21...	30	40	60	73	90	--	--
21...	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--
FEB							
28...	--	--	--	--	--	--	--
SEP							
05...	60	68	75	90	98	100	100
06...	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--

ROANOKE RIVER BASIN

02074000 SMITH RIVER AT EDEN, N. C.

LOCATION.--Lat 36°31'31" long 79°45'57", Rockingham County, Hydrologic Unit 03010103, on right bank at Eden, 0.3 mi (0.5 km) downstream from bridge on State Highway 14, 0.8 mi (1.3 km) upstream from bridge on Secondary Road 1714, 1.2 mi (1.9 km) south of Virginia-North Carolina State line, 1.3 mi (2.1 km) downstream from Stuart Creek, and 3.9 mi (6.3 km) upstream from mouth.

DRAINAGE AREA.--538 mi² (1,393 km²).

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

REVISED RECORDS.--WSP 1433: 1946.

GAGE.--Water-stage recorder. Datum of gage is 539.56 ft (164.458 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated since August 1950 by Philpott Lake 40 mi (64 km) upstream (usable capacity, 6,325,000,000 ft³ (179.1 hm³)). Some additional regulation by hydroelectric plant at Martinsville, Va. 18 mi (29 km) upstream. Suspended-sediment records for the current year are published on page 27 of this report.

AVERAGE DISCHARGE.--40 years, 624 ft³/s (17.67 m³/s), 15.75 in/yr (400 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,600 ft³/s (1,290 m³/s) Aug. 15, 1940, gage height, 19.28 ft (5.877 m), from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of computation of peak flow over dam 1.5 mi (2.4 km) downstream; minimum, 38 ft³/s (1.08 m³/s) Aug. 7, 1967; minimum daily, 46 ft³/s (1.30 m³/s) Aug. 14, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,300 ft³/s (660 m³/s) Sept. 22, gage height, 15.68 ft (4.779 m); minimum, 100 ft³/s (2.83 m³/s) Oct. 22, 23, gage height, 1.52 ft (0.463 m); minimum daily, 133 ft³/s (3.77 m³/s) Oct. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	270	403	331	1070	2180	1210	1080	812	313	494	508
2	272	263	357	4020	1040	2090	519	1060	809	348	505	249
3	354	279	206	2390	991	2040	1000	1040	418	500	515	153
4	346	290	444	1610	292	1470	1480	1080	821	474	524	668
5	375	141	1570	1440	447	7370	1660	1170	750	736	226	2420
6	395	231	762	1360	639	3490	1420	346	681	523	169	3000
7	305	280	478	1350	670	4690	1180	435	650	534	444	1210
8	197	335	410	818	675	4290	432	1050	662	202	455	1680
9	216	322	1130	1030	710	2290	624	1040	646	297	453	1650
10	361	333	1440	864	593	2120	1200	1040	268	542	447	1620
11	346	320	512	809	250	1720	1170	1210	623	583	497	1200
12	341	140	568	774	373	901	1160	1160	594	547	367	902
13	345	233	498	713	460	1440	2680	411	869	531	335	910
14	379	297	470	585	463	1280	1730	694	844	544	543	1020
15	156	310	442	640	438	1140	747	1120	838	246	518	942
16	244	296	407	930	600	1310	624	1090	813	243	218	821
17	297	448	227	901	734	1310	1340	1030	1490	505	477	280
18	391	521	330	901	300	1160	1420	1010	569	523	611	640
19	351	278	400	854	600	541	1250	1010	619	553	202	650
20	349	280	431	964	800	1030	1230	933	660	524	162	638
21	361	370	434	5500	641	982	1120	293	563	674	440	719
22	145	365	420	2810	833	939	340	793	817	345	653	14500
23	198	278	412	1880	1530	930	599	894	843	273	532	2770
24	321	335	205	2430	4460	1620	1100	1010	773	534	509	2410
25	398	259	761	2060	6690	1160	1090	1000	425	804	585	2160
26	372	219	439	1600	4660	747	1400	821	808	822	221	2110
27	342	368	566	1450	2770	1140	1410	353	799	886	155	2350
28	377	434	542	1220	2330	1460	1120	393	792	938	531	2290
29	133	384	501	582	---	1440	1200	811	773	270	500	2040
30	232	552	440	1130	---	1420	445	766	799	222	560	1320
31	267	---	306	1090	---	1410	---	769	---	477	478	---
TOTAL	9349	9431	16511	45036	36061	57110	33900	26912	21828	15513	13326	53830
MEAN	302	314	533	1453	1288	1842	1130	868	728	500	430	1794
MAX	398	552	1570	5500	6690	7370	2680	1210	1490	938	653	14500
MIN	133	140	205	331	250	541	340	293	268	202	155	153
(+)	-34	+33	+61	+10	+252	-121	+56	-102	+25	-12	-61	+184

CAL YR 1978 TOTAL 310349 MEAN 850 MAX 10700 MIN 133 MEAN± 854 CFSM± 1.59 IN± 21.58
WTR YR 1979 TOTAL 338807 MEAN 928 MAX 14500 MIN 133 MEAN± 950 CFSM± 1.77 IN± 24.03

+ Change in contents, equivalent in cubic feet per second, in Philpott Lake furnished by Corps of Engineers.
± Adjusted for change in contents.

ROANOKE RIVER BASIN

27

02074000 SMITH RIVER AT EDEN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
04...	0938	255	6	4.1
NOV				
07...	1535	163	2	.88
DEC				
04...	1030	280	20	15
JAN				
21...	1230	6900	1600	29800
21...	1500	6490	962	16900
22...	1405	2290	1090	6740
23...	1500	1310	67	237
24...	1255	1980	130	695
FEB				
26...	1445	3390	389	3560
27...	1730	2620	167	1180
SEP				
05...	1835	4470	1060	12800
06...	0315	6390	1370	23600
06...	1055	2080	493	2770

ROANOKE RIVER BASIN

02074218 DAN RIVER NEAR MAYFIELD, N. C.

LOCATION.--Lat 36°32'29", long 79°36'21", Rockingham County, Hydrologic Unit 03010103, near right bank on downstream end of bridge pier on Secondary Road 1761, at North Carolina-Virginia State line, 2.2 mi (3.5 km) upstream from Whiteoak Creek, 3.0 mi (4.8 km) northwest of Mayfield, and at mile 81.0 (130.3 km).

DRAINAGE AREA.--1,780 mi² (4,610 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 458.4 ft (139.7 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Water-discharge record good. Diurnal fluctuation and regulation at low flow caused by mills and Talbott and Townes reservoirs on the Dan River (see p. 404) and Philpott Lake on Smith River (see sta 02074000). Duke Power Company gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,300 ft³/s (1,060 m³/s) Sept. 23, 1979, gage height, 27.31 ft (8.324 m); minimum, 345 ft³/s (9.77 m³/s) Aug. 2, 1977, gage height 1.95 ft (0.594 m); minimum daily, 395 ft³/s (11.2 m³/s) July 18, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972 reached a stage of 28.1 ft (8.56 m), from floodmarks, discharge, 40,000 ft³/s (1,130 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft³/s (370 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	2200	17700 501	18.83 5.739	Apr. 14	0300	13300 377	16.16 4.926
Jan. 22	0730	23300 660	21.65 6.599	Sept. 6	0700	19900 564	19.98 6.090
Feb. 26	0700	31000 878	24.98 7.614	Sept. 23	1530	*37300 1060	*27.31 8.324
Mar. 6	1130	25800 731	22.80 6.949				

Minimum discharge, 623 ft³/s (17.6 m³/s) Oct. 30, gage height, 2.74 ft (0.835 m); minimum daily, 659 ft³/s (18.7 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	879	779	1510	1490	2590	5250	2920	2600	2000	1310	1270	1140
2	949	787	1240	9490	2360	4630	1980	2490	2060	1500	1520	827
3	981	795	920	13900	2420	4280	2600	2400	1510	1390	1550	1450
4	901	799	1100	5200	1640	3800	3570	2450	2800	1370	1380	2980
5	1020	776	5510	3690	1590	12600	5760	2770	2900	1540	925	6390
6	1130	671	5400	3130	1750	25300	4110	1940	2100	1620	902	17600
7	982	811	2290	3080	1830	12700	3250	1770	1850	1370	1040	5120
8	789	847	1700	3040	1820	8010	2240	2260	1780	977	1100	3410
9	802	912	2800	3870	2020	5750	2170	2220	1830	1060	1100	3060
10	842	895	8550	2870	1700	4810	2810	2210	1320	1250	1080	2720
11	893	855	3720	2400	1340	4750	2630	2560	1800	1530	1050	2430
12	892	819	2440	2150	1380	3590	2530	3580	1900	1440	1070	1920
13	894	703	2050	2340	1560	3720	7620	3010	1800	1450	1380	1840
14	895	819	1820	2860	1570	3500	9680	5180	1780	1250	1320	2000
15	883	843	1590	2790	1600	3070	3990	4150	1750	1150	1150	2060
16	791	875	1550	2500	2120	3100	2950	3050	1670	1300	872	1790
17	847	1110	1240	2300	2470	2950	3140	2690	5020	1400	936	1090
18	887	1540	1220	2200	1920	2830	3000	2440	4090	1550	1110	1330
19	887	1220	1250	2120	1330	1960	2760	2380	2430	1700	806	1410
20	871	967	1340	2770	2210	2400	2700	2280	2100	1480	801	1410
21	875	953	1330	18200	2510	2400	2660	1640	1890	2070	952	1330
22	807	967	1300	21100	3050	2280	1780	2030	2360	2420	1180	24000
23	659	957	1260	7180	6160	2230	1850	2130	2160	1770	1240	36200
24	799	934	1200	6650	12600	5610	2540	2200	1970	1600	1250	23500
25	842	1010	2290	7190	26800	6200	2440	3050	1870	1780	1310	6010
26	863	875	2220	4760	29600	3750	2950	2510	1930	1720	1060	5270
27	867	939	1720	3900	15100	3280	6110	1680	1750	2170	857	4580
28	883	1340	1550	3560	6270	3310	4920	1610	1680	2120	1010	4690
29	779	1270	1470	2460	---	3120	3720	2000	1680	1320	1140	4600
30	663	1500	1440	2900	---	3040	2180	1920	1660	1140	1350	4170
31	776	---	1330	2710	---	2970	---	1870	---	1260	1230	---
TOTAL	26828	28568	66350	154800	139310	157190	103560	77070	63440	47007	34941	176327
MEAN	865	952	2140	4994	4975	5071	3452	2486	2115	1516	1127	5878
MAX	1130	1540	8550	21100	29600	25300	9680	5180	5020	2420	1550	36200
MIN	659	671	920	1490	1330	1960	1780	1610	1320	977	801	827
(+)	-34	+33	+61	+10	+252	-121	+56	-102	+25	-12	-61	+184
CAL YR 1978 TOTAL	976875		MEAN 2676	MAX 29700	MIN 659	MEAN± 2680	CFSM± 1.51	IN± 20.50				
*TR YR 1979 TOTAL	1075391		MEAN 2946	MAX 36200	MIN 659	MEAN± 2968	CFSM± 1.67	IN± 22.67				

+ Change in contents, equivalent in cubic feet per second, in Philpott Lake furnished by Corps of Engineers.

* Adjusted for change in contents.

ROANOKE RIVER BASIN

29

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-70, 1972-73, 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1976 to current year.

WATER TEMPERATURES: October 1976 to current year.

INSTRUMENTATION.--Temperature recorder since October 1977.

REMARKS.--Water temperatures near left bank sometimes affected by heated releases from power plant located 8.4 mi (13.5 km) upstream. Releases from town of Eden's sewage treatment plant enter river on left bank approximately 10.2 mi (16.4 km) upstream. Temperature recorder located at gaging station.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 205 micromhos Oct. 27, 1978; minimum daily, 37 micromhos Oct. 10, 1976.

WATER TEMPERATURES: Maximum daily, 33.0°C July 20, 1977; minimum, 0.0°C Feb. 11, 12, 18, 19, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 205 micromhos Oct. 27; minimum daily, 40 micromhos Mar. 6.

WATER TEMPERATURES: Maximum, 29.5°C Aug. 6, 8-10, Sept. 1, 2; minimum, 0.0°C Feb. 11, 12, 18, 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DATE	TIME											
OCT 25...	1330	752	145	7.1	14.0	20	10.6	25	0	6.3	2.2	18
FEB 05...	1030	1600	67	7.6	2.0	10	13.1	19	2	4.8	1.7	5.0
26...	1100	30500	40	7.4	4.5	250	12.8	12	7	2.9	1.1	2.3
MAY 23...	0930	2340	70	7.5	19.5	10	8.9	19	0	4.8	1.7	6.1
JUL 05...	1330	1900	69	6.8	24.0	50	8.3	19	0	4.6	1.8	5.2
		SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DATE	SODIUM PERCENT											
OCT 25...	59	1.6	2.0	34	0	28	4.3	10	20	.1	16	92
FEB 05...	34	.5	1.4	21	0	17	.8	6.0	4.7	.1	15	54
26...	26	.3	1.8	6	0	5	.4	7.4	1.9	.1	6.6	44
MAY 23...	39	.6	1.3	26	0	21	1.3	5.5	5.2	.1	14	59
JUL 05...	35	.5	1.5	27	0	22	6.8	5.2	3.6	.1	15	60
	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)
DATE												
OCT 25...	93	.13	187	.30	.02	.32	.32	26	.09	.05	--	.06
FEB 05...	51	.07	233	.07	.30	.37	.34	--	.05	.04	--	.05
26...	28	.06	3620	.23	.05	.28	.21	--	.08	.02	--	.03
MAY 23...	53	.08	373	.25	.01	.26	.27	--	.01	.01	.01	.01
JUL 05...	50	.08	308	.39	.05	.44	.39	--	.00	.06	.00	.08

ROANOKE RIVER BASIN

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS P04)	PHOS- PHORUS TOTAL (MG/L AS P04)
OCT 25...	.60	.28	.69	.36	.33	350	1.0	4.5	.18	--	.55
FEB 05...	.09	.13	.14	.00	.17	--	.51	2.3	.05	--	.15
26...	3.0	.15	3.1	2.9	.17	--	3.4	15	.73	--	2.2
MAY 23...	.61	.22	.62	.39	.23	--	.88	3.9	.09	--	.28
JUL 05...	.51	.11	.51	.34	.17	--	.95	4.2	.22	.09	.67
DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO. DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO. DIS- SOLVED (MG/L AS P04)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT 25...	.13	.12	.12	.37	140	--	--	--	--	--	--
FEB 05...	.02	.02	.02	.06	--	--	--	--	--	--	--
26...	.00	.09	.00	.00	--	1	0	1	0	0	0
MAY 23...	.04	.02	.01	.03	--	--	--	--	--	--	--
JUL 05...	.04	.03	.04	.12	--	--	--	--	--	--	--
DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)
OCT 25...	10	7	3	<10	--	--	--	15	5	10	<10
FEB 05...	<10	<10	0	--	--	--	--	2	1	1	--
26...	50	50	0	--	5	4	1	19	16	3	--
MAY 23...	30	8	22	--	--	--	--	9	6	3	--
JUL 05...	40	23	17	--	--	--	--	14	11	3	--

ROANOKE RIVER BASIN

31

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 25...	550	390	160	4000	14	6	8	20	--	--	--
FEB 05...	810	780	30	--	0	0	0	--	--	--	--
26...	22000	22000	390	--	13	13	0	--	310	280	30
MAY 23...	1800	1700	140	--	11	5	6	--	--	--	--
JUL 05...	5700	5700	50	--	7	5	2	--	--	--	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 25...	--	--	--	--	--	--	20
FEB 05...	--	--	--	--	--	--	10
26...	<.5	.0	<.5	0	0	0	40
MAY 23...	--	--	--	--	--	--	140
JUL 05...	--	--	--	--	--	--	30

DATE	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT 25...	10	10	10	3.8	.1	.00
FEB 05...	10	0	--	5.7	.3	.00
26...	30	10	--	10	--	.00
MAY 23...	140	2	--	4.2	.7	.00
JUL 05...	20	10	--	5.7	--	.00

ROANOKE RIVER BASIN

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

PHYTOPLANKTON ANALYSES, JUNE TO SEPTEMBER 1978

DATE TIME	JUN 8, 78 1310	JUN 21, 78 1335	AUG 29, 78 1115
TOTAL CELLS/ML	2500	3100	17000
DIVERSITY: DIVISION	1.1	1.4	0.7
..CLASS	1.1	1.4	0.7
...ORDER	1.2	1.4	0.7
...FAMILY	2.8	2.4	0.8
...GENUS	3.0	2.6	1.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOKOCOCCEAE						
...CHAKACIACEAE						
....SCHROEDERIA	--	-	69	2	--	-
....COELASTRACEAE						
....COELASTRUM	--	-	--	-	1500	9
....OOCYSTACEAE						
....ANKISTRODESMEUS	--	-	23	1	--	-
....CHODATELLA	--	-	23	1	--	-
....DICTYOSPHAERIUM	--	-	46	1	--	-
....KIRCHNERIELLA	--	-	23	1	--	-
....SCENEDESMACEAE						
....CRUCIGENIA	--	-	93	3	380	2
....SCENEDESMUS	--	-	190	6	380	2
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	--	-	--	-	94	1
..ZYGNEATALES						
...DESMIDIACEAE						
....COSMARIIUM	23	1	--	-	--	-
....SPHAEROZOSMA	93	4	--	-	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	23	1	--	-	94	1
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	120	4	390	13	--	-
...CYMBELLACEAE						
....CYMBELLA	120	4	23	1	--	-
...DIATOMACEAE						
....DIATOMA	120	4	46	1	--	-
...EUNOTIACEAE						
....EUNOTIA	23	1	--	-	--	-
...FRAGILARIACEAE						
....SYNEDRA	69	3	46	1	--	-
...GOMPHONEMACEAE						
....GOMPHONEMA	46	2	--	-	--	-
...NAVICULACEAE						
....NAVICULA	790#	30	370	12	94	1
....PINNULARIA	120	4	23	1	--	-
...NITZSCHACEAE						
....NITZSCHIA	280	11	230	7	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	--	-	4500#	26
....ANACYSTIS	--	-	--	-	10000#	59
...HORMOGONALES						
....NOSTOCACEAE						
....ANABAEANA	580#	22	--	-	--	-
....APHANIZOMENON	--	-	23	1	--	-
...OSCILLATORACEAE						
....LYNGRYA	--	-	1500#	48	--	-
....OSCILLATORIA	210	8	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ROANOKE RIVER BASIN

33

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	OCT 25, 78 1330	FEB 5, 79 1030	MAY 23, 79 0930	JUL 5, 79 1330
TOTAL CELLS/ML	45000	1600	16000	720
DIVERSITY: DIVISION	0.1	0.2	0.1	1.0
..CLASS	0.1	0.2	0.1	1.0
...ORDER	0.3	0.5	0.2	1.4
...FAMILY	0.3	0.5	0.2	1.4
....GENUS	0.3	0.5	0.2	1.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACIACEAE								
....SCHROEDERIA	* 0	--	--	--	--	--	--	--
....OOCYSTACEAE								
....ANKISTRODESMUS	* 0	--	--	--	--	--	--	--
....TETRAEDRON	--	--	--	--	* 0	--	--	--
....SCENEDESMACEAE								
....CRUCIGENIA	--	--	--	--	--	--	360#	50
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	--	--	--	* 0	--	90	13
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	* 0	25	2	* 0	--	--	--	--
....MELOSIRA	--	--	10	1	--	--	--	--
..PENNALES								
...ACHNANTHACEAE								
....RHOICOSPHENIA	--	--	--	--	* 0	--	--	--
...FRAGILARIACEAE								
....ASTERIONELLA	--	--	--	--	* 0	--	--	--
...NAVICULACEAE								
....NAVICULA	290	1	15	1	* 0	--	270#	38
...NITZSCHIA								
....NITZSCHIA	* 0	--	--	--	* 0	--	--	--
...SURIPELLACEAE								
....SURIPELLA	--	--	* 0	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
....ANACYSTIS	970	2	60	4	120	1	--	--
...HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	43000#	97	1500#	93	15000#	98	--	--

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ROANOKE RIVER BASIN

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	129	101	74	94	57	61	86	104	72	118	128
2	81	134	92	61	91	60	59	93	100	67	128	108
3	99	148	96	55	98	58	117	96	62	75	108	68
4	107	145	81	68	68	59	70	84	68	72	119	73
5	110	116	82	86	74	43	61	80	70	72	91	80
6	118	108	78	88	94	40	68	61	73	64	90	48
7	103	117	93	80	79	52	81	75	96	68	123	61
8	96	116	103	69	74	55	64	80	93	72	128	78
9	92	132	93	74	76	54	70	84	91	68	100	74
10	93	128	63	79	68	59	82	84	75	76	108	64
11	119	132	78	83	66	57	82	84	74	85	122	78
12	120	109	73	91	63	58	78	64	80	80	106	100
13	132	91	89	90	73	65	71	58	81	96	92	95
14	127	110	94	71	75	73	52	57	114	96	107	108
15	130	126	100	74	80	78	51	66	111	95	110	93
16	85	120	95	92	86	82	55	96	99	78	100	96
17	94	117	90	90	68	78	62	98	68	84	136	74
18	109	109	76	91	59	63	73	92	57	86	148	132
19	131	76	85	90	62	57	75	95	63	86	96	126
20	122	81	93	95	65	75	70	70	72	90	92	128
21	122	83	100	60	62	72	79	66	74	98	150	112
22	117	92	100	52	84	80	60	100	78	65	126	44
23	88	94	100	59	68	76	70	98	85	82	104	45
24	87	92	83	73	62	71	86	80	76	90	97	52
25	148	97	74	61	41	51	73	82	58	124	112	63
26	160	86	71	68	42	57	82	92	71	120	92	78
27	205	86	67	68	51	70	70	67	106	86	100	68
28	143	90	71	65	53	68	63	70	78	94	122	77
29	94	98	78	68	---	67	84	100	128	72	110	73
30	117	119	80	87	---	71	60	102	78	74	101	72
31	110	---	75	91	---	72	---	90	---	78	111	---
MEAN	115	109	86	76	71	64	71	82	83	83	111	83
WTR YR 1979	MEAN		86	MAX	205	MIN		40				

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	18.5	15.0	13.0	8.0	7.0	---	---	4.0	3.0	6.5	6.0
2	18.5	18.0	14.0	12.0	7.0	6.0	---	---	3.5	2.5	7.5	6.0
3	20.0	18.0	13.5	12.0	7.5	6.0	6.5	4.0	3.0	2.0	8.5	7.0
4	20.5	19.5	13.0	11.5	10.0	7.5	5.0	3.0	4.0	2.0	9.5	8.0
5	20.0	19.0	12.5	11.0	11.0	10.0	3.0	2.5	3.5	2.5	11.5	9.5
6	19.5	18.0	14.5	11.0	11.0	10.5	3.5	2.5	2.5	2.0	11.5	10.5
7	19.0	15.5	14.0	12.0	10.5	9.0	5.0	3.5	---	---	10.5	8.0
8	15.5	14.0	15.0	13.5	12.5	9.5	6.5	5.0	---	---	8.0	7.0
9	16.0	12.5	14.0	13.0	14.0	12.5	6.0	4.0	2.0	1.0	8.5	7.0
10	15.5	13.5	14.5	12.5	13.5	9.5	4.0	2.5	1.5	.5	9.5	8.0
11	15.5	13.0	14.0	12.5	9.5	7.5	4.0	2.5	1.5	.0	9.5	8.5
12	16.0	13.5	14.0	12.5	7.0	5.5	2.5	2.0	1.0	.0	9.5	8.0
13	17.0	15.0	15.0	12.5	5.5	5.0	2.5	2.0	2.0	1.0	9.5	8.0
14	17.0	16.0	16.0	13.5	5.5	4.5	---	---	2.5	1.5	10.0	9.0
15	16.5	14.5	16.0	14.5	5.5	4.5	---	---	4.5	2.0	10.0	9.0
16	14.5	13.5	16.5	15.0	5.5	4.0	---	---	5.5	4.0	9.5	7.5
17	14.0	12.0	16.0	14.5	5.5	4.0	4.5	2.0	5.5	2.0	8.5	7.0
18	14.0	11.0	15.0	13.5	6.0	2.0	5.0	4.0	3.5	.0	9.0	7.5
19	14.5	12.0	14.0	12.0	6.0	4.5	5.0	4.0	2.0	.0	10.5	8.5
20	15.0	12.5	12.5	11.0	6.0	5.0	4.0	2.5	---	---	12.5	10.5
21	14.5	12.0	12.0	10.0	7.5	6.0	4.0	2.5	---	---	13.0	12.0
22	14.0	12.0	11.5	10.5	7.5	5.5	5.5	4.0	4.5	2.0	13.0	12.0
23	17.5	12.5	11.5	10.0	5.5	4.5	5.0	4.5	5.0	4.0	12.5	11.5
24	17.5	15.5	11.5	10.0	4.5	4.0	6.0	4.5	5.5	5.0	11.5	11.0
25	16.5	14.0	10.5	8.5	4.5	4.0	5.5	4.5	5.5	5.0	11.0	10.0
26	17.5	14.0	8.5	7.5	4.5	3.5	4.5	3.5	5.5	5.5	10.5	9.0
27	17.5	15.5	7.5	7.0	4.5	3.5	5.0	3.5	6.0	5.0	10.0	8.5
28	16.5	14.5	8.5	7.0	---	---	5.0	5.0	6.5	5.5	9.5	8.0
29	15.5	13.5	8.0	7.5	---	---	5.0	4.0	---	---	12.0	9.5
30	15.0	13.5	8.0	7.0	---	---	4.0	2.0	---	---	14.5	11.5
31	14.5	13.0	---	---	---	---	4.0	3.5	---	---	15.5	13.0
MONTH	20.5	11.0	16.5	7.0	14.0	2.0	6.5	2.0	6.5	.0	15.5	6.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.0	14.5	17.0	14.5	21.5	21.0	23.0	21.0	29.0	27.0	27.0	25.5
2	17.5	16.0	17.5	15.0	22.0	21.0	24.0	21.5	29.0	27.0	29.5	25.0
3	17.5	15.0	17.5	16.0	24.0	22.0	25.0	21.5	28.0	26.0	29.5	25.5
4	15.0	11.0	17.5	15.5	22.5	21.0	25.0	24.0	27.5	26.0	25.5	23.5
5	12.5	11.5	17.5	16.0	21.5	20.0	24.0	22.0	28.0	25.5	24.5	22.5
6	13.0	11.5	18.0	16.5	22.0	20.5	23.0	21.0	29.5	26.0	22.5	21.5
7	13.0	11.0	19.5	12.0	22.5	21.0	21.5	20.0	29.0	27.0	23.5	22.5
8	14.0	12.0	19.5	18.0	22.5	22.0	23.0	20.0	29.5	27.5	23.5	21.5
9	15.0	13.5	19.5	18.5	23.0	21.5	23.5	21.0	29.5	28.0	21.5	19.0
10	15.0	13.5	20.0	18.0	24.5	22.5	23.5	21.5	29.5	28.0	19.0	17.5
11	14.5	12.5	20.5	19.0	25.0	23.0	23.5	22.0	29.0	26.5	20.0	17.0
12	15.0	13.5	20.5	18.5	24.0	22.0	24.5	23.0	26.5	23.0	21.5	19.0
13	15.0	14.0	20.0	19.0	23.0	21.0	26.0	23.5	24.5	21.0	22.0	20.0
14	14.0	13.5	19.5	18.5	22.5	20.0	26.0	24.0	25.0	21.5	22.5	20.5
15	14.5	13.5	19.5	17.5	22.0	19.5	28.0	24.5	25.5	23.0	22.5	20.5
16	14.5	13.5	19.5	18.0	22.0	19.0	28.0	26.5	25.5	22.5	22.0	19.5
17	14.5	13.5	19.5	17.5	19.0	17.0	27.5	25.5	24.5	22.0	22.5	18.5
18	14.5	12.5	19.0	17.0	19.5	16.5	27.5	26.5	23.0	21.5	21.5	19.5
19	14.5	12.5	18.5	17.0	21.5	19.5	26.5	25.5	26.0	22.5	21.5	20.5
20	15.0	13.0	18.0	16.5	22.0	21.0	25.5	24.5	28.5	24.5	21.5	20.0
21	15.0	13.0	19.5	17.5	22.0	20.0	25.0	23.0	28.5	26.5	21.0	20.0
22	16.5	15.0	19.5	18.0	22.0	19.0	23.0	22.0	---	---	21.0	20.0
23	18.0	16.5	20.0	18.5	23.0	20.5	25.0	22.0	---	---	20.5	20.0
24	18.5	17.0	20.0	19.0	23.0	20.5	26.0	24.0	23.5	23.0	20.0	17.5
25	18.0	16.5	19.5	18.0	22.5	20.0	26.0	25.0	25.0	23.5	17.5	17.0
26	17.0	16.0	18.0	16.0	22.0	19.5	26.0	24.0	26.5	24.0	18.5	17.0
27	16.5	16.0	16.5	15.5	22.0	19.5	25.0	22.5	29.0	25.5	18.0	17.5
28	16.0	15.0	18.5	15.5	22.5	19.5	24.5	22.5	29.0	27.0	18.0	17.0
29	15.0	14.0	20.5	18.5	22.5	21.0	25.5	23.5	28.0	26.5	19.0	17.0
30	16.0	13.5	21.0	19.5	23.0	20.5	28.0	24.0	27.5	25.0	19.5	18.5
31	---	---	21.5	20.5	---	---	28.0	26.0	27.5	26.0	---	---
MONTH	18.5	11.0	21.5	12.0	25.0	16.5	28.0	20.0	29.5	21.0	29.5	17.0

YEAR	29.5	.0
------	------	----

ROANOKE RIVER BASIN

02074218 DAN RIVER NEAR MAYFIELD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 25...	1330	752	5	10	100
NOV 07...	1645	1960	86	455	70
FEH 05...	1030	1600	17	73	63
26...	1100	30500	539	44400	51
MAY 23...	0930	2340	51	322	62
JUL 05...	1330	1900	125	641	89
SEP 05...	0910	19600	963	51000	81

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER QUALITY DATA, PERIOD JULY TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
JUL 13...	1530	1660	80	6.1	24.0	7.3	17	.7	900
AUG 23...	1430	1490	--	6.6	26.0	6.8	<10	1.2	10
SEP 27...	1540	1320	--	7.1	21.0	7.7	11	1.1	260

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT 16...	1600	764	--	7.6	15.0	9.6	<10	1.1	390
NOV 29...	1530	1220	--	7.2	7.0	10.4	<10	1.2	560
DEC 18...	1250	1200	--	6.9	5.0	12.4	<10	1.2	160
JAN 16...	1615	2430	60	7.0	4.0	12.8	11	1.5	280
FEB 22...	1230	2720	--	7.0	5.0	10.8	11	1.3	310
MAR 20...	1320	2540	--	6.5	11.0	11.0	<10	1.3	460
APR 09...	1415	2130	--	6.9	15.0	9.6	<10	1.0	130
MAY 10...	1045	2720	--	--	10.0	8.6	<10	.9	460
JUN 06...	1015	2360	--	7.1	17.0	8.6	20	3.5	570
JUL 24...	1135	1660	--	6.8	25.0	7.6	10	1.7	60
AUG 22...	1058	1450	--	7.3	24.0	7.8	<10	1.0	60
SEP 18...	1125	1490	--	7.1	17.0	9.3	<10	1.1	2500

ROANOKE RIVER BASIN

37

02077200 HYCO CREEK NEAR LEASBURG, N. C.

LOCATION.--Lat 36°24'07", long 79°12'13", Caswell County, Hydrologic Unit 03010104, on right bank 10 ft (3 m) upstream from bridge on U.S. Highway 158, 1.5 mi (2.4 km) upstream from Kilgore Creek, and 2.5 mi (4.0 km) west of Leasburg.

DRAINAGE AREA.--44.0 mi² (114.0 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 400.08 ft (121.944 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--15 years, 46.5 ft³/s (1.317 m³/s), 14.35 in/yr (364 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,720 ft³/s (190 m³/s) July 14, 1975, gage height, 39.84 ft (12.143 m), from rating curve extended above 1,200 ft³/s (340 m³/s); no flow at times, most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1630	2490 70.5	35.92 10.948	Mar. 24	1330	2630 74.5	36.11 11.006
Feb. 25	0330	*4240 120	*37.87 11.543	Sept. 22	1730	3280 92.9	36.92 11.253

Minimum discharge, 1.7 ft³/s (0.048 m³/s) Sept. 1, gage height, 25.00 ft (7.620 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	3.2	35	41	42	100	40	22	101	10	3.5	2.1
2	9.5	3.2	22	154	36	82	38	20	74	11	5.0	2.1
3	6.9	3.9	18	258	34	67	36	19	32	8.3	66	22
4	4.1	3.2	29	86	33	59	76	22	310	6.9	18	10
5	3.2	2.8	324	60	31	54	110	21	183	7.2	10	181
6	3.4	2.8	302	52	28	51	66	18	67	6.1	6.8	361
7	3.8	2.8	79	67	27	45	50	17	42	4.9	5.0	63
8	3.2	20	51	177	40	43	42	16	32	4.6	3.7	27
9	2.9	16	93	154	36	57	42	15	26	4.5	2.9	17
10	2.4	11	230	77	38	48	42	18	22	4.5	2.5	13
11	2.9	8.4	83	58	33	84	33	20	21	4.8	5.0	10
12	2.4	7.9	51	49	31	92	31	188	18	4.6	54	8.5
13	2.8	7.0	38	74	29	62	187	170	15	6.4	56	7.4
14	3.3	6.4	31	210	31	54	353	278	14	7.8	14	9.3
15	3.3	6.9	26	222	36	48	122	355	12	5.3	8.2	9.4
16	3.2	7.4	24	95	138	38	77	96	13	7.9	5.2	7.2
17	3.2	19	25	70	120	35	58	58	61	5.7	4.0	5.9
18	3.0	23	21	58	57	32	47	40	32	5.8	3.7	5.0
19	3.0	16	19	47	48	31	40	44	23	9.0	3.7	4.6
20	3.0	11	19	76	85	29	34	44	17	5.2	4.5	4.4
21	3.5	9.7	19	1400	82	28	30	30	15	42	3.7	4.2
22	3.9	8.8	19	601	239	26	28	27	39	16	3.4	1950
23	3.2	8.5	17	162	470	26	28	31	35	11	3.2	663
24	2.7	13	38	326	1270	1280	26	24	19	8.8	3.1	110
25	2.5	14	177	380	2140	359	24	23	16	6.5	2.8	80
26	2.6	11	85	127	1250	137	43	20	14	7.0	2.7	56
27	2.8	12	54	86	273	87	53	16	12	7.5	2.7	43
28	3.1	19	40	76	142	70	32	15	11	6.5	2.2	32
29	3.4	19	32	63	---	58	27	14	10	5.0	2.3	36
30	3.5	52	29	52	---	52	24	13	9.5	4.0	3.4	144
31	3.4	---	32	46	---	45	---	16	---	3.7	2.8	---
TOTAL	108.6	348.9	2062	5404	6819	3279	1839	1710	1295.5	248.5	314.0	3888.1
MEAN	3.50	11.6	66.5	174	244	106	61.3	55.2	43.2	8.02	10.1	130
MAX	9.5	52	324	1400	2140	1280	353	355	310	42	66	1950
MIN	2.4	2.8	17	41	27	26	24	13	9.5	3.7	2.2	2.1
CFSM	.08	.26	1.51	3.96	5.55	2.41	1.39	1.26	.98	.18	.23	2.96
IN.	.09	.29	1.74	4.57	5.77	2.77	1.55	1.45	1.10	.21	.27	3.29
CAL YR 1978	TOTAL	28810.4	MEAN	78.9	MAX	2580	MIN	2.4	CFSM	1.79	IN	24.36
WTR YR 1979	TOTAL	27316.6	MEAN	74.8	MAX	2140	MIN	2.1	CFSM	1.70	IN	23.09

ROANOKE RIVER BASIN

02077200 HYCO CREEK NEAR LEASBURG, N. C.--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1964 to current year.

INSTRUMENTATION.--Temperature recorder since May 1964.

REMARKS.--Miscellaneous chemical data published for water years, 1959, 1965-67; 1959 data published as 02077202 North Hyco Creek near Leasburg. Prior to October 1967 daily water temperature data published as North Hyco Creek near Leasburg.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.0°C July 8-11, Aug. 7-13, 1977; minimum, 0.0°C on several days during winter months in most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 28.5°C Aug. 10; minimum, 0.0°C Dec. 29, Feb. 7.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.5	18.0	12.0	10.0	7.0	6.5	6.5	3.0	3.0	1.5	7.0	7.0
2	18.0	16.5	11.5	10.0	6.5	5.5	9.0	6.5	1.5	.5	8.5	7.0
3	18.0	16.5	11.0	10.0	6.5	5.5	8.5	2.0	1.0	1.0	10.0	8.5
4	18.0	17.0	11.0	10.5	10.5	6.5	2.0	.5	2.0	1.0	11.0	10.0
5	18.0	17.0	11.5	10.0	11.0	10.5	1.0	.5	2.0	2.0	13.0	11.0
6	19.0	18.0	11.5	10.0	10.5	9.0	2.0	1.0	2.0	1.0	13.0	12.0
7	18.0	14.5	11.5	10.0	9.0	8.0	5.5	2.0	1.0	.0	12.0	9.5
8	15.0	13.0	11.5	11.5	11.0	8.0	7.0	5.5	.5	.5	10.5	9.5
9	14.0	11.0	11.5	10.5	13.5	11.0	7.0	3.0	.5	.5	10.0	8.5
10	13.5	11.0	10.5	10.5	13.0	8.0	3.0	1.0	.5	.5	11.0	10.0
11	13.5	11.0	12.0	10.5	8.0	5.0	1.5	1.0	.5	.5	11.0	10.0
12	14.5	12.0	12.0	11.0	5.0	3.5	1.5	1.0	.5	.5	10.0	7.0
13	15.5	13.5	12.0	11.0	4.0	3.5	1.0	1.0	.5	.5	9.5	8.0
14	16.0	15.5	12.0	11.0	4.0	3.5	3.0	1.0	.5	.5	11.0	9.5
15	15.5	13.5	12.0	12.0	3.5	3.0	3.0	1.5	3.5	.5	10.5	9.5
16	14.0	12.0	12.0	12.0	3.5	3.0	1.5	1.0	4.5	3.5	9.5	6.5
17	12.0	11.0	12.0	12.0	4.5	3.5	3.5	1.5	5.0	3.5	9.5	6.5
18	11.0	10.0	13.5	12.0	4.0	3.5	4.5	3.5	3.5	1.0	10.0	8.0
19	11.0	10.0	13.5	11.0	4.0	3.5	4.5	2.0	1.0	1.0	11.5	9.5
20	12.0	10.5	11.0	10.0	5.0	4.0	2.0	2.0	1.0	1.0	14.0	11.5
21	12.0	10.0	10.0	8.5	7.0	5.0	4.0	2.0	1.0	.5	14.0	12.0
22	13.5	10.5	9.0	8.5	6.5	5.0	4.5	4.0	4.5	.5	13.5	11.5
23	14.5	11.0	9.0	9.0	5.0	3.5	4.5	3.0	4.5	4.5	13.5	12.0
24	14.0	12.0	10.5	9.0	4.0	3.5	5.0	3.0	5.0	4.5	13.0	11.0
25	13.0	10.0	10.0	8.0	4.5	4.0	5.0	4.0	5.5	5.0	11.5	10.5
26	13.0	11.0	8.0	7.0	4.5	4.0	4.0	3.0	5.5	5.5	10.5	9.0
27	14.0	13.0	7.0	6.5	4.0	3.5	3.5	3.0	6.0	5.0	10.0	9.0
28	14.0	12.0	8.0	6.5	3.5	1.5	4.5	3.5	7.0	5.5	10.0	8.5
29	14.0	12.0	8.0	8.0	1.5	.0	4.5	3.5	---	---	14.0	10.0
30	13.5	11.0	8.0	7.0	1.0	.5	4.0	2.0	---	---	16.5	14.0
31	12.0	11.0	---	---	3.0	1.0	3.0	3.0	---	---	18.5	16.0
MONTH	19.0	10.0	13.5	6.5	13.5	.0	9.0	.5	7.0	.0	18.5	6.5

ROANOKE RIVER BASIN

39

02077200 HYCO CREEK NEAR LEASBURG, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.0	16.5	18.0	15.0	22.0	21.0	23.5	21.0	26.5	24.5	25.5	24.5
2	19.0	18.0	19.0	15.5	22.0	21.0	23.5	21.0	27.0	25.0	26.0	24.5
3	18.5	16.0	18.5	16.5	22.0	21.5	24.0	21.0	25.5	24.0	25.5	23.5
4	16.0	13.5	20.0	18.0	21.5	20.0	24.0	21.5	25.5	24.0	23.5	23.5
5	14.0	13.0	20.0	19.0	20.0	19.0	23.5	21.0	25.5	24.0	23.5	22.0
6	14.0	13.0	19.5	18.0	20.0	19.0	23.5	20.0	26.0	24.0	23.0	22.0
7	14.0	11.5	20.0	17.0	21.0	20.0	22.0	20.0	26.0	24.0	24.5	23.5
8	15.0	12.0	21.0	19.0	21.5	21.0	22.0	19.0	27.0	24.5	24.5	23.5
9	16.0	15.0	22.0	20.0	23.5	21.0	22.0	20.0	27.0	25.0	23.5	20.5
10	15.0	13.5	22.0	21.0	23.5	22.0	22.0	21.0	28.5	25.5	21.5	19.5
11	15.5	13.0	23.0	20.5	23.5	22.0	23.5	21.0	28.0	25.5	21.0	19.0
12	16.5	15.5	23.0	19.5	23.5	19.5	24.0	22.0	25.5	20.5	21.5	19.5
13	15.5	15.0	20.0	20.0	22.0	19.0	26.0	23.5	20.5	19.0	21.5	21.0
14	15.0	14.0	20.0	18.0	22.0	19.0	25.5	24.5	21.0	19.0	24.5	21.5
15	15.0	14.0	18.0	16.5	21.5	19.0	26.0	24.0	21.5	20.5	24.5	21.5
16	14.5	14.0	18.5	18.0	21.0	19.5	26.0	24.5	21.5	19.5	21.5	20.0
17	14.5	13.0	18.5	17.0	19.5	18.5	27.0	24.5	21.0	19.0	20.5	20.5
18	14.5	12.0	18.0	16.5	20.5	18.0	27.0	25.0	22.0	19.0	20.5	18.0
19	15.5	12.0	18.0	17.0	21.0	20.0	25.5	23.5	23.5	21.0	20.5	19.0
20	16.0	13.5	18.0	16.5	23.0	20.0	23.5	23.5	24.5	22.0	20.5	19.0
21	17.0	14.0	18.0	17.0	22.0	20.0	23.5	23.0	24.5	23.5	20.0	19.5
22	18.0	16.5	18.0	16.5	21.0	19.0	23.0	22.0	24.5	23.5	21.0	20.0
23	19.0	18.0	19.5	18.0	23.0	21.0	24.5	22.0	24.0	23.0	21.5	19.5
24	20.0	18.5	20.0	19.5	23.0	21.5	25.0	23.5	24.5	23.0	19.5	17.0
25	20.0	19.0	20.0	19.0	21.5	19.5	25.5	23.5	26.0	23.5	17.0	17.0
26	19.5	19.0	19.0	16.0	21.0	18.5	25.5	24.5	26.5	24.5	18.0	17.0
27	19.5	19.0	16.5	15.0	21.0	18.5	25.5	24.0	26.5	25.0	19.5	18.0
28	19.5	17.0	19.0	16.5	21.0	19.0	26.5	25.0	26.5	25.0	20.0	19.5
29	17.0	15.0	20.5	18.5	21.0	20.0	26.5	25.0	25.5	25.0	20.5	20.0
30	16.5	14.0	22.0	19.0	23.0	21.0	26.0	25.0	26.5	24.5	20.5	20.5
31	---	---	22.0	21.0	---	---	26.0	24.0	26.5	24.5	---	---
MONTH	20.0	11.5	23.0	15.0	23.5	18.0	27.0	19.0	28.5	19.0	26.0	17.0
YEAR	28.5	10										

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 30...	1445	2.7	3	.02

ROANOKE RIVER BASIN

02077240 DOUBLE CREEK NEAR ROSEVILLE, N. C.

LOCATION.--Lat 36°21'44", long 79°05'48", Person County, Hydrologic Unit 03010104, on left bank 21 ft (6 m) downstream from culvert on Secondary Road 1166, 1.0 mi (1.6 km) upstream from Mill Creek, and 3.0 mi (4.8 km) northwest of Roseville.

DRAINAGE AREA.--7.47 mi² (19.35 km²).

PERIOD OF RECORD.--May 1964 to September 1975. April 1977 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 450.39 ft (137.279 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Recording rain gage at station. Suspended-sediment records for the current year are published on page 41 of this report.

AVERAGE DISCHARGE.--13 years (water years 1965-75, 1978-79), 8.02 ft³/s (0.227 m³/s), 14.58 in/yr (370 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,390 ft³/s (96.0 m³/s), July 13, 1975, gage height, 7.41 ft (2.259 m), from rating curve extended above 620 ft³/s (17.6 m³/s) on basis of computation of peak flow through culvert at gage height 5.79 ft (1.765 m); minimum, 0.03 ft³/s (0.0008 m³/s) Oct. 3, 4, 5, 7, 1968, Oct. 6, 7, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft³/s (4.81 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0245	668 18.9	5.69 1.734	Aug. 2	2245	568 16.1	5.43 1.655
Feb. 24	1915	*954 27.0	*6.37 1.942	Sept. 22	1045	629 17.8	5.60 1.707
Mar. 24	0300	824 23.3	6.06 1.847				

Minimum discharge, 0.61 ft³/s (0.017 m³/s) Oct. 15, 16, 20; minimum gage height, 1.79 ft (0.546 m) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.1	2.5	4.7	6.7	14	7.1	3.5	12	2.7	1.4	1.3
2	1.8	1.1	1.9	2.6	6.2	12	6.8	3.3	6.8	2.4	1.24	1.9
3	1.1	1.1	1.8	1.2	6.0	10	6.9	3.3	13	2.2	69	2.0
4	1.1	1.1	6.8	7.6	6.0	9.5	15	3.9	39	2.2	10	2.0
5	1.1	1.1	5.1	6.9	5.7	9.3	12	3.4	11	2.3	6.6	53
6	1.2	1.0	9.8	5.8	5.4	8.7	8.8	3.2	7.1	2.0	5.0	16
7	.89	1.1	6.2	9.9	6.6	8.1	7.5	3.0	6.1	1.9	3.7	6.9
8	.88	2.4	5.0	19	5.8	9.0	7.1	3.0	5.2	1.7	3.1	4.8
9	.88	1.6	18	10	5.9	9.7	7.0	2.9	4.7	1.6	2.8	3.5
10	.85	1.2	12	7.5	5.0	8.4	6.2	3.0	4.4	1.8	2.6	2.9
11	.87	1.2	6.5	6.2	4.8	14	5.7	11	4.3	1.7	2.5	2.7
12	.88	1.1	5.2	5.7	4.6	11	5.7	12	3.7	2.3	7.5	2.5
13	.80	1.1	4.4	13	4.2	9.1	26	7.6	3.4	2.5	4.0	2.5
14	.79	1.1	3.3	29	5.0	8.6	16	23	3.1	1.7	3.0	2.9
15	.68	1.2	3.5	14	10	7.7	10	9.6	3.0	1.6	2.7	2.3
16	.70	1.9	3.4	8.8	17	7.0	7.8	6.2	5.5	3.3	2.4	2.2
17	.71	3.8	3.5	7.5	13	6.9	6.7	4.9	11	1.8	2.3	2.0
18	.74	2.3	3.2	6.6	7.9	6.7	6.1	4.2	5.2	19	2.2	2.0
19	.79	1.6	3.2	5.7	6.1	6.7	5.6	5.6	5.8	10	2.2	1.9
20	.71	1.3	3.2	18	6.0	6.4	5.3	4.5	4.3	4.5	2.0	1.8
21	.74	1.2	3.6	226	16	6.2	4.7	3.9	4.0	5.1	2.0	2.1
22	.79	1.2	3.1	31	56	6.0	4.5	3.7	4.8	3.6	1.9	169
23	.81	1.4	2.9	16	87	6.5	4.5	3.8	3.6	3.0	2.0	17
24	.84	2.0	6.9	72	294	198	4.3	3.4	3.2	2.5	1.9	15
25	.90	1.4	13	22	175	25	4.1	3.8	3.1	2.2	1.7	9.8
26	.96	1.3	6.9	14	73	15	6.2	3.1	2.8	2.0	1.6	7.8
27	1.1	2.4	5.3	11	24	12	5.0	2.9	2.7	2.1	1.6	7.9
28	1.0	2.4	4.4	11	17	9.5	4.1	3.1	2.7	1.8	1.7	7.8
29	1.1	2.5	3.6	8.7	---	8.5	3.9	3.0	2.6	1.6	1.7	8.7
30	1.0	4.6	3.8	7.8	---	7.9	3.7	2.7	2.6	1.6	1.5	11
31	.95	---	4.6	7.3	---	7.4	---	11	---	1.5	1.3	---
TOTAL	29.96	49.8	215.2	650.7	879.9	484.8	224.3	165.5	190.7	96.2	277.9	373.2
MEAN	.97	1.66	6.94	21.0	31.4	15.6	7.48	5.34	6.36	3.10	8.96	12.4
MAX	2.3	4.6	5.1	226	294	198	26	23	39	19	124	169
MIN	.68	1.0	1.8	4.7	4.2	6.0	3.7	2.7	2.6	1.5	1.3	1.3
CFS-1	.13	.22	.93	2.31	4.20	2.09	1.00	.72	.85	.42	1.20	1.66
IN	.15	.25	1.07	3.24	4.34	2.41	1.12	.82	.95	.48	1.38	1.86
CAL YR 1978	TOTAL	4063.43	MEAN	11.1	MAX	374	MIN	.68	CFSM	1.49	IN	20.23
WTR YR 1979	TOTAL	3638.16	MEAN	9.97	MAX	294	MIN	.68	CFSM	1.34	IN	18.12

ROANOKE RIVER BASIN

41

02077240 DOUBLE CREEK NEAR ROSEVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
02...	0845	1.7	17	.08
30...	1345	.96	2	.01
NOV				
07...	0757	.98	1	.00
DEC				
15...	0835	3.2	4	.03
MAR				
05...	1059	9.2	12	.30
APR				
29...	0900	4.6	5	.06

LOCATION.--Lat 36°23'12", long 79°06'22", Person County, Hydrologic Unit 03010104, on right bank at downstream side of bridge on U.S. Highway 158, 1.2 mi (1.9 km) downstream from Double Creek, and 4.2 mi (6.8 km) northwest of Roseville.

WATER-DISCHARGE RECORDS

REMARKS.--Water-discharge record good. Since December 1976 some regulation by Lake Roxboro 3.9 mi (6.3 km) upstream (see p. 406).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,030 ft³/s (227 m³/s) July 13, 1975, gage height, 30.04 ft (9.156 m), from rating curve extended above 2,000 ft³/s (566 m³/s); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--No flow observed many days in July and September 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,660 ft³/s (132 m³/s) Feb. 24, gage height, 25.69 ft (7.830 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

[illegible]

ROANOKE RIVER BASIN

43

02077250 SOUTH HYCO CREEK NEAR ROSEVILLE, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1967 to current year.

INSTRUMENTATION.--Temperature recorder since January 1967.

REMARKS.--Miscellaneous chemical data published for water years 1966-67.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 30.5°C Aug. 22, 1968; minimum, 0.0°C on several days during winter months in most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.0°C Aug. 10, 11; minimum, 0.0°C Dec. 29, Feb. 7, 8, 10, 11.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.0	18.0	13.0	11.0	8.5	8.0	7.0	3.5	2.0	1.0	8.0	6.0
2	18.0	16.0	13.0	11.0	8.0	6.5	8.5	7.0	1.5	.5	10.0	6.5
3	17.0	16.5	13.0	11.0	8.0	6.5	8.0	1.0	2.0	1.0	10.0	8.0
4	18.0	17.0	12.0	12.0	11.5	4.0	1.0	.5	3.5	1.5	10.5	9.0
5	18.0	17.0	12.0	11.0	11.5	10.5	1.0	.5	3.5	1.5	12.0	10.5
6	18.5	18.0	12.0	11.0	10.5	4.5	3.0	1.0	1.5	1.0	12.0	10.5
7	18.0	15.0	13.0	10.5	8.5	7.0	5.5	3.0	1.0	.0	10.5	8.0
8	15.0	13.5	13.0	13.0	13.0	8.5	7.0	5.5	.5	.0	10.0	8.5
9	14.0	12.0	13.0	11.0	14.0	12.0	6.0	2.0	.5	.5	10.0	8.0
10	13.0	12.0	12.0	11.0	12.0	6.5	2.0	.5	.5	.0	11.0	9.5
11	13.5	12.0	14.0	12.0	6.5	4.5	1.5	1.0	.5	.0	11.0	9.0
12	14.0	13.0	14.0	13.0	4.5	3.5	1.5	1.0	1.0	.5	10.0	5.5
13	14.5	14.0	13.5	12.0	4.5	3.5	1.0	1.0	2.0	1.0	10.5	6.5
14	16.5	14.5	13.5	11.5	4.5	4.0	3.0	1.0	1.5	1.0	10.5	10.0
15	16.5	14.5	13.5	13.0	4.5	1.5	3.0	1.0	4.5	1.5	10.5	8.0
16	14.5	13.0	13.5	13.5	4.0	2.0	1.5	.5	5.0	3.0	9.0	5.5
17	13.5	12.0	13.5	12.0	5.0	4.0	4.0	1.5	5.0	2.0	10.0	6.5
18	12.0	10.5	14.5	13.5	5.0	3.5	4.5	3.5	2.0	1.0	10.5	8.5
19	11.5	10.5	14.0	11.5	4.5	3.5	4.0	1.5	1.0	.5	12.0	9.0
20	12.0	11.5	11.5	10.0	5.5	4.5	1.5	1.5	2.0	1.5	14.0	11.5
21	12.0	11.0	10.5	9.5	8.0	5.5	4.5	1.5	2.0	2.0	13.5	10.0
22	12.0	11.5	10.0	9.5	7.0	4.5	4.5	3.5	5.5	2.0	12.0	10.0
23	13.5	12.0	10.0	10.0	5.0	2.0	4.0	2.0	5.5	5.0	13.0	11.0
24	14.0	13.5	11.5	10.0	3.5	3.0	5.5	3.5	5.5	5.0	13.0	11.0
25	14.0	11.0	11.0	9.5	4.5	3.5	5.0	2.0	5.5	5.0	11.5	10.0
26	13.5	12.0	9.5	8.0	4.5	3.0	3.5	2.0	5.0	5.0	11.5	8.0
27	15.0	13.5	8.0	8.0	3.5	3.0	4.0	2.0	6.5	4.0	11.0	8.0
28	15.0	14.0	9.0	8.0	3.0	1.0	4.0	3.5	8.0	4.5	12.0	8.0
29	14.5	14.0	9.0	9.0	1.0	.0	4.0	2.0	---	---	15.0	11.0
30	14.5	12.0	9.0	8.5	1.5	.5	3.5	1.5	---	---	16.5	12.0
31	13.5	12.0	---	---	3.5	1.5	3.0	2.0	---	---	17.0	14.0
MONTH	18.5	10.5	14.5	8.0	14.0	.0	8.5	.5	8.0	.0	17.0	5.5

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

ROANOKE RIVER BASIN

45

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR MCGEHEES MILL, N. C.

LOCATION.--Lat 36°31'54", long 78°59'48", Person County, Hydrologic Unit 03010104, on right bank 600 ft (183 m) downstream from afterbay dam of Carolina Power and Light Company, 1.2 mi (1.9 km) upstream from Ghent Creek, and 1.8 mi (2.9 km) east-northeast of McGehees Mill.

DRAINAGE AREA.--196 mi² (508 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 342.98 ft (104.540 m) National Geodetic Vertical Datum of 1929 (levels by Carolina Power and Light Company). August, 1964 to September, 1973, at site, 2.8 mi (4.5 km) upstream at datum 349.78 ft (106.613 m) National Geodetic Vertical Datum of 1929. Published as Hyco River at McGehees Mill, N. C.

REMARKS.--Water-discharge record good above 10 ft³/s (0.28 m³/s), and poor below. Flow regulated by Roxboro Steam-Electric Generating Plant afterbay Reservoir (see p. 406).

AVERAGE DISCHARGE.--6 years, 224 ft³/s (6.344 m³/s), 15.52 in/yr (394 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft³/s (320 m³/s) July 14, 1975, gage height, 24.40 ft (7.437 m); minimum, 0.25 ft³/s (0.007 m³/s) Sept. 21, 22, 1977, gage height, 2.13 ft (0.649 m); minimum daily, 0.31 ft³/s (0.009 m³/s) Sept. 21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,700 ft³/s (275 m³/s) Feb. 25, gage height, 23.06 ft (7.029 m); minimum, 10 ft³/s (0.28 m³/s) Sept. 11-13, gage height, 2.51 ft (0.765 m); minimum daily, 10 ft³/s (0.28 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	56	17	185	26	1040	176	37	37	35	35	36
2	64	55	17	238	25	504	173	37	37	35	35	36
3	63	39	17	214	25	336	173	37	43	35	35	36
4	63	19	18	306	25	326	181	37	178	35	36	43
5	63	19	140	408	23	318	183	37	403	35	36	419
6	63	19	30	404	23	314	179	37	619	35	36	1060
7	63	19	24	401	23	307	177	37	605	35	37	1120
8	63	19	25	420	23	303	177	37	473	35	38	909
9	63	19	48	406	23	143	177	37	41	35	33	707
10	62	19	60	395	23	39	177	46	40	35	33	341
11	61	18	29	390	24	39	174	37	40	35	34	44
12	61	18	30	384	23	205	171	37	40	35	35	10
13	61	18	32	395	23	299	697	39	40	35	35	17
14	61	18	33	447	23	295	1340	618	40	35	35	27
15	61	17	33	429	23	292	1160	1350	40	35	35	27
16	61	17	33	404	26	205	831	942	41	35	35	27
17	61	18	33	394	27	151	644	434	308	35	35	27
18	61	18	34	388	25	149	336	242	493	35	35	27
19	60	18	34	384	25	148	157	155	341	35	36	27
20	60	18	34	395	26	146	107	152	210	35	35	27
21	60	17	34	1270	445	146	34	77	34	36	34	27
22	60	17	35	2770	830	144	34	35	34	36	35	4170
23	60	17	35	2340	1270	73	34	36	34	36	35	5980
24	60	17	36	2110	3560	1540	34	36	34	36	35	2540
25	60	17	50	2050	8000	2490	35	37	34	36	35	973
26	60	17	36	1660	6720	1790	36	37	34	36	35	490
27	59	17	256	1310	3020	1080	36	37	34	36	35	360
28	58	16	374	1210	1610	716	37	37	34	36	36	142
29	57	17	298	514	---	554	37	37	34	36	35	41
30	57	16	190	29	---	302	37	37	35	36	35	41
31	57	---	188	27	---	178	---	38	---	35	35	---
TOTAL	1888	629	2253	22677	25939	14572	7744	4829	4410	1095	1089	19731
MEAN	60.9	21.0	72.7	732	926	470	258	156	147	35.3	35.1	658
MAX	65	56	374	2770	8000	2490	1340	1350	619	36	38	5980
MIN	57	16	17	27	23	39	34	35	34	35	33	10

CAL YR 1978 TOTAL 118867 MEAN 326 MAX 8460 MIN 16
WTR YR 1979 TOTAL 106856 MEAN 293 MAX 8000 MIN 10

ROANOKE RIVER BASIN

02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR McGEHEES MILL, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1974 to current year.

INSTRUMENTATION.--Temperature recorder since June 1974.

REMARKS.--Interruptions of daily record during April, June, and July were due to malfunctions of thermograph.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 33.5°C July 20, 21, 22, 1977; minimum, 2.0°C Jan. 11, 12, 13, Feb. 1, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 28.0°C Sept. 6-9; minimum, 3.5°C Feb. 19-22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.0	22.0	15.5	15.5	10.5	9.5	8.0	8.0	6.5	5.5	8.5	8.5
2	22.0	22.0	15.5	15.0	10.0	9.5	8.5	8.0	5.5	5.5	8.5	8.5
3	22.0	21.5	15.5	15.0	10.0	9.5	8.5	8.0	6.0	5.5	8.5	8.0
4	21.5	21.5	15.0	14.5	10.5	10.0	8.0	7.0	6.0	5.5	8.5	8.0
5	21.5	21.5	15.0	14.5	11.0	10.5	7.0	7.0	6.0	5.0	9.0	8.5
6	21.5	21.5	15.0	14.0	11.5	10.5	7.0	7.0	5.0	5.0	10.5	9.0
7	21.5	21.0	15.5	14.5	11.5	11.0	7.0	7.0	5.0	4.5	10.5	10.0
8	21.0	20.0	15.5	15.0	13.0	11.0	8.0	7.0	4.5	4.0	10.0	10.0
9	20.0	19.5	15.0	14.5	13.5	13.0	8.0	8.0	4.5	4.5	10.5	9.5
10	19.5	19.0	14.5	14.5	13.5	13.0	8.0	8.0	4.5	4.0	10.5	9.5
11	19.5	19.0	15.0	14.5	13.0	12.0	8.0	7.0	4.5	4.0	11.5	10.0
12	19.5	19.0	15.0	14.5	12.0	11.5	7.0	6.5	4.5	4.0	11.5	11.0
13	19.5	19.0	15.0	14.5	11.5	11.5	6.5	6.5	4.5	4.0	11.5	11.0
14	20.0	19.5	14.5	14.0	11.5	10.5	6.5	6.5	4.5	4.0	11.5	11.0
15	20.0	19.0	14.5	14.5	10.5	10.5	6.5	6.0	5.0	4.5	11.5	11.0
16	19.0	18.5	14.5	14.5	10.5	10.0	6.0	6.0	5.0	4.5	11.5	11.0
17	18.5	17.0	14.5	14.5	10.0	9.5	6.0	6.0	5.0	4.5	11.0	11.0
18	17.0	16.5	15.0	14.5	9.5	9.5	6.5	6.0	4.5	4.0	12.0	11.0
19	17.0	17.0	15.0	14.5	9.5	9.5	6.5	6.5	4.0	3.5	11.5	11.0
20	17.0	16.5	14.5	14.0	9.5	9.5	6.5	6.0	4.0	3.5	11.0	11.0
21	17.0	16.5	14.0	13.5	10.0	9.5	6.0	6.0	3.5	3.5	11.5	11.0
22	17.0	16.5	13.5	13.0	9.5	9.0	8.0	6.0	4.0	3.5	11.5	11.0
23	18.0	16.5	13.0	13.0	9.5	9.0	8.5	8.0	4.5	4.0	11.5	11.0
24	18.0	16.5	13.0	13.0	9.0	9.0	8.5	8.5	6.5	4.5	14.0	11.0
25	16.5	16.0	13.0	11.5	9.0	9.0	8.5	8.5	8.0	6.5	14.5	14.0
26	16.5	16.5	11.5	11.5	9.0	8.5	8.5	8.5	8.5	8.0	15.0	14.5
27	16.5	16.5	11.5	11.0	8.5	8.5	8.5	8.5	8.5	8.5	15.0	14.5
28	16.5	16.0	11.0	11.0	8.5	8.5	8.5	8.0	8.5	8.5	14.5	14.5
29	16.0	16.0	11.0	10.5	8.5	8.0	8.0	7.0	---	---	15.0	14.5
30	16.0	15.5	10.5	10.5	8.0	8.0	7.0	6.5	---	---	16.0	15.0
31	15.5	15.5	---	---	8.0	8.0	7.0	6.5	---	---	16.5	16.0
MONTH	23.0	15.5	15.5	10.5	13.5	8.0	8.5	6.0	8.5	3.5	16.5	8.0

47

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

ROANOKE RIVER BASIN

02077670 MAYO CREEK NEAR BETHEL HILL, N. C.

LOCATION.--Lat 36°32'26", long 78°52'21", Person County, Hydrologic Unit 03010104, on right bank 0.1 mi (0.2 km) upstream from Virginia State line, 0.3 mi (0.5 km) downstream from Mayo Steam Electric Generating Plant Dam (under construction), 2.9 mi (4.7 km) northeast of Bethel Hill, and 4.8 mi (7.7 km) downstream from Spoonwater Creek.

DRAINAGE AREA.--52.6 mi² (136.2 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 338.84 ft (103.278 m) National Geodetic Vertical Datum of 1929 (levels by Carolina Power & Light Company).

REMARKS.--Records excellent. Some regulation since November 1978 due to construction of Mayo Steam Electric Generating Plant Dam. Suspended-sediment records for the current year are published on page 49 of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft³/s (112 m³/s) Apr. 26, 1978; no flow Aug. 1-13, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 4, 1974 reached a stage of 11.11 ft (3.39 m) from floodmarks, discharge, 4,300 ft³/s (122 m³/s); no flow July 31, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 798 ft³/s (22.6 m³/s) Feb. 25, gage height, 6.62 ft (2.018 m), no peak above base of 850 ft³/s (24.1 m³/s); minimum, 0.88 ft³/s (0.025 m³/s) due to regulation, Aug. 17, 18, gage height, 1.63 ft (0.497 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	4.7	29	31	47	625	48	27	60	12	5.4	17
2	14	5.1	17	172	41	543	45	27	33	14	62	28
3	10	3.2	14	191	38	468	42	25	49	11	63	27
4	7.1	3.7	28	70	38	301	139	27	193	9.6	24	31
5	5.9	3.5	401	50	35	83	175	28	73	10	13	150
6	6.3	3.0	213	45	32	67	86	26	43	10	9.3	275
7	6.4	3.3	64	64	34	59	64	23	32	8.6	8.3	56
8	5.4	6.2	42	168	45	55	56	21	27	8.2	6.5	31
9	4.0	11	88	110	39	92	56	21	23	7.2	6.0	21
10	3.2	8.4	157	65	33	73	57	22	21	7.5	5.2	16
11	4.3	6.3	60	48	33	101	45	24	19	7.7	4.6	13
12	4.3	5.5	41	43	31	102	41	55	18	7.2	38	9.8
13	3.8	4.9	31	63	32	72	222	71	16	7.0	41	9.1
14	4.3	5.1	27	189	29	61	349	153	15	6.3	15	9.7
15	3.5	5.3	23	156	41	57	121	115	14	6.9	10	9.9
16	2.8	8.0	22	79	139	48	78	54	35	5.4	7.0	8.0
17	3.8	20	22	62	122	44	59	31	140	5.3	4.3	6.1
18	4.7	27	22	52	64	45	51	26	51	6.7	1.3	5.5
19	3.5	16	20	42	64	40	46	28	31	30	5.5	5.6
20	3.5	9.6	20	71	79	39	42	32	24	42	6.2	5.2
21	3.8	9.7	21	587	79	37	41	27	20	38	4.7	5.2
22	3.7	8.6	21	633	305	35	37	24	19	35	3.0	410
23	3.3	8.2	19	576	408	36	36	26	19	18	2.6	536
24	3.6	8.7	39	534	545	553	33	30	17	16	2.8	497
25	3.3	10	165	549	734	595	32	29	15	13	3.6	450
26	3.7	8.8	70	476	773	527	42	27	14	10	3.0	393
27	3.1	13	46	173	755	298	49	22	12	8.8	2.8	167
28	4.2	17	34	94	707	82	36	19	12	8.8	11	48
29	5.0	22	28	76	---	65	31	22	11	7.5	19	33
30	5.0	38	25	60	---	59	28	21	12	6.2	14	94
31	4.6	---	27	51	---	53	---	37	---	5.9	13	---
TOTAL	150.2	303.8	1836	5580	5322	5315	2187	1120	1068	389.8	415.1	3367.1
MEAN	4.85	10.1	59.2	180	190	171	72.9	36.1	35.6	12.6	13.4	112
MAX	14	38	401	633	773	625	349	153	193	42	63	536
MIN	2.8	3.0	14	31	29	35	28	19	11	5.3	1.3	5.2
CFSM	.09	.19	1.13	3.42	3.61	3.25	1.39	.69	.68	.24	.26	2.13
IN.	.11	.21	1.30	3.95	3.76	3.76	1.55	.79	.76	.28	.29	2.38

CAL YR 1978 TOTAL 30251.1 MEAN 82.9 MAX 2080 MIN 2.8 CFSM 1.58 IN 21.39
WTR YR 1979 TOTAL 27054.0 MEAN 74.1 MAX 773 MIN 1.3 CFSM 1.41 IN 19.13

ROANOKE RIVER BASIN

49

02077670 MAYO CREEK NEAR BETHEL HILL, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 02...	1535	17	40	1.8
NOV 07...	1455	4.1	113	1.3
DEC 15...	1440	23	68	4.2
MAR 05...	1605	80	138	30
APR 19...	1140	49	73	9.7
JUL 18...	0845	5.5	78	1.2
AUG 27...	0900	2.5	55	.37

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.

LOCATION.--Lat 36°28'04", long 77°37'18", Halifax County, Hydrologic Unit 03010107, on right bank 1.2 mi (1.9 km) downstream from bridge on State Highway 48 at Roanoke Rapids, 2.5 mi (4.0 km) upstream from Chockoyotte Creek, 2.8 mi (4.5 km) downstream from Roanoke Rapids dam, and 133.6 mi (215.0 km) upstream from mouth in Albemarle Sound.

DRAINAGE AREA.--8,410 mi² (21,780 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1911 to current year. Prior to January 1933, published as "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.

GAGE.--Water-stage recorder. Datum of gage is 43.84 ft (13.362 m) National Geodetic Vertical Datum of 1929. 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 (14 km) upstream at different datum. Aug. 6, 1941 to Mar. 1, 1973, auxiliary water-stage recorder, 3.6 mi (5.8 km) downstream from base gage. Gage height telemeter at station.

REMARKS.--Water-discharge record excellent. Flow regulated since August 1950 by Philpott Lake on Smith River, usable capacity, 6,325,000,000 ft³ (179,124,000 m³); since September 1950 by John H. Kerr Reservoir, usable capacity, 101,247,000,000 ft³ (2,867,315,000 m³); since June 1955 by Roanoke Rapids Lake (see p. 404); since September 1962 by Leesville Lake, since October 1962 by Lake Gaston (see p. 404); and since September 1963 by Smith Mountain Lake.

AVERAGE DISCHARGE.--67 years (1912-79) 8,138 ft³/s (230.5 m³/s) adjusted for storage, 13.14 in/yr (334 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 261,000 ft³/s (7,390 m³/s) Aug. 18, 1940, gage height, 39.0 ft (11.89 m) from floodmarks; minimum, about 250 ft³/s (7.08 m³/s) Dec. 16, 1955; minimum daily, 472 ft³/s (13.4 m³/s) Sept. 21, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877, discharge, 212,000 ft³/s (6,000 m³/s), reached a stage of about 2 ft (0.61 m) lower at Old Gaston than flood in August 1940 which was 21.5 ft (6.55 m). Flood in August 1940 is the maximum known since at least 1771.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,400 ft³/s (748 m³/s) Mar. 2, gage height, 9.89 ft (3.014 m); minimum, 1,060 ft³/s (30.0 m³/s) Nov. 4, Dec. 1, 8, gage height, 2.01 ft (0.613 m). Minimum daily, 1,120 ft³/s (31.7 m³/s) Nov. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2080	4860	7230	1230	18500	25600	18700	15900	14200	2570	12300	2520
2	3270	5470	4600	7990	18700	25200	18700	15400	6590	5970	11400	2530
3	6920	4060	1580	10400	18700	25700	18700	17400	6190	8660	4870	2360
4	1800	1460	6220	9880	3230	25600	18900	18600	12800	5710	2450	5500
5	1770	1190	8290	11400	14300	25700	18800	7380	12200	7620	6790	9090
6	1770	4550	8240	9120	18700	25600	18700	6280	14600	6990	10100	14000
7	1810	3210	8020	1340	18700	25600	18700	6390	13900	2270	7290	14000
8	1760	4330	8050	14000	18700	25700	18700	13700	13600	2270	6170	13900
9	1890	5320	6930	18600	18300	25700	18700	15400	9480	2260	3780	11500
10	1740	5220	1190	18700	17600	25700	18700	13300	11500	2270	8990	10600
11	1730	1190	10100	18700	13800	25800	18800	11200	7710	4700	4540	13800
12	1750	1130	10800	18800	17600	25100	18700	6150	6210	10900	2440	13800
13	1770	4220	9850	18700	17600	25700	18800	6250	6270	9580	2300	13900
14	2170	4400	8860	5340	17600	25600	18800	6340	6280	3850	2260	13200
15	1740	3740	7760	13900	17400	25600	18700	6170	2360	2340	2260	2670
16	5010	4400	8550	18800	17600	25500	18700	6180	2520	2460	2290	2500
17	5890	7510	1230	18700	17600	25200	18800	6890	2400	2320	2280	6590
18	3570	1900	8050	18800	14600	25600	18800	10600	5770	4070	2350	5830
19	1860	1120	7240	18800	17700	25400	18700	6190	8070	4650	2280	4850
20	2400	7080	8510	18800	17700	25400	18700	6120	6960	2440	4090	4210
21	1760	6890	7030	11400	17700	25500	18700	12100	7670	2330	2300	5000
22	1940	7600	8040	14300	17700	24900	18700	12500	7810	2270	2300	7770
23	2810	2830	9240	18800	17600	24600	18700	12900	8470	7870	3630	18900
24	4760	7810	1840	18800	17700	24600	18600	6390	2260	8370	2830	19400
25	5810	6460	2030	18700	18600	19600	18700	8830	5980	7240	2260	19300
26	4310	1510	7350	18700	18700	18800	18700	11000	8510	3380	2260	19300
27	7960	9000	11200	18600	18500	18600	18700	6270	7990	7950	6120	19300
28	3910	7900	13200	18600	21500	18600	18700	6280	10100	9470	3730	19300
29	2740	8280	13400	18600	---	18700	7010	12300	11900	4950	5240	19200
30	5370	8110	9230	18700	---	18800	14500	13400	9770	2360	7960	19100
31	3650	---	5600	18700	---	18800	---	14300	---	8860	4720	---
TOTAL	97720	142750	229480	465900	482630	742500	545810	318110	250070	158950	144580	333920
MEAN	3152	4758	7403	15030	17240	23950	18190	10260	8336	5127	4664	11130
MAX	7960	9000	13400	18800	21500	25800	18900	13600	14600	10900	12300	19400
MIN	1730	1120	1190	1230	3230	18600	7010	6120	2260	2260	2260	2360
(t)	-381	-2001	+435	+6917	+9438	-3988	-5318	-2016	-912	-706	-1352	+11926

CAL YR 1978 TOTAL 4318230 MEAN 11830 MAX 35300 MIN 1120 MEAN± 11768 CFSM± 1.40 IN± 19.00
WTR YR 1979 TOTAL 3912420 MEAN 10720 MAX 25800 MIN 1120 MEAN± 11656 CFSM± 1.39 IN± 18.87

† Change in contents, equivalent in cubic feet per second, in Leesville and Smith Mountain Lakes, furnished by Appalachian Power Co.; Philpott and Kerr Reservoirs, furnished by Corps of Engineers, and Lake Gaston and Roanoke Rapids Lake, furnished by Virginia Electric and Power Co.

‡ Adjusted for change in contents.

ROANOKE RIVER BASIN

51

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued
(National stream-quality accounting network and pesticide station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949, 1968-73, 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1976 to current year.

WATER TEMPERATURES: October 1948 to September 1949, October 1976 to current year.

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by the Environmental Protection Agency. Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

REMARKS.--Samples collected at bridge on State Highway 48 at Roanoke Rapids, 1.2 mi (1.9 km) upstream from gaging station. Miscellaneous chemical data collected at bridge on State Highway 48 and/or at gaging station 1.2 mi (1.9 km) downstream are published for water years 1946-47, 1955-67.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 129 micromhos Jan. 3, 7, Nov. 19, 1978; minimum daily, 65 micromhos Apr. 7, 1979.

WATER TEMPERATURES: Maximum daily, 32.5°C July 30, 1949; minimum daily, 1.0°C Jan. 18-22, 30, 31, Feb. 1, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 129 micromhos Nov. 19; minimum daily, 65 micromhos Apr. 7.

WATER TEMPERATURES: Maximum daily, 28.5°C Aug. 30; minimum daily, 2.0°C Feb. 18, 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER AS CAC03)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT												
02...	1045	1940	92	5.8	21.0	--	3.0	9.1	K6	K8	29	0
NOV												
20...	1200	1320	89	7.3	14.5	--	4.0	9.4	59	37	27	11
JAN												
02...	1115	17000	100	6.9	8.0	--	6.0	10.7	K18	30	32	2
FEB												
14...	1000	17600	88	6.1	1.0	--	31	13.9	K18	23	25	3
APR												
02...	1330	18600	60	7.2	12.5	--	50	--	23	K15	21	4
24...	1200	18600	70	7.1	16.0	--	25	10.2	K14	43	23	5
MAY												
22...	1030	6440	73	7.5	19.5	--	3.0	8.5	K18	K14	24	0
JUN												
12...	0800	6180	78	6.2	22.0	--	3.0	7.5	20	K12	25	4
JUL												
09...	1300	2280	82	6.9	25.0	--	2.0	8.1	K4	K9	28	0
AUG												
07...	1030	5580	89	6.5	28.0	2	--	6.8	K4	K20	28	0
SEP												
04...	1355	2350	85	6.7	27.5	--	5.0	9.8	44	72	30	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS C03)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT												
02...	7.0	2.8	5.5	27	.4	2.3	39	0	32	99	6.3	5.4
NOV												
20...	6.4	2.6	6.3	32	.5	2.2	19	0	16	1.5	6.6	5.9
JAN												
02...	7.5	3.1	7.6	33	.6	2.0	36	0	30	7.3	7.6	7.2
FEB												
14...	6.0	2.4	5.5	30	.5	2.0	27	0	22	34	9.3	5.8
APR												
02...	5.1	2.1	3.6	25	.3	2.0	21	0	17	2.1	8.0	4.0
24...	5.5	2.2	4.5	28	.4	1.7	22	0	18	2.8	7.9	4.6
MAY												
22...	5.8	2.3	5.0	29	.4	1.7	29	0	24	1.5	6.6	4.9
JUN												
12...	6.0	2.4	5.1	29	.4	1.6	25	0	21	25	7.0	4.9
JUL												
09...	6.6	2.7	5.6	29	.5	1.6	36	0	30	7.3	6.7	4.9
AUG												
07...	6.4	2.8	5.8	30	.5	1.5	39	0	32	20	7.6	5.0
SEP												
04...	7.4	2.9	6.4	30	.5	1.6	--	0	33	13	6.1	5.7

K Results based on colony count outside the acceptable range (non-ideal colony count).

ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT 02...	.1	9.1	56	58	.08	299	.15	.08	--	.24	.32	--
NOV 20...	.1	7.3	62	47	.08	221	.24	.03	--	.19	.22	.00
JAN 02...	.1	8.7	57	62	.08	2620	.27	.02	--	.21	.23	.03
FEB 14...	.1	11	64	56	.09	3040	.29	.06	--	.00	.00	.00
APR 02...	.0	7.7	60	43	.08	3010	.29	.00	--	1.0	1.0	--
24...	.1	7.7	56	45	.08	2810	.22	.01	.01	.25	.26	.11
MAY 22...	.1	7.8	52	49	.07	904	.20	.01	.01	.28	.29	.05
JUN 12...	.1	8.0	60	47	.08	1000	.13	.00	.00	.29	.29	.05
JUL 09...	.1	7.6	60	54	.08	369	.03	.03	.04	.26	.29	.07
AUG 07...	.1	8.3	44	57	.06	663	.04	.04	.05	.18	.22	.05
SEP 04...	.1	7.9	62	58	.11	520	.01	.25	.30	.07	.32	.08
DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)
OCT 02...	--	.47	2.1	.03	--	--	--	--	--	--	--	--
NOV 20...	.22	.46	2.0	.02	--	--	.00	1	0	1	0	0
JAN 02...	.20	.50	2.2	.02	--	--	--	--	--	--	--	--
FEB 14...	.00	.29	1.3	.04	--	--	.02	1	1	0	0	0
APR 02...	--	1.3	5.7	.00	--	--	--	--	--	--	--	--
24...	.15	.48	2.1	.02	--	.06	.00	--	--	--	--	--
MAY 22...	.24	.49	2.2	.02	--	.06	.00	2	1	1	<50	<20
JUN 12...	.24	.42	1.9	.02	--	.06	--	--	--	--	--	--
JUL 09...	.22	.32	1.4	.01	--	.03	.00	--	--	--	--	--
AUG 07...	.17	.26	1.2	.02	--	.06	.00	1	0	1	<50	<10
SEP 04...	.24	.33	1.5	.01	--	.03	.04	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE D RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE D TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE D RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE D RECOV- ERABLE (UG/L AS ZN)
OCT 02...	--	--	--	--	--	--	--	--	--	--	--
NOV 20...	<.5	.0	<.5	0	0	0	2	2	0	0	0
JAN 02...	--	--	--	--	--	--	--	--	--	--	--
FEB 14...	<.5	.0	<.5	0	0	0	0	0	0	190	180
APR 02...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	<.5	.0	<.5	0	0	0	0	0	0	30	30
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 09...	--	--	--	--	--	--	--	--	--	--	--
AUG 07...	<.5	.0	<.5	0	0	0	0	0	0	10	7
SEP 04...	--	--	--	--	--	--	--	--	--	--	--

DATE	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE D TOTAL (MG/L AS C)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO- SURE (DAYS)
OCT 02...	--	7.9	--	--	11.0	8.30	--	1.33	.000	26
NOV 20...	0	--	6.4	--	--	--	--	--	--	--
JAN 02...	--	2.2	--	--	--	--	--	--	--	--
FEB 14...	10	--	8.6	.7	--	--	--	--	--	--
APR 02...	--	19	--	--	10.9	9.29	--	10.7	3.22	46
24...	--	3.6	--	--	.950	.790	286	.560	.480	21
MAY 22...	2	--	7.5	.4	--	--	--	--	--	--
JUN 12...	--	6.3	--	--	--	--	--	--	--	--
JUL 09...	--	8.0	--	--	--	--	--	--	--	--
AUG 07...	3	--	7.1	.4	--	--	--	--	--	--
SEP 04...	--	3.5	--	--	.550	.390	88.4	1.81	1.25	27

ROANOKE RIVER BASIN

55

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

WATER QUALITY DATA, PERIOD JULY TO SEPTEMBER 1978

DATE	TIME	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ATHA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUL 05...	1100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	0730	ND	--	ND	ND	--	ND	--	ND	--	ND	--
DATE	TIME	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
JUL 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--
DATE	TIME	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUL 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--
DATE	TIME	SIMA- ZINE TOTAL (UG/L)	SIMA- ZINE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUL 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--
DATE	TIME	SIMA- ZINE TOTAL (UG/L)	SIMA- ZINE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUL 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 08...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--

WATER QUALITY DATA, PERIOD OCTOBER 1978 TO MAY 1979

		ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)
NOV 20...	1200	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 14...	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 22...	1030	ND	ND	ND	ND	ND	ND	ND	ND	ND
		HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)
NOV 20...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 14...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAY 22...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND Not detected.

ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

PHYTOPLANKTON ANALYSES, JULY TO SEPTEMBER 1978

DATE TIME	JUL 5, 78 1100	JUL 14, 78 1130	AUG 8, 78 0730
TOTAL CELLS/ML	11000	15000	110000
DIVERSITY: DIVISION	1.3	1.4	0.3
..CLASS	1.3	1.4	0.3
...ORDER	2.1	2.2	0.4
...FAMILY	2.4	2.6	0.4
...GENUS	2.7	2.9	0.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	130	1	220	1	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	--	-	330	2	--	-
...MICRACTINIACEAE						
....ACANTHOSPHAERA	*	0	--	-	--	-
....GOLENKINIA	--	-	*	0	*	0
...MICRACTINIUM	*	0	83	1	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	100	1	140	1	*	0
....CHODATELLA	--	-	*	0	--	-
...DICTYOSPHAERIUM	100	1	330	2	--	-
...KIRCHNERIELLA	180	2	*	0	--	-
...OOCYSTIS	*	0	550	4	--	-
...SELENASTRUM	100	1	*	0	--	-
...TETRAEDRON	78	1	--	-	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	220	1	--	-
....CHUCIGENIA	210	2	220	1	*	0
...SCENEDESMUS	550	5	83	1	*	0
...TETRASTRUM	--	-	110	1	--	-
...VOLVOCELES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	--	-	*	0
...ZYGNEMATALES						
...DESMIDIACEAE						
....CLOSTERIUM	*	0	--	-	--	-
....COSMARIUM	--	-	110	1	730	1
...SPONDYLIOSIUM	--	-	190	1	--	-
...STAUSTRUM	--	-	--	-	*	0
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	78	1	280	2	--	-
....MELOSIRA	890	8	1200	8	1300	1
...STEPHANODISCUS	*	0	--	-	--	-
...PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	78	1	--	-	--	-
...DIATOMACEAE						
....OPEPHORA	--	-	*	0	--	-
...FRAGILARIACEAE						
....FRAGILARIA	78	1	--	-	--	-
....SYNEDRA	--	-	*	0	1300	1
...NAVICULACEAE						
....PINNULARIA	*	0	--	-	--	-
...NITZSCHACEAE						
....NITZSCHIA	780	7	440	3	--	-
...TABELLARIACEAE						
....TABELLARIA	--	-	660	4	--	-

ROANOKE RIVER BASIN

57

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

PHYTOPLANKTON ANALYSES, JULY TO SEPTEMBER 1978

DATE TIME	JUL 5,78 1100		JUL 19,78 1130		AUG 8,78 0730	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	2500#	23	6900#	47	670	1
...HORMOGONALES						
...NOSTOCACEAE						
....APHANIZOMENON	--	-	--	-	*	0
...OSCILLATORIA						
....LYNGBYA	--	-	--	-	110000#	95
....OSCILLATORIA	5000#	45	2300#	16	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....PHACUS	*	0	--	-	--	-
....TRACHELOMONAS	--	-	110	1	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIAEAE						
....GLENODINIUM	--	-	*	0	--	-
...PERIDINIACEAE						
....PERIDINIUM	*	0	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

DATE TIME	NOV 20,78 1200	APR 2,79 1330	MAY 22,79 1030	JUN 12,79 0800	JUL 9,79 1300
TOTAL CELLS/ML	7800	4300	440	930	96000
DIVERSITY: DIVISION	1.1	1.0	0.9	1.4	0.5
..CLASS	1.1	1.0	0.9	1.4	0.5
...ORDER	1.2	1.3	0.9	1.8	1.3
...FAMILY	1.4	1.4	1.1	2.0	1.4
....GENUS	1.9	1.7	1.4	2.0	1.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	--	-	*	0
...MICRACTINIAEAE										
....GOLENKINIA	--	-	--	-	--	-	--	-	*	0
...MICRACTINIUM	58	1	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTROESMUS	140	2	57	1	100#	24	13	1	*	0
...DICTYOSPHAERIUM	500	8	--	-	--	-	52	6	2300	2
...KIRCHNERIELLA	43	1	*	0	--	-	--	-	--	-
...OOCYSTIS	--	-	--	-	--	-	--	-	--	-
...SELENASTRUM	--	-	--	-	--	-	--	-	570	1
...TETRAEDRON	*	0	--	-	--	-	--	-	*	0
...TREUBARIA	*	0	--	-	--	-	--	-	*	0
...WESTELLA	--	-	--	-	--	-	--	-	*	0
...SCENEDESMACEAE										
....CRUCIGENIA	460	6	--	-	--	-	--	-	990	1
...SCENEDESMUS	300	4	66	2	26	6	52	6	*	0
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CHLAMYDOMONAS	--	-	140	3	--	-	--	-	--	-
...ZYGNEMATALES										
...DESMIDIACEAE										
...COSMARIMUM	*	0	--	-	--	-	--	-	*	0
...EUASTRUM	*	0	--	-	--	-	--	-	--	-

ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

DATE TIME	NOV 20,78 1200		APR 2,79 1330		MAY 22,79 1030		JUN 12,79 0800		JUL 9,79 1300	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSDOPHYTA										
..BACILLARIOPHYCEAE										
..CENTRALES										
..COSCINODISCACEAE										
....CYCLOTELLA	43	1	160	4	--	-	--	-	710	1
....MELOSIRA	520	7	3000#	71	280#	65	310#	33	*	0
....STEPHANODISCUS	--	-	--	-	26	6	--	-	--	-
..PENNALES										
...FRAGILARIACEAE										
....ASTERIONELLA			94	2	--	-	--	-	--	-
....FRAGILARIA	43	1	*	0	--	-	--	-	2100	2
....SYNEDRA	--	-	28	1	--	-	--	-	--	-
...GOMPHONEMACEAE										
....GOMPHONEMA	--	-	*	0	--	-	--	-	--	-
...MERIDIONACEAE										
....MERIDION	--	-	*	0	--	-	--	-	--	-
...NAVICULACEAE										
....NAVICULA	--	-	38	1	--	-	--	-	--	-
...NITZSCHIA										
....NITZSCHIA	--	-	28	1	--	-	13	1	*	0
...TABELLARIACEAE										
....TABELLARIA	--	-	--	-	--	-	100	11	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
....ANACYSTIS	5300#	68	530	12	--	-	--	-	66000#	68
....COCCOCHLORIS	230	3	--	-	--	-	--	-	--	-
...HORMOGONALES										
....OSCILLATOIRIACEAE										
....OSCILLATORIA	--	-	--	-	--	-	390#	42	21000#	22
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
....TRACHELOMONAS	*	0	28	1	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...PERIDINIALES										
....GLENODINIACEAE										
....GLENODINIUM	--	-	*	0	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ROANOKE RIVER BASIN

59

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	89	94	104	94	78	68	80	77	87	101	98
2	87	42	96	102	94	77	68	76	75	86	95	102
3	87	101	96	103	91	70	66	78	74	88	101	98
4	87	91	99	103	91	70	68	76	75	66	95	103
5	88	94	97	103	91	69	67	79	77	88	97	98
6	88	91	100	102	99	70	66	79	79	84	96	99
7	88	94	100	102	91	73	65	78	77	88	103	99
8	88	98	98	102	69	72	67	79	77	84	98	95
9	90	95	102	103	87	72	72	80	79	86	95	99
10	89	95	103	102	88	70	70	78	81	86	96	97
11	86	88	101	103	88	71	68	77	82	90	97	101
12	88	90	101	103	86	71	70	79	80	88	97	95
13	86	87	101	102	87	70	68	79	77	84	99	99
14	86	92	104	101	88	71	69	77	80	88	97	99
15	87	87	103	102	84	75	70	78	83	86	95	99
16	87	90	102	103	80	69	70	77	79	88	100	100
17	87	87	101	102	82	68	71	76	81	89	96	99
18	88	90	105	106	81	69	71	80	72	88	95	99
19	86	129	107	104	81	69	73	77	77	92	98	100
20	87	90	104	103	81	66	71	79	81	86	95	97
21	88	92	104	101	79	68	72	77	81	90	97	99
22	86	86	101	101	80	68	72	76	83	86	98	98
23	87	91	101	101	81	81	71	80	81	84	96	96
24	88	87	102	98	76	69	77	79	83	86	98	100
25	90	96	102	98	76	69	76	77	83	88	99	99
26	90	90	103	98	76	67	74	76	81	85	98	98
27	88	88	101	98	76	68	79	75	84	86	95	100
28	88	92	103	98	76	69	79	74	88	84	97	99
29	90	97	102	98	---	69	78	77	84	91	97	93
30	89	91	104	97	---	69	78	76	86	94	99	93
31	88	---	102	95	---	70	---	75	---	98	99	---
MEAN	88	93	101	101	85	71	71	78	80	88	97	98
WTR YR 1979	MEAN	88	MAX	129	MIN	65						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	17.5	13.0	9.0	4.0	4.5	12.0	18.0	22.5	24.0	28.0	27.0
2	23.0	17.5	13.0	9.0	4.0	4.5	13.0	18.0	21.0	25.5	28.0	27.5
3	23.0	17.5	13.0	8.5	4.0	5.0	13.0	18.0	21.0	24.0	28.0	27.5
4	22.5	17.0	13.5	7.5	4.0	5.0	13.0	18.0	22.0	25.0	27.0	26.5
5	23.0	17.0	14.0	---	4.0	6.0	13.0	18.0	22.0	25.0	27.0	27.0
6	23.0	17.0	14.0	---	4.0	6.5	13.5	18.5	21.5	25.0	28.0	26.0
7	22.0	16.0	14.0	---	3.0	6.0	13.5	19.0	22.5	24.5	28.0	26.0
8	22.0	16.0	14.0	---	3.0	6.5	13.5	19.0	23.0	24.0	27.5	25.5
9	21.5	16.5	14.0	---	2.5	6.5	13.5	19.0	23.0	24.0	28.0	26.0
10	21.0	16.5	13.0	---	2.5	6.5	14.5	19.0	23.0	24.0	28.0	26.0
11	20.5	16.0	13.0	6.5	2.5	6.5	14.5	19.0	22.0	24.0	28.0	25.5
12	20.0	16.0	12.0	6.5	2.5	7.0	15.0	19.0	22.5	25.0	28.0	25.5
13	20.5	16.5	12.0	6.5	2.5	7.5	14.0	19.5	23.0	25.0	27.5	25.5
14	20.0	16.0	11.5	6.5	2.5	7.5	14.0	20.0	23.0	26.0	27.0	25.5
15	20.0	16.0	11.5	6.5	2.5	7.0	14.0	20.0	23.5	26.0	27.0	25.0
16	20.0	16.5	11.0	6.0	2.5	7.5	14.5	20.0	22.0	26.0	26.5	25.0
17	19.0	16.5	10.5	6.0	2.5	8.0	14.5	20.0	22.0	27.0	26.0	24.5
18	19.0	16.0	10.0	6.0	2.0	8.5	15.0	18.0	23.0	26.0	26.0	24.5
19	19.0	16.0	9.5	6.0	2.0	9.0	15.0	18.5	23.5	26.0	26.0	25.0
20	18.0	16.0	9.5	5.5	2.5	9.0	15.0	19.0	23.0	26.0	26.0	25.0
21	14.0	16.0	9.5	5.0	2.5	9.0	15.0	19.0	22.5	27.0	26.5	24.5
22	18.0	15.5	9.0	5.5	2.5	9.5	15.0	19.0	24.0	27.0	27.0	23.5
23	19.0	14.0	9.0	6.0	3.0	10.0	15.5	19.0	23.0	27.0	28.0	23.0
24	18.0	14.0	9.0	6.0	3.0	9.0	16.5	20.0	24.0	27.0	27.0	23.0
25	19.0	14.0	4.0	6.0	3.0	9.0	16.0	21.0	24.0	27.0	26.0	22.5
26	14.5	13.5	9.0	5.0	3.0	10.0	16.5	20.0	23.5	27.0	27.0	23.0
27	18.0	14.0	9.0	5.0	4.0	10.0	17.0	20.0	24.0	27.0	28.0	23.0
28	17.5	13.0	8.5	5.0	4.0	10.0	17.0	20.5	24.0	27.0	27.5	23.5
29	17.0	13.0	8.5	5.5	---	11.0	17.0	21.0	23.0	27.0	28.0	23.0
30	16.0	13.0	9.0	5.0	---	12.0	17.5	21.0	24.0	28.0	28.5	23.0
31	16.0	---	9.0	5.0	---	12.0	---	22.0	---	28.0	28.0	---
MEAN	20.0	15.5	11.0	6.0	3.0	8.0	14.5	19.5	23.0	25.5	27.5	25.0
WTR YR 1979	MEAN	17.0	MAX	28.5	MIN	2.0						

ROANOKE RIVER BASIN

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDIM- ENT, SUS- PENDED (MG/L)	SEDIM- ENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. DIAM. % FINER THAN .075 MM
OCT					
02...	1045	1980	5	27	100
NOV					
20...	1200	1320	6	21	100
JAN					
02...	1115	17000	8	367	62
FEB					
14...	1000	17600	9	428	100
APR					
02...	1330	18600	15	753	100
24...	1200	18600	9	452	100
MAY					
22...	1030	6440	7	122	90
JUN					
12...	0800	6180	5	83	90
JUL					
09...	1300	2280	7	43	61
AUG					
07...	1030	5580	5	75	81
SEP					
04...	1355	2350	4	25	93

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER QUALITY DATA, PERIOD AUGUST TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
AUG									
30...	1214	2370	90	6.3	27.0	8.2	21	3.1	40
SEP									
06...	1230	2380	90	6.9	26.0	8.1	21	3.0	<10

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
10...	1330	1750	--	6.5	18.0	7.9	16	1.4	2600
NOV									
23...	1200	18600	110	7.3	14.0	8.3	<10	.7	310
DEC									
24...	1330	18600	--	7.4	5.0	10.1	10	.9	200
JAN									
16...	1230	18600	--	7.5	--	--	<10	1.0	170
FEB									
13...	1100	17600	--	7.0	6.0	11.3	14	.7	510
MAR									
15...	1230	25600	--	7.1	11.0	10.9	13	1.1	10
APR									
24...	1100	14500	--	7.2	18.0	9.2	10	1.4	70
MAY									
14...	1230	6500	--	6.5	21.0	9.5	38	2.8	2500
JUN									
20...	1500	17700	--	7.1	26.0	8.5	15	1.2	2200
JUL									
23...	1130	7140	--	6.9	25.0	7.9	26	1.6	260
AUG									
14...	1445	2240	120	7.7	28.0	8.8	13	.9	1300
SEP									
20...	1230	19300	--	6.8	22.0	8.6	10	1.0	1600

PAMLICO RIVER BASIN

61

02081500 TAR RIVER NEAR TAR RIVER, N. C.

LOCATION.--Lat 36°11'41", long 78°35'00", Granville County, Hydrologic Unit 03020101, on right bank 90 ft (27 m) upstream from bridge on State Highway 96, 1.2 mi (1.9 km) upstream from Fishing Creek, 2.5 mi (4.0 km) east of town of Tar River, and 8 mi (13 km) south of Oxford.

DRAINAGE AREA.--167 mi² (433 km²).

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: Drainage area.

GAGE.--Water-stage recorder and concrete control with a sharp-crested weir notch. Datum of gage is 287.25 ft (87.554 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Town of Oxford diverts about 0.04 ft³/s (0.001 m³/s) for municipal water supply. Occasional intermittent diversion for irrigation.

AVERAGE DISCHARGE.--40 years, 156 ft³/s (4.418 m³/s), 12.69 in/yr (322 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s (402 m³/s) Apr. 27, 1978, gage height, 18.87 ft (5.752 m); no flow for part of Aug. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	2230	5490 155	11.78 3.591	June 4	1030	2380 67.4	7.82 2.384
Feb. 25	1100	*6340 180	*12.65 3.856	Sept. 23	0500	2470 70.0	7.96 2.426
Mar. 24	2200	3660 104	9.59 2.923				

Minimum discharge, 1.1 ft³/s (0.031 m³/s) Oct. 27, 30; minimum gage height, 1.26 ft (0.384 m) Oct. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.0	87	68	117	309	116	58	175	48	6.7	12
2	14	2.8	50	436	104	266	108	50	106	46	6.4	9.0
3	35	2.3	35	902	97	220	112	46	135	30	149	7.7
4	19	3.3	30	236	95	185	823	60	2090	26	108	7.5
5	15	4.1	423	129	94	194	1290	59	597	23	39	486
6	10	3.6	765	108	88	240	371	48	200	22	23	944
7	8.3	2.6	177	155	91	189	214	43	118	20	15	152
8	7.0	4.0	100	961	107	174	159	39	89	18	11	64
9	6.0	6.9	83	508	104	347	155	37	71	17	8.9	37
10	5.5	13	350	218	95	260	165	54	59	16	6.8	26
11	5.0	12	173	141	97	372	129	111	51	15	5.5	21
12	4.5	9.8	96	116	90	409	109	371	46	15	5.5	17
13	4.3	8.3	74	557	93	227	256	144	41	14	5.4	14
14	4.2	7.3	61	1020	94	178	886	879	36	12	29	13
15	4.0	7.0	51	545	113	160	296	1030	32	12	20	13
16	3.5	8.0	44	245	581	133	169	250	43	11	13	12
17	2.4	15	58	167	511	119	127	124	317	10	9.0	11
18	3.0	29	54	136	228	113	108	91	171	10	7.0	9.2
19	2.9	32	46	111	165	109	97	151	87	9.6	5.9	8.9
20	2.7	23	44	131	255	104	91	196	59	9.6	5.2	8.2
21	2.4	17	48	3240	245	98	85	113	48	13	5.3	13
22	2.4	12	56	3050	920	94	80	91	102	19	11	680
23	2.3	11	51	530	1760	91	76	80	140	24	8.4	1590
24	1.9	11	56	619	3180	2050	72	74	67	19	5.7	316
25	1.9	12	545	985	5540	1950	69	93	46	17	4.7	250
26	1.7	12	243	364	5060	438	86	72	38	13	4.2	200
27	1.3	13	121	245	1290	256	137	54	32	11	3.7	174
28	1.7	24	88	213	451	189	108	48	29	10	63	106
29	1.7	34	70	188	---	156	82	46	27	8.9	402	95
30	1.4	76	60	146	---	140	68	45	25	7.8	43	648
31	1.9	---	57	126	---	126	---	43	---	7.1	20	---
TOTAL	179.4	419.0	4596	16596	21665	9896	6644	4600	5077	534.0	1050.3	5944.5
MEAN	5.79	14.0	148	535	774	319	221	148	169	17.2	33.9	198
MAX	35	76	823	3240	5540	2050	1290	1030	2090	48	402	1590
MIN	1.3	2.3	30	68	88	91	68	37	25	7.1	3.7	7.5
CFSM	.04	.08	.89	3.20	4.64	1.91	1.32	.89	1.01	.10	.20	1.19
IN.	.04	.09	1.02	3.70	4.83	2.20	1.48	1.02	1.13	.12	.23	1.32

CAL YR 1978	TOTAL	87974.4	MEAN 241	MAX	10200	MIN 1.3	CFSM 1.44	IN 19.60
WTR YR 1979	TOTAL	77201.2	MEAN 212	MAX	5540	MIN 1.3	CFSM 1.27	IN 17.20

PAMLICO RIVER BASIN

02081747 TAR RIVER AT U.S. 401 AT LOUISBURG, N. C.

LOCATION.--Lat 36°05'39", long 78°17'52", Franklin County, Hydrologic Unit 03020101, on left bank 3 ft (1 m) downstream from bridge on U.S. Highway 401 (Bickett Boulevard), at Louisburg, and 0.3 mi (0.5 km) upstream from Fox Creek.

DRAINAGE AREA.--430 mi² (1,110 km²), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 176.71 ft (53.861 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 21, 1973, nonrecording gage at bridge 0.3 mi (0.5 km) upstream at datum 1.82 ft (0.555 m) higher.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 63 of this report.

AVERAGE DISCHARGE.--6 years, 455 ft³/s (12.89 m³/s), 14.37 in/yr (365 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s (371 m³/s) Apr. 28, 1978, gage height, 24.36 ft (7.425 m) from floodmarks; minimum gage height observed, 1.30 ft (0.396 m) several days in September 1967, August, September and October 1968 at former site and datum. Minimum discharge, 7.3 ft³/s (0.21 m³/s) Aug. 14, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of December 1934, September 1945 and August 1955 reached stages of 26 ft (7.9 m), 24 ft (7.3 m) and 24 ft (7.3 m) respectively, at former site and datum, from information of Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 23	0100	7130 202	20.59 6.276	Mar. 26	0030	5300 150	18.83 5.739
Feb. 26	2200	*9300 263	*22.13 6.745	June 4	2100	7050 200	20.53 6.258

Minimum discharge, 42 ft³/s (1.19 m³/s) Aug. 21, gage height, 4.63 ft (1.411 m), but may have been less during period of lost record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	68	343	192	378	1500	420	227	316	161	63	80
2	179	62	232	276	334	850	390	209	383	214	64	97
3	128	54	171	1470	307	770	393	197	265	149	226	84
4	193	64	169	1040	296	644	921	287	5850	120	615	80
5	90	80	607	446	265	621	2660	266	6000	133	191	548
6	84	62	2220	346	270	749	2720	225	2700	118	111	2600
7	74	50	1960	336	264	706	887	195	700	104	83	1500
8	65	110	432	925	307	630	634	177	474	100	69	331
9	51	146	327	1640	355	476	567	163	361	95	62	180
10	59	200	463	762	271	1070	575	196	249	93	56	127
11	59	160	655	468	302	878	443	341	266	94	52	103
12	60	130	399	341	295	1250	410	446	243	90	51	90
13	59	110	264	716	287	872	553	530	215	90	54	86
14	59	100	213	2020	262	706	1570	1360	195	87	55	141
15	57	95	130	2010	291	669	1690	2980	178	79	60	122
16	55	110	167	672	612	547	687	2200	188	80	59	92
17	54	130	229	566	1190	472	500	679	688	78	51	76
18	54	160	246	455	859	436	409	420	723	85	49	69
19	54	200	206	386	352	414	363	409	365	96	47	66
20	52	170	193	365	541	395	331	546	250	69	44	63
21	56	140	193	2190	704	373	308	442	209	113	54	74
22	53	120	193	5620	1050	350	290	334	223	188	164	213
23	51	93	162	6320	2420	339	274	295	300	156	83	1760
24	50	107	162	2500	3880	1360	267	295	264	112	57	1910
25	49	105	467	1700	6520	4050	258	374	205	145	57	720
26	49	97	339	1200	8800	4100	303	332	167	127	55	478
27	50	114	413	750	8000	1100	413	244	151	94	51	453
28	53	177	245	630	4600	706	405	212	138	82	49	307
29	56	204	223	600	---	530	317	205	130	74	338	338
30	60	336	177	505	---	519	255	189	125	68	310	427
31	65	---	169	428	---	463	---	185	---	68	101	---
TOTAL	2097	3748	12174	38165	44075	29045	20253	15169	22571	3384	3401	13215
MEAN	67.3	120	383	1231	1574	937	675	489	752	109	110	441
MAX	179	336	2220	6320	8800	4100	2720	2980	6000	214	615	2600
MIN	49	90	167	192	262	349	255	168	125	68	44	63
CFSM	1.15	1.29	1.41	2.66	3.66	2.18	1.57	1.14	1.75	.25	.26	1.03
IN	1.15	1.32	1.05	3.30	3.41	2.51	1.75	1.31	1.95	.29	.29	1.14
CAL YR 1978 TOTAL	211473											
MEAN	67.3											
MAX	179											
MIN	49											
CFSM	1.15											
IN	1.15											
CAL YR 1979 TOTAL	207292											
MEAN	66.9											
MAX	179											
MIN	49											
CFSM	1.15											
IN	1.15											

CAL YR 1978 TOTAL 211473 MEAN 67.3 MAX 13000 MIN 49 CFSM 1.35 IN 18.34
CAL YR 1979 TOTAL 207292 MEAN 66.9 MAX 8600 MIN 44 CFSM 1.32 IN 17.93

PAMLICO RIVER BASIN

63

02081747 TAR RIVER AT U.S. 401 AT LOUISBURG, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
DEC				
07...	0920	1200	81	262
FEB				
26...	1150	9170	124	3070
27...	1105	8650	72	1680
28...	0843	5440	39	573
28...	1340	4670	31	391
MAR				
01...	0958	1930	42	219
02...	0855	968	74	193
05...	1425	692	24	45
12...	1100	1360	58	213

PAMLICO RIVER BASIN

02082506 TAR RIVER BELOW TAR RIVER RESERVOIR NEAR ROCKY MOUNT, N. C.

LOCATION.--Lat 35°53'30", long 77°52'18", Nash County, Hydrologic Unit 03020101, near center of span on downstream side of bridge on Secondary Road 1544, 1.8 mi (2.9 km) downstream from Tar River Reservoir, 2.8 mi (4.5 km) downstream from Sapony Creek, 2.9 mi (4.7 km) upstream from Grape Branch, and 5.0 mi (8.0 km) southwest of Rocky Mount.

DRAINAGE AREA.--777 mi² (2,012 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 85.9 ft (26.18 m) National Geodetic Vertical Datum of 1929 (levels by North Carolina State Highway Commission).

REMARKS.--Records good. The city of Rocky Mount diverted an average of 3.2 ft³/s (0.091 m³/s) for municipal water supply, most of which was returned as sewage below station. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--7 years, 905 ft³/s (25.63 m³/s), 15.82 in/yr (402 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s (326 m³/s) Apr. 30, 1978, gage height, 21.62 ft (6.590 m); minimum, 46 ft³/s (1.30 m³/s) Oct. 10, 1973, gage height, 3.32 ft (1.012 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,500 ft³/s (297 m³/s) Mar. 1, gage height, 20.44 ft (6.230 m); minimum, 83 ft³/s (2.35 m³/s) Nov. 8, gage height, 3.56 ft (1.085 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	99	760	404	800	10300	812	486	670	260	161	193
2	136	100	753	583	760	9150	758	432	856	360	148	193
3	216	100	580	1020	720	4320	721	404	867	320	149	192
4	259	100	657	1880	680	1560	1060	404	4600	300	166	169
5	211	100	812	1630	640	1260	2480	571	6250	160	441	225
6	179	100	1560	948	960	2110	3530	723	6590	120	385	2780
7	152	98	2540	763	865	2210	3610	610	7090	180	250	3460
8	133	88	1990	809	668	1860	1900	486	5300	200	195	2820
9	120	100	1100	1320	738	1970	1170	401	1290	220	160	1010
10	110	115	900	1860	731	2000	999	436	791	180	141	530
11	106	247	800	1150	638	2020	947	925	673	165	127	365
12	115	278	1000	847	639	1900	835	1540	656	165	115	284
13	111	239	800	1240	670	2000	765	1460	526	165	132	240
14	109	211	600	1980	657	1610	960	1650	450	176	183	220
15	107	191	700	2810	821	1380	1780	3140	393	185	156	200
16	107	171	495	2750	803	1260	1930	4220	361	219	164	260
17	107	176	405	1560	1110	1090	1090	3840	501	176	168	220
18	107	209	582	1000	1540	940	807	1650	977	558	167	200
19	105	277	549	900	1150	853	685	1090	1090	842	163	180
20	105	291	467	800	783	798	616	934	715	531	162	174
21	106	253	442	2000	1090	756	569	980	504	397	161	176
22	106	217	426	3000	1640	717	543	925	426	301	162	183
23	105	204	417	4500	2540	676	516	727	415	338	162	234
24	104	211	437	5800	4020	1500	503	763	449	384	163	1280
25	105	208	530	6200	5630	2730	495	2370	465	351	161	1770
26	103	209	765	5330	5850	3840	539	2720	380	357	159	971
27	93	212	1070	2800	8340	4500	678	1600	320	321	158	692
28	99	267	718	1800	9920	3680	767	941	300	259	157	594
29	99	344	535	1200	---	1410	750	660	280	215	159	511
30	99	653	447	1000	---	1020	610	568	240	186	158	554
31	99	---	410	900	---	894	---	524	---	170	165	---
TOTAL	3822	6068	24247	60784	55403	72314	33425	38180	44425	8761	5498	20880
MEAN	123	202	782	1961	1979	2333	1114	1232	1481	283	177	696
MAX	259	653	2540	6200	9920	10300	3610	4220	7090	842	441	3460
MIN	93	88	405	404	638	676	495	401	240	120	115	169
CFSM	.16	.26	1.01	2.52	2.55	3.00	1.43	1.59	1.91	.36	.23	.90
IN.	.18	.29	1.16	2.91	2.65	3.46	1.60	1.83	2.13	.42	.26	1.00
CAL YR 1978	TOTAL	350938	MEAN	961	MAX	10900	MIN	87	CFSM	1.24	IN	16.80
WTR YR 1979	TOTAL	373807	MEAN	1024	MAX	10300	MIN	88	CFSM	1.32	IN	17.90

PAMLICO RIVER BASIN

65

02082585 TAR RIVER AT N. C. 97 AT ROCKY MOUNT, N. C.

LOCATION.--Lat 35°57'14", long 77°47'20", Edgecombe County, Hydrologic Unit 03020101, on left bank 20 ft (6 m) downstream from bridge on N. C. Highway 97, 0.5 mi (0.8 km) above Cowlick Branch, and 1.0 mi (1.6 km) north-northeast of Rocky Mount.

DRAINAGE AREA.--916 mi² (2372 km²).

PERIOD OF RECORD.--August 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 53.882 ft (16.423 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation at low flow by mill above station. The City of Rocky Mount diverted an average of 14.9 ft³/s (0.42 m³/s) for municipal water supply, most of which was returned as sewage below station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft³/s (348 m³/s) May 1, 1978, gage height, 23.66 ft (7.212 m); minimum, 10 ft³/s (0.28 m³/s) May 30, 1977, gage height, 3.03 ft (0.924 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,200 ft³/s (317 m³/s) Mar. 1, gage height, 22.94 ft (6.992 m); minimum, 32 ft³/s (0.91 m³/s) July 6, gage height, 3.14 ft (0.957 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	103	1000	503	1150	11200	1020	624	867	309	185	215
2	197	186	1020	918	1070	10200	950	490	1010	428	183	225
3	271	106	798	1410	966	6830	911	487	990	367	153	240
4	355	99	764	2110	797	2170	1370	521	5210	353	143	283
5	263	131	1050	2020	763	1510	2660	781	7480	293	407	759
6	222	140	1740	1230	1020	2840	3840	983	8240	148	424	3990
7	153	146	2720	1020	1040	2960	4130	822	8000	208	309	3690
8	215	170	2470	1080	819	2560	2440	634	6910	235	226	3340
9	132	194	1380	1420	886	2410	1410	460	1950	252	208	1280
10	106	234	985	2000	901	2260	1210	770	971	218	88	577
11	162	402	932	1370	761	2360	1140	1380	856	185	129	387
12	136	389	1160	1090	770	2200	1020	2210	826	153	139	296
13	122	345	947	1640	781	2260	945	2030	684	227	175	272
14	117	260	756	2310	792	1980	1080	2150	523	163	163	265
15	107	267	794	3200	925	1730	1740	3610	480	210	202	225
16	142	232	687	3210	971	1560	2070	5020	448	300	162	291
17	143	202	476	1920	1240	1370	1300	4870	611	202	146	256
18	119	276	660	1280	1660	1180	964	2320	1050	534	183	219
19	142	330	707	1100	1350	1080	813	1490	1240	982	181	193
20	139	365	588	1000	939	1010	735	1390	854	688	221	173
21	142	327	563	2000	1290	954	688	1390	602	457	169	166
22	118	261	546	3500	1960	901	608	1180	518	336	260	183
23	103	284	530	5000	2780	854	637	938	451	356	199	203
24	111	258	575	6200	4400	1910	617	1000	508	442	209	1050
25	130	279	696	6400	6310	3010	587	2940	541	670	157	1830
26	131	263	895	5500	8000	4360	645	4350	450	529	177	1070
27	130	295	1260	4000	9080	4910	835	2710	386	472	225	725
28	137	346	898	3000	10700	4380	933	1440	344	283	196	613
29	121	504	670	2200	---	1800	908	954	324	263	186	543
30	129	868	559	1600	---	1260	764	780	283	228	182	595
31	134	---	513	1330	---	1120	---	690	---	201	114	---
TOTAL	4756	8262	29339	72561	64121	87129	38970	51414	53607	10692	6101	24154
MEAN	153	275	946	2341	2290	2811	1299	1659	1787	345	197	805
MAX	355	868	2720	6400	10700	11200	4130	5020	8240	982	424	3990
MIN	103	99	476	503	761	854	587	460	283	148	88	166
CFSM	.17	.30	1.03	2.56	2.50	3.07	1.42	1.81	1.95	.38	.22	.88
IN.	.19	.34	1.19	2.95	2.60	3.54	1.58	2.09	2.18	.43	.25	.98

CAL YR 1978 TOTAL 422919 MEAN 1159 MAX 12100 MIN 56 CFSM 1.27 IN 17.18
WTR YR 1979 TOTAL 451106 MEAN 1236 MAX 11200 MIN 88 CFSM 1.35 IN 18.32

PAMLICO RIVER BASIN

02082770 SWIFT CREEK AT HILLIARDSTON, N. C.

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 (1.1 km) northeast of Hilliardston, and 2.8 mi (4.5 km) downstream from Gideon Swamp.

DRAINAGE AREA.--163 mi² (422 km²).

PERIOD OF RECORD.--July 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 130.42 ft (39.752 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 499 of this report. An average of 8.0 ft³/s (0.23 m³/s) was diverted from Kerr Reservoir for municipal water supply. About 0.42 ft³/s (0.012 m³/s) of sewage effluent was discharged into the Tar River and about 1.9 ft³/s (0.054 m³/s) was diverted into the Roanoke River basin. Withdrawals from Sandy Creek tributary for municipal water supply ended Feb. 21, 1978.

AVERAGE DISCHARGE.--16 years, 151 ft³/s (4.276 m³/s), 12.58 in/yr (320 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,030 ft³/s (171 m³/s) June 5, 1979, gage height, 14.27 ft (4.349 m); minimum, 0.60 ft³/s (0.017 m³/s) Sept. 25, 26, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1924 reached a stage of 14.5 ft (4.42 m) discharge not determined, from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	1130	1310 37.1	9.93 3.027	May 25	0230	1300 36.8	9.88 3.011
Feb. 27	1130	2660 75.3	12.70 3.871	June 5	0200	*6030 171	*14.27 4.349
May 15	0700	1500 42.5	10.65 3.246				

Minimum discharge, 27 ft³/s (0.76 m³/s) Aug. 20, gage height, 2.25 ft (0.686 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	35	225	111	168	1080	168	131	136	73	47	68
2	50	35	163	219	158	478	164	122	207	77	57	61
3	90	34	123	380	144	354	174	117	223	76	50	116
4	70	35	110	240	141	307	506	131	2830	66	121	110
5	56	40	330	184	139	284	881	147	4710	69	438	185
6	48	40	657	158	134	545	589	134	2210	72	367	501
7	44	40	447	159	139	510	437	126	922	62	91	514
8	42	65	341	228	148	369	264	118	273	58	67	818
9	40	107	212	245	164	361	225	112	205	56	57	350
10	38	82	203	219	155	350	216	126	170	55	50	109
11	37	79	176	177	146	403	196	194	156	55	45	85
12	35	71	161	158	150	407	181	160	152	56	41	73
13	35	60	135	463	134	340	214	146	129	54	37	66
14	33	54	124	616	130	300	452	573	112	51	37	69
15	33	51	116	457	138	308	381	1380	100	49	39	92
16	32	51	111	358	238	269	301	791	95	47	36	100
17	32	69	127	244	254	239	203	562	145	46	33	77
18	30	95	143	195	212	223	169	284	171	49	30	63
19	31	104	135	170	177	214	156	274	157	64	28	58
20	32	88	125	168	203	207	148	284	114	66	27	55
21	30	69	123	847	255	199	139	227	96	58	33	53
22	30	61	124	1290	533	193	134	194	95	78	40	56
23	29	58	115	1210	742	186	131	176	98	228	37	74
24	28	61	118	1170	1060	601	133	404	94	119	32	143
25	28	67	194	707	1500	646	132	1020	87	87	31	184
26	28	64	164	372	2020	404	155	402	81	68	38	128
27	29	61	149	312	2510	327	208	236	75	73	41	116
28	30	86	126	253	1900	225	200	187	70	62	34	114
29	33	114	114	221	---	194	165	169	69	58	36	100
30	34	307	108	193	---	182	146	160	67	52	44	105
31	34	---	107	176	---	172	---	142	---	49	111	---
TOTAL	1177	2183	5606	11900	13792	10877	7568	9229	14049	2133	2175	4643
MEAN	38.0	72.8	181	384	493	351	252	298	468	68.8	70.2	155
MAX	90	307	657	1290	2510	1080	881	1380	4710	228	438	818
MIN	28	34	107	111	130	172	131	112	67	46	27	53
CFSM	.23	.45	1.11	2.36	3.03	2.15	1.55	1.83	2.87	.42	.43	.95
IN.	.27	.50	1.28	2.72	3.15	2.48	1.73	2.11	3.21	.49	.50	1.06

CAL YR 1978	TOTAL	70056	MEAN	192	MAX	2320	MIN	27	CFSM	1.18	IN	15.99
WTR YR 1979	TOTAL	85332	MEAN	234	MAX	4710	MIN	27	CFSM	1.44	IN	19.47

02082950 LITTLE FISHING CREEK NEAR WHITE OAK, N. C.

LOCATION.--Lat 36°11'08", long 77°52'34", Halifax County, Hydrologic Unit 03020102, on right bank 8 ft (2 m) downstream from bridge on Secondary Road 1338, 1.1 mi (1.8 km) west of White Oak, 1.8 mi (2.9 km) upstream from Powells Creek, 4.3 mi (6.9 km) upstream from mouth, and 12 mi (19 km) west of Enfield.

DRAINAGE AREA.--175 mi² (453 km²).

PERIOD OF RECORD.--October 1959 to current year.

REVISED RECORDS.--WSP 1723: 1960 (M).

GAGE.--Water-stage recorder. Datum of gage is 116.44 ft (35.491 m) National Geodetic Vertical Datum of 1929. Feb. 14, 1962 to Apr. 23, 1979, auxiliary nonrecording gage 3.6 mi (5.8 km) downstream.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 499 of this report.

AVERAGE DISCHARGE.--20 years, 170 ft³/s (4.814 m³/s), 13.19 in/yr (335 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Oct. 7, 1972, gage height, 24.80 ft (7.559 m) from floodmarks, from rating curve extended above 3,400 ft³/s (96.3 m³/s) on basis of slope-conveyance study of peak flow; minimum, 0.83 ft³/s (0.024 m³/s) Sept. 26, Oct. 2, 3, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1959 reached a stage of 19.3 ft (5.88 m), from floodmarks (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 23	0630	2510 71.1	14.41 4.392	May 24	2130	1400 39.6	10.30 3.139
Feb. 26	2200	*3550 101	*16.64 5.072	June 4	0630	2660 75.3	14.77 4.502
May 15	0400	1820 51.5	12.19 3.716				

Minimum discharge, 9.9 ft³/s (0.28 m³/s) Aug. 19, 20; minimum gage height, 1.49 ft (0.454 m) Oct 1, Aug. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	17	153	85	156	444	173	124	136	64	24	13
2	34	18	90	213	143	359	165	113	205	60	100	12
3	54	19	76	594	133	313	189	105	188	50	91	10
4	29	19	68	440	132	268	591	106	2490	43	48	15
5	22	19	300	185	131	255	1100	109	1070	42	33	300
6	21	20	700	156	122	684	828	109	278	40	27	619
7	21	21	400	159	123	851	324	97	174	37	24	340
8	19	28	250	315	135	511	237	90	140	35	21	83
9	17	52	200	429	159	411	219	85	121	34	18	46
10	16	47	160	237	151	346	224	98	107	33	17	33
11	16	38	130	163	172	369	189	171	109	33	16	28
12	16	44	110	146	139	451	170	235	108	34	16	26
13	16	36	90	467	131	317	299	178	95	32	15	25
14	16	29	80	706	129	266	1010	961	83	29	18	30
15	15	26	74	604	130	280	776	1640	76	28	16	38
16	15	26	70	244	205	232	320	1050	75	26	14	32
17	14	38	86	183	296	206	222	285	107	25	12	25
18	14	105	112	164	207	199	191	176	120	36	11	22
19	14	68	89	146	202	193	172	320	91	32	10	21
20	15	44	81	140	241	189	158	351	77	32	10	20
21	15	35	80	1100	267	183	146	248	70	36	14	19
22	15	32	83	2030	608	170	138	181	75	64	14	21
23	15	31	77	2300	1020	165	130	157	77	63	19	128
24	15	35	76	713	1510	630	159	448	68	49	14	152
25	14	38	175	481	2130	939	136	666	66	41	12	137
26	14	35	167	358	3250	487	163	298	63	34	12	92
27	15	34	110	244	3160	276	291	185	57	32	17	72
28	17	55	91	218	1430	226	257	151	54	32	14	57
29	18	83	81	206	---	205	180	139	52	29	11	48
30	18	164	76	176	---	194	141	134	50	25	11	66
31	17	---	78	160	---	182	---	119	---	23	22	---
TOTAL	573	1256	4413	13762	16612	10801	9298	9129	6482	1173	701	2530
MEAN	18.5	41.9	142	444	593	348	310	294	216	37.8	22.6	84.3
MAX	54	164	700	2300	3250	939	1100	1640	2490	64	100	619
MIN	14	17	68	85	122	165	130	85	50	23	10	10
CFSM	.11	.24	.81	2.54	3.39	1.99	1.77	1.68	1.23	.22	.13	.48
IN.	.12	.27	.94	2.93	3.53	2.30	1.98	1.94	1.38	.25	.15	.54

CAL YR 1978	TOTAL	69825	MEAN 191	MAX 3150	MIN 14	CFSM 1.09	IN 14.84
WTR YR 1979	TOTAL	76730	MEAN 210	MAX 3250	MIN 10	CFSM 1.20	IN 16.31

PAMLICO RIVER BASIN

02083000 FISHING CREEK NEAR ENFIELD, N. C.

LOCATION.--Lat 36°09'03", long 77°41'35", Edgecombe County, Hydrologic Unit 03020102, on right bank 15 ft (5 m) downstream from bridge on U.S. Highway 301, 2,000 ft (610 m) downstream from Seaboard Coast Line Railroad bridge, 2 mi (3 km) southwest of Enfield, 4.8 mi (7.7 km) downstream from Rocky Creek, and 40 mi (64 km) upstream from mouth.

DRAINAGE AREA.--521 mi² (1,349 km²).

PERIOD OF RECORD.--October 1923 to current year. Figures of daily discharge below 250 ft³/s (7.08 m³/s) Oct 1, 1923, to July 3, 1924, below 350 ft³/s (9.91 m³/s) May 30, 1925, to May 31, 1926, below 150 ft³/s (4.25 m³/s) June 1 to Nov. 16, 1926, and below 100 ft³/s (2.83 m³/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 (610 m) 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 1172: Drainage area. WSP 1333: 1928(M), 1932-33, 1935. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 76.26 ft (23.244 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1932, nonrecording gage, at same site and datum.

REMARKS.--Records good. Slight diurnal fluctuation and some regulation at low flow caused by mills above station. Suspended-sediment records for the current year are published on page 69 of this report.

AVERAGE DISCHARGE.-- 56 years, 495 ft³/s (14.02 m³/s), 12.90 in/yr (328 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/s (357 m³/s) Dec. 2, 1934, Aug. 18, 1940; maximum gage height, 17.72 ft (5.401 m) Aug. 18, 1940; minimum daily discharge, 6.9 ft³/s (0.20 m³/s) Oct. 5, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Apr. 19, 1910 reached a stage of 20.1 ft (6.13 m), present datum (from floodmarks of Seaboard Coast Line Railroad Co.) at site 2,000 ft (610 m) upstream. Flood of July 24, 1919, reached a stage of 19.6 ft (5.97 m) discharge, 20,300 ft³/s (575 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,940 ft³/s (225 m³/s) Feb. 28, gage height, 15.73 ft (4.795 m); minimum, 68 ft³/s (1.93 m³/s) Oct. 19, 26, 27, minimum gage height, 0.68 ft (0.207 m) Oct. 19, Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	81	616	270	531	6010	526	404	406	191	102	117
2	85	80	488	474	503	2940	501	362	518	210	120	100
3	156	81	343	1360	464	1450	510	333	528	200	300	112
4	211	83	269	1460	441	991	1000	325	3140	180	440	202
5	152	86	364	890	438	825	2400	344	6200	161	450	334
6	114	89	1460	586	428	1330	2500	355	4760	152	540	1590
7	104	91	1540	539	424	2180	2000	341	2230	146	400	1610
8	97	109	1190	604	443	1940	1200	301	990	138	170	1230
9	89	149	743	971	481	1340	740	276	557	131	140	875
10	81	216	524	944	453	1100	680	287	434	127	120	337
11	77	223	544	642	392	1000	640	538	414	125	110	191
12	76	200	469	515	461	1210	540	731	469	124	100	156
13	76	180	378	970	477	1110	670	662	402	126	95	140
14	77	154	326	1750	435	886	1500	1060	328	120	90	135
15	77	133	297	1910	448	839	2100	3480	283	115	95	150
16	74	124	273	1460	557	797	1600	4230	257	110	90	179
17	72	149	273	920	807	669	890	3020	289	106	85	163
18	70	213	337	638	829	609	610	1540	393	108	85	136
19	69	331	369	541	516	585	540	1040	392	130	80	120
20	70	291	318	492	471	568	500	1120	314	159	80	112
21	72	224	298	1640	722	553	480	962	259	137	75	109
22	71	175	294	3080	1310	526	450	679	239	141	80	108
23	72	157	287	4010	2200	498	430	551	253	210	90	118
24	71	155	275	4860	2800	1010	430	680	252	211	85	425
25	70	161	374	4070	3790	2160	460	3740	226	193	85	568
26	69	171	554	2190	5270	1890	450	3270	214	170	80	518
27	69	165	467	1200	6840	1100	620	1500	202	138	80	346
28	71	169	363	843	7790	773	760	710	187	131	85	287
29	75	251	307	728	---	632	610	534	178	134	81	254
30	79	438	275	640	---	584	480	472	172	116	81	228
31	80	---	261	565	---	554	---	426	---	105	92	---
TOTAL	2702	5129	14876	41762	40721	38659	26817	34273	25486	4545	4606	10950
MEAN	87.2	171	480	1347	1454	1247	894	1106	850	147	149	365
MAX	211	438	1540	4860	7790	6010	2500	4230	6200	211	540	1610
MIN	69	80	261	270	392	498	430	276	172	105	75	100
CFSM	.17	.33	.92	2.59	2.79	2.39	1.72	2.12	1.63	.28	.29	.70
IN.	.19	.37	1.06	2.98	2.91	2.76	1.91	2.45	1.82	.32	.33	.78
CAL YR 1978	TOTAL	224335	MEAN 615	MAX 6050	MIN 69	CFSM 1.18	IN 16.02					
WTR YR 1979	TOTAL	250526	MEAN 686	MAX 7790	MIN 69	CFSM 1.32	IN 17.89					

PAMLICO RIVER BASIN

69

02083000 FISHING CREEK NEAR ENFIELD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 30...	1125	78	4	.84
JAN 22...	1400	2800	166	1260
FEB 02...	1310	490	15	20
26...	0845	4260	53	610
MAR 01...	1055	5660	30	458
03...	1000	2830	49	374
05...	1120	841	12	27
SEP 07...	1505	1440	69	268

PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, N. C.

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 (10.5 km) downstream from Fishing Creek, and 49.2 mi (79.2 km) upstream from Pamlico River at Washington.

DRAINAGE AREA.--2,140 mi² (5,540 km²), approximately.

WATER-DISCHARGE RECORDS

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.

GAGE.--Water-stage recorder. Datum of gage is 10.37 ft (3.161 m) National Geodetic Vertical Datum of 1929. July 1896 to December 1900 nonrecording gage at Seaboard Coast Line Railroad bridge 600 ft (183 m) downstream at different datum, Oct. 1, to Dec. 8, 1931, nonrecording gage at site 100 ft (30 m) upstream at present datum.

REMARKS.--Water-discharge record excellent. Some diurnal fluctuation at low flow caused by mills above station. Town of Tarboro diverted 2.9 ft³/s (0.08 m³/s) for municipal water supply.

AVERAGE DISCHARGE.--52 years, 2,252 ft³/s (63.78 m³/s), 14.29 in/yr (363 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,200 ft³/s (1,050 m³/s) Aug. 20, 1940, gage height, 31.77 ft (9.683 m); minimum, 36 ft³/s (1.02 m³/s) Oct. 17, 22, 1933, Oct. 6, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 27, 1919, reached a stage of 34.0 ft (10.36 m), present datum, from floodmarks, discharge, 52,800 ft³/s (1,500 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,400 ft³/s (634 m³/s) Mar. 3, gage height, 27.02 ft (8.236 m); minimum, 214 ft³/s (6.06 m³/s) Oct. 21, gage height, 1.69 ft (0.515 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	390	288	1480	1260	3710	19800	3200	1970	3090	763	496	310
2	430	270	1700	1660	3020	22100	2710	1700	2540	752	492	377
3	490	292	1760	3400	2690	22300	2480	1480	2350	847	478	522
4	580	313	1520	4080	2440	20400	2670	1420	4500	788	500	456
5	640	258	1540	4710	2170	15000	4250	1540	8120	758	648	1430
6	603	263	2220	4840	2020	11800	5290	2050	10500	684	855	6930
7	533	291	3100	4250	2230	10300	6310	2070	13700	569	1020	11600
8	477	355	4170	3800	2290	9580	7330	1790	17500	541	958	12700
9	436	423	4470	3710	2140	9020	7590	1510	17300	570	712	11900
10	413	378	3720	3850	2170	8510	5960	1330	13000	566	612	8510
11	330	499	2920	4210	2140	7950	4420	2610	9560	532	514	5410
12	354	762	2550	3630	1960	7300	3440	4010	7990	487	399	2750
13	316	712	2530	3570	1970	6580	2830	4600	6560	453	373	1750
14	305	648	2150	4530	2020	6040	2680	5140	4600	510	380	1380
15	300	578	1780	5310	2000	5580	3000	6160	2880	452	360	1100
16	278	542	1670	5960	2180	5080	3950	7350	2050	482	370	886
17	275	505	1520	6410	2330	4520	4450	8240	1760	539	354	817
18	273	484	1280	6130	2690	3930	4170	9270	1800	500	320	775
19	273	526	1350	4790	3040	3380	3490	9980	2120	819	342	693
20	271	635	1440	3580	2690	3040	2630	9390	2180	1130	334	624
21	275	742	1330	3660	2390	2800	2200	7770	1740	961	388	569
22	301	692	1270	5770	3490	2600	1940	6190	1440	799	407	549
23	296	603	1240	7160	4840	2430	1730	4800	1290	661	463	536
24	266	590	1220	8010	6220	3400	1710	4000	1230	656	377	544
25	263	556	1360	8950	8090	5430	1660	5200	1340	790	373	1600
26	273	546	1520	10200	10400	6200	1660	6740	1270	986	357	2450
27	284	568	1820	11500	13700	7080	1940	8030	1100	920	319	1950
28	281	632	2150	11700	17300	7910	2180	8970	971	841	393	1480
29	294	729	1790	9240	---	8270	2340	9130	885	650	349	1290
30	280	1060	1520	6880	---	6280	2240	7200	812	569	351	1380
31	268	---	1350	4690	---	4100	---	4860	---	518	355	---
TOTAL	11048	15740	61440	171440	114330	258710	102450	156500	146178	21093	14649	83268
MEAN	356	525	1982	5530	4083	8345	3415	5048	4873	680	473	2776
MAX	640	1060	4470	11700	17300	22300	7590	9980	17500	1130	1020	12700
MIN	263	258	1220	1260	1960	2430	1660	1330	812	452	319	310
CFSM	.17	.25	.93	2.58	1.91	3.90	1.60	2.36	2.28	.32	.22	1.30
I.D.	.19	.27	1.07	2.98	1.99	4.50	1.78	2.72	2.54	.37	.25	1.45
CAL YR 1978 TOTAL	1008182	MEAN	2762	MAX	21100	MIN	258	CFSM	1.29	IN	17.53	
WTR YR 1979 TOTAL	1156446	MEAN	3169	MAX	22300	MIN	258	CFSM	1.48	IN	20.11	

PAMLICO RIVER BASIN

71

02083500 TAR RIVER AT TARBORO, N. C.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945, 1954, 1958 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1967, July 1973 to current year.

WATER TEMPERATURES: October 1944 to September 1945, October 1953 to September 1954, October 1961 to September 1967, July 1973 to current year.

REMARKS.--Daily records of specific conductance for water years 1954, 1959-64 are available in files of district office in Raleigh, N. C. Miscellaneous chemical data published for water years 1944, 1947, 1955-61.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 186 micromhos Oct. 25, 1966, Aug. 3, 1977; minimum daily, 34 micromhos Aug. 22, 1967.

WATER TEMPERATURES: Maximum daily, 32.0°C July 8, 9, 10, 20, 21, Aug. 7, 8, 12, 1977; minimum daily, 0.0°C on several days in 1963 and 1966, Jan. 18, 19, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 133 micromhos Nov. 4; minimum daily, 38 micromhos June 9.

WATER TEMPERATURES: Maximum daily, 29.0°C Aug. 1-10, 29, 30; minimum daily, 2.0°C Feb. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 03...	0800	400	120	7.4	17.0	10	8.5	100	200	25	0	6.2
NOV 13...	1615	620	100	7.0	15.0	25	8.8	170	140	23	0	5.9
DEC 12...	1200	2510	80	7.1	7.0	25	10.2	580	260	20	6	4.7
FEB 14...	1000	2040	78	5.9	2.5	12	12.9	K24	80	21	4	5.2
27...	1000	12400	52	7.3	5.5	45	10.8	460	2700	14	7	3.6
MAR 26...	1415	6290	65	6.6	12.0	35	10.0	510	400	16	3	4.0
APR 18...	0915	4210	61	6.0	14.5	25	8.7	120	120	18	3	4.6
MAY 21...	1415	8080	55	6.6	18.0	25	7.1	140	340	17	5	4.5
JUN 12...	1130	8460	45	5.8	20.5	55	5.5	1300	1600	15	6	3.9
JUL 09...	1315	542	88	6.9	23.5	6.0	8.4	K16	K40	27	1	6.8
AUG 01...	1245	461	87	6.1	28.0	6.0	7.1	K52	120	25	0	6.3
29...	1045	281	103	6.1	27.0	6.0	6.9	380	1900	26	0	6.6

K Results based on colony count outside the acceptable range (non-ideal colony count).

PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 03...	2.2	13	50	1.1	2.9	36	0	30	2.3	9.7	11	.2
NOV 13...	2.0	9.0	42	.8	3.2	31	0	25	5.0	7.0	2.5	.1
DEC 12...	1.9	6.0	36	.6	2.6	17	0	14	2.2	12	7.2	.1
FEB 14...	1.9	6.5	38	.6	1.7	20	0	16	40	8.2	7.5	.0
27...	1.3	3.7	32	.4	2.0	9	0	7	.7	7.7	5.0	.1
MAR 26...	1.5	4.4	34	.5	1.7	16	0	13	6.4	6.1	5.5	.1
APR 18...	1.7	4.5	32	.5	1.7	19	0	16	30	4.7	5.1	.1
MAY 21...	1.4	3.5	28	.4	1.8	15	0	12	6.0	5.9	4.7	.1
JUN 12...	1.3	2.4	23	.3	1.9	11	0	9	28	4.4	3.0	.1
JUL 09...	2.4	7.7	36	.6	2.0	31	0	25	6.2	6.3	7.2	.1
AUG 01...	2.2	6.8	35	.6	2.3	30	0	25	38	6.0	5.9	.1
29...	2.4	10	42	.8	2.5	40	0	33	51	6.0	7.2	.2
DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT 03...	14	85	77	.12	91.8	.42	.08	--	.34	.42	--	--
NOV 13...	16	66	67	.09	110	.31	.09	--	.51	.60	.26	.34
DEC 12...	13	84	56	.11	569	.21	.05	--	.61	.66	.18	.48
FEB 14...	13	68	54	.09	375	.52	.10	--	.07	.17	--	--
27...	8.4	61	37	.08	2040	.43	.03	--	.62	.65	--	--
MAR 26...	11	67	42	.09	1140	.30	.05	--	.68	.73	--	--
APR 18...	10	65	42	.09	739	.21	.04	.05	.47	.51	.13	.38
MAY 21...	9.5	76	39	.10	1660	.35	.04	.05	.73	.77	--	--
JUN 12...	7.5	63	30	.09	1440	.33	.05	.06	.75	.80	--	--
JUL 09...	16	84	64	.11	123	.72	.02	.02	.48	.50	.01	.49
AUG 01...	14	79	59	.11	98.3	--	.10	.12	.72	.82	.23	.59
29...	13	82	68	.11	62.2	.44	.01	.01	.50	.51	.15	.36

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

02083500 TAR RIVER AT TARBORO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible][illegible]

PAMLICO RIVER BASIN

75

02083500 TAR RIVER AT TARBORO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO- SURE (DAYS)
OCT 03...	--	3.2	--	--	--	--	--	--	--	--
NOV 13...	0	--	11	.4	10.0	8.03	--	10.3	3.05	40
DEC 12...	--	12	--	--	--	--	--	--	--	--
FEB 14...	10	--	12	.7	.320	.240	--	.060	.000	63
27...	0	--	9.9	--	--	--	--	--	--	--
MAR 26...	--	9.6	--	--	--	--	--	--	--	--
APR 18...	--	9.5	--	--	--	--	--	--	--	--
MAY 21...	0	--	14	1.2	--	--	--	--	--	--
JUN 12...	--	16	--	--	--	--	--	--	--	--
JUL 09...	--	6.0	--	--	--	--	--	--	--	--
AUG 01...	4	--	8.2	.4	--	--	--	--	--	--
29...	--	6.7	--	--	23.7	19.9	81.7	46.5	18.2	27

PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, N. C.--Continued

PHYTOPLANKTON ANALYSES, JUNE TO SEPTEMBER 1978

DATE TIME	JUN 13, 78 1445	JUL 18, 78 1415	AUG 7, 78 1330
TOTAL CELLS/ML	26000	18000	1600
DIVERSITY: DIVISION	1.4	1.5	1.4
..CLASS	1.4	1.5	1.4
...ORDER	1.5	2.2	1.6
...FAMILY	2.1	2.6	1.9
...GENUS	2.7	3.6	2.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHAPACIACEAE						
....SCHROEDERIA	--	-	* 0		--	-
...COELASTRACEAE						
....COELASTRUM	--	-	720	4	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	2200	9	--	-	--	-
...MICRACTINACEAE						
....GOLENKINIA	--	-	--	-	18	1
....MICRACTINIUM	200	1	--	-	--	-
...OOCYSTACEAE						
....ANKISTOMESMUS	200	1	90	1	57	4
....CHODATELLA	*	0	--	-	--	-
...DICTYOSPHAERIUM	1900	7	360	2	32	2
....KIRCHNERIELLA	--	-	360	2	43	3
....TETRAEDRON	--	-	--	-	*	0
...SCENEDESMACEAE						
....ACTINASTRUM	2700	10	--	-	--	-
....CRUCIGENIA	1600	6	720	4	180	12
...SCENEDESMUS	2300	9	990	6	150	10
....TETRASTRUM	--	-	360	2	14	1
...TETRASPORALES						
...COCCOMYXACEAE						
....ELAKATOTHRIX	--	-	--	-	14	1
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	310	2	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	450	3	--	-
...VOLVOACEAE						
....EUDORINA	--	-	720	4	--	-
...ZYGNEATALES						
...DESMIDIACEAE						
....COSMARIMUM	--	-	* 0		--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	200	1	400	2	21	1
....MELOSIHA	11000#	43	1800	10	140	9
...SKELETONEMA	--	-	180	1	--	-
...PENNALES						
...FRAGILARIACEAE						
....SYNEDRA	--	-	--	-	18	1
...NAVICULACEAE						
....NAVICULA	150	1	180	1	*	0
....PINNULARIA	--	-	90	1	11	1
...NITZSCHIIACEAE						
....NITZSCHIA	*	0	400	2	*	0

PAMLICO RIVER BASIN

77

02083500 TAR RIVER AT TARBORO, N. C.--Continued

PHYTOPLANKTON ANALYSES, JUNE TO SEPTEMBER 1978

DATE TIME	JUN 13,78 1445	JUL 18,78 1615	AUG 7,78 1330
--------------	-------------------	-------------------	------------------

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	2800#	16	--	-
....ANACYSTIS	3200	12	4800#	27	850#	54
....COCCOCHLOKIS	--	-	1100	6	--	-
...HORMOGONALES						
...OSCILLATORIAEAE						
....LYNGBYA	--	-	580	3	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	*	0	--	-	--	-
....PHACUS	--	-	--	-	*	0
....TRACHELOMONAS	--	-	220	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 13,78 1615	MAR 26,79 1415	MAY 21,79 1415	JUN 12,79 1130	JUL 9,79 1315	AUG 29,79 1045
TOTAL CELLS/ML	4900	1000	170	190	62000	78000
DIVERSITY: DIVISION	1.3	1.4	1.0	0.7	1.5	1.3
..CLASS	1.3	1.5	1.0	0.7	1.5	1.3
...ORDER	2.0	2.2	1.1	1.6	1.7	1.3
...FAMILY	2.9	3.0	1.9	1.7	2.3	1.9
....GENUS	3.7	3.8	1.9	2.0	3.3	2.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCCOCCALES												
...OOCYSTACEAE												
....DICHOTOMOCOCCUS	--	-	--	-	--	-	--	-	--	-	4000	5
....GLOEOACTINIUM	--	-	--	-	--	-	--	-	3000	5	--	-
...CHARACIACEAE												
....SCHROEDERIA	--	-	--	-	--	-	--	-	450	1	400	1
....HYDRODICTYACEAE												
...PEDIASTRUM	230	5	--	-	--	-	--	-	--	-	--	-
...MICRACTINIACEAE												
....GOLENKINIA	--	-	--	-	--	-	--	-	*	0	*	0
...MICRACTINIUM	--	-	--	-	--	-	--	-	3000	5	1800	2
...OOCYSTACEAE												
....ANKISTRODESMUS	470	10	110	11	--	-	13	7	--	-	1400	2
....CLOSTERIOPSIS	58	1	--	-	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	410	8	40	4	--	-	100#	53	1800	3	6200	8
....KIRCHNERIELLA	120	2	100	10	--	-	--	-	600	1	4200	5
...OOCYSTIS	29	1	20	2	52#	31	--	-	--	-	400	1
....SELENASTRUM	--	-	--	-	--	-	--	-	*	0	--	-
....TETRAEDRON	--	-	*	0	--	-	--	-	*	0	800	1
....TREUBARIA	--	-	--	-	--	-	--	-	*	0	--	-
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	--	-	4800	8	--	-
....CRUCIGENIA	120	2	60	6	--	-	--	-	3600	6	2400	3
...SCENEDESMUS	960#	20	60	6	77#	46	--	-	5400	9	13000#	17
...TETRASPORALES												
...PALMELLACEAE												
....SPHAEROCYSTIS	120	2	--	-	--	-	--	-	1200	2	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	200#	19	--	-	39#	20	900	1	--	-
...ZYGEMATALES												
...DESMIDIACEAE												
...COSMARIMUM	88	2	--	-	--	-	--	-	--	-	--	-

PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 13,78 1615		MAR 26,79 1415		MAY 21,79 1415		JUN 12,79 1130		JUL 9,79 1315		AUG 29,79 1045	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
..CENTRALES												
..COSCINODISCACEAE												
....CYCLOTELLA	670	14	25	2	13	8	--	-	1100	2	*	0
....MELOSIRA	530	11	45	4	--	-	13	7	9200	15	3000	4
..PENNALES												
....ACHNANTHACEAE			*	0	--	-	--	-	--	-	--	-
....ACHNANTHES	--	-	*	0	--	-	--	-	--	-	--	-
....CYMBELLACEAE	--	-	*	0	--	-	--	-	--	-	--	-
....CYMBELLA	--	-	*	0	--	-	--	-	--	-	--	-
....FRAGILARIACEAE												
....FRAGILARIA	260	5	--	-	--	-	--	-	--	-	--	-
....SYNEORA	29	1	75	7	--	-	--	-	--	-	--	-
....GOMPHONEMACEAE												
....GOMPHONEMA	--	-	15	1	--	-	--	-	--	-	--	-
....MERIDIONACEAE												
....MERIDION	--	-	*	0	--	-	--	-	--	-	--	-
....NAVICULACEAE												
....NAVICULA	290	6	25	2	--	-	13	7	--	-	--	-
....NITZSCHIACEAE												
....NITZSCHIA	230	5	45	4	13	8	13	7	*	0	*	0
....TABELLARIACEAE												
....TABELLARIA	--	-	*	0	--	-	--	-	--	-	--	-
..CHRYSTOPHYCEAE												
..CHRYSONOMADALES												
..UCHROMONADACEAE												
....DINOHRYON	--	-	*	0	--	-	--	-	--	-	--	-
....UCHROMONAS	--	-	10	1	--	-	--	-	--	-	--	-
..XANTHOPHYCEAE												
..HETEROCOCCALES												
..CHLOROTHECIACEAE												
....OPHIOCYTIUM	--	-	--	-	--	-	--	-	--	-	400	1
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
..CRYPTOMONADALES												
..CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	--	-	13	8	--	-	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
..CHROOCOCCALES												
..CHROOCOCCACEAE												
....GOMENELLUM												
....ANACYSTIS	120	2	140	13	--	-	--	-	13000#	20	5200	7
....COCCOCHLORIS	--	-	20	2	--	-	--	-	14000#	22	32000#	41
..HORMOGONALES												
..RIVULARIACEAE												
..RAPHIIDOPSIS	58	1	--	-	--	-	--	-	--	-	--	-
..CHROOCOCCALES												
..CHROOCOCCACEAE												
....GOMPHOSPHERIA	--	-	--	-	--	-	--	-	--	-	1600	2
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
..EUGLENALES												
..EUGLENACEAE												
....EUGLENA	29	1	--	-	--	-	--	-	--	-	--	-
....TRACHELONAS	29	1	*	0	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PAMLICO RIVER BASIN

79

02083500 TAR RIVER AT TARBORO, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMH/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	107	92	72	71	49	66	75	65	87	91	120
2	101	100	83	84	74	47	67	79	69	89	100	116
3	120	107	88	75	75	44	69	82	68	85	104	114
4	96	133	92	77	76	44	75	79	59	85	101	102
5	99	122	87	74	75	50	69	82	46	83	97	66
6	87	102	92	73	76	56	67	76	45	86	110	45
7	92	122	87	74	80	62	64	75	44	82	80	46
8	102	117	91	76	81	59	58	78	46	86	79	55
9	98	102	91	75	80	61	59	82	38	94	78	57
10	95	117	79	77	81	60	61	88	47	84	85	59
11	91	112	80	74	79	62	65	76	53	86	87	63
12	89	110	80	73	81	64	67	76	48	88	88	70
13	112	95	80	78	79	67	67	78	53	93	90	71
14	97	92	82	75	83	68	71	64	61	94	127	79
15	119	96	34	74	82	59	70	61	67	93	101	85
16	107	110	84	70	85	66	64	59	72	94	110	90
17	107	99	84	66	79	67	61	58	77	93	117	95
18	117	102	86	66	77	67	61	55	77	100	108	87
19	97	103	84	69	74	71	64	49	71	98	116	87
20	102	108	87	71	74	71	67	51	71	90	125	91
21	112	92	90	71	79	72	68	56	74	94	116	95
22	112	91	92	66	80	73	73	61	78	98	99	101
23	107	101	91	64	76	74	75	63	85	95	124	109
24	112	96	89	59	70	71	76	65	82	88	114	112
25	113	92	87	54	65	60	79	59	81	86	115	77
26	102	91	71	50	63	64	79	58	83	83	118	75
27	102	92	84	50	58	57	76	53	93	77	110	78
28	107	90	81	54	51	55	74	46	89	81	103	76
29	102	92	80	57	---	56	73	46	90	80	109	77
30	111	96	86	64	---	61	75	51	87	86	111	77
31	112	---	82	66	---	66	---	58	---	80	112	---
MEAN	104	103	86	69	75	62	69	66	67	88	104	83
WTR YR 1979	MEAN	81	MAX	133	MIN	36						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	16.0	11.0	7.0	5.0	8.0	18.0	18.0	21.0	25.0	29.0	27.0
2	21.0	16.0	11.0	10.0	5.0	8.0	19.0	19.0	23.0	25.0	29.0	28.0
3	20.0	15.0	11.0	9.0	4.0	9.0	19.0	19.0	23.0	26.0	29.0	28.0
4	22.0	15.0	15.0	6.0	5.0	10.0	17.0	20.0	21.0	25.0	29.0	26.0
5	22.0	15.0	13.0	5.0	5.0	10.0	16.0	20.0	21.0	25.0	29.0	25.0
6	22.0	15.0	13.0	6.0	5.0	11.0	16.0	20.0	21.0	25.0	29.0	25.0
7	20.0	15.0	12.0	6.0	4.0	13.0	15.0	20.0	21.0	23.0	29.0	25.0
8	19.0	15.0	12.0	7.0	4.0	12.0	15.0	21.0	21.0	24.0	29.0	25.0
9	18.0	15.0	14.0	7.0	4.0	12.0	15.0	21.0	21.0	24.0	29.0	24.0
10	17.0	15.0	12.0	6.0	3.0	12.0	15.0	21.0	22.0	23.0	29.0	23.0
11	17.0	15.0	11.0	5.0	2.0	11.0	15.0	21.0	20.0	25.0	28.0	22.0
12	17.0	16.0	9.0	5.0	3.0	11.0	17.0	22.0	20.0	26.0	27.0	23.0
13	18.0	16.0	9.0	5.0	3.0	11.0	18.0	22.0	20.0	27.0	26.0	23.0
14	19.0	16.0	3.0	5.0	3.0	12.0	18.0	21.0	21.0	27.0	26.0	24.0
15	18.0	17.0	8.0	5.0	4.0	12.0	17.0	20.0	20.0	28.0	26.0	24.0
16	16.0	17.0	7.0	5.0	5.0	11.0	16.0	20.0	20.0	28.0	25.0	23.0
17	15.0	17.0	8.0	5.0	4.0	10.0	15.0	19.0	20.0	28.0	25.0	23.0
18	15.0	18.0	7.0	5.0	3.0	11.0	15.0	18.0	21.0	---	25.0	23.0
19	15.0	16.0	7.0	5.0	3.0	12.0	15.0	17.0	23.0	---	26.0	24.0
20	15.0	15.0	6.0	5.0	3.0	12.0	16.0	17.0	23.0	---	27.0	23.0
21	15.0	14.0	9.0	7.0	3.0	13.0	16.0	17.0	21.0	---	26.0	22.0
22	15.0	14.0	8.0	8.0	4.0	13.0	18.0	18.0	22.0	---	25.0	24.0
23	17.0	14.0	8.0	7.0	5.0	13.0	19.0	20.0	24.0	---	26.0	22.0
24	16.0	14.0	8.0	8.0	6.0	15.0	19.0	20.0	24.0	27.0	27.0	20.0
25	15.0	13.0	8.0	8.0	7.0	14.0	19.0	20.0	22.0	27.0	28.0	21.0
26	16.0	11.0	8.0	7.0	7.0	14.0	19.0	19.0	23.0	28.0	28.0	21.0
27	17.0	11.0	7.0	6.0	7.0	13.0	20.0	18.0	23.0	27.0	28.0	21.0
28	16.0	12.0	6.0	6.0	8.0	13.0	20.0	18.0	23.0	28.0	28.0	22.0
29	16.0	12.0	5.0	6.0	---	14.0	19.0	18.0	24.0	28.0	29.0	21.0
30	15.0	11.0	5.0	6.0	---	15.0	19.0	19.0	25.0	27.0	29.0	22.0
31	17.0	---	6.0	5.0	---	17.0	---	20.0	---	28.0	28.0	---
MEAN	17.5	14.5	9.0	6.5	4.5	12.0	17.0	19.5	22.0	26.0	27.5	23.5
WTR YR 1979	MEAN	16.5	MAX	29.0	MIN	2.0						

PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SEDI- SUSP. SIEVE DIAM., # FINE THAN .062 MM
OCT					
03...	0800	400	17	18	--
NOV					
13...	1615	620	15	25	100
DEC					
12...	1200	2510	19	129	90
FEB					
14...	1000	2040	6	33	100
27...	1000	12400	40	1340	82
MAR					
26...	1415	6290	29	493	94
APR					
14...	0915	4210	25	284	90
MAY					
21...	1415	8080	16	349	91
JUN					
12...	1130	8460	62	1420	96
JUL					
09...	1315	542	8	12	87
AUG					
01...	1245	461	65	81	96
29...	1045	281	11	8.3	87

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER QUALITY DATA, PERIOD JULY TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
JUL									
17...	1340	1790	--	7.4	24.0	6.2	26	3.1	400
AUG									
14...	1330	1380	90	7.3	26.0	6.4	26	1.8	40
SEP									
21...	1035	342	90	6.4	24.0	6.7	16	.5	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
30...	0930	267	90	7.0	14.0	6.5	18	2.0	<10
NOV									
30...	1430	1100	80	6.8	12.0	8.5	24	2.6	1100
DEC									
27...	1345	1850	90	6.8	5.0	9.4	21	1.1	70
JAN									
09...	1300	3700	--	6.8	6.0	9.5	31	1.3	350
FEB									
26...	1400	9810	--	6.3	10.0	10.6	26	1.6	920
MAR									
21...	1200	2740	--	6.6	15.0	9.5	20	1.6	20
APR									
17...	1145	4480	--	6.7	16.0	9.5	24	2.2	60
MAY									
04...	1300	1780	--	7.0	22.0	8.3	24	1.6	110
JUN									
27...	1430	13100	--	6.0	24.0	6.8	41	1.5	180
JUL									
04...	1415	538	--	7.3	25.0	7.2	18	1.6	20
AUG									
08...	1400	738	100	7.1	30.0	7.8	21	1.2	80

PAMLICO RIVER BASIN

81

02083800 CONETOE CREEK NEAR BETHEL, N. C.

LOCATION.--Lat 35°46'33", long 77°27'45", Pitt County, Hydrologic Unit 03020103, on right bank 5 ft (2 m) downstream from bridge on Secondary Road 1409, 5.5 mi (8.8 km) downstream from Crisp Creek, and 5.5 mi (8.8 km) west of Bethel.

DRAINAGE AREA.--78.1 mi² (202 km²).

PERIOD OF RECORD.--December 1956 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 30 ft (9 m), from topographic map.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 82 of this report.

AVERAGE DISCHARGE.--22 years, (1957-79) 87.4 ft³/s (2.475 m³/s), 15.20 in/yr (386 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,580 ft³/s (73.1 m³/s) Aug. 23, 1967, gage height, 15.74 ft (4.798 m); minimum daily, 1.3 ft³/s (0.037 m³/s) Nov. 6, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1955 reached a stage of 16.7 ft (5.09 m), from information by local resident (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 470 ft³/s (13.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 28	0730	*933 26.4	*12.27 3.740	June 5	1200	772 21.9	10.97 3.344
Mar. 8	0430	875 24.8	11.92 3.633	June 14	0730	894 25.3	12.05 3.673
May 15	2200	735 20.8	10.61 3.234	June 25	0800	489 13.8	8.04 2.451
May 25	1500	620 17.6	9.46 2.883	Sept. 6	1700	723 20.5	10.49 3.197

Minimum discharge, 1.7 ft³/s (0.048 m³/s) Oct. 13, 14, 15, 16, 20, 21, 22, 23, 24; minimum gage height, 0.06 ft (0.018 m) Nov. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	3.5	29	17	80	623	67	38	328	60	13	6.2
2	6.4	3.5	21	127	72	331	62	33	166	51	22	6.1
3	5.2	3.5	16	276	67	244	64	31	120	44	14	6.8
4	4.0	3.5	14	129	65	205	194	29	527	40	23	6.3
5	3.5	3.0	25	94	62	177	379	35	761	37	15	168
6	3.0	3.0	82	82	57	468	242	42	518	33	12	682
7	3.0	2.6	48	80	62	829	165	35	234	30	12	660
8	3.0	8.0	36	143	70	848	130	31	152	29	11	285
9	3.0	7.1	32	135	82	571	113	28	117	28	10	141
10	2.4	6.3	29	101	78	317	111	51	97	25	9.3	101
11	2.4	6.8	25	84	72	267	93	151	329	23	8.8	81
12	2.4	6.3	23	83	67	256	81	199	769	21	8.7	67
13	1.7	5.6	22	256	73	197	80	199	848	20	8.7	58
14	1.7	4.4	20	286	71	168	104	451	871	19	8.7	59
15	2.2	4.0	19	189	69	151	93	707	488	18	8.3	54
16	1.7	4.0	17	137	73	129	77	660	194	19	8.3	47
17	3.0	4.8	17	116	66	116	68	320	164	18	8.4	42
18	3.0	4.8	17	105	58	108	60	186	134	17	8.7	39
19	2.4	4.4	16	90	64	99	55	348	106	17	8.1	37
20	1.7	4.0	16	87	73	92	50	308	87	16	8.1	33
21	1.7	4.0	16	271	95	86	46	210	75	20	8.0	31
22	1.7	3.5	16	329	199	79	44	160	69	16	7.8	32
23	1.7	4.0	15	187	211	75	41	138	63	15	7.7	31
24	2.4	4.8	16	171	337	127	40	306	75	53	7.0	30
25	2.4	4.4	30	180	458	189	39	581	396	62	6.5	36
26	2.4	4.0	26	140	801	142	45	401	182	25	6.2	32
27	2.4	5.6	23	118	882	111	71	206	119	21	6.0	31
28	2.4	9.0	21	113	906	95	60	145	92	17	6.4	31
29	2.4	12	19	104	---	85	50	121	76	16	9.2	168
30	3.5	57	18	92	---	78	43	129	64	14	7.0	191
31	4.0	---	17	85	---	72	---	180	---	14	6.5	---
TOTAL	87.4	201.4	741	4407	5270	7335	2767	6459	8221	838	304.4	3192.4
MEAN	2.82	6.71	23.9	142	188	237	92.2	208	274	27.0	9.82	106
MAX	6.4	57	82	329	906	848	379	707	871	62	23	682
MIN	1.7	2.6	14	17	57	72	39	28	63	14	6.0	6.1
CFSM	.04	.09	.31	1.82	2.41	3.04	1.18	2.66	3.51	.35	.13	1.36
IN.	.04	.10	.35	2.41	2.51	3.49	1.32	3.08	3.92	.40	.14	1.52
CAL YR 1978	TOTAL	36181.9	MEAN	99.1	MAX 900	MIN 1.7	CFSM 1.27	IN 17.23				
WTR YR 1979	TOTAL	39823.6	MEAN	109	MAX 906	MIN 1.7	CFSM 1.40	IN 18.97				

PAMLICO RIVER BASIN

02083800 CONETOE CREEK NEAR BETHEL, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
JAN				
22...	1100	325	52	46
30...	1645	89	8	1.9
SEP				
05...	1050	41	353	39
06...	1330	684	71	131

PAMLICO RIVER BASIN

83

02084148 CHICOD CREEK AT SECONDARY ROAD 1565 NEAR GRIMESLAND, N. C.

LOCATION.--Lat 35°31'57", long 77°11'13", Pitt County, Hydrologic Unit 03020103, at bridge on Secondary Road 1565, 2.0 mi (3.2 km) upstream from Cow Swamp and 2.2 mi (3.5 km) south of Grimesland.

DRAINAGE AREA.--19 mi² (49 km²), approximately.

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICHO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- CORAL UNITS)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
NOV 29...	1600	.01	176	6.2	11.0	200	2.4	K32	650	57	25
JAN 30...	0915	28	65	6.4	5.0	20	9.3	--	--	21	15
APR 23...	1525	7.8	50	5.9	21.0	70	10.2	--	--	10	6
JUL 11...	1220	.11	63	5.6	21.0	100	4.2	--	--	13	6

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV 29...	14	5.3	8.0	21	.5	7.0	39	0	32	39	33
JAN 30...	5.2	2.0	4.1	28	.4	1.7	7	0	6	4.5	11
APR 23...	2.7	.9	5.4	49	.7	1.3	5	0	4	10	6.4
JUL 11...	3.4	1.2	4.3	36	.5	2.8	9	0	7	36	4.1

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 140 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE (MG/L AS N)	NITRO- GEN, NITRITE (MG/L AS N)	NITRO- GEN, NO2+NO3 (MG/L AS N)
NOV 29...	11	.1	14	165	114	.22	.00	.00	.01	.00
JAN 30...	7.0	.1	4.9	56	43	.08	4.23	.64	.00	.64
APR 23...	6.3	.1	2.8	50	30	.07	1.05	.17	.01	.18
JUL 11...	8.0	.1	8.4	82	37	.11	.02	1.2	.04	1.2

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN+NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV 29...	--	3.4	1.0	--	--	4200	1.0	4.4	--	.13
JAN 30...	.68	--	.37	.00	.37	--	1.0	4.5	--	.03
APR 23...	.21	.6	.66	.29	.37	2000	.84	3.7	2000	.05
JUL 11...	1.2	--	1.5	.00	1.6	--	2.7	12	--	.15

K Results based on colony count outside the acceptable range (non-ideal colony count).

02084148 CHICOD CREEK AT SECONDARY ROAD 1565 NEAR GRIMESLAND, N. C.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

PAMLICO RIVER BASIN

85

02084148 CHICOD CREEK AT SECONDARY ROAD 1565 NEAR GRIMESLAND, N. C.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 29...	.0	.00	.0	.00	.0	.00	1.0	.00	.00	.0
JAN 30...	--	--	--	--	--	--	--	--	--	--
APR 23...	.3	.00	.0	.00	.0	.01	.0	.00	.00	.0
JUL 11...	--	--	--	--	--	--	--	--	--	--
DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 29...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JAN 30...	--	--	--	--	--	--	--	--	--	--
APR 23...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JUL 11...	--	--	--	--	--	--	--	--	--	--
DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)
NOV 29...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JAN 30...	--	--	--	--	--	--	--	--	--	--
APR 23...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JUL 11...	--	--	--	--	--	--	--	--	--	--
DATE	TOXA- PHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)				
NOV 29...	0	0	.00	.0						
APR 23...	0	0	.00	.0						

PAMLICO RIVER BASIN

02084148 CHICOD CREEK AT SECONDARY ROAD 1565 NEAR GRIMESLAND, N. C.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
05...	0815	.25	6	.00
NOV				
24...	1600	.01	17	.00
DEC				
14...	1432	2.6	3	.02
JAN				
31...	0915	2.4	2	.15
FEB				
14...	1350	12	3	.10
MAR				
23...	1525	7.8	5	.11
APR				
05...	1505	76	26	5.3
MAY				
10...	1451	.83	33	.07
JUN				
11...	1220	.11	35	.01

PAMLICO RIVER BASIN

87

02084158 COW SWAMP NEAR GRIMESLAND, N. C.

LOCATION.--Lat 35°32'00", long 77°13'30", Pitt County, Hydrologic Unit 03020103, at bridge on Secondary Road 1756, 1.0 mi (1.6 km) upstream from mouth, and 3.0 mi (4.8 km) southwest of Grimesland.

DRAINAGE AREA.--17 mi² (44 km²), approximately.

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA: WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICHO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- CORALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	CULI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
NOV 29...	1500	1.8	300	7.1	11.0	50	4.4	110	770	91	0
JAN 30...	1130	18	150	7.3	5.9	20	8.9	--	--	50	33
APR 24...	0830	6.7	140	5.9	19.0	65	3.9	--	--	39	16
JUL 11...	1150	.97	155	6.5	21.0	50	2.9	--	--	53	12
AUG 27...	1115	.31	350	6.7	25.5	45	3.4	--	--	78	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV 29...	30	4.0	9.0	15	.4	14	118	0	97	15	23
JAN 30...	15	3.1	6.9	22	.4	3.3	21	0	17	1.7	25
APR 24...	12	2.2	6.5	25	.5	3.2	28	0	23	56	16
JUL 11...	17	2.5	6.6	20	.4	4.5	50	0	41	25	11
AUG 27...	25	3.7	11	19	.5	17	168	0	140	54	6.5

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 29...	16	.1	11	180	166	.24	.87	.59	.06	.65
JAN 30...	11	.1	8.4	105	92	.14	5.10	1.8	.02	1.8
APR 24...	10	.1	8.0	93	79	.13	1.68	1.4	.08	1.5
JUL 11...	13	.2	8.4	199	88	.15	.29	1.6	.10	1.7
AUG 27...	16	.2	9.1	--	172	.23	.14	.07	.03	.10

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN+NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN+TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV 29...	.68	.0	19	2.0	17	3400	20	87	--	.50
JAN 30...	1.9	--	1.4	.10	1.3	--	3.2	14	--	.26
APR 24...	1.6	.4	1.7	.10	1.6	2100	3.2	14	2100	.69
JUL 11...	2.2	--	1.7	.20	1.5	--	3.4	15	--	.59
AUG 27...	.12	--	19	4.0	15	--	19	85	--	2.2

02084158 COW SWAMP NEAR GRIMESLAND, N. C.--Continued

WATER QUALITY DATA: WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

PAMLICO RIVER BASIN

89

02084158 COW SWAMP NEAR GRIMESLAND, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DI-AZINON, TOTAL (UG/L)	DI-AZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DI-ELDRIN, TOTAL (UG/L)	DI-ELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 29...	1.5	.00	.4	.00	.0	.00	.0	.00	.00	.0
JAN 30...	--	--	--	--	--	--	--	--	--	--
APR 24...	1.6	.00	1.2	.00	.0	.01	4.5	.00	.00	.0
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--

DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	LINDANE, TOTAL (UG/L)	LINDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	MALA-THION, TOTAL (UG/L)	MALA-THION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 29...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JAN 30...	--	--	--	--	--	--	--	--	--	--
APR 24...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--

DATE	METH-OXY-CHLOR, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHYL-PARA-THION, TOTAL (UG/L)	METHYL-PARA-THION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHYL-TRI-THION, TOTAL (UG/L)	METHYL-TRI-THION, TOTAL IN BOTTOM MATERIAL (UG/KG)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PARA-THION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PER-THANE, TOTAL (UG/L)
NOV 29...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JAN 30...	--	--	--	--	--	--	--	--	--	--
APR 24...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--

DATE	TOX-APHENE, TOTAL (UG/L)	TOX-APHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRI-THION, TOTAL (UG/L)	TRI-THION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 29...	0	0	.00	.0
APR 24...	0	0	.00	.0

PAMLICO RIVER BASIN

02084158 COW SWAMP NEAR GRIMESLAND, N. C.--Continued

WATER QUALITY DATA WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 05...	0830	.42	8	.01
NOV 15...	0540	.58	9	.01
29...	1500	1.8	5	.02
DEC 14...	1415	4.0	5	.05
JAN 30...	1130	1.5	5	.24
MAR 19...	1330	13	15	.53
APR 24...	0830	0.7	12	.22
JUN 05...	1515	42	63	7.1
JUL 10...	1612	.89	12	.03
11...	1150	.97	12	.03
AUG 27...	1115	.31	15	.01

PAMLICO RIVER BASIN

91

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.

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 (1 km) upstream from Juniper Branch, and 2.8 mi (4.5 km) east-south-east of Simpson.

DRAINAGE AREA.--45 mi² (117 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is National Geodetic Vertical Datum of 1929 (Soil Conservation Service benchmark). Prior to July 25, 1977, at datum 4.92 ft (1.500 m) higher.

REMARKS.--Water-discharge record good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,510 ft³/s (71.1 m³/s) Nov. 7, 1977, gage height, 12.50 ft (3.810 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 14	1930	364 10.3	8.34 2.542	May 24	2230	850 24.1	9.60 2.926
Jan. 22	0300	358 10.1	8.32 2.536	June 4	2030	335 9.49	8.25 2.515
Feb. 26	0830	*1490 42.2	*10.82 3.298	June 12	0600	1250 35.4	10.41 3.173
Apr. 14	0500	753 21.3	9.37 2.856	Sept. 6	1030	468 13.3	8.64 2.633
Apr. 27	0100	658 18.6	9.13 2.783				

No flow Oct. 1, 9-31, Nov. 1-12, Aug. 8-22, 26-31, Sept. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	30	14	37	237	21	63	180	11	4.7	.00
2	6.8	.00	28	39	32	179	19	43	167	10	2.9	.00
3	4.8	.00	31	201	28	135	29	32	86	7.9	1.8	.00
4	2.1	.00	21	194	25	102	140	25	226	6.4	1.1	.00
5	1.3	.00	18	125	23	84	269	27	247	27	.60	.65
6	.91	.00	23	70	20	110	213	26	131	15	.25	427
7	.41	.00	21	50	22	220	131	20	64	9.3	.08	213
8	.09	.00	18	45	29	184	80	16	39	5.8	.00	80
9	.00	.00	16	43	33	126	59	14	27	3.3	.00	36
10	.00	.00	15	39	34	90	52	13	19	2.1	.00	20
11	.00	.00	13	33	31	77	48	13	252	1.6	.00	15
12	.00	.00	11	32	27	79	42	12	1040	1.1	.00	12
13	.00	.27	9.1	137	26	68	125	11	451	8.6	.00	10
14	.00	.27	7.9	327	24	57	655	18	236	7.2	.00	11
15	.00	.20	6.8	322	23	55	386	88	126	2.7	.00	12
16	.00	.20	5.9	221	21	51	234	141	68	63	.00	10
17	.00	.23	5.7	152	19	45	143	79	57	24	.00	7.4
18	.00	.75	5.1	102	16	39	87	49	51	8.8	.00	5.9
19	.00	2.1	4.5	70	22	35	58	113	40	14	.00	4.7
20	.00	1.8	4.1	54	38	32	44	181	28	21	.00	3.7
21	.00	1.2	4.2	177	66	29	35	129	20	17	.00	2.9
22	.00	.95	4.3	337	112	26	28	103	18	21	.00	2.7
23	.00	.85	3.7	230	121	24	24	387	20	84	.26	3.7
24	.00	1.1	6.5	180	164	37	20	559	20	109	.28	5.2
25	.00	1.1	48	220	430	52	17	678	84	106	.05	5.1
26	.00	.95	56	189	1280	53	213	359	76	49	.00	4.3
27	.00	1.2	49	126	645	42	513	209	44	28	.00	4.6
28	.00	3.7	34	95	354	34	269	116	27	18	.00	3.9
29	.00	5.1	24	54	---	29	162	167	18	12	.00	8.7
30	.00	30	18	50	---	26	99	125	13	8.6	.00	31
31	.00	---	15	42	---	23	---	70	---	6.4	.00	---
TOTAL	16.41	51.97	559.5	3474	3702	2380	4215	3886	3875	708.8	12.02	1004.80
MEAN	.53	1.73	18.1	128	132	76.8	141	125	129	22.9	.39	33.5
MAX	6.8	30	56	337	1280	237	655	678	1040	109	4.7	427
MIN	.00	.00	3.7	14	16	23	17	11	13	1.1	.00	.00
CFS	.01	.04	.40	2.84	2.93	1.71	3.13	2.78	2.87	.51	.009	.74
IN.	.01	.04	.40	3.29	3.06	1.97	3.48	3.21	3.20	.59	.01	.83

CAL YR 1978 TOTAL 21990.74 MEAN 60.2 MAX 1790 MIN .00 CFSM 1.34 IN 18.18
WTR YR 1979 TOTAL 24335.80 MEAN 66.8 MAX 1280 MIN .00 CFSM 1.48 IN 20.16

PAMLICO RIVER BASIN

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1975 to current year.

WATER TEMPERATURES: November 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: November 1975 to current year.

INSTRUMENTATION.--Water-quality monitor and sediment pumping sampler since November 1975.

REMARKS.--No flow Oct. 1, 9-31, Nov. 1-12, Aug. 8-22, 26-31, Sept. 1-4.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 398 micromhos Nov. 23, 1978; minimum, 30 micromhos May 5, 1978.

WATER TEMPERATURES: Maximum, 31.5°C Aug. 2, 3, 1979; minimum, 0.0°C Dec. 20, 1975, Jan. 10, 11, 18-25, 1976.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 662 mg/L May 5, 1978; minimum daily mean, 0 mg/L during periods of no flow.

SEDIMENT LOADS: Maximum daily, 3650 tons (3310 tonnes) May 5, 1978; minimum daily, 0.0 tons (0.0 tonnes) during periods of no flow.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 398 micromhos Nov. 23; minimum, 39 micromhos June 12.

WATER TEMPERATURES: Maximum, 31.5°C Aug. 2, 3; minimum, 1.0°C Feb. 10-12, 18-20.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 254 mg/L Apr. 14; minimum daily mean, 0 mg/L during periods of no flow.

SEDIMENT LOADS: Maximum daily, 701 tons (636 tonnes) June 12; minimum daily, 0.0 tons (0.0 tonnes) during periods of no flow.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
NOV 29...	1300	4.6	280	7.5	11.5	50	4.6	660	770	85	37
JAN 29...	1220	60	98	6.2	4.5	30	11.0	--	--	34	26
MAR 19...	1215	35	99	6.0	12.0	40	9.5	--	--	27	17
APR 23...	1200	23	80	5.7	19.0	80	8.1	--	--	24	12
JUN 06...	1230	106	63	5.9	21.0	100	6.7	--	--	20	10
JUL 11...	1500	2.2	95	6.4	22.0	65	4.9	--	--	31	9
AUG 27...	1350	.001	185	6.7	26.0	40	1.8	--	--	59	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV 29...	26	4.9	11	19	.5	12	59	0	48	3.0	40
JAN 29...	9.8	2.2	5.0	23	.4	2.7	9	0	7	9.1	16
MAR 19...	8.1	1.7	5.5	28	.5	2.6	12	0	10	19	14
APR 23...	7.0	1.6	4.6	27	.4	2.1	15	0	12	48	8.7
JUN 06...	5.7	1.3	3.8	27	.4	2.3	12	0	10	24	7.2
JUL 11...	9.1	1.9	5.3	25	.4	3.6	26	0	21	17	5.9
AUG 27...	18	3.3	8.9	22	.5	9.3	74	0	61	24	12

PAMLICO RIVER BASIN

93

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 29...	17	.1	12	206	153	.28	2.56	3.8	.17	4.0
JAN 29...	8.5	.1	6.0	77	61	.10	12.5	1.3	.01	1.3
MAR 19...	9.1	.1	3.4	68	56	.09	6.43	1.1	.02	1.1
APR 23...	7.8	.1	5.4	67	49	.09	4.16	.71	.02	.73
JUN 06...	5.7	.1	6.9	78	44	.11	22.3	.86	.03	.89
JUL 11...	8.4	.1	7.9	82	56	.11	.49	1.4	.02	1.4
AUG 27...	11	.2	6.7	147	106	.20	.00	.57	.06	.63
DATE	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN+AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN+AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN+NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	NITROGEN,TOT IN BOT-TOM MA- TERIAL (MG/KG AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
NOV 29...	4.0	.3	2.5	.10	2.4	1500	6.5	29	--	.33
JAN 29...	1.3	--	.65	.12	.53	--	2.0	8.6	--	.10
MAR 19...	1.1	--	.53	--	--	--	1.6	7.2	--	.22
APR 23...	.74	.2	.76	.35	.41	2200	1.5	6.6	2200	.26
JUN 06...	.94	--	.95	.00	.95	--	1.8	8.1	--	.30
JUL 11...	1.5	--	1.0	.28	.72	--	2.4	11	--	.32
AUG 27...	.73	--	3.5	.00	3.5	--	4.1	18	--	.36
DATE	PHOSPHATE, TOTAL (MG/L AS P04)	PHOSPHORUS TOTAL (MG/L AS P04)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA- TERIAL (UG/G AS AS)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOVERABLE (UG/L AS CU)
NOV 29...	--	1.0	.40	17	2	0	2	--	1	1
JAN 29...	--	.31	.10	--	1	1	0	--	0	0
MAR 19...	--	.67	.19	--	1	0	1	--	3	1
APR 23...	--	.80	.17	140	3	1	2	0	3	0
JUN 06...	--	.92	.14	--	3	2	1	--	4	1
JUL 11...	--	.98	.21	--	2	1	1	--	6	3
AUG 27...	--	1.1	.26	--	2	1	1	--	1	0

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

PAMLICO RIVER BASIN

95

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 29...	.0	.00	.0	.00	.0	.00	.9	.00	.00	.0
JAN 29...	--	--	--	--	--	--	--	--	--	--
MAR 19...	--	--	--	--	--	--	--	--	--	--
APR 23...	2.6	.00	.5	.00	.0	.00	.0	.00	.00	.0
JUN 06...	--	--	--	--	--	--	--	--	--	--
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--

DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 29...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JAN 29...	--	--	--	--	--	--	--	--	--	--
MAR 19...	--	--	--	--	--	--	--	--	--	--
APR 23...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JUN 06...	--	--	--	--	--	--	--	--	--	--
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--

DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)
NOV 29...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JAN 29...	--	--	--	--	--	--	--	--	--	--
MAR 19...	--	--	--	--	--	--	--	--	--	--
APR 23...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JUN 06...	--	--	--	--	--	--	--	--	--	--
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--

DATE	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 29...	0	0	.00	.0
APR 23...	0	0	.00	.0

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	390	286	201	177	104	102	77	73
2	235	131	---	---	285	197	175	135	106	104	80	77
3	259	245	---	---	196	177	138	122	107	106	84	81
4	266	239	---	---	177	167	121	112	110	108	88	84
5	339	267	---	---	167	158	116	112	111	110	90	88
6	359	337	---	---	228	167	119	117	111	110	101	90
7	335	288	---	---	231	196	123	119	123	109	107	96
8	287	245	---	---	196	177	126	122	131	124	96	93
9	---	---	---	---	177	166	130	126	129	117	94	93
10	---	---	---	---	173	167	129	124	120	115	94	93
11	---	---	---	---	175	170	125	124	118	115	99	95
12	---	---	---	---	172	170	126	122	119	115	102	98
13	---	---	231	209	172	171	134	123	117	115	99	95
14	---	---	229	223	174	173	122	102	120	115	97	95
15	---	---	227	222	176	174	100	96	117	117	99	96
16	---	---	227	223	176	175	100	97	118	117	99	98
17	---	---	236	226	178	174	103	100	118	117	98	96
18	---	---	235	226	179	177	106	103	119	115	100	98
19	---	---	233	199	181	179	108	106	129	115	100	98
20	---	---	221	214	183	181	109	107	134	123	101	100
21	---	---	296	221	187	183	108	105	122	114	103	101
22	---	---	394	302	196	187	106	94	115	112	105	103
23	---	---	398	391	197	195	94	92	112	109	106	103
24	---	---	393	362	200	173	99	91	109	106	119	101
25	---	---	362	334	216	180	103	96	106	77	123	106
26	---	---	336	307	188	143	96	94	75	59	105	93
27	---	---	307	296	142	131	96	94	69	59	93	92
28	---	---	293	270	131	129	98	96	73	69	93	91
29	---	---	329	282	129	128	100	98	---	---	96	93
30	---	---	384	239	132	129	101	100	---	---	98	96
31	---	---	---	---	182	132	103	101	---	---	101	98
MONTH	359	131	398	199	390	128	201	91	134	59	123	73
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	109	102	70	67	79	66	75	70	84	77	---	---
2	109	106	72	69	65	60	115	73	90	82	---	---
3	113	100	75	72	62	60	88	78	99	85	---	---
4	122	105	80	75	71	55	82	70	100	94	---	---
5	107	87	94	79	71	62	138	75	102	96	175	106
6	88	83	101	93	66	62	119	96	106	97	103	69
7	84	83	93	90	76	65	96	91	107	101	84	72
8	85	84	92	90	70	66	96	88	---	---	87	85
9	88	85	93	91	69	67	92	89	---	---	89	87
10	91	88	104	93	72	69	100	87	---	---	92	90
11	90	85	114	102	73	45	105	98	---	---	93	91
12	86	85	162	124	47	39	109	101	---	---	96	93
13	88	64	124	114	47	41	273	103	---	---	98	96
14	73	60	114	105	50	47	201	152	---	---	109	99
15	63	60	121	94	50	48	152	146	---	---	115	110
16	65	63	94	74	71	51	147	78	---	---	112	110
17	67	65	74	71	70	60	105	82	---	---	110	109
18	70	67	71	69	69	64	140	105	---	---	111	109
19	72	70	89	72	63	62	150	110	---	---	114	111
20	75	72	114	81	68	62	131	120	---	---	116	114
21	77	75	81	76	67	65	128	113	---	---	123	113
22	79	77	77	67	83	67	125	110	---	---	128	117
23	82	80	73	58	96	83	130	66	122	112	128	122
24	86	82	67	55	82	74	70	59	166	124	132	121
25	89	86	55	50	107	76	62	57	202	168	139	132
26	92	55	56	54	75	66	64	59	---	---	151	136
27	62	54	58	56	65	60	72	60	---	---	153	151
28	62	57	60	57	63	59	73	64	---	---	156	152
29	64	62	76	57	69	62	80	68	---	---	173	137
30	67	65	75	73	73	68	83	71	---	---	282	174
31	---	---	79	75	---	---	78	73	---	---	---	---
MONTH	122	54	162	50	107	39	273	57	202	77	282	69
YEAR	398	39										

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	12.5	11.5	12.0	8.0	4.0	2.0	10.5	9.0
2	20.0	18.5	---	---	11.5	10.0	14.0	12.0	3.5	1.5	12.5	9.5
3	19.5	18.0	---	---	12.0	9.5	12.0	5.0	4.0	2.0	13.5	10.0
4	20.0	18.5	---	---	17.0	12.5	5.0	3.0	7.0	4.0	15.0	11.0
5	20.5	19.0	---	---	17.0	14.0	5.0	3.0	6.0	4.5	15.0	14.0
6	20.5	19.5	---	---	14.0	12.0	6.0	4.5	4.5	3.0	15.5	14.0
7	20.0	16.5	---	---	13.0	10.5	10.0	5.5	3.5	2.5	15.0	13.0
8	16.5	14.5	---	---	16.0	13.0	12.0	10.0	5.5	2.5	13.5	12.5
9	---	---	---	---	19.0	16.0	9.5	5.5	4.5	1.5	14.5	11.0
10	---	---	---	---	17.0	10.0	5.0	3.0	2.0	1.0	15.0	11.5
11	---	---	---	---	9.5	7.5	4.5	2.5	2.5	1.0	14.0	11.0
12	---	---	---	---	8.5	7.5	4.5	3.5	3.5	1.0	12.5	8.0
13	---	---	15.5	15.5	8.0	6.0	7.5	5.0	4.5	2.5	14.0	9.0
14	---	---	15.5	14.5	7.5	6.0	9.0	7.5	3.0	1.5	14.5	12.5
15	---	---	16.0	14.5	6.0	4.5	8.0	5.5	7.5	3.0	13.5	10.5
16	---	---	17.0	16.0	8.0	4.5	6.0	4.0	9.0	7.0	11.5	8.0
17	---	---	17.5	16.5	9.0	7.5	7.0	4.0	7.5	4.0	12.5	7.5
18	---	---	18.5	17.5	7.5	6.0	8.0	6.5	3.5	1.0	13.5	9.5
19	---	---	18.5	16.0	8.0	7.0	6.5	4.0	2.0	1.0	14.5	10.5
20	---	---	16.0	14.0	9.5	8.0	7.5	4.0	3.5	1.0	15.0	11.5
21	---	---	14.0	13.5	12.0	9.5	13.0	8.5	6.5	3.0	15.0	11.0
22	---	---	14.0	13.5	10.5	7.5	12.0	9.0	11.0	7.0	15.0	11.5
23	---	---	14.0	13.5	7.5	5.5	9.0	7.0	11.0	10.0	14.5	12.0
24	---	---	14.5	14.0	10.5	6.0	11.5	8.0	14.5	11.0	17.5	14.5
25	---	---	14.0	11.0	10.5	9.0	10.0	7.0	14.5	13.5	15.5	13.0
26	---	---	11.0	9.0	9.0	7.0	7.0	5.5	13.0	12.0	15.0	11.0
27	---	---	9.5	8.5	8.0	6.5	7.0	4.5	11.5	10.0	14.5	10.5
28	---	---	14.5	10.0	6.0	4.0	7.5	6.0	11.0	8.5	16.0	12.0
29	---	---	14.0	13.0	4.5	2.5	7.0	4.5	---	---	17.5	13.0
30	---	---	13.0	12.5	5.0	3.0	6.5	4.0	---	---	20.5	15.5
31	---	---	---	---	8.0	4.5	5.0	3.5	---	---	21.0	17.0
MONTH	20.5	14.5	18.5	8.5	19.0	2.5	14.0	2.5	14.5	1.0	21.0	7.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	23.0	18.5	19.0	16.0	24.0	22.5	24.5	22.5	31.0	28.0	---	---
2	22.5	19.5	18.5	16.0	25.0	23.0	24.5	22.5	31.5	29.5	---	---
3	21.0	18.5	19.0	16.0	23.5	22.0	25.0	22.5	31.5	30.0	---	---
4	18.0	16.0	21.0	18.5	22.5	20.5	25.0	22.5	31.0	28.5	---	---
5	17.0	16.0	21.0	17.0	21.5	20.0	24.0	22.0	30.0	28.5	27.5	26.5
6	17.5	14.5	18.0	16.0	22.0	20.5	22.5	20.5	28.5	27.5	29.0	27.5
7	16.0	13.0	18.0	16.0	23.0	20.5	21.0	20.0	29.0	28.0	29.0	27.5
8	17.5	12.5	20.0	18.0	23.0	21.0	21.5	19.0	---	---	28.0	25.0
9	19.0	16.0	21.0	19.0	23.5	21.5	22.0	20.0	---	---	25.0	22.0
10	17.0	14.0	21.0	20.5	24.5	22.5	22.0	20.5	---	---	23.0	21.5
11	18.0	13.5	22.5	21.0	24.5	20.5	24.0	22.0	---	---	23.0	21.5
12	19.5	15.5	23.5	22.0	20.5	19.5	25.0	23.0	---	---	24.5	22.5
13	19.5	18.5	24.0	22.5	20.5	19.0	28.0	25.0	---	---	26.5	23.5
14	19.5	17.5	23.5	20.5	20.5	19.5	29.0	27.0	---	---	28.5	26.0
15	18.0	16.5	20.5	19.5	20.0	18.0	28.5	27.0	---	---	27.0	24.0
16	16.0	15.0	20.0	18.5	20.5	19.0	28.0	27.0	---	---	23.5	21.0
17	15.5	13.5	19.0	17.5	20.5	20.0	28.0	26.5	---	---	21.0	20.0
18	16.0	13.0	17.5	16.0	22.5	19.0	28.0	27.0	---	---	22.0	20.0
19	16.0	13.0	16.5	16.0	23.0	21.5	27.0	26.5	---	---	22.5	20.0
20	16.5	13.0	17.0	16.0	22.5	20.0	27.0	26.0	---	---	22.5	20.5
21	17.0	14.0	19.0	17.0	20.5	18.5	28.0	26.0	---	---	23.0	21.0
22	19.0	15.5	19.5	18.5	22.0	19.0	27.5	26.0	---	---	26.5	23.0
23	20.5	18.0	20.5	19.5	24.5	21.5	27.0	25.5	25.5	24.0	26.5	22.0
24	20.5	19.5	21.5	20.5	24.5	23.0	27.0	25.5	26.5	25.0	22.0	20.0
25	20.0	18.5	21.5	20.0	22.5	20.0	28.5	26.0	27.0	26.0	20.0	19.5
26	19.5	18.5	20.0	17.0	20.0	18.5	29.0	27.0	---	---	21.0	20.0
27	20.5	19.0	18.5	16.0	20.5	19.0	29.5	27.5	---	---	22.0	20.0
28	20.0	19.0	19.5	17.0	21.5	19.5	30.0	28.0	---	---	23.0	21.0
29	19.0	17.0	20.5	18.5	22.5	20.0	31.0	28.5	---	---	23.5	22.5
30	18.5	15.5	21.0	19.0	23.0	21.0	30.5	29.0	---	---	24.0	22.5
31	---	---	22.5	20.5	---	---	30.5	27.5	---	---	---	---
MONTH	23.0	12.5	24.0	16.0	25.0	18.0	31.0	19.0	31.5	24.0	29.0	19.5
YEAR	31.5	1.0										

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, N. C.--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH														
1	0	.00	0	.00	26	2.1	6	.23	6	.60	10	6.4													
2	56	1.0	0	.00	15	1.1	18	3.2	5	.43	10	4.8													
3	23	.30	0	.00	12	1.0	49	27	3	.23	11	4.0													
4	11	.06	0	.00	9	.51	28	15	5	.34	9	2.5													
5	11	.04	0	.00	6	.29	14	4.7	5	.31	8	1.8													
6	7	.02	0	.00	7	.43	7	1.3	8	.43	12	3.6													
7	6	.01	0	.00	9	.51	7	.95	4	.24	20	12													
8	6	.00	0	.00	6	.29	6	.73	5	.39	16	7.9													
9	0	.00	0	.00	6	.26	6	.70	6	.53	9	3.1													
10	0	.00	0	.00	5	.20	5	.53	11	1.0	6	1.5													
11	0	.00	0	.00	4	.14	5	.45	18	1.5	8	1.7													
12	0	.00	0	.00	4	.12	7	.60	7	.51	10	2.1													
13	0	.00	14	.01	7	.17	22	10	4	.28	9	1.7													
14	0	.00	11	.01	7	.15	53	47	4	.26	8	1.2													
15	0	.00	9	.00	4	.07	27	23	4	.25	7	1.0													
16	0	.00	9	.00	3	.05	10	6.0	5	.28	7	.96													
17	0	.00	10	.01	3	.05	9	3.7	4	.21	7	.85													
18	0	.00	11	.02	3	.04	6	1.7	6	.26	6	.63													
19	0	.00	9	.05	2	.02	8	1.5	5	.30	7	.66													
20	0	.00	6	.03	3	.03	6	.87	4	.41	6	.52													
21	0	.00	5	.02	3	.03	38	24	7	1.2	6	.47													
22	0	.00	3	.01	3	.03	43	39	9	2.7	6	.42													
23	0	.00	3	.01	4	.04	22	14	9	2.9	8	.52													
24	0	.00	3	.01	9	.46	13	6.3	10	4.4	16	1.6													
25	0	.00	2	.01	45	5.8	20	12	37	56	14	2.0													
26	0	.00	2	.01	26	3.9	16	8.2	142	499	13	1.9													
27	0	.00	3	.01	19	2.5	9	3.1	41	71	10	1.1													
28	0	.00	11	.11	12	1.1	7	1.6	15	14	8	.73													
29	0	.00	14	.19	8	.52	6	1.0	---	---	8	.63													
30	0	.00	25	2.0	7	.34	6	.81	---	---	8	.56													
31	0	.00	---	---	6	.26	6	.68	---	---	8	.50													
TOTAL	---	1.43	---	2.51	---	22.51	---	259.85	---	659.96	---	69.35													
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER															
1	8	.45	14	2.4	62	30	18	.53	12	.15	0	.00													
2	8	.41	13	1.5	43	19	17	.46	15	.12	0	.00													
3	12	1.1	12	1.0	24	5.6	14	.30	11	.05	0	.00													
4	35	13	12	.81	216	172	35	.79	11	.03	0	.00													
5	24	17	20	1.5	97	67	123	9.0	11	.02	40	15													
6	15	8.6	15	1.1	32	11	30	1.2	9	.01	46	53													
7	12	4.2	12	.65	30	5.2	23	.58	10	.00	19	11													
8	9	1.9	12	.52	26	2.7	19	.30	0	.00	16	3.5													
9	9	1.4	12	.45	21	1.5	17	.15	0	.00	11	1.1													
10	10	1.4	9	.32	24	1.2	16	.09	0	.00	11	.59													
11	10	1.3	11	.39	222	309	14	.06	0	.00	14	.57													
12	8	.91	14	.45	224	701	13	.04	0	.00	15	.49													
13	143	127	12	.36	36	44	24	.66	0	.00	13	.35													
14	254	463	20	1.3	26	17	14	.27	0	.00	14	.42													
15	65	68	79	19	19	6.5	13	.09	0	.00	13	.42													
16	26	16	31	12	12	2.2	31	5.4	0	.00	13	.35													
17	15	5.8	18	3.8	18	2.8	27	1.7	0	.00	18	.36													
18	12	2.8	14	1.9	16	2.2	24	.57	0	.00	14	.22													
19	12	1.9	35	12	17	1.8	35	1.3	0	.00	14	.18													
20	9	1.1	16	7.8	18	1.4	31	1.8	0	.00	12	.12													
21	11	1.0	13	4.5	17	.92	26	1.2	0	.00	8	.06													
22	10	.76	15	4.2	23	1.1	54	3.1	0	.00	7	.05													
23	13	.84	150	164	20	1.1	73	17	7	.00	7	.07													
24	13	.70	175	319	43	3.2	39	11	6	.00	9	.13													
25	11	.50	125	240	132	30	37	11	5	.00	10	.14													
26	214	236	34	33	35	7.2	21	2.8	0	.00	8	.09													
27	157	240	21	12	21	2.5	14	1.1	0	.00	8	.10													
28	34	25	18	5.6	15	1.1	12	.58	0	.00	9	.09													
29	26	11	120	60	14	.68	13	.42	0	.00	13	.31													
30	16	4.3	19	6.4	16	.56	12	.28	0	.00	31	2.6													
31	---	---	23	4.3	---	---	10	.17	0	.00	---	---													
TOTAL	---	1257.37	---	922.25	---	1451.46	---	73.94	---	0.38	---	91.31													
TOTAL LOAD FOR YEAR:		4912.32		TONS.																					

PAMLICO RIVER BASIN

99

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.

LOCATION.--Lat 35°33'55", long 77°14'43", Pitt County, Hydrologic Unit 03020103, on right bank at downstream side of bridge on Secondary Road 1766, 0.8 mi (1.3 km) upstream from mouth, and 1.8 mi (2.9 km) southwest of Simpson.

DRAINAGE AREA.--7.5 mi² (19.4 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is National Geodetic Vertical Datum of 1929 (Soil Conservation Service, bench mark). Prior to July 25, 1977, at datum 11.41 ft (3.478 m) higher.

REMARKS.--Water-discharge record good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 996 ft³/s (28.2 m³/s) May 5, 1978, gage height, 16.83 ft (5.130 m), present datum; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft³/s (0.85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
Jan. 21	2030	44	1.25	13.85	4.221	May 29	0845	34	0.96	13.45	4.100
Feb. 26	0430	171	4.84	15.05	4.587	June 4	1615	85	2.41	14.24	4.340
Mar. 7	0100	37	1.05	13.71	4.179	June 11	1830	*740	21.0	*16.63	5.069
Apr. 13	2345	36	1.02	13.63	4.154	July 24	0515	38	1.08	13.74	4.188
Apr. 26	2000	171	4.84	14.94	4.554	Sept. 5	1645	309	8.75	15.75	4.801
May 25	0915	46	1.30	13.62	4.151						

Minimum discharge, 0.01 ft³/s (<0.001 m³/s) Aug. 11, gage height, 12.36 ft (3.767 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.09	8.0	2.1	8.3	17	6.1	9.7	21	3.4	.96	.50
2	.73	.10	3.6	12	7.3	16	5.7	7.3	16	2.6	.66	.66
3	.44	.09	2.5	20	6.8	14	12	5.9	10	1.9	.50	.60
4	.26	.21	2.1	11	6.7	12	27	4.6	49	3.6	.80	.55
5	.16	.27	3.6	7.2	6.6	12	22	13	24	18	.66	126
6	.20	.28	7.2	6.1	6.2	24	16	12	20	4.5	.40	59
7	.15	.27	3.6	5.6	7.7	32	12	6.0	17	2.2	.23	18
8	.11	1.3	2.5	7.0	9.7	21	11	4.0	13	1.7	.14	11
9	.07	1.5	2.6	6.4	8.3	17	9.3	2.9	10	1.1	.11	7.0
10	.06	1.1	2.7	5.3	7.5	15	9.0	4.4	8.7	.90	.10	5.1
11	.09	1.0	2.2	4.7	7.2	15	7.0	8.0	241	1.4	.12	4.2
12	.10	.78	1.9	6.3	7.0	15	6.4	5.3	136	.96	3.2	3.6
13	.09	.72	1.6	19	7.0	12	15	5.9	29	1.3	6.1	3.4
14	.15	.61	1.7	26	6.3	11	29	7.3	23	1.0	1.3	7.0
15	.12	.61	1.7	18	6.2	12	17	21	20	.80	.72	4.4
16	.11	.69	1.6	14	6.2	9.8	12	11	19	4.4	.23	3.0
17	.10	.71	1.7	11	5.6	8.8	12	4.9	21	2.0	.16	2.6
18	.11	.97	1.7	9.8	4.7	8.4	7.5	2.9	18	1.3	.21	2.4
19	.09	1.7	1.6	8.4	8.1	7.9	6.8	24	16	2.1	.16	2.1
20	.07	1.0	1.7	8.1	10	7.5	5.8	20	12	2.4	.14	1.8
21	.05	.84	1.9	29	12	7.4	4.7	14	9.0	2.6	.14	1.7
22	.06	.80	1.9	27	14	6.9	3.8	14	10	3.6	1.0	2.3
23	.05	.80	1.7	16	13	6.7	3.4	30	7.9	9.4	.96	2.6
24	.05	.96	4.6	18	16	12	2.9	36	10	24	.80	2.8
25	.04	.83	8.7	20	35	12	2.6	42	20	9.3	.55	3.0
26	.05	.70	4.9	15	108	8.5	66	26	11	4.0	.40	3.0
27	.06	.87	3.1	12	33	7.3	52	16	7.1	2.8	.29	2.4
28	.05	1.7	2.4	11	22	7.0	24	8.6	5.8	2.1	.29	2.0
29	.06	2.8	2.1	10	---	6.7	17	28	4.4	1.4	.45	6.6
30	.07	13	2.0	8.9	---	6.4	12	18	3.4	1.2	.40	15
31	.06	---	2.0	8.4	---	6.1	---	11	---	1.1	.33	---
TOTAL	4.06	37.30	91.1	383.3	396.4	374.4	434.0	423.7	812.3	119.06	22.51	304.31
MEAN	.13	1.24	2.94	12.4	14.2	12.1	14.5	13.7	27.1	3.84	.73	10.1
MAX	.73	13	8.7	29	108	32	66	42	241	24	6.1	126
MIN	.04	.09	1.6	2.1	4.7	6.1	2.6	2.9	3.4	.80	.10	.50
CFSM	.02	.17	.39	1.65	1.89	1.61	1.93	1.83	3.61	.51	.10	1.35
IN.	.02	.18	.45	1.90	1.97	1.86	2.15	2.10	4.03	.59	.11	1.51

CAL YR 1978	TOTAL	3891.66	MEAN	10.7	MAX	385	MIN	.00	CFSM	1.43	IN	19.30
WTR YR 1979	TOTAL	3402.44	MEAN	9.32	MAX	241	MIN	.04	CFSM	1.24	IN	16.87

PAMLICO RIVER BASIN

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
NOV 29...	1415	1.1	163	7.3	11.0	60	5.6	440	380	54	22
JAN 29...	1440	11	142	6.4	6.5	10	11.0	--	--	50	42
APR 24...	1320	3.0	120	5.9	20.0	70	6.8	--	--	37	18
JUL 11...	1055	1.5	130	6.4	21.5	50	4.9	--	--	46	19
AUG 27...	1545	.24	180	6.6	27.0	60	3.3	--	--	76	7

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV 29...	17	2.7	8.2	24	.5	3.2	38	0	31	3.0	20
JAN 29...	14	3.6	6.6	21	.4	2.8	9	0	7	5.7	25
APR 24...	11	2.3	6.4	25	.5	3.0	23	0	19	46	16
JUL 11...	14	2.6	5.9	21	.4	3.1	33	0	27	21	13
AUG 27...	25	3.4	6.8	15	.3	4.6	85	0	70	34	8.5

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 29...	15	.1	11	132	97	.18	.39	.23	.02	.25
JAN 29...	12	.1	7.0	101	88	.14	3.00	2.7	.00	2.7
APR 24...	11	.1	5.8	84	73	.11	.68	1.3	.02	1.3
JUL 11...	14	.2	8.9	100	78	.14	.40	1.4	.02	1.4
AUG 27...	10	.2	12	150	114	.20	.10	.24	.04	.28

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN+NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV 29...	.26	.0	.59	.01	.58	3000	.84	3.7	--	.09
JAN 29...	2.7	--	.42	.05	.37	--	3.1	14	--	.05
APR 24...	1.3	1.0	.72	.13	.59	660	2.0	8.9	661	.18
JUL 11...	1.5	--	.84	.08	.76	--	2.2	9.9	--	.20
AUG 27...	.27	--	.86	.00	.86	--	1.1	5.0	--	.17

101

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

PAMLICO RIVER BASIN

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 29...	.7	.00	.0	.00	.0	.00	.7	.00	.00	.0
JAN 29...	--	--	--	--	--	--	--	--	--	--
APR 24...	1.2	.00	1.2	.00	.0	.00	.0	.00	.00	.0
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--

DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 29...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JAN 29...	--	--	--	--	--	--	--	--	--	--
APR 24...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--

DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)
NOV 29...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JAN 29...	--	--	--	--	--	--	--	--	--	--
APR 24...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JUL 11...	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--

DATE	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 29...	0	0	.00	.0
APR 24...	0	0	.00	.0

PAMLICO RIVER BASIN

103

02084164 JUNIPER BRANCH NEAR SIMPSON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
05...	1245	.17	6	.00
NOV				
06...	1240	.23	3	.00
15...	1102	.61	4	.01
29...	1415	1.1	3	.01
DEC				
14...	1201	1.5	3	.01
JAN				
29...	1440	11	5	.15
MAR				
19...	1204	3.0	5	.11
APR				
24...	1320	3.0	9	.07
MAY				
25...	1255	45	37	4.5
JUN				
05...	1210	23	24	1.5
JUL				
11...	1025	1.5	7	.03
AUG				
27...	1545	.24	6	.00
SEP				
05...	1354	182	433	213
05...	1702	309	223	186
06...	0830	61	51	8.4

02084500 HERRING RUN NEAR WASHINGTON, N. C.

LOCATION.--Lat 35°34'03", long 77°01'09", Beaufort County, Hydrologic Unit 03020104, on left bank 10 ft (3 m) downstream from bridge on Secondary Road 1506, 400 ft (122 m) upstream from Pineywood Branch, 1.2 mi (1.9 km) upstream from mouth, and 2.8 mi (4.5 km) northeast of Washington.

DRAINAGE AREA.--About 15 mi² (39 km²).

PERIOD OF RECORD.--Occasional low-flow measurements in 1949. January 1950 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 2 ft (0.6 m), from topographic map. Prior to May 8, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good. Runoff affected by ditches and canals above station.

AVERAGE DISCHARGE.--29 years, 10.6 ft³/s (0.300 m³/s), 9.60 in/yr (244 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 620 ft³/s (17.6 m³/s) Sept. 13, 1964, gage height, 14.85 ft (4.526 m) from floodmark; minimum, 0.50 ft³/s (0.014 m³/s) Sept. 27, 28, 29, 30, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1946 reached a stage of 17 ft (5.2 m), from information by local resident (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 120 ft³/s (3.40 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 25	2400	*267 7.56	*11.58 3.530	May 14	2230	176 4.98	10.23 3.118
Apr. 13	1700	140 3.96	9.60 2.926	May 22	1900	219 6.20	10.90 3.322
Apr. 26	1400	232 6.57	11.08 3.377	May 24	1930	188 5.32	10.43 3.179

Minimum discharge, 0.54 ft³/s (0.015 m³/s) several days in October, November, July and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	.79	3.3	1.5	11	38	3.3	20	23	3.9	1.4	.63
2	1.1	.76	2.0	17	9.4	32	3.0	13	15	3.2	1.1	.62
3	.74	.77	1.4	27	8.4	27	14	8.7	11	2.7	1.9	.58
4	.67	.76	1.1	15	7.8	23	42	6.6	37	1.9	3.3	.59
5	.61	.72	1.6	9.1	7.0	20	37	8.1	31	1.1	2.7	13
6	.59	.59	2.3	6.7	6.5	26	26	7.9	21	.90	1.9	10
7	.59	.58	1.9	5.9	8.2	35	18	6.4	13	.79	1.3	3.9
8	.59	1.1	1.6	14	12	29	13	5.1	8.9	.74	1.0	2.7
9	.59	.67	1.4	13	11	23	11	4.2	6.7	.69	.87	1.8
10	.59	.72	1.2	8.6	9.4	19	9.3	10	5.4	.64	.79	1.2
11	.62	.66	1.0	6.4	8.0	18	7.2	6.5	24	.64	1.4	1.0
12	.64	.64	.93	8.1	7.4	18	6.1	10	34	.66	1.9	.92
13	.64	.59	.88	39	7.1	14	47	15	20	.64	1.0	.92
14	.69	.59	.85	56	6.3	12	56	64	13	.62	.79	1.0
15	.68	.60	.79	33	6.1	11	36	96	7.9	.61	.70	.98
16	.69	.58	.79	24	5.8	8.3	28	57	5.9	.60	.64	.83
17	.67	.61	.77	19	5.2	7.0	21	41	19	.58	.67	.83
18	.69	.63	.74	16	4.8	6.3	14	34	21	.63	.64	.82
19	.69	.65	.74	12	14	5.7	9.8	80	14	8.5	.64	.81
20	.69	.64	.74	11	21	5.2	7.2	51	8.3	3.9	.72	.79
21	.74	.63	.77	62	22	4.8	5.9	40	5.5	3.5	1.0	.81
22	.74	.63	.74	38	24	4.4	4.9	74	4.9	4.2	.83	.85
23	.75	.63	.71	26	23	4.3	4.4	69	4.2	5.0	.66	.82
24	.71	.67	3.3	57	59	11	5.8	129	8.5	19	.63	.70
25	.76	.66	5.1	49	126	13	5.5	98	11	15	.62	.70
26	.76	.60	3.6	33	149	8.9	89	50	9.1	7.7	.62	.64
27	.83	.75	2.8	25	71	6.6	74	38	6.1	4.9	1.3	.62
28	.84	.66	2.2	22	50	5.5	49	27	5.0	3.7	.91	.63
29	.87	3.1	1.8	19	---	4.2	39	22	4.1	3.0	.66	1.2
30	.81	9.1	1.6	15	---	3.9	29	18	3.5	2.4	.66	1.4
31	.79	---	1.5	13	---	3.6	---	20	---	1.7	.67	---
TOTAL	23.97	31.08	50.15	701.3	700.4	447.7	715.4	1119.5	401.0	104.04	33.92	52.29
MEAN	.77	1.04	1.62	22.6	25.0	14.4	23.8	36.1	13.4	3.36	1.09	1.74
MAX	2.6	9.1	5.1	62	149	38	89	129	37	19	3.3	13
MIN	.59	.58	.71	1.5	4.8	3.6	3.0	4.2	3.5	.58	.62	.58

CAL YR 1978 TOTAL 3614.37 MEAN 9.92 MAX 183 MIN .50
WTR YR 1979 TOTAL 4380.75 MEAN 12.0 MAX 149 MIN .58

PAMLICO RIVER BASIN

105

02084540 DURHAM CREEK AT EDWARD, N. C.

LOCATION.--Lat 35°19'25", long 76°52'26", Beaufort County, Hydrologic Unit 03020104, on left bank 5 ft (2 m) downstream from bridge on Secondary Road 1949, at Edward, and 6.8 mi (10.9 km) upstream from mouth.

DRAINAGE AREA.--About 26 mi² (67 km²).

PERIOD OF RECORD.--Occasional low-flow measurements water years 1950-54, 1956-65. August 1965 to current year.

REVISED RECORDS.--WRD N. C. 1974: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.19 ft (0.058 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Jan. 28 to Feb. 26, which are poor. Runoff affected by ditches and canals above station. Suspended sediment records for the current year are published on page 106 of this report.

AVERAGE DISCHARGE.--14 years, 40.1 ft³/s (1.136 m³/s), 25.93 in/yr (659 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,070 ft³/s (58.6 m³/s) Oct. 1, 1971, gage height, 13.24 ft (4.036 m); no flow at times many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 300 ft³/s (8.50 m³/s) Feb. 26, gage height, 8.83 ft (2.691 m) from flood marks. No flow Oct. 1 to Nov. 29.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		.00	2.7	14	35	137	22	74	24	9.7	10	2.8
2		.00	1.4	30	30	114	20	53	20	7.4	7.4	2.4
3		.00	2.3	117	28	96	19	37	17	5.3	5.8	2.0
4		.00	2.2	123	26	82	23	28	24	4.2	5.0	1.8
5		.00	2.6	104	24	71	25	25	31	4.4	10	5.5
6		.00	4.5	80	22	89	23	24	25	3.9	7.0	15
7		.00	4.3	67	21	162	19	21	22	3.0	5.0	36
8		.00	3.5	86	24	150	17	18	18	2.2	3.5	39
9		.00	3.5	104	27	126	21	15	15	1.7	2.5	34
10		.00	3.2	93	25	108	37	15	12	1.2	1.5	28
11		.00	2.8	78	24	96	28	21	12	1.1	2.2	22
12		.00	2.5	70	22	92	22	18	20	.87	3.0	19
13		.00	2.4	103	21	80	21	16	17	.63	2.5	16
14		.00	2.2	132	20	70	43	18	14	.45	1.8	15
15		.00	2.0	123	19	67	52	56	11	.44	1.4	16
16		.00	1.9	102	19	58	44	53	9.7	.69	1.1	16
17		.00	1.9	85	17	50	34	33	10	.42	.90	14
18		.00	1.6	74	20	44	26	24	10	.27	.80	12
19		.00	1.7	63	22	38	22	38	8.4	.29	.65	11
20		.00	1.7	55	25	33	19	51	7.1	.69	1.3	9.1
21		.00	1.4	90	32	29	16	42	6.0	.96	2.0	8.2
22		.00	1.8	130	36	26	14	35	5.3	2.7	3.0	8.5
23		.00	1.8	116	55	24	13	48	4.7	3.1	2.0	12
24		.00	6.5	119	120	36	11	104	19	6.0	1.4	14
25		.00	1.4	150	160	54	10	147	123	26	1.0	16
26		.00	2.0	134	290	46	21	97	90	48	2.0	18
27		.00	1.9	111	245	38	58	65	51	18	3.0	18
28		.00	1.5	90	176	32	57	41	30	8.6	3.7	17
29		.00	1.8	70	---	28	77	35	18	5.8	3.9	27
30		.00	1.7	60	---	25	90	34	11	9.0	3.7	87
31		---	15	40	---	23	---	29	---	13	3.1	---
TOTAL	.00	.06	136.37	2813	1985	2124	904	1315	685.2	190.01	102.15	542.3
MEAN	.000	.002	6.01	90.7	56.6	68.5	30.1	42.4	22.8	6.13	3.30	18.1
MAX	.00	.06	20	150	290	162	90	147	123	48	10	87
MIN	.00	.00	.27	14	17	23	10	15	4.7	.27	.65	1.8
CFS#	.000	.000	.29	4.32	2.70	3.26	1.43	2.02	1.09	.29	.16	.86
IN#	.00	.00	.33	4.98	2.81	3.76	1.60	2.33	1.21	.34	.18	.96

CAL YR 1978 TOTAL 14013.90 MEAN 38.4 MAX 525 MIN .00 CFSM 1.83 IN 24.82
 YR 1979 TOTAL 10447.09 MEAN 28.6 MAX 290 MIN .00 CFSM 1.36 IN 18.51

PAMLICO RIVER BASIN

02084540 DURHAM CREEK AT EDWARD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
JAN				
24...	1655	157	2	.85
FEB				
26...	1236	432	16	19
26...	1420	432	15	17
27...	0820	372	2	2.0
27...	1435	340	2	1.8
28...	0730	261	3	2.1
MAR				
01...	1330	174	2	.94
02...	0940	140	1	.38
12...	1340	97	10	2.6

PAMLICO RIVER BASIN

107

02084556 NORTH LAKE CANAL, ABOVE PUNGO LAKE, NEAR WENONA, N. C.

LOCATION.--Lat 35°43'35", long 76°31'01", Washington County, Hydrologic Unit 03020104, Pungo National Wildlife Refuge (revised), at confluence with Allen Canal, and 6.9 mi (11.1 km) east of Wenona.

DRAINAGE AREA.--0.29 mi² (0.75 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1976 to December 1979 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 8 ft (2.4 m), from topographic map.

REMARKS.--Water-discharge record fair above 3 ft³/s (0.085 m³/s), and good below. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7.2 ft³/s (0.20 m³/s) May 25, 1977, gage height, 11.62 ft (3.557 m); no flow Aug. 30 to Sept. 15, 28-30, Oct. 1-25, 1977, Sept. 10 to Dec. 9, 1978, Aug. 4-21, 1979, Nov. 1, 2, 6, 7, 23-25, 1979.

EXTREMES FOR CURRENT PERIOD.--Water year 1979: Maximum discharge, 2.8 ft³/s (0.079 m³/s) Feb. 26, gage height, 9.78 ft (2.981 m); no flow Oct. 1 to Dec. 9, Aug. 4-21.

October to December 1979: Maximum discharge during period, 0.06 ft³/s (0.002 m³/s) Oct. 1, stage falling, peak occurred Sept. 30, 1979, maximum peak discharge, 0.06 ft³/s (0.002 m³/s) Oct. 3, gage height 8.74 ft (2.66 m); no flow Nov. 1, 2, 6, 7, 23-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.04	.34	1.7	.13	.18	.30	.07	.01	.01
2	.00	.00	.00	.74	.27	1.3	.11	.15	.25	.07	.01	.01
3	.00	.00	.00	2.2	.25	1.1	.16	.13	.21	.05	.01	.01
4	.00	.00	.00	1.1	.23	.90	.35	.12	.22	.04	.00	.02
5	.00	.00	.00	.56	.21	.74	.38	.25	.20	.05	.00	.16
6	.00	.00	.00	.41	.18	1.3	.32	.27	.17	.04	.00	.22
7	.00	.00	.00	.34	.29	2.1	.26	.22	.14	.03	.00	.14
8	.00	.00	.00	.87	.30	2.0	.23	.19	.12	.03	.00	.08
9	.00	.00	.00	.74	.28	1.5	.22	.16	.11	.03	.00	.06
10	.00	.00	.01	.58	.26	1.1	.19	.19	.10	.03	.00	.05
11	.00	.00	.01	.47	.23	.97	.16	.26	.12	.03	.00	.04
12	.00	.00	.01	.54	.22	.78	.15	.24	.13	.02	.00	.03
13	.00	.00	.01	1.6	.20	.65	.24	.24	.11	.02	.00	.03
14	.00	.00	.01	2.0	.18	.57	.54	.79	.09	.02	.00	.03
15	.00	.00	.01	1.5	.18	.48	.44	2.3	.08	.02	.00	.03
16	.00	.00	.01	1.1	.17	.41	.34	2.2	.07	.01	.00	.03
17	.00	.00	.02	.87	.16	.36	.28	1.7	.08	.02	.00	.02
18	.00	.00	.02	.70	.16	.33	.24	1.1	.08	.02	.00	.02
19	.00	.00	.02	.57	.36	.30	.21	1.1	.07	.03	.00	.02
20	.00	.00	.01	.52	.43	.27	.18	1.2	.06	.03	.00	.02
21	.00	.00	.01	1.2	.41	.24	.16	1.0	.06	.04	.00	.02
22	.00	.00	.01	1.1	.45	.22	.15	.88	.07	.04	.01	.02
23	.00	.00	.01	.84	.48	.21	.13	.81	.06	.04	.01	.02
24	.00	.00	.05	.76	.73	.27	.13	.83	.06	.03	.03	.02
25	.00	.00	.11	.67	2.0	.27	.12	.90	.07	.03	.02	.04
26	.00	.00	.07	.56	2.5	.22	.22	.73	.06	.02	.02	.03
27	.00	.00	.06	.50	2.2	.20	.34	.58	.05	.02	.01	.03
28	.00	.00	.05	.47	2.0	.18	.29	.48	.05	.02	.01	.02
29	.00	.00	.04	.42	---	.16	.25	.40	.04	.01	.02	.03
30	.00	.00	.04	.39	---	.15	.20	.34	.03	.01	.01	.06
31	.00	---	.04	.36	---	.14	---	.31	---	.01	.01	---
TOTAL	.00	.00	.63	24.72	15.67	21.12	7.12	20.25	3.26	.93	.18	1.32
MEAN	.000	.000	.020	.80	.56	.68	.24	.65	.11	.030	.006	.044
MAX	.00	.00	.11	2.2	2.5	2.1	.54	2.3	.30	.07	.03	.22
MIN	.00	.00	.00	.04	.16	.14	.11	.12	.03	.01	.00	.01
CFS4	.000	.000	.07	2.76	1.93	2.35	.83	2.24	.38	.10	.02	.15
IN.	.00	.00	.08	3.16	2.00	2.70	.91	2.59	.42	.12	.02	.17
CAL YR 1978	TOTAL	176.02	MEAN	.48	MAX	4.7	MIN	.00	CFSM	1.66	IN	22.50
WTR YR 1979	TOTAL	95.20	MEAN	.26	MAX	2.5	MIN	.00	CFSM	.90	IN	12.17

PAMLICO RIVER BASIN

02084556 NORTH LAKE CANAL, ABOVE PUNGO LAKE, NEAR WENONA, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER TO DECEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.00	.03									
2	.05	.00	.03									
3	.05	.02	.02									
4	.04	.01	.02									
5	.04	.01	.02									
6	.03	.00	.02									
7	.03	.00	.03									
8	.02	.01	.03									
9	.02	.01	.04									
10	.02	.01	.04									
11	.02	.01	.04									
12	.02	.01	.04									
13	.02	.02	.04									
14	.02	.02	.04									
15	.02	.02	.04									
16	.02	.02	.04									
17	.01	.02	.04									
18	.01	.02	.04									
19	.01	.02	.04									
20	.01	.01	.04									
21	.01	.01	.04									
22	.01	.01	.04									
23	.01	.00	.04									
24	.02	.00	.03									
25	.02	.00	.04									
26	.01	.03	.04									
27	.01	.05	.04									
28	.01	.04	.04									
29	.01	.03	.04									
30	.01	.03	.04									
31	.01	---	.03									
TOTAL	.65	.44	1.10									
MEAN	.021	.015	.035									
MAX	.06	.05	.04									
MIN	.01	.00	.02									
CFSM	.07	.05	.12									
IN.	.08	.06	.14									

CAL YR 1979 TOTAL 96.76 MEAN .27 MAX 2.5 MIN .00 CFSM .93 IN 12.37

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1976 to September 1979.

WATER TEMPERATURES: June 1976 to September 1979.

INSTRUMENTATION.--Water-quality monitor since June 1976.

REMARKS.--No flow from Oct. 1-31, Nov. 1-30, Dec. 1-9, 1978, Aug. 4-21, 1979. Malfunctions of water-quality monitor caused some loss of daily records during December, May, June, July, August and September.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 195 micromhos Nov. 9, 1977; minimum, 42 micromhos Nov. 17, 1976.

WATER TEMPERATURES: Maximum, 39.0°C July 9, 1977, July 22, 1978, July 17, 1979; minimum, 0.0°C Nov. 24, Dec. 3, 4, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 170 micromhos Feb. 27; minimum recorded, 51 micromhos July 19.

WATER TEMPERATURES: Maximum recorded, 39.0°C July 17; minimum recorded, 2.5°C Dec. 29, 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
DEC 20...	1030	.01	73	4.6	8.5	200	7.9	120	580	42	80
JAN 31...	1110	.16	115	3.8	6.0	500	4.4	7	--	--	--
MAR 12...	1345	.78	111	3.2	14.0	700	4.6	160	98	40	K22
MAY 01...	0900	.17	85	3.8	16.5	500	4.9	160	K120	K90	K110
JUN 12...	1200	.15	69	4.2	19.5	500	4.8	160	39	35	22
JUL 16...	1345	.01	78	5.7	32.5	300	1.2	120	>80	K130	73
SEP 05...	1050	.17	60	4.4	23.0	300	4.5	95	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
DEC 20...	16	12	--	--	4.1	1.3	4.6	37	.5	.9	5
JAN 31...	11	11	1.0	50	2.9	.8	3.7	43	.5	.2	0
MAR 12...	9	9	1.0	50	2.1	.8	3.4	46	.5	.1	0
MAY 01...	13	13	.9	45	3.6	.9	3.8	39	.5	.1	0
JUN 12...	13	13	.7	35	3.9	.9	4.3	41	.5	.1	0
JUL 16...	19	13	--	--	5.5	1.3	7.3	45	.7	.5	7
SEP 05...	9	9	.0	.0	1.9	1.0	7.0	74	1.0	.5	0

K Results based on colony count outside the acceptable range (non-ideal colony count).

PAMLICO RIVER BASIN

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
DEC 20...	0	4	201	11	8.1	.0	17	112	50	.15	.00
JAN 31...	0	0	.0	17	7.8	.1	13	143	48	.19	.06
MAR 12...	0	0	.0	15	7.7	.0	11	152	42	.21	.32
MAY 01...	0	0	.0	14	7.1	.0	17	132	49	.18	.06
JUN 12...	0	0	.0	13	6.7	.0	20	150	52	.20	.06
JUL 16...	0	6	22	7.8	9.3	.1	33	155	71	.21	.00
SEP 05...	0	0	.0	8.2	7.8	.0	24	108	51	.15	.05
DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)
DEC 20...	.00	.01	.01	.04	.92	.37	.55	.93	4.1	.05	.15
JAN 31...	.00	.00	.00	.01	1.3	.30	1.0	1.3	5.8	.01	.03
MAR 12...	.00	.02	.01	.03	.96	.00	.98	.97	4.3	.01	.03
MAY 01...	.00	.02	.01	.05	1.1	.18	.92	1.1	4.9	.03	.09
JUN 12...	.00	.02	.01	.01	1.4	.43	.97	1.4	6.2	.03	.09
JUL 16...	.00	.01	.01	.12	1.4	.00	1.5	1.4	6.2	.03	.09
SEP 05...	.27	.01	.28	.02	1.5	.30	1.2	1.8	7.9	.05	.15
DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
DEC 20...	.01	2	0	2	870	200	660	--	--	--	--
JAN 31...	.01	1	0	1	1600	500	1100	4	0	6	40
MAR 12...	.01	2	0	3	1400	300	1100	0	0	4	70
MAY 01...	.01	1	0	3	2100	500	1600	3	0	5	50
JUN 12...	.01	5	2	3	2400	300	2100	2	0	2	49
JUL 16...	.02	1	0	5	2200	200	2000	1	0	2	41
SEP 05...	.02	2	0	3	1700	1600	90	1	0	1	--

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)
DEC 20...	--	--	--	--	--	--	--	--	--	--	--
JAN 31...	.8	--	--	--	--	--	--	--	--	--	--
MAR 12...	.2	--	--	--	--	--	--	--	--	--	--
MAY 01...	.7	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00
JUN 12...	1.4	--	--	--	--	--	--	--	--	--	--
JUL 16...	1.5	--	--	--	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--	--	--	--

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)
MAY 01...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAY 01...	.00	.00	.00	0	.00	.00	.00	.00

PAMLICO RIVER BASIN

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1					---	---	102	98	112	107	159	151
2					---	---	147	71	109	98	155	150
3					---	---	144	98	110	103	155	142
4					---	---	119	115	110	97	145	137
5					---	---	122	115	107	97	139	136
6					---	---	122	118	104	98	145	128
7					---	---	121	104	98	90	155	145
8					---	---	140	104	95	86	154	148
9					---	---	141	129	103	96	152	143
10					---	---	127	121	101	97	153	141
11					---	---	125	121	103	95	144	135
12					---	---	124	114	102	94	145	127
13					---	---	155	124	104	99	140	127
14					---	---	166	157	101	93	131	124
15					---	---	167	150	96	89	136	125
16					---	---	152	148	94	88	131	117
17					---	---	150	144	97	87	127	112
18					---	---	145	141	90	79	120	110
19					---	---	142	129	85	75	119	109
20					77	73	131	127	101	85	116	103
21					78	75	145	122	103	91	110	99
22					78	74	149	143	118	104	108	96
23					82	75	142	129	119	105	104	94
24					79	60	138	126	120	103	96	89
25					89	67	137	129	143	120	97	94
26					101	90	128	123	169	142	100	94
27					109	101	127	123	170	161	102	92
28					109	104	127	123	164	151	94	89
29					108	103	123	116	---	---	93	88
30					108	101	119	111	---	---	90	87
31					109	98	117	112	---	---	93	89
MONTH					109	60	167	71	170	75	159	87

[illegible]

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	
OCTOBER				NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1					---	---	14.0	7.0	6.5	4.0	14.0	11.5	
2					---	---	16.0	12.5	6.5	3.5	15.5	13.0	
3					---	---	14.5	7.5	7.0	4.0	15.5	12.5	
4					---	---	7.0	5.5	9.5	6.0	17.0	13.0	
5					---	---	7.5	5.5	8.0	6.0	17.0	15.5	
6					---	---	9.5	7.5	7.0	4.5	16.5	15.5	
7					---	---	12.5	8.5	7.0	3.5	16.0	14.0	
8					---	---	15.5	12.0	8.5	5.0	15.0	13.0	
9					---	---	11.5	8.0	7.0	4.0	16.0	13.0	
10					---	---	7.5	6.0	6.5	3.5	16.5	13.0	
11					---	---	7.5	5.5	6.5	3.5	15.5	12.5	
12					---	---	10.0	7.0	7.5	4.0	14.5	11.0	
13					---	---	13.5	10.0	7.0	4.5	15.5	11.0	
14					---	---	14.0	12.0	7.5	4.0	16.5	14.0	
15					---	---	12.0	9.5	10.5	6.0	15.5	12.0	
16					---	---	10.0	8.0	11.5	8.5	14.5	10.5	
17					---	---	10.5	8.0	8.0	4.0	15.5	9.5	
18					---	---	11.0	9.0	4.5	3.0	16.0	11.0	
19					---	---	8.5	6.5	7.5	4.0	15.5	11.0	
20					11.5	8.5	12.0	7.5	9.0	5.0	16.5	11.0	
21					15.0	8.5	15.0	12.0	11.0	7.0	16.5	11.0	
22					8.0	5.0	13.0	10.5	14.5	11.0	16.5	11.5	
23					6.0	3.0	11.0	8.5	13.5	12.0	17.0	11.0	
24					11.5	4.0	14.5	11.0	16.5	13.5	20.0	15.5	
25					11.0	7.0	12.0	8.5	16.0	14.5	19.0	13.5	
26					8.0	4.5	9.0	7.5	15.0	14.0	18.5	12.5	
27					6.5	3.5	8.5	7.0	15.0	13.0	18.0	11.5	
28					5.0	3.0	9.5	7.5	14.5	12.0	18.5	12.5	
29					5.0	2.5	8.5	6.5	---	---	21.5	12.5	
30					6.5	2.5	8.5	6.0	---	---	24.0	15.5	
31					10.5	4.0	7.0	6.0	---	---	24.5	16.5	
MONTH					15.0	2.5	16.0	5.5	16.5	3.0	24.5	9.5	

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	
APRIL				MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	26.5	18.5	23.5	16.5	---	---	31.5	23.0					
2	24.5	19.0	23.5	15.5	---	---	---	---					
3	23.0	18.5	25.0	15.5	---	---	---	---					
4	18.0	17.0	26.5	20.0	---	---	---	---					
5	19.5	16.5	22.0	18.5	---	---	---	---					
6	21.0	14.0	23.0	16.5	---	---	---	---					
7	19.0	13.0	22.0	17.0	---	---	---	---					
8	20.5	13.5	25.0	19.0	---	---	---	---					
9	20.5	17.0	27.5	19.5	---	---	---	---					
10	20.5	14.0	---	---	---	---	---	---					
11	22.0	13.5	---	---	---	---	---	---					
12	23.5	15.0	---	---	---	---	---	---					
13	21.0	18.5	---	---	26.5	20.0	---	---					
14	21.5	17.5	---	---	26.0	20.0	---	---					
15	20.5	16.0	---	---	26.5	19.5	---	---					
16	18.5	15.0	---	---	23.5	21.0	35.0	28.0					
17	20.0	13.0	---	---	28.0	21.5	39.0	26.0					
18	20.5	14.0	---	---	30.0	20.5	32.5	25.5					
19	20.5	14.0	---	---	29.0	23.0	29.0	24.5					
20	21.0	13.5	---	---	29.5	20.5	31.0	25.0					
21	22.0	13.5	---	---	26.5	19.0	35.0	26.0					
22	23.5	15.0	---	---	29.5	20.5	37.5	26.5					
23	24.5	18.0	---	---	32.5	23.5	33.0	27.5					
24	24.5	19.5	---	---	31.5	24.0	27.5	27.5					
25	24.5	18.5	---	---	26.5	21.0	---	---					
26	21.0	19.5	---	---	29.5	20.0	---	---					
27	24.0	19.0	---	---	29.5	21.0	---	---					
28	22.5	19.5	---	---	31.0	20.5	---	---					
29	22.5	18.0	---	---	31.0	19.5	---	---					
30	24.0	16.0	---	---	33.0	23.0	---	---					
31	---	---	---	---	---	---	---	---					
MONTH	26.5	13.0	27.5	15.5	33.0	19.0	39.0	23.0					
YEAR	39.0	2.5											

PAMLICO RIVER BASIN

02084556 NORTH LAKE CANAL ABOVE PUNGO LAKE NEAR WENONA, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
DEC				
20...	1030	.01	12	.00
JAN				
31...	1110	.16	4	.00
MAR				
12...	1345	.78	3	.01
MAY				
01...	0900	.17	4	.00
JUN				
12...	1200	.15	2	.00
JUL				
15...	1345	.01	6	.00
SEP				
05...	1050	.17	20	.01

PAMLICO RIVER BASIN

115

02084571 VAN SWAMP NEAR HOKE, N. C.

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, 4.8 mi (7.7 km) east of Hoke.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--23 mi² (60 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (6 m) from topographic map.

REMARKS.--Water-discharge record good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 409 ft³/s (11.6 m³/s) Nov. 6, 1977, gage height, 4.45 ft (1.356 m), no flow part of day Oct. 1, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft³/s (2.83 m³/s) and Maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 14	0900	106 3.00	2.86 0.872	Apr. 28	1200	106 3.00	2.86 0.872
Jan. 22	0500	106 3.00	2.86 0.872	May 17	0300	132 3.74	3.14 0.957
Jan. 24	2100	106 3.00	2.85 0.869	May 20	0100	140 3.96	3.21 0.978
Feb. 26	0400	*187 5.30	*3.50 1.067	May 25	0800	135 3.82	3.17 0.966
Mar. 7	0900	150 4.25	3.28 1.000				

No flow part of day Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.01	.93	1.5	55	159	30	88	47	11	.68	.78
2	.03	.01	.59	7.2	49	150	27	75	39	9.0	.58	.78
3	.03	.01	.54	22	44	139	26	61	31	7.4	.90	.68
4	.03	.01	.49	19	40	127	49	49	34	6.0	3.6	.73
5	.03	.01	.65	16	36	114	66	46	43	5.2	2.3	15
6	.03	.01	1.1	14	32	123	68	48	38	4.2	1.4	47
7	.03	.01	1.1	13	32	149	64	42	32	3.6	1.1	47
8	.02	.01	.92	22	35	146	58	36	26	3.0	.68	36
9	.02	.01	.82	25	34	139	51	30	21	2.3	.58	26
10	.02	.01	.82	22	32	132	48	25	17	2.1	.49	20
11	.02	.02	.67	20	30	122	43	22	15	1.8	.34	15
12	.02	.02	.60	19	28	115	39	23	19	1.5	.49	12
13	.02	.02	.54	40	27	106	35	24	19	1.4	.68	9.6
14	.02	.02	.50	103	25	98	45	47	17	1.2	.58	7.9
15	.02	.02	.44	97	23	88	48	112	13	1.0	.41	6.6
16	.02	.02	.38	88	22	76	45	128	11	.89	.34	5.4
17	.02	.02	.41	80	20	66	41	129	11	.85	.22	4.6
18	.02	.02	.35	75	20	58	37	125	20	.72	.22	3.9
19	.02	.03	.34	67	27	51	32	134	22	.85	.13	3.4
20	.01	.02	.34	61	34	45	29	139	18	1.6	.28	2.8
21	.01	.02	.34	93	37	40	25	134	16	1.5	.34	2.5
22	.01	.02	.34	104	47	35	22	127	13	1.4	.22	2.4
23	.01	.02	.30	100	53	32	20	123	11	1.5	.22	2.4
24	.01	.03	1.4	102	66	38	20	122	10	1.8	.22	2.2
25	.01	.03	4.6	103	99	50	21	134	23	1.8	.13	3.6
26	.01	.02	3.7	99	178	49	39	128	28	2.0	.07	4.5
27	.01	.03	3.1	90	169	46	96	117	26	1.7	.07	4.3
28	.01	.04	2.5	82	171	42	105	106	22	1.4	.34	3.8
29	.01	.14	2.0	75	---	39	103	94	17	1.3	2.1	4.7
30	.01	.89	1.9	67	---	36	98	75	14	1.0	1.5	11
31	.01	---	1.7	60	---	33	---	58	---	.90	.90	---
TOTAL	.57	1.55	34.41	1786.7	1465	2643	1430	2601	673	81.91	22.11	306.57
MEAN	.018	.052	1.11	57.6	52.3	85.3	47.7	83.9	22.4	2.64	.71	10.2
MAX	.03	.89	4.6	104	178	159	105	139	47	11	3.6	47
MIN	.01	.01	.30	1.5	20	32	20	22	10	.72	.07	.68
CFSM	.001	.002	.05	2.50	2.27	3.71	2.07	3.65	.97	.12	.03	.44
IN.	.00	.00	.06	2.89	2.37	4.27	2.31	4.21	1.09	.13	.04	.50
CAL YR 1978	TOTAL	13130.53	MEAN	36.0	MAX	273	MIN	.01	CFSM	1.57	IN	21.24
WTR YR 1979	TOTAL	11045.82	MEAN	30.3	MAX	178	MIN	.01	CFSM	1.32	IN	17.86

PAMLICO RIVER BASIN

02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1977 to current year.

WATER TEMPERATURES: May 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since May 1977.

REMARKS.--Interruptions in the daily record were due to malfunctions of the monitor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 169 micromhos Nov. 8, 1977; minimum, 30 micromhos Aug. 17, 1977.

WATER TEMPERATURES: Maximum, 31.0°C July 21, Aug. 9, 11, 12, 1977; minimum, 2.5°C Dec. 30, 31, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 158 micromhos Jan. 17, Feb. 23; minimum, 45 micromhos Sept. 5.

WATER TEMPERATURES: Maximum, 27.5°C Aug. 9, 10, 11; minimum, 2.5°C Dec. 30, 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 03...	1330	.03	80	5.7	19.0	600	3.0	160	--	K10	55	68
NOV 13...	1500	.03	110	5.2	15.5	750	--	290	--	--	--	--
DEC 18...	1325	.34	67	5.4	6.5	200	7.9	--	83	K97	K75	K220
FEB 06...	0830	33	142	3.6	7.0	80	8.5	--	210	K16	K3	K5
MAR 13...	1330	106	138	3.2	10.5	70	7.4	--	65	<1	K1	K3
APR 30...	1415	98	101	3.4	15.0	100	7.0	--	62	K9	K5	K2
JUN 11...	1400	14	98	3.8	18.5	150	7.6	--	85	K8	32	K250
JUL 18...	0930	.68	70	4.6	23.0	400	5.1	--	99	62	44	180
SEP 04...	1200	.90	50	4.7	25.0	300	4.9	--	60	--	K170	K300

DATE	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)
OCT 03...	25	11	--	--	8.0	1.3	5.6	30	.5	2.0	17
NOV 13...	42	18	--	--	13	2.3	7.0	25	.5	3.0	29
DEC 18...	18	12	--	--	4.8	1.5	4.5	33	.5	1.4	8
FEB 06...	11	11	.9	45	1.9	1.5	5.0	49	.7	.5	0
MAR 13...	9	9	.7	35	1.7	1.2	4.8	51	.7	.6	0
APR 30...	7	7	.6	30	1.3	.9	4.1	54	.7	.5	0
JUN 11...	7	7	.6	30	1.3	.8	3.8	54	.6	.4	0
JUL 18...	11	11	.0	.0	3.1	.8	5.0	48	.7	.6	0
SEP 04...	8	7	--	--	2.0	.7	4.1	49	.6	1.2	1

K Results based on colony count outside the acceptable range (non-ideal colony count).

PAMLICO RIVER BASIN

117

02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 03...	0	14	54	13	10	.1	32	194	88	.26	.02
NOV 13...	0	24	293	9.6	12	.0	41	223	108	.30	.02
DEC 18...	0	7	51	12	6.5	.1	17	90	53	.12	.08
FEB 06...	0	0	.0	21	6.5	.1	10	96	51	.13	8.55
MAR 13...	0	0	.0	20	5.6	.1	8.7	85	48	.12	24.3
APR 30...	0	0	.0	15	5.8	.0	8.3	74	38	.10	19.6
JUN 11...	0	0	.0	14	5.6	.0	9.6	94	38	.13	3.55
JUL 18...	0	0	.0	13	7.4	.0	15	98	48	.13	.18
SEP 04...	0	1	32	8.2	7.5	.0	11	82	36	.11	.20

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)
OCT 03...	.02	.02	.04	.06	2.2	.30	1.9	2.2	9.9	.07	.21
NOV 13...	.00	.01	.01	.01	2.1	.20	1.9	2.1	9.3	.04	.12
DEC 18...	.10	.01	.11	.12	.56	.02	.54	.67	3.0	.01	.03
FEB 06...	.80	.00	.80	.78	.67	.01	.66	1.5	6.5	.00	.00
MAR 13...	.87	.00	.87	.91	.89	.14	.75	1.8	7.8	.01	.03
APR 30...	.35	.00	.35	.32	.77	.14	.63	1.1	5.0	.01	.03
JUN 11...	.01	.01	.02	--	.86	.00	.91	.88	3.9	.01	.03
JUL 18...	.01	.01	.02	--	1.5	.00	1.5	1.5	6.7	.02	.06
SEP 04...	.03	.00	.03	.03	1.9	1.1	.82	1.9	8.5	.04	.12

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 03...	.05	4	2	2	8800	1000	7800	--	--	--	30
NOV 13...	.01	4	3	1	7900	1800	6100	--	--	--	58
DEC 18...	.01	0	0	0	1000	80	920	--	--	--	21
FEB 06...	.00	0	0	0	350	60	290	0	0	2	26
MAR 13...	.01	0	0	2	310	100	210	4	2	2	28
APR 30...	.00	1	0	1	510	230	280	3	3	0	27
JUN 11...	.01	5	4	1	1100	180	920	2	0	2	30
JUL 18...	.01	2	0	2	4500	2500	2000	0	0	1	33
SEP 04...	.01	2	0	6	3400	2300	1100	4	3	1	26

PAMLICO RIVER BASIN

02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)
OCT 03...	4.2	--	--	--	--	--	--	--	--	--	--
NOV 13...	.6	--	--	--	--	--	--	--	--	--	--
DEC 18...	.4	--	--	--	--	--	--	--	--	--	--
FEB 06...	.4	--	--	--	--	--	--	--	--	--	--
MAR 13...	.3	--	--	--	--	--	--	--	--	--	--
APR 30...	.3	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00
JUN 11...	.8	--	--	--	--	--	--	--	--	--	--
JUL 18...	3.1	--	--	--	--	--	--	--	--	--	--
SEP 04...	2.0	--	--	--	--	--	--	--	--	--	--

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)
APR 30...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
APR 30...	.00	.00	.00	0	.00	.00	.00	.00

119

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH									
1	80	72	96	89	60	55	68	63	136	130	153	147								
2	80	73	95	91	58	53	66	63	149	130	152	147								
3	85	79	103	95	57	54	66	63	149	145	152	150								
4	90	83	107	100	65	57	98	65	148	140	150	138								
5	93	90	105	101	67	61	113	99	146	143	138	132								
6	92	89	110	103	61	57	117	112	---	---	138	133								
7	89	84	118	110	61	56	125	118	---	---	139	133								
8	85	81	---	---	56	54	129	125	---	---	140	134								
9	84	80	---	---	57	54	129	122	---	---	141	136								
10	84	79	---	---	62	57	128	116	---	---	142	136								
11	83	78	---	---	63	59	137	129	---	---	142	137								
12	81	75	---	---	63	58	132	126	131	126	142	136								
13	81	79	111	108	64	58	135	129	128	124	141	137								
14	81	78	109	106	65	59	137	135	127	123	142	137								
15	84	81	112	107	66	60	138	125	128	122	141	135								
16	85	81	113	109	66	60	151	138	129	127	139	132								
17	84	82	116	112	67	61	158	131	134	128	137	129								
18	85	80	113	105	69	66	140	133	134	123	135	128								
19	85	80	108	103	67	66	138	132	133	120	133	127								
20	85	80	108	93	67	64	140	137	119	105	132	124								
21	85	78	97	92	64	63	142	130	121	111	130	123								
22	86	78	97	94	69	64	131	129	139	118	129	122								
23	85	78	97	93	73	66	143	130	158	120	128	122								
24	86	82	95	90	72	67	156	145	157	139	123	114								
25	87	81	97	95	66	52	151	144	149	139	119	115								
26	86	80	97	94	59	54	143	135	150	139	121	117								
27	85	82	95	90	61	54	148	139	151	148	123	115								
28	88	86	98	92	66	59	149	137	152	147	121	116								
29	89	87	102	87	67	65	139	134	---	---	121	115								
30	91	88	86	60	68	62	137	133	---	---	119	115								
31	95	86	---	---	69	63	137	135	---	---	117	115								
MONTH	95	72	118	60	73	52	158	63	158	105	153	114								
DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER										
1	116	113	106	102	99	98	97	95	60	58	51	50								
2	116	112	108	103	99	97	95	94	61	58	50	49								
3	114	99	109	105	98	96	94	93	60	58	51	49								
4	106	100	106	103	96	88	93	92	67	56	51	47								
5	110	102	105	101	91	90	92	88	58	56	57	45								
6	112	106	102	97	92	91	90	87	61	58	94	57								
7	114	108	104	98	93	92	88	86	65	59	111	95								
8	113	107	103	100	94	93	87	84	62	61	112	105								
9	111	107	104	100	95	94	85	83	62	60	108	105								
10	111	105	104	98	96	95	83	82	66	61	107	103								
11	111	104	100	97	99	94	90	81	67	64	104	100								
12	109	103	98	96	97	93	88	79	64	59	103	98								
13	107	97	99	94	96	95	79	77	61	55	102	96								
14	102	96	94	74	97	96	78	76	58	57	101	96								
15	104	99	90	83	98	96	76	75	58	57	96	95								
16	106	104	91	89	99	97	75	74	63	56	95	91								
17	108	102	91	90	97	92	74	73	74	64	95	91								
18	110	103	92	90	95	90	73	72	84	73	95	92								
19	109	102	93	90	96	92	72	68	85	67	94	91								
20	110	104	93	91	98	96	69	67	75	62	92	89								
21	110	102	92	91	98	95	68	64	66	61	91	87								
22	108	103	92	91	97	95	64	62	73	64	88	83								
23	107	103	92	91	96	94	63	61	76	70	83	80								
24	106	99	92	85	95	84	61	58	87	75	81	77								
25	102	96	96	90	93	88	58	56	90	75	78	69								
26	99	82	95	91	92	90	58	56	93	74	77	72								
27	96	91	94	93	92	90	60	57	93	82	77	72								
28	95	91	96	94	94	90	60	58	99	64	77	74								
29	102	96	98	94	95	94	61	59	63	51	76	59								
30	104	100	98	93	97	95	60	58	52	51	71	59								
31	---	---	99	97	---	---	60	57	51	51	---	---								
MONTH	116	82	109	74	99	84	97	56	99	51	112	45								
YEAR	158	45																		

02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.0	17.5	14.5	12.5	12.5	11.0	6.0	3.5	10.5	10.0	10.5	9.5
2	19.5	18.0	14.0	12.5	11.0	9.5	8.5	6.0	10.0	9.5	11.5	10.0
3	18.5	17.0	13.5	11.0	10.5	9.0	12.0	9.0	10.0	9.0	11.5	11.0
4	18.5	16.5	14.0	12.0	15.0	10.5	12.5	8.5	9.5	8.5	12.0	11.0
5	19.5	17.0	14.5	12.0	14.5	14.0	8.5	5.0	9.0	9.0	12.0	11.0
6	19.5	18.0	13.0	10.5	14.0	12.0	6.0	5.0	---	---	12.0	11.0
7	18.5	15.5	13.0	11.0	12.0	11.0	6.5	5.5	---	---	11.0	10.5
8	15.5	14.0	---	---	14.5	11.5	7.5	6.5	---	---	11.5	10.5
9	14.0	12.5	---	---	17.5	14.5	10.0	7.0	---	---	11.5	10.5
10	13.5	12.0	---	---	16.0	10.5	11.5	10.0	---	---	11.5	11.0
11	14.0	12.5	---	---	10.0	8.0	10.5	8.0	---	---	11.0	10.5
12	15.0	13.5	---	---	8.0	7.0	8.0	6.5	7.0	6.0	11.0	10.0
13	15.0	14.0	15.0	14.5	7.5	6.0	6.5	6.0	7.0	6.5	11.5	10.0
14	17.0	15.5	15.0	13.5	7.0	6.0	6.5	6.0	7.0	6.0	12.0	11.0
15	16.5	14.5	16.5	14.5	6.0	5.0	8.0	6.5	7.5	6.5	11.5	10.5
16	14.0	12.5	16.5	16.0	7.0	4.5	10.5	7.0	8.5	8.0	10.5	9.5
17	13.5	13.0	17.5	16.0	7.5	6.5	12.0	9.5	9.5	8.0	11.0	9.5
18	13.0	11.5	19.0	17.5	7.0	5.5	12.5	11.5	8.0	6.0	11.5	10.0
19	12.5	11.0	18.5	14.5	7.5	7.0	12.5	12.0	6.0	3.5	12.0	10.0
20	12.5	11.5	14.5	13.0	8.5	7.0	12.0	12.0	7.5	3.5	12.5	10.5
21	12.0	11.0	13.5	12.5	11.0	8.5	12.0	11.5	7.5	5.5	12.5	10.5
22	12.0	10.0	13.5	13.0	10.5	7.5	12.0	11.5	10.0	7.0	12.5	10.5
23	13.5	11.5	14.0	13.0	8.0	5.5	11.5	10.5	12.0	10.5	12.0	10.5
24	13.5	12.0	14.5	13.0	7.0	5.5	10.5	9.5	11.0	10.0	14.0	12.0
25	12.0	11.0	13.0	10.0	9.5	7.0	11.0	10.5	10.0	9.0	13.0	12.0
26	13.5	11.5	10.0	8.5	9.0	6.5	11.5	11.0	10.0	9.0	12.5	11.0
27	14.5	13.5	12.0	9.0	7.5	6.5	11.5	10.5	10.0	9.5	12.5	10.5
28	14.5	14.0	13.5	12.0	6.5	5.0	11.0	10.5	10.5	9.5	13.0	11.5
29	15.0	14.5	13.0	12.0	5.0	3.5	11.0	11.0	---	---	14.0	11.5
30	14.5	14.0	12.5	12.0	3.0	2.5	11.5	11.0	---	---	15.5	13.0
31	15.0	14.0	---	---	3.5	2.5	11.0	10.5	---	---	15.5	14.0
MONTH	19.5	10.0	19.0	8.5	17.5	2.5	12.5	3.5	12.0	3.5	15.5	9.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.5	14.5	15.5	14.0	18.0	17.0	22.0	20.5	26.0	24.5	25.5	25.0
2	16.5	15.0	15.5	14.0	18.5	17.0	22.0	20.5	26.5	25.0	25.0	24.5
3	16.0	15.0	16.0	14.0	18.5	17.0	22.0	20.5	26.5	25.0	25.5	24.5
4	15.0	13.5	16.5	15.5	18.5	17.5	22.0	21.0	26.0	25.5	25.0	24.5
5	14.0	13.5	16.5	15.0	18.5	17.0	22.0	21.0	26.5	26.0	25.0	24.5
6	14.5	12.5	15.5	14.0	18.5	17.5	20.5	19.5	27.0	25.5	25.0	24.0
7	13.5	12.5	16.0	14.5	19.0	17.5	20.0	19.0	27.0	26.0	24.5	23.0
8	14.5	12.0	17.0	15.5	19.0	18.5	19.5	18.0	27.0	25.5	24.0	22.5
9	15.0	13.5	17.0	16.0	19.5	19.0	19.5	18.5	27.5	25.5	23.0	21.5
10	14.5	13.0	17.0	17.0	20.0	19.5	19.5	19.0	27.5	25.5	23.0	21.0
11	14.5	12.0	17.5	16.5	19.5	18.5	21.0	19.5	27.5	25.5	24.0	21.5
12	15.5	13.5	17.5	17.0	19.0	17.5	22.5	20.5	27.0	24.5	23.5	22.0
13	15.5	15.0	18.0	17.0	19.0	17.5	23.5	22.0	24.5	22.0	25.0	22.0
14	15.5	14.5	18.5	17.0	19.5	18.0	24.5	22.5	23.0	21.0	25.0	24.0
15	15.0	13.5	17.0	16.0	19.0	17.0	24.5	23.0	22.5	21.5	24.5	22.5
16	14.0	13.0	17.0	16.0	19.0	18.5	24.5	23.0	22.0	20.5	23.0	21.0
17	14.0	12.5	16.5	16.0	19.5	18.5	25.0	23.0	20.5	19.5	21.0	20.0
18	14.0	12.5	16.5	15.5	20.5	19.0	25.0	23.0	20.5	19.0	22.0	20.5
19	14.0	12.5	15.5	15.5	20.5	20.0	24.0	23.5	22.0	20.0	22.5	20.0
20	14.0	12.5	16.0	15.5	20.0	19.0	23.5	23.0	22.5	21.0	22.5	20.5
21	14.5	13.0	16.5	16.0	19.0	18.0	24.5	23.0	23.5	21.5	22.0	20.5
22	15.5	13.0	16.5	16.0	20.0	18.0	24.5	23.5	24.0	22.5	23.5	22.0
23	16.5	15.5	17.0	16.0	22.0	20.0	24.5	23.5	24.5	23.0	24.5	21.5
24	16.5	16.0	17.0	16.5	22.0	21.0	24.5	23.5	24.5	23.0	21.5	20.0
25	16.5	16.0	17.0	16.0	21.0	19.5	25.0	23.5	25.0	23.0	21.0	20.0
26	16.5	15.5	16.5	16.0	19.0	18.0	25.0	24.5	25.0	23.5	22.0	20.5
27	16.0	15.0	16.5	15.5	19.5	18.5	25.5	24.5	25.0	24.0	22.5	20.0
28	15.5	15.0	17.0	16.0	20.0	19.0	25.5	25.0	24.5	23.0	23.0	21.0
29	15.5	14.5	17.0	16.5	20.0	19.0	26.0	25.0	25.0	23.0	23.0	22.5
30	15.5	14.0	17.0	16.0	21.0	19.5	26.0	25.0	25.0	25.0	23.0	22.5
31	---	---	17.5	16.5	---	---	26.0	25.0	25.5	25.0	---	---
MONTH	16.5	12.0	18.5	14.0	22.0	17.0	26.0	18.0	27.5	19.0	25.5	20.0
YEAR	27.5	2.5										

02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
02...	1145	.01	10	.00
03...	1330	.03	16	.00
06...	1610	.03	11	.00
07...	0820	.03	18	.00
12...	1725	.02	8	.00
14...	0835	.02	11	.00
19...	1615	.02	16	.00
21...	1405	.01	14	.00
25...	1730	.01	11	.00
28...	1800	.01	14	.00
NOV				
02...	1605	.01	13	.00
04...	1620	.01	17	.00
07...	1650	.02	19	.00
09...	1417	.02	24	.00
13...	1500	.03	18	.00
13...	1637	.03	23	.00
15...	1630	.03	25	.00
21...	1600	.03	24	.00
25...	1010	.03	10	.00
DEC				
01...	1005	1.1	31	.09
03...	1329	.50	28	.04
06...	1605	1.1	13	.04
09...	0751	.90	6	.01
12...	1619	.58	4	.01
16...	1313	.41	5	.01
18...	1325	.34	6	.01
19...	1611	.34	5	.00
23...	1555	.28	3	.00
28...	2018	2.3	6	.04
30...	1432	1.6	5	.02
JAN				
01...	1104	1.5	4	.02
08...	1634	25	9	.61
10...	1614	22	4	.24
15...	1724	94	8	2.0
17...	1620	80	5	1.1
19...	1603	66	3	.53
25...	1555	97	3	.79
28...	1700	85	1	.23
FEB				
05...	1000	36	1	.10
06...	0830	33	10	.89
08...	1750	35	2	.19
10...	1313	32	2	.17
13...	1616	27	2	.15
16...	0953	20	3	.16
20...	1605	35	2	.19
21...	1635	49	2	.26
23...	1557	54	4	.58
26...	1306	169	33	15
28...	1645	42	4	.45
MAR				
03...	0856	158	8	3.4
07...	1731	158	11	4.7
09...	1310	158	8	3.4
13...	1330	106	3	.86
14...	1634	102	4	1.1
16...	1553	77	3	.62
20...	1554	44	4	.48
25...	1545	52	7	.98
APR				
01...	1040	30	5	.40
03...	1624	31	20	1.7
04...	1030	59	4	.64
12...	0900	39	5	.53
15...	1130	34	6	.55
18...	0951	37	8	.80
22...	1030	40	13	1.4
24...	1620	20	4	.22
27...	1357	103	14	3.9
30...	1415	98	11	2.9
30...	1554	100	6	1.6
MAY				
02...	1430	145	9	3.5
06...	1030	67	2	.36
08...	1819	31	4	.33
13...	1030	175	22	10
15...	1445	132	26	9.3

PAMLICO RIVER BASIN

02084571 VAN SWAMP NEAR HOKE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
MAY				
18...	1200	140	9	3.4
26...	1530	117	6	1.9
28...	1936	108	7	2.0
JUN				
02...	1345	38	256	26
04...	1545	37	17	1.7
09...	1015	20	9	.49
11...	1400	14	5	.19
13...	1630	20	9	.49
15...	1415	13	7	.25
19...	0910	22	11	.65
24...	1700	22	17	1.0
27...	0920	26	8	.56
30...	1330	13	9	.32
JUL				
06...	1655	3.9	12	.13
10...	1400	2.0	13	.07
12...	0940	1.7	13	.06
16...	1025	.68	17	.03
18...	0930	.68	15	.03
19...	1405	.90	27	.07
23...	1230	1.1	41	.12
25...	1435	2.0	32	.17
28...	0845	1.4	33	.12
30...	1520	.90	59	.14
AUG				
02...	1150	.49	24	.03
08...	1625	.49	58	.08
13...	1125	.68	476	.87
18...	1330	.49	1310	1.7
22...	1500	.07	2440	.46
26...	0855	.03	642	.05
29...	1045	2.0	713	3.9
SEP				
03...	1105	.68	54	.10
04...	1200	.90	57	.14
09...	1630	24	37	2.4
11...	1730	14	19	.72
21...	1335	2.6	18	.13
24...	1000	2.3	18	.11

Note.--High sediment concentrations during summer 1979 occurred during a period of logging operations.

PAMLICO RIVER BASIN

123

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.

LOCATION.--Lat 35°38'18", long 76°40'19", Beaufort County, Hydrologic Unit 03020104, near right bank on downstream side of bridge on Secondary Road 1626, and 1.4 miles (2.3 km) northeast of Swindell.

DRAINAGE AREA.--68 mi² (176 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 0 ft from topographic map.

REMARKS.--Records fair from 100 ft³/s (283 m³/s) to 300 ft³/s (8.50 m³/s), good above and poor below. The flow is affected by tide at all but extreme high stages and occasionally reverses at low flow. Daily discharges below 50 ft³/s (1.42 m³/s) are computed based on records of stage, discharge measurement, hydrographic comparisons, and runoff from Van Swamp near Hoke (Sta. No. 02084507) and individual daily values are subject to considerable error and should be used with caution. Flows in this range averaged over several days have greater reliability.

EXTREMES FOR THE CURRENT PERIOD.--July to September 1977: Maximum discharge during period, 705 ft³/s (20.0 m³/s) Aug. 19, gage height, 7.98 ft (2.432 m); minimum gage height, 3.63 ft (1.106 m) Aug. 8.

Water year 1978: Maximum discharge, 1,590 ft³/s (45.0 m³/s) Nov. 7, gage height 12.17 ft (3.709 m); minimum gage height, 3.81 ft (1.161 m) Aug. 10.

Water year 1979: Maximum discharge, 1,540 ft³/s (43.6 m³/s) Feb. 26, gage height, 11.90 ft (3.627 m); minimum gage height, 3.40 ft (1.036 m) Dec. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										15	5.0	19
2										30	5.1	16
3										65	5.3	12
4										44	5.5	11
5										16	5.4	9.8
6										14	5.4	9.1
7										13	5.1	28
8										12	5.1	79
9										10	5.1	462
10										23	5.1	484
11										35	5.0	333
12										27	5.0	225
13										15	5.1	145
14										9.1	5.3	77
15										7.3	5.6	75
16										6.4	6.5	59
17										5.7	12	45
18										5.2	206	31
19										4.9	613	20
20										4.9	358	16
21										4.9	192	14
22										4.9	109	11
23										4.9	117	11
24										4.9	598	10
25										4.9	364	9.4
26										5.4	213	8.8
27										5.5	122	8.3
28										5.4	87	7.9
29										5.3	55	7.4
30										5.1	40	7.1
31										5.1	23	---
TOTAL										418.8	3193.6	2250.8
MEAN										13.5	103	75.0
MAX										65	613	484
MIN										4.9	5.0	7.1
CFS/4										.20	1.52	1.10
IN.										.23	1.75	1.23

PAMLICO RIVER BASIN

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	449	71	544	178	74	110	243	16	5.9	16	6.0
2	6.8	368	65	360	155	110	90	209	16	5.7	34	5.9
3	10	329	64	250	134	147	84	152	48	5.8	37	5.8
4	10	283	54	188	112	515	66	187	336	6.0	33	5.7
5	7.5	251	80	139	97	354	51	912	132	5.8	33	5.5
6	6.5	601	64	118	76	213	50	984	62	5.7	27	5.3
7	6.2	1560	49	230	68	177	48	765	45	5.6	24	5.0
8	6.1	1390	42	261	62	141	41	866	30	5.5	18	5.0
9	6.3	1120	37	335	59	164	40	1050	153	5.5	14	4.9
10	23	905	34	305	55	497	37	867	300	5.5	14	4.9
11	35	720	31	180	54	589	34	617	174	13	16	4.9
12	36	577	29	128	53	368	31	474	91	51	24	4.9
13	96	431	28	151	51	261	30	395	45	39	79	4.9
14	99	350	31	584	48	228	33	444	32	24	302	4.9
15	263	269	214	446	61	164	33	441	27	17	84	4.9
16	207	219	312	292	68	134	27	362	22	22	32	4.9
17	106	186	222	256	73	97	34	301	16	27	22	4.9
18	78	152	260	570	98	80	63	244	13	57	18	4.9
19	46	139	503	471	145	69	230	196	11	62	15	4.9
20	30	119	452	1320	176	54	229	154	10	38	13	4.9
21	28	96	440	1160	133	50	155	116	9.4	22	12	4.9
22	24	79	596	799	94	47	107	90	9.3	13	11	4.9
23	20	81	444	586	104	40	100	72	8.5	10	10	4.9
24	31	107	305	441	112	37	68	57	7.8	9.5	9.4	4.8
25	36	123	247	475	121	42	76	46	6.9	9.1	9.0	4.8
26	145	102	222	936	99	70	477	36	6.2	9.1	8.2	4.8
27	390	112	194	643	82	260	774	30	6.1	9.1	7.4	4.8
28	370	91	130	423	78	360	571	26	6.1	8.6	7.0	4.8
29	929	75	106	319	---	229	409	23	6.0	8.4	6.8	4.8
30	879	70	92	250	---	181	286	20	6.1	8.4	6.6	4.8
31	617	---	546	207	---	157	---	18	---	12	6.2	---
TOTAL	4554.2	11354	5964	13367	2646	5909	4384	10397	1651.4	526.2	948.6	151.3
MEAN	147	378	192	431	94.5	191	146	335	55.0	17.0	30.6	5.04
MAX	929	1560	596	1320	178	589	774	1050	336	62	302	6.0
MIN	6.1	70	28	118	48	37	27	18	6.0	5.5	6.2	4.8
CFSM	2.16	5.56	2.82	6.34	1.39	2.81	2.15	4.93	.81	.25	.45	.07
IN.	2.49	6.21	3.26	7.31	1.45	3.23	2.40	5.69	.90	.29	.52	.08

WTR YR 1978 TOTAL 61852.7 MEAN 169 MAX 1560 MIN 4.8 CFSM 2.49 IN 33.84

PAMLICO RIVER BASIN

125

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	3.5	9.8	16	54	476	28	158	62	16	5.6	40
2	5.9	3.5	7.4	217	44	412	32	149	55	14	5.4	40
3	9.4	3.6	6.8	865	39	354	35	98	66	12	6.0	41
4	9.0	3.7	6.4	373	34	303	149	60	114	11	9.2	57
5	8.2	3.8	7.0	171	30	246	191	101	107	10	7.4	412
6	7.4	3.9	12	117	35	491	132	127	80	9.2	6.4	575
7	4.8	4.0	13	103	52	937	89	87	70	8.4	6.0	345
8	5.1	4.1	10	431	51	580	74	65	58	7.8	5.6	175
9	5.5	4.2	8.3	385	50	398	58	48	50	7.4	5.6	102
10	5.0	4.4	7.6	179	44	303	50	35	44	7.1	5.3	70
11	4.8	4.5	7.2	109	41	232	47	52	40	6.8	5.2	37
12	4.5	4.7	6.8	89	41	219	44	329	77	6.6	5.4	26
13	4.4	5.0	6.6	529	37	190	57	116	81	6.5	5.9	17
14	4.4	5.0	6.6	1030	34	142	99	204	81	6.3	5.8	15
15	4.4	5.0	6.4	652	33	112	86	746	71	6.1	5.3	13
16	4.4	5.0	6.4	367	30	101	75	506	61	6.0	5.2	11
17	4.4	5.0	6.2	243	27	74	63	317	61	6.0	4.9	10
18	4.4	5.0	6.0	173	46	59	57	223	162	5.9	4.7	9.5
19	4.4	5.0	5.8	130	63	61	53	397	99	6.2	4.4	8.8
20	4.3	5.0	5.8	123	193	59	48	448	83	7.3	4.6	8.2
21	4.1	5.0	5.8	528	174	50	41	344	66	7.0	4.7	7.9
22	3.9	5.0	5.6	536	155	60	36	263	29	6.8	4.3	7.8
23	3.8	5.0	5.3	313	139	62	31	251	23	7.1	4.3	7.8
24	3.6	5.0	32	310	279	138	31	300	44	7.9	4.3	7.5
25	3.5	5.2	119	288	800	100	60	414	155	6.0	4.1	9.0
26	3.5	5.6	66	203	1470	73	302	268	144	7.9	3.8	10
27	3.5	5.6	25	172	1100	62	596	207	99	8.4	3.8	9.9
28	3.5	5.8	16	131	672	56	376	139	62	7.5	4.5	9.3
29	3.5	6.1	15	102	---	48	278	112	53	7.0	5.1	10
30	3.5	8.1	12	90	---	42	211	90	39	6.7	7.8	20
31	3.5	---	13	85	---	33	---	83	---	6.5	6.2	---
TOTAL	149.5	144.3	466.8	9060	5767	6473	3429	6737	2236	245.4	166.8	2111.7
MEAN	4.82	4.81	15.1	292	206	209	114	217	74.5	7.92	5.38	70.4
MAX	9.4	8.1	119	1030	1470	937	596	746	162	16	9.2	575
MIN	3.5	3.5	5.3	16	27	33	28	35	23	5.9	3.8	7.5
CFSM	.07	.07	.22	4.29	3.03	3.07	1.68	3.19	1.10	.12	.08	1.04
IN.	.08	.08	.26	4.96	3.15	3.54	1.88	3.69	1.22	.13	.09	1.16
CAL YR 1978 TOTAL	40741.1			MEAN 112	MAX 1320	MIN 3.5	CFSM 1.65	IN 22.29				
WTR YR 1979 TOTAL	36986.5			MEAN 101	MAX 1470	MIN 3.5	CFSM 1.49	IN 20.23				

PAMLICO RIVER BASIN

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1978 to September 1979.

WATER TEMPERATURES: March 1978 to September 1979.

INSTRUMENTATION.--Water-quality monitor since March 1978.

REMARKS.--Malfunctions of water-quality monitor caused some loss of daily records during March and April 1979. Due to the maximum range of the water-quality monitor, values for conductance of 573 micromhos for October, November and December 1978 are $\geq$ 573 micromhos. Station is affected by tide.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, $\geq$ 573 micromhos Oct. 2, 3, 6, 7, 13-31, Nov. 1-29, Dec. 22, 1978; minimum, 59 micromhos Aug. 14, 1978.

WATER TEMPERATURES: Maximum, 36.0°C Aug. 10, 1979; minimum, 1.0°C Feb. 10, 18, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, $\geq$ 573 micromhos Oct. 2, 3, 6, 7, 13-31, Nov. 1-29, Dec. 22; minimum recorded, 83 micromhos May 12.

WATER TEMPERATURES: Maximum, 36.0°C Aug. 10; minimum, 1.0°C Feb. 10, 18.

WATER QUALITY DATA, PERIOD MARCH TO SEPTEMBER 1978

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
MAR 29...	0925	135	5.0	13.5	80	8.5	--	K130	53	92	44
MAY 17...	1010	110	5.0	17.5	140	6.9	70	--	K14	52	32
JUN 21...	1030	271	6.7	27.0	300	4.4	120	>80	K120	50	120
JUL 18...	1310	240	6.7	30.0	100	4.4	110	--	--	K130	93
24...	1240	217	--	--	--	--	--	--	--	--	--

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS C03)
MAR 29...	43	.0	.0	11	3.9	5.1	20	.3	1.6	1	0
MAY 17...	25	.0	.0	7.9	3.0	4.2	21	.3	1.2	9	0
JUN 21...	62	--	--	35	7.8	10	15	.4	2.9	70	0
JUL 18...	44	--	--	27	6.3	8.2	15	.4	3.2	60	0
24...	--	--	--	--	--	--	--	--	--	--	--

DATE	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
MAR 29...	1	16	36	9.0	.1	13	105	89	.14	1.9	.01
MAY 17...	7	144	26	6.8	.0	11	114	66	.16	1.3	.01
JUN 21...	57	22	50	17	.1	27	281	188	.38	.81	.01
JUL 18...	49	19	49	12	.1	16	175	153	.24	.63	.08
24...	--	--	--	--	--	--	--	--	--	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).

PAMLICO RIVER BASIN

127

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

WATER QUALITY DATA, PERIOD MARCH TO SEPTEMBER 1978

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
MAR 29...	1.9	1.9	.88	.00	.99	2.8	12	.04	.12	.01
MAY 17...	1.3	1.3	1.1	.20	.90	2.4	11	.04	.12	.00
JUN 21...	.82	.85	1.6	.20	1.4	2.4	11	.07	.21	.02
JUL 18...	.71	.68	2.0	.00	2.1	2.7	12	.12	.37	.08
24...	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE D RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE D RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE D TOTAL (MG/L AS C)
MAR 29...	4	1	3	1600	740	4	0	6	23	.3
MAY 17...	1	0	3	2300	1400	4	1	3	21	1.2
JUN 21...	3	1	2	9000	3300	--	--	--	76	.8
JUL 18...	2	0	7	7100	1400	--	--	--	6.1	.5
24...	--	--	--	--	--	--	--	--	--	--

DATE	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)
MAR 29...	--	--	--	--	--	--	--	--	--	--
MAY 17...	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00
JUN 21...	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--
24...	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)
MAY 17...	.00	.00	.00	.00	.00	.00	.00	.00
JUL 24...	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAY 17...	.00	.00	.00	0	.00	.03	.00	.00
JUL 24...	.00	.00	.00	0	.00	.00	.00	.00

PAMLICO RIVER BASIN

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	COLIFORM, TOTAL, IMMEDIATE (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CaCO3)
OCT 02...	1130	495	6.6	21.5	350	3.2	94	--	--	160	K1100	230
NOV 14...	0930	550	6.4	16.5	300	--	180	--	--	--	--	240
DEC 19...	1300	440	6.2	8.0	150	7.8	--	--	220	84	K72	180
FEB 05...	1220	198	5.8	6.5	80	9.6	--	170	310	K2	K6	71
MAR 13...	0940	170	4.4	9.0	100	9.2	--	55	K6	K3	K17	49
MAY 01...	1415	152	4.5	21.5	50	8.6	--	58	--	24	K19	46
JUN 13...	1000	240	6.2	21.5	200	5.6	--	110	>80	K130	K190	84
JUL 17...	1130	389	6.5	30.0	200	4.6	--	130	540	230	100	180
SEP 04...	1355	283	6.7	28.0	150	3.7	--	59	--	82	K660	120

DATE	HARDNESS, NONCARBONATE (MG/L CaCO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)
OCT 02...	68	--	--	73	11	17	14	.5	4.2	194	0
NOV 14...	95	--	--	74	14	17	13	.5	5.4	180	0
DEC 19...	92	--	--	53	12	14	14	.5	4.5	110	0
FEB 05...	64	--	--	20	5.0	7.7	19	.4	1.6	8	0
MAR 13...	49	.6	30	12	4.5	6.0	21	.4	1.2	0	0
MAY 01...	46	.0	.0	12	4.0	5.8	21	.4	1.0	1	0
JUN 13...	63	--	--	23	6.4	7.7	16	.4	2.0	25	0
JUL 17...	98	--	--	51	12	15	15	.5	3.1	96	0
SEP 04...	66	--	--	34	7.6	8.6	13	.3	5.2	61	0

K Results based on colony count outside the acceptable range (non-ideal colony count).

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
OCT 02...	160	78	64	24	.3	38	439	329	.60	.14	.03
NOV 14...	150	115	86	22	.3	35	439	346	.60	.40	.04
DEC 19...	90	111	94	20	.2	41	386	298	.53	.49	.01
FEB 05...	7	20	58	11	.1	21	177	135	.24	1.3	.00
MAR 13...	0	.0	45	8.9	.1	15	139	104	.19	2.0	.01
MAY 01...	1	51	39	9.0	.1	14	130	93	.18	1.5	.01
JUN 13...	21	25	57	13	.1	20	235	143	.32	.68	.03
JUL 17...	79	49	78	19	.3	24	369	251	.50	.60	.01
SEP 04...	50	19	48	12	.2	19	233	166	.32	1.2	.00
DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)
OCT 02...	.17	.18	1.9	.40	1.5	2.1	9.2	.09	.28	.03	--
NOV 14...	.44	.46	2.3	.20	2.1	2.7	12	.06	.18	.01	--
DEC 19...	.50	.50	2.4	.10	2.3	2.9	13	.09	.28	.01	--
FEB 05...	1.3	1.3	1.1	.00	1.2	2.4	11	.03	.09	.00	--
MAR 13...	2.0	2.1	.87	.00	.96	2.9	13	.02	.06	.01	--
MAY 01...	1.5	1.5	1.1	.29	.81	2.6	12	.05	.15	.00	--
JUN 13...	.71	.76	2.2	.10	2.1	2.9	13	.07	.21	.03	--
JUL 17...	.61	.62	1.6	.10	1.5	2.2	9.8	.04	.12	.01	--
SEP 04...	1.2	.91	1.8	.40	1.4	3.0	13	.05	.15	.01	0

PAMLICO RIVER BASIN

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE D RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE D RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 02...	2	1	1	--	13000	--	1700	--	--	--	--
NOV 14...	3	1	2	--	9100	--	1900	--	6	0	6
DEC 19...	4	2	2	--	5800	--	2400	--	--	--	--
FEB 05...	1	0	1	--	2200	--	1100	--	0	0	0
MAR 13...	1	0	2	--	2300	800	1500	--	4	0	4
MAY 01...	2	0	2	--	2200	1400	790	--	4	0	4
JUN 13...	7	5	2	--	5800	4300	1500	--	6	3	3
JUL 17...	3	1	2	--	5500	3800	1700	--	1	1	0
SEP 04...	1	0	3	10	4000	2800	1200	15000	0	0	0
DATE	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE D TOTAL (MG/L AS C)	PCB, TOTAL (UG/L)	PCB, IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, IN BOT- TOM MA- TERIAL (UG/KG)
OCT 02...	--	--	5.2	3.0	--	--	--	--	--	--	--
NOV 14...	--	--	39	1.5	--	--	--	--	--	--	--
DEC 19...	--	--	3.4	.1	--	--	--	--	--	--	--
FEB 05...	--	--	23	2.1	--	--	--	--	--	--	--
MAR 13...	--	--	26	.6	--	--	--	--	--	--	--
MAY 01...	--	--	28	.6	.0	--	.00	.00	--	.0	--
JUN 13...	--	--	31	.7	--	--	--	--	--	--	--
JUL 17...	--	--	47	1.8	--	--	--	--	--	--	--
SEP 04...	<10	.00	25	.7	--	1	--	--	.0	--	2

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTERRER 1979

DATE	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)
OCT 02...	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	--	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
MAR 13...	--	--	--	--	--	--	--	--	--	--	--
MAY 01...	.00	--	.00	--	.00	--	10	--	.00	--	.00
JUN 13...	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	--	17	--	3.8	--	.0	--	.0	--	.0	--

DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, EPOXIDE TOT. IN BOTTOM MATL. (UG/L)	HEPTA- CHLOR, EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
MAY 01...	.00	--	.00	--	.00	--	.00	--	.00	--
SEP 04...	--	.0	--	.0	--	.0	--	.0	--	.0

DATE	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)
MAY 01...	.00	--	.00	--	.00	--	.00	--	.00	.00
SEP 04...	--	.0	--	.0	--	.0	--	.0	--	--

DATE	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAY 01...	--	.00	0	--	.00	--	.38	.00	.00
SEP 04...	.0	--	--	0	--	.0	--	--	--

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), PERIOD MARCH TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1											---	---
2											---	---
3											---	---
4											---	---
5											---	---
6											---	---
7											146	142
8											145	141
9											160	146
10											173	148
11											146	141
12											146	141
13											141	132
14											132	131
15											132	129
16											129	125
17											127	126
18											126	124
19											127	123
20											129	126
21											132	128
22											149	131
23											142	135
24											145	140
25											147	143
26											162	147
27											215	159
28											160	137
29											136	126
30											125	117
31											116	112
MONTH											215	112
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	113	111	114	106	224	176	404	363	339	229	463	429
2	112	109	106	103	249	225	406	376	224	187	430	306
3	108	106	103	101	256	188	409	387	249	216	298	260
4	110	107	111	102	159	82	445	383	253	248	310	272
5	117	110	135	83	186	161	399	361	267	250	362	291
6	117	111	104	91	195	186	366	340	304	267	347	308
7	126	116	103	98	207	195	350	333	340	306	361	324
8	137	121	136	98	215	207	340	329	380	327	386	350
9	137	125	157	137	215	108	381	335	389	367	402	364
10	136	127	154	138	166	143	406	366	416	359	405	380
11	143	135	136	113	171	166	390	358	311	186	413	375
12	156	140	112	99	174	169	386	232	325	194	426	393
13	170	153	98	91	178	171	240	235	218	64	448	412
14	177	170	99	93	184	178	248	240	115	59	449	439
15	179	155	103	98	192	183	265	249	144	114	452	426
16	172	155	101	95	207	192	303	266	177	145	465	423
17	163	151	95	90	219	207	307	286	206	177	481	455
18	193	158	89	88	236	219	298	219	252	203	491	462
19	210	177	88	86	252	235	222	205	273	225	490	452
20	173	151	89	86	301	252	234	215	311	244	496	461
21	149	136	91	87	310	268	234	174	327	276	487	460
22	135	124	94	90	296	280	213	177	332	304	496	432
23	124	119	96	91	330	293	236	217	372	316	508	480
24	120	117	103	96	326	306	273	189	392	362	550	477
25	125	117	114	102	349	310	166	115	402	373	534	426
26	163	125	122	111	345	327	211	169	434	394	565	462
27	157	152	132	120	363	341	252	211	441	408	566	472
28	155	143	145	132	376	336	292	250	432	401	567	470
29	142	126	161	145	365	342	305	284	454	419	569	510
30	132	115	168	157	396	352	299	285	469	442	570	501
31	---	---	179	166	---	---	323	289	463	449	---	---
MONTH	210	106	179	83	396	82	445	115	469	59	570	260
YEAR	570	59										

133

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C); WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	571	451	---	573	289	239	383	374	183	178	202	199
2	573	492	---	573	327	291	387	221	185	169	205	201
3	573	500	573	512	344	328	254	232	186	174	205	184
4	514	469	---	573	365	345	271	256	190	180	187	181
5	522	483	---	573	388	357	285	271	190	187	183	176
6	573	477	---	573	367	303	299	286	191	188	197	170
7	573	504	573	529	327	307	308	300	224	187	193	174
8	561	494	573	520	349	328	300	271	241	224	196	191
9	512	483	573	550	369	348	272	266	235	217	191	176
10	555	479	573	539	380	367	276	272	228	200	184	176
11	520	492	573	527	390	380	280	275	223	200	185	180
12	524	496	573	535	432	365	280	264	222	212	184	173
13	573	512	---	573	407	388	283	253	228	220	174	170
14	573	552	---	573	422	406	250	187	227	221	177	167
15	---	573	---	573	435	414	225	205	231	220	178	167
16	573	571	---	573	437	431	226	225	234	229	168	162
17	573	496	---	573	454	435	227	224	247	223	172	162
18	573	520	---	573	455	443	225	219	222	193	178	168
19	573	524	---	573	463	451	218	206	259	192	183	172
20	573	529	---	573	470	455	223	205	263	237	189	177
21	---	573	---	573	518	463	247	219	239	224	194	181
22	---	573	---	573	573	458	218	212	229	222	201	186
23	---	573	---	573	487	469	213	204	231	213	203	190
24	---	573	---	573	522	314	219	200	236	206	259	194
25	---	573	---	573	325	249	225	206	219	180	270	215
26	573	479	---	573	307	291	205	193	178	117	213	185
27	---	573	---	573	321	308	192	187	194	146	190	175
28	---	573	---	573	331	322	189	187	202	194	183	170
29	573	496	573	502	348	332	188	183	---	---	182	171
30	---	573	487	234	362	348	182	178	---	---	183	175
31	---	573	---	---	377	363	178	176	---	---	187	177
MONTH	≥ 573	469	≥ 573	234	≥ 573	239	387	176	263	117	270	162
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	194	184	149	132	143	129	231	216	379	343	408	374
2	199	190	143	123	145	129	247	229	407	371	367	293
3	203	193	125	119	155	137	259	246	434	391	299	258
4	214	199	130	122	160	131	275	251	454	407	315	278
5	224	215	195	124	162	156	312	265	458	398	311	158
6	---	---	194	177	179	162	331	272	441	366	185	155
7	---	---	175	155	178	166	320	293	411	356	188	169
8	---	---	161	156	171	149	334	292	393	335	197	189
9	---	---	205	157	168	150	354	326	408	351	203	196
10	---	---	184	161	176	154	346	316	420	375	208	201
11	---	---	188	85	174	162	371	329	434	387	213	206
12	---	---	187	83	231	182	378	344	413	305	222	209
13	---	---	200	182	246	223	393	360	293	263	227	215
14	---	---	203	166	229	217	388	366	304	263	232	215
15	---	---	216	165	228	216	407	371	391	302	252	234
16	---	---	218	195	234	222	402	374	407	364	253	245
17	---	---	194	168	255	213	429	381	422	384	260	251
18	---	---	168	146	222	166	439	411	431	405	274	256
19	---	---	196	148	234	225	441	356	462	410	306	265
20	---	---	204	192	233	225	355	281	462	420	314	282
21	---	---	202	184	229	222	381	345	460	407	323	290
22	---	---	183	161	237	222	355	215	456	411	323	289
23	---	---	172	161	261	239	303	241	466	420	340	310
24	---	---	179	164	255	203	301	247	475	427	345	319
25	---	---	210	182	237	191	307	276	469	431	336	321
26	---	---	190	167	227	220	328	315	473	436	356	320
27	---	---	166	142	220	211	346	305	479	448	364	339
28	---	---	149	123	212	206	318	234	489	460	341	327
29	---	---	126	119	212	205	315	257	473	450	340	311
30	---	---	126	119	220	205	356	301	452	391	340	284
31	---	---	130	120	---	---	358	321	424	379	---	---
MONTH	224	184	218	83	261	129	441	215	489	263	408	155
YEAR	≥ 573	83										

PAMLICO RIVER BASIN

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued
TEMPERATURE (DEG. C) OF WATER, PERIOD MARCH TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1											---	---
2											---	---
3											---	---
4											---	---
5											---	---
6											---	---
7											9.5	8.5
8											8.5	6.5
9											6.5	5.5
10											7.0	6.0
11											10.0	6.5
12											12.0	9.0
13											12.5	10.0
14											14.5	11.0
15											16.0	12.0
16											15.5	12.5
17											13.5	10.5
18											12.5	9.0
19											13.5	8.0
20											15.0	10.0
21											16.0	12.0
22											18.5	13.5
23											18.0	12.5
24											18.5	13.5
25											14.5	12.5
26											14.5	12.0
27											15.0	13.5
28											15.5	12.5
29											17.0	13.0
30											17.0	14.0
31											16.0	12.5
MONTH											18.5	5.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	19.0	13.5	16.5	14.5	27.0	24.5	31.0	28.5	30.5	26.0	29.0	27.0
2	19.5	15.0	15.0	13.5	28.0	25.0	29.0	26.5	26.5	25.0	27.5	25.5
3	16.0	13.0	18.5	12.5	29.0	25.5	29.0	26.5	28.0	25.0	27.5	25.5
4	18.0	12.5	17.5	15.0	24.5	23.0	29.5	26.0	30.5	26.0	29.0	25.0
5	21.0	15.0	17.5	16.5	26.5	21.5	28.0	26.0	29.5	27.5	27.5	25.5
6	19.0	15.5	17.5	16.0	27.0	23.0	26.5	23.0	31.5	27.5	28.0	25.0
7	21.5	16.0	17.0	15.0	26.5	24.0	27.5	23.5	31.0	28.0	28.0	24.5
8	21.0	16.0	15.5	14.5	28.5	25.0	27.5	25.0	31.5	27.5	29.5	25.5
9	20.0	16.5	18.5	15.5	27.5	25.0	30.5	26.0	31.5	28.0	30.5	27.0
10	20.0	16.0	19.5	17.5	26.5	24.5	32.0	27.5	30.5	28.0	29.0	27.0
11	21.0	18.5	19.5	17.0	27.5	23.5	30.5	25.5	28.0	25.0	28.0	25.5
12	21.0	19.0	20.0	17.0	28.5	23.0	28.0	23.0	30.0	25.5	28.0	24.5
13	20.0	17.5	20.0	18.0	27.5	24.0	29.5	23.0	31.0	25.5	27.0	25.0
14	21.0	15.5	20.0	18.5	27.0	22.5	27.5	25.0	28.0	25.0	26.0	23.0
15	20.5	16.0	19.0	17.5	27.0	22.0	29.0	25.0	30.5	27.0	25.0	22.5
16	19.0	15.0	19.5	17.0	27.0	22.5	28.0	26.0	32.0	27.5	27.5	24.0
17	16.5	14.0	20.0	16.5	28.0	23.5	31.0	25.0	32.0	28.5	28.5	24.5
18	14.0	13.5	20.5	17.0	29.5	24.5	31.0	26.5	32.0	28.0	30.0	26.0
19	17.0	14.0	22.0	17.5	30.5	25.0	29.5	26.0	31.0	28.0	30.5	26.5
20	19.5	15.5	23.5	18.0	30.5	25.5	31.0	27.5	32.5	28.5	29.0	26.0
21	19.0	15.5	24.5	19.5	30.5	26.0	31.5	27.5	30.5	27.5	27.0	24.5
22	18.0	13.5	23.5	20.0	30.0	26.5	32.0	28.5	29.0	26.5	28.5	24.5
23	19.5	13.5	24.0	20.0	31.0	27.0	33.0	29.5	30.5	26.0	27.0	22.5
24	21.5	15.5	24.5	21.0	29.5	27.0	32.5	28.0	28.5	26.0	25.0	20.5
25	19.0	16.5	26.0	22.0	30.0	26.0	30.0	25.5	29.0	25.5	24.0	21.0
26	16.5	15.0	26.5	23.0	29.0	26.0	30.5	26.5	30.0	27.0	24.0	20.5
27	15.0	12.0	25.0	20.5	30.0	26.5	31.5	27.5	28.0	27.0	22.5	20.5
28	15.5	11.5	21.5	19.5	32.5	27.5	31.0	27.5	29.0	26.5	22.0	19.5
29	17.5	14.0	25.5	20.5	32.5	28.5	31.5	27.5	31.0	27.0	22.0	20.0
30	18.0	15.5	27.0	23.0	31.5	28.0	32.5	28.5	31.5	28.0	21.5	19.0
31	---	---	28.0	24.5	---	---	32.0	29.5	31.0	28.0	---	---
MONTH	21.5	11.5	28.0	12.5	32.5	21.5	33.0	23.0	32.5	25.0	30.5	19.0
YEAR	33.0	5.5										

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.5	20.0	18.5	15.5	13.0	11.5	13.0	9.5	6.0	3.5	10.5	9.0
2	22.0	19.5	18.0	15.0	12.0	10.0	15.0	13.0	6.5	2.5	12.0	10.0
3	22.5	19.5	16.0	14.0	12.5	10.0	13.0	7.0	7.0	3.5	13.0	10.5
4	22.5	19.5	16.0	15.0	18.0	12.5	6.5	5.0	9.5	6.0	14.5	10.5
5	22.5	20.0	16.5	14.0	18.0	15.5	6.5	4.5	8.5	6.0	14.5	13.0
6	24.0	20.5	15.5	13.5	15.0	13.0	7.5	6.5	7.0	5.0	14.5	13.5
7	22.0	19.5	16.0	13.5	14.0	11.5	11.0	7.0	5.5	4.5	13.5	12.0
8	19.5	17.5	16.0	15.0	17.5	13.5	13.5	11.5	8.0	4.0	12.5	10.5
9	18.5	15.5	16.0	14.5	20.5	17.5	12.0	7.5	7.0	3.0	13.5	10.0
10	17.5	15.0	15.5	15.0	18.5	11.0	7.5	5.5	5.0	1.0	14.0	11.0
11	17.5	15.5	16.0	15.0	10.5	8.5	6.5	4.5	5.0	1.5	12.5	10.0
12	19.5	16.0	17.0	15.5	9.5	7.5	6.5	5.0	6.5	2.0	12.0	8.5
13	19.5	17.0	18.0	15.0	9.0	6.5	10.5	6.5	7.0	4.5	13.5	9.0
14	22.0	19.0	17.5	15.5	9.0	7.0	11.0	10.0	5.5	3.5	14.0	12.0
15	20.5	18.5	19.0	16.5	7.5	5.0	10.0	8.0	9.5	5.5	12.5	10.0
16	18.5	16.0	20.0	17.5	9.5	5.5	8.0	6.5	10.0	8.5	12.0	8.0
17	17.0	15.5	20.0	18.5	12.0	8.5	8.5	6.5	8.0	3.5	13.5	8.5
18	16.0	14.5	22.0	19.5	8.5	6.0	10.0	8.0	3.5	1.0	14.0	9.5
19	17.0	14.0	20.5	17.0	8.5	7.5	8.0	5.5	6.0	1.5	14.5	10.0
20	18.0	14.5	16.5	15.0	10.5	8.5	9.5	6.0	6.5	2.5	15.5	10.5
21	17.0	14.5	16.0	14.0	13.5	11.0	14.0	9.5	9.0	6.0	15.5	10.5
22	17.0	14.5	16.0	14.5	11.5	9.0	12.5	9.5	11.5	9.0	15.0	10.5
23	18.5	15.5	15.0	14.5	9.5	7.5	9.5	7.5	11.5	10.5	15.0	11.0
24	18.0	16.0	16.5	14.0	11.5	7.5	12.5	9.0	15.5	11.5	17.5	14.5
25	17.0	13.5	15.0	12.5	11.5	9.5	11.5	7.5	15.5	12.0	16.0	13.5
26	19.0	15.0	12.5	11.0	9.5	8.0	8.0	6.0	12.5	11.0	---	---
27	20.0	17.0	13.0	10.5	9.0	6.5	9.0	6.5	11.0	10.0	---	---
28	19.0	17.5	15.0	13.0	6.5	4.0	8.5	7.5	11.0	9.0	---	---
29	17.0	15.5	14.5	13.5	5.5	2.0	8.0	5.5	---	---	---	---
30	17.0	15.0	13.5	13.0	6.0	3.0	8.5	5.5	---	---	---	---
31	18.5	15.5	---	---	9.5	5.5	7.0	5.5	---	---	---	---
MONTH	24.0	13.5	22.0	10.5	20.5	2.0	15.0	4.5	15.5	1.0	17.5	8.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1			23.0	20.0	26.0	22.5	31.0	25.0	33.0	30.0	30.0	27.5
2			22.0	17.5	27.0	23.0	31.5	25.5	34.0	29.5	30.5	26.0
3			22.5	18.0	26.5	22.5	31.0	26.0	33.5	30.0	31.5	26.5
4			24.0	20.0	25.5	22.5	29.5	26.5	33.0	28.5	29.5	27.0
5			22.5	19.0	25.5	21.0	30.5	25.0	33.0	28.5	27.0	25.0
6			22.0	17.0	25.5	22.5	29.5	25.5	34.0	28.5	27.0	24.5
7			23.5	18.5	27.5	23.0	27.0	25.0	34.5	29.0	28.0	25.5
8			25.5	20.0	28.0	24.0	28.0	23.5	34.5	29.5	27.0	25.0
9			26.5	21.5	28.5	24.5	27.5	24.5	35.0	30.0	25.5	23.5
10			24.5	23.0	29.0	24.5	27.0	25.0	36.0	31.0	25.5	22.5
11			26.5	22.0	27.0	22.0	29.5	25.5	34.5	30.0	26.0	23.5
12			24.5	22.0	26.0	20.5	31.5	27.0	31.5	26.5	26.5	24.0
13			25.0	22.0	27.5	22.0	32.5	28.5	28.5	24.0	27.5	25.0
14			24.0	21.0	26.5	22.5	32.5	29.0	29.5	25.0	28.0	26.0
15			21.5	19.5	25.5	22.0	31.5	30.0	29.5	26.0	27.0	24.5
16			22.0	19.0	24.0	23.0	32.0	28.5	28.0	24.5	26.0	23.5
17			21.5	19.0	26.5	22.0	32.5	28.5	27.0	23.5	23.5	21.5
18			20.0	17.0	26.5	21.5	32.0	29.5	27.5	23.5	24.0	21.5
19			18.5	16.5	28.0	25.0	30.5	26.0	30.0	24.5	25.0	21.5
20			20.0	17.5	28.0	23.0	29.5	26.5	30.0	26.5	25.5	23.0
21			22.0	19.0	26.0	22.0	31.0	27.0	31.0	26.5	25.0	23.0
22			21.5	20.0	28.5	22.5	30.5	27.0	30.0	26.5	27.0	24.0
23			23.0	19.5	31.5	25.0	30.0	27.5	31.0	26.5	26.0	23.0
24			23.0	21.0	30.0	25.5	30.0	27.0	31.5	27.5	23.0	20.5
25			23.5	21.0	25.5	23.5	32.0	27.0	32.0	27.5	21.5	20.0
26			22.5	19.0	25.5	21.5	32.5	27.5	33.0	28.5	23.5	21.0
27			22.0	17.5	26.5	22.5	33.5	28.5	32.0	28.5	24.0	21.5
28			23.0	18.5	27.5	23.0	33.5	29.0	30.0	28.0	25.5	23.0
29			23.5	20.0	29.0	23.0	33.0	30.0	32.0	26.5	24.5	23.5
30			24.5	20.0	30.5	24.5	33.0	29.5	30.5	26.0	24.0	23.0
31			24.0	21.5	---	---	32.5	29.0	31.5	27.0	---	---
MONTH			26.5	16.5	31.5	20.5	33.5	23.5	36.0	23.5	31.5	20.0

YEAR	36.0	1.0										
------	------	-----	--	--	--	--	--	--	--	--	--	--

PAMLICO RIVER BASIN

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L)
NOV		
17...	1012	12
DEC		
28...	1450	7
FEB		
08...	1407	10
APR		
27...	1310	69
MAY		
17...	1010	26
18...	0900	23
20...	1000	46
26...	0800	494
28...	1700	34
JUN		
02...	1010	53
04...	1020	353
08...	1900	41
11...	0915	55
17...	1720	123
19...	1130	35
21...	1030	27
21...	1230	40
23...	1600	53
26...	1330	44
29...	1348	51
JUL		
07...	1100	46
14...	1230	242
16...	0930	128
18...	0950	47
22...	1200	124
24...	1240	26
25...	1200	119
30...	0930	56
AUG		
04...	1830	26
07...	1900	96
09...	1745	38
12...	1100	55
17...	1600	31
19...	1400	30
24...	1915	25
26...	1630	16
31...	1920	26
SEP		
03...	1910	22
06...	1130	146
09...	1710	38
11...	1840	14
13...	1825	108
18...	1500	15
20...	1750	10
23...	1200	13
26...	1650	15

PAMLICO RIVER BASIN

137

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued
 WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L)
OCT		
02...	1130	34
02...	1750	29
06...	1640	20
07...	0845	28
12...	1800	39
14...	0850	33
19...	1635	23
21...	0805	18
25...	1845	17
28...	0810	22
30...	1605	17
NOV		
01...	1721	18
07...	1715	16
09...	1415	19
13...	1116	25
13...	1707	28
15...	1605	25
21...	1640	25
25...	1045	37
DEC		
01...	1040	21
04...	1710	17
06...	1633	16
09...	0819	20
12...	1555	14
16...	1337	14
19...	1300	16
19...	1544	19
23...	1625	25
28...	0848	8
30...	1405	10
JAN		
01...	1030	11
06...	1640	21
10...	1545	20
15...	1700	24
17...	1550	16
19...	1536	14
22...	1622	41
24...	1620	19
30...	1348	10
FEB		
02...	1613	7
05...	1220	9
05...	1651	12
09...	1257	9
13...	1552	11
16...	0922	65
20...	1344	43
23...	1530	16
26...	1242	246
MAR		
03...	0922	12
07...	1708	33
09...	1336	16
13...	0940	14
14...	1700	15
16...	1516	12
19...	1803	10
24...	1653	71
28...	1622	12

PAMLICO RIVER BASIN

02084572 ALBEMARLE CANAL NEAR SWINDELL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L)
APR		
01...	1110	19
03...	1600	20
08...	1335	15
11...	0930	21
13...	1600	33
18...	1750	21
21...	1613	123
24...	1600	23
27...	1532	50
30...	1530	15
MAY		
01...	1415	15
05...	0950	44
09...	1730	22
12...	1020	239
16...	1330	35
18...	1310	16
21...	1500	16
24...	1607	28
28...	1908	16
JUN		
02...	1320	26
04...	1445	271
09...	1040	46
12...	0945	46
13...	1000	29
15...	1345	26
19...	0935	38
22...	0810	25
25...	1000	103
30...	1300	19
JUL		
06...	0520	17
10...	1445	11
12...	1205	11
16...	1150	17
17...	1130	16
19...	1435	19
23...	1310	37
25...	1410	22
28...	0920	39
30...	1550	11
AUG		
06...	1530	19
08...	1550	18
13...	1055	42
18...	1235	14
22...	1415	17
26...	0825	15
29...	1410	15
SEP		
03...	1145	14
04...	1355	22
09...	0630	15
11...	1700	16
21...	1310	17
24...	1240	16

NEUSE RIVER BASIN

139

02085070 ENO RIVER NEAR DURHAM, N. C.

LOCATION.--Lat 36°04'21", long 78°54'24", Durham County, Hydrologic Unit 03020201, on right bank 275 ft (84 m) downstream from bridge on U.S. Highway 501, 0.2 mi (0.3 km) downstream from Crooked Creek, and 5 mi (8 km) north of Durham.

DRAINAGE AREA.--141 mi² (365 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water year 1955. August 1963 to current year.

REVISED RECORDS.--WRD N. C. 1972: 1968-71(M), 1971(P).

GAGE.--Water-stage recorder. Altitude of gage is 270 ft (82 m), from topographic map. Prior to Nov. 19, 1966, at site 275 ft (84 m) upstream at datum 2.35 ft (0.716 m) higher. Nov. 20, 1966 to Sept. 30, 1967 water-stage recorder and crest-stage gage at present site at datum 0.94 ft (0.287 m) higher.

REMARKS.--Records good. Some regulation during periods of low flow caused by mill 600 ft (183 m) upstream. Suspended sediment records for the current year are published on page 499 of this report.

AVERAGE DISCHARGE.--16 years, 128 ft³/s (3.625 m³/s), 12.33 in/yr (313 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,620 ft³/s (272 m³/s) Apr. 26, 1978, gage height, 19.65 ft (5.989 m), minimum, 0.06 ft³/s (0.002 m³/s) Aug. 14, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft³/s (65.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1200	4770 135	13.84 4.218	Mar. 24	1600	3050 86.4	10.34 3.152
Feb. 25	0200	5080 144	14.39 4.386	June 4	0230	*8030 227	*18.09 5.514

Minimum discharge, 0.77 ft³/s (0.022 m³/s) Aug. 19, gage height, 0.87 ft (0.265 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	6.3	61	49	107	317	126	70	74	43	11	22
2	29	5.7	40	242	94	262	116	65	100	107	8.9	37
3	32	5.2	31	335	87	224	151	59	193	51	10	15
4	23	5.1	42	142	85	202	864	70	3980	38	13	9.9
5	20	4.6	514	91	82	206	660	67	560	34	22	538
6	17	4.6	297	78	75	210	320	61	259	31	15	497
7	15	4.5	113	140	88	176	216	57	162	29	11	125
8	14	8.7	72	403	97	168	178	53	117	26	8.2	56
9	13	22	63	257	94	190	188	51	96	24	5.8	38
10	12	17	113	145	86	165	184	69	83	24	4.0	30
11	10	16	98	104	78	277	144	92	79	24	3.6	24
12	8.4	12	63	95	74	301	130	188	69	26	5.3	20
13	6.8	15	50	434	76	199	152	170	58	25	8.6	18
14	6.8	11	44	638	82	171	218	385	52	24	16	19
15	7.0	9.4	40	406	134	166	159	345	49	24	12	19
16	6.4	13	38	212	413	137	127	151	76	25	8.0	19
17	5.7	28	42	153	271	119	107	92	322	24	6.1	18
18	7.4	47	42	125	164	114	98	72	157	26	5.2	16
19	6.0	35	42	102	157	113	93	80	90	23	3.4	13
20	7.2	25	38	170	172	105	87	93	67	20	3.3	11
21	7.8	20	39	3210	215	100	83	77	55	28	3.0	54
22	7.2	17	40	827	670	94	79	67	59	32	2.8	74
23	7.4	14	38	353	1560	89	78	119	80	31	2.9	77
24	6.8	18	91	918	2750	1750	75	111	71	35	3.1	56
25	6.5	19	325	642	4010	749	72	98	58	26	2.7	42
26	6.2	20	154	312	2500	383	139	74	48	22	2.4	39
27	6.5	31	89	222	747	245	195	61	42	21	2.2	37
28	6.7	32	65	191	464	195	118	56	38	18	6.7	33
29	6.6	52	54	159	---	169	88	54	36	15	84	30
30	6.5	79	48	130	---	151	76	51	34	14	26	41
31	5.9	---	47	115	---	135	---	46	---	14	13	---
TOTAL	339.8	597.1	2833	11400	15432	7882	5321	3104	7164	904	329.2	2027.9
MEAN	11.0	19.9	91.4	368	551	254	177	100	239	29.2	10.6	67.6
MAX	32	79	514	3210	4010	1750	864	385	3980	107	84	538
MIN	5.7	4.5	31	49	74	89	72	46	34	14	2.2	9.9
CFSM	.08	.14	.65	2.61	3.91	1.80	1.26	.71	1.70	.21	.08	.48
IN.	.09	.16	.75	3.01	4.07	2.08	1.40	.82	1.89	.24	.09	.54
CAL YR 1978	TOTAL	63492.9	MEAN 174	MAX 6210	MIN 4.5	CFSM 1.23	IN 16.75					
WTH YR 1979	TOTAL	57334.0	MEAN 157	MAX 4010	MIN 2.2	CFSM 1.11	IN 15.13					

NEUSE RIVER BASIN

02085220 LITTLE RIVER NEAR ORANGE FACTORY, N. C.

LOCATION.--Lat 36°08'20", long 78°54'24", Durham County, Hydrologic Unit 03020201, on right bank 125 ft (38 m) upstream from bridge on U.S. Highway 501, 1 mi (1.6 km) upstream from Mountain Creek, and 1.2 mi (1.9 km) northwest of Orange Factory.

DRAINAGE AREA.--81.6 mi² (211 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1930, 1954-59, 1961. September 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 333.98 ft (101.797 m) National Vertical Datum of 1929 (levels by North Carolina State Highway Commission).

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 499 of this report.

AVERAGE DISCHARGE.--18 years, 73.4 ft³/s (2.079 m³/s), 12.22 in/yr (310 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,070 ft³/s (257 m³/s) Oct. 25, 1971, gage height, 12.56 ft (3.828 m) from high-water mark in well; minimum, 0.01 ft³/s (<0.001 m³/s) Sept. 3-7, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A field estimate of 0.03 ft³/s (<0.001 m³/s) was made on Sept. 18, 19, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1000	3040 86.1	6.77 2.063	Mar. 24	1700	2880 81.6	6.56 1.999
Jan. 24	1400	1740 49.3	4.98 1.518	June 4	0200	3560 101	7.73 2.356
Feb. 24	2330	*3610 102	*7.44 2.268				

Minimum discharge, 3.0 ft³/s (0.085 m³/s) Oct. 18, 19, 20, 21, 22, 23; minimum gage height, 0.78 ft (0.238 m) Aug. 25, 26, 27, 28, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	6.1	20	31	55	136	67	41	89	102	9.0	5.5
2	26	5.5	13	172	48	114	66	38	112	91	8.4	10
3	13	6.0	11	175	45	91	90	37	175	40	15	7.5
4	9.4	6.6	13	67	45	79	514	46	2160	30	19	6.4
5	8.4	8.0	319	46	43	83	371	44	240	34	12	348
6	7.9	7.2	135	40	42	84	172	39	118	24	8.9	224
7	7.9	4.8	55	81	48	80	111	37	83	23	7.5	36
8	7.5	6.3	35	249	57	84	90	35	68	21	7.0	16
9	5.9	7.5	34	134	50	143	99	35	62	21	6.2	12
10	5.2	12	105	73	53	99	108	71	58	22	6.2	10
11	5.2	6.5	49	55	57	214	79	149	70	21	5.5	8.4
12	5.5	5.6	32	46	52	182	69	336	59	19	8.9	7.9
13	5.2	5.5	27	230	42	108	92	120	51	19	11	7.9
14	4.8	5.5	24	377	43	92	180	507	48	18	9.4	8.4
15	4.2	5.3	21	209	95	84	103	259	44	15	7.9	8.4
16	3.8	5.9	20	99	312	64	84	105	58	27	6.6	7.9
17	3.7	14	21	77	170	59	71	71	199	23	5.9	7.5
18	3.4	19	21	64	71	57	64	58	102	15	5.2	7.5
19	3.5	13	20	51	105	57	60	66	68	14	4.8	6.6
20	3.4	9.9	19	99	113	57	59	67	56	14	4.8	7.0
21	3.5	7.8	20	2090	130	55	55	57	50	17	4.5	18
22	3.4	7.2	22	529	574	53	55	54	230	21	4.5	89
23	3.4	7.6	21	218	1080	55	53	57	140	19	5.2	79
24	4.1	8.8	57	839	1960	1710	52	56	74	15	4.8	27
25	4.4	10	200	437	2550	426	44	54	58	14	4.8	22
26	3.6	9.8	75	200	1500	198	76	53	46	12	4.2	23
27	4.1	11	43	134	351	126	88	48	41	13	4.2	21
28	4.9	16	32	110	200	102	59	47	39	12	24	18
29	5.5	19	26	89	---	86	50	46	42	11	13	15
30	5.0	35	24	71	---	75	45	45	40	9.4	7.2	27
31	6.0	---	24	64	---	71	---	49	---	8.9	5.5	---
TOTAL	195.8	292.4	1538	7156	9891	4924	3126	2727	4680	745.3	251.1	1091.9
MEAN	6.32	9.75	49.6	231	353	159	104	88.0	156	24.0	8.10	36.4
MAX	26	35	319	2090	2550	1710	514	507	2160	102	24	348
MIN	3.4	4.8	11	31	42	53	44	35	39	8.9	4.2	5.5
CFS*	.08	.12	.61	2.83	4.33	1.95	1.28	1.08	1.91	.29	.10	.45
IN.	.09	.13	.70	3.26	4.51	2.24	1.43	1.24	2.13	.34	.11	.50

CAL YR 1978 TOTAL 38465.6 MEAN 105 MAX 3980 MIN 3.4 CFSM 1.29 IN 17.54
WTR YR 1979 TOTAL 36618.5 MEAN 100 MAX 2550 MIN 3.4 CFSM 1.23 IN 16.69

02085500 FLAT RIVER AT BAHAMA, N. C.

LOCATION.--Lat 36°10'57", long 78°52'44", Durham County, Hydrologic Unit 03020201, on right bank 0.5 mi (0.8 km) upstream from Lake Michie, 1.2 mi (1.9 km) upstream from bridge on Secondary Road 1616, 1.2 mi (1.9 km) north of Bahama, and 1.5 mi (2.4 km) upstream from Dial Creek.

DRAINAGE AREA.--150 mi² (388 km²).

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 1333: 1926, 1928(M), 1938, 1946.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 346.85 ft (105.720 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 22, 1925, nonrecording gage at same site at datum 0.58 ft (0.177 m) lower.

REMARKS.--Records good. Prior to December 1962, some diurnal fluctuation and infrequent regulation at low flow caused by small mill 5 mi (8 km) upstream.

AVERAGE DISCHARGE.--54 years, 143 ft³/s (4.050 m³/s), 12.95 in/yr (329 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 20,000 ft³/s (566 m³/s) July 26, 1938 (gage height, not determined), computed on basis of records for nearby stations; minimum, 0.23 ft³/s (0.007 m³/s) Sept. 26, 28, 29, Oct. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1100	5500 156	7.46 2.274	Mar. 24	1500	6440 182	7.97 2.429
Feb. 25	0400	*7240 205	*8.37 2.551				

Minimum discharge, 2.3 ft³/s (0.065 m³/s) Nov. 3, 4, gage height, 0.94 ft (0.286 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	6.5	57	83	127	321	140	74	282	63	12	7.8
2	21	4.2	34	422	112	282	130	69	220	69	37	8.5
3	22	3.3	25	497	103	237	139	66	122	41	587	8.9
4	15	3.4	25	178	102	206	651	85	943	32	123	22
5	12	5.4	856	119	98	203	599	80	279	29	52	745
6	9.8	5.3	329	104	92	203	282	68	144	27	36	873
7	8.4	6.1	127	163	102	179	200	64	101	25	26	139
8	9.1	8.9	84	606	113	169	167	60	83	23	21	76
9	8.4	10	77	343	108	309	171	58	71	22	18	50
10	7.1	14	387	180	101	227	180	67	66	21	16	37
11	6.3	13	140	133	93	360	138	218	62	21	14	30
12	6.0	11	86	112	89	337	126	625	58	22	19	26
13	5.8	9.6	68	317	92	216	167	213	51	20	39	23
14	5.1	7.8	58	718	92	187	399	1160	46	21	32	25
15	4.5	8.4	52	471	124	167	206	526	43	21	19	23
16	4.2	9.2	46	222	515	139	151	224	48	22	15	23
17	3.9	25	46	169	362	128	125	143	252	35	12	19
18	3.7	43	44	143	197	123	112	108	134	24	11	16
19	3.5	31	43	116	192	118	105	118	82	48	9.7	15
20	3.6	21	41	168	202	114	98	127	87	50	9.0	14
21	3.4	16	44	3800	235	107	93	98	60	79	8.4	40
22	3.4	13	52	916	1070	100	89	89	226	59	9.1	1130
23	3.5	12	49	382	1660	99	87	84	137	40	9.3	523
24	3.4	14	91	1450	3300	3850	89	79	70	30	8.6	201
25	3.2	15	500	845	5090	830	85	77	54	24	7.9	173
26	3.5	17	188	362	3220	402	122	84	46	20	7.5	116
27	3.8	18	111	253	720	273	177	68	41	20	7.2	96
28	3.5	22	83	225	434	223	110	63	38	20	14	74
29	3.3	35	67	198	---	192	89	72	36	17	16	63
30	3.4	58	59	160	---	171	79	72	34	14	8.1	115
31	4.2	---	60	142	---	153	---	63	---	13	7.7	---
TOTAL	211.0	466.1	3929	13997	18745	10625	5306	5002	3916	972	1211.5	4712.2
MEAN	6.81	15.5	127	452	669	343	177	161	131	31.4	39.1	157
MAX	22	58	856	3800	5090	3850	651	1160	943	79	587	1130
MIN	3.2	3.3	25	83	89	99	79	58	34	13	7.2	7.8
CFSM	.05	.10	.85	3.01	4.46	2.29	1.18	1.07	.87	.21	.26	1.05
IN.	.05	.12	.97	3.47	4.65	2.63	1.32	1.24	.97	.24	.30	1.17
CAL YR 1978	TOTAL	77911.7	MEAN 213	MAX 6780	MIN 3.2	CFSM 1.42	IN 19.32					
WTR YR 1979	TOTAL	69092.8	MEAN 189	MAX 5090	MIN 3.2	CFSM 1.26	IN 17.13					

02087000 NEUSE RIVER NEAR NORTHSIDE, N. C.

LOCATION.--Lat 36°02'54", long 78°44'59", Durham County, Hydrologic Unit 03020201, on right bank 25 ft (8 m) upstream from Fish Dam Bridge on Secondary Road 1801, 1.5 mi (2.4 km) downstream from Rocky Creek, 2.5 mi (4.0 km) downstream from Seaboard Coast Line Railroad bridge, 2.5 mi (4.0 km) south of Northside, 8.5 mi (13.7 km) downstream from confluence of Eno and Flat Rivers, and 9.5 mi (15.3 km) northeast of Durham.

DRAINAGE AREA.--526 mi² (1,362 km²).

PERIOD OF RECORD.--July 1927 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1032: 1933(M), 1935-36, 1937(M), 1938-39, 1944(M). WSP 1333: 1928-31, 1933, 1934(M). WSP 1703: 1948.

GAGE.--Water-stage recorder. Datum of gage is 225.91 ft (68.857 m) National Geodetic Vertical Datum of 1929. Prior to June 2, 1928, nonrecording gage at site 10 ft (3 m) upstream at same datum. Mar. 25, 1949, to Sept. 28, 1950, auxiliary nonrecording gage, and Sept. 29, 1950, to Jan. 14, 1968, auxiliary water-stage recorder at bridge on U.S. Highway 15, 4 mi (6 km) upstream. Mar. 5, 1968 to Oct. 7, 1969, auxiliary water-stage recorder and Oct. 7, 1969, to June 30, 1977, nonrecording auxiliary gage on bridge on Secondary Road 1900, 3.7 mi (6.0 km) downstream.

REMARKS.--Records good. Slight diurnal fluctuation caused by water plants above station. Flow regulated by Lake Michie (see p. 406). An average of 27.1 ft³/s (0.77 m³/s) was diverted from Flat River, an upstream tributary, for Durham municipal water supply, and an average of 2.4 ft³/s (0.068 m³/s) from Knap of Reeds Creek, an upstream tributary for Butner municipal water supply. Sewage effluent from Durham, about 12.2 ft³/s (0.35 m³/s) and Butner 2.7 ft³/s (0.076 m³/s) was returned to Neuse River 3 mi (5 km) upstream from station, the remainder, about 11.8 ft³/s (0.33 m³/s) was diverted into the Cape Fear River basin. Suspended-sediment records for the current year are published on page 499 of this report.

AVERAGE DISCHARGE.--52 years, 518 ft³/s (14.67 m³/s), 13.37 in/yr (340 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,600 ft³/s (1,040 m³/s) Sept. 18, 1945; maximum gage height, 31.02 ft (9.455 m) Sept. 18, 1945, from floodmark; minimum discharge, 3.1 ft³/s (0.088 m³/s) Sept. 30, 1932, gage height, 0.87 ft (0.265 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	1930	8890 252	20.85 6.355	Mar. 25	2100	5810 165	18.11 5.520
Feb. 26	2030	*16200 459	24.89 7.586	June 5	1000	8970 254	20.91 6.373

Minimum discharge, 17 ft³/s (0.48 m³/s) Oct. 30, 31; minimum gage height, 1.18 ft (0.360 m) Oct. 22, 23, 24, 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	21	207	169	456	3340	420	217	255	193	42	70
2	119	24	136	454	390	5100	378	211	366	219	40	96
3	95	25	93	1610	334	1000	439	225	428	191	54	166
4	69	26	83	870	321	814	1490	273	4570	125	242	125
5	64	26	610	451	318	789	3390	232	7870	104	162	638
6	50	20	1220	340	273	920	2620	211	4440	90	134	2600
7	38	27	431	364	299	714	1170	198	1940	82	117	1760
8	30	57	221	1350	357	587	741	204	858	66	112	427
9	28	48	172	1500	390	768	685	197	414	59	114	179
10	29	46	234	854	343	797	715	230	351	60	43	159
11	29	49	448	553	313	872	553	445	334	59	60	141
12	28	45	206	391	309	1270	466	1700	323	58	93	128
13	26	35	212	1030	299	875	474	1150	259	81	99	123
14	24	33	194	2380	330	663	808	1890	235	61	72	135
15	22	32	177	2190	347	597	762	3100	206	55	67	135
16	22	31	165	1110	1200	462	528	1640	149	56	62	73
17	22	140	193	625	1370	414	435	628	768	64	56	49
18	23	116	154	479	829	363	339	385	592	266	46	46
19	23	110	179	393	476	302	300	480	373	286	30	44
20	24	76	174	494	616	359	262	511	258	76	26	42
21	24	56	100	3160	744	314	245	391	226	95	24	81
22	21	45	105	7630	1680	298	270	313	256	137	25	255
23	19	40	179	5020	3290	297	249	290	525	88	26	1310
24	20	59	172	3140	5650	1730	242	348	356	106	26	651
25	22	49	647	2690	10700	4900	239	368	270	309	27	489
26	21	41	651	2320	15500	4240	315	298	170	104	26	368
27	22	69	420	1180	13000	1940	476	265	198	66	25	253
28	23	152	276	797	5100	884	428	247	199	58	33	221
29	20	99	211	745	---	592	303	182	192	50	178	197
30	18	283	177	575	---	499	251	216	163	44	129	221
31	20	---	164	494	---	461	---	226	---	43	59	---
TOTAL	1062	1880	8952	45358	65234	37281	19993	17271	27544	3351	2249	11182
MEAN	34.3	62.7	280	1463	2330	1203	666	557	918	108	72.5	373
MAX	119	243	1200	7630	15500	5100	3390	3100	7870	309	242	2600
MIN	14	20	83	169	273	297	239	182	149	43	24	42
CFS	0.07	0.12	0.54	2.78	4.43	2.29	1.27	1.06	1.75	0.21	0.14	0.71
IN	0.04	0.13	0.63	3.21	4.61	2.64	1.41	1.22	1.95	0.24	0.16	0.79
CAL YR 1978 TOTAL	255769.0	447701	MAX 14100	MIN 9.0	CFSM 1.33	IN 18.09						
AT YR 1979 TOTAL	241257.0	447701	MAX 15500	MIN 18	CFSM 1.26	IN 17.06						

02087183 NEUSE RIVER NEAR FALLS, N. C.

LOCATION.--Lat 35°56'24", long 78°34'32", Wake County, Hydrologic Unit 03020201, on left bank, 0.3 mi (0.5 km) downstream from bridge on Secondary Road 2000, 0.4 mi (0.6 km) northeast of Falls, and 0.5 mi (0.8 km) downstream from Honeycutt Creek.

DRAINAGE AREA.--770 mi² (1,994 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 182.62 ft (55.663 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge record good. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000). The city of Raleigh diverted an average of 27.7 ft³/s (0.78 m³/s) 1.2 mi (1.9 km) upstream from station for municipal water supply, most of which was returned downstream as sewage effluent. Gage height telemeter at station.

AVERAGE DISCHARGE.--9 years, 869 ft³/s (24.61 m³/s), 15.33 in/yr (389 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) July 17, 1975, gage height, 25.21 ft (7.684 m); minimum, 7.2 ft³/s (0.20 m³/s) Oct. 12, 13, 1970, gage height, 1.62 ft (0.494 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of 216.1 ft (65.9 m) above mean sea level, discharge, 23,300 ft³/s (660 m³/s) at bridge 0.4 mi (0.6 km) upstream from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 24	1400	7740 219	19.22 5.858	Apr. 6	1400	4390 124	14.21 4.331
Feb. 27	2000	*12700 360	*24.47 7.458	May 15	1600	4790 136	14.98 4.566
Mar. 27	0230	5420 153	16.12 4.913	June 6	1630	7560 214	19.00 5.791

Minimum discharge, 14 ft³/s (0.396 m³/s) Oct. 26; minimum gage height, 2.27 ft (0.692 m) Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	32	324	270	728	10400	598	334	352	209	80	87
2	139	22	216	345	654	8260	541	307	373	239	77	80
3	119	19	154	1380	588	5940	537	305	483	268	49	105
4	98	33	129	1560	550	2660	1650	379	5210	194	61	136
5	78	54	656	754	526	1150	3810	423	6610	149	252	568
6	74	47	1570	495	386	1260	4330	329	7410	122	167	2000
7	68	41	935	445	382	1150	3440	292	7010	111	127	2730
8	55	80	432	1140	419	929	1320	272	5170	101	108	1340
9	45	87	331	1890	471	1080	913	264	1390	87	104	331
10	42	69	386	1390	452	1180	900	325	533	82	101	179
11	48	69	472	795	403	1220	802	672	483	82	62	159
12	49	71	492	573	396	1740	657	2200	448	77	45	136
13	47	66	369	1250	390	1500	634	2440	398	75	81	127
14	45	52	313	2700	393	1070	944	3240	329	84	91	130
15	50	44	295	3010	423	1010	1100	4720	284	75	69	130
16	47	47	281	2390	1020	802	796	4450	294	67	53	128
17	42	74	329	1060	1750	691	626	2200	1070	61	45	87
18	40	131	338	689	1270	616	523	771	1170	120	39	59
19	41	121	282	672	720	582	446	799	682	558	33	49
20	40	111	290	663	682	572	414	1020	452	247	29	39
21	41	90	289	4160	846	532	368	728	352	150	25	91
22	42	66	289	6180	1800	498	366	558	331	211	18	200
23	41	66	300	6920	3910	484	364	472	457	176	16	685
24	44	74	307	7530	5880	2570	347	498	521	136	74	1120
25	24	76	565	6720	7780	4180	336	565	408	272	87	556
26	27	74	880	5680	10800	5100	378	485	318	286	55	474
27	47	75	650	4910	12400	5270	530	421	227	138	36	356
28	26	135	459	2680	12200	3260	626	371	247	90	33	270
29	29	166	352	1150	---	996	496	345	233	86	50	247
30	37	324	302	936	---	751	389	284	217	69	202	463
31	27	---	280	792	---	665	---	309	---	74	136	---
TOTAL	1589	2416	13267	71129	68219	68118	29181	30778	43462	4696	2405	13062
MEAN	51.3	80.5	428	2294	2436	2197	973	993	1449	151	77.6	435
MAX	139	324	1570	7530	12400	10400	4330	4720	7410	558	252	2730
MIN	24	19	129	270	382	484	336	264	217	61	16	39
CFS ⁴	.07	.11	.56	2.98	3.16	2.85	1.26	1.29	1.88	.20	.10	.57
IN.	.08	.12	.64	3.44	3.30	3.29	1.41	1.49	2.10	.23	.12	.63
CAL YR 1978 TOTAL	381187			MEAN 1044	MAX 12100	MIN 19	CFSM 1.36	IN 18.42				
WTR YR 1979 TOTAL	348322			MEAN 954	MAX 12400	MIN 16	CFSM 1.24	IN 16.83				

NEUSE RIVER BASIN

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1961-1973, September 1978 to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1960 to September 1967, October 1978 to September 1979.

WATER TEMPERATURES: October 1953 to September 1954, November 1960 to September 1967, October 1978 to September 1979.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

REMARKS.--Daily records of specific conductance for period November 1960 to September 1964 are available in the district office in Raleigh, N. C. For water years 1954, 1961-73, data were published as Neuse River at Falls (station 02087182).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 355 micromhos Sept. 22, 1966; minimum daily, 37 micromhos Aug. 4, 1961.

WATER TEMPERATURES: Maximum daily, 28.0°C Aug. 1, 6, 1979; minimum daily, 0.0°C on many days during 1960-62.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 238 micromhos Nov. 14; minimum daily, 39 micromhos June 4.

WATER TEMPERATURES: Maximum daily, 28.0°C Aug. 1, 6; minimum daily, 1.0°C Feb. 9, 12.

WATER QUALITY DATA, SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPECIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COHALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
SEP 14...	1415	46	103	6.6	23.5	200	7.6	33	0	9.7	2.1	8.4
DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
SEP 14...	33	.6	3.0	52	0	43	21	9.0	7.1	.1	14	94
DATE	SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORG. TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
SEP 14...	83	.13	11.7	.36	.04	.40	.41	.3	.07	1.4	1.5	.66
DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/KG AS P)	CHRO- MIUM, TOTAL RECOV- ERABLE (MG/KG AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)
SEP 14...	.84	210	1.9	4.4	.50	1.5	.48	.18	13	20	19	
DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CH)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)
SEP 14...	1	<10	10	9	1	<10	7600	7600	50	1800	<10	
DATE	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)					
SEP 14...	30	30	0	<10	14	1.0	.00					

NEUSE RIVER BASIN

145

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPI- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN- DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS- NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JAN											
19...	1325	664	85	7.5	3.0	50	13.3	27	10	6.3	2.7
21...	0900	4510	57	6.1	8.0	1000	11.3	16	7	3.5	1.7
21...	1530	5560	61	6.1	8.0	350	10.9	16	8	3.8	1.6
22...	0735	6110	61	6.2	6.5	130	12.4	19	10	4.5	1.8
23...	1000	6740	52	7.2	4.5	--	11.6	--	--	--	--
26...	0930	5720	55	7.3	4.0	100	11.6	18	10	4.0	1.9
29...	1400	1100	75	7.1	5.0	50	12.4	22	9	5.0	2.3
FEB											
26...	1400	11000	44	6.0	6.0	200	12.0	13	8	3.2	1.3
27...	1630	12700	46	6.2	6.0	15	11.0	13	6	3.0	1.3
APR											
02...	1200	544	78	6.5	17.5	65	9.8	22	2	5.2	2.2
20...	1030	416	89	6.1	15.0	35	9.7	22	1	5.0	2.3
MAY											
09...	0930	264	93	6.9	20.5	15	8.5	25	0	5.7	2.6
JUN											
04...	0945	5750	30	6.6	20.0	--	8.4	--	--	--	--
JUL											
12...	1230	78	100	6.8	24.5	12	10.4	28	0	6.7	2.7
SEP											
05...	1130	597	148	6.7	24.5	25	7.2	29	4	7.1	2.7
07...	1430	2830	53	5.8	24.0	70	7.6	19	0	4.3	1.9

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JAN											
19...	6.3	32	.5	2.1	20	0	16	1.0	11	6.9	.1
21...	3.5	28	.4	2.5	11	0	9	14	7.8	4.6	.1
21...	4.5	34	.5	2.4	10	0	8	13	7.7	6.4	.1
22...	4.8	33	.5	2.2	10	0	8	10	9.1	4.6	.1
23...	--	--	--	--	--	--	--	--	--	--	--
26...	3.9	29	.4	2.6	10	0	8	8.8	8.1	4.0	.1
29...	5.4	33	.5	1.8	16	0	13	2.0	11	5.6	.1
FEB											
26...	3.6	34	.4	1.6	6	0	5	9.6	8.0	3.6	.1
27...	2.7	28	.3	1.8	8	0	7	8.1	7.1	3.4	.1
APR											
02...	6.0	35	.6	1.8	24	0	20	12	7.1	5.8	.1
20...	6.6	38	.6	1.4	26	0	21	33	5.8	5.6	.1
MAY											
09...	8.7	41	.8	1.7	34	0	28	6.8	5.1	7.1	.1
JUN											
04...	--	--	--	--	--	--	--	--	--	--	--
JUL											
12...	9.1	39	.8	2.1	37	0	30	9.4	5.5	7.5	.1
SEP											
05...	17	52	1.4	3.7	--	0	25	9.7	10	12	.3
07...	4.2	30	.4	2.5	25	0	21	6.3	6.1	4.3	.1

NEUSE RIVER BASIN

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
JAN											
19...	12	71	40	.10	127	.37	.02	.39	.40	.24	.22
21...	7.7	62	37	.08	755	.23	.05	.28	.30	.22	--
21...	6.4	65	39	.09	976	.22	.04	.26	.25	.18	.15
22...	7.2	54	40	.07	891	.21	.03	.24	.28	.09	.05
23...	--	--	--	--	--	.28	.03	.31	.36	.07	.06
26...	8.2	61	39	.08	942	.31	.02	.33	.34	.07	.00
29...	11	64	53	.09	190	.39	.02	.41	.50	.19	.17
FEB											
26...	7.4	48	32	.07	1430	.29	.03	.32	.39	.07	.02
27...	6.5	60	32	.08	2060	.28	.03	.31	.32	.06	.06
APR											
02...	12	67	55	.09	98.4	.45	.02	.47	.48	.19	.19
20...	12	63	55	.09	70.8	.42	.03	.45	.47	.16	--
MAY											
09...	13	71	63	.10	50.6	.57	.02	.59	.49	.07	--
JUN											
04...	--	--	--	--	--	--	--	--	--	--	--
JUL											
12...	16	80	68	.11	16.8	.88	.02	.90	.94	.01	.02
SEP											
05...	11	104	79	.14	168	1.0	.00	1.0	1.0	.75	.14
07...	9.4	62	47	.08	474	.38	.00	.38	.30	.11	--

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
JAN										
19...	--	.28	.26	.23	.50	.05	.45	.89	3.9	.12
21...	--	--	2.2	--	2.4	1.7	.71	2.7	12	.39
21...	--	.19	.42	.11	1.1	.84	.26	1.4	6.0	.31
22...	--	.06	.71	.76	.80	.00	.81	1.0	4.6	.23
23...	--	.08	.61	.01	.68	.61	.07	.99	4.4	.26
26...	--	.00	.77	.34	.84	.50	.34	1.2	5.2	.22
29...	--	.22	.42	.28	.61	.16	.45	1.0	4.5	.13
FEB										
26...	--	.03	.61	.42	.58	.24	.44	1.0	4.4	.17
27...	--	.08	.58	.20	.64	.38	.26	.95	4.2	.16
APR										
02...	--	.24	.43	.22	.62	.21	.41	1.1	4.8	.17
20...	.19	--	.41	--	.57	.00	.62	1.0	4.5	.15
MAY										
09...	.08	--	.60	--	.67	.20	.47	1.3	5.6	.19
JUN										
04...	--	--	--	--	--	--	--	--	--	--
JUL										
12...	.01	.03	.99	.38	1.0	.60	.40	1.9	8.4	.20
SEP										
05...	.91	.18	1.5	1.5	2.2	.60	1.6	3.2	14	.59
07...	.13	--	.57	--	.68	.22	.46	1.1	4.7	.28

NEUSE RIVER BASIN

147

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PHOS- PHATE, TOTAL (MG/L AS P04)	PHOS- PHOSPHUS, TOTAL (MG/L AS P04)	PHOS- PHOSPHUS, DISSOLVED (MG/L AS P)	PHOS- PHOSPHUS, ORTHOPHOSPHATE, TOTAL (MG/L AS P)	PHOS- PHOSPHUS, ORTHOPHOSPHATE, DISSOLVED (MG/L AS P)	PHOS- PHOSPHATE, ORTHOPHOSPHATE, DISSOLVED (MG/L AS P04)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
JAN										
19...	--	.37	.06	.07	.04	.12	1	0	1	0
21...	--	1.2	--	.09	--	--	1	0	1	0
21...	--	.95	.03	.09	.03	.04	1	0	1	0
22...	--	.71	.03	.06	.01	.03	1	0	1	0
23...	--	.40	.02	.06	.02	.05	1	0	1	0
26...	--	.67	.03	.05	.00	.00	--	--	--	--
29...	--	.40	.03	.07	.04	.12	--	--	--	--
FEB										
26...	--	.52	.03	.06	.01	.03	3	0	3	0
27...	--	.49	--	.06	--	--	2	1	1	0
APR										
02...	--	.52	.12	.12	.10	.31	2	0	2	0
20...	--	.46	--	.09	--	--	--	--	--	--
MAY										
09...	--	.58	--	.11	.08	.25	--	--	--	--
JUN										
04...	--	--	--	--	--	--	--	--	--	--
JUL										
12...	.37	.61	.12	.12	.09	.28	--	--	--	--
SEP										
05...	1.1	1.8	.43	.37	.11	.34	1	0	1	0
07...	.12	.85	.06	.04	.03	.04	--	--	--	--
DATE	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
JAN										
19...	0	0	<10	<10	0	7	6	1	2	0
21...	0	0	20	17	3	11	10	1	66	60
21...	0	0	10	8	2	7	6	1	20	17
22...	0	0	10	8	2	5	4	1	22	17
23...	0	1	20	20	0	2	2	0	5	0
26...	--	--	10	8	2	--	--	--	8	2
29...	--	--	<10	<8	2	--	--	--	3	0
FEB										
26...	0	0	50	31	19	2	2	0	21	12
27...	0	0	30	14	16	2	1	1	16	6
APR										
02...	0	0	30	30	0	1	1	0	6	4
20...	--	--	10	10	0	--	--	--	3	1
MAY										
09...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	--	--	30	20	10	--	--	--	19	13
JUL										
12...	--	--	40	20	20	--	--	--	2	2
SEP										
05...	0	1	20	6	14	3	3	0	6	3
07...	--	--	20	0	21	--	--	--	8	5

NEUSE RIVER BASIN

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

WATER QUALITY DATA WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, PENDE- D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, PENDE- D RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE- D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)		
	DATE												
	JAN												
	19...	2	1100	1100	50	49	45	4	40	30	60		
	21...	5	27000	27000	220	85	82	3	910	520	90		
	21...	3	13000	13000	100	--	--	--	360	350	10		
	22...	5	5900	5700	210	72	69	3	220	100	120		
	23...	6	2000	1800	170	13	12	1	180	170	10		
	26...	6	5400	5200	180	14	9	5	--	--	--		
	29...	3	2500	2300	170	--	--	--	--	--	--		
	FEB												
	26...	9	6000	5700	350	26	26	0	120	60	60		
	27...	10	6100	5800	330	8	8	0	80	30	50		
	APR												
	02...	2	1300	950	350	5	3	2	90	30	60		
	20...	2	1200	1200	0	5	4	1	--	--	--		
	MAY												
	09...	--	--	--	--	--	--	--	--	--	--		
	JUN												
	04...	6	7400	6900	540	30	30	0	--	--	--		
	JUL												
	12...	0	780	530	250	5	2	3	--	--	--		
	SEP												
	05...	3	3000	3000	50	13	13	0	550	210	340		
	07...	3	6000	5900	110	15	13	2	--	--	--		
		MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE- D RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE- D RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE- D RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE- D TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
	DATE												
	JAN												
	19...	<.5	.0	<.5	0	0	0	10	10	0	9.8	1.2	.10
	21...	<.5	.0	<.5	1	1	0	80	80	0	12	4.7	.00
	21...	<.5	.0	<.5	0	0	0	40	30	10	8.5	6.2	.00
	22...	<.5	.0	<.5	0	0	0	50	40	10	11	--	.00
	23...	1.0	.5	<.5	0	0	0	10	10	0	--	3.7	.00
	26...	--	--	--	--	--	--	50	50	0	8.0	1.0	.00
	29...	--	--	--	--	--	--	40	30	10	8.1	.8	.00
	FEB												
	26...	<.5	.0	<.5	0	0	0	70	50	20	8.9	--	.10
	27...	<.5	.0	<.5	0	0	0	10	0	10	5.9	--	.00
	APR												
	02...	.5	.0	.5	0	0	0	30	30	0	7.5	.8	.00
	20...	--	--	--	--	--	--	10	10	0	9.0	.4	.00
	MAY												
	09...	--	--	--	--	--	--	--	--	--	6.7	.7	.00
	JUN												
	04...	--	--	--	--	--	--	90	80	10	--	--	--
	JUL												
	12...	--	--	--	--	--	--	40	30	10	10	1.3	.00
	SEP												
	05...	<.5	.0	<.5	0	0	0	20	10	9	10	1.9	.10
	07...	--	--	--	--	--	--	20	10	10	8.5	1.5	.00

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

PHYTOPLANKTON ANALYSES, SEPTEMBER 1978

DATE	SEPT 14, 1978
TIME	11:15
TOTAL CELLS/ML	14000
DIVERSITY: DIVISION	14
..CLASS	14
...ORDER	14
....FAMILY	14
.....GENUS	14

ORGANISM	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
....HYDRODICTYACEAE		
.....PEDIASTRUM	600	4
....MICHACTINIACEAE		
.....GOLENKINIA	150	1
....MICHACTINIUM	450	3
...OOCYSTACEAE		
....ANKISTOMESMUS	600	4
....DICTYOSPHAERIUM	230	2
....KIRCHNERIELLA	530	4
....OOCYSTIS	150	1
....TETRAEDRON	75	1
....TREHARIA	75	1
...SCENEDESMACEAE		
....CHUCIGENIA	300	2
....SCENEDESMUS	1400	10
..VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	750	5
...VOLVOCAEAE		
....EUDORINA	600	4
CHRYSDOPHYTA		
..BACILLARIOPHYCEAE		
...CENTRALES		
....COSCINODISCAEAE		
.....CYCLOTELLA	750	5
..PENNALES		
...ACHNANTHACEAE		
....ACHNANTHES	75	1
...CYMBELLACEAE		
....CYMBELLA	75	1
...DIATOMACEAE		
....DIATOMA	75	1
...GOMPHONEMACEAE		
....GOMPHONEMA	75	1
...NAVICULACEAE		
....NAVICULA	230	2
...NITZSCHIAEAE		
....NITZSCHIA	1600	11
CYANOPHYTA (BLUE-GREEN ALGAE)		
..CYANOPHYCEAE		
...CHROOCOCCALES		
....CHROOCOCCACEAE		
.....AGMENELLUM	2100#	15
...HORMOGONALES		
....NOSTOCACEAE		
.....CYLINDROSPERMUM	530	4
...OSCILLATORIAEAE		
....OSCILLATORIA	830	6
EUGLENOPHYTA (EUGLENIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
....EUGLENACEAE		
.....EUGLENA	380	3
....LEPOCINCLIS	230	2
....TRACHELONAS	830	6
PYRRHOPHYTA (FIRE ALGAE)		
..DINOPHYCEAE		
...PERIDINIALES		
....PERIDINIAEAE		
.....PERIDINIUM	150	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

NEUSE RIVER BASIN

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JAN 19,79 1325	MAY 9,79 0430	JUL 12,79 1230
TOTAL CELLS/ML	3500	18000	17000
DIVERSITY: DIVISION	1.3	1.2	1.6
..CLASS	1.3	1.2	1.6
...ORDER	1.5	1.7	1.9
...FAMILY	2.1	2.5	2.2
...GENUS	2.9	3.4	2.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
...SCHROEDERIA	--	-	* 0		--	-
...HYDRODICTYACEAE						
...PEDIASTRUM	72	2	--	-	--	-
...MICRACETINIACEAE						
...GOLLENKINIA	29	1	--	-	220	1
...OOCYSTACEAE						
...ANKISTRODESMUS	160	5	1700	9	440	3
...DICTYOSPHAERIUM	110	3	1400	7	--	-
...FRANCEIA	--	-	160	1	--	-
...KIRCHNERIELLA	--	-	2200	12	--	-
...OOCYSTIS	--	-	320	2	290	2
...SELENASTRUM	--	-	--	-	220	1
...SCENEDESMACEAE						
...CRUCIGENIA	110	3	3100#	17	290	2
...SCENEDESMUS	1300#	36	2600	14	2300	14
...TETRASTRUM	290	8	--	-	580	3
..TETRASPORALES						
...COCCOMYXACEAE						
...ELAKATOTHRIX	--	-	160	1	--	-
...PALMELLACEAE						
...SPHAEROCYSTIS	--	-	640	3	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	* 0		--	-	1000	6
..ZYGNEATALES						
...DESMIDIACEAE						
...COSMARIUM	43	1	--	-	--	-
...FUASTRUM	72	2	--	-	--	-
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
...CYCLOTELLA	43	1	* 0		580	3
...MELOSIRA	210	6	800	4	150	1
...STEPHANODISCUS	--	-	--	-	4500#	26
..PENNALES						
...FRAGILARIACEAE						
...FRAGILARIA	--	-	* 0		--	-
...SYNEDRA	--	-	240	1	* 0	
...GOMPHONEMACEAE						
...GOMPHONEMA	--	-	* 0		--	-
...NAVICULACEAE						
...NAVICULA	--	-	160	1	--	-
...NITZSCHIA						
...NITZSCHIA	* 0		400	2	--	-

NEUSE RIVER BASIN

151

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JAN 19,79 1325		MAY 9,79 0930		JUL 12,79 1230	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	--	-	5300#	31
....ANACYSTIS	860#	25	3500#	19	880	5
....COCCOCHLORIS	160	5	--	-	--	-
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	640	3	290	2
...OSCILLATORIAEAE						
....SPIRULINA	*	0	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
....TRACHELOMONAS	*	0	*	0	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

NEUSE RIVER BASIN

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROHOS/CM AT 25 DEG. C) WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	163	143	99	58	43	73	87	93	92	89	206
2	148	163	139	102	69	51	75	88	87	91	108	158
3	139	167	138	102	79	56	78	90	104	95	103	119
4	150	163	125	79	75	54	72	93	39	44	129	105
5	172	165	113	66	80	66	59	105	51	84	193	103
6	153	168	110	88	75	67	57	102	54	86	188	96
7	114	173	95	95	83	69	61	97	51	86	101	68
8	132	144	92	89	85	70	68	96	58	94	95	74
9	159	197	103	94	104	71	69	95	66	95	101	89
10	122	184	103	79	107	74	69	91	73	95	106	86
11	112	192	111	85	108	75	71	83	75	95	107	89
12	120	189	125	82	97	57	73	54	77	105	99	94
13	121	219	95	77	105	65	81	57	78	102	115	102
14	131	238	110	72	105	67	74	57	77	98	116	100
15	133	220	99	70	123	73	73	57	79	104	117	103
16	143	208	104	69	103	71	71	63	86	107	135	105
17	143	175	104	72	77	73	76	65	66	121	155	106
18	148	176	103	78	76	75	77	71	85	111	150	106
19	148	165	103	83	81	81	75	72	70	114	144	110
20	143	197	103	84	84	79	78	70	76	75	115	111
21	143	212	113	54	81	81	92	78	76	79	114	160
22	141	162	103	55	85	63	91	75	80	79	100	99
23	138	203	108	57	67	83	91	76	82	93	121	75
24	143	186	126	53	59	67	85	82	95	124	128	79
25	137	165	106	61	61	51	86	77	75	119	132	77
26	143	165	110	55	51	50	87	80	78	132	132	79
27	158	149	94	65	46	55	88	84	80	104	103	82
28	158	143	66	69	44	63	91	83	86	90	116	89
29	156	151	88	71	---	69	95	83	96	91	101	102
30	153	164	94	71	---	67	84	84	94	92	120	95
31	163	---	94	73	---	71	---	85	---	84	179	---
MEAN	142	179	108	76	81	58	77	80	76	98	123	102
WTR YR 1979	MEAN	101	MAX	238	MIN	39						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	12.0	8.5	5.5	4.5	6.0	17.0	15.0	21.0	22.0	28.0	25.0
2	17.0	15.0	8.0	7.0	4.0	7.0	17.5	16.0	22.0	23.0	27.0	27.0
3	15.5	13.0	8.5	5.0	3.5	7.0	17.0	17.0	23.0	22.0	26.0	26.0
4	17.0	12.0	11.5	3.0	4.0	7.0	14.5	19.0	20.0	22.5	27.0	26.0
5	17.0	12.0	10.5	3.0	3.0	10.5	15.0	18.0	20.0	23.0	27.0	24.0
6	18.0	11.5	11.0	4.0	3.5	10.0	13.5	18.0	20.0	22.5	28.0	22.5
7	16.0	11.5	10.0	4.5	3.0	10.0	13.0	18.0	20.0	23.0	25.0	23.0
8	15.5	12.0	10.0	7.0	2.0	9.5	14.0	19.0	20.0	23.0	26.0	23.5
9	14.0	12.0	10.0	6.5	1.0	10.5	14.0	20.0	20.5	21.0	27.0	22.5
10	14.5	12.0	9.0	5.0	1.5	10.0	14.0	20.0	21.0	21.0	26.0	22.0
11	14.0	13.0	8.5	4.0	1.5	10.0	15.0	20.0	21.0	21.0	27.0	23.0
12	14.0	14.0	8.0	5.0	1.0	8.5	15.0	19.0	20.0	22.0	24.0	22.0
13	14.0	12.0	7.0	4.0	2.0	8.5	16.0	20.0	20.0	23.5	23.0	21.0
14	15.5	12.0	6.0	4.5	2.5	10.0	16.5	19.0	20.0	25.0	25.0	22.0
15	14.0	13.5	5.5	4.0	3.5	9.5	14.0	19.0	19.0	25.0	22.0	22.0
16	12.0	15.0	5.0	4.0	4.0	9.0	15.0	18.0	19.0	24.5	25.0	22.0
17	12.0	12.5	5.0	3.5	4.5	9.0	15.0	17.0	18.0	27.0	21.0	22.5
18	12.0	14.0	5.0	4.5	4.5	10.0	14.0	19.0	20.0	24.0	23.0	20.0
19	11.0	14.0	5.5	4.0	2.5	11.0	15.0	17.0	20.0	24.0	23.0	22.0
20	12.0	12.5	6.5	3.5	3.0	10.5	15.0	17.0	20.0	23.0	25.0	21.0
21	11.5	12.0	6.5	6.5	2.0	12.0	16.0	16.0	20.0	24.0	24.0	20.0
22	12.0	11.5	6.5	6.0	3.0	12.0	17.5	17.0	20.0	24.0	21.0	22.0
23	16.0	10.5	6.0	4.5	5.0	13.0	18.0	18.0	21.0	23.0	23.0	20.0
24	14.0	11.5	5.5	7.0	6.0	13.0	19.0	19.0	22.0	25.0	24.0	20.0
25	13.0	10.0	5.5	6.0	5.5	11.0	18.0	19.0	20.0	25.0	25.0	19.0
26	15.0	9.5	5.0	5.0	5.5	10.0	17.0	17.0	20.0	25.0	25.0	19.0
27	15.0	8.5	5.0	5.5	6.0	10.5	18.0	17.0	20.0	25.0	25.0	20.0
28	14.0	10.0	4.0	5.0	6.0	10.5	18.0	18.0	21.0	27.0	25.0	21.0
29	14.0	9.0	4.0	5.0	---	12.0	18.0	17.0	22.0	27.0	25.0	20.0
30	13.0	8.5	3.0	4.0	---	13.5	16.0	18.0	21.0	25.0	25.0	20.0
31	12.5	---	4.5	5.0	---	15.0	---	20.0	---	26.0	25.0	---
MEAN	14.5	12.0	7.0	5.0	3.5	10.0	16.0	18.0	20.5	24.0	25.0	22.0
WTR YR 1979	MEAN	15.0	MAX	28.0	MIN	1.0						

NEUSE RIVER BASIN

153

02087183 NEUSE RIVER NEAR FALLS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDIM- ENT, SUS- PENDED (MG/L)	SEDIM- ENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .052 MM
OCT					
04...	1440	99	76	20	--
30...	0930	35	13	1.2	95
NOV					
08...	1600	97	64	17	97
DEC					
07...	1020	951	89	229	85
14...	1000	301	19	15	92
JAN					
19...	1325	664	23	41	83
21...	0900	4510	902	11000	70
21...	0945	4700	846	10700	75
21...	1100	4760	926	11900	62
21...	1530	5560	404	6070	73
22...	0735	6110	142	3000	81
23...	1000	6740	166	3020	66
26...	0930	5720	81	1250	97
29...	1400	1100	45	134	98
FEB					
01...	1200	728	326	641	--
06...	1230	380	20	21	100
26...	1400	11000	148	4400	59
27...	1630	12700	150	5140	55
MAR					
07...	1105	1170	79	250	65
12...	0855	1700	85	390	100
APR					
02...	1200	544	26	38	100
20...	1030	416	32	36	93
MAY					
09...	0930	264	16	11	100
JUN					
04...	0945	5750	392	6090	84
JUL					
12...	1230	78	11	2.3	94
SEP					
05...	1130	597	142	229	81
07...	1430	2830	173	1320	89

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
04...	1340	99	180	6.9	19.0	8.9	30	3.8	390
DEC									
21...	1330	294	100	6.8	9.0	10.5	19	1.1	440
JAN									
22...	1100	6160	75	6.5	6.0	8.8	37	2.9	780
FEB									
20...	0930	649	40	7.4	1.0	13.0	13	1.1	90
MAR									
15...	0910	1070	60	6.8	8.0	12.9	20	1.7	<10
APR									
09...	1300	900	60	6.8	15.0	10.5	23	1.7	140
MAY									
03...	1040	350	--	6.8	17.0	9.5	19	1.3	<10
JUN									
08...	1450	5090	--	6.5	--	--	38	2.0	90
JUL									
03...	0930	294	--	6.9	24.0	7.8	30	2.3	20
AUG									
03...	1015	45	40	7.2	27.0	7.8	20	2.3	20
SEP									
17...	1410	81	--	7.1	23.0	8.2	27	2.2	20

02087500 NEUSE RIVER NEAR CLAYTON, N. C.

LOCATION.--Lat 35°38'50", long 78°24'21", Johnston County, Hydrologic Unit 03020201, on left bank at downstream side of bridge on State Highway 42, 2.3 mi (3.7 km) upstream from Mill Creek, and 3 mi (5 km) east of Clayton.

DRAINAGE AREA.--1,140 mi² (2,953 km²), approximately.

PERIOD OF RECORD.--July 1927 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1032: 1930, 1935(M). WSP 1333: 1935. WSP 1503: 1949.

GAGE.--Water-stage recorder. Datum of gage is 128.41 ft (39.139 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 18, 1942, at site 1,100 ft (335 m) upstream at same datum.

REMARKS.--Water-discharge record excellent. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000). The city of Raleigh diverted from Swift Creek (see p. 406), a downstream tributary, an average of 2.0 ft³/s (0.057 m³/s), and from the Neuse River upstream from station an average of 30.6 ft³/s (0.87 m³/s), most of which was returned as sewage effluent upstream from station.

AVERAGE DISCHARGE.--52 years, 1,185 ft³/s (33.56 m³/s), 14.12 in/yr (359 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s (649 m³/s) Sept. 19, 1945, gage height, 22.12 ft (6.742 m); minimum, 44 ft³/s (1.25 m³/s) Sept. 15, 1932, gage height, 0.28 ft (0.085 m), site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1919, reached a stage of 21.15 ft (6.447 m), from flood-mark at former site, discharge, 21,200 ft³/s (600 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,100 ft³/s (201 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	2300	7900 224	11.88 3.621	Mar. 1	1530	*14000 396	*16.60 5.060
Jan. 26	0100	7950 225	11.93 3.636	June 8	0700	7190 204	11.12 3.389

Minimum discharge, 91 ft³/s (2.58 m³/s) Oct. 27, gage height, 1.01 ft (0.308 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	112	898	420	1220	13900	1080	558	606	398	222	357
2	368	111	592	524	1100	13200	962	499	609	398	217	410
3	326	109	430	1290	976	11400	904	466	684	395	216	298
4	262	106	352	2130	897	8450	1950	578	5800	402	178	265
5	225	125	840	1700	849	3550	5190	746	6670	381	181	2510
6	193	147	2590	1080	770	2250	4900	640	6670	296	350	5290
7	171	143	2120	832	685	2110	4610	509	6950	260	275	3420
8	162	362	1150	1290	746	1750	3450	461	7100	248	233	2750
9	144	532	667	2210	845	1830	1720	433	5780	235	210	1150
10	134	293	619	2250	856	1850	1530	640	1500	222	202	529
11	126	251	615	1580	798	1980	1420	990	1120	225	198	393
12	123	216	794	1110	701	2320	1180	2180	951	221	163	350
13	120	196	708	1890	703	2330	1130	2720	728	220	138	319
14	118	186	524	3430	681	1880	1410	3600	613	214	169	346
15	114	168	460	3400	720	1700	1570	4790	522	224	178	333
16	110	157	436	3280	1100	1470	1430	4900	607	210	152	305
17	115	246	520	2440	1930	1200	1100	4480	2350	200	132	292
18	111	275	554	1520	2030	1070	929	2400	2040	311	127	248
19	110	300	492	1310	1420	955	769	1580	1480	1060	117	215
20	111	269	438	1280	1220	905	683	1830	984	835	114	201
21	109	247	451	3860	1420	856	622	1480	697	445	116	198
22	109	226	462	7330	2410	780	568	1140	653	377	435	505
23	108	231	435	7350	4290	735	572	901	594	593	245	480
24	109	240	458	6950	6860	3210	556	1150	787	506	168	1260
25	106	227	745	7720	9340	5150	535	1900	709	1650	180	1050
26	110	199	1130	7720	11400	4730	630	1260	584	1390	200	732
27	100	204	1200	6650	13400	5110	771	897	466	711	176	628
28	108	472	858	5470	13700	5330	914	729	400	400	164	503
29	156	425	611	2880	---	3320	894	687	408	297	215	485
30	121	1140	491	1630	---	1420	683	644	387	269	266	1120
31	111	---	439	1360	---	1190	---	538	---	235	342	---
TOTAL	4524	7915	23079	93886	83067	107931	44662	46326	59449	13828	6279	26942
MEAN	146	264	744	3029	2967	3482	1489	1494	1982	446	203	898
MAX	368	1140	2590	7720	13700	13900	5190	4900	7100	1650	435	5290
MIN	100	106	352	420	681	735	535	433	387	200	114	198
CFSM	.13	.23	.65	2.66	2.60	3.05	1.31	1.31	1.74	.39	.18	.79
IN.	.15	.26	.75	3.06	2.71	3.52	1.46	1.51	1.94	.45	.20	.88
CAL YR 1978	TOTAL	522771	MEAN	1432	MAX	14100	MIN	100	CFSM	1.26	IN	17.06
WTR YR 1979	TOTAL	517888	MEAN	1419	MAX	13900	MIN	100	CFSM	1.25	IN	16.90

02087570 NEUSE RIVER AT SMITHFIELD, N. C.

LOCATION.--Lat 35°30'46", long 78°21'00", Johnston County, Hydrologic Unit 03020201, on left bank 10 ft (3 m) downstream from bridge on U.S. Highway 70, at Smithfield, 2.1 mi (3.4 km) upstream from Swift Creek and 177.6 mi (285.8 km) upstream from mouth.

DRAINAGE AREA.--1,200 mi² (3,110 km²), approximately.

PERIOD OF RECORD.--October 1959 to current year. Prior to October 1970 medium and high water discharges only. Gage height records at different datum collected at this site since July 1911 are contained in reports of the National Weather Service, NOAA, U.S. Department of Commerce.

GAGE.--Water-stage recorder. Datum of gage is 99.26 ft (30.254 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1971, nonrecording gage on upstream side of bridge near center of span at same datum.

REMARKS.--Records good. Diversions for municipal water supply for cities of Durham and Butner (see sta 0208700). The city of Raleigh diverted from Swift Creek (see p. 406), a downstream tributary, an average of 2.0 ft³/s (0.057 m³/s), and from Neuse River upstream from station an average of 30.6 ft³/s (0.87 m³/s), most of which was returned as sewage effluent upstream from station. The city of Smithfield diverted an average of 3.1 ft³/s (0.088 m³/s) 0.2 mi (0.3 km) upstream from station for municipal water supply, most of which was returned downstream as sewage effluent.

AVERAGE DISCHARGE.--7 years, 1,449 ft³/s (41.04 m³/s), 16.40 in/yr (417 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft³/s (433 m³/s) Feb. 5, 1973, Mar. 21, 1975, gage height, 23.65 ft (7.209 m); minimum, 61 ft³/s (1.73 m³/s) July 29, 1977, gage height, 2.47 ft (0.753 m); minimum gage height observed, 2.38 ft (0.725 m) Sept. 26, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1908 reached a stage of 27.1 ft (8.26 m), discharge, 19,900 ft³/s (564 m³/s) July 24, 1919, 26.8 ft (8.17 m), discharge, 19,400 ft³/s (549 m³/s); Oct. 3, 1929, 26.4 ft (8.05 m), discharge, 18,700 ft³/s (530 m³/s); Sept. 20, 1945, 25.9 ft (7.89 m), discharge, 17,900 ft³/s (507 m³/s), from stage information furnished by National Weather Service and Corps of Engineers, and discharges determined from ratings developed since 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1800	8980 254	18.78 5.724	May 16	2330	6040 171	16.38 4.993
Mar. 1	1630	*14500 411	*22.16 6.754	June 8	2030	8160 231	18.16 5.535
Mar. 28	1800	6300 178	16.62 5.066	Sept. 6	1900	6750 191	17.01 5.185

Minimum discharge, 111 ft³/s (3.14 m³/s) Oct. 28, gage height, 3.19 ft (0.972 m).

DISCHARGE, 14 CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	128	1090	513	1420	14300	1310	721	732	514	265	381
2	321	125	770	590	1270	12800	1180	637	760	502	251	440
3	329	127	561	1130	1130	11400	1090	581	732	491	257	373
4	319	134	446	1960	1040	9200	1440	617	3690	492	226	279
5	251	131	613	1800	973	6800	4080	940	6590	477	195	2450
6	228	156	2240	1260	909	4200	5420	914	7730	405	325	6340
7	193	160	2520	970	795	3200	5570	681	8000	334	340	5200
8	180	263	1400	1130	840	2400	4800	592	8100	312	273	3800
9	161	608	901	2090	947	2300	2900	552	7400	296	240	2600
10	150	391	737	2000	993	2100	1800	748	4200	283	224	1120
11	138	290	716	1800	937	2440	1600	1720	1700	275	220	520
12	133	253	765	1360	817	2720	1450	1840	1320	273	199	430
13	134	212	854	1770	795	2780	1300	2950	948	269	158	386
14	132	201	673	3130	775	2300	1540	3880	805	269	161	432
15	130	187	567	3700	781	1850	1730	5430	695	298	192	415
16	122	167	541	3610	959	1650	1700	5970	775	269	186	348
17	124	201	566	2900	1710	1450	1360	5200	2330	255	157	331
18	125	306	647	1800	2100	1300	1130	3800	2550	242	141	300
19	124	304	623	1400	1660	1210	984	2580	2200	915	133	255
20	123	306	536	1320	1350	1140	857	2650	1800	984	126	226
21	124	281	542	2540	1460	1090	792	2000	926	630	124	214
22	122	249	565	5630	2210	1010	724	1620	814	491	336	399
23	121	247	525	7920	3690	957	704	1230	760	548	385	533
24	125	247	550	8440	5880	2730	698	1300	847	701	224	931
25	123	263	741	8510	8860	5480	675	2970	993	1270	183	1310
26	122	220	1030	8890	11300	6020	692	2500	780	1560	220	841
27	123	234	1270	7500	12800	5970	908	1600	648	1040	205	730
28	116	403	1010	6600	13900	6220	979	1160	524	562	173	599
29	148	532	754	4800	---	5000	1060	869	512	384	194	554
30	160	1040	611	2600	---	2600	875	856	499	325	269	979
31	131	---	546	1740	---	1400	---	704	---	296	253	---
TOTAL	4975	8366	25930	101403	82301	126017	51348	59812	70360	15962	6835	33716
MEAN	160	279	436	3271	2939	4065	1712	1929	2345	515	220	1124
MAX	329	1040	2520	8890	13900	14300	5570	5970	8100	1560	385	6340
MIN	116	125	446	513	775	957	675	552	499	242	124	214
CFSM	.13	.23	.70	2.73	2.44	3.39	1.43	1.61	1.95	.43	.18	.94
IN	.15	.26	.30	3.14	2.55	3.91	1.59	1.85	2.18	.49	.21	1.05
CAL YR 1978 TOTAL	595508	MEAN	1632	MAX	15800	MIN	116	CFSM	1.36	IN	18.46	
WTY YR 1979 TOTAL	587025	MEAN	1604	MAX	14300	MIN	116	CFSM	1.34	IN	18.20	

NEUSE RIVER BASIN

02088000 MIDDLE CREEK NEAR CLAYTON, N. C.

LOCATION.--35°34'12", long 78°35'30", Johnston County, Hydrologic Unit 03020201, on right bank 300 ft (91 m) downstream from bridge on State Highway 50, 0.5 mi (0.8 km) upstream from Buffalo Branch, 3.7 mi (6.0 km) downstream from Wake-Johnston County line, and 9.5 mi (15.3 km) southwest of Clayton.

DRAINAGE AREA.--80.7 mi² (209 km²).

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

REVISED RECORDS.--WSP 952: 1940(M), 1941. WSP 1233: 1943(M), 1945, 1949.

GAGE.--Water-stage recorder. Datum of gage is 184.53 ft (56.245 m) National Geodetic Vertical Datum of 1929. Nov. 1-20, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 499 of this report.

AVERAGE DISCHARGE.--40 years, 92.4 ft³/s (2.617 m³/s), 15.55 in/yr (395 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,510 ft³/s (241 m³/s) Feb. 3, 1973, gage height, 13.42 ft (4.090 m), result of dam failure; no flow Oct. 11-13, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	1130	757 21.4	7.28 2.219	May 12	0330	626 17.7	6.63 2.021
Feb. 27	0700	1000 28.3	8.22 2.505	June 5	0400	786 22.3	7.41 2.259
Mar. 25	0900	718 20.3	7.10 2.164	Sept. 6	1500	*1800 51.0	*10.11 3.082
Apr. 6	0500	680 19.3	6.92 2.109				

Minimum discharge, 3.0 ft³/s (0.085 m³/s) Oct. 6; minimum gage height, 1.33 ft (0.405 m) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	21	78	36	85	223	97	59	67	21	13	29
2	34	23	47	53	78	164	90	51	63	19	12	104
3	10	26	34	115	72	139	87	46	54	16	10	99
4	5.6	22	30	75	71	124	196	45	282	14	10	80
5	4.2	25	67	57	68	144	523	84	642	13	8.2	168
6	3.6	26	227	52	64	244	605	117	206	13	7.2	1230
7	3.8	31	114	55	73	208	212	72	98	12	6.3	884
8	3.6	49	66	87	85	163	127	57	73	11	6.3	212
9	5.0	49	56	92	98	197	119	47	59	10	5.3	82
10	5.9	22	57	66	93	153	113	87	50	9.6	4.9	60
11	6.0	16	48	55	80	171	97	369	52	9.0	4.7	50
12	6.5	14	41	54	75	213	99	504	52	9.1	5.0	44
13	8.1	13	37	161	85	147	123	124	43	8.7	6.2	40
14	9.8	11	35	261	88	124	184	251	36	11	6.9	41
15	12	10	33	149	88	158	123	481	31	10	7.0	43
16	16	10	33	96	98	124	95	409	37	8.8	6.9	37
17	21	12	41	82	88	102	80	118	193	7.8	6.4	32
18	23	12	48	76	71	94	73	85	157	7.8	6.0	28
19	17	17	42	67	76	88	69	175	82	25	6.3	26
20	19	15	38	67	107	84	65	222	56	41	6.8	23
21	22	13	38	293	128	82	61	127	43	35	8.0	22
22	14	13	44	692	259	75	59	103	43	57	92	42
23	19	14	40	598	389	72	56	96	42	56	76	47
24	26	19	39	248	589	476	51	173	37	37	33	36
25	23	21	81	233	831	661	50	362	78	108	24	32
26	31	17	74	147	901	416	72	275	53	74	21	31
27	31	17	55	112	930	160	113	120	38	69	16	31
28	9.7	42	45	105	527	127	124	89	30	39	13	29
29	10	44	39	96	---	118	105	75	26	27	13	31
30	12	104	37	85	---	111	73	83	23	20	30	120
31	21	---	35	81	---	103	---	67	---	16	27	---
TOTAL	437.8	728	1699	4446	6197	5465	3941	4973	2746	814.8	498.4	3733
MEAN	14.1	24.3	54.8	143	221	176	131	160	91.5	26.3	16.1	124
MAX	34	104	227	692	930	661	605	504	642	108	92	1230
MIN	3.6	10	30	36	64	72	50	45	23	7.8	4.7	22
CFSM	.18	.30	.68	1.77	2.74	2.18	1.62	1.98	1.13	.33	.20	1.54
IN.	.20	.34	.78	2.05	2.86	2.52	1.82	2.29	1.27	.38	.23	1.72
CAL YR 1978 TOTAL	37065.4			102	2950	MIN 3.4	CFSM 1.26	IN 17.09				
WTR YR 1979 TOTAL	35679.0			97.8	1230	MIN 3.6	CFSM 1.21	IN 16.45				

NEUSE RIVER BASIN

157

02088315 BEAVERDAM CREEK NEAR GRANTHAM, N. C.

LOCATION.--Lat 35°17'08", long 78°15'17", Wayne County, Hydrologic Unit 03020201, on right bank at upstream side of culvert on U.S. Highway 13, 0.6 mi (1.0 km) upstream from Falling Creek, and 5.3 mi (8.5 km) west of Grantham.

DRAINAGE AREA.--4.84 mi² (12.54 km²).

PERIOD OF RECORD.--April 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 220 ft (67 m) from topographic map.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 159 of this report. Recording rain gage at station.

EXTREMES FOR THE CURRENT PERIOD.--April to September 1978; Peak discharge above base of 40 ft³/s (1.13 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 26	1430	85 2.41	6.55 1.996
May 5	0715	40 1.13	5.67 1.728

No flow Sept. 18-30.

WATER YEAR 1979

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 26	0930	45 1.27	5.79 1.765	Sept. 6	0300	*126 3.57	*7.15 2.179
Mar. 6	1800	62 1.76	6.14 1.871	Sept. 30	1315	49 1.39	5.87 1.789
Mar. 24	1430	40 1.13	5.67 1.728				

No flow Aug. 9-21.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							6.0	9.4	1.4	.43	1.0	.02
2							5.6	7.8	1.2	.73	.63	.02
3							5.1	6.4	1.3	1.1	.91	.03
4							4.7	9.1	1.7	.81	.59	.07
5							4.3	28	1.4	.43	4.7	.03
6							3.9	13	1.6	.36	2.8	.03
7							3.6	8.3	3.5	.22	5.2	.02
8							3.3	16	3.1	.15	3.2	.02
9							3.0	20	5.4	.23	1.3	.01
10							3.0	15	12	.40	.80	.01
11							2.8	8.5	3.4	.68	1.0	.01
12							3.4	6.2	2.1	.59	.86	.01
13							6.7	6.1	1.7	.28	3.0	.01
14							5.7	24	1.3	.37	2.3	.01
15							3.3	11	1.1	1.5	1.1	.01
16							2.8	8.1	.94	2.6	.54	.01
17							2.7	6.6	.78	2.2	.30	.01
18							15	11	.65	1.1	.46	.00
19							28	6.4	.53	.59	.22	.00
20							18	4.7	.40	.38	.20	.00
21							11	3.8	.29	.33	.15	.00
22							8.3	3.2	.28	.13	.08	.00
23							6.5	2.9	.33	.07	.06	.00
24							5.4	2.7	.41	.04	.05	.00
25							5.6	2.6	.28	.41	.04	.00
26							44	2.3	.28	2.3	.04	.00
27							35	2.1	2.1	.72	.03	.00
28							21	2.1	2.0	.32	.03	.00
29							14	2.0	1.8	.34	.03	.00
30							10	1.8	.78	.14	.03	.00
31							---	1.6	---	.31	.02	---
TOTAL							291.7	252.7	54.05	20.26	31.67	.33
MEAN							9.72	8.15	1.80	.65	1.02	.011
MAX							44	28	12	2.6	5.2	.07
MIN							2.7	1.6	.28	.04	.02	.00
CFS ⁴							2.01	1.68	.37	.13	.21	.002
IN.							2.24	1.94	.42	.16	.24	.00

NEUSE RIVER BASIN

02088315 BEAVERDAM CREEK NEAR GRANTHAM, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.84	8.0	2.5	5.6	12	5.7	3.1	2.5	.52	.16	3.8
2	1.8	.73	4.4	9.6	4.9	11	5.3	2.8	1.9	.42	.08	2.5
3	.74	.74	3.6	10	4.8	9.6	5.1	2.6	1.6	.30	.08	1.7
4	.41	3.3	3.2	4.7	4.8	8.8	8.8	2.5	2.4	.25	.05	10
5	.24	4.5	7.0	4.1	4.5	11	7.5	3.0	1.9	.73	.03	46
6	.16	2.2	18	3.9	4.2	37	5.6	2.9	1.4	.43	.02	76
7	.08	1.7	11	3.9	5.6	34	5.0	2.4	1.2	.36	.02	26
8	.07	6.0	7.0	4.9	7.1	24	4.5	2.3	.94	.35	.01	10
9	.07	2.2	4.5	4.0	7.3	31	5.2	2.2	.78	.25	.00	8.5
10	.08	4.0	3.2	3.5	6.1	20	4.7	3.7	.66	.31	.00	7.0
11	.09	6.0	2.8	3.4	5.6	21	4.4	3.9	5.1	.53	.00	6.0
12	.09	4.0	2.5	5.8	5.4	19	4.3	2.9	3.4	.37	.00	5.0
13	.09	2.6	2.1	14	5.7	14	10	2.5	1.6	2.5	.00	3.8
14	.12	2.5	1.9	8.8	4.9	13	8.0	3.3	1.1	1.1	.00	3.5
15	.10	2.3	1.8	6.1	4.8	13	6.4	4.4	.96	.80	.00	3.3
16	.09	2.2	2.5	5.2	4.7	11	6.0	2.6	5.5	.53	.00	3.1
17	.10	2.1	4.0	4.8	4.1	9.2	5.8	2.2	13	.42	.00	3.0
18	.12	2.0	5.0	4.5	3.8	8.6	5.4	2.0	3.7	8.0	.00	2.4
19	.14	2.0	4.5	4.1	5.5	7.9	5.2	11	2.1	5.0	.00	2.0
20	.11	2.0	4.0	5.3	6.2	7.2	4.7	5.7	1.6	1.8	.00	1.8
21	.10	2.1	3.5	25	8.4	6.6	4.4	3.2	1.3	5.0	.00	2.3
22	.12	2.5	2.9	16	14	6.1	4.1	5.1	2.2	10	.28	9.8
23	.12	3.5	2.4	8.4	14	6.0	3.8	11	1.4	2.0	1.0	20
24	.10	4.2	4.8	9.9	21	27	3.7	6.9	1.6	5.4	2.2	6.1
25	.13	3.2	5.5	8.2	26	19	3.6	9.2	3.3	3.0	1.1	4.8
26	.17	2.5	3.3	6.8	41	12	5.5	4.4	1.6	.80	.53	4.3
27	.19	2.0	2.9	6.3	21	9.2	4.6	3.0	1.3	.50	.28	3.8
28	.19	4.0	2.7	6.5	15	7.9	3.7	2.5	1.0	.40	3.1	3.3
29	.29	6.0	2.5	5.7	---	7.2	3.3	2.3	.84	.30	12	13
30	.33	20	2.5	5.3	---	6.6	3.2	2.1	.67	.20	1.9	38
31	.60	---	2.5	5.5	---	6.1	---	1.9	---	.35	1.0	---
TOTAL	8.44	103.91	136.5	216.7	266.0	436.0	157.5	119.6	68.55	52.92	23.84	330.8
MEAN	.27	3.46	4.40	6.99	9.50	14.1	5.25	3.86	2.29	1.71	.77	11.0
MAX	1.8	20	18	25	41	37	10	11	13	10	12	76
MIN	.07	.73	1.8	2.5	3.8	6.0	3.2	1.9	.66	.20	.00	1.7
CFSM	.06	.72	.91	1.44	1.96	2.91	1.09	.80	.47	.35	.16	2.27
IN.	.06	.80	1.05	1.67	2.04	3.35	1.21	.92	.53	.41	.18	2.54

WTR YR 1979 TOTAL 1920.76 MEAN 5.26 MAX 76 MIN .00 CFSM 1.09 IN 14.76

NEUSE RIVER BASIN

159

02088315 BEAVERDAM CREEK NEAR GRANTHAM, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 05...	1340	.18	7	.00
NOV 09...	1015	6.4	7	.12
DEC 05...	1026	3.7	5	.05
21...	1510	3.5	5	.05
JAN 25...	1432	6.7	3	.05
FEB 26...	1047	42	34	3.9
MAR 16...	1447	10	4	.11
APR 06...	1715	5.6	8	.12
MAY 15...	1125	4.6	13	.16

02088470 LITTLE RIVER NEAR KENLY, N. C.

LOCATION.--Lat 35°35'18", long 78°11'12", Johnston County, Hydrologic Unit 03020201, near left bank on downstream side of bridge on Secondary Road 1934, 0.7 mi (1.1 km) downstream from Buffalo Creek, and 3.7 mi (6.0 km) west of Kenly.

DRAINAGE AREA.--190 mi² (492 km²), approximately.

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 140 ft (43 m), by barometer.

REMARKS.--Records good. Some diurnal fluctuation and some regulation during periods of low flow caused by mill 10 mi (16 km) upstream.

AVERAGE DISCHARGE.--15 years, 189 ft³/s (5.352 m³/s), 13.51 in/yr (343 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,030 ft³/s (142 m³/s) Oct. 6, 1964, gage height, 16.30 ft (4.968 m); minimum, 0.18 ft³/s (0.005 m³/s) Oct. 4, 5, 6, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 27	0700	2980 84.4	14.76 4.499	May 26	1000	1250 35.4	12.12 3.694
Mar. 26	0500	1170 33.1	11.90 3.627	June 6	0230	2220 62.9	13.82 4.212
May 15	2400	1350 38.2	12.34 3.761	Sept. 6	1800	*3240 91.8	*15.04 4.584

Minimum discharge, 3.8 ft³/s (0.11 m³/s) Aug. 21, gage height, 3.04 ft (0.927 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	189	76	218	1640	249	108	177	92	29	128
2	21	13	171	126	197	992	226	85	144	59	25	153
3	25	13	153	246	177	620	211	70	135	54	21	129
4	26	13	140	229	168	450	289	70	951	60	22	86
5	29	15	144	196	159	391	498	245	1770	53	23	391
6	24	16	275	188	146	613	585	319	2000	43	20	2640
7	19	17	288	172	154	881	666	173	1310	38	14	2610
8	15	35	279	188	175	776	624	125	815	33	12	1620
9	13	43	288	207	217	712	441	93	397	28	11	1010
10	12	65	265	182	214	636	323	134	228	27	9.6	527
11	12	64	190	167	196	605	257	528	173	25	8.2	223
12	11	68	149	168	189	627	223	505	171	25	7.9	116
13	10	62	130	360	197	541	220	460	160	24	8.4	82
14	9.3	47	113	466	191	460	240	761	132	26	7.2	118
15	8.7	38	95	443	183	435	225	1220	106	29	6.3	117
16	7.9	32	84	401	184	381	217	1240	117	31	5.8	88
17	7.6	34	86	375	185	328	217	895	424	27	5.1	69
18	7.6	36	93	316	177	285	179	611	500	25	4.5	52
19	7.2	43	92	236	164	244	148	430	486	26	4.2	41
20	7.4	40	94	204	184	218	130	413	448	34	4.1	33
21	7.4	40	97	418	268	197	117	377	313	84	4.2	28
22	7.1	38	97	683	431	177	106	344	187	73	5.7	32
23	7.2	35	90	760	605	163	98	298	149	67	10	40
24	7.1	35	90	858	807	474	90	270	132	62	18	40
25	6.7	36	139	888	1310	977	86	725	177	72	19	40
26	7.6	37	154	678	2380	1120	105	1170	137	107	12	41
27	7.7	36	136	460	2900	857	150	839	106	95	9.4	37
28	8.0	48	120	367	2370	646	151	589	83	83	7.9	34
29	7.6	60	102	313	---	456	134	391	71	71	7.8	39
30	6.9	153	87	260	---	337	121	252	60	48	7.9	145
31	9.4	---	79	229	---	280	---	193	---	37	17	---
TOTAL	367.4	1225	4509	10860	14746	17519	7326	13933	12059	1558	367.2	10709
MEAN	11.9	40.8	145	350	527	565	244	449	402	50.3	11.8	357
MAX	29	153	288	888	2900	1640	666	1240	2000	107	29	2640
MIN	6.7	13	79	76	146	163	86	70	60	24	4.1	28
CFSM	.06	.22	.76	1.84	2.77	2.97	1.28	2.36	2.12	.27	.06	1.88
IN.	.07	.24	.88	2.13	2.89	3.43	1.43	2.73	2.36	.31	.07	2.10
CAL YR 1978	TOTAL	82960.8	MEAN 227	MAX 2810	MIN 6.7	CFSM 1.20	IN 16.24					
WTR YR 1979	TOTAL	95178.6	MEAN 261	MAX 2900	MIN 4.1	CFSM 1.37	IN 18.63					

NEUSE RIVER BASIN

161

02088500 LITTLE RIVER NEAR PRINCETON, N. C.

LOCATION.--Lat 35°30'40", long 78°09'36", Johnston County, Hydrologic Unit 03020201, on left bank 600 ft (183 m) downstream from bridge on Secondary Road 2320, 0.8 mi (1.3 km) upstream from Little Creek, and 3 mi (5 km) north of Princeton.

DRAINAGE AREA.--229 mi² (593 km²).

PERIOD OF RECORD.--February 1930 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORD.--WSP 822: Drainage area. WSP 1233: 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 107.75 ft (32.842 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of no gage-height record, Dec. 27 to Jan. 29, which are fair. Slight diurnal fluctuation and occasional regulation for short periods, caused by mills above station. Suspended sediment records for the current year are published on page 499 of this report.

AVERAGE DISCHARGE.--49 years, 253 ft³/s (7.165 m³/s), 15.00 in/yr (381 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,150 ft³/s (202 m³/s) Oct. 6, 1964, gage height, 13.94 ft (4.249 m); minimum, 1.0 ft³/s (0.028 m³/s) several times in September and October 1932, Oct. 10, 11, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1919 reached a stage of 14.57 ft (4.441 m); September 1924, 14.90 ft (4.542 m); September 1928, 13.3 ft (4.054 m); October 1929, 13.47 ft (4.106 m); from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 25	Unknown	1210 34.3	6.96 2.121	May 16	1100	1750 49.6	9.12 2.780
Feb. 28	0300	2990 84.7	11.98 3.651	May 27	0100	1500 42.5	8.14 2.481
Mar. 7	Unknown	1640 46.4	8.67 2.643	June 6	2100	2190 62.0	10.53 3.210
Mar. 26	1800	1500 42.5	8.13 2.478	Sept. 7	1300	*3010 85.2	*12.01 3.661

Minimum discharge, 3.8 ft³/s (0.11 m³/s) Aug. 20, 21, gage height, 1.01 ft (0.308 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	12	228	90	259	2450	280	119	204	105	45	88
2	18	13	197	170	234	1900	246	105	161	97	38	135
3	27	13	161	280	208	1110	226	93	146	74	32	147
4	33	11	152	260	193	651	300	89	1020	71	29	115
5	36	14	168	230	182	519	605	185	2060	72	28	397
6	36	15	342	210	168	879	702	458	2140	62	30	2130
7	28	13	371	190	172	1600	748	252	2030	55	24	2890
8	22	50	333	200	202	1500	760	140	1440	50	17	2530
9	18	56	300	210	262	1300	581	116	634	44	14	1780
10	15	64	280	200	279	1200	405	120	280	39	11	905
11	14	84	220	180	242	1000	292	572	191	37	9.5	333
12	13	75	170	180	227	1000	239	704	170	34	8.8	146
13	13	72	150	420	235	900	241	533	158	35	8.1	108
14	12	61	130	500	234	800	291	920	132	35	9.2	108
15	10	47	120	480	220	650	260	1530	114	56	8.1	135
16	9.4	38	110	450	216	535	226	1730	119	43	6.3	109
17	10	31	100	420	212	454	222	1430	461	40	5.4	93
18	9.4	39	105	400	201	395	192	886	630	36	4.6	82
19	8.8	45	110	350	191	341	155	606	582	35	4.6	70
20	8.1	47	105	300	199	299	136	544	534	37	4.2	62
21	8.7	45	110	500	318	268	125	477	393	71	4.6	57
22	8.1	45	117	750	564	242	118	419	217	102	8.4	55
23	7.5	41	113	850	826	222	111	370	146	85	8.3	63
24	8.1	40	113	950	1120	538	106	320	129	79	25	65
25	8.1	39	152	1000	1550	1190	102	665	190	73	41	66
26	7.5	41	172	900	2080	1470	116	1320	154	97	33	67
27	8.1	44	160	800	2680	1300	165	1350	119	98	23	65
28	8.8	60	140	600	2910	899	159	847	99	91	18	62
29	8.8	72	130	450	---	610	140	520	89	85	15	66
30	8.1	154	110	320	---	427	126	319	80	69	12	128
31	10	---	100	275	---	329	---	210	---	54	13	---
TOTAL	442.5	1381	5269	13115	16384	26978	8375	17949	14822	1961	538.1	13057
MEAN	14.3	46.0	170	423	585	870	279	579	494	63.3	17.4	435
MAX	36	154	371	1000	2910	2450	760	1730	2140	105	45	2890
MIN	7.5	11	100	90	168	222	102	89	80	34	4.2	55
CFSM	.06	.20	.74	1.85	2.56	3.80	1.22	2.53	2.16	.28	.08	1.90
IN.	.07	.22	.86	2.13	2.66	4.38	1.36	2.92	2.41	.32	.09	2.12
CAL YR 1978	TOTAL	121432.1	MEAN	333	MAX	2910	MIN	7.5	CFSM	1.45	IN	19.73
WTR YR 1979	TOTAL	120271.6	MEAN	330	MAX	2910	MIN	4.2	CFSM	1.44	IN	19.54

NEUSE RIVER BASIN

02089000 NEUSE RIVER NEAR GOLDSBORO, N. C.

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 (0.3 km) upstream from Stony Creek, 1.5 mi (2.4 km) downstream from Seaboard Coast Line Railroad bridge, 3.2 mi (5.1 km) south of Wayne County courthouse in Goldsboro, 4.3 mi (6.9 km) downstream from Little River, and 135 mi (217 km) upstream from mouth.

DRAINAGE AREA.--2,390 mi² (6,190 km²), approximately.

PERIOD OF RECORD.--February 1930 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1333: 1931, 1935.

GAGE.--Water-stage recorder. Datum of gage is 42.95 ft (13.091 m) National Geodetic Vertical Datum of 1929. Prior to July 24, 1931, nonrecording gage at railroad bridge, 1.5 mi (2.4 km) upstream at datum 2.00 ft (0.610 m) higher. July 24, 1931, to Aug. 31, 1948, water-stage recorder at site 2.3 mi (3.7 km) upstream at datum 1.71 ft (0.521 m) higher than present datum.

REMARKS.--Records good. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000). National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--49 years, 2,526 ft³/s (71.54 m³/s), 14.35 in/yr (364 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,700 ft³/s (869 m³/s) Sept. 23, 1945; maximum gage height, 26.72 ft (8.144 m) Sept. 23, 1945, site and datum then in use; minimum discharge, 76 ft³/s (2.15 m³/s) Sept. 26, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 1866 and July 1919, reached stages of about 29 ft (8.8 m) and 28 ft (8.5 m), respectively, at site 2.3 mi (3.7 km) upstream at present datum, from flood profiles of Corps of Engineers. Flood of Oct. 5, 1929, reached a stage of 27.3 ft (8.32 m) at railroad bridge at present datum, discharge, 38,600 ft³/s (1,090 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,200 ft³/s (515 m³/s) Mar. 6, gage height, 23.02 ft (7.016 m); minimum, 118 ft³/s (3.34 m³/s) Oct. 30, 31, gage height, 2.47 ft (0.753 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	291	169	1890	1240	8800	12700	7760	1580	1990	856	520	900
2	278	155	2190	1620	8150	14700	6000	1350	1760	809	490	1100
3	241	163	1970	2060	5780	16800	4500	1170	1640	801	500	1900
4	361	154	1590	2410	3480	18000	3200	1030	1610	742	460	3500
5	398	175	1420	2980	2570	18100	3180	987	2880	731	430	5000
6	371	160	1710	3270	2200	18000	4010	1240	4180	699	380	6000
7	316	151	2720	2920	2070	17600	4650	1680	5010	657	350	7960
8	285	252	3340	2490	1930	16800	5090	1530	5940	588	360	9380
9	257	293	3460	2390	1980	15800	5650	1200	6820	537	380	10700
10	239	477	2570	2890	2190	14400	6190	1080	7510	507	330	11400
11	224	806	2000	3260	2370	12800	6430	1140	7850	472	320	11000
12	208	635	1730	3390	2320	11100	6070	2580	7900	453	310	9530
13	196	512	1560	3510	2160	9020	4430	3060	7600	461	310	5690
14	183	441	1560	3690	2030	8230	3800	3380	5270	449	260	2120
15	174	386	1430	4230	1950	7300	3630	3830	2440	461	224	1270
16	168	354	1250	4440	1870	6520	3650	4350	1560	474	213	1360
17	162	330	1180	4600	1920	5820	3530	4990	1880	473	232	1220
18	156	304	1150	4700	2340	4700	3090	5770	3290	441	233	1130
19	154	324	1210	5000	2850	3760	2490	6550	3980	432	211	975
20	157	396	1250	5300	2950	3270	2060	6980	4080	622	195	840
21	153	421	1210	5200	2720	2870	1780	7040	3210	1120	211	735
22	152	412	1190	5000	3010	2600	1600	6760	2150	1000	246	673
23	152	396	1200	4740	3920	2380	1460	6330	1650	849	195	921
24	147	397	1270	5340	4770	3770	1350	5690	1420	1040	353	1040
25	142	383	1400	5880	5660	5110	1300	5270	1480	1240	533	1190
26	150	381	1580	6460	6800	5770	1360	5170	1630	1260	730	1650
27	143	411	1870	7250	8040	6460	1410	5510	1530	1780	680	1830
28	133	458	2150	8080	10200	7170	1580	5720	1290	1650	620	1500
29	132	637	2010	8600	---	7750	1680	5680	1060	1130	660	1800
30	122	1620	1680	8700	---	8020	1720	4040	897	789	700	2000
31	132	---	1410	8800	---	7980	---	2500	---	625	800	---
TOTAL	6377	12153	54150	140440	107030	295300	104650	115187	101507	24148	12436	106314
MEAN	206	405	1747	4530	3823	9526	3488	3716	3384	779	401	3544
MAX	398	1620	3460	8800	10200	18100	7760	7040	7900	1780	800	11400
MIN	122	151	1150	1240	1870	2380	1300	987	897	432	195	673
CFS-1	.09	.17	.73	1.90	1.60	3.99	1.46	1.56	1.42	.33	.17	1.48
IN.	.10	.19	.84	2.19	1.67	4.60	1.63	1.79	1.58	.38	.19	1.65
CAL YR 1978 TOTAL	1072361	MEAN	2938	MAX	17400	MIN	122	CFSM	1.23	IN	16.69	
WTR YR 1979 TOTAL	1079692	MEAN	2958	MAX	18100	MIN	122	CFSM	1.24	IN	16.81	

NEUSE RIVER BASIN

163

02089216 DAILEYS CREEK NEAR LIDDELL, N. C.

LOCATION.--Lat 35°12'30", long 77°48'32", Lenoir County, Hydrologic Unit 0320202, on left bank at downstream side of culvert on State Highway 55, 2.0 mi (3.2 km) upstream from mouth and 2.5 mi (4.0 km) north of Liddell.

DRAINAGE AREA.--3.81 mi² (9.87 km²).

PERIOD OF RECORD.--April 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 65 ft (20 m) from topographic map.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 165 of this report. Recording rain gage at station.

EXTREMES FOR THE CURRENT PERIOD.--April to September 1978; Peak discharge above base of 35 ft³/s (0.99 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Apr. 19	0030	50	1.42	4.75	1.448	June 27	1245	46	1.30	4.71	1.436
Apr. 26	1215	68	1.93	4.92	1.500	July 16	1900	54	1.53	4.79	1.460
May 9	2000	54	1.53	4.79	1.460	July 25	2315	170	4.81	5.49	1.673
June 10	0015	61	1.73	4.86	1.481						

Minimum discharge, 0.93 ft³/s (0.026 m³/s) July 24, gage height, 3.37 ft (1.027 m).

Water year 1979

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Nov. 29	2330	51	1.44	4.76	1.451	Apr. 13	1700	42	1.19	4.67	1.423
Jan. 2	1315	74	2.10	4.97	1.515	July 18	2215	45	1.27	4.70	1.433
Feb. 25	2130	58	1.64	4.83	1.472	Sept. 5	1345	*84	2.38	*5.04	1.536

Minimum discharge, 0.56 ft³/s (0.016 m³/s) July 14; minimum gage height, 3.28 ft (1.000 m) Aug. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							4.3	8.5	2.5	2.4	5.3	6.3
2							4.0	7.7	3.8	3.4	7.1	5.4
3							3.8	6.6	3.5	3.4	5.7	3.1
4							3.6	12	3.0	2.7	4.8	2.5
5							3.4	17	2.7	2.3	4.5	2.0
6							3.2	8.3	2.7	2.2	5.2	1.9
7							3.0	7.1	2.9	2.1	4.5	1.8
8							2.8	10	3.0	2.0	3.8	1.7
9							2.7	25	8.7	1.9	3.0	1.6
10							16	15	18	1.7	3.3	1.5
11							2.6	8.7	4.2	3.7	4.2	2.4
12							2.7	7.7	3.3	2.6	3.8	2.1
13							10	7.1	3.0	1.9	3.2	1.7
14							4.9	7.5	2.6	1.9	3.0	1.6
15							3.4	6.6	2.5	2.2	2.9	1.6
16							2.9	6.0	2.4	21	2.6	1.6
17							3.0	5.6	2.2	8.8	2.4	1.5
18							18	5.7	2.2	3.2	2.4	1.5
19							21	4.8	2.1	2.5	2.2	1.4
20							7.6	4.3	1.9	2.2	2.7	1.5
21							5.7	3.8	1.8	2.0	4.4	1.6
22							5.1	3.6	3.0	1.6	2.2	1.5
23							4.4	3.5	4.9	1.4	2.0	1.7
24							3.9	3.7	2.6	1.9	1.9	1.9
25							9.6	3.5	2.3	35	1.8	1.8
26							43	3.2	2.0	25	2.1	1.8
27							14	3.2	15	7.5	2.9	1.7
28							10	3.5	6.5	5.8	2.3	1.7
29							8.7	3.2	3.6	4.8	2.0	1.6
30							8.1	3.0	2.7	4.1	1.7	1.6
31							---	2.8	---	3.7	1.8	---
TOTAL							235.4	218.2	121.6	166.9	101.7	61.6
MEAN							7.85	7.04	4.05	5.38	3.28	2.05
MAX							43	25	18	35	7.1	6.3
MIN							2.6	2.8	1.8	1.4	1.7	1.4
CFS ⁴							2.06	1.85	1.06	1.41	.86	.54
IN.							2.30	2.13	1.19	1.63	.99	.60

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	3.0	4.3	2.7	4.2	8.0	4.3	3.2	2.3	1.8	1.5	3.2
2	3.2	3.1	3.4	34	3.8	7.5	4.1	3.0	2.0	1.3	1.4	4.7
3	2.1	3.3	3.1	9.6	3.8	6.9	8.2	2.8	1.8	1.1	2.0	3.2
4	2.0	4.2	3.3	5.7	3.8	6.6	14	2.7	9.0	1.3	3.3	3.1
5	1.8	3.6	11	5.5	3.6	7.3	8.5	2.9	3.5	2.4	3.1	42
6	1.7	3.2	6.9	5.2	3.7	23	6.2	2.7	2.6	1.3	2.6	12
7	1.5	3.3	3.7	5.0	6.4	12	5.4	2.5	2.1	1.2	1.6	4.6
8	1.5	4.9	3.6	5.5	5.4	11	5.2	2.5	1.8	1.2	1.3	3.6
9	1.4	3.5	3.9	4.4	4.6	9.7	6.6	2.2	1.6	1.0	1.2	3.2
10	1.5	4.9	3.8	4.2	4.0	7.9	5.1	8.7	1.4	1.1	1.1	3.2
11	1.4	5.4	3.5	4.2	3.8	10	4.7	5.6	8.6	1.1	1.2	2.7
12	1.4	3.8	3.5	11	3.8	7.5	4.6	4.9	5.1	.93	1.6	2.6
13	1.4	3.6	3.4	14	3.6	6.7	17	4.5	3.0	.93	1.6	3.5
14	1.5	3.6	3.3	7.4	3.4	7.8	10	6.0	2.6	.83	1.2	5.6
15	1.3	3.6	3.3	6.1	3.5	6.9	7.2	5.5	2.3	.83	1.2	2.9
16	1.3	3.6	3.2	5.5	3.3	5.9	6.4	3.4	5.9	.93	1.1	2.4
17	1.4	4.3	3.3	5.3	3.1	5.7	6.0	2.7	5.2	.83	.99	2.3
18	1.5	4.8	3.2	5.2	3.2	5.5	5.6	6.0	3.2	4.6	.93	2.5
19	1.4	4.1	3.0	4.8	5.8	5.2	5.2	9.8	2.4	7.8	.88	2.1
20	1.3	4.3	3.0	5.7	5.5	5.0	5.0	4.6	1.9	3.3	.88	2.0
21	1.3	4.3	3.3	17	7.2	4.7	4.8	3.6	1.8	5.2	.99	3.3
22	1.4	4.3	3.0	6.9	5.3	5.1	4.5	4.0	2.1	11	2.2	3.3
23	1.4	4.5	2.9	5.8	6.6	4.8	4.1	3.8	1.6	3.8	1.4	2.9
24	1.4	7.0	9.6	7.5	10	13	3.9	13	1.6	6.4	1.3	2.7
25	1.7	4.3	4.2	5.7	23	6.7	3.8	7.2	4.8	4.1	1.2	2.7
26	1.8	4.3	2.9	5.1	21	5.7	9.2	4.1	2.1	3.4	1.0	2.7
27	1.9	6.1	2.6	4.9	10	5.3	5.4	3.4	1.8	2.4	1.2	2.4
28	2.0	5.7	2.4	4.9	8.6	5.1	4.2	3.2	1.6	2.0	1.5	2.3
29	2.2	13	2.5	4.4	---	5.0	3.7	3.8	1.4	1.8	1.5	9.0
30	2.2	21	2.5	4.2	---	4.8	3.5	3.2	1.3	1.7	1.1	29
31	2.7	---	2.5	4.5	---	4.6	---	2.8	---	1.8	1.9	---
TOTAL	58.1	152.6	114.1	221.9	174.0	230.9	186.4	138.3	88.4	79.38	45.97	171.6
MEAN	1.87	5.09	3.81	7.16	6.21	7.45	6.21	4.46	2.95	2.56	1.48	5.72
MAX	7.5	21	11	34	23	23	17	13	9.0	11	3.3	42
MIN	1.3	3.0	2.4	2.7	3.1	4.6	3.5	2.2	1.3	.83	.88	2.0
CFSM	.49	1.34	1.00	1.88	1.63	1.96	1.63	1.17	.77	.67	.39	1.50
IN.	.57	1.49	1.15	2.17	1.70	2.25	1.82	1.35	.86	.77	.45	1.68
WTR YR 1979	TOTAL	1665.65	MEAN	4.56	MAX	42	MIN	.83	CFSM	1.20	IN	16.26

NEUSE RIVER BASIN

165

02089216 DAILEYS CREEK NEAR LIDDELL, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
04...	1655	1.9	4	.02
20...	1520	3.7	4	.04
NOV				
08...	1135	6.4	20	.35
DEC				
05...	1239	7.2	17	.33
JAN				
26...	1315	5.1	4	.06
FEB				
26...	1356	15	694	28
MAR				
13...	1535	6.7	6	.11
APR				
06...	1400	6.3	14	.24
MAY				
15...	1415	5.2	9	.13
JUN				
04...	1730	6.4	18	.31

NEUSE RIVER BASIN

02089222 BEAR CREEK NEAR PARKSTOWN, N. C.

LOCATION.--Lat 35°22'22", long 77°48'10", Greene County, Hydrologic Unit 03020203 on left bank at upstream side of culvert on Secondary Road 1136, 0.9 mi (1.4 km) east of Parkstown and 1.7 mi (2.7 km) upstream from mouth.

DRAINAGE AREA.--12.6 mi² (32.6 km²).

PERIOD OF RECORD.--March 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 80 ft (25 m) from topographic map.

REMARKS.--Records good. Suspended-sediment records for the period March to September 1978 and the current year are published on page 168 of this report. Recording rain gage at station.

EXTREMES FOR CURRENT PERIOD.--March to September 1978; Maximum discharge during period, 58 ft³/s (1.64 m³/s) Apr. 26, gage height, 5.71 ft (1.740 m); minimum, 0.05 ft³/s (0.001 m³/s) Sept. 26, 27, 28, 29, 30, gage height, 2.31 ft (0.704 m).

Water year 1979: Maximum discharge, 72 ft³/s (2.04 m³/s) Sept. 6, gage height, 7.36 ft (2.243 m); minimum, 0.01 ft³/s (<0.001 m³/s) Aug. 17-21, gage height, 2.24 ft (0.683 m).

DISCHARGE, IN CUBIC FEET PER SECOND, MARCH TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						1.3	3.9	14	.77	2.9	11	.54
2						5.0	3.5	4.4	.67	1.9	28	.73
3						11	3.4	5.3	.66	1.5	11	2.6
4						10	2.9	15	.69	1.3	5.8	4.3
5						8.0	2.8	45	.65	.99	3.5	3.0
6						5.0	2.8	39	11	.73	2.5	1.3
7						4.5	2.9	17	52	.64	2.5	.95
8						4.0	2.3	12	49	.57	2.4	.68
9						10	2.1	25	49	.54	2.0	.64
10						18	1.9	19	44	.50	1.5	.61
11						30	1.8	11	47	17	1.4	.61
12						17	2.1	7.4	43	18	1.2	.61
13						3.5	3.6	5.8	15	5.8	1.1	.61
14						7.5	4.5	4.1	5.5	2.5	1.0	.54
15						6.4	3.1	7.2	2.9	1.7	.87	.47
16						5.3	2.3	5.6	2.0	4.2	.75	.44
17						4.5	1.9	5.3	1.5	8.6	.60	.40
18						4.3	18	6.5	1.2	4.3	.53	.37
19						4.1	29	4.9	1.0	2.4	.47	.30
20						4.1	21	3.6	.86	1.6	.45	.27
21						3.7	13	2.9	.68	1.1	.96	.24
22						3.5	8.9	2.3	.99	.89	.90	.22
23						3.2	6.5	2.0	1.1	.71	.66	.19
24						7.3	5.1	1.8	1.8	.85	.49	14
25						28	5.3	1.7	1.6	19	.40	.11
26						20	42	1.4	1.0	18	.36	.08
27						13	49	1.2	14	5.6	.39	.06
28						9.2	44	1.1	36	2.4	.36	.07
29						6.9	47	1.0	15	1.5	.30	.07
30						5.7	39	.95	5.6	.45	.23	.05
31						4.8	---	.87	---	.66	.26	---
TOTAL						274.2	379.6	286.32	410.17	129.43	84.28	39.06
MEAN						8.85	12.7	9.24	13.7	4.18	2.72	1.30
MAX						30	49	46	52	19	24	14
MIN						1.3	1.8	.87	.65	.50	.23	.05
CFS-H						.70	1.01	.73	1.09	.33	.22	.10
IN.						.41	1.12	.65	1.21	.38	.25	.12

NEUSE RIVER BASIN

167

02089222 BEAR CREEK NEAR PARKSTOWN, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.26	7.0	2.2	3.8	13	4.0	1.4	2.8	4.8	.61	4.2
2	4.9	.25	2.5	1.4	3.3	10	3.6	1.0	1.9	3.6	.52	2.5
3	2.3	.25	1.7	3.4	2.9	8.5	3.7	.84	3.0	1.8	.46	2.2
4	1.3	.47	1.7	1.6	2.4	7.4	9.5	.77	23	1.2	.39	1.7
5	.87	.62	5.1	9.8	2.6	7.4	12	.76	13	2.1	.35	4.0
6	.69	.60	12	7.5	2.5	3.4	8.0	.69	6.3	1.5	.29	6.9
7	.53	.57	5.1	7.1	4.1	4.5	5.0	.59	3.7	.94	.24	6.0
8	.42	2.1	4.0	10	4.5	3.5	3.9	.54	2.4	.72	.18	5.6
9	.34	2.3	3.5	9.3	4.7	2.8	4.2	.50	1.7	.59	.14	5.4
10	.29	2.2	3.3	7.1	4.1	1.8	4.2	1.5	1.2	.54	.09	5.2
11	.26	2.5	3.2	6.0	3.7	1.8	3.1	3.5	10	.53	.03	5.0
12	.25	2.1	3.0	9.1	3.5	17	2.6	11	23	.49	.04	4.8
13	.25	1.5	2.3	31	3.6	12	6.2	5.7	8.4	.46	.03	4.6
14	.24	1.2	2.3	24	3.2	10	1.6	3.8	4.1	.43	.02	1.7
15	.24	1.0	2.3	15	3.1	11	8.5	4.2	2.4	.96	.02	6.2
16	.18	.96	2.3	11	3.0	8.1	5.3	3.1	2.7	.98	.02	3.3
17	.17	.45	2.6	8.5	2.6	6.9	3.7	2.0	5.5	.79	.02	2.2
18	.13	.99	2.3	7.3	2.6	6.3	2.9	1.5	4.1	.87	.01	1.9
19	.11	.92	2.2	6.0	3.3	5.7	2.4	6.1	2.9	1.8	.01	1.6
20	.12	.80	2.2	6.2	4.0	5.2	2.0	5.0	1.9	4.3	.01	1.4
21	.11	.75	2.4	17	5.7	4.8	1.6	3.4	1.3	6.0	.02	1.4
22	.11	.71	2.3	15	11	4.4	1.5	2.8	1.3	4.5	.32	2.6
23	.11	.75	2.1	8.8	11	4.0	1.4	3.6	1.1	7.1	.41	4.3
24	.13	1.0	3.0	4.3	21	15	1.2	15	1.4	17	.40	3.0
25	.11	.90	5.2	8.1	29	17	1.1	47	3.9	36	.39	2.4
26	.14	.82	4.3	6.2	46	11	3.1	3.4	2.5	11	.34	2.2
27	.16	.90	3.5	5.0	43	7.6	4.4	1.4	1.6	4.5	.29	2.0
28	.17	1.5	2.8	4.7	20	6.1	2.9	7.2	1.1	2.9	.60	1.9
29	.19	3.6	2.4	4.1	---	5.3	2.7	4.9	.86	2.0	1.1	6.1
30	.22	22	2.2	3.4	---	4.7	1.9	3.9	.72	1.1	2.3	3.9
31	.27	---	2.1	3.5	---	4.3	---	3.2	---	.86	9.7	---
TOTAL	16.55	56.18	103.9	330.5	254.6	391.7	134.6	198.49	139.78	122.36	19.35	584.1
MEAN	.53	1.87	3.35	10.7	9.09	12.6	4.49	6.40	4.66	3.95	.62	19.5
MAX	4.9	22	12	34	46	45	16	47	23	36	9.7	69
MIN	.11	.25	1.7	2.2	2.5	4.0	1.1	.50	.72	.43	.01	1.4
CFSM	.04	.15	.27	.85	.72	1.00	.36	.51	.37	.31	.05	1.55
IN.	.05	.17	.31	.98	.75	1.16	.40	.59	.41	.36	.06	1.72
WTR YR 1979	TOTAL	2352.11	MEAN	6.44	MAX	69	MIN	.01	CFSM	.51	IN	6.94

NEUSE RIVER BASIN

02089222 BEAR CREEK NEAR PARKSTOWN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
05...	1155	.87	15	.04
NOV				
03...	1435	2.8	16	.12
DEC				
05...	1440	6.2	30	.50
15...	1505	2.2	10	.06
JAN				
30...	0940	3.5	8	.03
FEB				
26...	1539	34	44	8.6
MAR				
16...	0925	4.0	68	1.5
APR				
06...	1100	7.5	17	.34
MAY				
15...	1634	3.9	9	.09
JUN				
04...	1524	24	21	1.4
18...	1755	3.5	10	.09
JUL				
24...	1442	44	88	10
AUG				
01...	1745	.56	14	.02

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, N. C.

LOCATION.--Lat 35°15'29", long 77°35'09", Lenoir County, Hydrologic Unit 03020202, on left bank at Kinston, 600 ft (183 m) downstream from bridge on State Highway 11, and 90 mi (145 km) upstream from mouth.

DRAINAGE AREA.--2,690 mi² (6,970 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1930 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1333: 1931-32.

GAGE.--Water-stage recorder. Datum of gage is 10.90 ft (3.322 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 25, 1934, nonrecording gage at highway bridge 1 mi (1.6 km) downstream at datum 0.80 ft (0.244 m) lower.

REMARKS.--Water-discharge record excellent. Diversions for municipal water supply for cities of Durham and Butner (see sta 02087000).

AVERAGE DISCHARGE.--49 years, 2,899 ft³/s (82.10 m³/s), 14.63 in/yr (372 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,000 ft³/s (736 m³/s) Oct. 13, 1964; maximum gage height, 22.86 ft (6.968 m) Oct. 13, 1964; minimum discharge, 124 ft³/s (3.51 m³/s) Sept. 26, 1932, gage height, 1.29 ft (0.393 m), site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1919 reached a stage of 25.0 ft (7.62 m), present site and datum, discharge, about 39,000 ft³/s (1,100 m³/s), from information by North Carolina State Highway Commission. Flood in October 1924 reached a stage of 24.7 ft (7.53 m), present site and datum, discharge, 36,000 ft³/s (1,020 m³/s), from information by North Carolina State Highway Commission. Flood of Sept. 25-26, 1928, reached a stage of 24.2 ft (7.38 m), present site and datum, discharge, 34,000 ft³/s (963 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,200 ft³/s (572 m³/s) Mar. 9, gage height, 20.72 ft (6.315 m); minimum, 225 ft³/s (6.37 m³/s) Nov. 1, gage height, 2.51 ft (0.765 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	396	227	2010	1670	8550	7900	7840	2070	4970	1250	930	588
2	484	246	2260	1980	8900	8940	8020	1970	3660	1180	781	691
3	547	261	2410	2650	8970	10600	8030	1750	2680	1080	706	915
4	439	275	2360	2800	8630	12700	7740	1540	2480	1050	700	1110
5	468	279	2110	3100	7640	15100	6260	1370	2560	1030	616	2300
6	544	296	2030	3300	5470	17500	5360	1290	2800	977	583	4140
7	536	289	2230	3400	3990	19200	4620	1420	3330	898	535	5900
8	472	303	2570	3500	3180	20000	4600	1810	3910	838	477	7200
9	431	358	3020	3300	2860	20100	4910	1850	4550	762	505	7960
10	400	463	3300	3000	2660	19600	5270	1600	5240	677	545	8940
11	383	575	3400	3090	2690	18900	5660	1500	6610	634	495	10000
12	363	910	3000	3350	2790	17700	6070	1550	7260	600	458	10900
13	343	878	2400	3750	2820	16100	6530	2490	7920	563	442	11300
14	327	741	2100	4110	2740	14100	6780	2970	8080	541	435	10900
15	305	658	1900	4320	2600	12200	6270	3390	7830	533	403	8160
16	293	599	1760	4440	2490	10400	5360	3680	6480	533	365	5150
17	282	555	1570	4660	2380	8890	4690	4370	4410	542	328	3330
18	278	542	1440	4920	2360	7820	4310	4300	3190	564	328	2130
19	272	516	1370	5110	2590	6970	3990	4830	3130	826	336	1740
20	264	498	1380	5240	2930	6150	3530	5440	3510	810	321	1460
21	263	549	1420	5500	3210	5220	2970	6060	3900	777	380	1280
22	261	607	1390	5490	3300	4350	2480	6570	4020	1630	361	1190
23	258	624	1340	5180	3390	3700	2160	6950	3340	1710	415	1220
24	252	611	1380	5050	3720	3420	1950	7350	2500	1450	354	1420
25	250	601	1530	5200	4790	3550	1800	7420	2070	1460	392	1520
26	247	575	1630	5500	5680	4130	1790	7020	1930	1680	549	1660
27	244	574	1690	5830	6600	4840	1900	6560	1970	1600	531	2020
28	248	622	1900	6220	7250	5540	1910	6160	1920	1900	498	2100
29	244	736	2140	6690	---	6190	1940	6020	1710	1970	568	1920
30	235	1250	2160	7290	---	6820	2030	6030	1440	1590	569	2600
31	232	---	1940	7980	---	7400	---	5960	---	1170	554	---
TOTAL	10561	16218	63140	137620	125180	326030	136770	123290	119400	32825	15440	121744
MEAN	341	541	2037	4439	4471	10520	4559	3977	3980	1059	498	4058
MAX	547	1250	3400	7980	8970	20100	8030	7420	8080	1970	930	11300
MIN	232	227	1340	1670	2360	3420	1790	1290	1440	533	321	588
CFSM	.13	.20	.76	1.65	1.66	3.91	1.70	1.48	1.48	.39	.19	1.51
IN.	.15	.22	.87	1.90	1.73	4.51	1.89	1.70	1.65	.45	.21	1.68

CAL YR 1978 TOTAL 1228540 MEAN 3366 MAX 18100 CFSM 1.25 IN 16.99
WTR YR 1979 TOTAL 1228218 MEAN 3365 MAX 20100 CFSM 1.25 IN 16.99

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued
(National stream-quality accounting network and pesticide station)

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 current year.

WATER TEMPERATURES: October 1949 to September 1950, January 1955 to September 1956, July 1973 to current year.

REMARKS.--Daily records of specific conductance for January 1955 to September 1956 are available in files of district office in Raleigh, N. C.

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by the Environmental Protection Agency. Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 218 micromhos Nov. 7, 1978; minimum daily, 43 micromhos Mar. 28, 1975.
WATER TEMPERATURES: Maximum daily, 33.5°C July 3, 1956; minimum daily, 0.0°C Feb. 7, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 218 micromhos Nov. 7; minimum daily, 49 micromhos June 11.
WATER TEMPERATURES: Maximum daily, 28.5°C Aug. 10; minimum daily, 1.5°C Feb. 11, 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	
DATE	TIME												
OCT 02...	1545	515	130	7.8	20.5	25	9.3	1100	1500	27	0	7.2	
NOV 13...	1200	876	142	7.3	15.0	6.0	8.6	360	390	25	2	6.4	
DEC 11...	1345	3340	95	6.6	9.5	30	8.9	280	320	18	4	3.9	
FEB 12...	1430	2400	88	6.3	2.0	13	13.2	80	140	19	9	4.7	
MAR 01...	1300	7940	66	5.9	8.0	40	9.8	220	410	15	10	3.7	
APR 04...	1400	7720	69	6.2	16.0	15	7.1	310	320	17	6	4.1	
MAY 23...	1135	6420	59	6.2	20.0	3.0	6.5	176	350	16	5	3.9	
JUN 13...	1010	7920	50	6.1	20.5	30	6.3	420	590	15	4	3.7	
JUL 05...	1315	1020	93	7.4	26.0	19	9.1	--	--	22	0	5.5	
AUG 06...	1215	583	105	7.5	29.5	15	10.0	11400	164	25	0	6.2	
SEP 10...	1130	3910	54	5.5	23.0	15	5.3	150	1600	12	6	3.0	
		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 02...	2.3	14	43	1.2	4.0	39	0	32	1.0	13	13	.2	
NOV 13...	2.1	13	49	1.1	4.0	28	0	23	2.2	14	12	.2	
DEC 11...	2.1	7.7	43	.8	3.1	17	0	14	6.8	14	9.4	.1	
FEB 12...	1.8	7.3	42	.7	2.0	12	0	10	9.6	12	9.2	.1	
MAR 01...	1.5	4.3	36	.5	1.0	7	0	6	14	10	6.3	.1	
APR 04...	1.6	5.5	38	.6	2.0	13	0	11	13	7.5	6.0	.0	
MAY 23...	1.6	5.0	37	.5	2.0	14	0	11	14	5.6	5.6	.1	
JUN 13...	1.4	3.3	29	.4	2.0	13	0	11	17	5.2	3.6	.1	
JUL 05...	2.1	8.8	43	.8	2.6	27	0	22	1.7	9.3	8.1	.1	
AUG 06...	2.2	9.4	42	.8	2.9	32	0	26	1.6	12	9.9	.2	
SEP 10...	1.2	3.9	35	.5	2.6	8	0	7	40	7.4	4.7	.1	

K Results based on colony count outside the acceptable range (non-ideal colony count).

NEUSE RIVER BASIN

171

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 02...	7.2	88	80	.12	122	.88	.11	--	.55	.66	--	--
NOV 13...	9.4	80	75	.11	189	.95	.17	--	.56	.73	.27	.46
DEC 11...	11	80	60	.11	721	.66	.06	--	.59	.65	.08	.57
FEB 12...	10	68	53	.09	514	.87	.10	--	.23	.33	.18	.15
MAR 01...	7.1	65	37	.09	1390	.63	.08	--	.51	.59	.18	.41
APR 04...	7.2	63	40	.09	1310	.36	.05	--	.54	.59	.00	.64
MAY 23...	8.8	68	40	.09	1270	.36	.05	.06	.74	.79	.00	.79
JUN 13...	7.8	68	34	.09	1450	.30	.04	.05	.69	.73	--	--
JUL 05...	11	76	61	.10	209	.21	.00	.00	.96	.96	.61	.35
AUG 06...	11	76	70	.10	120	.15	.01	.01	.79	.80	.51	.29
SEP 10...	5.9	54	33	.08	1400	.27	.03	.04	.64	.72	.15	.57

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	MARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
OCT 02...	1.5	6.8	.31	--	--	.39	--	--	--	--	--
NOV 13...	1.7	7.4	.36	--	--	.25	1	0	1	100	100
DEC 11...	1.3	5.8	.18	--	--	.15	--	--	--	--	--
FEB 12...	1.2	5.3	.12	--	--	.08	2	1	1	0	0
MAR 01...	1.2	5.4	.11	--	--	--	--	--	--	--	--
APR 04...	.95	4.2	.09	--	--	.08	--	--	--	--	--
MAY 23...	1.2	5.1	.14	--	.43	.11	2	0	2	<50	<10
JUN 13...	1.0	4.6	.16	--	.49	--	--	--	--	--	--
JUL 05...	1.2	5.2	.24	--	.74	.08	--	--	--	--	--
AUG 06...	.95	4.2	.21	--	.64	.11	1	0	1	<50	<10
SEP 10...	.99	4.4	.15	--	.46	.09	--	--	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible][illegible]

NEUSE RIVER BASIN

173

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECov- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 02...	--	--	--	--	--	--	--	--	--	--
NOV 13...	<.5	.0	<.5	0	0	0	0	0	0	30
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 12...	<.5	.0	<.5	0	0	0	0	0	0	110
MAR 01...	--	--	--	--	--	--	--	--	--	--
APR 04...	--	--	--	--	--	--	--	--	--	--
MAY 23...	<.5	.0	<.5	0	0	0	0	0	0	40
JUN 13...	--	--	--	--	--	--	--	--	--	--
JUL 05...	--	--	--	--	--	--	--	--	--	--
AUG 06...	<.5	.0	<.5	0	0	2	0	0	0	20
SEP 10...	--	--	--	--	--	--	--	--	--	--
DATE	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO- SURE (DAYS)
OCT 02...	--	--	9.6	--	--	13.1	11.0	5.98	1.00	25
NOV 13...	30	0	--	9.5	2.2	--	--	--	--	--
DEC 11...	--	--	11	--	--	--	--	--	--	--
FEB 12...	90	20	--	6.4	--	--	--	--	--	--
MAR 01...	--	--	9.3	--	--	--	--	--	--	--
APR 04...	--	--	8.5	--	--	--	--	--	--	--
MAY 23...	30	7	--	11	.7	--	--	--	--	--
JUN 13...	--	--	12	--	--	.080	.000	.000	.000	20
JUL 05...	--	--	12	--	--	--	--	--	--	--
AUG 06...	20	4	--	12	2.3	--	--	--	--	--
SEP 10...	--	--	11	--	--	--	--	--	--	--

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, PERIOD JUNE TO SEPTEMBER 1978

DATE	TIME	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	P,P' DDU, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 13...	1015	ND	ND	.64	ND	ND	ND	.71	ND	ND	ND	ND
AUG 03...	1115	ND	--	ND	ND	--	ND	--	ND	--	ND	--
DATE		DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
JUN 13...		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 03...		ND	--	ND	--	ND	--	ND	--	ND	--	ND
DATE		LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 13...		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 03...		ND	--	ND	--	ND	--	ND	--	ND	--	ND
DATE		SIMA- ZINE TOTAL COND. (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 13...		ND	ND	ND	ND	ND	--	ND	--	ND	--	ND
AUG 03...		ND	ND	--	ND	--	ND	--	ND	--	ND	--

ND Not detected.

NEUSE RIVER BASIN

175

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, PERIOD OCTOBER 1978 to MAY 1979

		ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	
DATE	TIME										
NOV 13...	1200	ND	ND	ND	ND	ND	ND	ND	ND	ND	
FEB 12...	1430	ND	--	ND	--	ND	--	ND	--	ND	
MAY 23...	1135	ND	--	ND	--	ND	--	ND	--	ND	
		DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELURIN, TOTAL (UG/L)	DI- ELURIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)
DATE											
NOV 13...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 12...	--	ND	--	ND	--	ND	--	ND	--	ND	ND
MAY 23...	--	ND	--	ND	--	ND	--	ND	--	ND	ND
		HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)
DATE											
NOV 13...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 12...	--	ND	--	ND	--	ND	--	ND	--	ND	ND
MAY 23...	--	ND	--	ND	--	ND	--	ND	--	ND	ND
		METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL THI- THION, TOTAL (UG/L)	METHYL THI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
DATE											
NOV 13...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 12...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 23...	--	ND	--	ND	--	ND	--	ND	--	ND	--

ND Not detected.

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, JUNE TO SEPTEMBER 1978

DATE TIME	JUN 13+78 1015	JUL 18+78 1300	AUG 3+78 1115
TOTAL CELLS/ML	8300	160000	11000
DIVERSITY: DIVISION	1.0	0.6	1.1
...CLASS	1.0	0.6	1.1
...ORDER	1.9	0.8	1.4
...FAMILY	2.6	1.0	2.2
...GENUS	2.7	1.7	2.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
...CHLOROPHYCEAE						
...CHLOROCOCCALES						
...OOCYSTACEAE						
...GLOEDACTINIUM	--	-	--	-	*	0
...COELASTHACEAE						
...COELASTRUM	560	7	--	-	*	0
...HYDRODICTYACEAE						
...PEDIATRUM	190	2	--	-	*	110 1
...MICRACINIACEAE						
...GOLENKINIA	--	-	*	0	*	0
...MICRACINIUM	--	-	2300	1	250	2
...OOCYSTACEAE						
...ANKISTRODESUS	120	1	*	0	120	1
...CHLORELLA	--	-	*	0	--	-
...DICTYOSPHAERIUM	510	6	1400	1	1200	11
...KIRCHNERIELLA	--	-	*	0	73	1
...OOCYSTIS	--	-	*	0	*	0
...GUAIRIGULA	--	-	--	-	*	0
...SELENASTRUM	--	-	*	0	--	-
...SCENEDESMACEAE						
...CHUCIGENIA	190	2	2900	2	1300	11
...SCENEDESMUS	350	4	1500	1	850	8
...TETRASTRUM	--	-	1000	1	180	2
...TETRASPOALES						
...PALMELLACEAE						
...SPHAEROCYSTIS	--	-	--	-	91	1
...TETRASPORACEAE						
...TETRASPORA	--	-	--	-	150	1
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	*	0	--	-	--	-
...ZYGEMATALES						
...DESMIDIACEAE						
...COSMARIIUM	93	1	--	-	--	-
...STAUASTRUM	--	-	--	-	*	0
CHRYSTOPHYTA						
...BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
...CYCLOTELLA	99	1	3800	2	100	1
...MELOSIRA	--	-	*	0	160	1
...PENNIALES						
...CYMBELLACEAE						
...CYMBELLA	*	0	--	-	--	-
...NAVICULACEAE						
...NAVICULA	--	-	*	0	*	0
...NITZSCHIAEAE						
...NITZSCHIA	210	3	*	0	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)						
...CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
...AGMENELLUM	--	-	110000# 68	--	--	-
...ANACYSTIS	2500# 31	--	28000# 17	--	170	2
...COCCOCHLORIS	--	-	--	-	*	0
...HORMOGONALES						
...NOSTOCACEAE						
...ANABAENA	830	10	880	1	340	3
...OSCILLATORIACEAE						
...LYNGBYA	--	-	5300	3	--	-
...OSCILLATORIA	2500# 31	--	--	-	5600# 51	
EUGLENOPHYTA (EUGLENOIDS)						
...EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
...PHACUS	*	0	--	-	--	-

NOTE: * - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

NEUSE RIVER BASIN

177

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 13,78 1200	MAY 23,79 1135	JUN 13,79 1010	JUL 5,79 1315	AUG 6,79 1215
TOTAL CELLS/ML	6200	1100	700	93000	340000
DIVERSITY: DIVISION	1.4	1.4	1.4	1.3	0.6
..CLASS	1.4	1.4	1.4	1.3	0.6
...ORDER	1.7	1.6	2.0	1.8	1.6
...FAMILY	2.4	2.3	2.7	2.5	1.7
....GENUS	3.0	3.1	3.1	3.1	2.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....OOCYSTACEAE										
.....DICHOTOMOCOCCUS	--	-	--	-	--	-	--	-	*	0
....CHARACIACEAE									*	0
.....SCHROEDERIA	38	1	13	1	--	-	--	-	*	0
....COELASTRACEAE										
.....COELASTRUM	--	-	--	-	52	7	--	-	2000	1
....TICRACINACEAE										
.....GULENKINIA	--	-	--	-	--	-	3100	3	--	-
....MICRACTINIUM	230	4	--	-	--	-	9600	10	*	0
....OOCYSTACEAE										
.....ANKISTHODESMUS	650	10	64	6	13	2	1500	2	*	0
....CHODATELLA	110	2	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	150#	22	--	-	4700	3
....FRANCEIA	--	-	--	-	--	-	--	-	*	0
....KIRCHNERIELLA	76	1	90	8	13	2	--	-	*	0
....OOCYSTIS	--	-	51	5	--	-	*	0	3800	1
....RADIOCOCCUS	--	-	--	-	--	-	--	-	2000	1
....SELENASTRUM	--	-	25	2	--	-	--	-	--	-
....TETRAEDRON	--	-	13	1	13	2	--	-	*	0
....TREUBAKIA	--	-	13	1	--	-	--	-	*	0
....WESTELLA	--	-	--	-	--	-	3700	4	--	-
....SCENEDESMACEAE										
.....ACTINASTRUM	--	-	--	-	--	-	5000	5	--	-
....CRUCIGENIA	--	-	210#	18	--	-	11000	12	*	0
....SCENEDESMUS	1500#	24	150	14	77	11	6800	7	2600	1
....TETRASTRUM	460	7	--	-	--	-	1200	1	--	-
....TETRASPORALES										
....PALMELLACEAE										
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-	17000	5
....VOLVOCELES										
....CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	39	3	90	13	930	1	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCACEAE										
.....CYCLOTELLA	1600#	25	--	-	26	4	3400	4	*	0
....MELOSIHA	380	6	--	-	52	7	1500	2	*	0
...PENNALES										
....FRAGILARIACEAE										
.....FRAGILARIA	150	2	51	5	--	-	620	1	--	-
....GOMPHONEMACEAE										
.....GOMPHONEMA	--	-	--	-	13	2	--	-	--	-
....NAVICULACEAE										
.....NAVICULA	38	1	--	-	26	4	--	-	--	-
....NITZSCHIACEAE										
.....NITZSCHIA	110	2	39	3	13	2	2500	3	--	-

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 13,78 1200		MAY 23,79 1135		JUN 13,79 1010		JUL 5,79 1315		AUG 6,79 1215	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS PER- /ML CENT	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	--	-	65000#	19
....ANACYSTIS	750	12	350#	31	150#	22	33000#	36	100000#	30
...HORMOGONALES										
....OSCILLATORIAEAE										
....OSCILLATORIA	--	-	--	-	--	-	7700	8	120000#	37
...RIVULARIAEAE										
....RAPHIDIOPSIS	110	2	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
....TRACHELOMONAS	--	-	13	1	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...PERIDINIALES										
....GLENODINIACEAE										
....GLENODINIUM	--	-	13	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

NEUSE RIVER BASIN

179

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	133	113	101	63	67	57	88	62	90	91	116
2	144	138	112	92	64	62	58	85	69	88	93	112
3	138	143	103	83	67	57	61	86	75	86	91	108
4	134	143	109	82	70	56	63	88	77	90	94	108
5	113	155	104	85	72	56	69	96	76	88	100	103
6	128	147	110	90	78	53	72	89	77	95	102	76
7	133	218	103	90	81	52	73	93	74	106	112	66
8	133	147	104	90	84	51	71	94	55	102	112	62
9	142	144	103	88	85	53	67	88	51	103	114	59
10	136	147	93	88	85	53	65	83	50	98	115	57
11	120	140	95	90	90	54	63	84	49	103	116	55
12	117	139	96	90	84	57	65	83	52	99	116	55
13	117	135	97	86	93	61	65	84	53	105	120	57
14	131	126	103	85	96	64	67	77	53	101	121	58
15	133	123	101	86	97	65	69	68	60	103	116	63
16	133	112	99	84	94	57	69	74	62	112	116	73
17	133	113	101	83	97	56	71	66	69	108	120	80
18	129	109	106	80	94	64	73	60	77	103	127	87
19	132	114	108	79	99	70	76	59	80	96	129	91
20	128	127	104	81	97	73	79	60	71	92	133	92
21	128	125	104	79	100	75	80	63	64	105	140	94
22	133	131	103	81	91	76	81	59	68	97	134	95
23	133	135	103	82	85	76	84	59	75	95	126	96
24	137	137	102	75	84	78	85	61	77	93	124	92
25	138	146	102	81	85	73	85	61	77	96	126	92
26	137	139	102	70	83	69	87	62	82	88	124	94
27	135	140	104	68	75	65	85	66	82	89	132	104
28	134	140	103	67	72	61	85	61	84	95	136	96
29	133	140	102	64	---	69	87	59	80	81	138	104
30	133	120	97	62	---	59	86	55	87	77	122	83
31	126	---	101	62	---	57	---	58	---	85	113	---
MEAN	132	137	103	81	84	63	73	73	69	95	118	84
WTR YR 1979	MEAN	93	MAX	218	MIN	49						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	15.0	11.0	7.0	3.5	8.0	16.0	18.0	20.0	24.0	27.5	27.0
2	18.5	14.5	9.5	10.5	3.0	8.0	16.5	18.5	21.5	23.5	27.0	26.5
3	18.5	13.5	11.0	6.0	4.0	9.0	17.5	18.0	22.0	23.5	27.0	27.5
4	19.0	14.5	13.0	6.0	5.0	10.0	17.0	19.5	23.0	24.0	27.0	26.0
5	20.0	14.0	12.5	5.0	4.0	11.0	17.0	20.0	21.0	23.0	27.0	24.5
6	20.0	12.5	11.0	5.5	3.0	11.5	15.5	20.5	22.0	24.0	26.0	24.5
7	19.0	13.5	10.5	6.0	3.0	11.0	15.0	19.0	22.0	24.5	27.0	24.0
8	17.0	15.5	13.0	8.0	3.0	11.0	15.5	20.0	21.0	25.0	27.5	24.0
9	15.0	14.0	14.0	6.0	3.5	11.0	15.5	20.0	22.0	23.5	28.0	22.5
10	14.0	15.0	11.0	4.0	2.0	11.0	14.0	21.0	22.0	22.5	28.5	22.0
11	14.5	15.0	10.0	5.0	1.5	11.0	14.0	21.0	22.0	23.5	28.0	22.0
12	15.5	15.5	9.0	5.0	1.5	10.0	15.5	21.5	20.0	24.0	27.5	22.0
13	17.0	15.0	8.0	5.0	2.0	10.5	16.5	22.0	20.0	25.0	24.0	22.0
14	18.5	14.5	8.0	5.5	2.0	12.0	16.0	22.0	20.0	26.0	23.0	22.5
15	17.0	15.5	6.0	4.0	3.5	11.0	16.0	21.0	19.0	26.5	24.0	22.0
16	15.0	16.0	6.0	3.5	5.0	10.0	15.0	20.0	20.0	26.0	23.0	21.5
17	14.5	17.0	8.0	3.5	4.5	10.0	15.0	19.5	20.0	26.0	22.0	21.0
18	13.0	18.0	6.0	5.0	3.0	10.0	15.0	18.5	19.5	25.0	22.0	21.0
19	13.0	16.0	7.0	3.0	2.5	10.5	15.0	18.0	21.0	25.0	23.5	21.0
20	13.0	14.5	7.0	4.0	3.0	11.0	15.0	17.0	20.5	24.0	25.0	21.0
21	13.0	13.5	9.0	8.0	4.0	11.5	16.0	17.5	20.0	25.0	25.5	22.0
22	13.5	13.0	7.0	6.5	5.0	11.5	16.0	18.0	20.0	26.0	25.0	22.0
23	15.0	13.5	7.0	5.5	5.5	12.5	17.5	18.0	22.0	25.5	24.5	22.5
24	16.0	13.5	8.0	5.5	7.0	13.0	18.5	19.0	23.0	25.0	25.0	21.0
25	13.5	12.0	8.0	8.0	8.0	14.0	18.5	19.0	22.0	25.0	25.5	20.0
26	14.5	11.0	7.0	5.5	8.5	12.5	19.0	18.0	21.0	25.0	26.5	20.0
27	17.0	10.0	6.0	5.5	7.0	12.0	19.0	17.5	21.0	26.0	26.0	20.0
28	17.0	12.0	5.0	6.0	8.0	12.5	19.0	18.5	21.5	26.5	26.0	20.0
29	17.0	12.0	4.0	5.0	---	12.5	19.0	18.5	22.0	28.0	25.0	21.0
30	15.5	11.0	4.0	4.0	---	13.5	18.0	18.5	23.0	26.5	26.0	21.0
31	15.5	---	5.5	5.0	---	15.0	---	19.5	---	26.0	26.5	---
MEAN	16.0	14.0	8.5	5.5	4.0	11.0	16.5	19.5	21.0	25.0	25.5	22.5
WTR YR 1979	MEAN	16.0	MAX	28.5	MIN	1.5						

NEUSE RIVER BASIN

02089500 NEUSE RIVER AT KINSTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. * FINER THAN .062 MM
OCT					
02...	1545	515	32	44	84
NOV					
13...	1200	875	39	92	87
DEC					
11...	1345	3340	37	334	100
FEB					
12...	1430	2800	14	106	100
MAR					
01...	1300	7940	18	386	100
APR					
04...	1400	7720	12	250	79
MAY					
23...	1135	6920	15	280	87
JUN					
13...	1010	7920	24	513	83
JUL					
05...	1315	1020	37	102	95
AUG					
05...	1215	583	20	31	85
SEP					
10...	1130	8910	22	529	76

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER QUALITY DATA, PERIOD AUGUST TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
AUG									
11...	1300	2400	--	7.3	25.0	7.8	29	.5	470
SEP									
26...	1400	343	--	8.8	--	--	32	4.4	330

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
12...	1340	363	--	8.2	20.0	11.5	21	4.5	170
DEC									
21...	1245	1420	--	7.0	10.0	11.3	21	1.8	440
JAN									
04...	1110	3000	--	6.8	6.0	10.7	26	1.6	1400
FEB									
07...	1345	4210	--	6.5	4.0	11.6	22	1.3	30
MAR									
27...	1630	4980	50	6.5	14.0	8.4	29	1.4	390
APR									
03...	1345	8020	--	6.6	--	6.6	28	2.5	240
MAY									
16...	1430	3710	95	6.8	21.0	--	30	1.4	640
AUG									
16...	1415	359	--	8.5	27.0	10.2	30	6.3	210
SEP									
07...	1430	5650	95	6.4	25.0	4.5	33	1.9	2800

NEUSE RIVER BASIN

181

02090380 CONTENTNEA CREEK NEAR LUCAMA, N. C.

LOCATION.--Lat 35°41'29", long 78°06'29", Wilson County, Hydrologic Unit 03020203, on right bank 250 ft (76 m) upstream from bridge on State Highway 581, 1.0 mi (1.6 km) downstream from Buckhorn Reservoir, 1.0 mi (1.6 km) upstream from Buckhorn Branch, and 6.5 mi (10.4 km) northwest of Lucama.

DRAINAGE AREA.--156 mi² (404 km²).

PERIOD OF RECORD.--September 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 117.43 ft (35.793 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Since September 1976, some regulation at low flow by Buckhorn Reservoir 1 mile (1.6 km) upstream (see page 406).

AVERAGE DISCHARGE.--15 years, 158 ft³/s (4.475 m³/s), 13.75 in/yr (349 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,860 ft³/s (166 m³/s) Oct. 6, 1964, gage height, 16.28 ft (4.962 m); minimum, 0.04 ft³/s (0.001 m³/s) Sept. 9-14, 1976, due to regulation; minimum gage height, 1.07 ft (0.326 m) July 14, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 26	1700	*2660 75.3	*12.78 3.895	May 26	0400	1980 56.1	11.52 3.511
Mar. 26	0900	1220 34.6	9.41 2.868	June 5	0530	2510 71.1	12.54 3.822
May 12	2400	1480 41.9	10.26 3.127	Sept. 6	1030	2050 58.1	11.68 3.560
May 16	0630	1510 42.8	10.35 3.155				

Minimum discharge, 1.0 ft³/s (0.028 m³/s) Aug. 14, gage height, 1.51 ft (0.460 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	8.9	195	51	149	884	156	63	140	63	14	182
2	27	8.1	131	118	123	437	142	52	136	47	8.7	179
3	22	7.8	86	247	118	306	135	46	108	33	7.5	133
4	17	12	77	231	117	251	233	50	1360	30	8.3	73
5	13	14	119	161	112	241	478	172	2380	42	7.2	465
6	14	12	273	130	100	456	568	178	1640	37	5.3	1910
7	11	11	265	120	121	817	501	130	806	31	4.4	1570
8	6.4	40	190	143	126	841	321	94	345	25	6.5	1070
9	3.9	49	152	145	159	810	218	70	211	18	4.4	362
10	3.9	43	112	127	171	748	164	98	130	16	4.4	133
11	4.1	48	90	110	156	688	145	456	91	16	3.2	80
12	4.6	51	77	121	141	605	129	1160	81	16	6.8	59
13	4.5	46	71	311	137	498	126	1270	73	18	2.6	52
14	7.7	38	71	493	133	409	144	956	59	16	3.2	71
15	6.1	33	61	459	136	352	150	1240	53	17	3.9	62
16	3.7	28	59	359	147	315	117	1430	61	13	7.0	51
17	9.7	30	76	249	165	276	97	911	183	11	14	43
18	30	33	56	181	169	235	85	427	260	9.6	50	39
19	34	32	58	135	163	194	79	277	206	14	70	37
20	27	28	53	132	153	176	73	284	127	62	50	32
21	19	25	59	391	197	158	67	262	84	66	30	31
22	15	23	53	771	347	142	68	202	72	43	20	37
23	12	24	52	856	588	127	65	160	67	32	16	32
24	9.9	32	62	806	867	373	58	156	77	30	12	26
25	7.7	28	91	542	1590	922	52	933	109	35	10	26
26	8.3	23	98	343	2490	1160	75	1770	85	31	9.0	27
27	7.6	31	86	242	2360	756	120	910	66	27	8.0	27
28	7.3	49	70	230	1650	344	123	433	51	23	10	27
29	7.4	65	64	187	---	256	100	226	42	22	7.0	37
30	7.0	165	57	150	---	200	78	160	38	19	9.0	70
31	9.5	---	52	147	---	172	---	135	---	17	40	---
TOTAL	376.3	1037.8	3016	8688	12885	14249	4867	14711	9141	879.6	452.4	6943
MEAN	12.1	34.6	97.3	280	460	460	162	475	305	28.4	14.6	231
MAX	34	165	273	856	2490	1160	568	1770	2380	66	70	1910
MIN	3.7	7.8	52	51	100	127	52	46	38	9.6	2.6	26
CFSM	.08	.22	.62	1.80	2.95	2.95	1.04	3.05	1.96	.18	.09	1.48
IN.	.09	.25	.72	2.07	3.07	3.40	1.16	3.51	2.18	.21	.11	1.66
CAL YR 1978	TOTAL	66728.2	MEAN 183	MAX 3770	MIN 3.4	CFSM 1.17	IN 15.91					
WTR YR 1979	TOTAL	77246.1	MEAN 212	MAX 2490	MIN 2.6	CFSM 1.36	IN 18.42					

NEUSE RIVER BASIN

183

02090512 HOMINY SWAMP AT PHILLIPS ST. AT WILSON, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	.09	40	1.2	3.4	10	4.0	.47	9.0	12	.14	38
2	1.8	.07	20	73	2.8	8.5	3.6	.30	2.3	.40	.09	31
3	.14	.07	10	19	2.6	7.3	3.2	.25	4.4	.35	1.2	3.4
4	.05	3.3	4.0	6.3	2.6	6.4	30	.30	276	.32	.53	1.2
5	.05	.47	80	4.5	2.4	7.0	12	65	27	.29	.09	322
6	.10	.10	12	5.4	2.0	184	9.0	5.9	10	.25	.11	274
7	.07	.07	5.4	11	12	50	7.0	3.0	6.3	.23	.09	17
8	.06	40	3.8	19	7.2	33	6.0	1.7	3.9	.21	.11	6.2
9	.11	20	6.9	7.5	7.9	24	4.0	1.1	2.6	.21	.07	3.1
10	.13	8.0	3.1	4.4	5.5	13	3.2	23	1.9	.22	.08	2.0
11	.14	50	2.2	3.8	4.4	46	2.5	37	17	.20	.10	1.4
12	.18	20	1.9	41	4.2	16	2.3	42	3.2	.19	.74	1.4
13	.19	8.0	1.5	58	4.7	10	12	45	1.5	.18	.14	2.7
14	.15	3.0	1.5	20	4.0	14	4.7	136	1.0	.15	.08	4.8
15	.07	1.8	1.6	9.5	4.0	5.9	2.8	41	1.0	2.5	.26	1.8
16	.09	1.2	2.3	7.0	4.0	6.6	1.4	12	13	1.8	.61	.62
17	.13	1.0	2.8	7.8	3.0	5.7	1.4	5.7	6.0	.25	.14	.62
18	.15	1.2	1.2	5.0	2.0	5.4	1.2	26	1.9	.22	.07	.52
19	.24	1.0	1.4	4.0	7.5	4.8	1.2	30	.98	.25	.07	.38
20	.12	.40	1.3	12	11	4.2	1.1	11	.64	.27	.13	.38
21	.09	.80	3.5	87	23	3.7	1.0	5.8	1.1	.69	11	1.8
22	.07	.78	1.5	17	32	3.3	.88	6.1	1.3	1.2	26	.52
23	.08	.80	1.1	9.0	40	3.4	.81	4.6	.45	15	1.0	.30
24	.12	1.2	23	17	56	300	.86	38	50	2.8	.31	.90
25	.15	.90	10	8.9	103	60	.68	30	18	.39	.31	1.3
26	.17	.84	3.3	6.3	95	20	18	8.7	3.4	.26	.15	.30
27	.19	.80	2.5	5.1	24	10	3.5	4.9	1.9	.95	1.2	.30
28	.22	2.0	1.8	7.3	13	8.0	1.2	4.5	1.3	.26	.26	.25
29	.16	1.0	1.3	4.5	---	6.0	.82	3.9	1.1	.14	.38	11
30	.17	90	1.1	3.7	---	5.0	.75	2.5	.95	.10	.40	26
31	.70	---	1.1	4.5	---	4.4	---	6.5	---	.12	40	---
TOTAL	66.11	259.39	258.3	488.1	484.2	888.6	141.70	605.22	469.12	42.40	85.91	755.19
MEAN	2.13	8.65	8.33	15.7	17.3	28.7	4.72	14.5	15.6	1.37	2.77	25.2
MAX	60	90	80	87	103	300	30	136	276	15	40	322
MIN	.05	.07	1.1	1.2	2.0	3.3	.68	.25	.45	.10	.07	.25
CFS 1	.26	1.06	1.02	1.92	2.11	3.50	.58	2.38	1.90	.17	.34	3.07
IN.	.30	1.18	1.17	2.21	2.20	4.03	.64	2.75	2.13	.19	.39	3.43
WTR YR 1979	TOTAL	4544.24	MEAN	12.4	MAX	322	IN	.05	CFSM	1.51	IN	20.61

NEUSE RIVER BASIN

02090512 HOMINY SWAMP AT PHILLIPS STREET AT WILSON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT				
06...	1205	.08	11	.00
NOV				
06...	0858	.07	18	.00
DEC				
05...	1009	123	184	61
05...	1108	153	171	71
05...	1303	169	166	76
05...	1402	157	138	58
06...	1302	.15	37	1.5
FEB				
01...	1117	3.9	9	.09
26...	0940	91	205	50
MAR				
05...	0940	6.0	15	.24
15...	1230	8.7	12	.28
APR				
25...	1124	.87	16	.04
MAY				
25...	1448	22	59	3.5
JUN				
04...	0927	601	779	1260
04...	1021	523	471	665
04...	1222	349	294	277
04...	1339	280	249	188
04...	1444	207	221	124
04...	1515	174	230	108
04...	1610	143	241	93
JUL				
12...	1001	.21	14	.01
AUG				
23...	1040	.15	10	.00
SEP				
05...	1512	288	216	168
06...	1505	74	72	14

NEUSE RIVER BASIN

185

02090625 TURNER SWAMP NEAR EUREKA, N. C.

LOCATION.--Lat 35°34'10", long 77°52'40", Wayne County, Hydrologic Unit 03020203, on right bank at downstream side of bridge on Secondary Road 1505, 2.0 mi (3.2 km) north of Eureka, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--2.2 mi² (5.7 km²), approximately.

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 90 ft (27 m), by barometer.

REMARKS.--Records good.

AVERAGE DISCHARGE.--11 years, 2.48 ft³/s (0.0702 m³/s), 15.31 in/yr (389 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 652 ft³/s (18.5 m³/s) Aug. 5, 1974, gage height, 5.78 ft (1.762 m); minimum, 0.24 ft³/s (0.007 m³/s) July 21, 22, 1976; minimum gage height, 0.84 ft (0.256 m), Aug. 24, 28, Sept. 1, 8, 9, 13, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 29	2200	57 1.61	3.04 0.927	May 24	2145	52 1.47	2.96 0.902
Mar. 6	1045	104 2.95	3.58 1.091	June 4	0545	122 3.46	3.66 1.116
Mar. 24	0815	66 1.87	3.16 0.963	Sept. 5	2330	80 2.27	3.33 1.015
May 11	2145	*167 4.73	*4.05 1.234				

Minimum discharge, 0.32 ft³/s (0.009 m³/s), Aug. 20, gage height, 0.88 ft (0.268 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	.51	3.0	1.4	2.3	4.5	2.6	1.1	1.5	.89	.55	.68
2	.85	.51	2.0	18	2.0	3.9	2.4	1.0	1.3	.77	.58	1.8
3	.62	.50	1.6	8.3	2.0	3.4	3.1	.98	9.6	.74	.63	1.0
4	.58	.89	1.5	4.2	2.0	3.2	7.4	1.3	38	.74	.63	.71
5	.56	.81	9.6	3.3	1.9	3.4	5.3	3.2	5.6	.80	.54	37
6	.53	.61	6.7	3.0	1.7	55	3.6	1.5	2.9	.71	.51	22
7	.49	.58	3.3	3.4	2.4	16	2.8	1.1	1.8	.72	.50	2.0
8	.50	5.2	2.6	6.3	3.1	11	2.6	1.0	1.3	.70	.47	1.2
9	.50	1.1	2.5	3.8	3.1	11	2.5	.96	1.1	.69	.45	.56
10	.51	1.2	2.1	3.0	2.4	6.8	2.2	2.7	1.0	.75	.45	.52
11	.50	4.2	1.7	2.6	2.2	9.9	2.0	26	12	.72	.46	.57
12	.51	1.1	1.7	6.1	2.3	6.6	2.0	22	4.8	.66	.51	.56
13	.52	.88	1.6	12	2.5	5.1	3.7	4.4	2.0	.67	.49	.75
14	.52	.81	1.5	6.6	2.2	4.9	3.1	4.7	1.3	.65	.47	1.2
15	.47	.80	1.4	4.4	2.2	4.4	2.2	6.0	1.1	.84	.46	.95
16	.50	.76	1.4	3.6	2.1	3.7	1.9	3.2	2.7	.76	.45	.79
17	.49	.74	1.7	3.2	1.7	3.4	1.7	2.1	2.9	.67	.45	.62
18	.50	.78	1.4	3.0	1.7	3.2	1.6	2.4	1.8	.70	.44	.56
19	.49	.73	1.4	2.5	2.2	3.0	1.5	4.4	1.3	.80	.43	.54
20	.46	.71	1.4	3.2	2.4	2.8	1.4	3.7	1.1	.90	.42	.53
21	.47	.73	1.5	19	4.4	2.6	1.4	2.6	1.1	.84	.48	.64
22	.48	.73	1.3	6.4	7.2	2.4	1.3	2.4	1.1	1.3	.79	.64
23	.47	.80	1.2	4.2	6.2	2.4	1.2	2.3	.97	1.5	.55	.66
24	.44	.93	2.7	4.7	12	27	1.2	14	1.0	1.1	.52	.70
25	.47	.78	2.5	3.7	15	7.7	1.2	13	1.3	.78	.51	.70
26	.48	.72	1.8	3.0	22	5.1	3.9	4.2	.98	.69	.46	.71
27	.46	2.2	1.5	2.8	7.5	4.2	2.1	2.6	.90	.65	.44	.65
28	.47	2.0	1.4	3.3	5.3	3.6	1.5	2.0	.87	.60	.48	.62
29	.49	13	1.3	2.6	---	3.3	1.3	1.7	.82	.58	4.5	1.3
30	.47	13	1.3	2.3	---	3.0	1.2	1.5	.80	.62	1.2	4.1
31	.51	---	1.5	2.4	---	2.7	---	1.5	---	.60	.59	---
TOTAL	17.61	58.31	68.1	156.3	124.0	229.2	71.9	149.54	104.94	24.14	20.41	85.26
MEAN	.57	1.94	2.20	5.04	4.43	7.39	2.40	4.82	3.50	.78	.66	2.84
MAX	2.3	13	9.6	19	22	55	7.4	26	38	1.5	4.5	37
MIN	.44	.50	1.2	1.4	1.7	2.4	1.2	.96	.80	.58	.42	.52
CFSM	.26	.88	1.00	2.29	2.01	3.36	1.09	2.19	1.59	.36	.30	1.29
IN.	.30	.99	1.15	2.64	2.10	3.87	1.22	2.53	1.77	.41	.34	1.44
CAL YR 1978	TOTAL	1230.38	MEAN	3.37	MAX	70	MIN	.44	CFSM	1.53	IN	20.80
WTR YR 1979	TOTAL	1109.71	MEAN	3.04	MAX	55	MIN	.42	CFSM	1.38	IN	18.76

NEUSE RIVER BASIN

02091000 NAHUNTA SWAMP NEAR SHINE, N. C.

LOCATION.--Lat 35°29'20", long 77°48'22", Greene County, Hydrologic Unit 03020203, on right bank 10 ft (3 m) downstream from bridge on Secondary Road 1058, 2 mi (3.2 km) upstream from Appletree Swamp, 3.5 mi (5.6 km) north of Shine, and 8 mi (12.9 km) northwest of Snow Hill.

DRAINAGE AREA.--77.6 mi² (201 km²).

PERIOD OF RECORD.--April 1954 to current year. Monthly discharges only for some periods, published in WSP 1723.

GAGE.--Water-stage recorder. Datum of gage is 50.74 ft (15.466 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 1, 1955, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of no gage-height record, Sept. 3-7, which are poor. Suspended-sediment records for the current year are published on page 499 of this report.

AVERAGE DISCHARGE.--25 years, 88.9 ft³/s (2.518 m³/s), 15.56 in/yr (395 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,470 ft³/s (155 m³/s) Oct. 6, 1964, gage height, 14.14 ft (4.310 m); minimum, 1.0 ft³/s (0.028 m³/s) Oct. 7, 8, 1954, gage height, 0.80 ft (0.244 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 580 ft³/s (16.4 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 26	0700	618 17.5	6.72 2.048	May 25	0200	840 23.8	7.68 2.341
Mar. 7	1700	952 27.0	8.10 2.469	Sept. 6	Unknown	*1620 45.9	*10.04 3.060

Minimum discharge, 6.4 ft³/s (0.18 m³/s) Aug. 21, gage height, 1.24 ft (0.378 m).

DISCHARGE, IN CUBIC FEET PER SECOND, AFTER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	11	14.6	61	96	208	86	44	61	26	13	8.8
2	5.3	12	9.9	222	87	175	80	39	51	21	12	9.4
3	2.0	12	6.0	309	83	151	85	36	66	18	11	12
4	1.5	17	3.5	197	82	136	222	35	249	16	20	50
5	1.4	28	20.0	138	77	134	211	48	131	19	15	400
6	1.3	17	15.0	117	71	536	142	54	74	16	11	1400
7	11	14	10.0	103	83	393	108	39	55	15	10	500
8	1.6	5.8	8.0	185	102	689	93	35	44	15	9.5	165
9	9.7	7.0	7.0	145	114	498	90	32	38	14	9.0	97
10	9.4	31	5.0	107	100	334	86	47	34	14	9.0	69
11	9.3	92	5.5	93	91	302	73	69	117	15	8.4	51
12	9.3	63	5.0	111	86	277	68	53	217	14	8.6	41
13	9.0	38	4.7	331	92	207	103	42	76	14	9.0	36
14	9.6	30	4.4	265	85	151	150	44	53	14	8.1	44
15	9.1	26	4.0	182	82	130	97	101	43	32	7.7	39
16	5.4	24	4.4	140	80	147	76	63	46	24	7.5	30
17	8.4	23	5.0	123	72	130	66	44	96	19	7.2	27
18	8.7	23	4.5	112	66	122	60	37	68	15	7.1	25
19	8.8	22	5.0	99	76	114	57	86	47	22	6.9	24
20	8.7	20	5.0	102	96	107	53	67	38	64	6.7	22
21	4.2	19	5.5	268	127	99	50	52	32	51	7.0	23
22	4.2	19	5.0	296	213	92	48	51	34	38	32	26
23	4.4	19	4.6	190	210	89	45	70	30	36	14	28
24	8.5	26	6.0	173	330	325	43	217	26	42	9.9	25
25	8.4	24	10.2	163	385	534	41	614	33	50	12	25
26	9.0	20	7.2	132	580	344	34	190	29	25	11	25
27	9.2	23	6.0	116	498	175	88	108	24	22	11	24
28	9.0	70	5.7	117	300	136	61	79	23	18	11	22
29	9.3	60	6.4	107	---	116	60	67	21	15	10	65
30	9.6	346	6.2	96	---	104	50	58	20	14	9.5	182
31	9.8	---	5.1	93	---	94	---	53	---	14	9.9	---
TOTAL	382.0	1257	2174	4953	4364	7630	2576	2578	1876	732	334.0	3495.2
MEAN	12.3	41.9	70.1	166	156	246	85.9	83.2	62.5	23.6	10.8	117
MAX	53	346	200	369	580	893	222	614	249	64	32	1400
MIN	8.2	11	4.0	61	66	89	41	32	20	14	6.7	8.8
CFSM	.16	.54	.90	2.06	2.01	3.17	1.11	1.07	.81	.30	.14	1.51
IN.	.18	.60	1.04	2.37	2.09	3.66	1.23	1.24	.90	.35	.16	1.68
CAL YR 1978 TOTAL	38076.6			MEAN 104	MAX 1060	MIN 8.2	CFSM 1.34	IN 18.25				
WTR YR 1979 TOTAL	32351.2			MEAN 88.6	MAX 1400	MIN 6.7	CFSM 1.14	IN 15.51				

187

LOCATION.--Lat 35°25'38", long 77°35'09", Greene County, Hydrologic Unit 03020203, on right bank at Hookerton, 0.3 mi (0.5 km) upstream from bridge on State Highway 123, and 2.5 mi (4.0 km) upstream from Wheat Swamp Creek.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Datum of gage is 14.85 ft (4.526 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Nov. 26, 1934, nonrecording gage at site 200 ft (61 m) downstream at same datum.

AVERAGE DISCHARGE.--50 years (water years 1929-79), 772 ft³/s (21.86 m³/s), 14.38 in/yr (365 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s (487 m³/s) Oct. 7, 1964; maximum gage height, 22.11 ft (6.739 m) Oct. 8, 1964; minimum discharge, 15 ft³/s (0.42 m³/s) Oct. 28, 1933, gage height, 1.22 ft (0.372 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1928 reached a stage of 23.3 ft (7.10 m), from floodmark; high water of autumn 1924 was about 0.1 ft (0.03 m) lower, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,650 ft³/s (160 m³/s) Sept. 10, gage height, 14.99 ft (4.569 m); minimum, 49 ft³/s (1.39 m³/s) Oct. 24, 25, gage height, 2.88 ft (0.878 m).

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	54	705	403	1510	3240	2100	515	1920	513	143	103
2	98	54	779	592	1230	3470	1820	450	1730	408	132	114
3	135	54	833	968	1030	4460	1460	386	1430	342	125	170
4	113	59	835	1050	900	4420	1220	335	1920	284	124	284
5	98	66	800	1170	800	3870	1180	304	1930	286	119	693
6	86	80	795	1270	724	3480	1210	307	1950	246	115	2420
7	76	83	841	1370	680	3260	1230	398	2290	204	107	3540
8	72	86	900	1410	672	3120	1250	477	3060	176	101	3930
9	71	111	949	1370	691	3160	1340	520	3780	163	96	4720
10	69	173	983	1270	723	3360	1400	499	3890	156	91	5540
11	67	218	988	1180	750	3620	1370	478	3580	152	88	5330
12	65	252	946	1130	767	3640	1260	429	3310	145	90	4280
13	62	344	799	1190	777	3470	1130	881	2730	139	90	3250
14	61	349	658	1300	772	3200	1100	1070	2180	132	85	2550
15	59	288	539	1420	756	2950	1050	1230	1530	147	81	1890
16	58	234	480	1510	734	2700	967	1450	1130	221	78	1230
17	56	201	436	1620	708	2450	882	1800	885	168	75	832
18	54	187	405	1730	680	2200	791	2230	805	156	73	595
19	53	172	391	1780	662	1970	693	2610	726	186	71	461
20	52	157	390	1750	661	1720	593	2730	672	171	69	390
21	51	151	390	1710	693	1460	513	2640	643	285	70	348
22	50	150	390	1620	782	1240	460	2440	606	371	121	345
23	50	148	396	1540	888	1080	422	2220	537	468	125	385
24	49	147	397	1590	1120	1010	392	2070	477	426	128	357
25	49	145	444	1730	1510	1050	368	1910	588	464	132	331
26	51	142	496	1890	2080	1260	372	1910	570	513	107	322
27	56	142	536	2020	2470	1690	451	2000	761	447	90	319
28	57	160	544	2080	2830	2070	514	1930	829	318	89	310
29	57	212	531	2080	---	2300	546	1860	811	230	115	348
30	56	482	498	1990	---	2370	552	1860	545	176	93	632
31	55	---	443	1800	---	2290	---	1910	---	155	88	---
TOTAL	2051	5101	19517	45533	28600	81980	28646	42049	47815	8248	3111	46019
MEAN	66.2	170	630	1469	1021	2645	955	1356	1594	266	100	1534
MAX	135	482	988	2080	2830	4460	2100	2730	3890	513	143	5540
MIN	49	54	390	403	661	1010	368	304	477	132	69	103
CFSM	.09	.23	.86	2.02	1.40	3.63	1.31	1.86	2.19	.37	.14	2.10
IN.	.10	.26	1.00	2.32	1.46	4.18	1.46	2.15	2.44			

CAL YR 1978	TOTAL	327873	MEAN	898	MAX	5030	MIN	49	CFSM	1.23	IN	16.73
WTR YR 1979	TOTAL	358670	MEAN	983	MAX	5540	MIN	49	CFSM	1.35	IN	18.30

NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1969-72, March to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March to September 1979.

WATER TEMPERATURES: October 1949 to September 1950, March to September 1979.

REMARKS.--Miscellaneous chemical data published for water years 1945, 1947-49, 1955-67.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 29.0°C June 27, 28, 1950; minimum daily, 7.5°C Dec. 6-10, 1949.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily observed, 155 micromhos Aug. 27; minimum daily observed, 41 micromhos June 11.

WATER TEMPERATURES: Maximum daily, 27.0°C Aug. 3, 9-12; minimum daily observed, 13.0°C Mar. 26, 27, 28.

WATER QUALITY DATA, PERIOD MARCH TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR 26...	1100	1230	68	6.1	13.0	6.1	7.8	4900	3700	15	5	3.7
APR 18...	1130	790	78	5.8	16.0	10	7.3	92	K56	18	1	4.5
MAY 21...	1055	2660	50	6.3	18.5	20	6.2	310	420	14	3	3.4
JUN 13...	1230	2720	50	5.9	20.5	35	5.0	4200	2000	14	6	3.5
JUL 09...	1045	141	80	6.2	22.0	15	6.5	180	80	20	9	5.1
AUG 01...	1530	148	95	5.6	27.0	10	7.4	520	K110	21	8	5.3
SEP 10...	0945	5570	48	5.8	23.0	15	4.6	K280	360	11	6	2.6

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAR 26...	1.4	4.4	34	.5	2.5	12	0	10	15	7.3	7.4	.1
APR 18...	1.6	6.1	39	.6	2.2	20	0	16	51	6.6	8.9	.1
MAY 21...	1.2	3.8	34	.5	2.2	13	0	11	10	5.6	5.8	.1
JUN 13...	1.3	3.2	29	.4	2.2	10	0	8	20	5.9	5.1	.1
JUL 09...	1.8	6.9	39	.7	2.6	13	0	11	13	8.2	9.9	.1
AUG 01...	1.8	7.5	40	.7	3.0	15	0	12	60	9.4	9.5	.1
SEP 10...	1.0	2.7	29	.4	3.2	6	0	5	15	7.2	4.4	.1

K Results based on colony count outside the acceptable range (non-ideal colony count).

WATER QUALITY DATA, PERIOD MARCH TO SEPTEMBER 1979

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
MAR 26...	1.8	8.0	.36	--	--	.43	2	0	2	0	0
APR 18...	1.5	6.7	.21	--	.64	.12	--	--	--	--	--
MAY 21...	1.6	7.2	.20	--	.61	--	3	0	3	100	0
JUN 13...	1.6	6.9	.26	--	.80	--	--	--	--	--	--
JUL 09...	2.2	9.7	.28	--	.86	.27	--	--	--	--	--
AUG 01...	.99	4.4	.14	--	.43	.09	1	0	1	<50	<20
SEP 10...	2.1	9.4	.21	--	.64	.13	--	--	--	--	--

[illegible]

NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

WATER QUALITY DATA, PERIOD MARCH TO SEPTEMBER 1979

	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED ERABLE (UG/L AS MN)
DATE											
MAR 26...	2	1	2800	2500	270	4	1	3	50	10	40
APR 18...	--	--	--	--	--	--	--	--	--	--	--
MAY 21...	0	4	1600	1000	570	8	0	10	30	0	30
JUN 13...	--	--	--	--	--	--	--	--	--	--	--
JUL 09...	--	--	--	--	--	--	--	--	--	--	--
AUG 01...	2	2	1600	1500	80	5	2	3	90	30	60
SEP 10...	--	--	--	--	--	--	--	--	--	--	--
	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDED RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)
DATE											
MAR 26...	.5	.0	.5	0	0	0	0	0	0	50	50
APR 18...	--	--	--	--	--	--	--	--	--	--	--
MAY 21...	<.5	.0	<.5	0	0	0	0	0	0	20	20
JUN 13...	--	--	--	--	--	--	--	--	--	--	--
JUL 09...	--	--	--	--	--	--	--	--	--	--	--
AUG 01...	<.5	.0	<.5	0	0	0	0	0	0	10	4
SEP 10...	--	--	--	--	--	--	--	--	--	--	--
	ZINC, DIS- SOLVED ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO- SURE (DAYS)	
DATE											
MAR 26...	0	--	6.5	1.2	--	--	--	--	--	--	
APR 18...	--	10	--	--	--	--	--	--	--	--	
MAY 21...	0	--	14	1.1	1.50	1.18	2909	.110	.000	53	
JUN 13...	--	16	--	--	--	--	--	--	--	--	
JUL 09...	--	13	--	--	--	--	--	--	--	--	
AUG 01...	6	--	4.7	.1	--	--	--	--	--	--	
SEP 10...	--	12	--	--	--	--	--	--	--	--	

NEUSE RIVER BASIN

191

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, MARCH TO JULY 1979

DATE TIME	MAR 25,79 1100	MAY 21,79 1055	JUN 13,79 1230	JUL 9,79 1045				
TOTAL CELLS/ML	970	250	610	39000				
DIVERSITY: DIVISION	1.2	0.8	0.9	1.2				
..CLASS	1.2	0.8	0.9	1.2				
...ORDER	2.1	1.5	1.3	1.3				
...FAMILY	2.5	1.5	1.3	1.9				
....GENUS	2.5	2.0	1.4	2.5				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....OOCYSTACEAE								
.....GLOEOACTINIUM	--	-	--	-	--	-	300	1
....COELASTRACEAE								
.....COELASTRUM	--	-	--	-	--	-	1200	3
....MICRACTINIACEAE								
.....MICRACTINIUM	--	-	--	-	--	-	900	2
....OOCYSTACEAE								
.....ANKISTRODESMUS	40	4	--	-	--	-	1200	3
....CHODATELLA	--	-	--	-	--	-	*	0
....DICTYOSPHAERIUM	--	-	--	-	--	-	1500	4
....OOCYSTIS	--	-	--	-	--	-	300	1
....SELENASTRUM	--	-	--	-	--	-	380	1
....TETRAEDRON	--	-	--	-	--	-	*	0
....SCENEDESMACEAE								
.....CRUCIGENIA	--	-	52#	21	52	9	300	1
....SCENEDESMUS	160#	17	100#	42	26	4	6900#	18
....TETRASTRUM	--	-	--	-	--	-	900	2
....TETRASPORALES								
....COCCOMYXACEAE								
....ELAKATOTHRIX	--	-	--	-	--	-	*	0
....VOLVOCALES								
....CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	400#	42	52#	21	--	-	230	1
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
....COSCINODISCACEAE								
.....CYCLOTELLA	120	13	--	-	13	2	600	2
....MELOSIRA	--	-	--	-	--	-	1100	3
...PENNALES								
....FRAGILARIACEAE								
.....ASTERIONELLA	--	-	13	5	--	-	--	-
....SYNEDRA	40	4	--	-	--	-	--	-
....NAVICULACEAE								
.....NAVICULA	81	8	--	-	--	-	--	-
....NITZSCHACEAE								
.....NITZSCHIA	40	4	--	-	--	-	*	0
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOMONADACEAE								
.....CRYPTOMONAS	--	-	26	11	26	4	--	-

NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

PHYTOPLANKTON ANALYSES, MARCH TO JULY 1979

DATE TIME	MAR 26, 79 1100		MAY 21, 79 1055		JUN 13, 79 1230		JUL 9, 79 1045	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
.....AGMENELLUM	--	-	--	-	--	-	2000	5
.....ANACYSTIS	81	8	--	-	--	-	21000#	53
....COCCOCHLORIS	--	-	--	-	39	6	--	-
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	450#	74	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
.....EUGLENA	--	-	--	-	--	-	*	0
.....PHACUS	--	-	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

NEUSE RIVER BASIN

193

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), PERIOD MARCH TO SEPTEMBER 1979

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	60	77	54	70	90	120
2						---	64	75	57	65	100	116
3						---	65	79	63	75	102	113
4						---	73	79	57	79	104	143
5						---	69	82	62	83	107	66
6						---	72	82	59	87	110	53
7						---	68	84	47	95	108	55
8						---	68	81	45	89	112	58
9						---	64	87	42	85	108	56
10						---	64	71	43	83	109	54
11						---	64	72	41	85	107	54
12						---	64	72	46	86	111	53
13						---	68	70	53	88	116	57
14						---	70	61	54	92	114	62
15						---	69	63	58	95	116	67
16						---	72	62	66	86	116	74
17						---	75	55	67	88	121	83
18						---	75	54	72	92	122	90
19						---	73	51	73	85	128	93
20						---	75	54	76	96	129	93
21						---	77	54	84	86	128	95
22						---	80	55	70	94	118	94
23						---	80	58	68	86	119	93
24						---	78	61	70	77	120	93
25						---	81	63	70	78	128	91
26						62	83	63	72	83	138	94
27						72	85	57	76	70	155	99
28						58	79	60	64	80	135	101
29						56	79	61	62	76	119	100
30						56	83	57	66	77	113	95
31						54	---	51	---	81	124	---
MEAN						69	73	66	61	84	117	84
WTR YR 1979	MEAN				155	MIN	41					

TEMPERATURE (DEG. C) OF WATER, PERIOD MARCH TO SEPTEMBER 1979

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	17.0	17.0	20.0	22.0	25.5	25.0
2						---	17.5	17.0	21.0	22.0	26.5	25.0
3						---	18.5	17.5	21.0	23.0	27.0	24.0
4						---	18.0	19.0	21.0	23.0	26.0	25.0
5						---	17.0	19.0	20.5	23.0	26.0	24.0
6						---	15.0	18.0	20.5	23.0	26.0	24.0
7						---	15.0	18.0	20.0	22.0	26.0	24.0
8						---	15.0	19.0	20.5	21.0	26.0	24.0
9						---	15.5	19.0	21.0	22.0	27.0	23.0
10						---	15.0	20.0	21.0	22.0	27.0	23.0
11						---	15.0	20.0	22.0	23.0	27.0	22.0
12						---	15.5	20.5	21.0	23.0	27.0	23.0
13						---	16.5	20.5	20.0	24.0	24.0	23.0
14						---	16.0	20.0	20.0	25.0	23.5	23.0
15						---	16.5	20.0	19.5	25.0	24.0	23.0
16						---	15.5	19.5	20.0	24.0	23.0	22.0
17						---	15.0	19.5	20.0	24.0	22.5	22.0
18						---	14.5	19.0	19.5	25.0	22.0	22.0
19						---	14.5	18.0	20.0	24.0	23.0	21.0
20						---	14.0	18.0	21.0	24.0	24.0	22.0
21						---	15.0	18.0	21.0	24.0	24.0	23.0
22						---	15.0	18.0	21.0	24.0	24.0	22.0
23						---	17.0	18.5	20.5	24.0	24.0	22.0
24						---	18.0	20.0	22.5	24.0	24.0	22.0
25						---	18.0	20.0	21.0	24.0	24.0	20.0
26						13.0	18.5	19.0	21.0	25.0	25.0	20.0
27						13.0	18.5	18.0	21.0	25.0	25.0	20.0
28						13.0	18.5	18.0	20.0	25.0	25.0	21.0
29						14.0	18.0	19.0	20.5	26.0	24.0	21.0
30						15.0	17.0	19.0	21.0	25.0	25.0	21.0
31						16.0	---	20.0	---	25.0	25.0	---
MEAN						14.0	16.5	19.0	20.5	23.5	25.0	22.5
WTR YR 1979	MEAN	21.0		MAX	27.0	MIN	13.0					

NEUSE RIVER BASIN

02091500 CONTENTNEA CREEK AT HOOKERTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
30...	1450	56	9	1.4	--
JAN					
29...	1240	2050	16	89	--
FEB					
26...	1040	2100	26	147	--
27...	1120	2460	36	239	--
28...	1100	2820	57	434	--
MAR					
01...	0920	3180	31	266	--
02...	1310	3910	41	433	--
14...	1325	3190	11	95	--
26...	1100	1230	67	223	--
APR					
18...	1130	790	15	32	--
MAY					
21...	1055	2660	14	101	--
JUN					
13...	1230	2720	28	206	94
JUL					
09...	1045	181	14	6.8	91
AUG					
01...	1530	148	19	7.6	92
SEP					
10...	0945	5570	59	887	--

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
23...	1320	50	--	6.8	17.0	8.9	12	1.3	150
DEC									
21...	1345	390	--	6.8	10.0	9.7	20	1.2	200
JAN									
15...	1250	1420	--	6.2	5.0	10.7	26	1.7	420
FEB									
07...	1200	678	--	6.5	--	--	29	1.2	70
MAR									
01...	1335	3250	--	6.0	9.0	9.0	32	1.1	20
APR									
04...	1315	1210	--	6.3	17.0	6.3	32	2.3	4500
MAY									
07...	1330	404	55	6.6	19.0	7.0	28	1.6	130
JUN									
15...	1010	1720	--	6.4	20.0	5.6	41	1.9	200
JUL									
19...	1410	212	--	6.6	23.0	7.8	34	1.2	2900
AUG									
07...	1222	108	125	7.0	--	7.5	24	2.4	<10
SEP									
06...	1056	2380	140	6.2	24.0	4.7	49	3.4	11000

NEUSE RIVER BASIN

195

02091700 LITTLE CONTENTNEA CREEK NEAR FARMVILLE, N. C.

LOCATION.--Lat 35°32'08", long 77°30'41", Pitt County, Hydrologic Unit 03020203, near center of span on downstream side of bridge on U.S. Highway 264, 1.5 mi (2.4 km) upstream from Middle Swamp, and 5.5 mi (8.8 km) southeast of Farmville.

DRAINAGE AREA.--93.3 mi² (241.6 km²).

PERIOD OF RECORD.--Occasional low-flow measurements water years 1952-54, 1956. October 1956 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 30 ft (9 m), from topographic map. Oct. 1, 1956, to Aug. 19, 1958, and June 23, 1964, to Aug. 24, 1965, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 196 of this report.

AVERAGE DISCHARGE.--23 years, 120 ft³/s (3.398 m³/s), 17.47 in/yr (444 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,170 ft³/s (146 m³/s) Oct. 6, 1964 gage height, 19.65 ft (5.989 m) from floodmark, from rating curve extended above 1,500 ft³/s (42.5 m³/s); no flow part of each day July 30, 31, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August and September 1955 reached stages of 18.9 ft (5.76 m) and 18.5 ft (5.64 m), respectively.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 660 ft³/s (18.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 26	2200	1230 34.8	14.42 4.395	June 6	1700	961 27.2	13.45 4.100
Mar. 7	1030	912 25.8	13.30 4.054	Sept. 6	1700	*3390 96.0	*17.42 5.310

Minimum discharge, 0.01 ft³/s (<0.001 m³/s) Oct. 1, 27-31, Nov. 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.01	80	23	93	759	68	28	98	125	9.8	268
2	4.4	.01	73	108	42	499	50	23	123	124	8.0	92
3	2.7	.01	54	547	71	345	60	20	100	34	7.4	41
4	1.5	.02	39	527	65	261	210	19	625	20	8.4	30
5	.97	.02	34	414	50	213	498	20	945	24	6.7	468
6	.69	.02	85	257	53	429	597	26	917	17	12	2690
7	.47	.04	110	164	57	884	373	27	786	12	8.7	2970
8	.37	.71	100	147	79	870	212	23	388	9.4	6.5	1760
9	.28	4.4	74	183	101	842	139	19	160	3.6	5.4	874
10	.24	3.5	59	198	119	644	111	17	40	8.9	5.0	389
11	.22	3.3	50	158	107	480	96	36	100	9.0	7.5	161
12	.23	5.3	42	127	89	439	79	131	300	8.2	43	93
13	.20	4.7	36	293	36	356	40	135	320	7.2	18	66
14	.20	4.2	31	474	82	309	199	128	160	7.0	8.8	66
15	.17	3.9	27	480	75	661	201	188	90	7.9	5.9	67
16	.15	3.6	25	398	70	220	129	289	60	16	5.4	51
17	.12	3.5	25	258	63	172	85	242	110	12	4.8	37
18	.09	3.9	25	177	53	138	64	122	120	7.8	4.3	32
19	.08	4.2	24	135	60	117	51	93	96	8.3	2.8	27
20	.06	3.7	23	112	73	101	42	130	63	17	2.2	23
21	.05	3.6	23	225	104	99	36	138	40	30	3.8	23
22	.04	3.3	25	444	210	77	32	104	34	26	18	25
23	.03	4.0	23	409	306	68	28	96	27	96	15	28
24	.02	4.6	25	348	448	109	31	176	22	135	8.2	27
25	.02	4.9	50	311	627	262	27	454	167	410	10	37
26	.02	4.6	53	262	1090	365	36	526	354	123	6.6	42
27	.01	5.2	49	203	1240	239	72	562	271	44	4.5	37
28	.01	8.7	39	162	1020	169	67	528	92	25	9.9	32
29	.01	12	31	149	---	115	48	252	45	16	135	82
30	.01	55	27	130	---	91	33	110	28	11	38	255
31	.01	---	24	107	---	78	---	70	---	11	22	---
TOTAL	13.49	155.54	1392	7930	6583	10101	3674	4732	6761	1410.7	452.0	10993
MEAN	.44	5.18	44.9	256	235	326	122	153	225	45.5	14.6	366
MAX	4.4	55	110	547	1240	884	507	562	945	410	135	2970
MIN	.01	.01	23	23	53	68	27	17	22	7.0	2.2	23
CFS-1	.005	.06	.48	2.74	2.52	3.49	1.31	1.64	2.41	.49	.16	3.92
IN.	.01	.06	.55	3.16	2.62	4.03	1.46	1.89	2.70	.56	.18	4.38

CAL YR 1978	TOTAL	45158.82	MEAN 124	MAX 1470	MIN .01	CFSM 1.33	IN 18.01
WTR YR 1979	TOTAL	54197.73	MEAN 148	MAX 2970	MIN .01	CFSM 1.59	IN 21.61

NEUSE RIVER BASIN

02091700 LITTLE CONTENTNEA CREEK NEAR FARMVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
06...	1000	.69	14	.03
NOV				
06...	1033	.02	14	.00
DEC				
10...	0930	27	6	.44
JAN				
06...	1310	3110	64	537
07...	1315	2960	46	368

NEUSE RIVER BASIN

197

02091836 NEUSE RIVER AT STREETS FERRY NEAR VANCEBORO, N. C.
(Radiochemical station)

LOCATION.--Lat 35°12'20", long 77°07'40", Craven County, Hydrologic Unit 03020202, at bridge on Secondary Road 1400 at Streets Ferry, 1.4 mi (2.3 km) above the Gut, and 7 mi (11 km) south of Vanceboro.

DRAINAGE AREA.--4,040 mi² (10,460 km²).

PERIOD OF RECORD.--Water years 1955-66, 1969 to current year.

REMARKS.--Tritium determinations for period April to September 1979 were not available at time of this publication. Salinity station prior to October 1966; chemical analysis and temperature values were determined on integrated samples collected three times daily from September 1954 to September 1957, and top (T) and bottom (B) samples collected once daily from October 1957 to September 1964. Daily records of specific conductance for water years 1954-64 available in files of district office in Raleigh, N. C. Records prior to water year 1958 published as Neuse River near Vanceboro.

WATER QUALITY DATA, PERIOD SEPTEMBER TO NOVEMBER 1976, NOVEMBER 1977 TO MARCH 1979

DATE	TRITIUM IN WATER MOLE- CULES (TU)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU)
SEP , 1976		
01...	42.7	2.0
OCT		
04...	44.0	2.0
NOV		
06...	38.3	1.7
NOV , 1977		
02...	32.9	1.5
DEC		
02...	38.3	1.8
JAN , 1978		
03...	35.3	1.6
FEB		
01...	33.3	1.6
MAR		
02...	43.1	1.7
APR		
01...	37.8	1.5
MAY		
01...	37.3	1.5
JUN , 1978		
03...	39.6	1.6
JUL		
03...	51.3	2.4
AUG		
03...	53.1	2.2
SEP		
02...	42.0	1.8
OCT		
04...	37.8	1.7
NOV		
02...	40.3	1.7
DEC		
02...	34.6	1.4
JAN , 1979		
03...	37.0	1.6
FEB		
02...	29.8	1.2
MAR		
01...	26.7	1.1

NEUSE RIVER BASIN

02091970 CREEPING SWAMP NEAR VANCEBORO, N. C.

LOCATION.--Lat 35°23'30", long 77°13'46", Craven County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on State Highway 43, 1.0 mi (1.6 km) upstream from mouth, and 7.9 mi (12.7 km) northwest of Vanceboro.

DRAINAGE AREA.--27 mi² (70 km²), approximately.

PERIOD OF RECORD.--March 1971 to current year.

GAGE.--Water-stage recorder and concrete control with a parabolic shaped sharp-crested weir. Datum of gage is National Geodetic Vertical Datum of 1929 (Soil Conservation Service benchmark). Prior to Oct. 1, 1972, at datum, 16.60 ft (5.060 m) higher.

REMARKS.--Records good except those for period of no gage-height record, May 3 to June 11, which are poor.

AVERAGE DISCHARGE.--8 years, 39.7 ft³/s (1.124 m³/s), 19.97 in/yr (507 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,810 ft³/s (51.3 m³/s) Oct. 1, 1971, gage height, 24.53 ft (7.477 m) present datum; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 26	1330	910 25.8	23.00 7.010	May 31	Unknown	Unknown	Unknown
May 26	Unknown	Unknown	Unknown	June 12	1200	*774 21.9	*22.73 6.928

No flow Oct. 1 to Nov. 28, Aug. 19 to Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		.00	6.2	11	34	231	18	78	380	27	6.9	.00
2		.00	7.0	21	29	144	16	54	300	22	5.1	.00
3		.00	5.5	61	25	99	17	45	260	14	3.4	.00
4		.00	3.9	54	23	74	58	35	220	9.0	2.1	.00
5		.00	3.2	48	20	60	118	29	190	35	1.3	15
6		.00	3.5	46	18	59	152	25	150	33	.78	145
7		.00	3.5	36	20	71	118	22	120	22	.47	115
8		.00	3.1	31	26	72	79	20	150	12	.26	80
9		.00	2.6	29	28	69	58	19	250	5.6	.12	54
10		.00	2.3	25	27	59	47	18	500	1.5	.06	32
11		.00	2.2	22	27	52	37	50	770	.95	.04	20
12		.00	2.4	24	26	50	31	120	725	.81	.04	13
13		.00	2.5	74	24	44	36	90	497	.58	.07	9.7
14		.00	2.5	177	23	39	88	80	269	.40	.05	10
15		.00	2.3	205	21	40	218	130	164	.64	.03	20
16		.00	2.0	167	20	36	177	180	114	21	.02	21
17		.00	1.9	110	18	31	102	160	104	34	.01	15
18		.00	1.6	76	15	27	64	130	92	18	.01	11
19		.00	1.5	55	22	24	45	150	80	14	.00	8.5
20		.00	1.4	46	36	21	33	200	69	26	.00	6.6
21		.00	1.4	89	49	19	25	250	58	24	.00	5.8
22		.00	1.3	129	58	17	20	260	49	34	.00	6.8
23		.00	1.2	131	65	15	17	220	42	87	.00	11
24		.00	3.9	127	181	20	14	200	37	145	.00	11
25		.00	18	139	430	30	13	300	59	112	.00	9.8
26		.00	19	120	853	34	57	400	52	64	.00	8.8
27		.00	15	97	661	35	165	300	45	39	.00	7.8
28		.00	12	76	383	32	199	230	42	24	.00	6.6
29		.03	13	60	---	28	180	210	38	16	.00	14
30		2.0	13	48	---	24	126	350	30	12	.00	54
31		---	12	40	---	20	---	440	---	8.9	.00	---
TOTAL	.00	2.03	171.0	2374	3162	1576	2328	4795	5856	863.38	20.76	711.40
MEAN	.000	.068	5.52	76.6	113	50.8	77.6	155	195	27.9	.67	23.7
MAX	.00	2.0	19	205	853	231	218	440	770	145	6.9	145
MIN	.00	.003	1.2	11	15	15	13	18	30	.40	.00	.00
CFSM	.000	.003	.20	2.84	4.19	1.88	2.87	5.74	7.22	1.03	.03	.88
IN.	.00	.00	.24	3.27	4.36	2.17	3.21	6.61	8.07	1.19	.03	.98

CAL YR 1978 TOTAL 13758.76 MEAN 37.7 MAX 978 MIN .00 CFSM 1.40 IN 18.96
WTR YR 1979 TOTAL 21859.57 MEAN 59.9 MAX 853 MIN .00 CFSM 2.22 IN 30.12

NEUSE RIVER BASIN

199

02092000 SWIFT CREEK NEAR VANCEBORO, N. C.

LOCATION.--Lat 35°20'42", long 77°11'45", Craven County, Hydrologic Unit 03020202, on left bank at downstream side of bridge on Secondary Road 1478, 2.5 mi (4.0 km) upstream from bridge on State Highway 118, 2.5 mi (4.0 km) downstream from Clayroot Swamp, and 3.5 mi (5.6 km) northwest of Vanceboro.

DRAINAGE AREA.--182 mi² (471 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 2.07 ft (0.631 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Jan. 17, 1951, nonrecording gage and Jan. 17, 1951, to Sept. 30, 1964, water-stage recorder at same site at datum 6.00 ft (1.829 m) higher.

REMARKS.--Records fair. During 1964, the channel was canalized from a point 12.2 mi (19.6 km) upstream to a point 2.5 mi (4.0 km) downstream from the gage. Suspended-sediment records for the current year are published on page 200 of this report.

AVERAGE DISCHARGE.--29 years, 211 ft³/s (5.976 m³/s), 15.74 in/yr (400 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,060 ft³/s (172 m³/s) Sept. 22, 1955, gage height, 19.67 ft (6.000 m), present datum; no flow Aug. 8-29, Oct. 4 to Nov. 9, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1909 reached a stage of 22 ft (6.7 m), present datum, and flood in 1928 reached a stage of 17.7 ft (5.39 m), present datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,180 ft³/s (90.1 m³/s) June 14, gage height 14.76 ft (4.499 m); minimum, 6.7 ft³/s (0.19 m³/s) Oct. 30, minimum gage height, 3.91 ft (1.192 m) Oct. 15-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	9.2	115	72	214	1800	129	578	320	135	108	32
2	11	8.6	96	96	192	1340	120	388	298	122	91	46
3	21	8.1	70	342	176	908	120	266	294	102	76	44
4	17	8.6	54	380	165	691	312	199	992	93	71	36
5	14	9.5	44	317	154	545	554	174	1320	257	69	288
6	13	9.7	50	254	144	512	566	165	1060	218	57	1320
7	11	9.5	70	209	145	636	525	151	656	159	49	1630
8	10	10	65	196	176	676	395	132	385	123	46	1440
9	10	11	54	197	192	672	307	116	250	103	42	913
10	9.3	11	47	134	192	624	269	103	182	89	37	545
11	9.3	11	41	166	181	530	226	100	593	83	33	318
12	9.3	10	37	154	172	468	190	105	2340	74	60	218
13	8.7	9.7	34	351	168	388	232	106	2990	68	72	164
14	8.2	9.7	31	663	162	333	781	108	3140	65	52	168
15	7.7	9.5	28	749	155	314	817	268	2430	94	40	229
16	7.5	9.2	26	654	151	283	784	326	1510	577	34	208
17	7.4	9.0	24	536	139	251	728	262	1060	500	29	180
18	8.1	11	23	428	128	221	590	227	761	347	26	150
19	9.0	9.0	21	329	142	199	418	216	526	350	24	127
20	8.4	9.0	21	266	212	187	269	241	363	350	22	108
21	8.0	9.0	20	440	260	167	199	241	260	314	22	96
22	8.0	9.0	20	689	340	154	161	219	216	499	57	96
23	7.7	9.3	20	676	373	144	136	280	190	990	73	132
24	7.4	9.5	26	630	586	169	119	656	182	1180	50	130
25	7.7	8.9	104	728	970	253	105	790	697	962	38	121
26	7.8	8.6	147	660	1960	247	298	1350	630	860	31	116
27	7.1	8.6	132	550	2300	214	767	1110	434	462	27	106
28	7.0	9.3	113	446	2150	186	795	820	287	290	27	93
29	6.8	10	94	356	---	164	831	582	204	204	36	182
30	7.1	53	78	286	---	150	734	381	156	162	40	839
31	9.3	---	68	242	---	140	---	280	---	131	33	---
TOTAL	295.8	327.5	1773	12246	12299	13566	12477	10940	24726	9963	1472	10075
MEAN	9.54	10.9	57.2	395	439	438	416	353	824	321	47.5	336
MAX	21	53	147	749	2300	1800	831	1350	3140	1180	108	1630
MIN	6.8	8.1	20	72	128	140	105	100	156	65	22	32
CFSM	.05	.06	.31	2.17	2.41	2.41	2.29	1.94	4.53	1.76	.26	1.85
IN.	.06	.07	.36	2.50	2.51	2.77	2.55	2.24	5.05	2.04	.30	2.06

CAL YR 1978 TOTAL 99585.5 MEAN 273 MAX 3760 MIN 6.8 CFSM 1.50 IN 20.35
WTR YR 1979 TOTAL 110160.3 MEAN 302 MAX 3140 MIN 6.8 CFSM 1.66 IN 22.52

NEUSE RIVER BASIN

02092000 SWIFT CREEK NEAR VANCEBORO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
03...	1210	21	27	1.5
30...	1350	7.7	18	.37
NOV				
13...	1055	9.5	12	.31
JAN				
24...	1325	627	13	22
FEB				
26...	1140	2030	140	767
27...	1035	2340	50	316
29...	1015	2100	149	869
MAR				
01...	1215	1790	23	111
02...	1203	1310	19	67
12...	1030	435	18	24

NEUSE RIVER BASIN

201

02092500 TRENT RIVER NEAR TRENTON, N. C.

LOCATION.--Lat 35°03'55", long 77°27'25", Jones County, Hydrologic Unit 03020204, on left bank 50 ft (15 m) downstream from Free Bridge on Secondary Road 1129, 800 ft (244 m) downstream from Little Chinquapin Branch, 1.5 mi (2.4 km) southwest of Phillips Crossroads, and 6 mi (10 km) west of Trenton.

DRAINAGE AREA.--168 mi² (435 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 19.15 ft (5.837 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 21, 1951, nonrecording gage on bridge 50 ft (15 m) upstream at same datum.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--28 years, 200 ft³/s (5.664 m³/s), 16.17 in/yr (411 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,100 ft³/s (258 m³/s) Sept. 21, 1955, gage height, 17.84 ft (5.438 m); minimum, 1.3 ft³/s (0.037 m³/s) Oct. 11-15, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1928 reached a stage of 17.3 ft (5.27 m), discharge, 7,600 ft³/s (215 m³/s), from information furnished by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,410 ft³/s (68.3 m³/s) Feb. 28, gage height, 14.35 ft (4.374 m); minimum, 1.1 ft³/s (0.031 m³/s) Oct. 20; minimum gage height, 2.27 ft (0.692 m) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	1.6	47	62	186	1690	114	213	430	65	54	27
2	3.9	1.5	64	91	164	1110	108	139	383	48	40	18
3	3.8	1.5	79	202	152	816	103	104	324	37	32	27
4	3.3	1.9	80	262	140	611	106	83	299	34	31	56
5	3.1	1.9	77	282	129	488	141	70	346	69	74	597
6	2.9	1.6	61	284	119	436	162	66	354	67	114	985
7	2.5	1.5	56	274	122	478	152	61	317	66	123	1490
8	2.1	1.7	84	267	166	630	128	56	247	57	80	1900
9	2.0	2.1	78	244	205	752	120	51	180	56	47	1700
10	1.8	2.3	66	215	227	715	159	47	132	54	32	1060
11	1.8	2.5	57	188	231	640	194	46	157	42	23	651
12	1.5	2.7	54	177	222	572	198	49	375	33	19	432
13	1.5	2.6	50	289	200	504	177	64	802	28	17	253
14	1.4	2.5	44	436	174	443	179	77	1240	24	14	187
15	1.4	2.3	39	497	159	409	180	131	1140	20	12	209
16	1.3	2.0	37	525	149	363	165	219	800	17	11	235
17	1.3	2.0	34	501	133	318	139	257	600	16	9.2	240
18	1.2	1.9	33	442	118	274	114	247	475	14	8.3	233
19	1.3	1.9	32	360	132	236	96	216	416	16	7.7	219
20	1.1	1.6	31	266	177	197	82	209	379	20	7.6	186
21	1.2	1.4	30	356	213	169	72	208	304	24	12	148
22	1.2	1.4	30	479	233	153	63	185	213	73	28	128
23	1.2	1.7	29	544	249	134	55	157	147	136	25	135
24	1.3	2.2	30	625	410	138	49	203	112	224	21	132
25	1.4	2.3	68	671	404	192	45	412	110	288	18	123
26	1.6	2.2	105	649	1620	215	165	470	139	332	14	119
27	1.9	2.6	117	588	2200	222	449	473	153	305	11	116
28	2.3	3.9	113	490	2240	215	519	441	150	235	10	107
29	2.1	6.7	101	385	---	197	479	456	113	158	9.3	95
30	1.8	32	86	296	---	164	334	471	84	106	13	156
31	1.7	---	72	230	---	132	---	464	---	75	20	---
TOTAL	60.1	96.2	1944	11175	11274	13601	5047	6345	10921	2739	937.1	11964
MEAN	1.94	3.21	62.7	360	403	439	168	205	364	88.4	30.2	399
MAX	3.9	32	117	671	2240	1690	519	473	1240	332	123	1900
MIN	1.1	1.4	29	62	118	132	45	46	84	14	7.6	18
CFSM	.01	.02	.37	2.14	2.40	2.61	1.00	1.22	2.17	.53	.18	2.38
IN.	.01	.02	.43	2.47	2.50	3.01	1.12	1.40	2.42	.61	.21	2.65

CAL YR 1978 TOTAL 73278.0 MEAN 201 MAX 3200 MIN 1.1 CFSM 1.20 IN 16.23
WTR YR 1979 TOTAL 76103.4 MEAN 209 MAX 2240 MIN 1.1 CFSM 1.24 IN 16.85

NEUSE RIVER BASIN

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-53, 1955-63, 1965-67, October 1978 to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1955 to December 1962, October 1978 to September 1979.

WATER TEMPERATURES: October 1951 to September 1953, January 1955 to December 1962, December 1964 to May 1967, October 1978 to September 1979.

INSTRUMENTATION.--Water-quality monitor since October 1978.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

REMARKS.--Daily records of specific conductance for period January 1955 to December 1962 are available in the district office in Raleigh, N. C. Malfunctions of water-quality monitor caused some loss of daily records during October, November, December, March and April.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 284 micromhos Nov. 17, 1978; minimum daily, 31 micromhos July 2, 5, 6, 1962.

WATER TEMPERATURES: Maximum daily, 30.0°C June 17, 1957; minimum daily, 0.0°C on many days during most winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 284 micromhos Nov. 17; minimum, 50 micromhos Sept. 5.

WATER TEMPERATURES: Maximum, 27.5°C Aug. 10, 11; minimum, 2.0°C Feb. 12.

WATER QUALITY DATA. WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- CORAL UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT												
02...	1300	3.8	240	6.4	20.5	5	6.6	120	25	43	2.2	3.9
DEC												
11...	1115	57	185	6.5	9.0	50	8.8	50	28	17	1.8	5.8
FEB												
12...	1100	222	104	6.6	1.0	60	13.1	35	22	12	1.3	4.2
26...	1045	1500	65	5.7	13.5	100	7.6	23	20	7.8	.9	3.2
MAR												
01...	1130	1700	60	5.7	9.0	250	8.6	21	16	6.8	1.0	2.8
26...	0915	216	95	6.4	12.0	90	9.0	35	16	12	1.1	3.7
MAY												
23...	0945	158	90	6.2	19.0	10	7.4	34	16	12	1.0	3.6
JUL												
18...	1345	14	160	6.9	24.0	30	5.3	84	22	31	1.7	3.8
DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT												
02...	7	.2	1.6	111	0	91	71	19	6.9	.1	4.8	152
DEC												
11...	19	.4	2.3	27	0	22	14	42	11	.1	9.4	131
FEB												
12...	20	.3	1.1	16	0	13	6.4	16	8.1	.0	5.4	85
26...	22	.3	1.3	4	0	3	13	10	5.8	.0	3.8	74
MAR												
01...	21	.3	1.1	6	0	5	19	11	5.4	.0	4.2	80
26...	18	.3	1.0	23	0	19	15	11	7.8	.0	4.0	84
MAY												
23...	14	.3	.9	22	0	18	22	7.6	7.8	.1	5.8	84
JUL												
18...	9	.2	1.3	76	0	62	15	12	8.7	.1	5.5	135

NEUSE RIVER BASIN

203

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, SUM OF CONSTITUENTS DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DISSOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DISSOLVED (MG/L AS NH4)
OCT 02...	142	.21	1.26	1.3	.01	1.3	1.3	3.2	.03	.02	--	.03
DEC 11...	105	.18	20.2	.32	.01	.33	.32	--	.01	.06	--	.04
FEB 12...	56	.12	50.9	.57	.01	.58	.58	--	.02	.00	--	.00
APR 26...	35	.10	300	.29	.01	.30	.29	--	.03	.00	--	.00
JUN 01...	35	.11	367	.34	.01	.35	.37	--	.05	.06	--	.08
AUG 26...	54	.11	44.6	.39	.01	.40	.45	--	.00	--	--	--
OCT 23...	50	.11	35.8	.47	.01	.48	.48	--	.01	.00	.01	.00
JUL 14...	109	.15	5.10	1.6	.01	1.6	1.5	--	.02	.05	.02	.06
DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DISSOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DISSOLVED (MG/L AS N)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DISSOLVED (MG/L AS P)
OCT 02...	.17	.17	.20	.01	.19	1100	1.5	6.6	.06	--	.18	.06
DEC 11...	.41	.37	.42	.00	.45	--	.75	3.3	.02	--	.06	.04
FEB 12...	.09	.13	.11	.00	.13	--	.69	3.1	.01	--	.03	.01
APR 26...	.66	.41	.69	.28	.41	--	.99	4.4	.08	--	.25	.02
JUN 01...	.68	--	.73	--	--	--	1.1	4.8	.04	--	.12	--
AUG 26...	.47	--	.47	--	--	--	.87	3.9	.03	--	.09	--
OCT 23...	.88	.75	.89	.14	.75	--	1.4	6.1	.04	--	.12	.03
JUL 14...	.66	.48	.68	.15	.53	--	2.3	10	.07	.09	.21	.06
DATE	PHOS- PHORUS, ORTHOPHOS- PHATE, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DISSOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DISSOLVED (MG/L AS PO4)	PHOS- PHORUS, TOTAL IN BOT- TOM MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM TOTAL RECOVER- ABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOVER- ABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CADMIUM RECOVER- ABLE FM BOT- TOM MA- TERIAL (UG/G AS CD)
OCT 02...	.04	.04	.12	1500	--	--	--	0	--	--	--	<10
DEC 11...	.02	.03	.09	--	0	0	0	--	6	5	1	--
FEB 12...	.00	.00	.00	--	--	--	--	--	--	--	--	--
APR 26...	.04	.00	.00	--	2	0	2	--	0	0	0	--
JUN 01...	.02	--	--	--	2	0	2	--	1	1	0	--
AUG 26...	.01	--	--	--	--	--	--	--	--	--	--	--
OCT 23...	.02	.00	.00	--	--	--	--	--	--	--	--	--
JUL 14...	.03	.02	.06	--	2	2	2	--	0	0	0	--

NEUSE RIVER BASIN

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CH)	CHROMIUM, SUS- PENDE RECOVERABLE (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	CHROMIUM, FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOVERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)
OCT 02...	<10	<9	1	<10	--	--	--	11	2	0	2	<10
DEC 11...	<10	<8	2	--	0	0	0	--	2	1	1	--
FEB 12...	<10	<8	2	--	--	--	--	--	0	0	0	--
26...	30	11	19	--	1	0	1	--	2	0	2	--
MAR 01...	30	19	11	--	3	1	2	--	1	0	2	--
26...	20	10	10	--	--	--	--	--	1	0	2	--
MAY 23...	30	13	17	--	--	--	--	--	1	0	1	--
JUL 18...	30	10	20	--	0	0	0	--	1	0	1	--
DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOVERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOVERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, FM BOT- TOM MA- TERIAL (UG/G AS MN)
OCT 02...	180	20	160	1200	--	--	--	20	--	--	--	20
DEC 11...	630	450	180	--	--	--	--	--	20	10	10	--
FEB 12...	130	20	110	--	0	0	0	--	--	--	--	--
26...	510	300	210	--	1	1	0	--	10	0	10	--
MAR 01...	330	100	230	--	6	5	1	--	20	10	10	--
26...	320	130	190	--	6	3	3	--	--	--	--	--
MAY 23...	620	310	310	--	4	4	0	--	--	--	--	--
JUL 18...	500	140	360	--	1	1	0	--	10	0	20	--
DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOVERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL RECOVERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOVERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, FM BOT- TOM MA- TERIAL (UG/G AS SE)	SELE- NIUM, TOTAL RECOVERABLE (UG/L AS SF)	SELE- NIUM, SUS- PENDE RECOVERABLE (UG/L AS SF)	SELE- NIUM, DIS- SOLVED (UG/L AS SF)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
OCT 02...	--	--	--	--	0.00	--	--	--	--	0	20	--
DEC 11...	<.5	.0	<.5	--	0	0	0	--	--	--	30	--
FEB 12...	--	--	--	--	--	--	--	--	--	--	70	--
26...	<.5	.0	<.5	--	0	0	0	--	--	--	10	--
MAR 01...	<.5	.0	<.5	--	0	0	0	--	--	--	0	--
26...	--	--	--	--	--	--	--	--	--	--	50	--
MAY 23...	--	--	--	--	--	--	--	--	--	--	30	--
JUL 18...	<.5	.0	<.5	--	0	0	0	--	--	--	20	--

NEUSE RIVER BASIN

205

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, REC OV, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	PERT- PHYTON BIOMASS TOTAL DRY WEIGHT G/500 M	PERT- PHYTON BIOMASS ASH WEIGHT G/500 M	LENGTH OF EXPO- SURE (DAYS)
OCT 02...	10	10	<10	12	.5	.00	--	--	--
DEC 11...	20	10	--	16	.2	.00	--	--	--
FEB 12...	70	0	--	12	.4	.00	1.18	.240	62
26...	0	10	--	17	--	.10	--	--	--
MAR 01...	0	0	--	60	.3	.00	--	--	--
26...	40	10	--	2.1	.3	.00	--	--	--
MAY 23...	30	4	--	18	.5	.00	2.04	1.39	57
JUL 18...	10	10	--	10	.5	.00	--	--	--

NEUSE RIVER BASIN

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	OCT 2,79 1300	DEC 11,78 1115	FEB 12,79 1100	MAY 23,79 0945	JUL 18,79 1345		
TOTAL CELLS/ML	240	220	10	0	190		
DIVERSITY: DIVISION	1.9	1.4	0.0	0.0	1.8		
..CLASS	1.9	1.4	0.0	0.0	1.8		
...ORDER	2.3	1.8	1.0	0.0	2.1		
...FAMILY	2.3	1.8	1.0	0.0	2.1		
....GENUS	3.0	1.8	1.0	0.0	2.3		
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	
CHLOROPHYTA (GREEN ALGAE)							
..CHLOROPHYCEAE							
...CHLOROCOCCALES							
...OCYSTACEAE							
....ANKISTHODESMUS	5	2	--	--	--	--	
....KIRCHNERIELLA	--	--	46# 40	--	--	--	
...SCENEDESMACEAE							
....SCENEDESMUS	9	3	--	--	57# 31		
...VOLVOCALES							
...CHLAMYDOMONADACEAE							
....CHLAMYDOMONAS	53# 19	--	--	--	14	8	
...VOLVOCAEAE							
....GONIUM	58# 20	--	--	--	--	--	
CHRYSOPHYTA							
..HACILLARIOPHYCEAE							
...CENTRALES							
...COSCINODISCACEAE							
....CYCLOTELLA	17	6	29 13	5# 50	--	29# 15	
....MELOSIRA	4	2	--	--	--	14	8
...PENNACEAE							
...NAVICULACEAE							
....NAVICULA	6	2	--	5# 50	--	--	--
...NITZSCHIAEAE							
....NITZSCHIA	15	5	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)							
..CRYPTOPHYCEAE							
...CRYPTOMONADALES							
...CRYPTOMONADACEAE							
....CRYPTOMONAS	75# 27	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)							
..CYANOPHYCEAE							
...CHROOCOCCALES							
...CHROOCOCCACEAE							
....ANACYSTIS	--	--	72# 33	--	--	--	--
...HORMOGONALES							
...OSCILLATORIAEAE							
....LYNGBYA	--	--	--	--	--	57# 31	
...RIVULARIAEAE							
....RAPHIDIOPSIS	--	--	29 13	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)							
..EUGLENOPHYCEAE							
...EUGLENALES							
...EUGLENACEAE							
....EUGLENA	26	9	--	--	--	--	--
...PHACUS	4	2	--	--	--	--	--
...TRACHELOMONAS	4	2	--	--	--	--	--
PYRRHOPHYTA (FIRE ALGAE)							
..PYRRHOPHYCEAE							
...PERIDINIALES							
...GLENODINIACEAE							
....GLENODINIUM	4	2	--	--	--	14	8

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

NEUSE RIVER BASIN

207

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	258	250	255	268	265	267	---	---	175	132	127	130
2	259	248	255	267	262	266	---	---	163	135	123	130
3	261	256	258	268	267	267	---	---	155	123	118	120
4	263	253	261	268	266	267	---	---	155	118	116	117
5	263	260	262	268	266	267	---	---	156	118	115	116
6	262	259	261	269	262	267	---	---	155	115	112	113
7	261	258	259	270	267	269	---	---	153	112	110	111
8	259	253	257	279	267	274	---	---	150	110	109	109
9	257	255	256	270	267	268	---	---	155	109	108	108
10	255	252	254	272	270	271	---	---	170	109	105	107
11	254	251	252	274	271	272	181	180	180	105	103	104
12	259	251	253	276	272	274	182	176	180	103	102	102
13	259	251	255	278	275	277	184	181	183	103	98	99
14	259	249	255	279	275	278	184	184	184	102	101	102
15	256	251	255	282	276	278	184	181	183	102	101	101
16	---	---	256	283	269	277	182	182	182	104	101	102
17	---	---	257	284	269	279	183	182	182	107	104	105
18	---	---	258	280	269	277	187	182	185	109	102	106
19	---	---	259	279	271	274	187	186	186	103	97	100
20	259	253	259	273	267	266	188	187	187	99	96	97
21	258	257	257	267	263	265	188	187	187	97	93	95
22	---	---	258	267	264	265	187	185	186	93	92	92
23	261	256	258	264	262	263	187	186	187	92	90	91
24	263	257	260	262	259	261	187	181	184	92	90	91
25	263	256	259	260	255	257	184	162	175	94	92	93
26	266	259	262	---	---	260	171	161	166	98	94	96
27	271	259	266	---	---	265	163	143	150	100	98	99
28	281	265	273	---	---	267	143	138	140	103	100	101
29	282	264	267	---	---	240	138	135	137	107	103	105
30	267	261	264	---	---	185	135	130	133	112	107	109
31	267	264	266	---	---	---	130	127	128	115	112	113
MONTH	282	248	259	284	255	265	188	127	167	145	90	105
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	116	115	115	67	62	64	114	109	112	75	63	69
2	118	116	117	72	57	70	---	---	114	107	95	102
3	122	118	120	78	72	75	---	---	115	117	106	112
4	124	122	123	84	78	81	118	113	116	125	117	121
5	126	124	125	89	84	86	113	108	111	134	126	130
6	126	126	126	90	89	90	105	99	103	140	134	137
7	125	117	121	---	---	100	101	98	99	146	139	142
8	117	111	114	---	---	90	107	101	104	153	146	148
9	110	104	107	---	---	85	109	106	108	155	150	153
10	103	101	102	---	---	83	105	98	101	150	156	158
11	101	100	101	---	---	90	97	90	93	181	160	161
12	108	101	105	---	---	97	90	89	90	162	158	160
13	111	108	109	---	---	97	93	90	91	156	151	155
14	114	111	113	---	---	100	96	92	94	150	133	144
15	115	113	114	---	---	102	94	93	94	132	107	117
16	118	115	116	---	---	107	96	93	95	108	94	92
17	121	118	119	---	---	105	102	96	99	85	83	84
18	124	121	123	93	90	91	109	102	106	85	83	83
19	123	116	120	96	92	94	114	110	112	88	85	87
20	115	109	112	102	96	99	120	115	117	90	88	89
21	108	100	104	106	103	105	127	120	124	89	88	89
22	100	99	100	109	106	107	133	127	131	92	89	90
23	101	99	100	---	---	109	139	133	136	95	91	92
24	98	86	93	---	---	108	144	139	142	93	72	86
25	85	73	79	---	---	105	150	145	147	72	60	69
26	72	68	70	101	90	94	151	79	119	70	68	69
27	68	61	64	90	86	84	83	68	71	70	69	69
28	62	60	61	90	88	89	70	67	68	70	69	70
29	---	---	---	92	90	91	74	70	72	71	69	70
30	---	---	---	100	93	96	83	75	78	70	67	69
31	---	---	---	109	101	105	---	---	---	67	66	66
MONTH	126	60	106	109	62	94	151	67	105	162	66	107

NEUSE RIVER BASIN

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	68	66	67	107	104	105	123	112	118	187	163	178
2	70	68	69	121	106	113	134	123	128	180	167	172
3	73	70	71	133	121	127	142	134	137	188	181	184
4	75	72	74	139	134	137	154	143	148	181	139	166
5	73	70	71	138	113	120	152	113	133	136	50	78
6	73	70	72	135	117	127	113	77	88	69	56	62
7	74	72	73	142	132	135	82	77	78	73	69	71
8	84	75	79	134	125	129	99	83	90	69	66	67
9	95	84	90	130	126	129	118	101	110	68	67	67
10	110	96	104	132	130	131	133	118	127	73	68	70
11	113	96	105	141	132	134	148	134	140	82	73	78
12	96	72	81	147	138	140	157	146	152	92	83	87
13	70	54	61	149	145	147	169	153	162	108	92	100
14	54	53	53	157	149	152	176	167	171	115	108	113
15	56	53	54	170	157	164	181	174	176	113	106	110
16	62	56	59	177	169	173	185	175	179	106	95	101
17	68	62	65	182	175	179	193	184	188	94	92	93
18	70	66	69	190	181	185	202	191	197	92	92	92
19	70	69	70	192	187	190	207	202	203	94	92	93
20	72	69	70	195	189	193	211	203	207	102	94	97
21	78	72	74	190	174	184	212	176	206	110	102	105
22	87	78	82	172	118	148	188	161	171	114	110	113
23	99	88	93	117	91	105	183	177	180	115	112	113
24	108	96	103	91	78	84	190	181	185	115	105	112
25	110	108	109	77	71	74	194	188	190	110	106	108
26	108	92	102	75	71	72	192	186	189	115	105	109
27	91	82	86	75	72	72	190	187	188	122	104	113
28	83	80	81	82	74	77	190	185	187	114	102	107
29	96	84	89	92	82	87	199	190	194	120	105	116
30	104	96	100	103	93	99	205	199	201	134	81	107
31	---	---	---	112	104	105	205	190	200	---	---	---
MONTH	113	53	79	195	71	130	212	77	182	188	50	106
YEAR	284	50	141									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.0	20.5	20.5	17.5	16.0	17.0	---	---	---	12.0	10.5	13.0
2	21.5	20.0	20.5	17.0	15.5	16.0	---	---	---	10.5	8.0	9.0
3	21.5	19.5	20.5	16.0	15.0	15.5	---	---	---	7.5	6.0	7.0
4	21.5	19.0	20.5	15.5	15.0	15.0	---	---	---	8.5	7.0	7.5
5	21.5	20.0	20.5	16.0	15.0	15.5	---	---	---	9.5	8.0	8.5
6	21.5	20.5	21.0	16.0	14.5	15.5	---	---	---	10.5	9.0	9.5
7	20.5	19.0	19.5	15.5	14.5	15.0	---	---	---	10.5	9.0	10.0
8	19.0	18.0	18.5	16.5	15.5	16.0	---	---	---	9.0	7.5	8.5
9	18.0	16.5	17.5	16.5	15.0	15.5	---	---	---	7.5	6.5	7.0
10	17.0	15.5	16.5	16.5	16.0	16.0	---	---	---	8.0	7.0	7.5
11	18.0	15.5	17.0	17.0	16.0	16.5	11.0	10.5	11.0	8.5	7.5	8.0
12	18.5	16.5	17.5	17.5	16.5	17.0	10.5	10.0	10.5	8.5	7.5	8.0
13	18.5	17.5	18.0	17.5	16.0	17.0	10.5	9.5	10.0	7.5	6.0	6.5
14	19.5	18.5	19.0	17.0	15.5	16.5	10.0	9.0	9.5	6.0	5.5	5.5
15	19.0	17.5	18.5	17.5	16.5	17.0	9.0	8.0	8.5	6.5	6.0	6.0
16	17.0	16.0	17.0	18.0	16.5	17.5	8.0	7.5	8.0	7.5	6.5	7.0
17	16.5	15.5	16.0	18.5	18.0	18.0	8.5	7.5	8.0	8.0	6.0	7.0
18	16.0	15.0	15.5	19.0	18.5	19.0	9.0	8.5	8.5	10.5	7.0	9.0
19	15.5	14.5	15.0	20.0	18.5	19.0	9.0	8.0	8.5	11.0	10.5	10.5
20	16.0	15.0	15.5	18.5	16.0	17.0	8.5	8.0	8.0	10.5	9.0	9.5
21	15.5	14.5	15.0	16.5	15.0	15.5	9.0	8.5	8.5	9.0	8.5	8.5
22	15.5	14.0	15.0	16.0	15.0	15.5	10.5	9.0	10.0	10.0	8.5	9.5
23	16.5	15.0	15.5	15.5	15.0	15.5	10.5	10.0	10.0	8.5	7.5	8.0
24	16.5	15.5	16.0	16.0	15.0	15.5	10.0	8.5	9.0	7.5	7.0	7.0
25	15.5	15.0	15.5	16.0	14.0	15.0	10.5	8.0	9.0	7.5	6.5	7.0
26	17.0	15.0	15.5	---	---	---	10.0	9.0	9.5	8.0	7.5	7.5
27	18.5	16.5	17.5	---	---	---	9.0	8.5	8.5	7.5	7.0	7.5
28	18.5	17.5	18.0	---	---	---	9.5	9.0	9.0	7.0	6.5	6.5
29	18.0	17.0	17.5	---	---	---	10.0	9.0	9.5	7.5	6.0	6.5
30	17.5	16.5	17.0	---	---	---	10.5	9.5	9.5	6.5	5.5	6.0
31	17.5	16.5	16.5	---	---	---	11.0	10.0	10.5	6.0	5.5	5.5
MONTH	21.5	14.0	17.5	20.0	14.0	16.5	11.0	7.5	9.0	12.0	5.5	8.0

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	6.5	5.5	6.0	11.5	10.5	10.5	19.0	17.5	18.5	18.5	17.5	18.0
2	6.5	6.0	6.5	11.5	10.5	11.0	---	---	---	19.0	17.5	18.0
3	7.0	6.0	6.5	12.5	11.0	11.5	---	---	---	19.0	17.5	18.0
4	7.0	5.5	6.0	13.0	12.0	12.5	19.0	18.5	18.0	19.5	18.5	19.0
5	6.0	5.5	5.5	14.0	13.0	13.5	18.5	18.5	18.5	19.5	18.5	19.0
6	6.0	5.5	6.0	14.5	13.5	14.0	18.0	17.0	17.5	19.0	18.0	18.5
7	5.5	5.0	5.5	---	---	---	17.0	16.0	16.5	18.5	18.0	18.0
8	6.0	5.0	5.5	---	---	---	16.5	15.0	16.0	20.0	18.0	19.0
9	5.0	3.5	5.0	---	---	---	17.5	16.5	17.0	20.5	19.0	20.0
10	3.5	3.0	3.0	---	---	---	17.0	16.0	16.5	20.5	20.0	20.0
11	3.5	2.5	3.0	---	---	---	17.0	15.5	16.0	21.5	20.0	20.5
12	3.5	2.0	3.0	---	---	---	17.5	15.5	16.5	22.0	21.0	21.5
13	5.0	3.0	4.0	---	---	---	18.0	16.5	17.5	22.5	21.5	22.0
14	5.0	3.5	4.5	---	---	---	19.0	18.0	18.5	22.0	21.5	22.0
15	7.0	4.5	6.0	---	---	---	18.5	18.0	18.5	21.5	20.5	21.0
16	8.0	7.0	7.5	---	---	---	18.0	17.0	17.5	20.5	19.5	20.0
17	8.0	7.5	7.5	---	---	---	17.0	15.5	16.0	19.5	19.0	19.0
18	7.5	5.5	6.0	12.0	10.0	11.0	16.0	15.0	15.5	18.5	18.0	18.5
19	5.5	5.0	5.5	13.0	11.0	12.0	16.0	15.0	15.5	18.0	17.5	17.5
20	5.0	4.5	5.0	14.0	12.0	13.0	16.5	15.0	15.5	18.0	17.0	17.5
21	6.0	4.5	5.5	14.0	12.5	13.5	17.0	15.5	16.0	18.5	17.5	18.0
22	8.5	5.5	7.5	14.5	12.5	13.5	18.0	16.0	17.0	19.0	17.5	18.5
23	10.0	8.5	9.0	---	---	---	19.0	17.5	18.5	20.5	19.0	19.5
24	13.5	10.5	11.5	15.5	14.0	15.0	19.0	18.5	18.5	21.5	20.5	21.0
25	15.0	13.5	14.0	15.0	14.5	15.0	19.0	18.5	19.0	21.5	21.0	21.0
26	15.0	13.5	14.0	15.0	13.5	14.0	19.0	18.5	19.0	20.5	18.5	19.5
27	13.5	12.5	12.5	14.0	12.5	13.5	19.5	19.0	19.0	18.5	18.0	18.0
28	12.0	11.0	11.5	14.5	12.5	13.5	20.0	19.5	19.5	18.5	18.0	18.5
29	---	---	---	15.5	10.5	13.0	19.5	18.5	19.0	19.5	18.5	19.0
30	---	---	---	17.5	14.5	16.0	18.5	18.0	18.5	20.0	19.5	19.5
31	---	---	---	18.0	16.0	17.0	---	---	---	21.0	20.0	20.5
MONTH	15.0	2.0	7.0	18.0	10.0	13.5	20.0	15.0	17.5	22.5	17.0	19.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	22.0	21.0	21.5	23.0	22.0	22.5	26.5	25.0	25.5	24.5	23.5	24.0
2	22.5	22.0	22.0	24.0	22.5	23.0	27.0	25.5	26.0	25.0	23.5	24.0
3	22.5	22.5	22.5	24.0	22.5	23.0	26.5	25.5	26.0	25.0	23.5	24.5
4	22.5	22.0	22.0	24.0	22.5	23.0	26.5	25.5	26.0	25.0	24.5	24.5
5	22.0	21.0	21.5	23.5	22.5	23.0	26.5	25.5	26.0	25.5	24.5	24.5
6	21.5	21.0	21.0	23.0	22.0	22.5	26.0	25.5	25.5	25.5	25.0	25.5
7	21.5	21.0	21.0	22.5	22.0	22.5	26.0	25.5	25.5	25.5	25.0	25.5
8	22.0	21.0	21.5	22.0	21.0	21.5	26.5	25.5	26.0	26.0	25.0	25.5
9	22.0	21.5	22.0	22.5	21.0	21.5	26.5	25.5	26.0	25.0	24.0	24.5
10	22.5	22.0	22.0	22.0	21.5	21.5	27.5	26.0	26.5	24.0	23.0	23.0
11	22.5	21.0	22.0	23.0	21.5	22.0	27.5	26.0	26.5	23.0	22.5	22.5
12	21.0	20.0	20.5	24.0	22.0	23.0	27.0	26.0	26.5	23.0	22.0	22.5
13	20.0	19.5	20.0	24.5	23.0	23.5	25.5	24.5	25.0	23.5	23.0	23.0
14	20.5	20.0	20.0	25.5	23.5	24.5	25.0	23.5	24.0	24.5	23.5	24.0
15	20.0	19.5	20.0	25.5	24.0	25.0	24.5	23.0	24.0	24.5	23.5	24.0
16	20.0	19.5	20.0	25.0	24.0	24.5	24.5	22.5	23.5	23.0	22.0	22.5
17	20.5	20.0	20.0	25.5	24.0	25.0	24.0	22.0	23.0	22.5	21.0	21.5
18	20.5	20.0	20.0	25.5	24.5	25.0	24.0	21.5	22.5	21.5	20.5	21.0
19	21.5	20.5	21.0	24.5	24.0	24.0	24.5	22.5	23.5	21.0	20.5	20.5
20	22.0	21.0	21.5	24.5	23.5	24.0	25.0	23.0	24.0	22.0	20.5	21.0
21	21.5	20.5	21.0	25.5	23.5	24.5	25.5	23.0	24.0	21.5	21.0	21.5
22	21.0	20.0	20.5	25.5	24.0	24.5	24.0	23.0	23.5	23.0	22.0	22.5
23	22.0	21.0	21.5	25.0	24.5	24.5	24.5	23.0	24.0	23.0	22.0	22.5
24	23.0	22.0	22.5	24.5	24.0	24.5	25.0	23.5	24.5	22.0	21.0	21.5
25	22.5	21.5	22.0	25.0	24.0	24.5	26.0	23.5	24.5	21.0	20.5	20.5
26	21.5	20.5	21.0	25.0	24.5	24.5	27.0	24.0	25.0	21.5	20.5	21.0
27	21.0	20.5	21.0	25.5	25.0	25.0	26.5	25.0	25.5	21.5	20.5	21.0
28	21.5	20.0	21.0	25.5	25.0	25.5	25.5	25.0	25.0	22.0	20.5	21.0
29	21.5	20.5	21.0	26.0	25.0	25.5	26.0	24.0	25.0	22.0	21.0	22.0
30	22.5	21.0	22.0	26.0	25.5	25.5	26.0	24.5	25.0	22.5	21.5	22.0
31	---	---	---	26.0	25.0	25.5	25.5	24.5	25.0	---	---	---
MONTH	23.0	19.5	21.0	26.0	21.0	24.0	27.5	21.5	25.0	26.0	20.5	23.0
YEAR	27.5	2.0	17.0									

NEUSE RIVER BASIN

02092500 TRENT RIVER NEAR TRENTON, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
02...	1300	3.4	2	.02	100
30...	1130	1.8	1	.00	75
DEC					
11...	1115	57	1	.15	100
JAN					
25...	1445	680	4	7.3	93
FEB					
12...	1100	222	31	19	--
26...	0940	1460	12	47	100
26...	1045	1500	13	53	100
27...	1225	2240	21	127	65
MAR					
01...	1130	1700	8	37	87
13...	1215	500	3	4.0	73
26...	0915	216	4	2.3	91
MAY					
23...	0945	158	6	2.6	87
JUN					
15...	0743	1210	13	42	84
JUL					
05...	1145	72	34	16	98
18...	1345	14	5	.19	85
AUG					
05...	1055	114	14	4.3	88

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL, 5 DAY (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
12...	1156	1.5	--	7.8	18.0	8.3	<10	1.3	50
JAN									
14...	1500	268	--	6.7	6.0	9.4	24	1.9	350
FEB									
07...	1125	119	--	7.0	5.0	11.0	28	1.0	70
MAR									
05...	1300	430	--	6.7	--	--	42	1.3	40
APR									
13...	1010	175	75	6.9	15.0	9.1	41	1.2	20
MAY									
16...	1240	227	80	6.7	20.0	7.3	50	1.0	280
JUL									
19...	1410	13	170	7.4	25.0	5.5	20	1.6	80
AUG									
30...	1230	11	225	7.4	25.0	7.8	23	.9	10
SEP									
07...	1330	1460	70	6.3	24.0	3.6	62	2.2	150

HEWLETTS CREEK BASIN

211

02093229 HEWLETTS CREEK AT SECONDARY ROAD 1102 NEAR WILMINGTON, N. C.

LOCATION.--Lat 34°11'28", long 77°53'32", New Hanover County, Hydrologic Unit 03030005, on right bank 50 ft (15 m) upstream from culvert on Secondary Road 1102 and 3.8 mi (6.1 km) southeast of Wilmington.

DRAINAGE AREA.--1.2 mi² (3.1 km²).

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (6 m) from topographic map.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 212 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 314 ft³/s (8.89 m³/s) Sept. 5, 1979, gage height, 4.05 ft (1.234 m); no flow for part of July 26, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 24	1300	300 8.50	3.65 1.113	Sept. 5	0515	*314 8.89	*4.05 1.234
Apr. 26	0800	124 3.51	2.68 0.817				

Minimum discharge, 0.41 ft³/s (0.012 m³/s) Aug. 19, 20, gage height, 1.34 ft (0.408 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	.73	1.9	2.9	2.6	4.7	2.9	2.6	3.8	1.0	1.0	1.0
2	1.2	.73	.97	2.6	2.6	4.1	2.6	2.5	2.2	.82	1.0	1.2
3	1.2	.83	.61	8.4	2.6	3.7	2.6	2.4	1.9	.80	.86	.86
4	1.0	.86	.79	5.4	3.0	3.5	2.6	2.5	2.3	.79	1.4	25
5	1.0	.86	1.0	4.4	3.3	15	2.4	2.5	2.0	.83	1.0	75
6	.90	.78	.98	3.8	2.9	17	2.3	2.2	1.4	.81	.86	37
7	.97	.87	.82	9.6	6.1	9.0	2.1	1.9	1.3	.80	.81	30
8	.99	.77	.84	14	3.8	19	2.5	1.7	1.2	.83	.86	15
9	1.0	.81	1.1	5.9	3.4	14	2.7	2.4	1.2	.79	.61	11
10	1.0	1.0	1.2	4.4	2.9	8.1	2.3	5.4	1.2	.83	.73	7.8
11	.88	.90	1.3	4.1	3.2	4.2	2.1	6.9	5.5	.86	.61	6.8
12	.92	.88	1.5	7.2	2.9	6.6	2.2	3.8	2.9	.86	3.5	6.0
13	.92	1.0	1.2	10	3.0	5.3	2.4	3.0	2.0	.86	2.3	6.8
14	.92	1.0	1.2	6.9	2.8	5.4	2.3	11	1.5	.86	.86	11
15	1.0	1.3	1.2	4.8	3.0	4.7	2.1	6.7	1.3	.85	.73	8.2
16	.80	1.1	1.2	4.1	2.8	4.3	2.1	4.3	13	.96	.73	11
17	.86	1.2	1.0	3.7	2.6	4.3	2.0	3.5	4.3	.85	.61	9.3
18	.86	1.2	1.0	3.5	5.5	3.9	1.9	3.0	2.5	3.2	.61	6.8
19	.86	1.2	1.0	3.2	5.9	3.9	1.9	2.9	1.9	13	.41	5.5
20	.86	1.3	1.0	7.3	3.8	3.5	1.8	2.7	1.6	9.5	.61	4.7
21	.74	1.2	1.0	21	3.5	3.5	1.8	2.4	1.4	2.7	.61	7.8
22	.86	1.2	1.2	6.7	3.2	3.5	1.7	2.0	1.4	2.0	.50	12
23	.86	1.2	1.3	5.1	6.1	3.5	2.7	1.9	1.7	1.6	.50	6.8
24	.86	1.2	50	13	17	13	1.7	2.8	1.4	1.7	1.0	5.1
25	.86	1.2	9.5	6.2	25	5.1	1.7	2.3	1.5	2.0	.73	4.7
26	.89	1.0	5.5	4.8	12	3.8	17	1.9	1.3	1.6	.73	4.7
27	.85	1.0	4.2	4.3	6.9	3.2	4.4	1.5	1.2	1.3	1.2	6.4
28	.86	1.0	3.5	4.1	5.3	2.9	3.4	1.5	1.1	1.3	3.5	8.8
29	.86	1.1	3.2	3.6	---	2.8	3.2	2.0	1.1	1.7	1.3	6.8
30	.86	5.4	3.0	3.2	---	2.6	2.9	1.7	1.0	1.3	.86	23
31	.86	---	2.9	3.1	---	2.6	---	1.4	---	1.0	1.2	---
TOTAL	29.60	34.82	107.31	214.7	147.7	195.7	87.2	96.3	68.1	58.32	32.23	366.06
MEAN	.95	1.16	3.46	6.93	5.28	6.31	2.91	3.11	2.27	1.88	1.04	12.2
MAX	2.1	5.4	50	26	25	19	17	11	13	13	3.5	75
MIN	.74	.73	.79	2.9	2.6	2.6	1.7	1.4	1.0	.79	.41	.86
CFS4	.79	.97	2.88	5.78	4.40	5.26	2.43	2.59	1.89	1.57	.87	10.2
IN.	.92	1.08	3.32	6.65	4.57	6.06	2.70	2.98	2.11	1.81	1.00	11.34

CAL YR 1978	TOTAL	1251.53	MEAN 3.43	MAX 50	MIN .73	CFSM 2.86	IN 38.77
WTR YR 1979	TOTAL	1438.04	MEAN 3.94	MAX 75	MIN .41	CFSM 3.28	IN 44.54

HEWLETTS CREEK BASIN

02093229 HEWLETTS CREEK AT SECONDARY ROAD 1102 NEAR WILMINGTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	STREAM- FLOW- INSTANTANEOUS (CFS)	SEDI- MENT- SUS- PENDED (MG/L)	SEDI- MENT- DIS- CHARGE- SUS- PENDED (T/DAY)
0000				
0100	0945	.73	1	.00
0200	1030	.74	3	.01
0300	1040	1.3	3	.03
0400	1125	37	369	37
0500	1150	75	911	187
0600	1235	124	1250	418

CAPE FEAR RIVER BASIN

213

02093800 REEDY FORK NEAR OAK RIDGE, N. C.

LOCATION.--Lat 36°10'24", long 79°57'15", Guilford County, Hydrologic Unit 03030002, on left bank at downstream side of bridge on Secondary Road 2128, 0.8 mi (1.3 km) downstream from Beaver Creek, and 2 mi (3 km) east of Oak Ridge.

DRAINAGE AREA.--19.9 mi² (51.5 km²).

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 771.30 ft (235.092 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 13, 1955, nonrecording gage at same site and datum.

REMARKS.--Records good. Some diurnal fluctuation at medium and low flows caused by mill upstream. Suspended-sediment records for the current year are published on page 214 of this report.

AVERAGE DISCHARGE.--24 years, 23.5 ft³/s (0.666 m³/s), 16.04 in/yr (407 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft³/s (112 m³/s) Oct. 10, 1959, gage height, 10.94 ft (3.335 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of contracted-opening measurement of peak flow; maximum gage height, 12.41 ft (3.783 m) Sept. 22, 1979; minimum, 1.2 ft³/s (0.034 m³/s) Aug. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.9 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 5	1230	433 12.3	7.74 2.359	Feb. 26	0200	685 19.4	8.87 2.704
Dec. 9	2400	504 14.3	8.11 2.472	May 13	0630	699 19.8	8.92 2.719
Jan. 21	0900	1000 28.3	9.71 2.960	Sept. 5	2330	771 21.8	9.14 2.786
Feb. 24	2330	1190 33.7	10.09 3.075	Sept. 22	0930	*2880 81.6	*12.41 3.783

Minimum discharge, 6.7 ft³/s (0.19 m³/s) Aug. 21, gage height, 2.93 ft (0.893 m); minimum daily, 8.2 ft³/s (0.23 m³/s) Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	12	19	19	22	45	27	23	28	14	12	9.8
2	24	12	16	111	22	41	27	22	21	13	12	11
3	17	12	16	56	22	37	32	22	23	12	11	30
4	16	12	67	30	22	36	57	25	43	13	11	47
5	20	12	303	25	21	127	50	21	23	14	10	284
6	20	12	64	25	21	69	36	20	20	13	9.8	246
7	15	13	35	30	24	45	31	20	20	13	10	39
8	14	17	27	49	26	44	29	20	20	13	9.9	23
9	13	13	160	35	25	40	33	21	19	12	9.1	17
10	13	13	185	27	24	36	29	22	19	14	9.2	15
11	14	12	42	24	21	54	27	20	18	14	9.1	14
12	13	12	30	23	21	40	27	38	16	22	12	13
13	13	12	25	31	22	36	40	336	16	21	11	14
14	14	12	21	48	22	36	35	276	16	15	10	17
15	12	13	19	37	30	32	29	64	15	13	9.3	13
16	12	15	19	28	42	29	26	40	25	13	8.9	12
17	12	24	20	26	32	29	26	31	62	13	8.8	11
18	12	26	18	23	18	30	25	27	26	12	8.7	11
19	13	15	18	21	47	29	24	27	21	17	8.5	11
20	12	13	18	90	35	28	23	25	20	33	8.2	11
21	12	13	19	641	38	29	23	25	20	33	8.5	15
22	11	13	16	123	82	26	22	25	19	20	8.9	1170
23	12	15	16	51	170	33	22	24	17	23	11	156
24	12	18	27	76	409	140	22	25	17	25	13	62
25	11	14	35	47	529	56	22	29	17	17	21	42
26	12	13	22	36	324	39	50	21	15	17	17	33
27	12	24	19	32	80	35	72	19	15	27	12	29
28	12	20	18	31	53	32	36	21	14	27	11	46
29	12	23	17	27	---	30	28	21	14	16	12	39
30	12	32	17	25	---	29	25	19	14	14	10	123
31	12	---	23	25	---	28	---	24	---	12	10	---
TOTAL	453	467	1351	1872	2204	1340	955	1353	633	535	332.9	2563.8
MEAN	14.6	15.6	43.6	60.4	78.7	43.2	31.8	43.6	21.1	17.3	10.7	85.5
MAX	44	32	303	641	529	140	72	336	62	33	21	1170
MIN	11	12	16	19	18	26	22	19	14	12	8.2	9.8
CFSM	.73	.78	2.19	3.04	3.96	2.17	1.60	2.19	1.06	.87	.54	4.30
IN.	.85	.87	2.53	3.50	4.12	2.50	1.79	2.53	1.18	1.00	.62	4.79

CAL YR 1978 TOTAL 14581.0 MEAN 39.9 MAX 1070 MIN 10 CFSM 2.01 IN 27.26
WTR YR 1979 TOTAL 14059.7 MEAN 38.5 MAX 1170 MIN 8.2 CFSM 1.94 IN 26.28

CAPE FEAR RIVER BASIN

02093800 REEDY FORK NEAR OAK RIDGE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STATION- FLUX- INSTANT- TANEGUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 05...	1317	23	52	3.2
OCT 11...	1105	43	57	6.6
FEB 25...	1700	51	66	9.1
SEP 22...	1115	1110	239	866

CAPE FEAR RIVER BASIN

215

02094500 REEDY FORK NEAR GIBSONVILLE, N. C.

LOCATION.--Lat 36°10'31", long 79°36'57", Guilford County, Hydrologic Unit 03030002, on right bank 0.2 mi (0.3 km) downstream from Huffines Mill on Secondary Road 2719, 1.2 mi (1.9 km) upstream from Buffalo Creek, and 6 mi (10 km) northwest of Gibsonville.

DRAINAGE AREA.--133 mi² (344 km²).

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.

GAGE.--Water-stage recorder and rock-masonry control. Datum of gage is 626.88 ft (191.073 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated since 1923 by Lake Brandt 14 mi (23 km) upstream (see p. 406), since 1957 by Lake Higgins on Brush Creek, a tributary to Lake Brandt, (see p. 406), since 1943 by Richland Lake 12 mi (19 km) above station, and since 1968 by Lake Townsend 9 mi (14 km) above station. City of Greensboro diverted from Lake Brandt an average of 17.3 ft³/s (0.49 m³/s) and an average of 20.5 ft³/s (0.58 m³/s) from Lake Townsend for municipal water supply. Cone Mills diverted from Richland Lake an average of 3.2 ft³/s (0.091 m³/s) during the year. Suspended-sediment records for the current year are published on page 216 of this report.

AVERAGE DISCHARGE.--51 years, 102 ft³/s (2.889 m³/s), 10.41 in/yr (264 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) Sept. 25, 1947, gage height, 20.77 ft (6.331 m); minimum daily, 0.4 ft³/s (0.011 m³/s) Oct. 14, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1916 reached a stage of 17.90 ft (5.456 m), from information by local resident, discharge, 8,640 ft³/s (245 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,850 ft³/s (137 m³/s) Sept. 22, gage height, 14.62 ft (4.456 m); minimum, 5.5 ft³/s (0.156 m³/s) Aug. 18, 19, 22, gage height, 0.70 ft (0.213 m); minimum daily, 5.6 ft³/s (0.159 m³/s) Aug. 18, 19, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	7.6	79	74	483	319	27	94	75	22	15	6.9
2	30	7.7	78	197	460	519	26	77	71	19	14	6.3
3	48	7.4	69	398	440	496	27	68	66	20	15	6.1
4	48	7.4	100	252	414	473	56	66	106	12	11	8.2
5	46	7.6	451	156	386	541	377	67	93	13	8.7	1040
6	43	7.6	743	127	359	513	63	55	90	11	8.0	1020
7	35	7.1	505	145	352	570	33	54	76	9.3	7.4	665
8	26	9.1	235	287	334	537	29	51	62	9.0	6.8	624
9	20	10	268	228	300	499	32	48	53	8.6	6.2	585
10	16	8.8	554	187	275	458	31	52	47	8.5	6.2	538
11	14	8.6	528	158	250	148	27	53	52	8.9	6.8	98
12	13	8.3	322	131	235	54	26	98	48	9.7	14	17
13	12	8.3	159	143	213	41	49	536	40	14	9.6	55
14	12	8.5	110	194	176	37	46	1460	30	11	7.7	203
15	12	8.6	85	182	80	34	34	1370	23	8.9	7.1	32
16	11	9.1	71	258	148	30	30	555	44	8.4	6.7	13
17	11	16	69	205	173	29	26	263	182	8.2	6.0	9.9
18	11	23	64	124	154	28	24	174	206	7.9	5.6	8.9
19	37	16	57	81	177	28	23	134	153	7.5	5.6	8.4
20	46	16	51	187	167	27	22	112	93	10	6.1	8.2
21	42	16	59	2310	157	26	21	95	65	30	5.9	8.5
22	38	16	61	2180	259	25	22	88	57	26	5.6	3250
23	34	19	50	1040	467	39	23	79	51	51	5.9	3450
24	33	30	58	796	1580	364	25	82	43	62	6.1	1430
25	27	30	105	435	2130	75	31	91	37	60	5.9	728
26	26	25	130	394	1630	48	72	76	27	54	6.1	451
27	24	34	102	376	660	38	245	59	22	46	16	247
28	21	46	81	367	309	34	243	55	17	37	21	130
29	10	54	67	362	---	31	149	52	15	30	13	133
30	7.9	82	61	520	---	30	113	49	15	27	9.7	220
31	7.6	---	67	506	---	28	---	58	---	18	7.3	---
TOTAL	779.5	554.7	5439	13000	12768	6119	1952	6171	1959	667.9	276.0	15000.4
MEAN	25.1	18.5	175	419	456	197	65.1	199	65.3	21.5	8.90	500
MAX	48	82	743	2310	2130	570	377	1460	206	62	21	3450
MIN	7.6	7.1	50	74	80	25	21	48	15	7.5	5.6	6.1

CAL YR 1978 TOTAL 69444.5 MEAN 190 MAX 3090 MIN 7.1
WTR YR 1979 TOTAL 64686.5 MEAN 177 MAX 3450 MIN 5.6

CAPE FEAR RIVER BASIN

02094500 REEDY FORK NEAR GIBSONVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTAN- EOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
14...	1343	53	13	1.9
DEC				
11...	1635	480	17	22
JAN				
25...	1600	426	27	31
FEB				
05...	1400	1250	443	1660
05...	1630	1580	611	2610
05...	1730	1590	539	2310
05...	1900	1530	379	1570
05...	2100	1430	260	1000
22...	1210	5350	436	6310
22...	1340	5000	399	5390

02095500 NORTH BUFFALO CREEK NEAR GREENSBORO, N. C.

LOCATION.--Lat 36°07'13", long 79°42'30", Guilford County, Hydrologic Unit 03030002, on left bank 5 ft (2 m) downstream from bridge on Secondary Road 2832, 4.2 mi (6.8 km) upstream from mouth, and 5.8 mi (9.3 km) north-east of post office in Greensboro.

DRAINAGE AREA.--37.0 mi² (95.8 km²).

PERIOD OF RECORD.--August 1928 to current year.

REVISED RECORDS.--WSP 1303: 1929, 1931-42, monthly and yearly runoff. WSP 1383: Drainage area, 1928(M), 1929, 1933-34(M), 1936(M), 1941(M), 1943(M), 1945(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 678.02 ft (206.660 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for period of no gage-height record, Sept. 22, which are fair. Diurnal fluctuation at low flow caused by mills above station. Diversion into basin from Greensboro and Proximity Mills enter above station. Suspended-sediment records for the current year are published on page 218 of this report.

AVERAGE DISCHARGE.--51 years, 54.5 ft³/s (1.543 m³/s), 20.00 in/yr (508 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,140 ft³/s (259 m³/s) Sept. 22, 1979, gage height, 20.12 ft (6.133 m) from floodmarks, from rating curve extended above 2,900 ft³/s (82.1 m³/s) on basis of contracted-opening measurements at gage heights 14.15 ft (4.313 m), 15.96 ft (4.865 m), and 16.63 ft (5.069 m); minimum, 1.6 ft³/s (0.045 m³/s) Aug. 28, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0500	2720 77.0	12.10 3.688	May 14	0930	2400 68.0	11.66 3.554
Feb. 24	1930	3420 96.9	12.98 3.956	Sept. 5	1730	2560 72.5	11.89 3.624
Feb. 25	2200	2100 59.5	11.15 3.399	Sept. 22	1100	*9140 259	a*20.12 6.133
Mar. 24	0300	2220 62.9	11.38 3.469				

a Water-stage recorder inundated; from floodmarks in gage house.

Minimum discharge, 17 ft³/s (0.48 m³/s) Aug. 5, gage height, 2.01 ft (0.613 m); minimum daily, 24 ft³/s (0.68 m³/s) Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	28	41	52	45	77	46	41	61	28	27	45
2	46	29	40	369	45	69	47	39	39	29	29	74
3	33	29	40	86	45	60	72	38	36	30	36	51
4	31	29	265	53	43	57	200	64	95	38	26	87
5	100	27	546	49	43	383	92	38	40	65	24	1160
6	54	28	82	60	42	146	63	34	36	31	27	191
7	31	30	49	205	45	85	66	37	35	29	27	53
8	28	86	42	218	69	127	61	36	36	28	28	43
9	30	33	347	78	68	93	99	37	37	29	27	39
10	29	31	129	58	50	75	65	44	76	34	28	41
11	30	30	54	50	44	219	59	125	69	31	28	36
12	30	27	44	61	46	89	58	121	37	86	87	34
13	30	28	40	187	50	75	142	773	33	52	38	42
14	28	30	38	169	48	81	71	889	32	30	31	74
15	28	32	37	78	123	66	50	118	32	27	28	33
16	29	41	42	58	100	52	46	70	154	97	27	27
17	28	88	48	54	60	50	44	59	293	59	26	28
18	29	98	34	51	41	48	43	56	49	32	26	29
19	29	31	35	48	63	49	43	67	41	32	26	29
20	30	30	35	485	99	48	44	49	37	271	27	29
21	28	30	51	1130	189	47	41	41	41	115	31	41
22	27	30	36	152	328	46	40	40	38	42	31	4400
23	29	57	36	83	467	97	42	42	33	42	29	199
24	29	65	146	347	1400	730	42	54	32	41	34	110
25	29	34	93	102	956	105	42	66	30	36	37	69
26	31	30	48	72	471	74	243	40	30	33	55	67
27	32	119	43	65	126	61	195	34	31	35	212	65
28	28	48	40	68	83	56	53	45	33	31	102	90
29	26	127	38	55	---	53	43	55	31	29	129	82
30	28	88	38	50	---	52	42	36	31	29	35	128
31	29	---	72	48	---	48	---	64	---	26	31	---
TOTAL	1148	1413	2629	4641	5189	3318	2194	3252	1598	1517	1349	7396
MEAN	37.0	47.1	84.8	150	185	107	73.1	105	53.3	48.9	43.5	247
MAX	159	127	546	1130	1400	730	243	889	293	271	212	4400
MIN	26	27	34	48	41	46	40	34	30	26	24	27
CAL YR 1978	TOTAL	35188	MEAN	96.4	MAX	1760	MIN	26				
WTR YR 1979	TOTAL	35644	MEAN	97.7	MAX	4400	MIN	24				

CAPE FEAR RIVER BASIN

02095500 NORTH BUFFALO CREEK NEAR GREENSBORO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
05...	1117	28	9	.58
DEC				
11...	1430	57	37	5.7
SEP				
05...	1225	1170	457	1440
05...	1440	1930	459	2390
05...	1650	2530	204	1390
05...	1600	2530	158	1080
05...	1920	2300	145	900
05...	2020	2100	177	1000

02096500 HAW RIVER AT HAW RIVER, N. C.

LOCATION.--Lat 36°05'13", long 79°22'02", Alamance County, Hydrologic Unit 03030002, on left bank at town of Haw River, 650 ft (198 m) downstream from Southern Railway bridge, 800 ft (244 m) downstream from bridge on U.S. Highway 70 and State Highway 49, and 3 mi (5 km) downstream from Stony Creek.

DRAINAGE AREA.--599 mi² (1,551 km²).

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 757: 1929(M). WSP 782: 1934. WSP 822: Drainage area. WSP 1383: 1930, 1932(M), 1933(m), 1936, 1943, 1944(M), 1947(m).

GAGE.--Water-stage recorder. Datum of gage is 471.69 ft (143.771 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of fragmentary or no gage-height record, Sept. 22-24, which are fair. Some diurnal fluctuation and occasional regulation. City of Burlington diverted from two reservoirs on Stony Creek (see p. 406) an average of 15.8 ft³/s (0.45 m³/s) for municipal water supply, about half of which was returned above station as sewage, the remainder was returned below station. Corps of Engineers gage-height telephone-telemeter at station. Suspended-sediment records for the current year are published on page 220 of this report.

AVERAGE DISCHARGE.--51 years, 577 ft³/s (16.34 m³/s), 13.08 in/yr (332 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,000 ft³/s (1,050 m³/s) Sept. 18, 1945, gage height, 31.10 ft (9.479 m), from floodmark; minimum 3 ft³/s (0.085 m³/s) Sept. 5, 1930, gage height, 0.92 ft (0.280 m); minimum daily, 5 ft³/s (0.14 m³/s) Sept. 6, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1230	12000 340	19.89 6.062	June 4	0130	7780 220	15.86 4.834
Feb. 25	0430	16200 459	22.61 6.892	Sept. 5	2330	7590 215	15.63 4.764
Mar. 24	0800	8460 240	16.69 5.087	Sept. 22	unknown	*28700 813	*28.44 8.669
May 14	1300	6930 196	14.80 4.511				

a From floodmark

Minimum discharge, 95 ft³/s (2.69 m³/s) Aug. 19, gage height, 1.67 ft (0.509 m); minimum daily, 114 ft³/s (3.23 m³/s) Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	132	447	477	886	1650	443	513	907	300	172	168
2	397	131	330	1380	813	1550	413	425	613	239	161	171
3	273	132	294	2270	774	1350	429	364	705	193	205	230
4	261	136	506	1170	748	1160	878	364	3630	174	222	309
5	246	138	3500	892	709	1310	1560	387	932	192	155	3220
6	343	134	2430	767	669	2000	902	334	538	215	142	6120
7	275	127	1420	934	707	1420	617	307	423	170	134	2960
8	209	159	925	2250	712	1340	531	300	361	159	136	2060
9	183	227	1110	1600	748	1460	501	297	321	152	129	1610
10	165	163	2440	979	680	1220	554	315	659	153	126	1220
11	155	146	1460	777	607	1400	452	540	1090	167	122	676
12	146	140	1170	644	564	1160	422	2450	432	170	229	284
13	140	137	861	1000	556	746	979	3200	299	294	409	236
14	132	132	656	1850	531	654	1320	5580	248	224	204	450
15	123	139	513	1610	587	607	730	4510	217	172	158	366
16	123	153	414	987	1270	505	570	1980	254	156	139	223
17	117	205	389	885	993	449	472	1210	2460	263	124	194
18	117	307	376	687	734	431	420	844	1240	290	124	179
19	115	278	332	540	604	414	385	670	767	170	144	175
20	137	192	321	965	745	406	361	593	532	187	124	166
21	135	176	336	10100	882	392	339	460	401	765	150	164
22	134	170	364	7430	2110	376	327	448	429	398	144	13900
23	134	174	315	3890	4870	380	320	614	409	332	146	17100
24	130	217	465	4350	8920	7520	318	478	327	387	144	6800
25	137	245	1340	3150	14500	3070	324	594	287	444	152	3210
26	140	188	781	1810	12600	1210	554	436	250	339	199	1730
27	145	210	578	1390	5570	882	1660	377	227	295	215	1080
28	148	365	476	1200	2890	709	1120	327	211	256	533	736
29	144	329	400	1010	---	578	727	336	202	224	366	859
30	133	678	357	972	---	510	582	343	193	200	281	1420
31	125	---	369	954	---	469	---	437	---	185	196	---
TOTAL	5354	6060	25675	58920	66979	37328	19210	30013	19564	7859	5855	68016
MEAN	173	202	828	1901	2392	1204	640	968	652	254	189	2267
MAX	397	678	3500	10100	14500	7520	1660	5520	3630	765	533	17100
MIN	115	127	294	477	531	376	318	297	193	152	114	164
CFSM	.29	.34	1.38	3.17	3.99	2.01	1.07	1.62	1.09	.42	.32	3.79
IN.	.33	.38	1.59	3.66	4.16	2.32	1.19	1.86	1.21	.49	.36	4.22
CAL YR 1978 TOTAL	343722			MEAN 942	MAX 14500	MIN 115	CFSM 1.57	IN 21.35				
WTR YR 1979 TOTAL	350833			MEAN 961	MAX 17100	MIN 114	CFSM 1.60	IN 21.79				

CAPE FEAR RIVER BASIN

02096500 HAW RIVER AT HAW RIVER, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

CAPE FEAR RIVER BASIN

221

02096700 BIG ALAMANCE CREEK NEAR ELON COLLEGE, N. C.

LOCATION.--Lat 36°02'21", long 79°31'45", Alamance County, Hydrologic Unit 03030002, on right bank at downstream side of bridge on Secondary Road 1149, 1.2 mi (1.9 km) upstream from Beaver Creek, and 4.5 mi (7.2 km) south of Elon College.

DRAINAGE AREA.--116 mi² (300 km²).

PERIOD OF RECORD.--August 1957 to current year. Prior to October 1971 published as "Alamance Creek".

GAGE.--Water-stage recorder. Altitude of gage is 495 ft or 151 m (by barometer). Aug. 21, 1957 to Nov. 14, 1957, nonrecording gage and Nov. 15, 1957, to Apr. 25, 1963, water-stage recorder at site 70 ft (21 m) upstream at same datum.

REMARKS.--Records fair except those for periods of no gage-height record, Feb. 19 to Mar. 7, Apr. 21 to May 23, Sept. 14-22, which are poor. Suspended-sediment records for the current year are published on page 222 of this report.

AVERAGE DISCHARGE.--22 years, 114 ft³/s (3.228 m³/s), 13.35 in/yr (339 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,250 ft³/s (177 m³/s) Jan. 6, 1962; maximum gage height, 23.74 ft (7.236 m) Sept. 8, 1977; minimum, 0.27 ft³/s (0.008 m³/s) Sept. 19, 20, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of 29.4 ft (8.96 m), from information by local resident, discharge, about 10,000 ft³/s (280 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and Maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0830	3760 106	18.35 5.593	May 14	Unknown	2050 58.1	12.80 3.901
Feb. 24	Unknown	2780 78.7	15.67 4.776	June 4	0800	2420 68.5	14.37 4.380
Mar. 24	0645	*4110 116	*19.22 5.858	Sept. 5	2200	3480 98.6	17.65 5.380

Minimum discharge, 6.9 ft³/s (0.195 m³/s) Oct. 26; minimum daily, 7.2 ft³/s (0.204 m³/s) Oct. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	8.5	62	61	92	200	119	68	116	30	18	73
2	29	8.5	37	359	82	180	108	65	101	28	16	43
3	19	8.2	27	404	77	170	117	64	126	25	21	59
4	15	11	50	145	76	140	465	95	1560	23	18	62
5	15	9.4	856	98	80	500	475	70	290	29	15	1540
6	21	9.7	336	88	71	350	216	64	148	26	13	2000
7	17	9.6	124	197	77	200	150	60	110	23	11	267
8	13	17	85	558	100	203	128	57	91	23	11	146
9	11	23	113	291	93	217	127	56	79	22	10	93
10	11	19	249	148	94	155	135	70	69	22	9.8	72
11	10	15	110	111	97	323	111	100	125	22	9.6	61
12	9.9	14	74	96	97	286	106	500	79	21	47	52
13	11	15	62	256	97	175	282	1000	60	100	77	49
14	10	15	54	598	96	150	233	500	52	50	32	60
15	10	15	47	389	150	143	146	200	46	32	21	48
16	9.6	15	44	184	386	115	118	140	56	25	16	32
17	9.0	19	47	135	203	104	106	120	763	24	13	26
18	7.8	24	45	114	133	98	98	100	211	23	11	25
19	7.8	22	41	94	120	95	93	95	117	30	15	24
20	8.1	19	39	288	170	90	88	90	92	55	22	23
21	9.0	18	42	2980	190	85	84	88	76	116	13	21
22	9.3	16	53	765	180	81	82	88	77	61	194	1200
23	9.0	16	44	339	700	101	78	86	67	47	60	250
24	7.8	23	66	815	1700	3120	76	86	55	41	39	113
25	7.8	26	294	563	1400	631	75	180	51	90	42	97
26	7.2	20	128	262	650	323	450	116	44	48	54	79
27	7.8	23	84	187	450	216	400	81	40	37	32	75
28	8.4	43	65	163	300	171	140	72	36	33	27	70
29	11	41	56	132	---	155	95	79	34	27	145	70
30	9.0	94	51	112	---	140	75	70	32	23	68	115
31	8.1	---	54	102	---	125	---	74	---	20	45	---
TOTAL	356.6	616.9	3439	11034	7961	9042	4976	4534	4803	1176	1125.4	6845
MEAN	11.5	20.6	111	356	284	292	166	146	160	37.9	36.3	228
MAX	29	94	856	2980	1700	3120	475	1000	1560	116	194	2000
MIN	7.2	8.2	27	61	71	81	75	56	32	20	9.6	21
CFSM	.10	.18	.96	3.07	2.45	2.52	1.43	1.26	1.38	.33	.31	1.97
IN.	.11	.20	1.10	3.54	2.55	2.90	1.60	1.45	1.54	.38	.36	2.20

CAL YR 1978	TOTAL	61120.5	MEAN 167	MAX 3800	MIN 7.2	CFSM 1.44	IN 19.60
WTR YR 1979	TOTAL	55908.9	MEAN 153	MAX 3120	MIN 7.2	CFSM 1.32	IN 17.93

CAPE FEAR RIVER BASIN

02096700 BIG ALAMANCE CREEK NEAR ELON COLLEGE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
05...	1005	14	18	.68
19...	1300	7.9	7	.15
NOV				
15...	1015	15	14	.57
DEC				
12...	1600	27	11	2.1
JAN				
20...	1050	260	52	37
FEB				
22...	2215	621	258	449

CAPE FEAR RIVER BASIN

223

02096960 HAW RIVER NEAR BYNUM, N. C.

LOCATION.--Lat 35°45'48", long 79°08'02", Chatham County, Hydrologic Unit 03030002, on right bank 500 ft (150 m) upstream from Pokeberry Creek, 0.9 mi (1.4 km) south-southeast of Bynum, and 1.1 mi (1.8 km) downstream from U.S. Highway 15 and 501.

DRAINAGE AREA.--1,284 mi² (3,326 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 283.31 ft (86.353 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Considerable regulation for short periods at low flow caused by powerplant above station. Gage height telemeter at station. Suspended-sediment records for the current year are published on page 224 of this report.

AVERAGE DISCHARGE.--6 years, 1,440 ft³/s (40.78 m³/s), 15.23 in/yr (387 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,800 ft³/s (1,297 m³/s) Mar. 14, 1975, gage height, 17.67 ft (5.386 m); minimum, 1.6 ft³/s (0.045 m³/s) Sept. 19, 20, 1978, gage height, 2.00 ft (0.610 m); minimum daily, 29 ft³/s (0.82 m³/s) Aug. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1445	27900 790	14.64 4.462	June 4	1045	16400 464	11.73 3.575
Feb. 25	0600	*38900 1100	*16.56 5.047	Sept. 23	0830	22600 640	13.48 4.109
Mar. 24	1600	24200 685	13.90 4.237				

Minimum discharge, 3.4 ft³/s (0.096 m³/s) Oct. 14, 28, gage height, 2.08 ft (0.634 m), minimum daily, 86 ft³/s (2.44 m³/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	147	1120	621	1500	3390	1070	971	1350	551	264	307
2	370	164	626	1400	1360	2800	995	835	1560	580	228	289
3	545	163	501	4610	1250	2470	1050	686	956	406	172	272
4	353	163	459	2400	1220	2120	3630	860	10200	326	289	424
5	335	163	4440	1560	1180	2040	4960	783	4170	305	283	4500
6	306	166	5370	1310	1090	3320	2840	659	1640	336	213	14000
7	367	169	2520	1310	1120	2580	1700	591	1130	335	193	5650
8	306	181	1600	3730	1160	2190	1370	550	883	282	180	3010
9	305	236	1200	3610	1260	2310	1260	544	745	316	177	2250
10	227	309	2950	1990	1210	2160	1350	538	653	262	167	1690
11	202	239	2470	1460	1060	2530	1160	632	1800	263	161	1280
12	195	213	1700	1220	967	3120	970	3200	1080	265	156	654
13	188	252	1330	2940	984	1890	1100	4120	683	277	345	421
14	96	201	1000	4870	997	1570	2880	8470	528	537	518	456
15	171	198	793	4300	1130	1560	1750	7760	451	357	263	744
16	228	197	640	2310	3060	1290	1290	3600	457	344	205	472
17	155	249	586	1760	2620	1070	1030	2120	4580	269	180	325
18	158	387	581	1460	1760	982	886	1510	3180	355	163	280
19	129	466	529	1170	1220	940	802	1300	1580	414	146	256
20	174	392	484	1230	1570	890	740	1310	1110	313	146	246
21	94	292	478	21200	1860	852	686	986	837	387	223	274
22	176	269	517	16600	4720	792	659	782	740	1090	221	3480
23	250	189	534	6690	12400	759	637	1290	825	536	502	19900
24	88	310	511	7180	21000	16900	608	1080	676	554	304	10800
25	239	290	2230	7440	36900	12400	605	1160	570	662	222	4700
26	86	340	2010	3840	30700	3490	952	1200	499	656	213	2470
27	182	334	1190	2650	12000	2260	3600	790	435	495	265	1590
28	157	379	878	2190	5710	1780	3290	644	401	406	265	1180
29	174	590	703	1890	---	1490	1710	602	356	356	717	893
30	243	848	586	1610	---	1310	1220	613	347	351	716	1460
31	98	---	557	1590	---	1170	---	563	---	285	389	---
TOTAL	6787	8496	41093	118141	153008	84425	46800	50749	44422	12871	8486	84273
MEAN	219	283	1326	3811	5465	2723	1560	1637	1481	415	274	2809
MAX	545	848	5370	21200	36900	16900	4960	8470	10200	1090	717	19900
MIN	86	147	459	621	967	759	605	538	347	262	146	246
CFSM	.17	.22	1.03	2.97	4.26	2.12	1.22	1.28	1.15	.32	.21	2.19
IN.	.20	.25	1.19	3.42	4.43	2.45	1.36	1.47	1.29	.37	.25	2.44
CAL YR 1978	TOTAL	659140	MEAN	1806	MAX	27400	MIN	86	CFSM	1.41	IN	19.10
WTR YR 1979	TOTAL	659551	MEAN	1807	MAX	36900	MIN	86	CFSM	1.41	IN	19.11

CAPE FEAR RIVER BASIN

02096960 HAW RIVER NEAR BYNUM, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
JUL				
31...	1000	354	3	2.9
AUG				
22...	1200	17100	242	11200
30...	1540	1570	19	31
SEP				
25...	1120	30400	239	19900
26...	1500	23500	214	16500
27...	1135	10200	114	3140
28...	1130	5640	65	990
OCT				
01...	0925	3420	40	369
05...	1050	1940	20	105
13...	1235	1450	30	150
NOV				
17...	0835	1100	41	122
20...	0955	706	21	40
DEC				
05...	1000	4320	302	3520

CAPE FEAR RIVER BASIN

225

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, N. C.

LOCATION.--Lat 35°39'11", long 79°04'03", Chatham County, Hydrologic Unit 03030002, on right bank 300 ft (91.4 m) downstream from B. Everett Jordan Dam, 2.5 mi (4.0 km) north of Moncure, and 4.2 (6.8 km) upstream from mouth.

DRAINAGE AREA.--1,700 mi² (4,400 km²), approximately.

PERIOD OF RECORD.--October 1965 to current year. Published as Haw River near Haywood, N. C. (02098200) October 1965 to September 1978.

GAGE.--Water-stage recorder. Datum of gage is 155.00 ft (47.244 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Oct. 1, 1978, water-stage recorder at site 0.3 mi (0.5 km) downstream at same datum. Since June 22, 1966, auxiliary water-stage recorder 2.9 mi (4.7 km) downstream.

REMARKS.--Records fair. Some regulation for short periods at low flow caused by powerplants above station and occasionally by B. Everett Jordan Reservoir. Flows above 12,000 ft³/s (340 m³/s) regulated by temporary storage in B. Everett Jordan Reservoir beginning Dec. 16, 1972. Suspended-sediment records for the current year are published on page 226 of this report.

AVERAGE DISCHARGE.--14 years, 1,612 ft³/s (45.65 m³/s), 12.88 in/yr (327 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,800 ft³/s (731 m³/s) Oct. 25, 1971, gage height, 22.41 ft (6.831 m) at former site; minimum daily discharge, 35 ft³/s (0.99 m³/s) Sept. 12, 1966, at former site.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,700 ft³/s (360 m³/s) Feb. 27; maximum gage height, 18.20 ft (5.547 m) Feb. 26. Minimum discharge, 65 ft³/s (1.84 m³/s) Oct. 22; minimum daily, 141 ft³/s (3.99 m³/s) Oct. 14, 21, 24, 26, 28.

DISCHARGE IN CUBIC FEET PER SECOND, AVERAGE YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	165	1700	1400	5700	12100	4570	1300	1050	340	300	337
2	356	176	1300	2360	4910	4330	4320	1270	1140	452	230	324
3	526	176	977	3640	4330	9470	4000	1150	1000	451	250	315
4	501	192	404	3520	3740	9200	4550	542	4800	377	300	371
5	428	192	2420	3400	3040	9120	4760	1360	8000	317	300	3200
6												
7	384	195	5730	2930	2240	9250	5030	1180	6000	255	280	5560
8	384	196	5040	2500	1660	9000	4370	962	4700	341	250	6380
9	395	231	3210	3370	1500	8000	4250	1000	4100	356	216	6520
10	349	204	1990	3490	1020	4150	4030	1040	3700	425	206	6030
11	304	336	1330	3140	1780	7770	3440	402	3300	333	196	4100
12												
13	226	330	2720	2310	1500	7530	5050	731	2640	354	178	1340
14	242	298	2310	2310	1470	7450	4220	1700	1370	350	178	751
15	221	305	1500	2040	1360	7200	1300	4700	1100	377	237	444
16	141	258	1100	4720	1420	6000	1720	5000	975	822	545	398
17	182	264	905	4290	1540	6070	2020	1300	552	611	312	580
18												
19	242	269	672	4060	2120	5500	2340	5000	440	530	226	519
20	177	305	760	3220	2500	5110	2310	4400	2300	372	192	331
21	177	452	812	3500	2540	4900	1340	3000	3700	598	173	276
22	177	635	730	3120	2270	4540	185	3600	3100	802	157	253
23	153	654	484	2500	2150	4100	930	4000	2630	550	153	242
24												
25	141	500	536	8320	2330	3850	475	2500	1470	562	196	324
26	169	420	444	10700	3120	3500	375	2000	633	1320	324	751
27	264	363	444	11500	4310	3250	552	1270	770	900	391	5330
28	141	420	1140	10600	7710	4320	635	1240	750	700	350	6840
29	216	428	2150	9420	10200	7200	731	1220	780	800	231	6620
30												
31	141	536	2410	8600	12100	7010	919	1520	741	800	206	6360
32	221	545	1770	5280	12400	5500	3070	1430	1020	700	242	5950
33	141	549	1230	7690	12500	5270	4560	1080	570	600	264	5330
34	202	941	1100	7440	---	5130	4090	527	370	500	701	4240
35	242	1340	986	5440	---	5000	2700	701	330	500	642	2090
36	165	---	1090	6400	---	4340	---	1100	---	400	494	---
TOTAL	7927	12016	50917	159950	114230	207500	82493	55455	64991	16734	8960	82129
MEAN	256	401	1642	5160	4050	6574	2750	2111	2166	540	289	2738
MAX	626	1340	5730	11500	12500	12100	5030	7300	8000	1320	701	6840
MIN	141	165	444	1450	1360	3250	562	527	330	286	153	242
CFS	.15	.24	.37	3.04	2.43	3.24	1.62	1.24	1.27	.32	.17	1.61
IN	.17	.26	1.11	3.50	2.50	4.54	1.81	1.43	1.42	.37	.20	1.80

CAL YR 1978 TOTAL 856745 MEAN 2347 MAX 11800 MIN 141 CFSM 1.38 IN 18.74
WTR YR 1979 TOTAL 873306 MEAN 2393 MAX 12500 MIN 141 CFSM 1.41 IN 19.11

CAPE FEAR RIVER BASIN

02098198 HAW RIVER BELOW B. EVERETT JORDAN DAM NEAR MONCURE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
July				
22...	1440	3160	214	4720
Aug				
01...	1015	5700	50	764
06...	1335	12500	170	5780
07...	1250	12400	115	3680
08...	1340	12500	104	3510
Sept				
01...	1100	11800	95	3050
14...	1600	5570	35	623
20...	0820	4240	21	240

02099000 EAST FORK DEEP RIVER NEAR HIGH POINT, N. C.

LOCATION.--Lat 36°02'15", long 79°56'46", Guilford County, Hydrologic Unit 03030003, on left bank 5 ft (1.5 m) upstream from bridge on Secondary Road 1541, 3.3 mi (5.3 km) upstream from High Point Dam, and 5.2 mi (8.4 km) northeast of High Point College, High Point.

DRAINAGE AREA.--14.7 mi² (38.1 km²).

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 1383: Drainage area, 1941. WSP 1723: 1929 (M).

GAGE.--Water-stage recorder. Datum of gage is 764.02 ft (232.873 m) National Geodetic Vertical Datum of 1929. Intake pipe extended to downstream side of bridge since Mar. 1, 1934.

REMARKS.--Records good. Slight diurnal fluctuation at low flow during growing season. Suspended-sediment records for the current year are published on page 228 of this report.

AVERAGE DISCHARGE.--51 years, 16.4 ft³/s (0.464 m³/s), 15.13 in/yr (385 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft³/s (178 m³/s) Sept. 24, 1947, gage height, 10.87 ft (3.313 m), from floodmark, from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.7 ft³/s (0.020 m³/s) Sept. 22, 1941 (result of temporary regulation); minimum unregulated, 1.0 ft³/s (0.028 m³/s) Aug. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	2300	1140 32.3	3.23 0.985	May 12	2330	1270 36.0	3.38 1.030
Dec. 9	1445	1260 35.7	3.37 1.027	May 14	0500	2350 66.6	5.00 1.524
Jan. 21	0330	2360 66.8	5.02 1.530	Sept. 5	1630	1820 51.5	4.20 1.280
Feb. 24	1730	2480 70.2	5.31 1.618	Sept. 22	0745	*5030 142	*10.32 3.146
Feb. 25	1930	1960 55.5	4.42 1.347	Sept. 30	0145	1450 41.1	3.61 1.100
Mar. 23	2400	1550 43.9	3.77 1.149				

Minimum discharge, 3.4 ft³/s (0.096 m³/s) Aug. 20, 21, gage height, 0.33 ft (0.101 m) minimum daily, 3.9 ft³/s (0.11 m³/s) Aug. 10, 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	5.9	12	12	12	21	13	10	12	6.6	5.4	4.3
2	13	5.7	9.9	101	11	19	12	9.5	9.3	6.3	5.2	6.1
3	8.6	5.9	9.7	26	11	17	16	10	9.8	6.0	5.0	17
4	8.1	6.0	158	16	11	16	51	13	31	6.2	4.7	16
5	8.8	5.8	214	14	11	93	25	4.7	11	6.1	4.6	534
6	8.6	5.7	29	14	11	34	17	9.0	9.2	5.8	4.6	38
7	6.9	5.8	18	40	14	22	14	8.9	8.8	6.0	4.5	14
8	6.4	8.8	15	63	14	30	14	8.5	8.8	6.3	4.5	8.8
9	6.3	6.3	229	23	15	22	17	9.9	8.1	6.1	4.1	7.0
10	6.4	6.0	42	16	14	18	14	11	14	6.9	3.9	6.4
11	6.2	6.0	20	14	13	54	13	8.7	15	6.4	4.0	5.6
12	6.2	6.0	15	14	13	22	13	43	9.2	8.0	8.6	5.4
13	7.0	6.3	13	32	14	18	30	202	7.9	8.0	5.8	6.2
14	6.3	6.5	12	50	14	18	18	624	7.3	6.5	5.0	7.6
15	5.9	6.2	11	22	49	16	14	33	7.2	6.3	4.6	5.5
16	6.0	23	11	16	36	14	13	19	41	6.4	4.2	5.1
17	5.9	29	12	15	19	15	12	15	53	6.5	4.1	5.1
18	5.9	23	10	14	10	14	12	12	17	5.9	4.0	5.1
19	6.0	9.6	9.9	13	21	13	11	12	12	8.0	4.0	4.9
20	6.3	7.9	9.8	190	19	13	11	11	9.8	94	3.9	4.8
21	5.9	7.4	13	796	41	12	10	11	11	24	3.9	7.6
22	5.7	6.9	9.7	56	136	12	11	11	9.6	13	4.1	1550
23	5.8	9.2	8.8	27	154	100	10	10	8.7	10	4.8	45
24	5.6	11	40	79	965	179	10	11	8.8	11	5.3	23
25	5.6	20	28	29	523	29	10	13	7.9	7.6	7.2	16
26	6.1	10	15	20	113	21	57	10	7.3	6.9	6.8	13
27	6.0	30	12	18	36	17	47	9.5	7.2	8.4	4.8	11
28	5.7	15	11	18	24	15	18	10	7.3	8.5	4.7	27
29	5.8	32	9.6	15	---	14	14	13	7.0	6.1	5.0	22
30	5.6	25	9.5	14	---	13	12	9.8	6.8	5.8	4.5	245
31	5.7	---	14	14	---	13	---	12	---	5.5	4.4	---
TOTAL	237.3	351.9	1030.9	1791	2324	914	539	1239.5	383.0	325.1	150.2	2666.5
MEAN	7.65	11.7	33.3	57.8	83.0	29.5	18.0	40.0	12.8	10.5	4.85	88.9
MAX	39	32	229	796	965	179	57	624	53	94	8.6	1550
MIN	5.6	5.7	8.8	12	10	12	10	8.5	6.8	5.5	3.9	4.3
CFSM	.52	.80	2.27	3.93	5.65	2.01	1.22	2.72	.87	.71	.33	6.05
IN.	.60	.89	2.61	4.53	5.88	2.31	1.36	3.14	.97	.82	.38	6.75
CAL YR 1978	TOTAL	12206.9	MEAN	33.4	MAX	1540	MIN	5.1	CFSM	2.27	IN	30.89
WTR YR 1979	TOTAL	11952.4	MEAN	32.7	MAX	1550	MIN	3.9	CFSM	2.22	IN	30.24

CAPE FEAR RIVER BASIN

02099000 EAST FORK DEEP RIVER NEAR HIGH POINT, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
FEB 23...	1425	314	709	601	--	--	--
APR 04...	1745	55	98	15	--	--	--
26...	1200	47	146	19	--	--	--
SEP 05...	1158	627	1040	1760	53	65	76

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
FEB 23...	--	--	--	--	--	--
APR 04...	--	--	--	--	--	--
26...	--	--	--	--	--	--
SEP 05...	84	89	95	99	100	100

02099500 DEEP RIVER NEAR RANDLEMAN, N. C.

LOCATION.--Lat 35°54'06", long 79°51'05", Randolph County, Hydrologic Unit 03030003, on left bank 500 ft (152 m) downstream from bridge on Secondary Road 1929, 0.2 mi (0.3 km) downstream from Coltrane's mill, 0.5 mi (0.8 km) south of Guilford County line, 4.8 mi (7.7 km) upstream from Muddy Creek, and 7 mi (11 km) north of Randleman.

DRAINAGE AREA.--124 mi² (321 km²).

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 782: 1929-30. WSP 1383: 1934-35, 1941. WSP 1723: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 638.11 ft (194.496 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records fair except those for period of no gage-height record Jan. 4 to Feb. 2, which are poor. Some regulation by High Point Lake and Oak Hollow Reservoir (see pp. 406,407). City of High Point diverted an average of 18.1 ft³/s (0.51 m³/s) for municipal water supply during water year; 11.9 ft³/s (0.34 m³/s) was discharged as sewage effluent into Richland Creek above station and 4.6 ft³/s (0.13 m³/s) into Rich Fork Creek in Pee Dee River basin. Suspended-sediment records for the current year are published on page 499 of this report.

AVERAGE DISCHARGE.--51 years, 125 ft³/s (3.540 m³/s), 13.69 in/yr (348 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) Sept. 25, 1947, gage height, 32.2 ft (9.81 m), from floodmark, from rating curve extended above 7,100 ft³/s (201 m³/s) on basis of contracted-opening measurement of peak flow at bridge 1.5 mi (2.4 km) upstream; minimum, 0.5 ft³/s (0.014 m³/s) Nov. 28, 1931, gage height, 1.41 ft (0.430 m); minimum daily, 1.2 ft³/s (0.034 m³/s) Nov. 12, 1933.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft³/s (74 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	Unknown	5160 146	19.36 5.901	Mar. 24	0500	4270 121	17.65 5.380
Feb. 23	1900	2620 74.2	12.88 3.926	May 14	1230	3740 106	16.27 4.959
Feb. 24	2300	5430 154	19.85 6.050	Sept. 5	2000	3760 106	16.32 4.974
Feb. 26	0100	4100 116	17.25 5.258	Sept. 22	1830	*7710 218	*23.14 7.053

a From high water mark.

Minimum discharge, 14 ft³/s (0.40 m³/s) Oct. 22, 23, 29, Nov. 4, 5, Aug. 20; minimum gage height, 1.94 ft (0.591 m) Aug. 20; minimum daily, 15 ft³/s (0.42 m³/s) Oct. 23, Nov. 5, 6, Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	~4	19	113	124	150	270	100	84	181	25	26	25
2	106	19	95	746	140	238	96	72	92	23	24	40
3	56	19	93	337	132	215	118	60	79	21	29	30
4	41	14	372	175	134	205	383	86	390	21	20	24
5	54	15	1420	160	129	882	332	78	159	20	18	1640
6	114	15	297	150	123	489	194	65	96	19	17	1010
7	59	19	170	440	149	301	133	60	74	19	19	230
8	38	43	140	750	153	285	107	58	62	20	20	104
9	32	44	442	300	169	226	140	65	55	20	20	62
10	24	39	440	200	139	179	122	88	97	24	20	46
11	25	37	169	180	132	487	93	114	191	25	20	44
12	23	35	141	160	131	307	89	109	88	25	84	35
13	22	35	124	600	140	211	220	1470	58	27	36	34
14	21	38	117	900	145	189	189	2180	48	21	31	44
15	18	37	108	450	244	175	127	675	42	18	27	33
16	16	40	106	280	374	131	99	256	70	19	23	29
17	18	152	120	230	219	119	83	151	712	27	21	27
18	18	195	105	190	148	119	75	110	215	25	18	27
19	19	100	105	170	189	118	70	98	114	22	17	28
20	19	86	101	700	203	110	67	91	79	99	15	26
21	18	79	128	3500	297	104	61	81	64	365	18	29
22	16	80	105	900	790	97	60	80	62	147	65	3750
23	15	45	98	450	1510	222	60	76	52	91	21	1620
24	18	125	216	800	2720	2340	59	84	56	64	24	335
25	20	89	329	550	2940	522	58	180	49	53	48	197
26	26	98	164	320	2130	277	396	95	44	43	93	141
27	27	165	130	260	500	196	670	70	39	35	95	128
28	20	134	110	220	346	159	230	65	35	32	268	169
29	16	133	111	190	---	140	135	73	32	27	56	346
30	19	240	107	170	---	130	101	168	29	26	38	1220
31	23	---	129	160	---	116	---	109	---	27	30	---
TOTAL	1029	2233	6434	14752	14676	9559	4667	7051	3364	1430	1261	11473
MEAN	33.2	74.4	208	476	524	308	156	227	112	46.1	40.7	382
MAX	114	240	1420	3500	2940	2340	670	2180	712	365	268	3750
MIN	15	15	93	124	123	97	58	58	29	18	15	24
CAL YR 1978	TOTAL	77419	MEAN 212	MAX 5080	MIN 15							
WTR YR 1979	TOTAL	77939	MEAN 214	MAX 3750	MIN 15							

CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, N. C.

LOCATION.--Lat 34°43'40", long 79°39'10", Randolph County, Hydrologic Unit 03030003, on right bank 0.2 mi (0.3 km) downstream from Main Street bridge in Ramseur, 0.5 mi (0.8 km) downstream from mill dam, and 1.5 mi (2.4 km) downstream from Sandy Creek.

DRAINAGE AREA.--346 mi² (896 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1922 to current year.

REVISED RECORDS.--WSP 822: Drainage area. 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.

GAGE.--Water-stage recorder. Datum of gage is 419.50 ft (127.864 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Flow slightly regulated by High Point Municipal Lake (see p. 407) and small powerplant reservoirs. Prior to January 1963 large diurnal fluctuation caused by powerplant immediately above station. Town of Asheboro diverted an average of 5.7 ft³/s (0.16 m³/s) for water supply from Pee Dee River basin and discharged an average of 5.2 ft³/s (0.15 m³/s) of sewage into the Deep River above the station.

AVERAGE DISCHARGE.--56 years, (1923-79) 354 ft³/s (10.03 m³/s), 13.89 in/yr (353 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,000 ft³/s (1,220 m³/s) Sept. 18, 1945, gage height, 34.04 ft (10.375 m), from floodmark, from rating curve extended above 18,000 ft³/s (510 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.4 ft³/s (0.011 m³/s) May 27, Nov. 28, 29, 1941, minimum daily, 0.7 ft³/s (0.020 m³/s) Nov. 29, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1901 reached a stage of 28.75 ft (8.763 m), from floodmarks, 0.2 mi (0.3 km) upstream, discharge, 30,000 ft³/s (850 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0930	12300 348	18.31 5.581	Mar. 24	0700	13600 385	19.60 5.974
Feb. 23	1830	9320 264	14.90 4.542	Sept. 5	1830	11400 323	17.27 5.264
Feb. 24	2200	*17300 490	*22.94 6.992	Sept. 23	0530	7080 201	12.03 3.667
Feb. 26	0030	12000 340	17.98 5.480				

Minimum discharge, 41 ft³/s (1.16 m³/s) Oct. 17, 18-23, gage height, 0.81 ft (0.247 m); minimum daily, 41 ft³/s (1.16 m³/s) Oct. 19-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	49	278	250	318	709	336	297	433	86	73	101
2	218	51	193	1170	287	631	313	257	256	83	74	145
3	136	51	169	1170	280	550	383	229	208	78	241	147
4	93	52	290	451	281	509	1910	229	1150	75	119	228
5	79	51	3010	342	273	1440	1480	232	465	71	102	5630
6	112	52	967	316	261	1330	673	212	270	68	87	5120
7	144	54	409	550	307	677	474	194	210	66	74	709
8	90	57	302	1410	333	571	390	186	180	64	62	326
9	70	106	301	762	369	617	460	191	158	64	54	201
10	66	102	972	443	308	452	455	292	143	64	50	149
11	63	85	402	358	286	1080	335	231	275	64	46	131
12	61	78	285	343	284	833	305	291	213	64	48	121
13	59	74	241	984	321	530	520	1930	148	66	155	114
14	58	74	218	1580	346	468	591	2760	129	80	101	113
15	50	79	204	961	507	450	396	1520	119	78	88	113
16	44	88	195	518	1080	363	321	541	122	72	79	105
17	42	168	216	419	593	321	277	341	1310	66	70	98
18	42	281	210	374	402	309	255	263	512	66	64	91
19	41	221	196	326	378	300	240	232	289	69	58	87
20	41	151	194	946	498	291	226	228	199	74	52	82
21	41	136	226	9980	674	275	213	203	165	706	47	78
22	41	130	258	2060	2100	259	204	197	161	328	47	1470
23	42	137	197	847	5520	269	195	194	148	197	76	3930
24	45	184	299	1820	9490	9480	192	193	147	225	83	520
25	45	185	961	1290	10800	1790	187	376	136	437	79	305
26	45	146	443	659	7100	806	988	270	126	165	90	217
27	46	203	311	504	1650	569	3640	195	116	112	110	192
28	49	310	253	465	926	481	929	174	106	102	396	184
29	51	227	227	405	---	419	487	266	99	94	281	250
30	51	477	214	355	---	387	351	275	93	85	141	1310
31	50	---	215	335	---	360	---	238	---	77	103	---
TOTAL	2083	4059	12856	32393	45972	27526	17726	13237	8086	3946	3150	22267
MEAN	67.2	135	415	1045	1642	888	591	427	270	127	102	742
MAX	218	477	3010	9980	10800	9480	3640	2760	1310	706	396	5630
MIN	41	49	169	250	261	259	187	174	93	64	46	78
CFS ⁴	.19	.39	1.20	3.02	4.75	2.57	1.71	1.23	.78	.37	.30	2.15
IN.	.22	.44	1.38	3.48	4.94	2.96	1.91	1.42	.87	.42	.34	2.39
CAL YR 1978 TOTAL	173092		MEAN 474	MAX 11400	MIN 41	CF5M 1.37	IN 18.61					
WTR YR 1979 TOTAL	193301		MEAN 530	MAX 10800	MIN 41	CF5M 1.53	IN 20.78					

CAPE FEAR RIVER BASIN

231

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947, 1957, October 1978 to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1978 to September 1979.

WATER TEMPERATURES: October 1946 to September 1947, October 1978 to September 1979.

INSTRUMENTATION.--Water-quality monitor since October 1978.

REMARKS.--Malfunctions of water-quality monitor caused some loss of daily record during July and August.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 28.0°C Aug. 12, 1947; minimum daily, 0.5°C Feb. 10, 28, 1947.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 391 micromhos Nov. 14; minimum, 42 micromhos Feb. 24.

WATER TEMPERATURES: Maximum observed, 27.5°C Aug. 21; minimum, 1.5°C Feb. 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT												
02...	1315	267	240	7.6	20.0	85	11.2	45	0	11	4.2	28
20...	1130	41	235	7.0	14.0	30	9.7	40	0	9.8	3.7	25
JAN												
10...	1215	451	97	7.5	4.0	200	12.6	31	1	7.3	3.1	6.4
21...	1030	12300	62	6.4	4.0	600	8.7	20	9	4.6	2.0	4.2
21...	1515	11400	59	6.4	4.0	50	9.2	19	7	4.6	1.8	3.0
22...	0900	2090	69	7.0	4.0	300	12.8	24	11	5.7	2.3	3.7
APR												
18...	1200	256	115	7.5	17.5	30	10.0	30	3	7.2	2.9	10
JUL												
02...	1045	84	210	7.2	25.0	30	8.6	39	0	9.7	3.6	25
AUG												
14...	1400	97	220	7.4	25.0	30	8.2	38	0	9.3	3.5	29
SEP												
05...	1230	5430	82	6.3	23.0	200	9.3	20	3	5.1	1.8	7.4
05...	1500	8650	75	6.4	23.0	200	9.3	20	2	5.0	1.8	7.1
05...	1800	10800	67	6.3	22.5	100	9.2	17	1	4.3	1.6	5.9
06...	1130	4590	60	6.4	24.0	100	9.5	19	2	4.7	1.7	3.2
10...	1200	121	95	6.7	23.5	80	8.6	25	1	6.0	2.5	7.2
DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT												
02...	55	1.8	4.6	64	0	53	2.6	21	28	.2	14	153
20...	54	1.7	4.6	52	0	43	8.3	15	25	.3	15	144
JAN												
10...	29	.5	2.4	36	0	30	1.8	11	6.6	.1	13	91
21...	29	.4	2.4	13	0	11	8.3	9.0	4.6	.1	6.7	57
21...	23	.3	2.2	14	0	11	8.9	7.4	4.1	.1	6.5	53
22...	23	.3	2.3	15	0	12	2.4	9.2	4.4	.1	8.6	59
APR												
18...	40	.8	1.7	33	0	27	1.7	8.5	11	.1	13	78
JUL												
02...	56	1.7	3.6	52	0	43	5.3	14	30	.2	15	153
AUG												
14...	59	2.1	5.2	52	0	43	3.3	15	27	.3	14	146
SEP												
05...	40	.7	2.8	21	0	17	17	6.9	6.6	.1	9.3	72
05...	40	.7	2.8	22	0	18	14	7.3	7.0	.1	9.4	87
05...	38	.6	2.7	20	0	16	16	6.2	5.7	.1	8.2	77
06...	24	.3	2.5	20	0	16	13	6.2	3.5	.1	8.1	68
10...	35	.6	2.6	30	0	25	9.6	7.2	7.2	.1	12	81

CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, SUM OF CONSTITUENTS DISELVE (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DISELVE (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA DISELVE (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N+4)	NITRO- GEN, AMMONIA DISELVE (MG/L AS N+4)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N+4)
OCT												
02...	154	.21	110	2.1	.03	2.1	2.1	--	.06	.06	--	.06
20...	136	.20	15.9	2.1	.01	2.1	2.2	41	.06	.01	--	.01
JAN												
10...	72	.12	111	.51	.03	.54	.59	--	.23	.17	--	.22
21...	43	.08	1890	.64	.04	.68	.54	--	.19	.23	--	.30
21...	39	.07	1630	.35	.05	.40	.36	--	.19	.18	--	.23
22...	48	.08	333	.93	.04	.97	.87	--	.13	.13	--	.17
APR												
18...	75	.11	53.9	.71	.03	.74	.73	--	.07	.08	.08	.10
JUL												
02...	133	.21	34.7	.96	.02	.98	1.1	--	.13	.05	.16	.06
AUG												
14...	129	.20	38.2	1.5	.08	1.6	1.6	--	.22	.18	.27	.23
SEP												
05...	54	.10	1060	.98	.02	1.0	.63	--	.53	.01	.64	.01
05...	55	.12	2030	.93	.00	.93	.58	--	.13	.01	.16	.01
05...	48	.10	2250	.71	.03	.74	.47	--	.29	.06	.35	.08
06...	40	.09	843	.14	.02	.16	--	--	.19	--	.23	--
10...	60	.11	26.5	.50	.02	.52	.51	--	.05	.03	.06	.04

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DISELVE (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DISELVE (MG/L AS N)	NITRO- GEN,AM- MONIA + ORG. TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N+03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS P04)	PHOS- PHORUS, TOTAL (MG/L AS P04)
OCT											
02...	1.0	.68	1.1	.36	.74	--	3.2	14	.68	--	2.1
20...	.80	.74	.86	.11	.75	700	3.0	13	.80	--	2.5
JAN											
10...	.77	.64	1.0	.19	.81	--	1.5	6.8	.25	--	.77
21...	2.6	.87	2.8	1.7	1.1	--	3.5	15	.49	--	1.5
21...	1.5	.19	1.7	1.3	.37	--	2.1	4.3	.64	--	2.0
22...	.79	.78	.92	.01	.91	--	1.9	4.4	.23	--	.71
APR											
18...	--	--	--	--	--	--	--	--	.25	--	.61
JUL											
02...	.97	.70	1.1	.35	.75	--	2.1	9.2	.47	--	1.4
AUG											
14...	.98	1.0	1.2	.00	1.2	--	2.8	12	.91	--	2.8
SEP											
05...	3.7	1.2	4.2	3.0	1.2	--	5.2	23	1.4	.00	4.3
05...	3.3	1.3	3.4	2.1	1.3	--	4.3	19	1.2	.00	3.7
05...	3.9	1.2	4.2	2.9	1.3	--	4.9	22	1.4	.03	4.3
06...	1.2	--	1.4	.43	.97	--	1.6	6.9	.34	.18	1.0
10...	.81	.66	.86	.17	.69	--	1.4	6.1	.23	.43	.71

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT											
02...	.57	.58	.54	1.7	--	--	--	--	--	--	--
20...	.68	.65	.65	2.0	190	--	--	--	--	--	--
JAN											
10...	--	.16	--	--	--	--	--	--	--	--	--
21...	.04	.11	.02	.06	--	1	1	0	0	0	0
21...	.06	.12	.01	.03	--	1	1	0	0	0	0
22...	.04	.09	.03	.09	--	1	1	0	0	0	0
APR											
18...	.22	.14	--	--	--	3	0	3	1	1	0
JUL											
02...	.37	.31	.30	.92	--	--	--	--	--	--	--
AUG											
14...	.81	.72	.72	2.2	--	--	--	--	--	--	--
SEP											
05...	.11	.00	.07	.21	--	2	1	1	1	0	2
05...	.09	.00	.04	.12	--	1	0	1	3	1	2
05...	.08	.01	.04	.25	--	2	1	1	1	1	0
06...	.05	.06	.00	.00	--	--	--	--	--	--	--
10...	.16	.14	.12	.37	--	4	0	4	0	0	0
DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
OCT											
02...	10	9	1	--	--	--	--	6	1	5	--
20...	10	8	2	10	--	--	--	5	0	5	<10
JAN											
10...	10	9	1	--	--	--	--	6	2	4	--
21...	30	29	1	--	17	16	1	120	120	4	--
21...	20	18	2	--	11	9	2	51	47	4	--
22...	20	18	2	--	2	1	1	7	4	3	--
APR											
18...	10	10	0	--	3	3	0	3	0	3	--
JUL											
02...	40	28	12	--	--	--	--	7	3	4	--
AUG											
14...	30	22	8	--	--	--	--	6	0	6	--
SEP											
05...	40	36	4	--	14	14	0	73	60	13	--
05...	30	28	2	--	13	13	0	58	52	6	--
05...	20	20	0	--	15	15	0	58	49	9	--
06...	20	16	4	--	--	--	--	19	12	7	--
10...	10	10	0	--	0	0	0	5	1	4	--

CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM TOT- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE D RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM TOT- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE D RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT											
02...	1100	800	300	--	8	6	2	--	--	--	--
20...	600	410	190	4400	7	6	1	20	--	--	--
JAN											
10...	3200	3000	220	--	7	0	8	--	--	--	--
21...	41000	41000	200	--	91	48	3	--	1300	1100	220
21...	16000	16000	50	--	82	79	3	--	610	420	190
22...	6500	6500	130	--	52	49	3	--	180	100	80
APR											
18...	1300	1300	50	--	6	3	3	--	90	60	30
JUL											
02...	680	560	120	--	7	5	2	--	--	--	--
AUG											
14...	610	470	140	--	0	0	1	--	--	--	--
SEP											
05...	22000	21000	580	--	55	54	1	--	1700	1700	20
05...	14000	17000	580	--	41	40	1	--	1300	1200	70
05...	20000	14000	550	--	36	35	1	--	1200	1200	2
06...	5400	5200	170	--	20	20	0	--	--	--	--
10...	1300	990	310	--	4	2	2	--	100	50	20

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE D RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE D RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SF)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT							
02...	--	--	--	--	--	--	20
20...	--	--	--	--	--	--	20
JAN							
10...	--	--	--	--	--	--	40
21...	<.5	.0	<.5	1	1	0	170
21...	<.5	.0	<.5	1	1	0	90
22...	<.5	.0	<.5	0	0	0	10
APR							
18...	.5	.0	.5	0	0	0	10
JUL							
02...	--	--	--	--	--	--	20
AUG							
14...	--	--	--	--	--	--	30
SEP							
05...	<.5	.0	<.5	0	0	0	190
05...	<.5	.0	<.5	0	0	0	180
05...	<.5	.0	<.5	0	0	0	130
06...	--	--	--	--	--	--	30
10...	<.5	.0	<.5	0	0	0	10

DATE	ZINC, SUS- PENDE D RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, FM TOT- TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE D RECOV- ERABLE (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT						
02...	0	30	--	9.5	1.3	.10
20...	0	20	30	9.5	1.5	.10
JAN						
10...	20	20	--	7.2	1.3	.00
21...	170	0	--	13	4.8	.00
21...	90	0	--	6.0	6.4	.00
22...	0	10	--	12	3.6	.00
APR						
18...	10	0	--	5.8	.4	.00
JUL						
02...	0	20	--	7.5	1.2	.10
AUG						
14...	0	40	--	9.3	1.8	.10
SEP						
05...	180	8	--	--	--	.10
05...	170	10	--	--	--	.10
05...	120	9	--	--	--	.10
06...	30	3	--	--	--	.00
10...	0	10	--	7.5	.4	.00

CAPE FEAR RIVER BASIN

235

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	OCT 20,78 1130	JAN 10,79 1215	APR 18,79 1200	JUL 2,79 1045				
TOTAL CELLS/ML	12000	200	14000	41000				
DIVERSITY: DIVISION	1.0	1.1	1.4	1.1				
..CLASS	1.0	1.1	1.4	1.1				
...ORDER	1.9	1.7	2.0	1.2				
...FAMILY	3.0	1.8	2.4	2.1				
....GENUS	3.9	1.8	0.0	2.9				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....OOCYSTACEAE								
....DICHOTOMOCOCCUS	--	-	--	-	140	1	--	-
...COELASTRACEAE								
....COELASTRUM	1300	11	--	-	--	-	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	1500	4
...MICRACTINIACEAE								
....MICRACTINIUM	330	3	--	-	--	-	400	1
...OOCYSTACEAE								
....ANKISTRODESMUS	980	8	--	-	540	4	1800	4
...CHODATELLA	490	4	--	-	72	1	8	0
...CLOSTERIOPSIS	--	-	5	2	--	-	--	-
...DICTYOSPHAERIUM	660	5	--	-	1600	12	1700	4
...FRANCEIA	82	1	--	-	--	-	--	-
...KIRCHNEIELLA	--	-	--	-	790	5	700	2
...SELENASTRUM	490	4	--	-	--	-	3900	10
...TREUBARIA	160	1	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	8500#	21
...CHUCIGENIA	330	3	--	-	870	6	--	-
...SCENEDESMUS	1600	13	--	-	760	6	8500#	21
...TETRASTRUM	490	4	--	-	720	5	400	1
...TETRASPORALES								
...PALMELLACEAE								
...GLOEOCYSTIS	410	3	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE	--	-	--	-	140	1	--	-
...CHLAMYDOMONAS	2400#	19	15	7	--	-	500	1
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTILLA	330	3	--	-	72	1	600	1
....MELOSIRA	--	-	130#	65	790	6	--	-
...PENNALES								
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	--	-	110	1	--	-
....SYNEDRA	--	-	--	-	72	1	600	1
...NAVICULACEAE								
....NAVICULA	250	2	10	5	8	0	--	-
...NITZSCHACEAE								
....NITZSCHIA	330	3	15	7	--	-	8	0
..CHRYSTOPHYCEAE								
...CHRYSONOMADALES								
...MALLOMONADACEAE								
....MALLOMONAS	--	-	--	-	8	0	--	-

CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	OCT 20,78 1130		JAN 10,79 1215		APR 18,79 1200		JUL 2,79 1045	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	330	3	--	-	--	-	--	-
....ANACYSTIS	330	3	15	7	2700#	20	11000#	28
....COCCOCHLORIS	--	-	--	-	1500	11	--	-
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	2600#	19	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	82	1	10	5	--	-	--	-
....LEPOCINCLIS	82	1	--	-	--	-	--	-
....TRACHELOMONAS	740	6	--	-	110	1	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...GYMNODINIALES								
...GYMNODINIACEAE								
....GYMNODINIUM	--	-	--	-	--	-	0	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

° - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CAPE FEAR RIVER BASIN

237

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	229	204	217	268	260	267	148	138	144	117	112	115
2	239	219	229	272	263	269	140	126	134	131	111	120
3	332	264	299	273	263	269	145	134	139	107	82	92
4	342	321	334	274	267	269	159	146	152	91	85	88
5	341	290	317	275	271	273	150	91	111	194	92	98
6	290	213	263	291	271	280	111	92	100	105	101	103
7	263	220	239	305	288	299	106	96	102	119	106	112
8	225	215	219	323	305	314	104	97	101	124	102	113
9	272	228	250	317	294	307	117	104	108	100	95	97
10	281	273	278	343	312	326	147	119	137	95	92	94
11	286	279	282	372	343	358	132	96	109	104	92	100
12	281	257	272	366	351	357	96	94	95	115	104	110
13	260	229	247	386	373	381	104	97	100	128	111	114
14	229	214	223	391	373	387	114	104	109	119	104	111
15	213	205	210	384	356	370	120	114	118	119	99	107
16	215	206	211	363	352	356	129	119	123	99	95	97
17	221	215	218	371	331	354	146	129	137	102	99	100
18	223	211	216	367	344	346	159	146	152	105	99	103
19	227	217	220	387	388	389	163	144	159	124	103	111
20	249	219	236	376	349	365	163	144	158	131	122	128
21	259	241	252	345	298	321	168	155	161	115	55	70
22	270	249	262	285	271	279	169	158	165	73	60	65
23	277	254	271	282	250	267	157	144	149	79	70	75
24	274	260	268	246	194	212	146	132	138	91	76	80
25	271	263	267	193	144	190	155	130	143	91	72	76
26	266	261	264	183	177	179	129	109	118	87	72	77
27	267	260	264	177	145	172	111	101	106	87	82	85
28	268	260	263	179	154	168	101	99	100	98	87	92
29	271	266	270	178	168	173	102	97	101	102	97	100
30	270	264	267	167	146	153	108	102	105	110	100	106
31	272	263	269	---	---	---	112	108	110	112	103	107
MONTH	342	204	255	391	146	238	169	91	125	131	55	98
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	112	105	107	83	72	75	112	109	111	93	85	89
2	113	107	109	96	85	93	114	111	113	97	92	95
3	123	114	119	94	91	92	118	111	115	108	97	104
4	134	123	129	104	94	100	133	70	102	115	102	112
5	138	132	135	111	91	104	91	77	86	120	115	117
6	131	125	128	83	72	74	91	85	87	119	115	117
7	129	122	126	84	73	79	93	89	91	127	117	122
8	134	125	129	88	82	85	98	89	95	144	125	129
9	127	113	119	104	90	99	99	94	96	150	134	145
10	140	112	124	107	99	104	111	99	104	157	143	154
11	140	128	134	116	100	105	133	112	126	163	152	160
12	131	122	127	103	91	96	132	123	129	153	141	148
13	195	122	155	90	81	83	126	112	120	179	75	125
14	191	162	170	90	83	88	129	115	121	86	62	76
15	171	129	158	93	88	91	131	119	127	90	69	76
16	139	117	129	113	93	100	136	129	132	87	80	83
17	122	115	118	114	107	110	129	112	120	92	87	89
18	115	107	111	117	112	114	120	113	116	103	89	94
19	107	103	105	121	115	117	126	119	123	112	104	109
20	114	104	109	117	110	113	122	116	120	119	112	116
21	110	102	107	124	111	116	122	115	120	121	113	117
22	111	99	105	132	119	124	122	115	118	121	116	119
23	97	59	75	138	121	133	126	116	122	127	120	124
24	61	42	55	101	47	60	122	116	119	143	124	136
25	54	43	49	65	55	61	127	118	124	170	144	155
26	54	45	49	70	65	68	143	111	132	162	143	154
27	64	55	59	75	70	72	97	66	76	144	131	137
28	73	64	69	86	76	80	72	64	68	166	145	157
29	---	---	---	89	80	85	77	72	75	154	142	148
30	---	---	---	101	85	93	85	77	80	143	135	138
31	---	---	---	108	101	104	---	---	---	145	144	146
MONTH	195	42	111	138	47	94	143	64	109	179	62	122

CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	158	135	146	200	176	194	---	---	188	218	199	206
2	170	160	166	224	197	216	---	---	192	199	173	185
3	163	148	157	226	192	214	---	---	145	172	154	159
4	146	106	118	211	202	207	---	---	173	160	131	141
5	134	111	120	207	194	201	---	---	178	128	71	95
6	125	120	124	196	181	189	---	---	185	71	62	65
7	125	110	119	186	179	184	---	---	193	82	67	76
8	112	106	110	179	172	175	---	---	200	86	82	84
9	111	105	109	---	---	180	---	---	205	97	85	90
10	122	109	115	---	---	182	---	---	210	98	96	97
11	154	122	132	---	---	183	---	---	215	99	96	98
12	158	153	155	---	---	185	---	---	213	108	99	102
13	170	157	162	---	---	188	---	---	160	108	105	106
14	240	173	206	---	---	187	---	---	178	108	102	105
15	240	231	235	---	---	190	---	---	185	119	108	115
16	251	217	238	---	---	192	200	194	197	132	115	122
17	211	136	163	---	---	190	199	190	196	138	132	135
18	185	95	119	---	---	191	200	193	197	151	138	142
19	96	92	92	---	---	190	218	202	212	158	149	152
20	97	92	94	---	---	190	229	218	224	158	152	155
21	108	97	103	---	---	110	236	227	232	158	147	153
22	115	107	110	---	---	135	248	235	246	350	99	169
23	120	115	117	---	---	158	250	198	223	92	61	69
24	127	121	125	---	---	148	259	239	253	78	74	76
25	136	127	131	---	---	125	261	248	253	81	78	80
26	145	136	141	---	---	158	287	262	281	86	81	84
27	148	143	145	---	---	175	289	275	283	95	87	92
28	148	144	146	---	---	178	319	269	292	103	95	99
29	153	144	150	---	---	182	320	239	267	115	103	107
30	178	156	172	---	---	185	267	246	258	185	73	124
31	---	---	---	---	---	190	259	212	232	---	---	---
MONTH	251	92	141	226	172	180	320	190	215	350	61	116
YEAR	391	42	155									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.0	20.5	21.0	16.0	13.5	15.0	11.0	10.0	10.5	7.5	6.0	6.5
2	21.0	20.0	21.0	15.5	13.5	14.5	10.5	8.5	10.0	9.5	7.5	8.0
3	21.5	20.0	21.0	15.0	13.5	14.5	10.5	9.0	10.0	9.5	8.0	8.5
4	21.5	20.5	21.0	14.5	13.5	14.0	12.0	10.0	11.0	7.5	6.0	6.5
5	21.5	21.0	21.0	15.0	12.5	14.0	14.0	11.5	13.5	6.0	5.0	5.5
6	22.0	20.5	21.0	15.0	12.5	14.0	12.5	12.0	12.0	5.5	5.0	5.5
7	20.5	14.5	20.0	15.0	12.5	14.0	12.0	11.0	11.5	6.0	5.5	5.5
8	19.5	18.5	19.0	14.5	13.5	14.0	12.5	11.0	12.0	8.5	6.5	7.5
9	18.5	17.0	18.0	15.0	13.5	14.0	14.0	12.5	13.5	8.0	7.5	7.5
10	18.5	16.5	17.5	14.5	14.0	14.0	13.0	11.0	12.5	7.5	6.0	6.5
11	18.0	15.5	17.0	15.5	14.0	14.5	12.0	10.5	11.0	6.0	5.5	6.0
12	18.0	15.5	17.0	15.5	14.0	14.5	10.5	9.0	10.0	5.5	4.5	5.0
13	18.5	16.5	17.5	15.5	14.0	14.5	9.0	8.0	8.5	4.5	4.0	4.5
14	19.0	17.5	18.0	15.5	14.0	14.5	8.0	7.5	8.0	5.5	4.5	5.0
15	18.5	16.5	18.0	15.5	14.5	15.0	7.5	6.5	7.5	5.0	4.5	5.0
16	18.0	16.0	17.0	16.0	14.0	15.0	7.0	6.0	6.5	5.0	4.0	4.5
17	16.5	15.0	16.0	15.5	15.0	15.0	7.5	6.5	7.0	5.0	4.5	5.0
18	16.5	14.5	15.5	15.5	15.0	15.5	7.0	6.0	7.0	5.5	5.0	5.0
19	16.0	14.0	15.0	15.5	14.5	15.0	6.5	6.5	6.5	5.0	4.5	5.0
20	16.0	14.0	15.0	14.5	13.5	14.0	7.5	6.5	7.0	5.0	4.5	5.0
21	15.5	13.5	14.5	13.5	12.5	13.5	8.0	7.5	8.0	6.5	5.0	5.5
22	16.0	13.5	14.5	13.5	12.5	13.0	8.0	7.5	8.0	7.0	6.5	6.5
23	16.5	14.0	15.0	13.0	13.0	13.0	7.5	7.0	7.5	6.0	5.5	6.0
24	16.0	14.5	15.5	13.5	12.5	13.5	7.5	7.0	7.5	7.5	6.0	6.5
25	16.0	13.5	15.0	13.0	11.0	12.5	7.5	7.0	7.5	7.0	6.0	6.5
26	16.0	14.5	15.5	12.0	11.0	11.5	7.0	6.5	7.0	6.5	5.5	6.0
27	17.0	15.5	16.0	11.0	10.5	10.5	7.0	6.0	6.5	5.5	5.0	5.5
28	16.0	15.5	16.0	11.5	10.5	11.0	6.0	5.0	5.5	5.5	5.0	5.5
29	17.0	15.5	16.0	11.5	11.0	11.5	5.5	5.0	5.0	5.5	5.0	5.0
30	16.5	15.0	15.5	11.0	10.0	10.5	5.0	4.5	5.0	5.5	5.0	5.0
31	16.0	14.0	15.0	---	---	---	6.0	5.0	5.5	5.5	5.0	5.0
MONTH	22.0	13.5	17.5	16.0	10.0	13.5	14.0	4.5	4.5	9.5	4.0	6.0

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	5.0	4.0	4.5	8.0	7.5	7.5	17.5	16.0	17.0	18.5	18.0	18.5
2	4.5	3.5	4.0	9.0	8.0	8.5	18.5	17.5	18.0	19.5	18.5	19.0
3	4.5	3.5	4.0	10.5	9.0	9.5	18.5	18.0	18.0	19.5	18.5	19.0
4	5.0	4.0	4.5	11.0	10.5	10.5	18.0	14.5	16.0	20.0	18.5	19.5
5	5.0	4.0	4.5	13.0	11.0	11.5	15.5	14.0	14.5	20.0	19.0	20.0
6	4.0	3.0	4.0	13.5	13.0	13.5	15.5	14.0	14.5	20.0	19.0	20.0
7	3.0	2.5	3.0	13.0	12.0	12.5	15.5	14.5	15.0	20.5	19.0	20.0
8	3.5	2.5	3.0	12.5	11.0	11.5	15.5	15.0	15.5	22.0	20.5	21.5
9	3.5	2.5	3.0	12.0	11.0	11.5	16.0	15.5	15.5	22.5	22.0	22.5
10	2.5	2.0	2.5	12.0	11.0	11.5	16.0	15.5	15.5	22.5	22.0	22.0
11	3.0	2.0	2.5	12.0	11.0	11.5	17.0	16.0	16.5	24.0	22.5	23.0
12	3.0	2.5	3.0	11.5	10.5	10.5	17.0	16.5	16.5	23.5	23.0	23.0
13	3.5	3.0	3.0	11.0	10.0	10.5	17.5	16.5	17.0	23.5	22.0	22.5
14	3.5	2.5	3.5	11.5	10.5	11.0	18.0	16.5	17.5	22.0	20.5	21.5
15	5.5	3.5	4.5	11.0	10.5	11.0	14.0	17.0	17.5	22.0	19.0	20.5
16	7.5	5.5	6.5	11.0	10.5	10.5	18.0	17.0	17.5	21.5	20.0	21.0
17	7.5	6.0	6.5	11.0	10.0	10.5	18.0	17.0	17.5	21.5	20.0	21.0
18	6.0	2.5	4.5	11.5	10.5	11.0	18.0	16.5	17.0	21.5	20.5	20.5
19	3.0	1.5	2.5	12.5	11.0	12.0	18.5	16.5	17.5	21.5	20.5	21.0
20	3.5	2.5	3.0	14.0	12.0	13.5	14.5	16.5	17.5	21.5	20.0	21.0
21	3.0	2.5	3.0	14.5	13.5	14.0	18.5	17.0	18.0	21.5	20.5	21.0
22	5.5	3.0	4.0	15.0	13.5	14.5	20.0	17.0	19.0	21.0	20.0	20.5
23	6.5	5.5	6.0	15.0	14.0	14.5	20.0	17.5	19.5	22.5	21.0	21.5
24	7.5	6.5	7.0	14.0	12.5	13.0	20.5	17.5	20.0	22.5	21.5	22.0
25	7.5	7.5	7.5	12.5	12.0	12.5	20.5	16.5	20.0	21.5	21.0	21.0
26	7.5	7.0	7.5	12.0	11.0	11.5	20.0	14.0	14.5	21.0	19.0	20.0
27	7.5	6.5	7.0	12.0	10.5	11.0	19.0	17.5	18.5	20.0	19.0	19.5
28	8.0	7.0	7.5	12.5	11.0	11.5	19.0	17.5	19.0	21.0	19.0	20.0
29	---	---	---	13.0	12.5	12.5	19.0	16.0	18.5	21.5	20.0	21.0
30	---	---	---	14.5	13.5	14.0	14.0	17.5	18.0	21.5	21.0	21.5
31	---	---	---	16.0	14.5	15.5	---	---	---	23.0	21.5	22.5
MONTH	8.0	1.5	4.5	16.0	7.5	12.0	20.5	14.0	17.5	24.0	18.0	21.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE												
1	23.0	22.0	22.5	26.0	25.0	25.5	---	---	---	27.0	26.0	26.5
2	24.5	23.0	24.0	26.5	25.0	25.0	---	---	---	27.0	26.0	

CAPE FEAR RIVER BASIN

02100500 DEEP RIVER AT RAMSEUR, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
OCT								
02...	1315	267	36	26	--	--	--	--
20...	1130	41	10	1.1	--	--	--	--
DEC								
11...	1115	398	53	57	--	--	--	--
JAN								
10...	1215	451	41	50	--	--	--	--
21...	1030	12300	815	27100	26	42	61	76
21...	1300	12000	731	23700	--	--	--	--
21...	1515	11400	637	19600	--	--	--	--
22...	0900	2090	113	638	--	--	--	--
APR								
18...	1200	256	35	24	--	--	--	--
JUN								
04...	1100	1230	104	345	--	--	--	--
JUL								
02...	1045	84	12	2.7	--	--	--	--
AUG								
14...	1400	97	19	5.0	--	--	--	--
SEP								
05...	1230	5430	902	13200	--	53	65	77
05...	1500	8650	941	22000	--	55	67	79
05...	1800	10800	923	26900	--	--	--	--
06...	1130	4590	232	2880	--	--	--	--
10...	1200	121	25	8.2	--	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
OCT							
02...	--	--	--	--	--	--	100
20...	--	--	--	--	--	--	100
DEC							
11...	--	--	--	--	--	--	100
JAN							
10...	--	--	--	--	--	--	100
21...	88	98	99	100	--	--	--
21...	--	--	--	--	--	--	92
21...	--	--	--	--	--	--	91
22...	--	--	--	--	--	--	98
APR							
18...	--	--	--	--	--	--	100
JUN							
04...	--	--	--	--	--	--	100
JUL							
02...	--	--	--	--	--	--	84
AUG							
14...	--	--	--	--	--	--	96
SEP							
05...	--	--	--	--	--	--	94
05...	91	96	98	99	100	100	--
05...	92	96	98	99	100	100	--
06...	--	--	--	--	--	--	94
10...	--	--	--	--	--	--	92

CAPE FEAR RIVER BASIN

241

02101800 TICK CREEK NEAR MOUNT VERNON SPRINGS, N. C.

LOCATION.--Lat 35°39'37", long 79°20'08", Chatham County, Hydrologic Unit 03030003, on right bank 200 ft (61 m) upstream from bridge on U.S. Highway 421, 1.5 mi (2.4 km) east of Mount Vernon Springs, and 4 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--15.3 mi² (39.6 km²).

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

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 455 ft (139 m), by barometer.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 242 of this report.

AVERAGE DISCHARGE.--21 years, 15.4 ft³/s (0.436 m³/s), 13.67 in/yr (347 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,120 ft³/s (88.4 m³/s) July 13, 1975, gage height, 9.43 ft (2.874 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.91 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0630	*2670 75.6	*8.90 2.713	Mar. 24	0445	1020 28.9	6.42 1.957
Feb. 23	1715	846 24.0	6.06 1.847	June 4	0600	1010 28.6	6.41 1.954
Feb. 24	2000	1610 45.6	7.47 2.277	Sept. 5	1030	1620 45.9	7.49 2.283
Feb. 25	2100	692 19.6	5.70 1.737				

Minimum discharge, 0.11 ft³/s (0.003 m³/s) Oct. 30, 31, gage height, 1.75 ft (0.533 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.13	3.0	2.3	8.0	21	8.3	7.4	74	6.4	1.1	.55
2	2.0	.14	1.2	43	6.6	18	7.6	6.2	24	3.4	1.0	.47
3	.80	.15	1.0	18	6.4	14	24	5.5	36	2.2	.90	.43
4	.35	.14	2.0	7.4	6.5	13	152	5.5	392	1.8	.80	1.2
5	.21	.15	9.0	5.7	5.8	63	54	5.2	35	1.6	.70	699
6	.97	.16	16	5.6	5.4	54	25	4.8	21	1.4	.60	35
7	.72	.20	6.0	26	9.4	25	14	4.4	15	1.4	.50	11
8	.39	1.6	4.6	35	11	21	14	4.2	11	1.5	.45	5.9
9	.25	1.2	4.0	13	16	18	16	4.8	8.5	1.4	.40	4.4
10	.19	.58	3.6	7.9	9.5	14	12	5.0	7.0	1.4	.30	3.8
11	.18	.44	2.6	6.3	8.3	52	9.5	4.8	6.5	1.3	.26	2.9
12	.22	.51	2.4	9.9	9.1	28	8.8	6.8	5.3	1.2	.35	2.5
13	.30	.53	2.2	141	16	19	29	24	4.5	1.0	.70	4.0
14	.14	.46	2.0	63	17	19	19	15.0	4.2	.83	.50	4.2
15	.13	.36	1.8	22	29	18	12	37	4.0	.72	.45	2.2
16	.14	.40	1.5	13	28	12	9.0	17	19	.58	.35	1.8
17	.22	.60	2.6	10	15	10	7.7	10	43	.51	.30	1.6
18	.21	.70	2.2	8.2	8.7	9.6	7.0	7.8	13	.50	.25	1.5
19	.24	.50	1.9	6.5	15	8.8	6.5	8.1	7.4	.51	.22	1.5
20	.23	.40	1.9	37	19	8.1	5.0	7.4	5.5	4.4	.20	1.7
21	.21	.30	3.1	1030	55	7.5	5.6	6.2	4.9	10	.19	3.5
22	.24	.26	3.5	58	151	6.9	5.4	6.0	5.9	4.3	.18	3.8
23	.40	.50	2.3	26	367	5.1	5.1	8.4	4.4	5.5	4.0	2.7
24	.42	.70	8.4	69	559	387	4.9	6.0	4.0	5.4	2.0	1.9
25	.39	.60	16	31	381	50	5.0	7.8	3.9	6.2	1.5	1.9
26	.29	.50	6.0	20	174	25	42	6.0	2.9	7.8	1.0	2.7
27	.25	.40	4.2	15	44	14	91	4.8	2.5	3.0	.60	2.1
28	.30	1.0	3.2	13	27	14	27	4.1	2.3	1.9	2.0	2.3
29	.17	1.6	2.5	9.8	---	12	13	32	2.1	1.8	8.7	3.0
30	.11	7.0	2.4	8.3	---	11	9.2	12	2.0	1.5	2.3	3.1
31	.11	---	2.3	4.3	---	9.2	---	13	---	1.3	.86	---
TOTAL	11.38	22.21	126.0	1764.2	2007.7	1008.2	654.6	442.2	770.8	92.75	33.68	812.65
MEAN	.37	.74	4.06	57.1	71.7	32.5	22.0	14.9	25.7	2.67	1.09	27.1
MAX	2.0	7.0	16	1030	559	387	152	160	392	10	8.7	699
MIN	.11	.13	1.0	2.3	5.4	6.9	4.9	4.1	2.0	.50	.18	.43
CFS ¹	.02	.05	.27	3.73	4.69	2.12	1.44	.97	1.68	.18	.07	1.77
IN ²	.03	.05	.31	4.30	4.88	2.45	1.60	1.12	1.87	.20	.08	1.98
CAL YR 1978 TOTAL	6718.49			MEAN 18.4	MAX 496	MIN .11	CFSM 1.21	IN 16.33				
WTH YR 1979 TOTAL	7766.37			MEAN 21.3	MAX 1030	MIN .11	CFSM 1.34	IN 18.88				

CAPE FEAR RIVER BASIN

02101800 TICK CREEK NEAR MOUNT VERNON SPRINGS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STATION- FLOW, INSTANTANEOUS (CFS)	SECT- MFT, SUS- PENDED (MG/L)	SECT- MFT, CHARGE, SUS- PENDED (T/DAY)
03...	1228	.36	54	.05
03...	1200	1.7	5	.03
03...	1130	1.5	40	1.9
03...	1020	55	49	7.4
03...	1020	7.4	5	.14
03...	0950	140	40	19
03...	0945	23	22	1.4
03...	1315	27	26	2.0
03...	1000	17	11	.06
04...	1050	213	311	179
04...	1207	303	319	261
04...	1430	343	219	203
05...	1400	4.6	13	.17

CAPE FEAR RIVER BASIN

243

02102000 DEEP RIVER AT MONCURE, N. C.

LOCATION.--Lat 35°37'41", long 79°06'48", Lee County, Hydrologic Unit 03030003, on right bank 1.0 mi (1.6 km) upstream from Lockville Dam, 1.2 mi (1.9 km) upstream from bridge on U.S. Highway 1, 1.5 mi (2.4 km) northwest of Moncure, 2.2 mi (3.5 km) downstream from Rocky River, and 4.5 mi (7.2 km) upstream from confluence with Haw River.

DRAINAGE AREA.--1,410 mi² (3,650 km²), approximately.

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 822: Drainage area. WSP 1082: (1930-46 not previously published).

GAGE.--Water-stage recorder. Datum of gage is 185.06 ft (56.406 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diurnal fluctuation and some regulation at low flow caused by small powerplants above station. Suspended sediment records for the current year are published on page 500 of this report.

AVERAGE DISCHARGE.--49 years, 1,464 ft³/s (41.46 m³/s), 14.10 in/yr (358 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,300 ft³/s (2,270 m³/s) Sept. 18, 1945, gage height, 17.20 ft (5.243 m); minimum, 5.5 ft³/s (0.16 m³/s) Oct. 10, 1954, gage height, 0.35 ft (0.107 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1500	28800 816	10.12 3.085	Sept. 5.	2400	23600 668	9.26 2.822
Feb. 26	0500	*34100 966	*10.96 3.341				

Minimum discharge, 47 ft³/s (1.33 m³/s) Oct. 22, 23, 24, 26, 27, 28, 30, gage height, 0.94 ft (0.287 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	51	850	389	984	9820	1090	1330	1360	409	235	341
2	163	53	729	659	923	2560	1000	1080	2150	383	202	241
3	167	55	414	2520	840	2030	1000	915	1330	383	184	294
4	243	56	307	2510	771	1750	5900	820	8660	281	188	283
5	227	54	751	1180	747	1790	11700	895	10700	225	361	9480
6	164	55	3780	801	719	4430	6450	814	3110	201	261	16700
7	127	57	2180	810	757	3670	2750	725	1410	187	193	16000
8	116	74	1000	2710	900	2230	1830	657	1020	178	166	10800
9	137	101	659	3160	1280	1980	1500	624	822	169	146	1490
10	137	86	543	1920	1470	1980	1490	616	690	167	132	703
11	110	86	953	1150	1180	2320	1520	739	598	168	117	517
12	90	108	830	885	1010	4460	1200	3850	534	168	111	419
13	83	124	551	4170	1170	2860	1430	3800	609	165	107	363
14	80	117	434	7710	1600	1930	4010	11100	503	160	100	364
15	76	107	377	4640	1880	1860	2700	10500	409	163	119	367
16	72	104	348	2530	2730	1760	1680	4650	472	163	174	330
17	69	120	389	1510	2770	1390	1260	1920	3240	167	145	301
18	66	126	400	1150	1790	1200	1050	1270	4010	171	124	269
19	59	129	391	974	1340	1120	930	1060	1790	183	113	243
20	54	246	390	916	1390	1050	847	976	1020	164	106	222
21	51	254	376	20100	2370	997	785	842	721	207	105	287
22	49	191	403	16900	7070	929	734	758	588	1060	252	447
23	48	170	417	17800	14000	870	690	809	528	1090	250	1140
24	49	164	468	12100	20700	7250	652	1020	479	870	252	4140
25	50	157	937	6500	28400	12800	619	1330	423	1320	186	1140
26	48	158	1850	3650	31300	9120	1000	1730	397	1290	151	620
27	47	203	1170	2140	28200	2600	8270	1140	367	803	136	482
28	50	275	729	1640	22100	1790	13800	794	328	490	140	414
29	50	390	549	1390	---	1480	8130	722	303	367	1620	430
30	48	1010	454	1200	---	1310	1960	774	283	365	924	781
31	50	---	409	1050	---	1180	---	779	---	297	611	---
TOTAL	2875	4881	24038	126764	180391	92516	87977	59039	48854	12414	7911	69608
MEAN	92.7	163	775	4089	6443	2984	2933	1904	1628	400	255	2320
MAX	243	1010	3780	20100	31300	12800	13800	11100	10700	1320	1620	16700
MIN	47	51	307	389	719	870	619	616	283	160	100	222
CFSM	.07	.12	.55	2.90	4.57	2.12	2.08	1.35	1.16	.28	.18	1.65
IN.	.08	.13	.63	3.34	4.76	2.44	2.32	1.56	1.29	.33	.21	1.84
CAL YR 1978	TOTAL	636497	MEAN	1744	MAX	20900	MIN	47	CFSM	1.24	IN	16.79
WTR YR 1979	TOTAL	717268	MEAN	1965	MAX	31300	MIN	47	CFSM	1.39	IN	18.92

CAPE FEAR RIVER BASIN

02102192 BUCKHORN CREEK NEAR CORINTH, N. C.

LOCATION.--Lat 35°34'18", long 78°58'09", Chatham County, Hydrologic Unit 03030004, on left bank at upstream side of bridge on State Highway 42, 0.2 mi (0.3 km) downstream from White Oak Creek, and 2 mi (3.2 km) east of Corinth.

DRAINAGE AREA.--74.2 mi² (192 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 154.63 ft (47.131 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--7 years, 85.2 ft³/s (2.413 m³/s), 15.59 in/yr (396 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,920 ft³/s (196 m³/s) Feb. 2, 1973, gage height, 20.02 ft (6.102 m); minimum, 0.01 ft³/s (<0.001 m³/s) Sept. 2, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1500	2320 65.7	12.35 3.764	Apr. 4	1945	*2440 69.1	*12.68 3.865
Jan. 23	0300	791 22.4	6.63 2.021	May 14	1430	1740 49.3	10.48 3.194
Feb. 26	0500	2120 60.0	11.74 3.578	Sept. 5	1300	2220 62.9	12.07 3.679

Minimum daily discharge, 2.3 ft³/s (0.065 m³/s) Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	6.0	36	18	47	111	40	29	53	7.1	11	8.7
2	40	7.0	21	52	40	112	38	25	41	7.2	9.4	14
3	20	8.0	10	103	37	112	46	23	25	7.4	8.6	32
4	10	7.0	15	42	36	103	1000	22	128	6.7	7.5	81
5	4.0	7.5	127	31	34	108	1090	63	182	10	6.4	1140
6	3.3	8.0	186	39	31	150	316	32	91	10	5.6	1740
7	2.8	10	47	56	39	135	129	30	24	10	4.9	842
8	2.5	17	33	209	47	113	103	26	24	10	4.3	61
9	2.4	15	29	156	75	109	99	25	24	9.9	4.0	46
10	2.3	13	27	94	56	102	91	40	24	9.5	3.7	36
11	3.0	11	22	44	47	124	59	184	23	9.5	3.2	31
12	4.0	8.9	18	47	46	179	45	104	22	11	3.8	26
13	5.0	8.8	15	254	73	125	77	110	21	13	4.3	24
14	6.0	5.8	15	496	73	110	108	1580	19	12	4.1	27
15	7.0	5.6	15	191	82	107	104	1220	17	13	3.8	25
16	8.0	8.0	15	134	102	97	95	263	27	15	3.4	21
17	9.0	12	18	99	82	82	62	82	233	17	3.0	19
18	7.0	11	23	54	39	55	39	64	99	116	2.7	18
19	5.0	10	20	42	53	50	35	71	45	186	2.7	17
20	6.0	8.4	18	52	58	47	33	133	29	65	2.7	16
21	7.0	7.2	18	1330	114	43	30	85	24	131	4.2	63
22	5.0	7.0	21	764	615	39	28	69	46	134	94	97
23	7.0	7.3	20	338	965	37	26	63	21	56	46	38
24	6.0	8.6	36	234	1250	291	24	66	10	33	24	22
25	7.0	8.5	128	226	1340	284	23	217	15	48	13	17
26	9.0	7.9	51	123	1630	124	42	130	14	132	4.2	21
27	6.0	9.4	31	79	376	102	63	73	11	49	7.8	20
28	4.0	15	24	69	155	81	99	64	9.4	26	6.6	21
29	4.0	22	20	57	---	52	94	60	8.3	18	8.7	94
30	4.5	102	19	50	---	47	70	60	7.4	13	12	149
31	5.0	---	18	48	---	43	---	54	---	12	11	---
TOTAL	219.8	380.9	1102	5522	7572	3254	4108	5129	1323.1	1199.4	335.6	4786.7
MEAN	7.09	12.7	35.5	178	270	105	137	165	44.1	38.7	10.8	160
MAX	40	102	186	1330	1630	291	1090	1580	233	186	94	1740
MIN	2.3	5.6	15	18	31	37	23	22	7.4	7.1	2.7	8.7
CFSM	.10	.17	.48	2.40	3.64	1.42	1.85	2.22	.59	.52	.15	2.16
IN.	.11	.19	.55	2.77	3.80	1.53	2.06	2.57	.66	.60	.17	2.40

CAL YR 1978 TOTAL 35974.9 MEAN 98.6 MAX 2820 MIN 1.5 CFSM 1.33 IN 18.04
WTR YR 1979 TOTAL 34932.5 MEAN 95.7 MAX 1740 MIN 2.3 CFSM 1.29 IN 17.51

02102500 CAPE FEAR RIVER AT LILLINGTON, N. C.

LOCATION.--Lat 35°24'30", long 78°48'48", Harnett County, Hydrologic Unit 03030004, on right bank 60 ft (18 m) downstream from downstream bridge on U.S. Highway 401, 1,860 ft (567 m) downstream from Southern Railway bridge (revised), 0.5 mi (0.8 km) north of Lillington, 1 mi (1.6 km) downstream from Neal Creek, and at mile 178 (286 km).

DRAINAGE AREA.--3,440 mi² (8,910 km²), approximately.

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

REVISED RECORDS.--WSP 822: Drainage area. WSP 1002: 1930(M). WSP 1032: 1942(m). WSP 1303: 1944(M). WSP 1333: 1945. WSP 1383: 1924-29, 1936. WSP 1703: 1929.

GAGE.--Water-stage recorder. Datum of gage is 104.62 ft (31.888 m) National Geodetic Vertical Datum of 1929. Dec. 6, 1923 to Oct. 7, 1927, nonrecording gage and Oct. 8, 1927 to Dec. 2, 1975, water-stage recorder at site 60 ft (18 m) upstream in bridge pier at same datum. Gage height telemeters at station.

REMARKS.--Records good. Some regulation at high flows, beginning December 1972, caused by temporary storage in B. Everett Jordan Reservoir. Diurnal fluctuation and slight regulation at low flow caused by powerplants above station. Fluctuation and regulation by Buckhorn Reservoir 13 mi (21 km) above station ended in December 1962.

AVERAGE DISCHARGE.--55 years (water years 1924-79), 3,388 ft³/s (95.95 m³/s), 13.38 in/yr (337 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 ft³/s (4,250 m³/s) Sept. 19, 1945, gage height, 33.19 ft (10.116 m), from floodmark, from rating curve extended above 76,000 ft³/s (2,150 m³/s); maximum daily, 140,000 ft³/s (3,960 m³/s) Sept. 19, 1945; minimum discharge, 11 ft³/s (0.31 m³/s) Oct. 14, 15, 1954, gage height, -0.17 ft (-0.052 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30,000 ft³/s (850 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	0200	35900 1020	15.45 4.709	Sept. 6	0900	32400 918	14.59 4.447
Feb. 26	1900	*48700 1380	*18.23 5.557				

Minimum discharge, 177 ft³/s (5.01 m³/s) Oct. 25, gage height, 0.76 ft (0.232 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	366	245	2520	1210	7310	29000	6050	1280	2070	747	641	970
2	603	250	2260	1470	6380	15100	5720	2150	3300	1020	566	850
3	767	275	1540	4560	5600	13300	5420	2120	2720	962	535	878
4	857	240	1240	7020	4930	12600	8870	1670	7910	867	442	1040
5	803	293	1860	4980	4240	12400	19800	1930	16900	727	625	10100
6	686	293	4740	3570	3360	14300	13600	2300	10600	637	718	29500
7	547	288	8520	2670	2660	14900	7860	1590	6800	600	527	25700
8	618	432	5040	4730	2470	12400	6530	1560	5870	631	434	22600
9	532	435	3080	7060	2890	11300	5940	1630	5230	557	389	10100
10	556	488	2360	6160	3250	11000	5590	1540	4640	629	358	6390
11	459	555	3670	4830	2980	10600	5460	1480	3570	546	325	2840
12	395	490	3740	4090	2630	12500	4770	3100	1670	532	333	1720
13	366	469	2550	5600	2620	11200	3380	6460	1720	520	310	1150
14	349	500	1870	12200	3010	9480	5530	16900	1640	553	506	1050
15	262	432	1580	10000	3370	8630	5720	19500	1360	728	609	1090
16	308	408	1330	7620	4550	7890	4390	12200	1060	603	450	1220
17	374	449	1230	6250	5550	7030	4200	7570	4610	566	417	949
18	292	500	1290	5470	4820	6570	3190	6460	8190	561	358	788
19	291	600	1290	4860	4030	6070	2120	5710	5750	1230	326	709
20	260	800	1200	4400	3770	5610	1990	6510	4300	819	310	664
21	273	1000	1160	18900	4560	5140	1810	5750	3260	1210	298	732
22	232	900	1150	30800	9070	4810	1750	5220	1700	1720	668	1400
23	287	800	1190	27900	17400	4420	1570	2700	1530	2180	792	4740
24	372	700	1270	26000	28700	9330	1270	2690	1440	1610	951	11100
25	227	650	2190	18400	40100	18100	1480	3510	1380	1890	664	9150
26	328	700	4480	14600	46600	17600	1710	3900	1360	2560	513	8040
27	234	800	3900	11800	45300	9390	6360	3030	1230	2020	452	7440
28	315	900	2560	10600	40600	7620	16600	2320	1870	1300	538	6690
29	245	1040	1800	9730	---	7060	14500	1720	893	962	1610	6060
30	288	2110	1480	8920	---	6740	5920	1360	775	829	1840	4780
31	355	---	1280	8150	---	6420	---	2000	---	763	1480	---
TOTAL	12907	18092	79470	294550	312750	328510	179100	138860	115348	31079	18985	180440
MEAN	416	603	2564	9502	11170	10600	5970	4479	3845	1003	612	6015
MAX	857	2110	8790	30800	46600	29000	19800	19500	16900	2560	1840	29500
MIN	227	245	1150	1210	2470	4420	1270	1280	775	520	298	664
CFS-1	.12	.18	.75	2.76	3.25	3.08	1.74	1.30	1.12	.29	.18	1.75
IN-1	.14	.20	.86	3.19	3.38	3.55	1.94	1.50	1.25	.34	.21	1.95
CAL YR 1978	TOTAL	1645116	MEAN	4507	MAX	33700	MIN	227	CFSM	1.31	IN	17.79
WTR YR 1979	TOTAL	1710091	MEAN	4685	MAX	46600	MIN	227	CFSM	1.36	IN	18.49

CAPE FEAR RIVER BASIN

02102908 FLAT CREEK NEAR INVERNESS, N. C.

LOCATION.--Lat 35°10'54", long 79°10'40", Hoke County, Hydrologic Unit 03030004, Fort Bragg military reservation, on left bank 15 ft (5 m) downstream from culvert on Manchester Road, 0.4 mi (0.6 km) upstream from mouth, and 3.6 mi (5.8 km) east of Inverness.

DRAINAGE AREA.--7.65 mi² (19.81 km²).

PERIOD OF RECORD.--June 1968 to current year.

REVISED RECORDS.--WRD N. C. 1972: 1968-70 (M).

GAGE.--Water-stage recorder. Datum of gage is 191.18 ft (58.272 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some diurnal fluctuation at low flow during growing season. Suspended-sediment records for the current year are published on page 500 of this report.

AVERAGE DISCHARGE.--11 years, 13.1 ft³/s (0.371 m³/s), 23.25 in/yr (591 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 394 ft³/s (11.2 m³/s) Apr. 1, 1973, gage height, 7.30 ft (2.225 m); minimum, 2.4 ft³/s (0.068 m³/s) Feb. 12, 1969, gage height, 0.85 ft (0.259 m) due to regulation from unknown source; minimum unregulated, 3.3 ft³/s (0.09 m³/s) July 20, 21, 22, 25, 26, Sept. 4, 1977, gage height, 0.86 ft (0.262 m).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 60 ft³/s (1.70 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 21	1330	62 1.76	2.02 0.616	Sept. 5	1000	*310 8.78	*6.10 1.859

Minimum discharge, 3.8 ft³/s (0.11 m³/s) Aug. 10, 11, 20, 21; minimum gage height, 0.82 ft (0.250 m) Apr. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	7.0	14	9.0	11	15	12	9.8	14	14	5.8	5.4
2	15	7.0	12	19	10	15	11	9.4	9.8	7.2	5.4	13
3	8.3	7.0	11	16	10	14	12	9.2	10	6.0	9.4	7.5
4	7.6	7.7	10	11	10	14	24	9.5	25	5.7	7.0	7.5
5	7.4	8.8	22	10	10	23	22	15	13	5.6	6.0	195
6	7.3	7.5	25	10	9.9	22	13	9.8	10	5.3	5.5	63
7	5.8	7.2	13	13	13	16	12	9.2	9.4	6.2	5.2	18
8	6.8	22	12	21	15	15	12	8.8	8.5	6.3	5.0	13
9	6.8	16	12	12	15	16	15	9.0	8.0	5.5	4.9	12
10	6.9	9.7	12	10	13	14	13	23	7.7	6.1	4.7	12
11	6.8	9.7	11	10	12	22	12	20	8.0	6.0	4.6	11
12	6.8	8.7	10	12	11	16	12	17	7.6	5.7	7.8	11
13	6.7	8.4	10	27	12	14	20	11	7.1	6.9	6.5	14
14	6.8	8.1	9.9	15	11	15	17	13	7.0	5.2	5.4	15
15	6.6	8.1	9.7	12	11	16	13	13	6.7	4.9	5.2	11
16	6.7	7.8	9.7	11	10	14	12	10	15	4.9	5.0	10
17	6.9	15	11	10	9.9	13	11	9.2	25	5.0	4.9	10
18	7.0	10	9.8	10	10	13	11	8.8	11	5.6	4.8	9.6
19	6.9	8.7	9.7	9.7	12	13	11	9.2	8.4	11	4.9	9.2
20	6.7	8.7	9.7	11	13	12	11	9.4	7.5	10	4.8	9.1
21	6.7	8.4	10	38	17	12	10	8.8	7.7	4.9	4.9	12
22	6.7	8.4	9.8	19	23	12	10	15	7.7	29	6.7	12
23	6.7	8.7	9.4	13	33	12	9.9	16	7.1	15	6.3	10
24	6.6	12	13	20	47	36	9.9	16	6.9	18	6.0	15
25	6.7	8.7	14	14	32	18	9.7	35	8.2	9.9	5.7	14
26	6.9	8.4	10	12	46	14	20	14	7.2	9.4	5.2	12
27	7.0	16	9.6	12	19	13	24	11	6.7	8.0	5.6	11
28	7.0	26	9.4	12	16	13	13	10	6.5	7.2	7.2	11
29	7.3	16	9.3	11	---	12	11	9.6	6.1	6.5	6.5	23
30	7.1	33	9.2	11	---	12	10	9.4	6.4	6.2	5.7	25
31	7.0	---	9.0	11	---	12	---	9.1	---	6.2	5.3	---
TOTAL	232.5	338.7	356.2	431.7	461.8	478	403.5	382.2	289.2	297.5	177.9	601.3
MEAN	7.50	11.3	11.5	13.9	16.5	15.4	13.5	12.3	9.64	9.60	5.74	20.0
MAX	16	33	25	38	47	36	24	35	25	49	9.4	195
MIN	6.6	7.0	9.0	9.0	9.9	12	9.7	8.8	6.1	4.9	4.6	5.4
CFSM	.98	1.48	1.50	1.82	2.16	2.01	1.77	1.61	1.26	1.26	.75	2.61
IN.	1.13	1.65	1.73	2.10	2.25	2.32	1.96	1.86	1.41	1.45	.86	2.92
CAL YR 1978	TOTAL	4553.9	MEAN	12.5	MAX	100	MIN	5.9	CFSM	1.63	IN	22.14
WTR YR 1979	TOTAL	4450.5	MEAN	12.2	MAX	195	MIN	4.6	CFSM	1.60	IN	21.64

CAPE FEAR RIVER BASIN

247

02104387 BUCKHEAD CREEK NEAR OWENS, N. C.

LOCATION.--Lat 35°00'37", long 78°57'08", Cumberland County, Hydrologic Unit 03030004, on left bank at upstream side of culvert on Secondary Road 1222, 1.3 mi (2.1 km) south-southeast of Owens and 3.5 mi (5.6 km) upstream from mouth.

DRAINAGE AREA.--2.76 mi² (7.15 km²).

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 147.92 ft (45.086 m) National Geodetic Vertical datum of 1929 (North Carolina Geodetic Survey bench mark).

REMARKS.--Records good. Suspended sediment records for the current year are published on page 248 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184 ft³/s (5.21 m³/s) Aug. 18, 1977, gage height, 5.62 ft (1.713 m); minimum daily discharge, 0.76 ft³/s (0.022 m³/s) July 17, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 70 ft³/s (7.98 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 24	0200	116 3.29	4.70 1.433	Sept. 5	1030	*140 3.96	*5.04 1.536

Minimum daily discharge, 0.76 ft³/s (0.022 m³/s) July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	1.3	5.3	1.4	1.9	3.5	1.6	1.8	5.5	3.2	.78	8.2
2	3.9	1.2	2.7	9.9	1.6	3.3	1.6	1.6	1.8	2.1	.78	5.2
3	1.6	1.2	2.1	8.6	1.4	2.9	1.8	1.5	1.4	1.7	.78	3.4
4	1.1	7.1	1.7	2.2	1.3	2.7	4.8	1.6	7.9	1.9	.78	6.8
5	1.1	4.0	15	1.6	1.3	6.2	5.5	2.5	2.1	3.1	.78	96
6	1.1	1.4	11	1.6	1.3	8.7	2.1	2.7	1.6	2.0	.78	35
7	1.0	1.4	2.9	2.1	8.3	4.2	1.6	2.0	1.3	1.7	.78	7.4
8	1.0	15	1.8	3.8	6.2	4.0	1.5	1.8	1.3	1.5	.78	3.7
9	1.0	7.8	2.3	2.4	2.9	4.2	6.2	2.4	1.3	1.4	.84	2.5
10	1.6	21	2.9	1.5	1.8	3.1	3.9	18	1.2	1.3	.84	1.9
11	1.1	9.7	2.1	1.3	1.6	7.4	2.2	11	1.2	1.2	.84	1.8
12	1.0	3.7	1.7	6.2	1.4	3.7	1.7	6.4	1.2	1.2	1.4	6.4
13	1.0	2.0	1.6	15	1.4	2.5	13	3.9	1.1	1.1	1.2	8.3
14	1.0	1.7	1.6	6.1	1.4	3.7	9.4	3.9	1.1	1.1	1.0	9.6
15	.93	1.5	1.5	2.4	1.4	3.7	3.5	4.4	1.1	.93	1.0	2.9
16	.93	1.5	1.5	1.7	1.4	1.9	2.2	2.0	20	.84	1.0	1.8
17	1.0	1.6	2.0	1.6	1.3	1.6	1.8	1.5	17	.76	1.0	1.6
18	1.0	1.6	1.9	1.5	1.3	1.6	1.7	1.4	5.1	.90	.93	1.6
19	1.0	1.5	1.6	1.4	4.2	1.6	1.7	1.7	3.2	1.3	.93	1.4
20	1.0	1.3	1.5	2.4	10	1.6	1.6	1.5	2.0	5.4	.84	1.3
21	1.0	1.4	2.0	17	14	1.6	1.6	1.3	1.5	23	1.3	1.6
22	1.0	1.4	1.6	5.6	13	1.4	1.6	7.3	1.3	13	4.7	23
23	1.0	2.0	1.6	2.2	17	1.8	1.5	5.5	1.2	11	2.3	12
24	1.0	3.2	7.1	5.8	29	46	1.6	5.7	1.1	13	1.6	2.7
25	1.0	1.8	8.1	4.5	19	6.8	1.6	6.7	2.1	4.2	1.5	1.9
26	1.0	1.6	2.8	2.0	13	3.5	12	2.1	2.3	3.1	1.2	1.8
27	1.1	5.8	1.8	1.6	5.0	2.7	12	1.3	1.7	1.3	4.8	1.7
28	1.1	9.4	1.5	1.6	4.0	2.3	3.9	1.2	1.3	.93	23	2.1
29	1.2	16	1.4	1.4	---	1.8	2.3	1.1	1.1	.84	8.2	31
30	1.3	27	1.4	1.3	---	1.7	2.0	1.1	.97	.84	7.7	24
31	1.2	---	1.4	1.8	---	1.7	---	1.2	---	.84	5.8	---
TOTAL	44.26	157.1	95.4	119.5	167.4	143.4	109.5	108.1	92.97	106.68	80.16	308.6
MEAN	1.43	5.24	3.08	3.85	5.98	4.63	3.65	3.49	3.10	3.44	2.59	10.3
MAX	9.0	27	15	17	29	46	13	18	20	23	23	96
MIN	.93	1.2	1.4	1.3	1.3	1.4	1.5	1.1	.97	.76	.78	1.3
CFSM	.52	1.90	1.12	1.40	2.17	1.68	1.32	1.26	1.12	1.25	.94	3.73
IN.	.60	2.12	1.29	1.61	2.26	1.93	1.48	1.46	1.25	1.44	1.08	4.16
CAL YR 1978	TOTAL	1614.66	MEAN	4.42	MAX	53	MIN	.93	CFSM	1.60	IN	21.75
WTR YR 1979	TOTAL	1533.07	MEAN	4.20	MAX	96	MIN	.76	CFSM	1.52	IN	20.66

CAPE FEAR RIVER BASIN

02104387 BUCKHEAD CREEK NEAR OWENS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
06...	1055	17	30	1.4
04...	1130	5.6	36	0.54
04...	1409	6.0	39	0.63
05...	1130	130	124	44
05...	1545	42	217	54
02...	1700	33	115	26

02105500 CAPE FEAR RIVER AT WILLIAM O. HUSKE LOCK NEAR TARHEEL, N. C.

LOCATION.--Lat 34°50'05", long 78°49'27", Bladen County, Hydrologic Unit 03030005, on right bank 100 ft (30 m) upstream from William O. Huske Lock, 1 mi (1.6 km) downstream from Cumberland-Bladen County line, 7 mi (11 km) north of Tarheel, 9 mi (14 km) upstream from Phillips Creek, and at mile 123 (198 km).

DRAINAGE AREA.--4,810 mi² (12,460 km²), approximately.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1964, published as Cape Fear River at Lock 3 near Tarheel, N. C.

GAGE.--Water-stage recorder and concrete lock and dam control. Datum of gage is 28.968 ft (8.829 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 8, 1939, nonrecording gage on upper lock wall 100 ft (30 m) downstream at same datum. Auxiliary water-stage recorder 1.8 mi (2.9 km) downstream from base gage; prior to Jan. 14, 1943, auxiliary nonrecording gage 400 ft (122 m) downstream on lower end of lock wall; Jan. 14, 1943 to Sept. 30, 1953, auxiliary water-stage recorder at site 600 ft (183 m) downstream.

REMARKS.--Records good except those for period of no gage-height record Mar. 13 to Apr. 23, which are fair. Slight regulation at high flows, beginning December 1972, caused by storage in B. Everett Jordan Reservoir. Slight diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station. Suspended sediment records for the current year are published on page 250 of this report.

AVERAGE DISCHARGE.--42 years, 5,009 ft³/s (141.9 m³/s), 14.14 in/yr (359 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined; maximum gage height, 43.44 ft (13.24 m) Sept. 22, 1945; maximum daily discharge, 112,000 ft³/s (3,170 m³/s) Sept. 21, 1945; minimum discharge, 170 ft³/s (4.81 m³/s) Sept. 20, 1954; minimum daily, 208 ft³/s (5.89 m³/s) Sept. 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46,200 ft³/s (1,310 m³/s) Feb. 27, maximum gage height 28.33 ft (8.635 m) Feb. 28, minimum discharge, 533 ft³/s (15.1 m³/s) Oct. 20, 24, gage height, 0.86 ft (0.262 m); minimum daily, 556 ft³/s (15.7 m³/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	812	719	4700	2160	9600	43100	7800	6960	3070	1230	1370	2170
2	1060	701	4430	2300	8590	33200	7400	3900	3430	1570	1190	1690
3	1200	636	3660	3570	7610	26700	6900	3160	4160	1890	1050	1820
4	1400	728	2780	7390	6720	19600	7300	2840	4220	1610	970	1880
5	1420	823	2670	7700	6020	17200	14700	2530	13700	1350	898	6440
6	1340	803	6090	5940	5310	16700	18400	3010	15100	1130	1070	21800
7	1170	782	11400	4560	4580	18300	14100	2800	10500	1000	1100	32800
8	1040	982	9380	4240	4120	17900	10500	2400	7780	954	909	33600
9	1010	1420	5820	7060	4350	16400	9000	2300	6520	946	793	28500
10	921	1710	3930	8180	4790	14900	8000	2600	5710	894	705	20300
11	907	1970	4900	7080	4940	14200	7200	3300	4980	924	652	11600
12	821	1690	5900	6000	4550	14100	6800	4000	3390	858	640	5100
13	752	1420	5300	6300	4210	14400	6000	6500	2320	844	640	3100
14	727	1270	3900	10700	4120	12900	6400	11500	2230	814	654	2640
15	720	1110	2900	12100	4470	11600	8200	17400	2070	857	846	2500
16	677	862	2500	11400	4940	10400	7100	19500	1900	1010	926	2460
17	680	907	2300	9460	6120	9200	6000	15600	3230	894	795	2370
18	717	999	2200	7860	6460	8500	5400	11200	8260	856	784	1970
19	636	1090	2180	6920	5710	8200	4200	9000	9140	1170	730	1700
20	567	1330	2150	6180	5250	7800	3300	8420	6780	1880	663	1520
21	582	1570	2050	8080	5620	7100	3100	7660	5410	2260	621	1410
22	603	1470	2030	19500	8060	6600	2800	6940	3600	3150	726	1750
23	620	1300	2020	25700	14000	6100	2700	6660	2510	4280	1100	3000
24	556	1260	2130	29000	22000	8600	2390	5240	2220	4640	1540	8190
25	691	1230	2570	28200	32000	16800	2250	7010	2200	4610	1570	12000
26	665	1260	4100	22200	37000	20500	2540	7860	2010	5480	1270	10100
27	672	1300	5680	17800	42800	18500	3980	6660	1890	5330	1040	8910
28	668	1620	4530	15100	45100	13400	12900	5450	1960	3910	936	7940
29	660	2190	3330	12900	---	10300	16800	4230	1970	2690	1190	7650
30	663	3830	2640	11300	---	9200	12700	3200	1320	1910	2640	8890
31	667	---	2370	11000	---	8500	---	2780	---	1560	2610	---
TOTAL	25624	38982	122540	337880	319040	460900	226860	202610	143580	62501	32628	255800
MEAN	827	1299	3953	10900	11390	14870	7562	6536	4786	2016	1053	8527
MAX	1420	3830	11400	29000	45100	43100	18400	19500	15100	5480	2640	33600
MIN	556	636	2020	2160	4120	6100	2250	2300	1320	814	621	1410
CFSM	.17	.27	.82	2.27	2.37	3.09	1.57	1.36	1.00	.42	.22	1.77
IN.	.20	.30	.95	2.61	2.47	3.56	1.75	1.57	1.11	.48	.25	1.98
CAL YR 1978 TOTAL	2306131			6318	36800	556	CFSM 1.31	IN 17.84				
WTR YR 1979 TOTAL	2228945			6107	45100	556	CFSM 1.27	IN 17.24				

CAPE FEAR RIVER BASIN

02105500 CAPE FEAR RIVER AT WILLIAM O HUSKE LOCK NEAR TARHEEL, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STATION- FLOOD- INSTA- TAKENOUS (CFS)	DEPTH- MENT- SUS- PERFECT (MG/L)	SEMI- MENT- DIS- CHARGE, SUS- PENDED (T/DAY)
Jan 29...	1100	12900	63	2590
Mar 01...	1420	42500	94	11200
03...	1000	17100	63	2410
13...	1050	14400	37	1440
Apr 10...	1000	5000	28	600
May 15...	1615	17400	334	15700

CAPE FEAR RIVER BASIN

251

02105769 CAPE FEAR RIVER AT LOCK 1 NEAR KELLY, N. C.

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 (2.1 km) upstream from Natmore Creek, 2.0 mi (3.2 km) upstream from bridge on State Highway 11, 4.6 mi (7.4 km) southeast of Kelly, and at mile 67 (108 km).

DRAINAGE AREA.--5,220 mi² (13,520 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1969 to current year.

GAGE.--Water-stage recorder with concrete lock and dam control. Datum of gage is 2.90 ft (0.884 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Water-discharge record fair except those for period of no gage-height record, Feb. 15 to Mar. 13, which are poor. Slight regulation at high flow, beginning December 1972, caused by storage in B. Everett Jordan Reservoir. Slight diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station. The city of Wilmington diverted an average of 14.8 ft³/s (0.42 m³/s) for municipal water supply, most of which is returned as sewage below station. Gage height telemeter at station.

AVERAGE DISCHARGE.--10 years, 6,102 ft³/s (172.8 m³/s), 15.88 in/yr (403 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,700 ft³/s (1,630 m³/s) Mar. 3, 1979, gage height, 24.92 ft (7.596 m) from floodmarks; minimum, 412 ft³/s (11.7 m³/s) Aug. 1, 1977, gage height, 14.45 ft (4.404 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 57,700 ft³/s (1,630 m³/s) Mar. 3, gage height, 24.92 ft (7.596 m); minimum, 610 ft³/s (17.3 m³/s) Aug. 21, gage height, 14.81 ft (4.514 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	834	738	4590	2600	12600	49700	9940	14100	3400	1460	1780	2920
2	994	746	5150	2810	11000	55800	8860	8690	3520	1390	1500	2410
3	1180	756	4890	3550	9530	57100	8240	4730	4150	1790	1290	2050
4	1360	757	4020	5220	8310	49900	7910	3590	4510	1910	1130	2160
5	1520	843	3270	7900	7240	38500	9040	2980	6610	1680	1030	5730
6	1510	885	3730	7770	6500	29400	13800	2820	12900	1370	1000	13900
7	1410	874	7770	6260	5900	24100	16300	3200	15200	1150	1150	19300
8	1230	915	10900	5070	5300	21800	16100	2900	13500	1020	1120	23400
9	1130	1160	9630	5480	5000	21500	13900	2640	10100	986	958	29000
10	1090	1550	6470	7650	5200	19800	11400	2830	7880	966	825	33200
11	1030	1940	4970	8280	5400	18600	9500	3500	6590	962	734	30700
12	968	2010	4740	7430	5300	17700	8390	4180	5470	915	720	22200
13	914	1760	5140	6840	4890	16900	7520	3080	3620	908	676	11500
14	871	1520	4420	7720	4550	16600	6920	7730	2720	880	668	5670
15	826	1350	3440	11400	4600	16000	7530	11800	2490	854	693	3880
16	793	1240	2870	13200	4900	15000	8510	16300	2400	953	853	3230
17	766	1110	2570	12600	5500	13600	7860	14400	2710	993	864	2990
18	750	1050	2310	10700	6500	12100	6820	14000	5040	941	796	2690
19	707	1120	2300	8840	6700	10800	5730	15300	9140	978	779	2250
20	777	1220	2320	7550	6200	9810	4450	12100	9630	1580	733	1920
21	698	1480	2270	7140	5900	8900	3770	10200	7850	2250	675	1700
22	686	1620	2210	11000	7000	8110	3430	8950	6030	3310	703	1630
23	698	1540	2160	16800	10000	7440	3070	8190	3990	4210	809	2200
24	726	1420	2310	19900	14400	8420	2840	7310	2910	5210	1240	4140
25	722	1350	2660	23300	18100	12200	2520	6710	2710	5520	1680	8670
26	750	1340	3230	26700	21600	15800	2540	8220	2570	5870	1610	10900
27	738	1370	4870	27600	28600	17900	2950	8640	2320	6490	1310	10600
28	751	1520	5550	24900	40500	18700	5870	7490	2090	5970	1070	9690
29	744	1690	4570	20500	---	17100	11900	6070	2280	4480	1020	8870
30	745	3160	3500	17100	---	14100	15200	4700	1930	3110	1610	9880
31	726	---	2860	14600	---	11500	---	3570	---	2240	2900	---
TOTAL	28724	40278	132380	358410	277220	654880	242810	240920	166260	72346	33926	289380
MEAN	927	1343	4270	11560	9901	21130	8094	7772	5542	2334	1094	9646
MAX	1520	3160	10900	27600	40500	57100	16300	18400	15200	6490	2900	33200
MIN	686	738	2160	2600	4550	7440	2520	2640	1930	854	668	1630
CFSM	.18	.26	.82	2.22	1.90	4.05	1.55	1.49	1.06	.45	.21	1.85
IN.	.20	.29	.94	2.55	1.98	4.67	1.73	1.72	1.18	.52	.24	2.06

CAL YR 1978 TOTAL 2538299 MEAN 6954 MAX 37300 MIN 686 CFSM 1.33 IN 18.09
WTR YR 1979 TOTAL 2537534 MEAN 6952 MAX 57100 MIN 668 CFSM 1.33 IN 18.08

CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C. --Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1973 to current year.
WATER TEMPERATURES: January 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since May 1973.

REMARKS.--Daily records of specific conductance for period October 1956 to September 1961 are available in the district office in Raleigh, N. C. During period 1956-73, data were collected at bridge on State Highway 11 located 2 mi (3.2 km) downstream and published as Cape Fear River near Acme. Malfunctions of water-quality monitor caused some loss of daily records during June.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 317 micromhos Oct. 19, 20, 1976; minimum, 40 micromhos June 26, 1973.
WATER TEMPERATURES: Maximum, 32.0°C July 9, 19, 20, 21, 1977, Aug. 10, 1979; minimum, 0.5°C Jan. 24, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 177 micromhos Oct. 30, 31; minimum, 41 micromhos Mar. 2.
WATER TEMPERATURES: Maximum, 32.0°C Aug. 10; minimum, 4.5°C Feb. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 02...	1015	1020	95	6.1	23.5	15	7.0	K56	K16	17	3	3.7
NOV 06...	1400	908	140	7.1	16.0	4.0	8.2	K24	K20	19	0	4.5
DEC 18...	1200	2330	92	7.1	7.5	15	11.5	K2300	100	22	2	5.1
FEB 12...	1200	5290	81	6.4	4.5	20	14.0	110	K36	18	1	4.3
MAR 27...	1200	17900	63	6.4	13.0	80	9.6	660	310	16	4	3.7
APR 10...	1215	11100	68	6.2	16.0	30	8.6	410	80	16	3	4.0
MAY 21...	1130	10300	58	6.4	21.0	50	7.7	K120	120	16	3	3.9
JUN 12...	1000	5660	71	6.7	24.0	45	7.4	120	100	19	1	4.6
JUL 02...	1215	1420	88	6.2	26.5	16	--	84	K40	18	2	4.1
AUG 01...	1130	1810	85	6.0	29.0	10	6.4	K40	K44	14	0	3.1
SEP 11...	1030	31400	52	5.8	23.5	30	4.9	250	280	14	5	3.6

K Results based on colony count outside the acceptable range (non-ideal colony count).

CAPE FEAR RIVER BASIN

253

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 02...	1.8	10	52	1.1	2.8	17	0	14	22	11	9.7	.1
NOV 06...	1.9	18	63	1.8	3.1	23	0	19	2.9	18	16	.2
DEC 18...	2.2	8.3	42	.8	2.6	24	0	20	3.1	12	8.1	.1
FEB 12...	1.7	7.4	45	.8	1.7	21	0	17	13	10	7.5	.1
MAR 27...	1.6	4.8	37	.5	1.6	15	0	12	9.6	7.5	5.7	.0
APR 10...	1.5	5.2	39	.6	1.4	16	0	13	16	7.8	5.4	.0
MAY 21...	1.6	4.4	34	.5	1.8	16	0	13	10	6.6	5.0	.1
JUN 12...	1.9	5.9	37	.6	2.0	22	0	18	7.0	6.6	5.2	.1
JUL 02...	1.9	8.6	47	.9	2.3	20	0	16	20	8.7	8.2	.1
AUG 01...	1.6	9.0	54	1.0	2.0	18	0	15	29	9.5	7.9	.1
SEP 11...	1.2	3.8	33	.4	2.1	11	0	9	28	6.1	5.1	.1
DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)
OCT 02...	8.9	70	56	.10	193	.28	.02	--	1.2	1.2	.73	.47
NOV 06...	6.8	95	80	.13	233	1.2	.16	--	.71	.87	.20	.67
DEC 18...	11	68	61	.09	428	.52	.14	--	.35	.49	.00	.51
FEB 12...	9.6	68	53	.09	971	.54	.24	--	.43	.67	--	--
MAR 27...	9.3	63	42	.09	3050	.46	.13	--	.69	.82	.24	.58
APR 10...	8.1	67	41	.09	2010	.39	.07	--	.46	.53	.00	.53
MAY 21...	8.3	72	40	.10	2000	.45	.08	.10	.60	.68	.02	.66
JUN 12...	9.6	76	47	.10	1160	.68	.09	.11	.65	.74	.08	.66
JUL 02...	9.1	84	53	.11	322	.72	.13	.16	.44	.57	.09	.48
AUG 01...	8.1	74	51	.10	362	.56	.07	.08	.46	.53	.10	.43
SEP 11...	6.8	71	35	.10	6020	.26	.06	.07	.87	.93	.41	.52

CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTMBER 1979

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)
OCT 02...	1.5	6.6	.39	--	--	.15	--	--	--	--	--
NOV 06...	2.1	9.2	.35	--	--	.30	1	0	1	0	0
DEC 18...	1.0	4.5	.18	--	--	.15	--	--	--	--	--
FEB 12...	1.2	5.4	--	--	--	.40	2	0	2	100	0
MAR 27...	1.3	5.7	.15	--	--	.14	--	--	--	--	--
APR 10...	.92	4.1	.14	--	--	.07	--	--	--	--	--
MAY 21...	1.1	5.0	.18	--	.55	.08	1	0	1	<50	<20
JUN 12...	1.4	6.3	.16	--	.49	.12	--	--	--	--	--
JUL 02...	1.3	5.7	.19	--	.58	.15	--	--	--	--	--
AUG 01...	1.1	4.8	.15	--	.46	.12	1	0	1	<50	<10
SEP 11...	1.2	5.3	.15	--	.46	.06	3	0	3	100	50

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 02...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	0	0	0	0	<10	<9	1	0	0	0	36
DEC 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 12...	100	3	3	0	<10	<9	1	9	9	0	3
MAR 27...	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--	--	--	--
MAY 21...	30	0	0	0	30	20	10	2	2	0	5
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 02...	--	--	--	--	--	--	--	--	--	--	--
AUG 01...	40	0	0	1	10	10	10	2	1	1	7
SEP 11...	50	0	0	2	20	10	10	1	0	1	6

CAPE FEAR RIVER BASIN

255

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 02...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	34	2	450	190	260	1	1	0	30	0	40
DEC 18...	--	--	--	--	--	--	--	--	--	--	--
FEB 12...	3	0	1100	1000	70	--	--	0	70	30	40
MAR 27...	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--	--	--	--
MAY 21...	3	2	3100	2900	160	0	0	0	80	50	30
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 02...	--	--	--	--	--	--	--	--	--	--	--
AUG 01...	3	4	960	640	320	5	0	5	140	70	70
SEP 11...	1	5	1700	1300	400	4	1	3	150	80	70

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 02...	--	--	--	--	--	--	--	--	--	--
NOV 06...	<.5	.0	<.5	0	0	0	0	0	0	30
DEC 18...	--	--	--	--	--	--	--	--	--	--
FEB 12...	<.5	.0	<.5	0	0	0	0	0	0	40
MAR 27...	--	--	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--	--	--
MAY 21...	<.5	.0	<.5	0	0	0	0	0	0	20
JUN 12...	--	--	--	--	--	--	--	--	--	--
JUL 02...	--	--	--	--	--	--	--	--	--	--
AUG 01...	<.5	.0	<.5	0	0	0	0	0	0	20
SEP 11...	<.5	.0	<.5	0	0	0	0	0	0	120

CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
OCT 02...	--	--	--	--	--	--	--	--	--	--
NOV 06...	10	20	<.6	<.4	3.5	.5	3.3	.6	.08	.02
DEC 18...	--	--	--	--	--	--	--	--	--	--
FEB 12...	30	10	--	--	--	--	--	--	--	--
MAR 27...	--	--	<.6	5.1	2.3	2.2	2.1	2.1	.03	.06
APR 10...	--	--	--	--	--	--	--	--	--	--
MAY 21...	20	4	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--
JUL 02...	--	--	--	--	--	--	--	--	--	--
AUG 01...	10	6	--	--	--	--	--	--	--	--
SEP 11...	120	3	--	--	--	--	--	--	--	--

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO- SURE (DAYS)
OCT 02...	6.8	--	--	--	--	--	--	--	--
NOV 06...	--	8.7	.7	--	--	--	--	--	--
DEC 18...	9.3	--	--	--	--	--	--	--	--
FEB 12...	--	8.2	.9	--	--	--	--	--	--
MAR 27...	13	--	--	--	--	--	--	--	--
APR 10...	12	--	--	--	--	--	--	--	--
MAY 21...	--	14	1.5	3.54	2.60	27.7	33.9	8.86	40
JUN 12...	11	--	--	--	--	--	--	--	--
JUL 02...	9.7	--	--	13.1	10.6	102	24.5	11.6	19
AUG 01...	--	7.3	.1	--	--	--	--	--	--
SEP 11...	--	12	.3	--	--	--	--	--	--

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

PHYTOPLANKTON ANALYSES, JULY TO SEPTEMBER 1978

DATE TIME	JUL 5, 78 1120	JUL 18, 78 1150	AUG 15, 78 1045
TOTAL CELLS/ML	670	1300	110
DIVERSITY: DIVISION	1.1	1.2	1.4
..CLASS	1.1	1.2	1.4
...ORDER	1.1	2.1	1.4
...FAMILY	1.7	2.2	1.4
....GENUS	2.0	2.2	1.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTRODESMEUS	--	-	14	1	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	120#	17	--	-	--	-
...SCENEDESMEUS	59	9	260#	20	57#	50
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	29	2	--	-
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINOIDSACEAE						
....CYCLOTELLA	--	-	24	2	--	-
....MELOSTRA	--	-	29	2	--	-
...PENNALIS						
...FRAGILARIACEAE						
....SYNEURA	--	-	--	-	14	13
...NAVICULACEAE						
....NAVICULA	--	-	43	3	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	460#	36	--	-
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	290#	43	--	-	--	-
...OSCILLATOIRIACEAE						
....OSCILLATORIA	180#	26	390#	31	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....THACHELOMONAS	29	4	--	-	43#	38
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...PERIDINIACEAE						
....PERIDINIUM	--	-	14	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 6,78 1400	MAR 27,79 1200	MAY 21,79 1130	JUN 12,79 1000	JUL 2,79 1215	SEP 11,79 1030				
TOTAL CELLS/ML	55	1400	120	850	140	670				
DIVERSITY: DIVISION	1.5	1.8	1.0	0.2	0.9	1.1				
..CLASS	1.7	1.8	1.0	0.2	0.9	1.1				
...ORDER	1.5	2.6	1.4	0.2	0.9	1.9				
...FAMILY	2.0	3.1	1.8	0.2	1.5	2.1				
....GENUS	2.0	3.2	1.8	0.2	2.2	2.1				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	13	11	--	-	13	9
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	52#	36
....SCENEDESMACEAE										
....SCENEDESMUS	--	-	180	13	52#	44	--	-	26#	15
....VULVOCALES										
....CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	180	13	--	-	--	-	--	-
....PHACOTACEAE										
....PHACOTUS	14#	25	--	-	--	-	--	-	--	-
....ZYGNEMATALES										
....DESMIDIACEAE										
....STAUROSTRUM	--	-	61	4	--	-	--	-	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	120	9	--	-	--	-	26#	18
....MELOSIRA	--	-	30	2	26#	22	--	-	26#	18
...PENNALES										
....ACHNANTHACEAE										
....RHODOSPHENIA	--	-	30	2	--	-	--	-	--	-
....CYMBELLACEAE										
....CYMBELLA	--	-	61	4	--	-	--	-	--	-
....GOMPHONEMACEAE										
....GOMPHONEMA	14#	25	--	-	--	-	--	-	--	-
....NAVICULACEAE										
....NAVICULA	14#	25	150	11	--	-	--	-	--	-
....NITZSCHACEAE										
....NITZSCHIA	--	-	120	9	26#	22	26	3	--	-
....SURIACEAE										
....SURIELLA	--	-	30	2	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	820#	97	--	-
....ANACYSTIS	--	-	390#	28	--	-	--	-	--	-
...HORMOGONALES										
....OSCILLATORIAEAE										
....LYNGBYA	--	-	--	-	--	-	--	-	170#	26
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
....TRACHELOMONAS	14#	25	30	2	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...PERIDINIALES										
....GLENODINIACEAE										
....GLENODINIUM	--	-	30	2	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CAPE FEAR RIVER BASIN

259

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	92	91	91	173	166	170	171	143	163	120	113	117
2	94	88	92	166	157	162	168	148	160	112	104	108
3	88	82	84	159	155	156	148	124	135	104	87	96
4	98	83	93	162	158	161	124	108	113	95	86	91
5	96	91	94	157	147	151	108	107	108	94	83	88
6	94	89	91	147	138	142	115	108	112	96	82	87
7	94	89	91	138	134	135	124	115	121	101	95	99
8	97	91	95	135	133	134	123	107	115	97	88	93
9	99	96	97	143	134	137	122	104	115	90	86	88
10	102	99	101	144	128	138	103	96	98	86	85	85
11	103	101	102	126	116	120	97	92	94	88	84	87
12	101	100	100	125	115	120	92	91	92	84	78	79
13	101	98	100	126	118	122	91	83	87	85	77	80
14	98	95	96	118	113	117	83	81	82	86	80	83
15	103	96	100	114	112	113	82	81	82	83	79	81
16	104	103	104	114	113	114	85	82	84	80	73	75
17	106	103	104	113	111	112	92	86	88	77	75	76
18	113	106	109	119	112	116	95	92	93	72	77	74
19	118	113	116	121	119	120	96	93	95	83	81	82
20	118	117	118	118	114	116	93	87	89	82	80	82
21	117	116	116	114	107	110	93	86	89	80	77	78
22	122	117	119	108	106	106	93	90	92	81	76	66
23	126	122	124	111	108	109	90	87	88	59	56	58
24	126	123	125	111	109	110	88	85	87	57	56	57
25	123	121	122	113	111	112	88	86	87	57	56	56
26	132	123	126	123	114	118	86	82	83	59	57	58
27	150	133	142	126	124	125	87	82	84	62	59	61
28	170	151	162	136	126	130	94	87	91	65	62	63
29	176	170	173	143	137	140	99	94	96	66	65	66
30	177	175	176	148	135	143	101	98	99	67	66	66
31	177	174	176	---	---	---	118	102	110	67	65	66
MONTH	177	82	114	173	106	129	171	81	101	120	56	79

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	67	64	66	46	43	44	61	58	60	70	65	68
2	67	65	66	43	41	42	64	61	63	72	69	71
3	67	65	66	43	42	42	69	64	67	69	67	68
4	68	67	68	45	43	44	71	68	70	68	67	68
5	74	68	71	46	45	45	75	71	73	70	68	69
6	75	74	74	49	45	47	80	75	77	73	70	72
7	76	74	75	54	49	52	79	64	70	76	73	74
8	78	75	77	55	52	53	67	64	66	79	76	78
9	82	78	80	59	54	56	66	63	65	79	77	78
10	83	82	82	60	58	60	65	62	63	80	75	77
11	81	81	81	60	60	60	66	63	64	78	75	76
12	80	79	79	61	58	60	68	66	67	78	71	76
13	79	78	79	59	58	58	70	68	69	78	75	77
14	81	78	79	64	58	61	69	67	68	80	74	78
15	83	81	82	66	63	64	71	69	70	86	66	72
16	83	82	83	66	62	64	70	66	68	86	54	71
17	84	82	83	61	59	60	70	64	66	65	55	60
18	90	84	87	61	60	61	72	67	70	59	56	57
19	95	90	93	62	61	62	71	67	68	58	56	57
20	95	92	93	62	61	62	76	71	74	58	56	58
21	96	91	95	63	62	62	76	75	76	63	58	60
22	91	86	88	65	63	64	75	73	74	74	64	69
23	93	85	88	67	65	66	77	74	76	81	74	78
24	85	74	81	70	66	68	79	77	78	81	77	78
25	73	64	68	73	67	71	78	75	76	78	77	78
26	67	57	61	73	62	66	78	74	77	78	70	76
27	57	52	55	74	61	67	86	77	81	68	61	63
28	52	46	49	61	55	58	77	73	74	63	54	60
29	---	---	---	56	55	55	87	73	77	54	51	53
30	---	---	---	57	55	56	95	67	78	65	54	59
31	---	---	---	58	56	57	---	---	---	69	65	67
MONTH	96	46	77	74	41	58	95	58	71	86	51	69

CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	71	69	70	---	---	95	85	80	83	126	102	116
2	69	67	68	87	86	87	90	95	88	126	124	125
3	69	68	68	88	85	87	91	90	91	133	126	130
4	71	69	70	83	79	81	94	90	92	127	113	118
5	77	70	73	81	79	80	94	92	93	122	112	117
6	92	78	84	81	80	80	93	90	92	114	93	103
7	102	71	81	84	81	82	90	88	90	85	70	77
8	71	60	64	87	84	85	91	88	89	72	61	66
9	63	60	62	89	86	88	96	91	94	61	56	59
10	63	61	62	91	88	90	98	95	97	56	54	55
11	70	63	67	94	91	93	98	96	97	56	53	55
12	75	70	72	97	93	95	96	91	94	61	56	58
13	---	---	82	100	96	98	91	86	89	67	61	64
14	---	---	86	100	98	100	88	85	86	71	67	69
15	---	---	88	100	96	98	90	86	88	74	69	72
16	---	---	88	95	86	92	91	89	90	77	75	76
17	---	---	86	86	82	84	94	90	92	77	76	77
18	---	---	78	85	83	84	98	94	96	80	76	77
19	---	---	71	91	85	89	100	98	99	78	74	77
20	---	---	70	97	92	95	103	100	101	77	74	76
21	---	---	72	96	91	94	105	100	102	79	72	77
22	---	---	76	103	90	95	100	99	100	79	75	78
23	---	---	81	103	99	101	107	100	104	81	78	80
24	---	---	85	104	102	103	111	107	109	76	68	73
25	---	---	86	106	100	104	107	101	103	74	56	66
26	---	---	87	103	88	98	103	99	101	95	62	80
27	---	---	88	88	83	85	111	97	101	81	53	63
28	---	---	90	98	88	94	115	112	114	97	76	86
29	---	---	89	91	88	90	116	113	115	76	69	73
30	---	---	91	89	81	84	117	108	114	69	64	68
31	---	---	---	82	80	81	107	99	102	---	---	---
MONTH	102	60	78	106	79	91	117	80	97	133	53	80
YEAR	177	41	87									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	25.0	24.5	24.5	18.5	18.0	18.5	14.5	14.0	14.5	8.0	7.5	7.5
2	24.5	24.5	24.5	18.5	17.5	18.0	14.0	13.0	13.0	9.0	8.0	8.5
3	24.5	24.0	24.0	18.0	17.5	17.5	13.0	12.0	12.5	9.0	7.5	8.5
4	24.5	24.0	24.0	17.5	17.0	17.0	13.0	12.0	12.5	7.5	6.5	7.0
5	24.0	24.0	24.0	17.5	16.5	17.0	13.0	13.0	13.0	8.0	6.5	7.5
6	24.5	24.0	24.0	17.0	16.5	17.0	13.0	12.5	12.5	8.5	7.0	7.5
7	24.0	23.5	23.5	17.0	16.5	16.5	13.0	12.5	12.5	8.0	7.0	7.5
8	23.5	22.5	23.0	17.0	16.5	16.5	13.5	12.5	13.0	8.5	7.5	8.0
9	22.5	22.0	22.5	17.0	16.5	16.5	13.5	12.5	13.0	8.0	7.5	7.5
10	22.0	21.5	22.0	17.0	16.5	17.0	13.5	12.0	12.5	7.5	7.0	7.0
11	21.5	21.0	21.5	17.0	16.5	17.0	12.0	12.0	12.0	7.0	6.5	6.5
12	21.5	21.0	21.0	17.0	17.0	17.0	12.0	12.0	12.0	7.0	6.5	6.5
13	21.5	21.0	21.0	17.0	16.5	17.0	12.0	11.5	11.5	7.0	6.5	6.5
14	21.5	21.0	21.0	17.0	16.5	16.5	11.5	11.0	11.5	7.0	6.0	6.5
15	21.0	20.5	21.0	17.0	16.5	17.0	11.0	10.0	10.5	6.5	5.5	6.0
16	20.5	20.5	20.5	17.0	17.0	17.0	10.0	9.5	9.5	6.0	5.5	5.5
17	20.5	20.0	20.0	17.5	17.0	17.0	9.5	9.5	9.5	6.0	5.5	5.5
18	20.0	19.5	20.0	18.0	17.0	17.5	10.0	9.0	9.5	6.0	5.5	5.5
19	20.0	19.5	19.5	18.0	17.5	17.5	10.0	9.5	9.5	7.0	6.0	6.0
20	19.5	19.0	19.5	17.5	17.0	17.0	10.0	9.5	9.5	7.5	7.0	7.5
21	19.5	19.0	19.0	17.0	17.0	17.0	10.0	9.5	10.0	7.5	7.0	7.0
22	19.5	19.0	19.0	17.0	16.5	17.0	10.0	9.5	9.5	8.5	7.5	8.0
23	19.5	19.0	19.0	16.5	16.5	16.5	9.5	9.0	9.5	9.0	8.0	8.5
24	19.0	19.0	19.0	16.5	16.5	16.5	9.5	9.0	9.0	8.0	7.5	8.0
25	19.0	18.5	18.5	16.5	16.0	16.0	9.5	9.0	9.0	8.0	7.5	7.5
26	19.0	18.5	19.0	16.0	15.5	15.5	9.5	9.0	9.0	7.5	7.5	7.5
27	19.5	18.5	19.0	15.5	15.0	15.5	9.0	9.0	9.0	7.5	7.0	7.5
28	19.0	19.0	19.0	15.5	15.5	15.5	9.0	8.0	8.5	7.0	7.0	7.0
29	19.0	19.0	19.0	15.5	15.0	15.5	8.0	7.5	7.5	7.0	7.0	7.0
30	19.0	18.5	19.0	15.5	14.5	15.0	7.5	7.0	7.5	7.0	6.5	6.5
31	19.0	18.5	18.5	---	---	---	7.5	7.0	7.5	6.5	6.0	6.5
MONTH	25.0	-	21.0	18.5	14.5	16.5	14.5	7.0	10.5	9.0	5.5	7.0

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.5	6.0	6.0	9.5	9.0	9.0	17.0	16.0	16.5	20.0	19.5	20.0
2	6.0	6.0	6.0	9.5	9.0	9.5	17.5	16.5	17.0	20.0	19.5	20.0
3	6.5	6.0	6.5	10.0	9.5	9.5	18.5	17.5	18.0	20.0	20.0	20.0
4	6.5	5.5	6.0	10.5	9.5	10.0	18.5	18.5	18.5	20.5	20.0	20.5
5	6.0	5.5	5.5	11.0	10.5	10.5	19.0	18.5	18.5	20.5	20.5	20.5
6	6.0	5.5	5.5	11.5	11.0	11.0	19.0	18.5	18.5	21.0	20.5	20.5
7	6.0	5.5	6.0	12.0	11.5	11.5	18.5	17.0	17.0	21.5	20.5	21.0
8	6.0	5.0	5.5	12.0	11.5	12.0	17.0	16.5	16.5	22.0	21.5	22.0
9	5.5	5.0	5.0	12.5	12.0	12.0	17.0	16.5	17.0	22.5	22.0	22.5
10	5.5	5.0	5.0	12.5	12.0	12.5	17.0	16.5	17.0	23.0	22.5	23.0
11	4.5	4.5	4.5	12.5	12.0	12.5	17.5	17.0	17.0	23.5	23.0	23.0
12	5.5	5.0	5.0	12.5	12.0	12.5	18.0	17.5	17.5	24.0	23.5	24.0
13	5.5	5.0	5.5	12.5	12.0	12.5	18.0	17.5	18.0	24.5	24.0	24.0
14	5.5	5.0	5.0	12.5	12.0	12.5	19.0	18.0	18.5	24.5	24.5	24.5
15	6.0	5.0	5.5	12.5	12.0	12.5	19.0	18.5	19.0	24.5	24.0	24.5
16	6.5	6.0	6.0	12.5	12.0	12.5	19.5	18.5	19.0	24.5	22.0	23.0
17	6.5	6.0	6.5	12.5	12.0	12.5	19.5	19.0	19.0	22.0	21.0	21.5
18	6.5	5.5	6.0	12.5	12.0	12.5	19.0	18.5	19.0	21.5	20.5	21.0
19	6.5	5.5	6.0	13.0	12.0	12.5	19.0	18.5	18.5	21.0	20.5	20.5
20	6.5	6.0	6.0	13.5	12.5	13.0	19.0	18.5	18.5	21.5	20.5	20.5
21	6.0	6.0	6.0	14.0	13.5	13.5	19.0	18.5	19.0	21.5	20.5	21.0
22	6.0	5.5	6.0	14.5	13.5	14.0	19.5	19.0	19.0	22.0	21.0	21.5
23	6.5	5.5	6.0	15.0	14.0	14.5	19.5	19.0	19.5	22.5	21.5	22.0
24	7.0	6.0	6.5	15.5	15.0	15.0	20.0	19.5	20.0	22.5	22.5	22.5
25	8.0	6.5	7.5	16.0	15.5	15.5	20.0	20.0	20.0	22.5	22.0	22.5
26	9.0	8.0	8.5	15.5	15.0	15.5	20.5	20.0	20.5	22.5	22.5	22.5
27	9.0	8.5	9.0	15.5	14.5	15.0	21.0	20.5	21.0	23.0	22.5	22.5
28	9.5	9.0	9.0	14.5	14.0	14.0	22.5	21.0	22.0	22.5	22.0	22.5
29	---	---	---	15.0	14.0	14.5	22.5	22.0	22.0	22.0	21.5	22.0
30	---	---	---	15.5	14.5	15.0	22.0	20.0	20.5	22.0	21.0	21.5
31	---	---	---	16.0	15.0	15.5	---	---	---	22.5	22.0	22.0
MONTH	9.5	4.5	6.0	16.0	9.0	12.5	22.5	16.0	18.5	24.5	19.5	22.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	23.0	22.5	22.5	---	---	---	30.0	29.0	29.0	29.0	28.5	29.0
2	24.0	23.0	23.5	27.5	27.0	27.5	30.0	29.0	29.5	29.0	28.5	28.5
3	24.5	24.0	24.5	28.0	27.0	27.5	30.5	29.5	30.0	29.0	28.5	28.5
4	24.5	24.5	24.5	28.0	27.0	27.5	31.0	30.0	30.5	28.5	28.5	28.5
5	25.5	24.5	25.0	28.5	27.5	28.0	31.0	30.0	30.5	28.5	27.0	27.5
6	25.5	24.5	25.0	28.0	27.0	27.5	31.0	30.5	31.0	27.0	26.5	27.0
7	24.5	23.0	23.5	27.5	27.0	27.0	31.5	31.0	31.0	27.0	25.5	26.0
8	23.5	23.0	23.5	27.5	27.0	27.0	31.5	31.0	31.5	25.5	25.0	25.5
9	24.0	23.0	23.5	27.0	26.5	27.0	31.5	31.0	31.5	25.5	25.0	25.0
10	24.5	24.0	24.0	27.0	26.5	27.0	32.0	31.5	31.5	25.0	24.5	24.5
11	24.5	24.5	24.5	27.5	27.0	27.0	31.5	31.0	31.5	25.0	24.5	24.5
12	24.5	24.5	24.5	28.0	27.0	27.5	31.5	31.0	31.5	24.5	24.5	24.5
13	---	---	---	28.5	27.5	28.0	31.5	31.0	31.0	25.0	24.5	24.5
14	---	---	---	29.5	28.0	28.5	31.0	30.0	30.5	25.5	25.0	25.0
15	---	---	---	29.5	28.5	29.0	31.0	30.0	30.5	25.5	25.0	25.0
16	---	---	---	29.0	28.5	29.0	30.5	29.5	30.0	25.5	25.0	25.0
17	---	---	---	29.5	28.5	29.0	30.0	29.0	29.0	25.0	24.5	25.0
18	---	---	---	29.5	29.0	29.5	29.0	28.5	29.0	25.0	24.5	24.5
19	---	---	---	29.5	29.0	29.0	29.5	28.5	29.0	25.0	24.5	25.0
20	---	---	---	29.5	29.0	29.5	29.5	28.5	29.0	25.0	24.5	25.0
21	---	---	---	30.0	29.0	29.5	29.0	29.0	29.0	25.0	25.0	25.0
22	---	---	---	29.5	29.0	29.0	29.0	28.5	29.0	25.5	25.0	25.5
23	---	---	---	29.0	29.0	29.0	29.0	28.5	29.0	25.5	25.0	25.0
24	---	---	---	29.0	28.5	29.0	29.0	29.0	29.0	25.0	24.5	24.5
25	---	---	---	29.0	28.5	28.5	29.5	29.0	29.0	24.5	24.0	24.0
26	---	---	---	28.5	28.0	28.5	29.5	29.0	29.0	24.0	22.5	23.0
27	---	---	---	28.5	27.5	28.0	29.0	29.0	29.0	22.5	22.0	22.0
28	---	---	---	28.5	27.5	28.0	29.0	29.0	29.0	22.5	22.0	22.0
29	---	---	---	28.5	27.5	28.0	29.5	28.5	29.0	22.0	22.0	22.0
30	---	---	---	28.5	28.5	28.5	29.5	28.5	29.0	22.5	22.0	22.0
31	---	---	---	29.0	28.5	28.5	29.5	29.0	29.0	---	---	---
MONTH	25.5	22.5	24.0	30.0	26.5	28.0	32.0	28.5	30.0	29.0	22.0	25.0
YEAR	32.0	4.5	18.5									

CAPE FEAR RIVER BASIN

02105769 CAPE FEAR RIVER AT LOCK 1, NEAR KELLY, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
02...	1015	1020	14	39	85
NOV					
06...	1400	908	7	17	100
FEB					
12...	1200	5290	16	229	100
MAR					
27...	1200	17900	143	6910	64
APR					
10...	1215	11100	37	1110	98
MAY					
21...	1130	10300	39	1090	100
JUN					
12...	1000	5660	37	565	93
JUL					
02...	1215	1420	16	61	86
AUG					
01...	1130	1810	18	88	84
SEP					
11...	1030	31400	53	4490	63

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER QUALITY DATA, PERIOD AUGUST TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
AUG									
02...	1210	1740	71	6.9	30.0	5.8	20	1.3	20
SEP									
07...	1230	4060	98	6.8	26.0	6.8	18	.7	180

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
09...	1220	957	92	--	20.0	9.0	19	.5	120
NOV									
05...	1130	752	130	--	19.0	8.1	19	1.9	10
DEC									
07...	1300	5130	101	--	13.0	10.7	25	2.2	990
JAN									
06...	1115	5020	71	--	9.0	11.0	23	2.0	340
FEB									
27...	1040	26600	41	6.8	8.0	10.0	28	2.6	560
MAR									
07...	1100	24100	42	6.3	11.0	9.8	26	2.6	160
APR									
11...	1055	9410	60	5.6	16.0	8.4	30	2.5	230
MAY									
09...	1130	2620	80	6.1	22.0	7.4	22	.8	30
JUN									
14...	1100	2700	80	6.9	24.0	7.3	26	1.1	10
JUL									
11...	1400	982	70	7.0	26.0	6.9	17	1.1	10
AUG									
08...	1155	1130	110	6.5	31.0	6.8	23	1.3	540
SEP									
11...	1445	30400	60	6.2	26.0	5.2	44	1.5	50

CAPE FEAR RIVER BASIN

263

02106000 LITTLE COHARIE CREEK NEAR ROSEBORO, N. C.

LOCATION.--Lat 34°57'13", long 78°29'17", Sampson County, Hydrologic Unit 03030006, on downstream end of center pier of bridge on State Highway 24, 1.2 mi (1.9 km) east of Roseboro, and 1.5 mi (2.4 km) upstream from Bearskin Swamp.

DRAINAGE AREA.--96.4 mi² (250 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 80.52 ft (24.542 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Jan. 12, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 264 of this report.

AVERAGE DISCHARGE.--29 years, 117 ft³/s (3.313 m³/s), 16.48 in/yr (419 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft³/s (96.3 m³/s) Oct. 7, 1964, gage height, 9.97 ft (3.039 m); minimum, 0.1 ft³/s (0.003 m³/s) Sept. 13, 14, 27, Oct. 1-11, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1924 reached a stage of 11.6 ft (3.54 m), from information by North Carolina State Highway Commission

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,770 ft³/s (50.1 m³/s) Sept. 7, gage height, 8.55 ft (2.606 m); minimum, 2.6 ft³/s (0.074 m³/s) Aug. 21, gage height, 1.14 ft (0.347 m).

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	9.4	254	84	136	523	184	39	37	16	33	42
2	41	10	301	115	125	423	155	33	45	14	27	92
3	52	9.5	403	168	119	343	137	29	36	11	24	132
4	40	17	345	158	113	293	151	27	34	4.9	21	147
5	26	36	290	164	107	241	149	26	62	4.6	18	254
6	20	44	287	175	101	309	180	27	69	7.2	16	429
7	17	34	274	171	115	494	140	25	40	5.9	14	1350
8	14	34	251	156	131	529	170	22	27	6.7	12	1460
9	13	49	262	143	137	634	150	21	21	6.4	11	771
10	12	62	261	140	140	534	140	32	18	6.5	9.3	471
11	12	94	234	138	139	553	130	129	17	5.2	7.3	329
12	11	97	201	136	133	510	120	208	17	6.7	6.7	264
13	11	87	155	172	144	433	110	104	17	4.4	6.5	225
14	11	61	133	181	114	389	100	65	14	5.9	6.7	203
15	10	42	111	189	147	337	110	85	12	5.3	6.3	175
16	9.7	35	101	208	102	313	140	68	24	4.2	5.8	147
17	9.1	31	95	220	96	241	150	49	85	3.8	4.7	123
18	8.7	32	90	213	91	257	150	35	94	10	4.0	99
19	8.7	30	87	189	91	238	140	34	109	77	3.7	80
20	8.5	28	84	165	105	219	120	62	73	68	3.2	66
21	8.2	26	82	200	135	200	100	56	34	194	2.9	64
22	7.8	24	84	231	175	182	90	48	34	317	5.4	62
23	7.7	24	85	237	208	166	70	49	39	311	9.1	65
24	7.5	32	107	267	309	228	60	56	30	207	25	86
25	7.5	39	143	291	444	271	50	81	62	201	28	108
26	7.7	37	133	272	548	244	63	59	94	241	26	108
27	7.4	33	135	243	635	355	76	44	55	233	20	105
28	7.6	53	136	222	507	341	74	34	30	120	15	95
29	7.6	76	122	199	---	237	59	29	22	42	13	209
30	7.6	214	101	171	---	247	46	33	18	52	18	849
31	4.3	---	49	151	---	214	---	30	---	42	21	---
TOTAL	435.6	1399.9	5446	5769	5388	10852	3594	1644	1277	2358.2	423.7	8760
MEAN	14.1	46.7	176	186	192	350	120	53.0	42.6	76.1	13.7	292
MAX	52	214	403	291	635	634	189	208	109	317	33	1400
MIN	7.4	9.4	82	84	91	166	46	21	12	3.8	2.9	42
CFSM	.15	.48	1.63	1.93	1.99	3.63	1.25	.55	.44	.79	.14	3.03
IN	.17	.54	2.10	2.23	2.08	4.19	1.39	.63	.49	.91	.16	3.38
CAL YR 1978	TOTAL	54893.5	MEAN	150	MAX	1230	MIN	7.4	CFSM	1.56	IN	21.18
WTR YR 1979	TOTAL	47347.4	MEAN	130	MAX	1400	MIN	2.9	CFSM	1.35	IN	18.27

CAPE FEAR RIVER BASIN
02106000 LITTLE COHARIE CREEK NEAR ROSEBORO, N. C.
WATER-QUALITY RECORDS

WATER QUALITY DATA WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STEMMA- FLUOR- IMPERMAN- T (PPM)	SEMIT- SEMIT- SUS- PENDE (PPM/L)	SEMIT- SEMIT- SUS- PENDE (PPM/L)	SEMIT- SEMIT- SUS- PENDE (PPM/L)
01...	1030	7.6	2	14	
02...	1145	541	6	13	
03...	1740	550	5	13	
04...	0855	615	5	13	
05...	1740	500	5	13	
06...	0915	320	3	2.5	
07...	1525	250	35	25	
08...	1150	611	14	30	
09...	1745	731	25	39	
10...	1437	1000	50	216	
11...	1030	1700	13	50	

265

LOCATION.--Lat 34°45'17", long 78°17'21", Sampson County, Hydrologic Unit 03030006, on left bank 30 ft (9 m) upstream from bridge on State Highway 411, 0.2 mi (0.3 km) downstream from Clear Run Swamp, and 3.8 mi (6.1 km) northeast of Tomahawk.

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 24.61 ft (7.501 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1951, to June 29, 1961, nonrecording gage on downstream side of bridge. June 30, 1961, to Sept. 30, 1964, water-stage recorder at present site at datum 25.00 ft (7.620 m) lower.

AVERAGE DISCHARGE.--28 years, 791 ft³/s (22.40 m³/s), 15.80 in/yr (401 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s (317 m³/s) Oct. 9, 1964, gage height, 21.14 ft (6.443 m); minimum, 8.5 ft³/s (0.24 m³/s) Oct. 13, 1954, gage height, 0.59 ft (0.180 m), present site and datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1928 reached a stage of 22.0 ft (6.71 m), present datum, discharge, 14,500 ft³/s (411 m³/s) and floods in 1945 and 1948 reached a stage of 17.6 ft (5.36 m), present datum, discharge, 5,420 ft³/s (153 m³/s), from information furnished by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,310 ft³/s (179 m³/s) Sept. 9, gage height, 18.68 ft (5.694 m); minimum, 53 ft³/s (1.50 m³/s) July 19; minimum gage height, 1.46 ft (0.445m), Aug. 21.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	55	985	533	909	2350	1610	373	559	162	364	171
2	116	59	1060	683	814	2550	1450	330	476	140	280	183
3	162	62	1040	1180	729	2580	1280	294	410	124	244	401
4	160	66	991	1370	676	2450	1160	268	383	109	216	510
5	138	79	958	1440	641	2250	1160	249	477	97	200	1120
6	113	131	1000	1460	608	2210	1180	248	461	93	168	1890
7	94	155	1100	1430	633	2370	1160	252	433	93	142	2650
8	83	153	1140	1290	791	2610	1120	233	410	88	127	4380
9	75	144	1160	1120	873	2950	1090	216	340	83	114	6010
10	71	169	1150	1010	864	3350	1190	247	266	79	103	6110
11	68	227	1080	930	823	3490	1270	747	230	77	94	5280
12	67	295	972	862	782	3400	1270	1280	284	79	125	4290
13	66	302	879	934	754	3190	1140	1710	313	85	171	3360
14	65	275	802	1090	717	2940	977	1910	309	77	122	2610
15	64	237	716	1170	680	2700	892	1800	292	71	100	2040
16	64	193	623	1180	649	2450	872	1630	253	64	89	1640
17	63	167	554	1140	615	2240	922	1460	588	59	81	1290
18	59	153	504	1080	583	2050	949	1140	826	56	75	957
19	59	146	465	1010	594	1860	927	797	809	55	70	757
20	59	143	434	952	679	1680	884	684	703	112	67	637
21	58	141	422	992	812	1520	787	776	570	337	66	551
22	57	136	412	1150	948	1360	664	807	445	788	94	514
23	57	133	402	1240	1040	1210	582	818	406	984	123	493
24	56	139	444	1270	1180	1300	513	846	344	1130	147	468
25	55	159	758	1270	1380	1640	464	944	332	1310	291	468
26	55	171	890	1270	1620	1890	453	1060	361	1500	271	487
27	55	173	827	1240	1850	2050	522	1120	412	1610	182	509
28	55	187	734	1190	2090	2160	534	1160	364	1600	142	520
29	55	245	664	1150	---	2130	485	1180	254	1380	135	636
30	55	627	615	1090	---	2000	426	1010	195	929	169	1250
31	55	---	571	1000	---	1800	---	710	---	532	160	---
TOTAL	2332	5322	24352	34726	25334	70730	27933	26299	12505	13903	4732	52184
MEAN	75.2	177	786	1120	905	2282	931	848	417	448	153	1739
MAX	162	627	1160	1460	2090	3490	1610	1910	826	1610	364	6110
MIN	55	55	402	533	583	1210	426	216	195	55	66	171
CFSM	.11	.26	1.16	1.65	1.33	3.36	1.37	1.25	.61	.66	.23	2.56
IN.	.13	.29	1.33	1.90	1.39	3.87	1.53	1.44	.68	.76	.26	

CAL YR 1978	TOTAL	320897	MEAN 879	MAX 3710	MIN 55	CFSM 1.29	IN 17.55
WTR YR 1979	TOTAL	300352	MEAN 823	MAX 6110	MIN 55	CFSM 1.21	IN 16.43

CAPE FEAR RIVER BASIN

02106500 BLACK RIVER NEAR TOMAHAWK, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW INSTAN- TANEOUS (CFS)	SEDI- MENT SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
03...	1245	138	5	1.9
30...	1415	53	1	.14
NOV				
05...	1700	152	1	.41

CAPE FEAR RIVER BASIN

267

02106648 BLACK RIVER AT SECONDARY ROAD 1722 NEAR DUNN, N. C.

LOCATION.--Lat 35°20'52", long 78°37'28", Harnett County, Hydrologic Unit 03030006, at bridge on Secondary Road 1722 and 3.0 mi (4.8 km) north-northwest of Dunn.

DRAINAGE AREA.--38 mi² (98 km²).

PERIOD OF RECORD.--Water years 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-WF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (46/L AS CAC03)	BICAR- BONATE (MG/L AS HC03)
NOV												
24...	1300	5.4	73	6.6	11.0	6.3	4200	81100	81400	--	--	5
DEC												
01...	1200	13	115	6.6	10.0	6.3	--	--	--	--	--	6
JAN												
03...	1300	47	88	6.9	4.0	9.6	940	640	82500	--	--	4
FEB												
15...	1300	44	80	5.7	5.0	12.0	540	816	--	--	--	3
27...	1015	430	60	5.4	7.0	8.4	730	100	270	--	--	3
MAR												
12...	1000	130	63	6.6	7.0	10.0	828	824	48	--	--	2
24...	1030	135	55	6.0	11.0	7.9	130	40	44	--	--	3
APR												
10...	0945	60	60	5.5	12.0	7.4	220	62	60	--	--	6
MAY												
17...	1430	133	45	5.5	17.5	6.4	--	--	--	--	--	6
JUN												
04...	1200	18	--	--	--	--	--	--	--	--	--	--
JUL												
26...	1430	6.1	90	5.2	23.0	5.5	--	--	--	.0	.0	5
30...	1030	.36	85	5.6	24.5	3.7	3600	250	300	.0	.0	5
SEP												
05...	1530	90	83	5.3	23.0	5.0	--	--	--	.0	.0	6
07...	1130	280	64	5.6	23.0	4.7	--	--	--	.0	.0	0
11...	0915	40	67	5.2	21.0	--	340	300	220	.0	.0	--
26...	0930	4.8	59	5.7	13.0	5.8	280	210	300	.0	.0	10

DATE	CAR- BONATE (MG/L AS CO3)	ALKAL- INITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SOLIDS, RESIDUE AT 150 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TOAS PER AC-FT)	SOLIDS, DIS- SOLVED (TOAS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITROGEN TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (46/L AS N+4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
NOV												
24...	0	4	2.0	88	.12	1.28	.13	.01	.14	.03	--	.48
DEC												
01...	0	5	2.4	108	.15	3.79	.13	.01	.14	--	--	--
JAN												
03...	0	3	.8	70	.10	5.88	.05	.00	.05	.05	--	.44
FEB												
15...	0	2	9.6	56	.08	6.65	.21	.00	.21	.02	--	.49
27...	0	2	19	53	.07	61.5	.54	.01	.55	.01	--	.41
MAR												
12...	0	2	.8	53	.07	13.6	.19	.00	.19	.04	--	.10
26...	0	2	4.8	49	.07	17.9	.03	.01	.04	.00	--	.47
APR												
10...	0	5	30	56	.08	9.40	.01	.00	.01	.03	--	.60
MAY												
17...	0	5	30	74	.10	26.5	.03	.01	.04	.03	.04	.96
JUN												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
26...	0	4	50	60	.08	.99	.62	.00	.62	.04	.05	.79
30...	0	4	20	77	.10	.07	.12	.00	.12	.04	.05	.87
SEP												
05...	0	5	48	82	.11	19.9	.01	.00	.01	.07	.08	1.7
07...	0	0	137	74	.10	55.9	.28	.03	.31	.07	.08	.63
11...	0	4	49	92	.13	9.94	.02	.01	.03	.18	.22	1.0
26...	0	8	32	79	.11	1.02	.03	.00	.03	.03	.04	.71

K Results based on colony count outside the acceptable range (non-ideal colony count).

02106648 BLACK RIVER AT SECONDARY ROAD 1722 NEAR DUNN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)		PCB, TOTAL IN HOT- TOM MA- TERIAL (UG/KG)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
NOV													
28...	.51	.65	2.9	.04	--	.12	.01	10	--	--	--	--	--
DEC													
01...	--	--	--	.15	--	.46	.09	11	--	--	--	--	--
JAN													
03...	.49	.54	2.4	.03	--	.09	.01	7.5	--	--	--	--	--
FEB													
15...	.51	.72	3.2	.00	--	.00	.00	7.0	--	--	--	--	--
27...	.42	.97	4.3	.04	--	.12	.01	11	--	--	--	--	--
MAR													
12...	.14	.33	1.5	.02	--	.06	.01	7.6	--	--	--	--	--
28...	.47	.51	2.3	.03	--	.09	.00	11	--	--	--	--	--
APR													
10...	.63	.64	2.8	.03	--	.09	.00	12	--	--	--	--	--
MAY													
17...	.99	1.0	4.6	.06	--	.18	.01	15	--	--	--	--	--
JUN													
08...	--	--	--	--	--	--	--	--	--	0	--	--	--
JUL													
26...	.83	1.5	6.4	.07	.03	.21	.01	11	.1	--	--	.00	.00
30...	.91	1.0	4.6	.04	.00	.12	.00	13	--	--	--	--	--
SEP													
05...	1.8	1.8	8.0	.15	.00	.46	.00	14	--	--	--	--	--
07...	.70	1.0	4.5	.05	.34	.15	.11	13	--	--	--	--	--
11...	1.2	1.2	5.4	.07	.06	.21	.02	18	--	--	--	--	--
26...	.74	.77	3.4	.04	.06	.12	.02	21	--	--	--	--	--
	ALDRIN, TOTAL IN HOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL IN HOT- TOM MA- TERIAL (UG/L)	CHLOR- DANE, TOTAL IN HOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL IN HOT- TOM MA- TERIAL (UG/L)	DDD, TOTAL IN HOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN HOT- TOM MA- TERIAL (UG/L)	DDT, TOTAL IN HOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN HOT- TOM MA- TERIAL (UG/L)	DDT, TOTAL IN HOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL IN HOT- TOM MA- TERIAL (UG/L)	DI- AZINON, TOTAL IN HOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)
NOV													
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
08...	.0	--	3	--	8.8	--	11	--	11	--	--	.0	--
JUL													
26...	--	.0	--	.00	--	.00	--	.00	--	.00	--	--	.00
30...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

269

02106648 BLACK RIVER AT SECONDARY ROAD 1722 NEAR DUNN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	DIELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)
NOV 28...	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	--	--	--	--	--	--	--	--	--	--	--
JAN 03...	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	--	--	--	--	--	--	--	--	--	--	--
JUN 03...	1.2	--	--	.0	--	.0	--	.0	--	.0	--
JUL 26...	--	.00	.00	--	.00	--	.00	--	.00	--	.00
30...	--	--	--	--	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

DATE	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHOXY- CHLOR, TOTAL (UG/L)	METHOXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL THION, TOTAL (UG/L)	METHYL THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL THION, TOTAL (UG/L)	METHYL THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)
NOV 28...	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	--	--	--	--	--	--	--	--	--	--	--
JAN 03...	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	--	--	--	--	--	--	--	--	--	--	--
JUN 08...	.0	--	.0	--	.0	--	.0	--	.0	--	--
JUL 26...	--	.00	--	.00	--	.00	--	.00	--	.00	.00
30...	--	--	--	--	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

DATE	PARATHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 08...	.0	--	--	0	.0
JUL 26...	--	.00	0	--	.00

CAPE FEAR RIVER BASIN

02106648 BLACK RIVER AT SECONDARY ROAD 1722 NEAR DUNN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV				
23...	1300	5.4	48	.70
DEC				
31...	1200	13	7	.25
JAN				
33...	1300	47	5	.63
FEB				
25...	0725	425	8	9.2
27...	1015	430	5	5.3
29...	1650	280	3	2.3
MAR				
05...	1735	92	3	.75
12...	1000	130	7	2.5
23...	1030	135	3	1.1
29...	1020	94	3	.68
APR				
10...	0745	60	9	1.5
24...	1300	7.2	4	.09
MAY				
17...	1430	133	3	1.1
24...	1300	165	10	4.5
JUN				
04...	1430	46	21	2.7
07...	1510	27	5	.36
09...	1200	18	149	7.2
11...	0740	6.9	73	1.4
14...	0730	3.3	8	.08
21...	1720	5.3	5	.07
JUL				
20...	1430	0.1	16	.26
30...	1030	.36	6	.01
AUG				
05...	1530	40	31	7.5
07...	1130	280	10	7.6
11...	0915	40	5	.54

CAPE FEAR RIVER BASIN

271

02106651 BLACK RIVER NEAR ERWIN, N. C.

LOCATION.--Lat 35°18'44", long 78°38'44", Harnett County, Hydrologic Unit 03030006, at bridge on Secondary Road 1735, 1.5 mi (2.4 km) below Southern Railway and 2.0 mi (3.2 km) southeast of Erwin.

DRAINAGE AREA.--41 mi² (106 km²).

PERIOD OF RECORD.--October 1978 to September 1979.

REMARKS.--During period 1977-78, water-quality data was published as Black River near Dunn (station 02106681).

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOC- CI, FECAL, KF AGAR (COLS. PER 100 ML)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CaCO3)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)
NOV												
28...	1230	107	6.5	11.0	5.6	K16000	K12000	K11000	--	--	5	0
DEC												
01...	1100	117	6.5	10.0	6.9	--	--	--	--	--	17	0
JAN												
03...	1130	88	7.3	5.0	9.3	1100	380	930	--	--	3	0
FEB												
15...	1130	80	4.9	5.0	11.2	340	K16	--	--	--	6	0
27...	1145	63	5.6	7.0	8.3	800	140	220	--	--	2	0
MAR												
12...	1115	60	6.7	7.5	9.6	K24	K48	K24	--	--	2	0
28...	1145	51	5.6	11.0	8.5	48	42	K24	--	--	4	0
APR												
10...	1045	55	5.5	13.0	7.5	170	50	40	--	--	4	0
MAY												
17...	1300	45	5.5	18.0	6.1	--	--	--	--	--	5	0
JUN												
08...	1100	--	--	--	--	--	--	--	--	--	--	--
JUL												
24...	1200	85	5.7	27.5	2.2	4800	K1100	K700	.0	.0	11	0
26...	1300	70	5.1	26.0	4.2	--	--	--	.0	.0	8	0
30...	1115	90	5.8	26.5	4.8	2900	190	200	.0	.0	12	0
AUG												
15...	1145	75	5.3	27.0	8.4	K48	K8	K44	.0	.0	11	0
21...	1300	75	4.8	36.0	6.1	--	--	--	.0	.0	1	0
22...	1300	90	4.8	24.0	5.1	K400	K50	230	.0	.0	1	0
23...	1345	78	5.7	32.0	5.9	K280	80	K36	.0	.0	2	0
SEP												
05...	1620	64	5.2	23.5	6.3	--	--	--	.0	.0	7	0
06...	1130	69	5.2	24.0	5.4	--	--	--	.0	.0	2	0
07...	1045	59	5.0	24.0	5.1	--	--	--	.0	.0	3	0
11...	1015	67	5.0	21.0	--	350	140	240	.0	.0	--	0
26...	1120	56	5.7	19.0	7.0	2000	190	210	.0	.0	3	0

K Results based on colony count outside the acceptable range (non-ideal colony count).

CAPE FEAR RIVER BASIN

02106651 BLACK RIVER NEAR ERWIN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
NOV												
28...	4	2.5	93	.13	.10	.01	.11	.03	--	.60	.63	.74
DEC												
01...	14	8.6	101	.14	.19	.01	.20	.01	--	.59	.60	.80
JAN												
03...	2	.2	72	.10	.11	.00	.11	.00	--	.42	.42	.53
FEB												
15...	5	121	56	.08	.23	.00	.23	.01	--	.72	.73	.96
27...	2	8.0	58	.08	.46	.01	.47	.00	--	.31	.31	.78
MAR												
12...	2	.6	53	.07	.13	.00	.13	.01	--	.07	.08	.21
28...	3	16	53	.07	.00	.01	.01	.00	--	.40	.40	.41
APR												
10...	3	20	65	.09	.00	.01	.00	.04	--	.90	.94	.94
MAY												
17...	4	25	69	.09	.03	.01	.04	.01	.01	.89	.90	.94
JUN												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
24...	9	35	105	.14	.00	.04	.01	.00	.00	2.5	2.5	2.5
26...	7	102	82	.11	.01	.01	.02	.05	.06	.98	.93	.95
30...	10	30	81	.11	.02	.00	.02	.02	.02	.88	.90	.92
AUG												
15...	9	88	50	.07	.00	.04	.02	.04	.05	.42	.46	.48
21...	1	25	74	.10	.00	.03	.02	.04	.05	.49	.53	.55
22...	1	25	67	.09	.03	.12	.15	.21	.25	1.5	1.7	1.9
23...	2	6.4	79	.11	.04	.10	.14	.22	.27	1.1	1.3	1.4
SEP												
05...	6	71	62	.08	.01	.00	.01	.10	.12	1.4	1.5	1.5
06...	2	20	58	.08	.00	.02	.02	.11	.13	.99	1.1	1.1
07...	2	48	74	.10	.05	.01	.06	.03	.04	1.6	1.6	1.7
11...	2	39	96	.13	.01	.01	.02	.01	.01	1.1	1.1	1.1
26...	2	9.6	69	.09	.00	.05	.03	.07	.08	1.7	1.8	1.8

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PCB, TOTAL (UG/L)	PCB, IN TOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, IN TOT- TOM MA- TERIAL (UG/KG)
NOV											
28...	3.3	.20	--	.61	.02	9.2	--	--	--	--	--
DEC											
01...	3.5	.06	--	.18	.01	9.9	--	--	--	--	--
JAN											
03...	2.3	.02	--	.06	.00	7.3	--	--	--	--	--
FEB											
15...	4.3	.01	--	.03	.00	5.9	--	--	--	--	--
27...	3.5	.03	--	.09	.00	11	--	--	--	--	--
MAR											
12...	.93	.02	--	.06	.00	9.8	--	--	--	--	--
28...	1.8	.03	--	.09	.00	10	--	--	--	--	--
APR											
10...	4.2	.04	--	.12	.00	15	--	--	--	--	--
MAY											
17...	4.2	.07	--	.21	.02	19	--	--	--	--	--
JUN											
08...	--	--	--	--	--	--	--	12	--	--	.0
JUL											
24...	11	.17	.18	.52	.06	22	--	--	--	--	--
26...	4.2	.13	.06	.40	.02	16	.0	0	.00	.00	.0
30...	4.1	.06	.00	.18	.00	16	--	--	--	--	--
AUG											
15...	2.1	.04	.09	.12	.03	11	--	--	--	--	--
21...	2.4	.03	.09	.09	.03	9.2	--	--	--	--	--
22...	8.2	.17	.28	.52	.09	22	--	--	--	--	--
23...	6.4	.78	.40	2.4	.13	15	--	--	--	--	--
SEP											
05...	6.7	.18	.00	.55	.00	16	--	--	--	--	--
06...	5.0	.10	.09	.31	.03	18	--	--	--	--	--
07...	7.3	.05	.12	.15	.04	14	--	--	--	--	--
11...	5.0	.05	.06	.15	.02	22	--	--	--	--	--
26...	8.1	.12	.28	.37	.09	44	--	--	--	--	--

273

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

	DIELDRIN, TOTAL IN BOTTOM MATERIAL	ENDOSULFAN, TOTAL	ENDRIN, TOTAL IN BOTTOM MATERIAL	ETHION, TOTAL IN BOTTOM MATERIAL	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL	LINDANE TOTAL
DATE	(UG/KG)	(UG/L)	(UG/L)	(UG/KG)	(UG/L)	(UG/L)
NOV 28...	--	--	--	--	--	--
DEC 01...	--	--	--	--	--	--
JAN 03...	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--
27...	--	--	--	--	--	--
MAR 12...	--	--	--	--	--	--
28...	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--
MAY 17...	--	--	--	--	--	--
JUN 08...	1.1	--	--	.0	--	.0
JUL 24...	--	--	--	--	--	--
26...	.0	.00	.00	.0	.00	.00
30...	--	--	--	--	--	--
AUG 15...	--	--	--	--	--	--
21...	--	--	--	--	--	--
22...	--	--	--	--	--	--
23...	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--
06...	--	--	--	--	--	--
07...	--	--	--	--	--	--
11...	--	--	--	--	--	--
26...	--	--	--	--	--	--

CAPE FEAR RIVER BASIN

02106651 BLACK RIVER NEAR ERWIN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)
NOV											
24...	--	--	--	--	--	--	--	--	--	--	--
DEC											
01...	--	--	--	--	--	--	--	--	--	--	--
JAN											
03...	--	--	--	--	--	--	--	--	--	--	--
FEB											
15...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
MAR											
12...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	--	--	--	--	--	--	--	--	--	--	--
MAY											
17...	--	--	--	--	--	--	--	--	--	--	--
JUN											
08...	.0	--	.0	--	.0	--	.0	--	.0	--	--
JUL											
24...	--	--	--	--	--	--	--	--	--	--	--
26...	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.00
30...	--	--	--	--	--	--	--	--	--	--	--
AUG											
15...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

DATE	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	THI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN						
08...	.0	--	--	0	--	.0
JUL						
26...	.0	.00	0	0	.00	.0

CAPE FEAR RIVER BASIN

275

02106651 BLACK RIVER NEAR ERWIN, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L)
FEH		
15...	1130	3
27...	1145	4
MAR		
12...	1115	1
28...	1145	3
APR		
10...	1045	6
24...	1415	4
MAY		
17...	1300	5
24...	1040	12
JUN		
04...	1410	17
07...	1400	6
08...	1100	5
11...	0955	11
14...	1000	6
28...	1050	9
JUL		
24...	1200	448
26...	1300	65
30...	1115	13
AUG		
15...	1145	82
21...	1300	36
22...	1300	803
23...	1345	207
SEP		
05...	1620	432
06...	1130	1420
07...	1045	632
11...	1015	32

CAPE FEAR RIVER BASIN

02106681 BLACK RIVER NEAR DUNN, N. C.

LOCATION.--Lat 35°17'03", long 78°38'21", Harnett County, Hydrologic Unit 03030006, at bridge 1.5 mi (2.4 km) below Popes Pond and 2.3 mi (3.7 km) southwest of Dunn.

DRAINAGE AREA.--49 mi² (127 km²).

PERIOD OF RECORD.--Water years 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV				
28...	1230	35	9	.85
DEC				
01...	1025	86	7	1.6
JAN				
03...	1045	103	4	1.1
FEB				
15...	1100	101	2290	624
26...	0940	410	141	156
27...	1230	444	65	78
28...	1630	395	42	45
MAR				
05...	1715	133	1	.36
12...	1145	150	1330	539
24...	1215	240	174	113
29...	1400	157	135	57
APR				
10...	1135	81	118	26
24...	1330	22	247	15
MAY				
17...	1200	172	700	325
24...	1030	137	637	236
JUN				
04...	1300	42	257	29
07...	1430	42	180	20
08...	1000	31	53	4.4
11...	1120	12	267	8.7
14...	1100	5.4	106	1.5
28...	1200	6.6	113	2.0
JUL				
11...	1230	2.7	40	.29
25...	1340	3.3	124	1.1
26...	1200	7.2	528	10
30...	1220	2.3	42	.26
AUG				
15...	1210	.96	37	.10
22...	1200	6.0	50	.81
23...	1230	1.7	29	.13
SEP				
05...	1700	225	588	357
06...	1100	420	2670	3030
07...	1000	340	746	685
11...	1120	80	37	8.0

CAPE FEAR RIVER BASIN

277

02107000 SOUTH RIVER NEAR PARKERSBURG, N. C.

LOCATION.--Lat 34°48'45", long 78°27'26", Bladen County, Hydrologic Unit 03030006, near center of span on downstream side of bridge on Secondary Road 1503, 1.9 mi (3.1 km) southwest of Parkersburg, and 2.1 mi (3.4 km) upstream from Cypress Creek.

DRAINAGE AREA.--382 mi² (989 km²).

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 50.38 ft (15.356 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 13, 1961, nonrecording gage at present site at datum 50.00 ft (15.240 m) lower.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 278 of this report.

AVERAGE DISCHARGE.--28 years, 426 ft³/s (12.06 m³/s), 15.14 in/yr (385 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft³/s (167 m³/s) Oct. 10, 1964, gage height, 14.32 ft (4.365 m); minimum, 0.1 ft³/s (0.003 m³/s) Oct. 3-6, 11-14, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1918 or 1928 reached a stage of 15.88 ft (4.84 m), present datum, from highwater mark witnessed by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,160 ft³/s (61.2 m³/s) Mar. 2, gage height, 11.41 ft (3.478 m); minimum, 5.1 ft³/s (0.14 m³/s) Aug. 21, gage height, 2.34 ft (0.713 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	9.4	267	268	582	2040	1390	194	352	93	141	17
2	30	9.9	325	295	555	2150	1230	173	373	89	116	29
3	35	10	376	348	528	2120	1090	155	406	81	94	55
4	38	11	431	374	501	2000	972	140	440	68	74	82
5	42	15	482	377	469	1870	864	128	449	56	59	225
6	37	20	516	370	436	1910	777	121	416	45	47	562
7	30	20	514	363	425	1900	703	113	353	37	38	979
8	25	23	499	363	421	1930	638	104	291	31	30	1480
9	21	31	500	357	422	2010	597	98	231	27	24	1740
10	19	42	517	347	415	1900	574	109	175	23	20	1550
11	17	58	520	343	408	1730	549	211	138	20	17	1290
12	16	78	506	349	401	1540	530	306	121	18	14	1290
13	15	81	475	388	396	1390	511	333	106	17	13	1410
14	15	73	438	426	386	1300	485	330	94	16	11	1400
15	14	64	402	448	375	1280	460	318	84	14	9.8	1230
16	13	56	374	463	366	1240	460	279	96	13	8.4	1030
17	13	51	350	487	358	1170	502	232	180	11	7.4	851
18	12	50	325	516	352	1080	544	202	214	10	6.6	687
19	12	51	303	534	357	990	544	184	201	11	6.1	573
20	12	53	283	542	358	897	518	185	176	20	5.6	459
21	11	54	267	572	372	807	484	199	145	51	6.0	349
22	11	53	252	606	403	725	447	210	136	175	7.3	270
23	10	53	237	631	450	664	409	239	147	348	9.7	219
24	10	56	242	653	542	691	368	282	141	539	10	185
25	9.7	60	284	678	717	732	325	368	138	574	9.6	169
26	9.6	60	307	703	1000	793	299	401	137	468	9.5	166
27	9.7	60	306	698	1340	1040	278	397	135	333	12	171
28	9.5	65	299	675	1750	1400	257	372	131	263	17	186
29	9.6	82	294	654	---	1610	236	349	114	216	18	285
30	9.4	187	287	632	---	1640	216	341	99	177	18	852
31	9.4	---	277	608	---	1550	---	342	---	158	17	---
TOTAL	542.9	1536.3	11455	15068	15085	44099	17257	7415	6219	4002	876.0	19791
MEAN	17.5	51.2	370	486	539	1423	575	239	207	129	28.3	660
MAX	42	187	520	703	1750	2150	1390	401	449	574	141	1740
MIN	9.4	9.4	237	268	352	664	216	98	84	10	5.6	17
CFSM	.05	.13	.97	1.27	1.41	3.73	1.51	.63	.54	.34	.07	1.73
IN.	.05	.15	1.12	1.47	1.47	4.29	1.68	.72	.61	.39	.09	1.93
CAL YR 1978	TOTAL	175696.2	MEAN 481	MAX 2420	MIN 9.4	CFSM 1.26	IN 17.11					
WTR YR 1979	TOTAL	143346.2	MEAN 393	MAX 2150	MIN 5.6	CFSM 1.03	IN 13.96					

CAPE FEAR RIVER BASIN

02107000 SOUTH RIVER NEAR PARKERSBURG, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	STREAM- FLOW- INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (#G/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
27...	1515	43	2	.23
30...	1450	9.4	11	.25
NOV				
06...	1234	21	4	.23
DEC				
15...	1415	330	3	3.1

CAPE FEAR RIVER BASIN

279

02108000 NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, N. C.

LOCATION.--Lat 34°49'45", long 77°49'57", Duplin County, Hydrologic Unit 03030007, on right bank 540 ft (165 m) downstream from bridge on State Highway 41, 0.5 mi (0.8 km) downstream from Muddy Creek, and 1.2 mi (1.9 km) west of Chinquapin.

DRAINAGE AREA.--600 mi² (1,550 km²).

PERIOD OF RECORD.--July 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 17.28 ft (5.267 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Suspended sediment records for the current year are published on page 280 of this report.

AVERAGE DISCHARGE.--39 years, 733 ft³/s (20.76 m³/s), 16.59 in/yr (421 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,400 ft³/s (578 m³/s) July 6, 1962, gage height, 20.16 ft (6.145 m); minimum, 5.3 ft³/s (0.15 m³/s) Oct. 10, 11, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage of 22.6 ft (6.89 m) at old bridge site 1,000 ft (305 m) upstream from gage. Flood in 1928 reached a stage of 0.8 ft (0.2 m) lower than that in 1908, from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,900 ft³/s (167 m³/s) Sept. 7, gage height, 14.01 ft (4.270 m); minimum, 23 ft³/s (0.65 m³/s) Oct. 30, 31, gage height, 1.33 ft (0.405 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	24	423	392	740	3930	958	518	844	152	340	198
2	58	24	564	503	674	3390	763	380	898	131	330	240
3	87	25	553	1030	624	2740	650	274	547	115	270	190
4	110	26	663	1420	587	2180	621	221	565	101	240	166
5	98	27	650	1780	556	1770	689	190	807	125	220	945
6	79	29	680	1480	523	1680	770	184	861	125	200	4160
7	64	38	692	1810	560	1840	823	184	760	140	170	5750
8	55	41	673	1650	713	2090	824	172	647	114	150	5200
9	52	41	635	1470	794	2350	829	159	515	99	130	5140
10	47	53	555	1320	814	2550	1040	170	377	84	105	5100
11	42	64	540	1150	788	2760	1180	327	1110	75	40	4310
12	40	50	512	960	759	2730	1150	547	3120	69	78	3050
13	38	94	489	1080	728	2440	1010	547	3280	65	75	1950
14	37	102	454	1300	665	2100	895	942	2680	61	70	1410
15	34	108	397	1480	642	1840	796	1240	2930	55	54	1190
16	33	106	345	1550	598	1610	719	1480	1520	53	63	1090
17	33	104	310	1530	550	1420	678	1470	1540	50	60	911
18	34	103	283	1410	509	1270	667	1260	1590	55	58	763
19	32	102	261	1240	550	1130	666	1010	1490	238	56	637
20	30	97	245	1080	662	990	637	894	1290	533	53	515
21	29	93	233	1140	751	854	557	856	1040	616	53	419
22	28	89	227	1340	810	769	463	800	835	1480	139	425
23	27	88	223	1510	869	700	381	752	669	2300	199	479
24	27	89	241	1600	1160	770	323	870	506	2500	167	498
25	26	96	413	1590	1620	949	283	1260	396	2600	118	462
26	26	106	526	1500	2620	1020	283	1370	376	2400	109	424
27	25	107	574	1370	3740	1010	364	1340	340	2100	107	392
28	25	104	554	1230	4130	1070	458	1280	276	1600	123	353
29	25	122	525	1090	---	1220	574	1120	222	1100	136	543
30	23	250	497	942	---	1300	404	1030	183	800	129	1630
31	24	---	447	823	---	1190	---	972	---	500	120	---
TOTAL	1328	2446	14527	40170	23756	53682	20665	24119	31114	20444	4267	48540
MEAN	42.8	81.5	469	1296	1027	1732	689	773	1037	659	138	1618
MAX	110	260	692	1880	4130	3930	1180	1480	3280	2600	380	5750
MIN	23	24	223	322	509	700	283	154	183	50	53	166
CFS4	.07	.14	.78	2.16	1.71	2.89	1.15	1.30	1.73	1.10	.23	2.70
IN4	.08	.15	.90	2.49	1.78	3.33	1.28	1.50	1.93	1.27	.25	3.01

CAL YR 1978 TOTAL 296233 MEAN 812 MAX 5510 MIN 23 CFS4 1.35 IN 18.37
WTR YR 1979 TOTAL 290058 MEAN 795 MAX 5750 MIN 23 CFS4 1.33 IN 17.96

CAPE FEAR RIVER BASIN

02108000 NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA: WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
04...	1300	114	6	1.8
30...	1232	23	3	.19
NOV				
07...	1345	39	1	.11
DEC				
25...	1330	2680	17	123
28...	1050	3990	20	215
JAN				
01...	1620	3860	10	104
FEB				
06...	0945	4060	226	2400
07...	1030	2850	43	679

CAPE FEAR RIVER BASIN

281

02108500 ROCKFISH CREEK NEAR WALLACE, N. C.

LOCATION.--Lat 34°44'32", long 78°02'22", Duplin County, Hydrologic Unit 03030007, on right bank at downstream side of bridge on State Highway 41, 1.5 mi (2.4 km) upstream from Doctors Creek, and 2.5 mi (4.0 km) west of Wallace.

DRAINAGE AREA.--63.8 mi² (165 km²).

PERIOD OF RECORD.--July 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 29.36 ft (8.949 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1958, nonrecording gage at site 1.0 mi (1.6 km) downstream at different datum. Oct. 1, 1958, to June 1, 1960, nonrecording gage at present site and datum.

REMARKS.--Records good. Suspended sediment records for the current year are published on page 282 of this report.

AVERAGE DISCHARGE.--24 years, 97.6 ft³/s (2.764 m³/s), 20.77 in/yr (528 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,540 ft³/s (157 m³/s) Nov. 7, 1977 gage height, 13.17 ft (4.014 m) from floodmarks; minimum daily, 0.4 ft³/s (0.011 m³/s) July 27-30, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1948 reached a stage of about 15.5 ft (4.72 m) at former site and datum, from information by local resident, discharge, 2,800 ft³/s (79.3 m³/s). A discharge of 0.04 ft³/s (0.001 m³/s) was measured on Sept. 8, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 3	1800	720 20.4	8.59 2.618	Sept. 6	2100	*1200 34.0	*9.96 3.036
Feb. 26	0600	1090 30.9	9.68 2.950				

Minimum discharge, 2.3 ft³/s (0.065 m³/s) Oct. 29; minimum gage height, 0.87 ft (0.265 m) Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	6.5	92	27	59	314	42	14	25	10	15	22
2	11	6.5	122	179	55	223	39	17	24	9.0	13	36
3	11	6.6	127	683	51	172	38	16	20	9.0	31	36
4	8.4	6.2	57	628	44	133	53	14	24	8.1	44	28
5	7.5	5.7	36	403	47	126	81	14	36	7.4	19	393
6	6.9	6.6	50	260	44	353	96	15	41	7.4	12	1100
7	6.1	6.3	60	188	68	635	94	15	28	6.7	9.8	905
8	5.1	6.2	61	177	112	543	64	15	21	6.2	8.3	477
9	4.9	6.3	48	187	131	433	65	15	18	6.4	7.4	269
10	5.4	7.9	41	155	133	327	105	16	15	6.7	6.5	161
11	5.4	9.4	37	123	193	259	132	36	26	6.7	6.0	85
12	5.3	11	33	103	79	242	143	57	48	6.5	6.4	48
13	5.1	9.6	29	193	68	206	99	125	38	6.4	4.6	39
14	4.9	7.9	26	308	60	179	72	114	24	5.9	7.2	53
15	5.3	6.8	24	314	54	157	58	88	19	4.9	6.3	58
16	4.1	6.6	23	246	51	139	45	62	41	4.9	5.8	51
17	4.2	6.2	22	186	48	121	37	81	117	5.0	5.4	39
18	4.3	6.3	21	141	43	94	32	56	112	6.7	5.2	32
19	4.2	5.7	20	106	65	74	29	41	94	22	4.6	28
20	3.8	5.5	20	86	102	64	26	41	40	38	4.5	25
21	3.4	5.7	20	147	128	56	23	42	22	60	5.9	24
22	3.1	5.8	20	279	147	50	21	34	20	179	7.2	26
23	3.0	5.1	19	285	162	47	21	29	20	346	9.1	25
24	3.2	5.2	30	247	230	78	21	69	30	248	7.7	23
25	3.5	6.6	77	213	469	113	19	87	58	235	6.8	23
26	3.6	5.9	90	173	968	122	24	79	43	244	5.9	24
27	3.3	5.8	89	140	681	114	34	79	27	167	5.7	23
28	2.8	6.9	60	109	469	78	31	47	18	102	7.6	22
29	2.6	11	40	85	---	59	23	30	14	42	9.1	29
30	4.0	45	33	71	---	51	19	25	12	25	4.5	62
31	6.2	---	29	63	---	45	---	24	---	19	7.9	---
TOTAL	157.6	242.8	1456	6505	4674	5650	1546	1421	1075	1851.3	308.5	4167
MEAN	5.08	8.09	47.0	210	167	183	52.9	45.8	35.8	59.7	9.95	139
MAX	11	45	127	683	968	638	143	125	117	346	44	1100
MIN	2.6	5.1	19	27	43	45	19	14	12	4.9	4.5	22
CFS ¹	.08	.13	.74	3.29	2.62	2.87	.83	.72	.56	.94	.16	2.18
IN ²	.09	.14	.85	3.79	2.73	3.30	.92	.83	.63	1.08	.18	2.43
CAL YR 1978 TOTAL	34214.0		MEAN 93.7	MAX 739	MIN 2.6	CFS ¹ 1.47	IN 19.95					
WTH YR 1979 TOTAL	29104.2		MEAN 79.7	MAX 1100	MIN 2.6	CFSM 1.25	IN 16.97					

CAPE FEAR RIVER BASIN

02108500 ROCKFISH CREEK NEAR WALLACE, N. C.

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANT- TANKOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
09T				
30...	1320	4.0	2	.02
Feb				
25...	1255	758	34	71
26...	1400	1020	30	83
28...	1010	475	6	7.7
Mar				
01...	1540	221	6	4.7
02...	1525	132	1	.35
Sec				
05...	1330	395	81	87
05...	1735	711	55	106
05...	1035	1130	13	40
06...	1500	1350	14	51
07...	1125	909	7	17

CAPE FEAR RIVER BASIN

283

02108548 LITTLE ROCKFISH CREEK AT WALLACE, N. C.

LOCATION.--Lat 34°44'02", long 77°59'03", Duplin County, Hydrologic Unit 03030007, on right bank, 0.4 mi (0.6 km) downstream from bridge on State Highway 41, 0.6 mi (1.0 km) east-southeast of Wallace, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--7.8 mi² (20.2 km²), approximately.

PERIOD OF RECORD.--September 1976 to current year.

REVISED RECORDS.--WRD NC-78-1: Drainage area.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 27.58 ft (8.406 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Suspended-sediment records for the current year are published on page 284 of this report. Recording rain gage at station.

EXTREMES FOR PERIOD OF PERIOD.--Maximum discharge, 336 ft³/s (9.52 m³/s) Nov. 6, 1977, gage height, 7.55 ft (2.301 m); no flow June 19, 22, Sept. 27-30, Oct. 10-28, Nov. 1-3, 7, 20-22, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft³/s (3.68 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1845	209 5.92	5.60 1.707	June 23	2015	149 4.22	4.67 1.423
Feb. 26	0145	243 6.88	6.17 1.881	July 21	2330	149 4.22	4.67 1.423
Mar. 6	2045	157 4.45	4.76 1.451	Sept. 5	1530	*308 8.72	*7.16 2.182

No flow Oct. 10-28, Nov. 1-3, 7, 20-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	.00	1.0	2.6	7.1	2.0	4.1	.66	3.0	1.5	.77	5.3
2	.09	.00	4.7	11.0	5.4	2.2	3.5	.54	2.1	.94	6.2	3.9
3	.02	.00	3.0	9.9	5.4	1.7	3.7	.41	1.4	.57	2.0	1.7
4	.02	.13	2.5	3.4	5.7	1.4	7.0	.32	4.9	.44	1.5	6.6
5	.03	.07	4.8	2.3	5.2	2.9	9.6	.34	5.8	.52	6.4	2.24
6	.05	.01	4.3	1.7	5.0	10.7	6.4	.32	2.7	.25	3.1	19.2
7	.14	.00	3.6	1.5	1.7	4.1	4.6	.27	1.5	.17	1.8	11.5
8	.05	.49	2.7	2.3	2.0	4.7	9.6	.26	.94	.10	1.1	5.7
9	.01	.07	2.0	2.3	1.4	4.0	1.4	.25	.66	.08	.67	3.0
10	.00	1.4	1.9	1.4	1.1	2.9	1.5	4.9	.43	.07	.39	1.7
11	.00	.35	1.6	1.1	9.1	3.3	7.0	3.2	5.1	.09	.24	1.2
12	.00	.11	1.4	1.9	5.2	3.3	6.1	2.0	4.5	1.3	.44	8.5
13	.00	.08	1.2	5.5	7.5	2.2	1.1	1.2	1.3	.39	.12	8.4
14	.00	.07	1.1	4.8	6.8	1.9	1.1	.2	6.7	.12	.10	1.8
15	.00	.05	.99	3.0	6.4	1.9	6.4	.8	4.2	.09	.10	2.2
16	.00	.01	.45	2.1	6.2	1.4	4.5	3.5	2.9	.04	.04	1.6
17	.00	.04	.92	1.6	5.3	1.1	3.2	1.9	4.1	.97	.06	1.1
18	.00	.04	.34	1.4	7.4	9.5	2.5	1.3	1.7	3.7	.14	8.8
19	.00	.01	.82	1.1	1.5	8.8	2.1	2.9	4.4	1.5	.16	7.2
20	.00	.00	.81	1.2	1.9	7.8	1.7	2.1	5.2	2.2	.11	5.5
21	.00	.00	.67	5.6	1.5	6.9	1.4	1.6	3.6	1.6	8.7	6.4
22	.00	.00	.79	4.5	1.4	5.0	1.2	1.3	3.4	4.7	3.8	7.4
23	.00	.45	.73	2.5	2.4	7.7	1.0	1.0	1.3	1.2	1.8	7.1
24	.00	.20	1.4	2.6	5.5	2.0	.57	4.1	3.4	7.0	.94	6.2
25	.00	.08	2.1	2.6	1.23	1.7	.72	2.3	2.8	6.5	.57	5.4
26	.00	.02	8.7	1.7	1.74	1.0	4.4	4.1	1.5	1.2	.49	4.4
27	.00	1.0	5.3	1.3	6.3	7.8	3.8	4.5	6.4	6.0	.61	4.2
28	.00	.22	4.0	1.1	3.8	6.5	2.1	2.9	5.3	3.2	.29	3.8
29	.04	9.9	3.1	9.6	---	7.7	1.2	2.3	3.4	2.4	.24	5.0
30	.02	2.1	2.7	5.4	---	5.1	.42	1.9	2.2	1.3	.13	2.4
31	.17	---	2.4	7.9	---	4.5	---	2.5	---	1.0	3.1	---
TOTAL	3.14	35.81	114.32	542.5	694.3	696.7	148.11	126.62	356.37	129.71	78.63	846.1
MEAN	.10	1.19	3.69	27.2	24.8	22.5	4.94	4.08	12.2	4.14	2.54	28.2
MAX	2.5	2.1	2.1	11.0	17.4	10.7	1.5	4.1	5.1	4.7	2.0	22.4
MIN	.00	.00	.73	2.6	5.0	4.6	.72	.26	.43	.07	.08	1.7
CFS/IN	.61	.15	.47	3.49	3.18	2.34	.63	.52	1.56	.54	.33	3.62
IN.	.01	.17	.55	4.62	3.31	3.32	.71	.60	1.75	.62	.37	4.03
CAL YR 1976	TOTAL	3397.94	MEAN	9.31	MAX	17.6	MIN	.00	CFS/IN	1.14	IN	16.20
WTR YR 1979	TOTAL	4082.31	MEAN	11.2	MAX	22.4	MIN	.00	CFS/IN	1.44	IN	19.47

CAPE FEAR RIVER BASIN

02108548 LITTLE ROCKFISH CREEK AT WALLACE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA WATER YEAR OCTOBER 1973 TO SEPTEMBER 1979

DATE	TIME	STREAM FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
08.1				
08.14...	1015	.02	5	.00
08.21...	1250	1.0	2	.01
08.28...	1220	255	116	89
08.30...	1310	273	81	60
08.30...	1500	340	66	61
08.30...	1540	305	49	41
08.30...	1715	303	89	73
08.30...	1915	192	91	47

02109500 WACCAMAW RIVER AT FREELAND, N. C.

LOCATION.--Lat 34°05'43", long 78°32'56", Brunswick County, Hydrologic Unit 03040206, on left bank 150 ft (46 m) downstream from New Britton Bridge on State Highway 130, 1 mi (2 km) southwest of Freeland, 7 mi (11 km) downstream from Juniper Creek, and 117 mi (188 km) upstream from mouth in Winyah Bay.

DRAINAGE AREA.--706 mi² (1,829 km²).

PERIOD OF RECORD.--July 1939 to current year.

REVISED RECORDS.--WSP 1172: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 15.52 ft (4.730 m) National Geodetic Vertical Datum of 1929. Prior to July 15, 1943, nonrecording gage 150 ft (46 m) upstream at same datum. Auxiliary nonrecording gage 3.3 mi (5.3 km) downstream from base gage Oct. 7, 1949 to July 14, 1952. Since July 15, 1952 auxiliary water-stage recorder at same site and datum.

REMARKS.--Records good except those for period of no gage-height record, Apr. 23 to July 11, which are fair. Suspended-sediment records for the current year are published on page 286 of this report.

AVERAGE DISCHARGE.--40 years, 709 ft³/s (20.08 m³/s), 13.64 in/yr (346 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s (289 m³/s) Sept. 25, 1955; maximum gage height, 16.63 ft (5.069 m) Sept. 26, 1955; minimum discharge, 0.1 ft³/s (0.003 m³/s) Aug. 30, Sept. 9, 10, 28, Oct. 4-14, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,740 ft³/s (191 m³/s) Sept. 12, gage height, 15.68 ft (4.779 m); minimum daily, 4.6 ft³/s (0.13 m³/s) Nov. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	5.6	65	431	896	2700	1590	260	1100	210	27	23
2	34	5.5	82	460	852	2830	1520	230	1000	190	25	28
3	32	5.3	95	700	816	2790	1450	210	990	180	23	50
4	31	5.2	110	1080	784	2660	1390	180	920	190	22	100
5	29	5.1	120	1420	748	2640	1350	160	990	200	23	250
6	27	5.0	125	1610	713	2920	1260	140	1000	190	24	640
7	25	4.9	130	1740	697	3300	1170	120	1050	180	26	1620
8	23	4.8	135	1830	702	3700	1100	100	1100	160	27	2110
9	21	4.6	140	1840	720	4400	1040	95	1150	140	27	3020
10	20	14	145	1800	734	4900	988	100	1200	120	26	4750
11	18	19	140	1710	732	5600	947	140	1100	100	25	6300
12	17	21	135	1610	720	6000	901	170	1000	87	24	6670
13	16	23	130	1540	697	5600	866	200	990	73	34	6450
14	15	25	128	1480	674	5200	893	230	900	69	30	5910
15	14	25	125	1430	654	4800	915	310	820	67	30	5160
16	13	25	120	1390	637	4260	911	430	750	62	29	4490
17	12	26	118	1330	618	3750	892	660	750	60	28	3820
18	11	26	115	1190	602	3290	853	870	760	54	26	3280
19	10	26	110	1120	609	2880	802	990	760	49	23	2820
20	9.5	25	103	1050	648	2540	744	1100	700	94	19	2470
21	8.8	25	102	1020	709	2260	673	1050	640	178	19	2160
22	8.4	26	97	1020	763	2030	619	990	570	167	36	1940
23	8.0	25	93	1020	803	1830	560	870	490	134	42	1740
24	7.6	26	104	1050	884	1790	510	820	410	107	33	1560
25	7.1	26	212	1070	1070	1790	450	770	370	87	25	1400
26	6.8	26	276	1060	1440	1830	400	730	330	69	21	1180
27	6.5	27	338	1050	1830	1850	380	700	310	56	18	1100
28	6.2	28	382	1040	2350	1860	350	750	290	46	15	980
29	6.0	29	409	1010	---	1830	320	850	270	39	14	920
30	5.9	41	424	975	---	1760	290	1000	240	33	17	1200
31	5.7	---	433	940	---	1680	---	1100	---	30	19	---
TOTAL	493.5	580.0	5241	38016	24102	97270	26134	16325	22950	3421	777	74141
MEAN	15.9	19.3	169	1226	861	3138	871	527	765	110	25.1	2471
MAX	39	41	433	1840	2350	6000	1590	1100	1200	210	42	6670
MIN	5.7	4.6	65	431	602	1680	290	95	240	30	14	23
CFSM	.02	.03	.24	1.74	1.22	4.45	1.23	.75	1.08	.16	.04	3.50
IN.	.03	.03	.28	2.00	1.27	5.13	1.38	.86	1.21	.18	.04	3.91
CAL YR 1978 TOTAL	256988.5		MEAN 704	MAX 4340	MIN 4.6	CFSM 1.00	IN 13.54					
WTR YR 1979 TOTAL	309450.5		MEAN 848	MAX 6670	MIN 4.6	CFSM 1.20	IN 16.31					

WACCAMAW RIVER BASIN

02109500 WACCAMAW RIVER AT FREELAND, N. C.

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANT- ANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
03...	1120	32	7	.60
04...				
05...	1505	4.8	3	.04
06...				
09...	0925	1160	3	9.4
FEB				
26...	1550	1470	4	16
MAR				
05...	1155	2670	3	22
14...	0920	5030	3	41
APR				
23...	1400	560	4	6.0
MAY				
11...	1210	151	7	2.9
JUN				
04...	1435	1100	5	15
JUL				
11...	1300	114	4	1.2

02111000 YADKIN RIVER AT PATTERSON, N. C.

LOCATION.--Lat 35°59'29", long 81°33'30", Caldwell County, Hydrologic Unit 03040101, on left bank 200 ft (61 m) upstream from bridge on State Highway 268, 0.4 mi (0.6 km) upstream from Warrior Creek, 0.5 mi (0.8 km) south of Patterson, 2 mi (3 km) downstream from Walnut Branch, and at mile 416 (670 km).

DRAINAGE AREA.--29.0 mi² (75.1 km²).

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). WSP 1723: Drainage area, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,211.47 ft (369.256 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1940 nonrecording gage at present site, at datum 1.00 ft (0.305 m) higher. Prior to Oct. 20, 1970 at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Corps of Engineers rainfall and stage radio telemeter at station. Suspended-sediment records for the current year are published on page 288 of this report.

AVERAGE DISCHARGE.--40 years, 49.9 ft³/s (1.413 m³/s), 23.37 in/yr (594 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft³/s (459 m³/s) Aug. 13, 1940, gage height, 12.70 ft (3.871 m), datum then in use, from rating curve extended above 1,400 ft³/s (39.6 m³/s) on basis of computation of peak flow over dam 1 mi (1.6 km) upstream at gage heights 4.58 ft (1.396 m), 6.60 ft (2.012 m), 7.70 ft (2.347 m), 12.70 ft (3.871 m); minimum observed, 3.0 ft³/s (0.085 m³/s) May 15, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0100	445 12.6	3.15 0.960	Sept. 1	0130	768 21.7	4.12 1.256
Feb. 25	1700	705 20.0	3.96 1.207	Sept. 5	1430	564 16.0	3.55 1.082
Mar. 4	1300	1180 33.4	4.96 1.512	Sept. 21	2200	*2340 66.3	*6.57 2.003
Mar. 23	2200	649 18.4	3.81 1.161	Sept. 28	1300	564 16.0	3.55 1.082
July 20	2130	564 16.0	3.55 1.082				

Minimum discharge, 12 ft³/s (0.34 m³/s) Dec. 29, gage height, 0.82 ft (0.250 m) result of freezeup; minimum daily, 15 ft³/s (0.42 m³/s) Oct. 23, 24, Nov. 14, 22, 26.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	17	20	65	31	82	65	73	55	35	51	257
2	18	16	17	302	31	70	63	68	51	34	48	73
3	18	16	16	104	28	63	89	66	74	33	43	65
4	17	16	29	68	30	596	126	68	68	32	41	62
5	18	16	55	50	28	561	112	69	60	37	39	319
6	17	16	28	42	27	271	91	62	55	32	38	213
7	16	16	22	50	33	173	80	58	53	35	37	109
8	16	17	20	78	31	132	74	56	63	35	35	80
9	16	16	67	61	27	99	76	56	54	35	34	67
10	17	16	45	49	26	84	68	56	52	44	36	59
11	17	16	30	45	29	78	63	55	50	36	33	54
12	16	16	25	41	27	69	65	53	47	62	42	49
13	17	16	23	45	27	64	181	63	46	49	37	56
14	21	15	21	41	27	61	118	58	44	38	33	76
15	16	16	20	36	30	56	95	51	43	34	30	61
16	16	16	20	35	42	53	84	48	54	33	29	54
17	16	19	19	34	38	50	76	46	94	34	28	51
18	16	30	18	32	29	48	71	45	57	40	27	48
19	16	18	18	30	58	48	67	44	51	35	26	45
20	16	16	19	57	41	47	64	43	48	201	26	43
21	16	16	19	154	41	45	62	47	46	220	28	377
22	16	15	18	99	61	43	59	55	44	149	48	431
23	15	22	17	72	104	175	57	84	46	92	37	182
24	15	22	23	68	207	417	56	128	45	92	47	126
25	16	17	29	56	393	211	57	191	43	110	38	105
26	17	15	22	49	282	133	208	74	40	101	36	92
27	17	21	20	45	144	105	137	65	39	85	39	89
28	16	20	19	43	101	89	103	62	38	72	46	329
29	16	20	19	39	---	80	87	56	37	62	38	271
30	16	28	19	35	---	74	78	52	37	55	33	227
31	16	---	29	35	---	69	---	62	---	50	63	---
TOTAL	515	536	766	1960	1973	4146	2632	1924	1538	2002	1171	4070
MEAN	16.6	17.9	24.7	63.2	70.5	134	87.7	62.1	51.3	64.6	37.8	136
MAX	21	30	67	302	393	596	208	128	94	220	63	431
MIN	15	15	16	30	26	43	56	43	37	32	26	43
CFSM	.57	.62	.85	2.18	2.43	4.62	3.02	2.14	1.77	2.23	1.30	4.69
IN.	.66	.69	.98	2.51	2.53	5.32	3.38	2.47	1.97	2.57	1.50	5.22
CAL YR 1978	TOTAL	16888	MEAN 46.3	MAX 434	MIN 15	CFSM 1.60	IN 21.66					
WTR YR 1979	TOTAL	23233	MEAN 63.7	MAX 596	MIN 15	CFSM 2.20	IN 29.90					

PEE DEE RIVER BASIN

02111000 YADKIN RIVER AT PATTERSON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA: WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
NOV												
01...	1245	17	1	.05	--	--	--	--	--	--	--	--
JAN												
02...	1155	287	140	103	--	--	--	--	--	--	--	--
02...	1445	250	94	53	--	--	--	--	--	--	--	--
08...	1500	79	15	3.2	--	--	--	--	--	--	--	--
21...	0920	143	45	17	--	--	--	--	--	--	--	--
FEB												
24...	1230	250	514	350	--	--	--	--	--	--	--	--
24...	1355	290	561	434	--	--	--	--	--	--	--	--
24...	1510	303	595	495	--	--	--	--	--	--	--	--
25...	1300	445	1670	2010	--	--	--	--	--	--	--	--
25...	1500	627	2050	3470	3	6	10	20	31	46	58	73
25...	1540	701	1950	3710	--	--	--	--	--	--	--	--
MAR												
20...	1035	250	1410	1220	--	--	--	--	--	--	--	--
20...	1450	255	294	202	--	--	--	--	--	--	--	--

02111180 ELK CREEK AT ELKVILLE, N. C.

LOCATION.--Lat 36°04'16", long 81°24'13", Wilkes County, Hydrologic Unit 03040101, on left bank 700 ft (213 m) upstream from bridge on State Highway 268, in community of Elksville, and 3,400 ft (1,040 m) upstream from mouth.

DRAINAGE AREA.--50.9 mi² (131.8 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,082.40 ft (329.916 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Corps of Engineers rainfall and gage-height radio telemeter at station. Suspended-sediment records for the current year are published on page 290 of this report.

AVERAGE DISCHARGE.--14 years, 109 ft³/s (3.087 m³/s), 29.08 in/yr (739 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) Nov. 6, 1977, gage height, 9.58 ft (2.920 m) from floodmarks, from rating curve extended above 2,400 ft³/s (68.0 m³/s) on basis of contracted-opening measurement at gage height, 7.28 ft (2.219 m); minimum, 16 ft³/s (0.45 m³/s) Oct. 3, 1968, gage height, 0.83 ft (0.253 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 13, 1940 reached a stage of about 22 ft (6.7 m), discharge, about 70,000 ft³/s (1,980 m³/s), on basis of several contracted-opening and slope-area measurements. A discharge of 6.0 ft³/s (0.17 m³/s) was measured Sept. 19, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0730	1220 34.6	3.19 0.972	July 20	2315	1450 41.1	3.46 1.055
Feb. 25	1730	2490 70.5	4.59 1.399	Sept. 5	1500	1400 39.6	3.41 1.039
Mar. 4	1445	4160 118	5.92 1.804	Sept. 21	2230	*6760 191	*7.43 2.265
Mar. 23	2200	2910 82.4	4.98 1.518	Sept. 28	1400	1550 43.9	3.58 1.091
Apr. 26	1545	811 23.0	2.65 0.808				

Minimum discharge, 24 ft³/s (0.68 m³/s) Oct. 23 to Nov. 8, gage height, 0.91 ft (0.277 m); minimum daily, 24 ft³/s (0.68 m³/s) Oct. 23 to Nov. 8.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	24	36	65	60	167	123	138	129	66	130	134
2	31	24	31	737	58	143	116	128	138	64	113	79
3	31	24	28	199	59	127	157	120	328	62	101	117
4	31	24	53	123	54	1770	255	130	278	61	90	116
5	31	24	90	95	50	1440	252	127	189	62	84	542
6	31	24	103	81	48	416	191	116	153	59	75	340
7	29	24	49	89	58	272	163	111	134	60	71	171
8	28	24	42	151	62	207	149	108	150	64	67	125
9	26	25	98	108	51	172	145	104	129	64	62	104
10	26	25	95	86	49	149	133	106	119	86	62	95
11	26	25	66	74	51	138	123	126	109	71	90	87
12	26	25	55	67	51	123	120	126	99	94	108	81
13	26	25	45	69	50	114	394	139	97	79	77	99
14	34	25	43	68	49	111	255	134	92	67	68	221
15	29	25	40	56	51	102	195	116	87	61	64	161
16	27	25	38	54	82	96	167	110	97	59	60	126
17	26	29	36	54	83	93	149	102	198	57	56	111
18	26	53	34	52	60	89	137	100	124	69	55	100
19	25	33	32	48	97	87	128	97	108	109	56	93
20	25	29	30	80	95	86	122	99	99	351	55	87
21	25	27	30	321	78	81	115	112	95	531	53	882
22	25	26	29	230	117	80	112	138	94	359	73	1250
23	24	30	28	145	234	535	105	231	87	195	69	324
24	24	39	33	129	527	1390	96	430	85	197	79	214
25	24	32	54	108	1180	478	93	243	81	242	71	175
26	24	29	41	80	750	267	546	177	75	170	60	151
27	24	32	37	75	315	200	387	146	73	148	69	136
28	24	33	33	70	210	167	230	135	71	131	75	695
29	24	31	32	66	---	150	177	121	68	114	61	484
30	24	55	34	63	---	138	157	111	68	105	58	409
31	24	---	44	62	---	130	---	151	---	98	54	---
TOTAL	830	870	1439	3705	4629	9518	5492	4332	3654	3955	2266	7709
MEAN	26.8	29.0	46.4	120	165	307	183	140	122	128	73.1	257
MAX	34	55	103	737	1180	1770	546	430	328	531	130	1250
MIN	24	24	28	48	48	80	93	97	68	57	53	79
CFSM	.53	.57	.91	2.36	3.24	6.03	3.60	2.75	2.40	2.52	1.44	5.05
IN.	.61	.64	1.05	2.71	3.38	6.96	4.01	3.17	2.67	2.89	1.66	5.63
CAL YR 1978	TOTAL	31594	MEAN	86.6	MAX	806	MIN	24	CFSM	1.70	IN	23.09
WTR YR 1979	TOTAL	48399	MEAN	133	MAX	1770	MIN	24	CFSM	2.61	IN	35.37

PEE DEE RIVER BASIN

02111180 ELK CREEK AT ELKVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
23...	1415	23	5	.31
JAN				
02...	1150	804	187	406
08...	1615	150	15	6.1
21...	1010	293	65	50
FEB				
24...	1045	312	144	121
24...	1320	500	206	278
24...	1430	630	422	718
25...	1400	1230	588	1950
25...	1545	1910	1520	7840
JUL				
20...	1205	203	417	229

PEE DEE RIVER BASIN

291

02111500 REDDIES RIVER AT NORTH WILKESBORO, N. C.

LOCATION.--Lat 36°10'29", long 81°10'09", Wilkes County, Hydrologic Unit 03040101, on left bank 550 ft (168 m) (revised) upstream from bridge on Secondary Road 1517, 1.2 mi (1.9 km) northwest of North Wilkesboro, 1.4 mi (2.3 km) upstream from North Wilkesboro municipal dam, and 2.3 mi (3.7 km) upstream from mouth.

DRAINAGE AREA.--93.9 mi² (243.2 km²).

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

REVISED RECORDS.--WSP 1433: 1944.

GAGE.--Water-stage recorder. Datum of gage is 978.62 ft (298.283 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Slight diurnal fluctuation at low flow during growing season. Suspended-sediment records for the current year are published on page 292 of this report.

AVERAGE DISCHARGE.--40 years, 145 ft³/s (4.106 m³/s), 20.97 in/yr (533 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s (765 m³/s) Aug. 14, 1940, gage height, 22.02 ft (6.712 m), from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of computation of peak flow over dam; minimum, 22 ft³/s (0.62 m³/s) Aug. 17, 1954, gage height, 0.63 ft (0.193 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 4	1630	2540 71.9	7.26 2.213	Sept. 21	2300	*6190 175	*11.75 3.581
Mar. 24	0130	2940 83.3	7.90 2.408				

Minimum discharge, 27 ft³/s (0.76 m³/s) Feb. 18, result of freezeup; minimum daily, 65 ft³/s (1.84 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	68	82	117	82	203	217	223	183	135	172	100
2	71	68	75	783	81	177	210	211	194	130	165	114
3	74	68	74	222	104	163	286	206	398	126	141	143
4	75	68	107	136	91	1250	410	225	390	128	130	131
5	74	67	188	113	87	1300	343	225	253	133	125	443
6	75	68	105	107	85	540	273	199	212	121	122	269
7	71	69	88	122	99	379	242	190	190	124	119	157
8	71	72	83	184	97	320	229	186	271	129	117	131
9	71	68	184	128	85	273	235	209	220	126	113	119
10	72	67	142	114	65	245	212	225	218	183	111	116
11	71	68	101	106	72	233	200	204	195	143	118	111
12	70	68	90	100	78	209	203	218	177	167	131	105
13	71	68	84	119	84	195	598	228	166	154	116	134
14	86	67	80	113	84	190	367	219	161	131	110	362
15	71	69	76	98	88	179	293	188	156	124	105	185
16	70	72	77	96	127	171	258	178	180	120	102	147
17	70	89	76	94	115	165	239	167	422	118	101	134
18	70	121	72	91	68	162	230	162	216	261	101	126
19	70	87	73	87	180	158	219	160	186	221	100	120
20	70	81	78	146	150	155	211	158	175	520	98	115
21	68	80	76	480	130	152	202	171	169	543	99	668
22	69	84	72	287	136	147	195	194	170	323	127	1600
23	69	97	70	181	293	558	190	218	172	240	120	367
24	67	110	81	189	545	1500	185	322	164	205	123	274
25	66	93	115	165	977	554	184	249	159	212	121	234
26	68	90	85	139	670	372	555	198	148	204	123	211
27	68	91	80	129	331	307	476	181	144	183	120	201
28	68	78	73	123	242	274	301	183	142	172	116	580
29	68	79	69	111	---	254	260	169	142	159	112	546
30	68	124	76	105	---	238	238	161	142	150	104	591
31	68	---	108	104	---	226	---	223	---	156	100	---
TOTAL	2192	2399	2840	5091	5246	11249	8261	6250	6115	5841	3662	8534
MEAN	70.7	80.0	91.6	164	187	363	275	202	204	188	118	284
MAX	86	124	188	783	977	1500	598	322	422	543	172	1600
MIN	66	67	69	87	65	147	184	158	142	118	98	100
CFSM	.75	.85	.98	1.75	1.99	3.87	2.93	2.15	2.17	2.00	1.26	3.02
IN.	.87	.95	1.13	2.02	2.08	4.46	3.27	2.48	2.42	2.31	1.45	3.38

CAL YR 1978	TOTAL	58664	MEAN 161	MAX 1620	MIN 66	CFSM 1.72	IN 23.24
WTR YR 1979	TOTAL	67680	MEAN 185	MAX 1600	MIN 65	CFSM 1.97	IN 26.81

PEE DEE RIVER BASIN

02111500 REDDIES RIVER AT NORTH WILKESBORO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT				
02...	1300	76	4	.82
NOV				
02...	1210	70	3	.57
DEC				
01...	1125	87	9	2.1
JAN				
02...	0930	1170	991	3130
03...	1110	227	39	24
21...	1145	421	92	105
FEB				
01...	1254	72	5	.97
23...	1255	315	131	111
24...	1125	490	420	544
24...	1620	890	886	2110
25...	1405	1290	1670	5820
MAR				
04...	1730	2480	3240	21700
27...	1150	308	34	28

02112000 YADKIN RIVER AT WILKESBORO, N. C.

LOCATION.--Lat 36°09'09", long 81°08'45", Wilkes County, Hydrologic Unit 03040101, on right bank 150 ft (46 m) upstream from bridge on State Highway 18 and 268 between North Wilkesboro and Wilkesboro, 150 ft (46 m) downstream from Reddies River, 0.5 mi (0.8 km) northeast of Wilkesboro, and 382 mi (615 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--493 mi² (1,277 km²).

PERIOD OF RECORD.--April 1903 to June 1909, October 1920 to current year. Prior to October 1928, published as "at North Wilkesboro".

REVISED RECORDS.--WSP 822: Drainage area. WSP 1433; 1903-9, 1922, 1925-26(M), 1930, 1932, 1934, 1946-48(M), drainage area at former site.

GAGE.--Water-stage recorder. Datum of gage is 942.35 ft (287.228 m) National Geodetic Vertical Datum of 1929. Apr. 10, 1903 to June 30, 1909 and Oct. 17, 1920 to Apr. 10, 1929, nonrecording gage at site 1.2 mi (1.9 km) downstream at different datum. Apr. 11, 1929 to Jan. 9, 1930, nonrecording gage at present site and datum. Datum used 1920-29 was about 1.2 ft (0.366 m) lower than that used 1903-09.

REMARKS.--Records good. Flow regulated by W. Kerr Scott Reservoir 5.5 mi (8.8 km) upstream since 1962 (see p. 404). Corps of Engineers gage-height radio telemeter at station. Suspended-sediment records for the current year are published on page 294 of this report.

AVERAGE DISCHARGE.--64 years (1903-8, 1920-79), 828 ft³/s (23.45 m³/s), 22.81 in/yr (579 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 160,000 ft³/s (4,530 m³/s) Aug. 14, 1940, gage height, 37.6 ft (11.46 m), from floodmarks, from rating curve extended above 20,000 ft³/s (566 m³/s) on basis of slope-area measurement of peak flow; minimum, 86 ft³/s (2.44 m³/s) Dec. 4, 1965; minimum daily, 110 ft³/s (3.12 m³/s) Sept. 18, 19, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1916 reached a stage of 34.5 ft (10.52 m) present site and datum, from floodmark, discharge, 116,000 ft³/s (3,290 m³/s), from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,350 ft³/s (265 m³/s) Sept. 21, gage height, 13.50 ft (4.115 m); minimum, 98 ft³/s (2.78 m³/s) Oct. 18, gage height, 1.33 ft (0.405 m); minimum daily, 336 ft³/s (9.52 m³/s) Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	510	471	464	501	640	3110	1140	1250	1300	731	1200	935	
2	496	469	459	1750	563	1310	1070	1190	1120	756	1310	1540	
3	487	465	457	671	568	1030	1240	1140	1440	729	756	1170	
4	489	474	521	558	632	2400	1890	1170	2000	722	744	1220	
5	488	473	685	664	602	2350	2380	1230	1740	736	705	1620	
6	491	469	499	801	549	3370	2110	1140	1200	713	659	2730	
7	490	469	477	930	581	6030	1350	1060	1090	749	643	3750	
8	490	478	469	1140	631	5740	1220	1010	1190	726	623	1620	
9	489	466	763	1110	606	2860	1210	1060	1180	705	615	892	
10	488	465	607	815	543	1480	1220	1190	1140	964	584	788	
11	488	467	505	695	529	1390	1050	1060	1060	1000	640	755	
12	487	466	481	656	524	1120	1050	1240	1000	762	936	702	
13	487	462	470	708	525	1030	2340	1450	866	990	810	681	
14	518	461	456	771	524	1050	2600	1660	849	978	619	1630	
15	492	461	451	676	537	984	2550	1020	821	756	598	1180	
16	491	463	465	590	723	932	1700	927	1010	625	568	794	
17	485	482	468	543	796	1020	1280	917	1980	652	537	804	
18	336	517	458	543	631	855	1170	872	1770	1000	555	755	
19	472	477	460	537	666	798	1090	974	1340	1210	489	695	
20	471	466	473	825	691	872	1110	815	1180	1790	506	646	
21	474	459	470	1860	768	880	1080	972	851	2300	509	1790	
22	475	459	464	2100	872	784	988	1100	1040	3030	593	3350	
23	472	476	465	2190	1470	1620	1080	1450	1040	3000	706	714	
24	468	483	498	1310	1790	2370	1030	2130	1010	2430	717	3540	
25	468	470	542	1930	2070	3580	582	2120	1070	1980	757	6000	
26	441	462	490	1000	2900	5760	2490	1570	772	1410	686	5840	
27	471	466	475	815	6110	4380	3210	1040	761	1260	624	2890	
28	470	456	466	810	5750	2720	3080	1130	852	1220	825	2280	
29	475	458	459	740	---	1530	2040	1060	832	965	679	3420	
30	473	512	468	697	---	1230	1370	1010	829	852	594	3710	
31	468	---	502	690	---	1190	---	1290	---	820	533	---	
TOTAL	14800	14122	15387	29626	33791	65775	47720	37247	34333	36561	21320	58441	
MEAN	477	471	496	956	1207	2122	1591	1202	1144	1179	688	1948	
MAX	518	517	763	2190	6110	6030	3210	2130	2000	3030	1310	6000	
MIN	336	456	451	501	524	764	582	815	761	625	489	646	
(+)	-110	-78	+67	+143	+70	-62	0	+6	-7	+8	-6	+28	
MEAN±	367	393	563	1099	1277	2060	1591	1208	1137	1187	682	1976	
CFSM±	.74	.80	1.14	2.23	2.59	4.18	3.23	2.45	2.31	2.41	1.38	4.01	
IN±	.85	.89	1.31	2.57	2.70	4.82	3.60	2.82	2.58	2.78	1.59	4.47	
CAL YR 1978 TOTAL	335675	MEAN	920	MAX	6040	MIN	336	MEAN±	908	CFSM±	1.84	IN±	24.96
WTH YR 1979 TOTAL	409123	MEAN	1121	MAX	6110	MIN	336	MEAN±	1126	CFSM±	2.28	IN±	30.98

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; furnished by Corps of Engineers.
± Adjusted for change in W. Kerr Scott Reservoir.

PEE DEE RIVER BASIN

02112000 YADKIN RIVER AT WILKESBORO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 02...	1018	465	12	15
FEB 28...	1020	5000	107	1730
JUL 21...	1605	3130	173	1460

02112120 ROARING RIVER NEAR ROARING RIVER, N. C.

LOCATION.--Lat 36°14'59", long 81°02'41", Wilkes County, Hydrologic Unit 03040101, on left bank at downstream end of old bridge pier, 800 ft (244 m) upstream from bridge on Secondary Road 1990, 3.8 mi (6.1 km) northwest of village of Roaring River, and 4.1 mi (6.6 km) upstream from mouth.

DRAINAGE AREA.--122 mi² (316 km²).

PERIOD OF RECORD.--Occasional low-flow measurements water years 1925, 1947, 1949-56, 1963. April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 964.85 ft (294.086 m) National Geodetic Vertical Datum of 1929. Prior to May 1, 1964, nonrecording gage on downstream side of bridge at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 296 of this report.

AVERAGE DISCHARGE.--15 years, 198 ft³/s (5.607 m³/s), 22.04 in/yr (560 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft³/s (753 m³/s) Oct. 17, 1975, gage height, 22.54 ft (6.870 m), from floodmark in gage well, from rating curve extended above 2,400 ft³/s (68.0 m³/s) on basis of slope-area measurement of peak flow, and at gage heights 14.40 ft (4.389 m), and 10.83 ft (3.301 m); minimum, 53 ft³/s (1.50 m³/s) July 7, 8, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 reached a stage of about 28 ft (8.5 m), estimated discharge, 45,000 ft³/s (1,270 m³/s) and the flood of August 1940 about 24 ft, (7.3 m), estimated discharge, 31,000 ft³/s (878 m³/s), from stage information by local residents and rating curve extended as explained above. A discharge of 24.2 ft³/s (0.69 m³/s) was measured Sept. 18, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 25	1730	3040 86.1	6.98 2.128	July 20	1430	2860 81.0	6.72 2.048
Mar. 23	2400	4870 138	9.43 2.874	Sept. 22	0130	*17300 490	*18.88 5.755
Apr. 27	0030	2640 74.8	6.37 1.942				

Minimum discharge, 58 ft³/s (1.64 m³/s) Feb. 18, result of freezeup; minimum daily, 87 ft³/s (2.46 m³/s) Nov. 3-5, 11-14.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	89	106	166	146	292	248	262	218	152	211	126
2	98	88	98	1100	157	261	237	246	260	153	199	151
3	96	87	98	339	168	251	312	238	401	152	174	179
4	97	87	138	234	142	712	437	256	457	155	155	149
5	97	87	234	212	136	1160	386	263	289	154	147	573
6	98	88	135	165	133	582	314	230	254	149	146	332
7	92	88	115	183	154	437	275	220	235	150	141	187
8	92	92	108	302	151	400	261	210	251	154	139	159
9	92	89	274	216	134	350	270	234	233	149	134	148
10	93	88	194	188	128	310	244	247	241	184	133	143
11	92	87	140	165	145	320	232	227	215	155	139	137
12	92	87	123	156	146	300	231	240	192	166	149	135
13	92	87	115	173	134	270	605	259	182	186	136	153
14	113	87	110	167	126	250	407	238	177	153	131	367
15	93	90	106	149	132	240	329	210	170	148	129	195
16	91	91	106	145	171	235	300	199	219	147	125	166
17	91	101	105	141	158	230	281	187	577	142	124	158
18	91	134	100	136	98	220	264	183	263	305	124	150
19	93	98	101	132	162	215	251	180	225	457	122	145
20	92	91	106	214	182	212	231	177	208	1190	119	139
21	90	89	104	763	163	210	230	195	196	647	130	1450
22	90	89	99	420	201	210	227	198	195	352	168	3600
23	90	99	97	280	410	613	220	251	200	265	150	500
24	89	109	112	330	969	1950	210	329	188	226	139	348
25	88	93	156	285	1530	611	201	296	181	202	134	284
26	90	91	117	231	885	434	589	228	168	224	129	247
27	90	109	110	208	457	358	986	209	163	196	139	229
28	89	103	106	198	343	317	399	214	161	184	143	491
29	89	105	110	178	---	292	320	190	158	172	138	475
30	89	149	113	168	---	275	286	180	159	165	138	608
31	89	---	141	163	---	260	---	253	---	179	127	---
TOTAL	2881	2872	3877	7907	7861	12777	9783	7049	7035	7473	4412	12124
MEAN	92.9	95.7	125	255	281	412	326	227	235	241	142	404
MAX	113	149	274	1100	1530	1950	986	329	577	1190	211	3600
MIN	88	87	97	132	98	210	201	177	158	142	119	126
CFSM	.76	.78	1.03	2.09	2.30	3.38	2.67	1.86	1.93	1.98	1.16	3.31
IN.	.88	.88	1.18	2.41	2.40	3.90	2.98	2.15	2.15	2.28	1.35	3.70
CAL YR 1978	TOTAL	71581	MEAN 196	MAX 2280	MIN 87	CFSM 1.61	IN 21.83					
WTR YR 1979	TOTAL	86051	MEAN 236	MAX 3600	MIN 87	CFSM 1.93	IN 26.24					

PEE DEE RIVER BASIN

02112120 ROARING RIVER NEAR ROARING RIVER, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
OCT							
02...	1100	90	3	.73	--	--	--
NOV							
01...	1500	87	7	1.6	--	--	--
DEC							
04...	1445	139	8	3.0	--	--	--
JAN							
02...	1015	1640	813	3600	--	--	--
21...	1243	747	249	502	--	--	--
24...	0925	322	18	16	--	--	--
FEB							
23...	1338	411	76	84	--	--	--
24...	1338	1280	961	3320	--	--	--
24...	1745	1690	889	4060	--	--	--
28...	1215	352	20	19	--	--	--
SEP							
05...	1715	1080	1060	3090	--	--	--
22...	0430	6360	2180	37400	25	34	44

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
OCT						
02...	--	--	--	--	--	--
NOV						
01...	--	--	--	--	--	--
DEC						
04...	--	--	--	--	--	--
JAN						
02...	--	--	--	--	--	--
21...	--	--	--	--	--	--
24...	--	--	--	--	--	--
FEB						
23...	--	--	--	--	--	--
24...	--	--	--	--	--	--
24...	--	--	--	--	--	--
28...	--	--	--	--	--	--
SEP						
05...	--	--	--	--	--	--
22...	54	59	75	93	99	100

PEE DEE RIVER BASIN

297

02112250 YADKIN RIVER AT ELKIN, N. C.

LOCATION.--Lat 36°14'28", 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 (0.5 km) downstream from Elkin River and 362 mi (582 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--854 mi² (2,212 km²).

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 866.03 ft (263.966 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 28, 1964, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--Records good. Considerable regulation by W. Kerr Scott Reservoir (see p. 404). Corps of Engineers stage radio-telemeter at station. Suspended-sediment records for the current year are published on page 298 of this report.

AVERAGE DISCHARGE.--15 years, 1,478 ft³/s (41.86 m³/s), 23.50 in/yr (597 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s (700 m³/s) Aug. 10, 1970, gage height, 23.52 ft (7.169 m); minimum, 338 ft³/s (9.57 m³/s) July 28, 29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 36.0 ft (10.97 m), from information by North Carolina State Highway Commission. Flood of August 1940 reached a stage of 37.5 ft (11.43 m). A discharge of 172 ft³/s (4.87 m³/s) was measured on Sept. 19, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,500 ft³/s (609 m³/s) Sept. 22, gage height, 20.81 ft (6.343 m); minimum, 401 ft³/s (11.4 m³/s) Oct. 19, gage height, 0.98 ft (0.299 m); minimum daily, 625 ft³/s (17.7 m³/s) Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	842	692	855	986	1080	5020	1880	2080	1950	1180	1630	944
2	831	698	813	5680	1040	2350	1820	1940	1720	1150	2080	1690
3	801	692	795	2000	1010	1840	1940	1880	2000	1130	1500	1650
4	790	695	973	1210	1020	2830	2930	1870	3150	1120	1230	1540
5	790	699	1530	1180	1020	6560	3440	1980	2560	1140	1210	3110
6	814	693	1060	1210	963	3720	3190	1850	1920	1100	1170	3130
7	793	694	922	1350	956	6980	2290	1740	1670	1070	1130	4700
8	783	734	883	1780	1020	6920	1960	1700	1700	1110	1090	2770
9	779	728	1760	1740	1050	4880	1940	1690	1760	1090	1050	1440
10	779	707	1500	1430	912	2620	1950	1820	1710	1270	1040	1290
11	773	710	1060	1190	882	2210	1830	1730	1670	1460	1040	1210
12	773	715	943	1130	888	2060	1700	1840	1590	1240	1250	1180
13	775	707	911	1150	914	1740	4190	2140	1350	1310	1400	1130
14	896	716	875	1280	891	1750	3820	2490	1400	1410	1070	2080
15	832	716	860	1160	896	1650	3640	1860	1320	1170	1000	1930
16	784	722	860	1060	1070	1600	2750	1540	1510	1060	964	1370
17	784	748	860	983	1250	1580	2110	1570	4660	1060	939	1260
18	779	888	840	969	1080	1530	2000	1410	2690	1460	917	1230
19	625	830	800	941	1080	1380	1820	1530	2090	2170	869	1160
20	768	750	825	1260	1150	1420	1840	1380	1860	3460	831	1090
21	757	734	834	4840	1270	1470	1810	1470	1520	4710	831	1370
22	743	728	837	2930	1360	1400	1680	1630	1450	4020	970	13400
23	743	747	828	3600	2520	1700	1670	1970	1640	4070	1040	2600
24	743	837	860	1760	5210	8820	1720	2550	1420	3200	1100	2790
25	733	776	1100	2890	7830	3900	1450	3080	1610	2800	1120	6510
26	712	769	954	1790	5940	6980	3470	2320	1360	2200	1090	6570
27	714	800	903	1430	7270	5780	6290	1690	1210	1880	987	4570
28	722	829	855	1300	6910	4170	4340	1720	1240	1840	1130	3470
29	713	778	850	1280	---	2640	3260	1670	1280	1670	1110	4170
30	705	999	842	1180	---	2060	2340	1560	1260	1430	992	5950
31	702	---	900	1120	---	1970	---	1750	---	1400	908	---
TOTAL	23778	22531	29688	53809	58482	101530	77070	57450	54270	56380	34688	87304
MEAN	767	751	958	1736	2089	3275	2569	1853	1809	1819	1119	2910
MAX	896	999	1760	5680	7830	8820	6290	3080	4660	4710	2080	13400
MIN	625	692	795	941	882	1380	1450	1380	1210	1060	831	944
(+)	-110	-78	+67	+143	+70	-62	0	+6	-7	+8	-6	+28
MEAN#	657	673	1025	1879	2159	3213	2569	1859	1802	1827	1113	2938
CFSM#	.77	.79	1.20	2.20	2.53	3.76	3.01	2.18	2.11	2.14	1.30	3.44
IN#	.89	.88	1.38	2.54	2.64	4.34	3.36	2.51	2.35	2.47	1.50	3.84
CAL YR 1978 TOTAL	573935			MEAN 1572	MAX 11700	MIN 625	MEAN# 1560	CFSM# 1.83	IN# 24.81			
WTR YR 1979 TOTAL	656980			MEAN 1800	MAX 13400	MIN 625	MEAN# 1805	CFSM# 2.11	IN# 28.70			

+ Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; furnished by Corps of Engineers.

Adjusted for change in W. Kerr Scott Reservoir.

PEE DEE RIVER BASIN

02112250 YADKIN RIVER AT ELKIN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA: WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
OCT							
02...	1145	773	24	50	--	--	--
NOV							
01...	1000	676	8	15	--	--	--
MAR							
01...	1410	4730	975	12500	--	--	--
SEP							
05...	1950	5200	881	12400	--	--	--
22...	0745	21100	1210	68900	12	18	26

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
OCT						
02...	--	--	--	--	--	--
NOV						
01...	--	--	--	--	--	--
MAR						
01...	--	--	--	--	--	--
SEP						
05...	--	--	--	--	--	--
22...	39	46	64	85	97	100

LOCATION.--Lat 36°18'58", long 80°48'36", Surry County, Hydrologic Unit 03040101, on right bank 280 ft (85 m) upstream from bridge (relocated) on Secondary Road 1001, 1.8 mi (2.9 km) upstream from Grass Creek, and 3.3 mi (5.3 km) east of State Road.

CAL	YR 1978	TOTAL	45974	MEAN	126	MAX	1290	MIN	56	CFSM	1.57	IN	21.27
WTR	YR 1979	TOTAL	61321	MEAN	168	MAX	2560	MIN	56	CFSM	2.09	IN	28.37

PEE DEE RIVER BASIN

02112360 MITCHELL RIVER NEAR STATE ROAD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTAN- EANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
02...	1345	55	3	.53
09				
01...	1230	56	5	.76
08				
04...	1100	92	6	1.5
JAN				
02...	1135	944	573	1460
FEB				
23...	1430	222	39	23
24...	1450	1010	610	1660
24...	1900	1250	615	2080
MAR				
02...	1030	186	25	13
SEP				
05...	1815	1250	701	2370
22...	0645	3140	1270	10800

02113000 FISHER RIVER NEAR COPELAND, N. C.

LOCATION.--Lat 36°20'27", long 80°41'10", Surry County, Hydrologic Unit 03040101, on left bank 500 ft (152 m) upstream from bridge on State Highway 268, 1 mi (2 km) upstream from Cody Creek, and 2 mi (3 km) northwest of Copeland.

DRAINAGE AREA.--121 mi² (313 km²).

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1303: 1933(M).

GAGE.--Water-stage recorder. Altitude of gage is 913 ft (278 m), by barometer. Prior to Sept. 5, 1936, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 302 of this report.

AVERAGE DISCHARGE.--48 years, 184 ft³/s (5.211 m³/s), 20.65 in/yr (525 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,200 ft³/s (969 m³/s) Sept. 22, 1979, gage height, 19.61 ft (5.977 m) from rating curve extended above 6,200 ft³/s (176 m³/s) on basis of slope-area measurement of peak flow at gage height, 18.4 ft (5.61 m); minimum, 14 ft³/s (0.40 m³/s) Aug. 28, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0700	3000 85.0	7.14 2.176	Mar. 24	0400	2760 78.2	6.84 2.085
Feb. 24	1830	3540 100	7.81 2.380	June 17	0330	3350 94.9	7.58 2.310
Feb. 25	2030	4200 119	8.64 2.633	July 20	1830	4790 136	9.38 2.859
Mar. 5	0700	4250 120	8.70 2.652	Sept. 22	0930	*34200 969	*19.61 5.977

Minimum discharge, 46 ft³/s (1.30 m³/s) Feb. 18, gage height, 2.10 ft (0.640 m), result of freezeup; minimum daily 79 ft³/s (2.24 m³/s) Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	83	117	146	133	240	215	291	253	180	173	113
2	89	83	105	1720	142	256	210	272	211	165	185	370
3	84	83	103	393	146	235	260	263	589	156	170	526
4	86	83	146	237	135	379	360	273	630	158	151	407
5	88	83	319	192	130	2000	300	288	283	163	144	949
6	94	82	173	173	124	617	280	253	238	152	139	681
7	90	83	135	180	137	405	270	242	224	152	136	289
8	84	92	120	299	166	361	300	234	228	158	134	225
9	82	88	329	212	128	327	320	232	214	151	128	193
10	81	85	263	177	117	288	280	235	263	180	124	178
11	80	85	166	161	120	294	260	793	238	174	130	167
12	79	84	141	151	125	258	210	345	193	161	185	156
13	79	84	129	167	120	240	893	369	181	188	142	154
14	124	84	120	175	117	233	374	395	175	155	128	266
15	92	86	114	149	121	219	283	298	169	143	122	198
16	83	88	112	141	157	207	258	298	254	143	116	170
17	84	99	109	136	161	203	243	252	1510	138	114	161
18	82	135	103	132	108	199	240	236	342	160	113	153
19	84	104	105	126	164	195	227	230	355	441	114	150
20	84	90	105	189	172	192	219	223	284	1530	110	141
21	80	86	105	1190	161	189	214	217	240	727	109	737
22	82	85	100	471	182	183	210	224	227	322	185	12100
23	82	98	95	271	437	247	207	241	223	257	154	720
24	80	127	130	422	1660	1780	206	305	210	266	167	448
25	80	98	190	313	2310	553	206	331	212	249	166	359
26	82	92	150	234	1340	364	756	242	190	234	133	310
27	83	108	118	204	514	301	1200	223	182	266	131	284
28	81	113	115	191	357	270	487	225	181	233	154	593
29	83	108	111	171	---	255	366	209	177	194	128	479
30	82	169	109	159	---	240	319	196	180	181	128	366
31	82	---	128	154	---	225	---	293	---	169	116	---
TOTAL	2639	2868	4365	9036	9684	12005	10173	8728	8856	7951	4330	22043
MEAN	85.1	95.6	141	291	346	387	339	282	295	256	140	735
MAX	124	169	329	1720	2310	2000	1200	793	1510	1530	186	12100
MIN	79	82	95	126	108	183	206	196	169	138	109	113
CFSM	.70	.79	1.17	2.41	2.86	3.20	2.80	2.33	2.44	2.12	1.16	6.07
IN.	.81	.88	1.34	2.78	2.98	3.69	3.13	2.68	2.72	2.44	1.33	6.78

CAL YR 1978 TOTAL 72448 MEAN 198 MAX 3410 MIN 79 CFSM 1.64 IN 22.27
WTR YR 1979 TOTAL 102678 MEAN 281 MAX 12100 MIN 79 CFSM 2.32 IN 31.57

PEE DEE RIVER BASIN

02113000 FISHER RIVER NEAR COPELAND, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLUX, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 02...	1425	94	13	3.3
NOV 05...	1155	85	3	.69
JAN 02...	1225	2090	1010	5700

PEE DEE RIVER BASIN

303

02113500 YADKIN RIVER AT SILOAM, N. C.

LOCATION.--Lat 35°16'42", long 80°33'18", Yadkin County, Hydrologic Unit 03040101, on right bank at upstream side of bridge on Secondary Road 1003, at Siloam, 70 ft (21 m) upstream from Hagan Creek, and 339 mi (545 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--1220 mi² (3,160 km²).

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 782.02 ft (238.360 m) National Geodetic Vertical Datum of 1929 (North Carolina Department of Transportation bench mark). Prior to February 22, 1977, nonrecording gage at same site and datum.

REMARKS.--Records good. Some regulation by W. Kerr Scott Reservoir (see p. 404). Suspended-sediment records for the current year are published on page 304 of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,600 ft³/s (1,150 m³/s) Sept. 22, 1979 gage height, 26.72 ft (8.144 m); minimum discharge, 715 ft³/s (20.2 m³/s) Oct. 19, 1978; minimum gage height, 3.32 ft (1.012 m) Sept. 6, 1977; minimum daily, 764 ft³/s (21.6 m³/s) Sept. 6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 14 or 15, 1940 reached a stage of 816.7 ft (248.93 m) National Geodetic Vertical Datum of 1929, 34.7 ft (10.58 m) gage datum, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,600 ft³/s (1,150 m³/s) Sept. 22, gage height, 26.72 ft (8.144 m) minimum, 715 ft³/s (20.2 m³/s) Oct. 19, gage height, 3.44 ft (1.049 m); minimum daily, 856 ft³/s (24.2 m³/s) Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1040	952	1140	1270	1500	5830	2570	2840	2690	1730	2010	1250		
2	1040	940	1020	8730	1330	3190	2470	2650	2360	1640	2560	2110		
3	999	922	991	3750	1380	2600	2490	2540	2530	1610	2170	2460		
4	996	922	1240	1980	1360	3900	3430	2530	5120	1570	1730	2650		
5	995	928	2720	1720	1380	11300	4270	2700	3440	1620	1680	3880		
6	1010	928	1700	1680	1320	5500	3880	2520	2770	1560	1610	5030		
7	1020	928	1240	1790	1330	8200	3140	2380	2400	1520	1580	4810		
8	1000	971	1140	2510	1420	7800	2650	2350	2360	1570	1530	3740		
9	985	971	2530	2380	1420	5870	2590	2330	2440	1540	1480	2150		
10	971	940	2860	2010	1290	3730	2590	2430	2350	1630	1450	1800		
11	971	934	1530	1700	1230	3120	2460	3190	2430	2000	1460	1680		
12	971	934	1280	1580	1240	2900	2310	3100	2170	1810	1750	1610		
13	971	922	1190	1600	1290	2510	6160	3450	1960	1810	1900	1540		
14	1150	928	1140	1780	1260	2470	5000	3570	1910	1900	1560	2190		
15	1100	932	1100	1650	1270	2390	4300	2870	1810	1690	1420	2670		
16	1020	940	1080	1520	1440	2300	3540	2430	2010	1560	1370	1960		
17	988	977	1090	1430	1660	2230	2930	2270	8870	1500	1330	1680		
18	976	1130	1070	1370	1530	2240	2690	2120	3800	1860	1310	1650		
19	856	1120	1050	1350	1310	2080	2480	2140	3050	2950	1290	1540		
20	958	985	1070	1740	1670	2070	2430	2090	2730	4170	1240	1500		
21	958	961	1090	7900	1670	2110	2400	2040	2310	7210	1240	1820		
22	946	947	1070	4610	1780	2050	2310	2250	2090	4570	1410	30500		
23	952	958	1050	4140	3170	2500	2230	2490	2280	4400	1500	5870		
24	958	1060	1090	3170	9400	13900	2310	3180	2110	3730	1590	3320		
25	952	1010	1560	3520	14000	5500	2180	4030	2160	3500	1640	6500		
26	982	959	1290	2690	9200	8100	3440	3110	2020	2830	1560	6570		
27	946	988	1180	2060	8800	6700	8270	2510	1760	2480	1460	5320		
28	958	1070	1120	1870	8000	5000	5170	2360	1760	2550	1530	4180		
29	958	1000	1070	1760	---	3600	4250	2300	1810	2280	1650	4690		
30	952	1250	1080	1630	---	2840	3260	2180	1770	2010	1450	6020		
31	952	---	1150	1560	---	2680	---	2330	---	1910	1340	---		
TOTAL	30531	29407	40931	78450	83650	137210	100240	81280	79590	74760	48800	122740		
MEAN	985	980	1320	2531	2988	4426	3341	2622	2653	2412	1574	4091		
MAX	1150	1250	2860	8730	14000	13900	8270	4030	8870	7210	2560	30500		
MIN	856	922	991	1270	1230	2050	2180	2040	1760	1500	1240	1260		
(+)	-110	-78	+67	+143	+70	-62	0	+6	-7	+8	-6	+28		
CAL YR 1978	TOTAL	782759	MEAN	2145	MAX	20000	MIN	856	MEAN	2133	CFSM	1.75	IN	23.76
WTR YR 1979	TOTAL	907589	MEAN	2487	MAX	30500	MIN	856	MEAN	2492	CFSM	2.04	IN	27.69

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; furnished by Corps of Engineers.

* Adjusted for change in W. Kerr Scott Reservoir.

PEE DEE RIVER BASIN

02113500 YADKIN RIVER AT SILOAM, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
OCT							
02...	1520	1020	25	69	--	--	--
NOV							
02...	1120	837	13	29	--	--	--
DEC							
05...	1230	2800	225	1700	--	--	--
JAN							
05...	1245	1740	26	122	--	--	--
21...	1215	9170	771	19100	--	--	--
21...	1840	6880	570	10600	--	--	--
FEB							
25...	1700	15300	2240	92500	--	--	--
26...	1245	9170	741	18300	--	--	--
MAR							
02...	1515	2990	162	1310	--	--	--
16...	1500	2360	48	306	--	--	--
SEP							
22...	1430	40000	1810	195000	11	17	24

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
OCT						
02...	--	--	--	--	--	--
NOV						
02...	--	--	--	--	--	--
DEC						
05...	--	--	--	--	--	--
JAN						
05...	--	--	--	--	--	--
21...	--	--	--	--	--	--
21...	--	--	--	--	--	--
FEB						
25...	--	--	--	--	--	--
26...	--	--	--	--	--	--
MAR						
02...	--	--	--	--	--	--
16...	--	--	--	--	--	--
SEP						
22...	38	54	79	96	99	100

02113850 ARARAT RIVER AT ARARAT, N. C.

LOCATION.--Lat 36°24'16", long 80°33'43", Surry County, Hydrologic Unit 03040101, on right bank at upstream side of bridge pier on Secondary Road 2019, at Ararat, and 300 ft (91 m) downstream from Flat Shoal Creek.

DRAINAGE AREA.--231 mi² (598 km²).

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 880.97 ft (268.520 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 306 of this report.

AVERAGE DISCHARGE.--15 years, 315 ft³/s (8.921 m³/s), 18.52 in/yr (470 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) Sept. 22, 1979, gage height, 24.46 ft (7.455 m); minimum, 20 ft³/s (0.57 m³/s) Aug. 17, 18, Oct. 7, 8, 1966, gage height, 0.65 ft (0.198 m), result of regulation; minimum daily, 55 ft³/s (1.56 m³/s) Aug. 2, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 14, 1947 reached a stage of 21.4 ft (6.52 m), result of failure of dams upstream, discharge about 26,000 ft³/s (736 m³/s) revised, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0900	5100 144	8.57 2.612	Mar. 5	1000	4870 138	8.25 2.515
Jan. 21	0600	3360 95.2	6.08 1.853	Mar. 24	0500	4190 119	7.28 2.219
Feb. 24	1900	5450 154	9.05 2.758	June 4	0100	4760 135	8.10 2.469
Feb. 25	2000	4900 139	8.30 2.530	Sept. 22	1000	*35000 991	*24.46 7.455

Minimum discharge, 126 ft³/s (3.57 m³/s) Feb. 18, 19, result of freezeup; minimum daily, 131 ft³/s (3.71 m³/s) Oct. 25.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	135	199	288	265	590	456	449	549	376	306	184
2	154	135	170	3350	275	535	443	430	427	335	354	300
3	148	135	174	741	300	491	540	418	1570	318	299	505
4	154	135	237	452	278	592	611	443	2030	311	265	348
5	154	135	573	355	265	2970	697	335	750	340	255	911
6	154	135	268	315	257	1130	547	416	600	308	247	730
7	140	136	222	349	290	771	445	396	535	306	236	352
8	139	154	203	621	290	719	453	374	550	310	230	275
9	138	145	776	405	265	650	441	467	501	299	223	242
10	140	141	541	326	229	565	453	367	503	349	220	228
11	140	140	310	297	250	599	423	1180	508	337	232	219
12	138	140	258	230	260	516	469	996	434	322	294	212
13	139	141	232	305	244	442	1560	520	412	364	244	212
14	213	141	216	306	244	467	742	783	399	305	223	300
15	163	145	203	268	253	437	551	564	385	286	217	250
16	147	153	203	254	322	424	487	521	427	291	206	209
17	148	197	203	251	322	423	454	445	1150	236	202	203
18	144	252	185	241	223	407	436	409	541	309	201	199
19	147	177	185	229	330	400	421	402	478	431	201	197
20	145	156	193	408	333	391	413	374	449	979	199	188
21	138	147	189	2120	329	390	402	381	421	795	193	619
22	139	146	179	866	397	365	399	422	419	465	283	13600
23	139	172	175	530	826	476	396	424	408	400	235	1680
24	134	205	225	829	2540	2590	388	609	400	462	262	1050
25	131	162	391	622	3290	1040	377	695	420	481	266	583
26	135	152	241	457	2090	733	897	452	372	388	213	472
27	138	197	212	397	926	615	1240	402	356	378	198	416
28	134	196	193	374	689	557	656	438	349	350	207	638
29	135	186	185	333	---	527	527	381	344	322	146	583
30	134	304	192	323	---	499	464	354	369	305	199	459
31	134	---	248	323	---	490	---	459	---	292	145	---
TOTAL	4500	4895	8007	17266	16608	21821	17088	15706	17060	11844	7291	26372
MEAN	145	163	260	557	593	704	570	507	569	382	235	879
MAX	213	304	776	3350	3290	2970	1560	1180	2030	979	354	13600
MIN	131	135	174	229	223	365	377	354	344	246	185	184
CFSM	.63	.71	1.13	2.41	2.57	3.05	2.47	2.20	2.46	1.55	1.02	3.81
IN	.72	.79	1.30	2.78	2.67	3.51	2.75	2.53	2.75	1.91	1.17	4.25
CAL YR 1978	TOTAL	125777	MEAN	345	MAX	5630	MIN	131	CFSM	1.49	IN	20.25
WTR YR 1979	TOTAL	168518	MEAN	462	MAX	13600	MIN	131	CFSM	2.00	IN	27.14

PEE DEE RIVER BASIN

02113850 ARARAT RIVER AT ARARAT, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT CHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
03...	0755	145	12	4.7	--	--	--	--	--	--	--	--
13...	1100	133	12	4.3	--	--	--	--	--	--	--	--
NOV												
05...	1530	133	7	2.5	--	--	--	--	--	--	--	--
DEC												
18...	1400	194	5	2.6	--	--	--	--	--	--	--	--
JAN												
02...	1315	4050	1340	14700	--	--	--	--	--	--	--	--
21...	1700	1650	487	2170	--	--	--	--	--	--	--	--
30...	1350	339	4	4.2	--	--	--	--	--	--	--	--
FEB												
18...	1216	1730	686	3290	--	--	--	--	--	--	--	--
24...	1415	2490	1100	7490	--	--	--	--	--	--	--	--
25...	1400	4600	2020	25100	15	23	33	42	48	63	78	94
MAR												
05...	1230	680	77	141	--	--	--	--	--	--	--	--
SEP												
05...	1800	514	142	197	--	--	--	--	--	--	--	--

02114450 LITTLE YADKIN RIVER AT DALTON, N. C.

LOCATION.--Lat 36°17'56", long 80°24'53", Stokes County, Hydrologic Unit 03040101, on left bank 1,200 ft (370 m) downstream from bridge on U.S. Highway 52, 1.0 mi (1.6 km) southwest of Dalton, 1.3 mi (2.1 km) downstream from Southern Railway bridge, and 2.0 mi (3.2 km) downstream from Danbury Creek.

DRAINAGE AREA.--43.8 mi² (110.9 km²).

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 (248.02 m) National Geodetic Vertical Datum of 1929 (North Carolina State Highway Commission bench mark).

REMARKS.--Records good. A Soil Conservation Service flood-control dam on upstream tributary, drainage area 4.7 mi² (12.2 km²) with flood storage of 695 acre-ft (857,000 m³) was completed on June 21, 1977. Suspended-sediment records for the current year are published on page 308 of this report.

AVERAGE DISCHARGE.--19 years, 47.8 ft³/s (1.354 m³/s), 14.82 in/yr (376 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,400 ft³/s (266 m³/s) Sept. 22, 1979, gage height, 20.29 ft (6.184 m), from rating curve extended above 2,700 ft³/s (76.5 m³/s) on basis of slope-area measurement at gage height, 17.86 ft (5.444 m); minimum, 1.3 ft³/s (0.037 m³/s) Aug. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0500	2180 61.7	6.58 2.006	Feb. 25	1500	2010 56.9	6.13 1.868
Jan. 21	0200	3020 85.5	8.66 2.640	Mar. 5	0900	5680 161	14.33 4.368
Feb. 24	1800	2750 77.9	7.99 2.435	Sept. 22	0430	*9400 266	*20.29 6.184

Minimum discharge 12 ft³/s (0.34 m³/s) Sept. 1, gage height, 0.62 ft (0.19 m); minimum daily, 13 ft³/s (0.37 m³/s) Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	17	23	33	38	66	42	40	34	23	28	13
2	18	17	20	930	38	57	41	38	31	22	22	43
3	16	16	21	148	36	51	55	38	43	21	21	65
4	15	15	118	73	36	51	126	53	109	21	20	44
5	16	15	415	54	34	1880	93	71	44	22	19	570
6	16	16	81	49	33	255	62	43	36	19	18	142
7	14	16	46	52	48	112	51	39	34	19	18	50
8	14	21	36	129	50	100	47	36	34	21	17	33
9	14	18	402	71	36	84	52	35	31	18	16	26
10	14	17	156	51	34	69	46	35	32	28	16	24
11	14	17	65	44	40	123	43	144	30	25	17	22
12	14	16	47	41	39	77	42	118	26	23	38	21
13	14	17	39	57	32	63	288	133	25	25	22	21
14	29	17	33	67	32	59	113	150	25	21	19	24
15	17	17	30	49	40	52	69	62	24	20	17	20
16	16	19	29	43	63	47	54	49	35	51	16	19
17	15	23	28	40	52	46	47	42	213	57	16	19
18	15	28	26	38	35	45	44	38	54	26	16	19
19	16	20	26	36	74	44	42	37	39	22	16	18
20	16	19	26	257	55	43	40	35	35	187	15	17
21	15	18	27	1050	53	41	38	34	33	125	15	69
22	15	18	25	173	113	40	39	35	32	66	16	3020
23	15	20	24	92	231	66	50	34	30	46	18	238
24	15	24	58	156	1070	318	40	161	31	36	17	88
25	15	19	86	97	844	100	38	104	33	36	17	56
26	16	18	45	68	318	67	92	53	27	33	15	44
27	16	26	35	57	125	56	218	43	25	31	15	37
28	16	23	31	51	82	50	69	43	25	27	15	45
29	16	24	28	45	---	47	50	37	24	25	15	39
30	16	33	27	43	---	45	44	34	24	25	15	301
31	16	---	34	41	---	43	---	35	---	26	14	---
TOTAL	496	584	2087	4135	3681	4197	2075	1849	1218	1147	559	5147
MEAN	16.0	19.5	67.3	133	131	135	69.2	59.6	40.6	37.0	18.0	172
MAX	29	33	415	1050	1070	1880	288	161	213	187	38	3020
MIN	14	15	20	33	32	40	38	34	24	18	14	13
CFSM	.37	.46	1.57	3.11	3.06	3.15	1.62	1.39	.95	.86	.42	4.02
IN.	.43	.51	1.81	3.59	3.20	3.65	1.80	1.61	1.06	1.00	.49	4.47
CAL YR 1978	TOTAL	20989	MEAN 57.5	MAX 1600	MIN 14	CFSM 1.34	IN 18.24					
WTH YR 1979	TOTAL	27175	MEAN 74.5	MAX 3020	MIN 13	CFSM 1.74	IN 23.62					

PEE DEE RIVER BASIN

02114450 LITTLE YADKIN RIVER AT DALTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT 13...	1400	15	9	.36	--	--	--	--	--	--	--	--
NOV 03...	1500	16	8	.35	--	--	--	--	--	--	--	--
DEC 06...	1100	79	31	6.6	--	--	--	--	--	--	--	--
JAN 05...	1445	51	16	2.2	--	--	--	--	--	--	--	--
FEB 24...	1315	1760	3020	14400	19	25	32	42	44	62	78	95
25...	1205	415	1530	1710	--	--	--	--	--	--	--	--
25...	1600	1730	1610	7520	--	--	--	--	--	--	--	--
26...	0945	335	212	192	--	--	--	--	--	--	--	--
MAR 05...	1150	2620	1800	12700	--	--	--	--	--	--	--	--
06...	1515	192	192	100	--	--	--	--	--	--	--	--

PEE DEE RIVER BASIN

309

02115360 YADKIN RIVER AT ENON, N. C.

LOCATION.--Lat 36°07'55", long 80°26'39", Forsyth County, Hydrologic Unit 03040101, on left bank 100 ft (30 m) upstream from bridge on Secondary Road 1525, 1.5 mi (2.4 km) east of Enon, 4 mi (6.4 km) upstream from Forbush Creek, and 324 mi (521 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--1,680 mi² (4,350 km²), approximately.

PERIOD OF RECORD.--July 1964 to current year.

REVISED RECORDS.--WRD N. C. 1972: 1970(M).

GAGE.--Water-stage recorder. Datum of gage is 701.71 ft (213.881 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 6, 1968, nonrecording gage on downstream side of bridge at same site and datum.

REMARKS.--Records good. Some regulation by W. Kerr Scott Reservoir (see p. 404). Corps of Engineers stage-radio telemeter at station. Suspended-sediment records for the current year are published on page 310 of this report.

AVERAGE DISCHARGE.--15 years, 2,640 ft³/s (74.76 m³/s), 21.34 in/yr (542 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,300 ft³/s (2,080 m³/s) June 21, 1972; maximum gage height, 29.52 ft (8.998 m) Sept. 22, 1979; minimum observed, 625 ft³/s (17.7 m³/s) Aug. 17, 1967; minimum gage height observed, 2.29 ft (0.698 m) July 28, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 15, 1940 reached a stage of 737.5 ft (224.79 m) National Geodetic Vertical Datum of 1929 (35.8 ft or 10.91 m, gage datum), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharge, 65,100 ft³/s (1,840 m³/s) Sept. 22, gage height, 29.52 ft (8.998 m); minimum, 991 ft³/s (28.1 m³/s) Oct. 20, gage height, 3.22 ft (0.981 m); minimum daily, 1,170 ft³/s (33.1 m³/s) Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	1350	1210	1670	1740	2060	7630	3120	3440	3390	2160	2310	1480	
2	1360	1200	1400	16300	1850	4700	3020	3200	2980	2010	2790	2100	
3	1280	1210	1330	7110	1880	3340	3070	3070	3240	1960	2670	2880	
4	1270	1200	1710	3110	1870	3190	4270	3060	7780	1900	2080	3280	
5	1320	1200	4730	2420	1870	21900	5610	3400	4460	1990	1950	4460	
6	1320	1210	2830	2260	1800	8710	4660	3120	3590	1920	1890	8580	
7	1320	1210	1820	2300	1820	8320	3940	2900	3000	1830	1840	5240	
8	1270	1280	1600	3400	1920	9130	3320	2810	2910	1890	1800	4690	
9	1250	1290	3630	3420	1910	7920	3220	2730	2940	1870	1730	2770	
10	1240	1230	5420	2770	1740	4790	3220	2860	2850	1980	1690	2130	
11	1240	1220	2460	2320	1620	4130	3040	3930	2990	2360	1670	1980	
12	1240	1220	1890	2110	1670	3710	2880	4660	2630	2180	2070	1890	
13	1240	1210	1690	2190	1720	3250	8190	5950	2450	2190	2240	1840	
14	1460	1210	1580	2490	1680	3100	7130	4950	2280	2220	1930	2170	
15	1510	1210	1490	2300	1700	3020	5160	3790	2230	2060	1690	3200	
16	1290	1230	1440	2050	2000	2620	4430	3200	2320	1950	1640	2370	
17	1260	1320	1460	1940	2250	2720	3650	2840	12600	1960	1580	1970	
18	1250	1530	1410	1880	2110	2740	3280	2680	4940	2010	1540	1940	
19	1170	1600	1370	1800	1610	2580	3080	2600	3690	3310	1540	1870	
20	1190	1320	1410	2330	2350	2510	2970	2620	3400	4110	1500	1770	
21	1240	1260	1460	14800	2250	2530	2940	2470	2880	11600	1490	1870	
22	1210	1220	1420	7670	2500	2480	2860	2690	2590	5650	1610	48400	
23	1220	1240	1360	5160	4500	2440	2760	2900	2690	5070	1800	20800	
24	1220	1440	1430	4780	13600	15700	2810	3980	2620	4450	1870	4490	
25	1200	1400	2340	4850	23100	7490	2710	5230	2600	4130	1960	7060	
26	1210	1260	1990	3890	21500	8100	3330	3960	2480	3430	1850	7980	
27	1200	1310	1630	2920	9580	7860	12200	3250	2170	3000	1720	6810	
28	1220	1490	1540	2630	9360	6060	6580	2890	2120	2950	1720	4680	
29	1210	1370	1450	2440	---	4480	5220	2860	2170	2680	1870	5720	
30	1220	1700	1430	2260	---	3490	4000	2640	2160	2390	1690	7870	
31	1210	---	1530	2150	---	3230	---	2700	---	2200	1590	---	
TOTAL	39190	39000	59920	119790	123820	174070	126670	103440	101150	91410	57320	174290	
MEAN	1264	1300	1933	3864	4422	5615	4222	3337	3372	2949	1849	5810	
MAX	1510	1700	5420	16300	23100	21900	12200	5950	12600	11600	2790	48400	
MIN	1170	1200	1330	1740	1610	2440	2710	2470	2120	1830	1490	1480	
(+)	-110	-78	+67	+143	+70	-62	0	+6	-7	+8	-6	+28	
CAL YR 1978 TOTAL	1082390	MEAN	2746	MAX	33700	MIN	1170	MEAN	2734	CFSM	1.63	IN	22.13
WTR YR 1979 TOTAL	1210070	MEAN	3315	MAX	48400	MIN	1170	MEAN	3320	CFSM	1.98	IN	26.88

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; furnished by Corps of Engineers.

* Adjusted for change in W. Kerr Scott Reservoir.

PEE DEE RIVER BASIN

02115360 YADKIN RIVER AT ENON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDEED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	
DEC 05...	1645	5200	482	6770	--	--	--	
JAN 21...	1430	17400	564	26500	--	--	--	
FEB 25...	1545	16900	883	40300	18	23	30	
26...	1420	17700	935	44700	--	--	--	
JUL 21...	1125	11600	1140	35700	--	--	--	
SEP 06...	2030	4730	426	5440	--	--	--	
22...	1700	63200	953	163000	--	61	74	
DATE	TIME	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
DEC 05...	--	--	--	--	--	--	--	--
JAN 21...	--	--	--	--	--	--	--	--
FEB 25...	40	46	61	75	89	--	--	--
26...	--	--	--	--	--	--	--	--
JUL 21...	--	--	--	--	--	--	--	--
SEP 06...	--	--	--	--	--	--	--	--
22...	75	89	94	97	99	100	100	100

PEE DEE RIVER BASIN

311

02115856 SALEM CREEK NEAR ATWOOD, N. C.

LOCATION.--Lat 36°02'16", long 80°18'18", Forsyth County, Hydrologic Unit 03040101, on left bank 5 ft (1.5 m) upstream from bridge at Winston-Salem Elledge Wastewater Treatment Plant, 2,700 ft (820 m) upstream from effluent outfall, 4,100 ft (1,250 m) upstream from bridge on Secondary Road 1120, 1.4 mi (2.3 km) southeast of Atwood, and 3.4 mi (5.5 km) upstream from mouth.

DRAINAGE AREA.--64.4 mi² (166.8 km²).

PERIOD OF RECORD.--May 1971 to current year.

GAGE.--Water-stage recorder and concrete control since Dec. 1, 1972. Datum of gage is 693.97 ft (211.522 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow regulated by Salem Lake in the headwaters. The city of Winston-Salem diverted an average of 19.8 ft³/s (0.56 m³/s) from Salem Lake for water supply. Diurnal fluctuation at low flow caused by filtration plant and industry. Creek channel improved by dredging in 1916, 1934-35, 1961, 1967. Suspended-sediment records for the current year are published on page 312 of this report.

AVERAGE DISCHARGE.--8 years, 77.5 ft³/s (2.195 m³/s), 16.34 in/yr (415 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,620 ft³/s (103 m³/s) May 13, 1971, gage height, 16.30 ft (4.968 m); minimum, 11 ft³/s (0.31 m³/s) Sept. 13, 1976, Sept. 4, 1977; minimum daily, 12 ft³/s (0.34 m³/s) Sept. 4, 1977; minimum gage height, 0.59 ft (0.180 m) Oct. 15, 16, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,130 ft³/s (88.6 m³/s) Sept. 22, gage height, 14.07 ft (4.289 m); minimum daily, 21 ft³/s (0.59 m³/s) Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	25	42	38	53	94	44	57	50	31	31	42
2	35	24	34	285	51	63	45	53	44	29	34	44
3	28	24	49	129	49	74	103	53	48	30	48	35
4	28	24	194	67	50	77	227	65	72	28	26	38
5	77	23	540	57	49	1330	124	51	46	29	24	805
6	41	24	160	51	48	300	74	48	43	27	25	374
7	31	29	74	77	62	130	55	48	41	26	26	86
8	27	56	56	171	77	100	46	47	42	26	25	51
9	27	26	544	88	71	85	80	81	38	27	25	43
10	26	25	384	63	55	80	53	52	71	42	25	39
11	26	25	105	54	51	150	45	81	74	29	23	35
12	25	24	69	63	51	78	45	127	46	52	40	31
13	27	24	57	126	48	72	199	293	40	33	27	31
14	38	25	51	103	46	68	88	663	35	26	24	35
15	25	25	44	84	58	62	61	144	33	25	24	27
16	25	40	45	64	66	62	52	81	278	46	24	25
17	25	118	45	57	59	63	45	62	368	38	22	24
18	26	68	40	52	41	62	39	54	90	30	21	25
19	26	35	39	52	71	62	37	49	59	28	23	25
20	25	32	39	438	84	61	36	48	47	487	22	24
21	23	30	51	1220	114	57	33	47	46	104	22	71
22	23	28	36	392	169	57	32	48	65	76	22	1600
23	23	48	33	119	317	145	35	49	68	54	22	460
24	23	44	101	186	1170	330	36	75	56	46	47	132
25	24	32	73	95	1410	123	35	89	45	42	90	90
26	26	30	51	73	816	71	222	49	40	66	34	87
27	26	96	44	63	204	59	357	44	37	55	220	83
28	23	46	39	63	111	57	116	53	35	42	82	109
29	24	81	36	55	---	54	74	72	33	36	75	72
30	23	61	34	53	---	49	64	49	32	33	43	99
31	25	---	49	55	---	48	---	65	---	40	38	---
TOTAL	1036	1192	3163	4493	5451	4143	2502	2797	2022	1683	1238	4642
MEAN	33.4	39.7	102	145	195	134	83.4	90.2	67.4	54.3	39.9	155
MAX	185	118	544	1220	1410	1330	357	663	368	487	220	1600
MIN	23	23	33	38	41	48	32	44	32	25	21	24
CAL YR 1978	TOTAL	31587	MEAN	86.5	MAX	1790	MIN	23				
WTR YR 1979	TOTAL	34362	MEAN	94.1	MAX	1600	MIN	21				

PEE DEE RIVER BASIN

02115856 SALEM CREEK NEAR ATWOOD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
NOV												
00...	1530	26	11	.77	--	--	--	--	--	--	--	--
30...	1445	58	35	5.6	--	--	--	--	--	--	--	--
JAN												
02...	1315	359	477	402	--	--	--	--	--	--	--	--
21...	1340	1290	1110	3070	--	--	--	--	--	--	--	--
FEB												
23...	1500	440	443	1120	--	--	--	--	--	--	--	--
24...	1220	2170	2520	14800	6	17	22	33	39	58	74	92
25...	1310	1620	1290	5640	--	--	--	--	--	--	--	--
25...	1715	1670	1320	5750	--	--	--	--	--	--	--	--
MAR												
05...	1345	1400	1200	4540	--	--	--	--	--	--	--	--
SEP												
05...	1200	1230	553	1440	--	--	--	--	--	--	--	--

02115860 MUDDY CREEK NEAR MUDDY CREEK, N. C.

LOCATION.--Lat 36°00'01", long 80°20'25", Forsyth County, Hydrologic Unit 03040101, on right bank 100 ft (30 m) upstream from bridge on Secondary Road 2995, 0.2 mi (0.3 km) downstream from Salem Creek, and 1.8 mi (2.9 km) east of community of Muddy Creek.

DRAINAGE AREA.--178 mi² (461 km²).

PERIOD OF RECORD.--July 1964 to September 1979 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 682.67 ft (208.078 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Records on falling stages, following peaks above 14 ft (4.27 m), are affected by back-water and subject to error. Some regulation by Salem Lake and considerable diurnal fluctuation from sewage effluent and waste water. The city of Winston-Salem diverted an average of 19.8 ft³/s (0.56 m³/s) from Salem Lake in the basin and 30.1 ft³/s (0.85 m³/s) from the Yadkin River for water supply. An average of about 35.6 ft³/s (1.01 m³/s) sewage effluent was returned to Salem Creek 3.5 mi (5.6 km) above the station. The creek channel was dredged in 1935-36 by the Work Projects Administration. Suspended-sediment records for the current year are published on page 314 of this report.

AVERAGE DISCHARGE.--15 years, 236 ft³/s (6.684 m³/s), 18.00 in/yr (457 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s (411 m³/s) June 22, 1972, gage height, 21.26 ft (6.480 m); minimum, 21 ft³/s (0.59 m³/s) Oct. 6, 1968, gage height, 1.26 ft (0.384 m); minimum daily, 35 ft³/s (0.99 m³/s) Oct. 6, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1957 reached a stage of about 23 ft (7.01 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 5	0900	2320 65.7	11.70 3.566	May 14	0530	3390 96.0	14.24 4.340
Dec. 9	1930	2960 83.8	13.37 4.075	June 17	0130	3990 113	15.16 4.621
Jan. 21	1100	4320 122	15.63 4.764	July 20	1830	3060 86.7	13.58 4.139
Feb. 25	2200	*5260 149	*16.65 5.075	Sept. 5	1730	3390 96.0	14.23 4.337
Mar. 5	1300	4800 136	16.18 4.932	Sept. 22	1900	4520 128	15.87 4.837

Minimum discharge, 82 ft³/s (2.32 m³/s) Nov. 5, gage height, 2.12 ft (0.646 m); minimum daily, 88 ft³/s (2.49 m³/s) Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	362	100	153	158	196	413	210	208	205	141	146	102
2	144	101	127	1210	187	357	211	198	177	139	154	137
3	118	101	120	579	182	307	337	192	174	139	261	103
4	109	96	384	281	175	297	789	226	238	133	127	120
5	166	90	1620	230	175	3640	556	192	185	135	114	1650
6	144	98	476	208	178	2280	327	177	175	131	120	1250
7	108	103	240	234	198	622	259	181	171	121	122	298
8	96	174	197	511	218	557	234	185	175	128	121	190
9	98	112	1340	311	231	463	293	228	159	128	117	158
10	104	106	1280	225	188	367	241	207	206	159	113	155
11	103	99	363	203	171	765	221	292	253	145	108	155
12	103	94	243	206	175	445	221	352	173	161	124	148
13	105	100	206	423	181	359	728	1530	159	156	126	146
14	118	105	187	484	179	341	431	2070	153	126	117	156
15	95	105	172	306	209	299	279	564	148	120	114	134
16	96	115	162	237	285	264	237	329	481	151	105	122
17	99	237	170	215	234	250	227	253	2100	173	105	127
18	101	280	152	202	157	235	216	222	369	136	100	132
19	103	128	155	190	205	237	210	205	254	134	94	132
20	102	119	155	960	266	237	205	193	212	854	97	129
21	93	118	177	4090	336	229	193	191	195	522	103	196
22	88	113	148	1660	585	226	185	198	261	330	104	3570
23	97	125	134	502	1100	304	193	195	333	209	116	3370
24	98	153	243	686	2890	1250	196	277	199	174	123	666
25	97	114	324	432	4800	468	193	386	181	165	198	284
26	101	106	195	300	3690	335	493	211	171	189	109	233
27	104	228	183	256	856	287	834	182	164	328	447	214
28	95	176	169	240	514	273	337	199	157	169	147	299
29	90	184	160	211	---	256	232	233	153	144	234	243
30	94	247	153	207	---	243	217	191	148	141	124	374
31	99	---	175	204	---	230	---	206	---	143	115	---
TOTAL	3530	4027	9963	16161	18761	16836	9505	10473	8129	6024	4305	14993
MEAN	114	134	321	521	670	543	317	338	271	194	139	500
MAX	362	280	1620	4090	4800	3640	834	2070	2100	854	447	3570
MIN	88	90	120	158	157	226	185	177	148	120	94	102

CAL YR 1978 TOTAL 103424 MEAN 283 MAX 5620 MIN 88
WTR YR 1979 TOTAL 122707 MEAN 336 MAX 4800 MIN 88

PEE DEE RIVER BASIN

02115860 MUDDY CREEK NEAR MUDDY CREEK, N. C.

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR (OCTOBER 1978 TO SEPTEMBER 1979)

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SFDT- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV				
01...	1100	91	42	10
DEC				
05...	1530	395	107	114
JAN				
02...	1440	2010	962	5220
05...	1620	230	54	34
FEB				
14...	1515	176	16	7.6

02115900 SOUTH FORK MUDDY CREEK NEAR CLEMMONS, N. C.

LOCATION.--Lat 36°00'22", long 80°18'07", Forsyth County, Hydrologic Unit 03040101, on right bank 5 ft (1.5 m) upstream from bridge on Secondary Road 2902, 1.9 mi (3.1 km) downstream from Leak Creek, and 4.2 mi (6.8 km) southeast of Clemmons.

DRAINAGE AREA.--42.2 mi² (109.3 km²).

PERIOD OF RECORD.--July 1964 to September 1979 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 684 ft (208.5 m), from topographic map.

REMARKS.--Records fair. Creek channel improvement by dredging was done in 1915-16 by the county and in 1934-35 by Work Projects Administration. Suspended-sediment records for the current year are published on page 316 of this report.

AVERAGE DISCHARGE.--15 years, 46.5 ft³/s (1.317 m³/s), 14.96 in/yr (380 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,980 ft³/s (84.4 m³/s) Aug. 10, 1970, gage height, 16.30 ft (4.968 m); minimum, 3.8 ft³/s (0.11 m³/s) Oct. 3, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--In the period 1930-64, three floods equalled or exceeded 15 ft (4.57 m). The highest was about 16.3 ft (4.97 m) on Aug. 13, 1959 as a result of dam failure (from information by local resident).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 5	0830	721 20.4	9.16 2.792	June 17	0330	923 26.1	10.66 3.249
Jan. 21	1430	1280 36.2	12.55 3.825	July 21	0400	1060 30.0	11.59 3.533
Feb. 24	2330	1290 36.5	12.57 3.831	Sept. 5	1930	814 23.1	9.86 3.005
Feb. 26	0130	1120 31.7	11.83 3.606	Sept. 22	2100	*1400 39.6	*12.93 3.941
May 14	1000	912 25.8	10.58 3.225				

Minimum discharge, 7.6 ft³/s (0.215 m³/s) Feb. 18, gage height, 2.59 ft (0.789 m), result of freezeup; minimum daily, 18 ft³/s (0.510 m³/s) Aug. 16, 17, 19, 20, 21.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	20	34	35	48	74	40	42	40	31	27	20
2	27	20	32	160	45	65	42	40	36	29	26	21
3	22	20	28	74	43	58	70	40	39	28	51	20
4	21	20	135	47	42	57	125	43	133	28	24	20
5	40	20	527	42	40	434	90	40	44	28	26	408
6	42	20	101	42	39	146	60	39	39	27	24	185
7	25	20	58	51	43	37	48	38	39	28	26	56
8	22	27	48	98	48	82	44	37	40	28	27	39
9	22	22	292	60	46	73	50	45	35	27	22	32
10	22	21	199	46	43	62	44	40	134	31	21	29
11	21	21	59	42	40	115	42	38	87	28	20	27
12	21	21	52	41	39	70	41	53	42	32	19	25
13	20	21	45	67	38	59	115	153	36	37	19	25
14	20	21	40	99	38	57	80	605	34	26	19	28
15	20	21	37	64	50	52	50	112	33	27	19	24
16	20	21	36	49	87	48	44	72	128	26	18	22
17	20	31	37	46	72	47	44	50	427	26	18	22
18	20	53	35	43	36	46	43	43	77	25	19	22
19	20	34	33	39	90	45	42	39	60	52	18	21
20	20	30	33	259	65	46	41	37	48	338	18	20
21	20	28	36	1070	66	45	41	35	45	504	18	28
22	19	26	34	272	186	45	40	36	72	90	19	954
23	19	25	32	113	336	62	39	38	89	61	27	281
24	19	31	45	146	751	200	39	43	46	47	27	75
25	19	29	81	89	941	120	40	51	40	41	44	54
26	20	26	56	70	601	80	94	39	37	41	23	46
27	20	37	47	63	139	60	145	38	35	45	43	44
28	20	43	42	60	91	54	56	43	34	42	34	63
29	20	40	39	56	---	48	48	45	33	32	33	56
30	19	55	37	53	---	43	44	37	32	30	23	117
31	19	---	36	51	---	42	---	41	---	28	21	---
TOTAL	714	824	2356	3447	4103	2522	1741	2052	2014	1865	777	2784
MEAN	23.0	27.5	76.0	111	147	81.4	58.0	66.2	67.1	60.2	25.1	92.8
MAX	55	55	527	1070	941	434	145	605	427	504	51	954
MIN	19	20	28	35	36	42	39	35	32	25	18	20
CFSM	.54	.65	1.80	2.62	3.48	1.92	1.37	1.57	1.59	1.42	.59	2.19
IN	.63	.72	2.07	3.03	3.61	2.22	1.53	1.80	1.77	1.64	.68	2.45

CAL YR 1978 TOTAL 21370 MEAN 58.5 MAX 1410 MIN 18 CFM 1.38 IN 18.79
 WTR YR 1979 TOTAL 25199 MEAN 69.0 MAX 1070 MIN 18 CFM 1.63 IN 22.16

PEE DEE RIVER BASIN

02115900 SOUTH FORK MUDDY CREEK NEAR CLEMMONS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 06...	1200	20	11	.59
DEC 06...	1330	85	145	33
JAN 02...	1410	320	991	856
21...	1400	1260	520	1770
FEB 14...	1235	37	15	1.5
24...	1145	940	1730	4390
MAR 05...	1300	122	203	67

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.

LOCATION.--Lat 35°51'24", long 80°23'10", Davidson County, Hydrologic Unit 03040101, near left bank on downstream side of pier of bridge on U.S. Highway 64, 1.5 mi (2.4 km) south of Yadkin College, 6.2 mi (10.0 km) downstream from Reedy Creek, and 295 mi (475 km) upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--2,280 mi² (5,900 km²), approximately.

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 638.65 ft (194.661 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 26, 1957 at site on left bank 80 ft (24 m) downstream at same datum.

REMARKS.--Water-discharge record good. Diurnal fluctuation and occasionally some regulation during low flow caused by small hydroelectric plant with little storage capacity 10 mi (16 km) upstream. Since August 1962, some regulation by W. Kerr Scott Reservoir. (See p. 404). Corps of Engineers have a stage radio and satellite telemeter, the National Weather Service, a telephone telemeter, at station.

AVERAGE DISCHARGE.--51 years, 2,994 ft³/s (84.79 m³/s), 17.83 in/yr (453 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,200 ft³/s (2,270 m³/s) Aug. 15, 1940, gage height, 33.75 ft (10.287 m); minimum observed 177 ft³/s (5.01 m³/s) Oct. 12, 1954, gage height, -0.42 ft (-0.128 m); minimum daily, 330 ft³/s (9.35 m³/s) Oct. 9, 1954, Sept. 23, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916, reached a stage of 36.3 ft (11.06 m), from floodmarks, discharge, 94,300 ft³/s (2,670 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60,400 ft³/s (1,710 m³/s) Sept. 23, gage height, 29.68 ft (9.046 m); minimum, (result of regulation), 945 ft³/s (26.8 m³/s) Nov. 7, gage height, 0.85 ft (0.259 m); minimum daily, 1,340 ft³/s (37.9 m³/s) Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1760	1350	2140	2030	2530	9570	3880	4180	3570	2630	2620	1800
2	1810	1440	1800	9530	2370	6910	3740	3830	3720	2540	2840	1810
3	1580	1370	1630	17700	2230	4710	3740	3620	3340	2400	3840	2910
4	1500	1400	2000	5190	2290	4160	5180	3610	6590	2320	2780	3540
5	1520	1400	7070	3380	2250	14700	7300	3740	5020	2320	2340	4800
6	1640	1370	5500	2920	2210	28300	5870	3780	4410	2380	2290	11500
7	1510	1420	2900	2850	2260	10700	5130	3470	3650	2230	2220	5840
8	1510	1490	2240	3770	2260	10500	4230	3320	3400	2240	2160	5770
9	1440	1550	3550	4540	2450	9940	3950	4230	3370	2270	2090	3900
10	1420	1460	9990	3550	2330	6820	3900	3320	3360	2310	2020	2630
11	1450	1440	4330	2990	2110	5950	3720	3580	3780	2640	1980	2370
12	1410	1420	2840	2660	2060	5170	3540	3340	3270	2710	2170	2230
13	1420	1420	2360	2900	2080	4460	5140	4290	3020	2650	2660	2150
14	1460	1410	2140	3720	1880	4030	11100	4100	2700	2600	2490	2150
15	1700	1410	1980	3260	2110	3920	6480	5780	2670	2550	2120	3160
16	1570	1430	1890	2720	2450	3620	5660	4280	3120	2300	1930	2970
17	1450	1580	1900	2510	2700	3490	4640	3650	17800	2670	1870	2340
18	1450	1920	1820	2370	2750	3410	3990	3370	12200	2240	1770	2170
19	1450	1930	1770	2260	2160	3310	3780	3140	5270	2820	1790	2130
20	1340	1680	1770	3120	2170	3160	3540	3160	4480	4910	1760	2010
21	1370	1530	1840	17200	2950	3150	3480	3000	3810	17000	1710	2070
22	1420	1470	1820	18800	3150	3140	3430	3060	3390	7510	1720	16200
23	1420	1430	1720	7000	5800	3080	3310	3280	3740	5880	2060	50900
24	1420	1660	1770	6710	13000	11100	3280	4200	3450	5360	2150	35000
25	1380	1720	2820	6100	28900	14900	3290	5920	3130	4700	2350	7820
26	1390	1580	2820	5260	35000	7730	3520	5160	3180	4200	2290	9120
27	1410	1640	2210	3870	23400	9070	10300	4030	2820	3890	2360	8680
28	1380	1790	2000	3330	11500	7450	9960	3430	2630	3480	2030	6440
29	1370	1750	1900	3030	---	5840	6420	3500	2630	3280	2310	6760
30	1440	1990	1780	2810	---	4610	5080	3280	2640	2940	2150	8230
31	1390	---	1890	2640	---	4040	---	3100	---	2690	1940	---
TOTAL	45780	46450	84190	160770	169360	220940	150580	128750	131160	107700	68830	219430
MEAN	1477	1548	2716	5186	6049	7127	5019	4153	4372	3474	2220	7314
MAX	1810	1990	9990	18800	35000	28300	11100	9290	17800	12000	3840	50900
MIN	1340	1350	1630	2030	1880	3080	3280	3000	2630	2230	1710	1800
(†)	-110	-78	+67	+143	+70	-62	0	+6	-7	+8	-6	+28

CAL YR 1978 TOTAL 1236860 MEAN 3389 MAX 37600 MIN 1340 MEAN* 3377 CFSM* 1.48 IN* 20.09
WTR YR 1979 TOTAL 1533940 MEAN 4203 MAX 50900 MIN 1340 MEAN* 4208 CFSM* 1.85 IN* 25.11

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir; furnished by Corps of Engineers.
* Adjusted for change in W. Kerr Scott Reservoir.

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944, 1951 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1967, October 1970 to September 1978, February to September 1979.

WATER TEMPERATURES: October 1943 to September 1944, October 1950 to September 1951, October 1955 to September 1967, October 1970 to current year.

SUSPENDED-SEDIMENT DISCHARGE: January 1951 to current year.

INSTRUMENTATION.--Water-quality monitor from October 1970 to September 1975.

REMARKS.--Miscellaneous chemical data published for water years 1947-49, 1955. Daily records of specific conductance for water years 1956-64 are available in files of district office in Raleigh, N. C.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 815 micromhos Aug. 26, 1971; minimum recorded, 20 micromhos Nov. 2, 16, 28, Dec. 1, 6, 7, 1971.

WATER TEMPERATURES: Maximum daily, 31.0°C Aug. 24, 1959; minimum daily, 0.0°C on many days during most winter months.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,970 mg/L May 26, 1952; minimum daily mean, 1 mg/L Dec. 3, 1953.

SEDIMENT LOADS: Maximum daily, 182,000 tons (165,000 tonnes) June 22, 1972; minimum daily, 3 tons (2.7 tonnes) Dec. 3, 1953.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily observed, 82 micromhos Feb. 21, Aug. 24, 29; minimum daily observed, 38 micromhos Sept. 23.

WATER TEMPERATURES: Maximum daily, 27.0°C July 19, Aug. 8-12, 30; minimum daily, 1.0°C Feb. 20.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,400 mg/L May 13; minimum daily mean, 11 mg/L Oct. 30, Nov. 4, 11, Dec. 31.

SEDIMENT LOADS: Maximum daily, 131,000 tons (119,000 tonnes) Sept. 23; minimum daily, 42 tons (38 tonnes) Nov. 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLIFORM, FECA, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECA, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM, DIS-SOLVED (MG/L AS Ca)
APR 16...	1120	5680	43	6.3	14.5	40	8.7	--	--	11	0	2.8
MAY 22...	1030	3080	50	7.9	17.0	25	8.5	130	1300	15	0	3.8
JUL 23...	1045	5590	46	6.3	20.0	90	9.3	4900	3900	12	0	2.9
AUG 27...	1030	2810	90	6.2	23.0	100	10.3	--	--	18	2	4.9
DATE		MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CaCO3)	CARBON DIOXIDE, DIS-SOLVED (MG/L AS CO2)	SULFATE, DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)
APR 16...	.9	2.6	31	.3	1.3	14	0	11	11	2.6	2.5	.0
MAY 22...	1.3	4.1	35	.5	1.3	24	0	20	.5	3.0	3.2	.1
JUL 23...	1.1	3.0	32	.4	1.9	14	0	11	11	4.3	2.8	.1
AUG 27...	1.5	7.8	43	.8	3.4	20	0	16	20	8.2	6.5	.2
DATE		SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORG. SUSP. TOTAL (MG/L AS N)
APR 16...	11	39	31	.05	598	.39	.07	--	.28	.35	.02	.33
MAY 22...	13	48	42	.07	399	.57	.04	.05	.41	.45	.24	.21
JUL 23...	11	62	34	.08	936	.54	.03	.04	.75	.78	.50	.28
AUG 27...	13	65	56	.09	493	1.6	.00	.00	1.8	1.8	1.3	.50

K Results based on colony count outside the acceptable range (non-ideal colony count).

PEE DEE RIVER BASIN

319

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
APR 16...	.74	3.3	.12	--	--	.04	--	--	--	--	--
MAY 22...	1.0	4.5	.08	--	.25	.08	0	0	0	100	0
JUL 23...	1.3	5.8	.22	--	.67	.06	--	--	--	--	--
AUG 27...	3.4	15	.94	--	2.9	.29	1	0	1	100	100

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
APR 16...	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	100	0	0	0	20	10	10	0	0	0	17
JUL 23...	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	0	1	1	0	30	10	10	4	4	0	29

DATE	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PH)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PR)	LEAD, DIS- SOLVED (UG/L AS PR)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
APR 16...	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	15	2	1800	1600	220	4	4	0	20	10	9
JUL 23...	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	25	4	7300	7000	350	42	37	5	310	280	30

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDED RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
------	---	--	--	--	---	---	---	--	--	---

APR 16...	--	--	--	--	--	--	--	--	--	--
MAY 22...	<.5	.0	<.5	0	0	0	0	0	0	20
JUL 23...	--	--	--	--	--	--	--	--	--	--
AUG 27...	<.5	.0	<.5	0	0	0	1	1	0	50

DATE	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, DIS- SOLVED (MG/L AS C)	PERI- PHYTON BIOMASS DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO- SURE (DAYS)
------	--	--	---	---	---	---	---	--	--	---

APR 16...	--	--	1.7	--	--	--	--	--	--	--
MAY 22...	10	10	3.1	--	.000	.000	.00	.000	.000	35
JUL 23...	--	--	7.6	--	--	--	--	--	--	--
AUG 27...	50	10	14	9.9	--	--	--	--	--	--

PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

PHYTOPLANKTON ANALYSES, JULY TO SEPTEMBER 1978

DATE	JUL 7, 78
TIME	1000
TOTAL CELLS/ML	2400
DIVERSITY: DIVISION	0.9
..CLASS	0.9
...ORDER	1.0
....FAMILY	1.9
.....GENUS	2.5

ORGANISM	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
....DOCYSTACEAE		
.....ANKISTRONDESUS	64	2
...VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	46	2
CHRYSOPHYTA		
..BACILLARIOPHYCEAE		
...CENTRALES		
...COSCINODISCACEAE		
....CYCLOTELLA	23	1
...PENNALES		
...ACHNANTHACEAE		
....ACHNANTHES	190	6
...CYMBELLACEAE		
....CYMBELLA	46	2
...NAVICULACEAE		
....NAVICULA	120	4
...NITZSCHIACEAE		
....NITZSCHIA	160	6
CYANOPHYTA (BLUE-GREEN ALGAE)		
..CYANOPHYCEAE		
...HORMOGONALES		
...NOSTOCACEAE		
....ANABAENA	1100#	37
....CYLINDROSPERMUM	690#	24
...OSCILLATORIA		
....OSCILLATORIA	460#	16

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), PERIOD FEBRUARY TO SEPTEMBER 1979

ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	47	53	51	61	67	63	72
2					---	49	52	59	56	61	53	67
3					---	57	51	55	54	62	67	59
4					---	59	59	56	60	60	57	55
5					---	50	55	55	46	64	59	65
6					---	42	53	55	52	64	58	50
7					---	51	51	53	54	62	57	52
8					---	46	52	52	58	64	62	47
9					---	44	53	56	59	60	69	49
10					---	47	53	55	56	60	69	53
11					---	59	53	57	53	62	73	56
12					---	53	59	57	52	50	75	62
13					---	54	58	53	57	74	65	68
14					76	57	45	56	61	67	63	65
15					79	59	47	51	63	62	66	65
16					80	63	45	52	65	63	73	57
17					73	60	51	55	51	67	74	55
18					65	58	50	59	54	63	73	52
19					64	55	55	61	55	65	68	60
20					71	55	56	59	56	55	68	69
21					82	55	57	57	61	48	63	71
22					76	60	55	60	52	48	69	55
23					68	59	56	56	57	44	67	58
24					59	51	58	56	52	45	82	45
25					51	46	56	59	59	48	78	43
26					45	45	59	52	59	54	64	50
27					49	41	53	53	60	69	69	40
28					46	43	46	52	67	50	61	49
29					---	49	46	53	58	57	82	50
30					---	51	44	52	61	55	69	51
31					---	54	---	59	---	59	70	---
MEAN					66	53	53	55	58	60	68	56
WTR YR 1979	MEAN	58	46.8	52	MIN	3-						

 TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	13.0	8.0	5.0	4.0	7.0	14.0	14.0	22.0	23.0	25.0	26.0
2	20.0	13.0	8.0	8.0	3.0	7.0	17.0	17.0	21.0	23.0	26.0	26.0
3	19.0	13.0	8.0	7.0	3.0	8.0	17.0	17.0	23.0	23.0	26.0	26.0
4	20.0	13.0	11.0	4.0	4.0	11.0	15.0	17.0	22.0	23.0	25.0	25.0
5	21.0	14.0	11.0	4.0	4.0	13.0	13.0	18.0	20.0	23.0	26.0	24.0
6	20.0	12.0	10.0	3.0	4.0	12.0	13.0	18.0	20.0	23.0	26.0	24.0
7	17.0	13.0	8.0	4.0	3.0	10.0	13.0	18.0	21.0	22.0	26.0	25.0
8	15.0	14.0	10.0	5.0	4.0	10.0	13.0	20.0	22.0	20.0	27.0	23.0
9	15.0	13.0	14.0	5.0	3.0	10.0	14.0	20.0	23.0	22.0	27.0	24.0
10	14.0	12.0	12.0	4.0	3.0	10.0	14.0	22.0	23.0	22.0	27.0	22.0
11	14.0	12.0	9.0	4.0	3.0	11.0	15.0	22.0	23.0	22.0	27.0	21.0
12	15.0	13.0	7.0	4.0	4.0	9.0	15.0	22.0	21.0	23.0	27.0	21.0
13	16.0	13.0	5.0	3.0	3.0	9.0	17.0	21.0	21.0	24.0	24.0	22.0
14	14.0	13.0	5.0	5.0	3.0	10.0	15.0	20.0	22.0	25.0	24.0	23.0
15	16.0	14.0	5.0	4.0	5.0	10.0	15.0	20.0	21.0	25.0	24.0	22.0
16	15.0	15.0	5.0	3.0	7.0	10.0	15.0	20.0	21.0	25.0	23.0	22.0
17	13.0	15.0	5.0	4.0	5.0	5.0	16.0	14.0	18.0	25.0	23.0	20.0
18	12.0	14.0	5.0	5.0	5.0	9.0	15.0	14.0	18.0	26.0	23.0	20.0
19	12.0	14.0	5.0	5.0	4.0	10.0	17.0	18.0	20.0	27.0	24.0	20.0
20	14.0	13.0	5.0	4.0	1.0	12.0	15.0	17.0	21.0	25.0	25.0	22.0
21	12.0	12.0	4.0	5.0	4.0	14.0	15.0	18.0	21.0	23.0	26.0	21.0
22	13.0	12.0	7.0	5.0	4.0	13.0	17.0	20.0	20.0	23.0	26.0	22.0
23	14.0	12.0	7.0	5.0	6.0	13.0	15.0	20.0	22.0	22.0	24.0	22.0
24	15.0	12.0	6.0	5.0	7.0	14.0	18.0	20.0	23.0	23.0	24.0	20.0
25	13.0	10.0	5.0	4.0	7.0	12.0	18.0	18.0	21.0	24.0	24.0	20.0
26	14.0	10.0	5.0	4.0	7.0	10.0	14.0	17.0	21.0	24.0	25.0	18.0
27	15.0	9.0	5.0	4.0	6.0	10.0	14.0	14.0	21.0	24.0	25.0	20.0
28	14.0	10.0	3.0	4.0	6.0	10.0	17.0	17.0	21.0	24.0	25.0	20.0
29	15.0	9.0	3.0	4.0	---	12.0	15.0	17.0	22.0	25.0	26.0	20.0
30	14.0	12.0	3.0	4.0	---	13.0	15.0	20.0	23.0	25.0	27.0	20.0
31	13.0	---	4.0	5.0	---	15.0	---	22.0	---	25.0	25.0	---
MEAN	15.5	12.5	7.0	4.5	4.5	10.5	15.5	14.0	21.5	23.5	25.0	22.0
WTR YR 1979	MEAN	15.0	MAX	27.0	MIN	1.0						

02116500 YADKIN RIVER AT YADKIN COLLEGE, N. C.--Continued

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER QUALITY DATA, PERIOD JULY TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
JUL 31...	1110	1820	120	6.7	28.0	5.6	13	1.7	10
AUG 30...	1415	1880	65	6.5	23.0	8.4	18	1.8	3200
SEP 28...	1145	1420	90	7.3	18.0	9.0	<10	1.7	240

WATER QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT 24...	1300	1550	70	6.9	15.0	--	12	1.7	20
DEC 05...	1040	1060	80	6.8	11.0	11.6	50	4.0	3700
DEC 19...	1545	1740	55	6.9	5.0	4.5	14	3.0	40
JAN 24...	1650	6950	50	6.8	4.0	12.0	19	2.2	1200
FEB 20...	1215	2170	--	6.9	4.0	11.5	<10	1.3	<10
MAR 15...	1040	3930	--	6.7	11.0	10.4	12	1.7	130
APR 11...	1320	3680	--	6.8	10.5	9.0	<10	1.7	240
MAY 23...	1500	3260	--	6.9	14.0	4.5	11	1.0	40
JUL 05...	1215	2290	--	--	22.0	7.7	<10	1.3	40
AUG 13...	1330	2030	--	7.0	23.0	7.6	15	1.1	1200
SEP 18...	1600	2180	--	--	23.0	7.6	<10	2.0	90

02117030 HUMPHY CREEK NEAR FORK, N. C.

LOCATION.--Lat 35°51'17", long 80°26'24", Davie County, Hydrologic Unit 03040101, on left bank 9 ft (3 m) upstream from culvert on Secondary Road 1813, 1.9 mi (3.0 km) south of Fork, and 2.3 mi (3.7 km) upstream from mouth.

DRAINAGE AREA.--1.05 mi² (2.72 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 695 ft (212 m), from topographic map.

REMARKS.--Records fair. Diurnal fluctuation at low flow during growing season. A one-acre farm pond with a drainage area of 0.05 mi² (0.13 km²) in the basin was completed in June 1976. Suspended-sediment records for the current year are published on page 325 of this report.

AVERAGE DISCHARGE.--11 years, 1.14 ft³/s (0.032 m³/s), 14.74 in/yr (374 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 365 ft³/s (10.3 m³/s) May 30, 1975, from rating curve extended above 65 ft³/s (1.84 m³/s) on basis of computed culvert rating and computation of peak flow through culvert with flow-over-road; maximum gage height, 6.71 ft (2.045 m) June 16, 1979; minimum, 0.02 ft³/s (0.001 m³/s) July 31, Aug. 6, 7, 1977, gage height, 0.27 ft (0.082 m); minimum daily, 0.09 ft³/s (0.003 m³/s) July 25, 31, Aug. 1, 6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 0.08 ft³/s (0.002 m³/s) was measured on Sept. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s (1.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0015	41 1.16	2.03 0.619	June 16	2115	*260 7.36	*6.71 2.045
Feb. 24	1630	96 2.72	2.94 0.896	Sept. 30	1045	42 1.19	2.04 0.622
Feb. 25	1715	74 2.10	2.48 0.756				

Minimum discharge, 0.20 ft³/s (0.006 m³/s) Aug. 19, gage height, 0.47 ft (0.143 m); minimum daily, 0.28 ft³/s (0.008 m³/s) Aug. 16-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.65	.32	.54	.62	.72	1.6	.96	.77	.73	.66	.41	.40
2	.35	.32	.48	2.1	.69	1.4	.94	.74	.65	.57	.41	.39
3	.32	.32	.52	1.2	.70	1.2	1.4	.76	.72	.52	.40	.39
4	.32	.33	2.5	.88	.69	1.3	2.9	.78	.68	.57	.37	.40
5	.54	.32	6.6	.78	.66	4.4	2.0	.73	.62	.54	.35	4.7
6	.46	.32	1.4	.76	.63	2.2	1.4	.73	.61	.49	.35	1.1
7	.33	.36	.91	.88	.87	1.6	1.2	.71	.65	.52	.34	.60
8	.32	.50	.78	1.3	.76	1.7	1.1	.69	.61	.49	.33	.47
9	.31	.36	2.7	.96	.74	1.5	1.3	.74	.56	.50	.32	.41
10	.32	.36	1.6	.80	.67	1.3	1.0	.72	2.2	.61	.31	.41
11	.31	.35	.97	.74	.66	2.6	.98	.98	1.0	.52	.31	.39
12	.31	.34	.79	.80	.68	1.6	.99	1.1	.64	.52	.38	.38
13	.31	.34	.71	1.9	.71	1.4	2.3	2.0	.56	.54	.33	.53
14	.31	.35	.64	2.2	.75	1.3	1.5	5.8	.54	.51	.31	.48
15	.29	.36	.60	1.3	1.1	1.1	1.2	1.5	.52	.47	.30	.38
16	.30	.73	.61	1.0	1.3	1.1	1.1	1.1	35	.51	.28	.37
17	.30	.94	.54	.89	.99	1.0	.99	.89	13	.49	.28	.36
18	.31	.71	.56	.80	.81	1.0	.94	.81	2.2	.45	.28	.36
19	.31	.47	.56	.72	1.2	.99	.90	.79	1.4	.45	.78	.36
20	.30	.41	.57	6.5	.97	.98	.87	.75	1.2	.72	.57	.35
21	.30	.40	.69	16	1.3	.95	.87	.76	1.0	.84	.37	.72
22	.31	.39	.56	2.7	3.6	.92	.83	.77	.95	.70	.37	7.2
23	.31	.53	.54	1.6	7.4	2.8	.81	.74	.91	.59	.66	1.1
24	.29	.56	1.1	2.7	35	4.0	.79	2.0	1.2	.89	.52	.79
25	.30	.44	1.1	1.6	24	1.9	.81	1.8	.84	.68	.61	.70
26	.32	.41	.80	1.2	5.8	1.4	1.8	.94	.77	.75	.41	.65
27	.32	.74	.70	1.1	2.5	1.3	1.1	.82	.74	.58	.43	.67
28	.32	.54	.64	.99	1.8	1.2	.91	.78	.68	.52	.39	.80
29	.32	.79	.60	.86	---	1.1	.84	.74	.68	.48	.39	.77
30	.31	.72	.60	.80	---	1.0	.80	.69	.68	.44	.36	8.5
31	.32	---	.63	.78	---	.98	---	.75	---	.42	.34	---
TOTAL	10.39	14.03	32.58	57.46	97.70	48.82	35.53	33.88	72.54	17.54	12.26	35.13
MEAN	.34	.47	1.05	1.85	3.49	1.57	1.18	1.09	2.42	.57	.40	1.17
MAX	.65	.94	6.6	16	35	4.4	2.9	5.8	35	.89	.78	8.5
MIN	.29	.32	.48	.62	.63	.92	.79	.69	.52	.42	.28	.35
CFSM	.32	.45	1.00	1.76	3.32	1.50	1.12	1.04	2.31	.54	.38	1.11
IN.	.37	.50	1.15	2.03	3.46	1.73	1.26	1.20	2.57	.62	.43	1.24

CAL YR 1978 TOTAL 406.23 MEAN 1.11 MAX 37 MIN .25 CFSM 1.06 IN 14.38
WTR YR 1979 TOTAL 467.86 MEAN 1.28 MAX 35 MIN .28 CFSM 1.22 IN 16.56

PEE DEE RIVER BASIN

325

02117030 HUMPY CREEK NEAR FORK, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
DEC 06...	1300	1.4	46	.17	--	--	--	--	--	--	--	--
JAN 02...	0930	3.9	322	3.4	--	--	--	--	--	--	--	--
21...	1010	14	162	6.1	--	--	--	--	--	--	--	--
24...	1100	3.7	48	.48	--	--	--	--	--	--	--	--
FEB 23...	1135	13	659	23	--	--	--	--	--	--	--	--
24...	1000	29	746	58	22	29	35	49	60	71	82	95
27...	1135	2.6	29	.20	--	--	--	--	--	--	--	--

PEE DEE RIVER BASIN

02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, N. C.

LOCATION.--Lat 35°50'39", long 80°39'38", Rowan County, Hydrologic Unit 03040102, on right bank at downstream side of bridge on Secondary Road 1972, 1 mi (2 km) upstream from Little Creek, 4 mi (6.4 km) downstream from Fifth Creek, 4.5 mi (7.2 km) upstream from Hunting Creek, and 6.5 mi (10.5 km) southwest of Mocksville.

DRAINAGE AREA.--313 mi² (811 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 663.6 ft (202.265 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. The city of Statesville diverted an average of 8.0 ft³/s (0.23 m³/s) for water supply and waste-treatment dilution. The Alexander Water Corporation withdraws an average of 1.5 ft³/s (0.042 m³/s) for water supply. Suspended-sediment records for the current year are published on page 327 of this report.

AVERAGE DISCHARGE.--41 years, 344 ft³/s (9.742 m³/s), 14.92 in/yr (379 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s (334 m³/s) Oct. 17, 1964; maximum gage height, 18.59 ft (5.666 m) Sept. 23, 1979; minimum, 30 ft³/s (0.85 m³/s) Aug. 14, 16, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Oct. 3, 1929 reached a stage of 22.6 ft (6.89 m), from floodmark established by local resident (discharge, about 22,000 ft³/s or about 620 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	0930	3010 85.2	10.02 3.054	June 17	1430	2890 81.8	9.84 2.999
Feb. 26	0430	6540 185	14.65 4.465	Sept. 23	1230	*11300 320	*18.59 5.666
Mar. 5	2200	4590 130	12.46 3.798	Sept. 30	1900	3530 100	10.97 3.344

Minimum discharge, 144 ft³/s (4.08 m³/s) Oct. 24-26, gage height, 2.09 ft (0.637 m); minimum daily, 144 ft³/s (4.08 m³/s) Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	153	242	238	341	779	429	489	395	301	287	246
2	222	153	206	1290	317	664	411	446	370	289	314	478
3	175	154	190	2200	305	587	455	417	352	270	285	230
4	160	156	300	832	311	578	848	409	371	262	272	228
5	176	164	1200	491	306	3350	957	399	360	261	252	528
6	175	155	840	415	284	4050	677	388	321	252	248	960
7	166	149	414	383	297	1450	548	368	305	244	231	478
8	154	186	317	484	304	811	496	358	318	263	223	312
9	148	195	661	505	335	724	491	350	315	259	222	259
10	150	174	1740	404	289	622	475	366	360	267	210	235
11	150	166	799	360	275	670	427	355	340	322	205	231
12	149	167	461	339	284	593	411	434	290	282	215	220
13	147	162	368	460	274	515	563	601	261	283	245	217
14	153	164	320	625	286	492	730	1360	250	270	220	281
15	205	161	292	461	328	472	570	608	244	259	205	292
16	163	165	271	370	391	433	478	472	589	245	198	234
17	152	189	270	342	358	418	443	404	2820	247	193	222
18	148	195	262	332	301	415	415	356	1900	257	189	214
19	151	195	240	308	238	412	397	336	607	493	187	212
20	153	186	237	528	404	393	382	326	530	555	185	205
21	150	169	242	2570	437	379	370	329	457	1610	182	225
22	150	159	241	2890	564	370	364	321	405	988	185	1810
23	151	173	229	1110	1030	417	358	414	392	648	214	8960
24	146	202	256	877	2170	1160	350	664	511	488	236	3920
25	144	199	377	870	4260	1250	346	1060	532	555	220	711
26	146	181	313	600	6390	730	621	697	416	422	231	553
27	151	192	267	503	4550	599	1410	501	351	424	209	478
28	157	221	251	461	1260	549	1360	431	326	432	201	546
29	159	208	233	425	---	497	695	397	311	360	214	800
30	151	246	225	383	---	466	565	368	305	329	240	2360
31	151	---	232	362	---	443	---	357	---	297	219	---
TOTAL	4943	5339	12496	22418	26889	25288	17042	14781	15304	12434	6937	26403
MEAN	159	178	403	723	960	816	568	477	510	401	224	880
MAX	222	246	1740	2890	6390	4050	1410	1360	2820	1610	314	8960
MIN	144	149	190	238	238	370	346	321	244	244	182	205
CFSM	.51	.57	1.29	2.31	3.07	2.61	1.82	1.52	1.63	1.28	.72	2.81
IN.	.59	.63	1.49	2.66	3.20	3.01	2.03	1.76	1.82	1.48	.82	3.14
CAL YR 1978 TOTAL	145246		MEAN 398	MAX 4860	MIN 144	CFSM 1.27	IN 17.26					
WTH YR 1979 TOTAL	190274		MEAN 521	MAX 8960	MIN 144	CFSM 1.67	IN 22.61					

02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	
OCT 24...	1600	146	12	4.7	--	--	--	
DEC 05...	1300	1370	296	1100	--	--	--	
06...	1200	784	178	377	--	--	--	
26...	1100	316	23	20	--	--	--	
JAN 02...	0845	1030	264	734	--	--	--	
02...	1545	1830	686	3390	--	--	--	
FEB 26...	0900	6420	356	6170	54	69	77	
27...	1510	4100	122	1350	--	--	--	
SEP 23...	1145	11300	1310	40000	--	45	54	
		SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
OCT 24...	--	--	--	--	--	--	--	--
DEC 05...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--
FEB 26...	86	88	90	92	95	--	--	--
27...	--	--	--	--	--	--	--	--
SEP 23...	61	67	69	80	95	99	100	--

PEE DEE RIVER BASIN

02118500 HUNTING CREEK NEAR HARMONY, N. C.

LOCATION.--Lat 36°00'01", long 80°44'45", Iredell County, Hydrologic Unit 03040102, on right bank 52 ft (16 m) downstream from bridge (relocated) on Secondary Road 2115, 0.8 mi (1.3 km) downstream from Kennedy Creek, 1 mi (2 km) east of Houstonville, 2 mi (3 km) downstream from U.S. Highway 21, and 3.5 mi (5.6 km) northeast of Harmony.

DRAINAGE AREA.--153 mi² (396 km²).

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1723.

GAGE.--Water-stage recorder. Datum of gage is 734.78 ft (223.961 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1951, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--Records fair. Recorder inundated by flood on Sept. 22. Partial record only Sept. 22, 23. Suspended-sediment records for the current year are published on page 329 of this report.

AVERAGE DISCHARGE.--29 years, 209 ft³/s (5.919 m³/s), 18.55 in/yr (471 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s (419 m³/s) Sept. 22, 1979, gage height, 25.05 ft (7.635 m), from high-water mark in gage house; minimum, 18 ft³/s (0.51 m³/s) Oct. 8, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1130	4120 117	13.44 4.096	Mar. 5	1200	4730 134	14.56 4.438
Jan. 21	0600	2560 72.5	10.15 3.094	June 17	0430	3550 101	12.30 3.749
Feb. 24	2300	5070 144	15.12 4.608	July 20	1900	3090 87.5	11.38 3.469
Feb. 25	2400	6030 171	16.62 5.066	Sept. 22	1200	*14800 419	*25.05 7.635

Minimum discharge, 83 ft³/s (2.35 m³/s) Feb. 18, 19, results of freezeup; minimum daily, 102 ft³/s (2.89 m³/s) Nov. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	107	129	151	192	393	278	296	253	179	149	126
2	131	108	114	2380	181	351	272	277	220	168	147	129
3	118	106	111	684	190	324	307	269	220	159	180	152
4	116	108	233	367	182	410	536	273	256	160	141	149
5	118	105	772	280	177	2600	513	279	219	164	133	533
6	119	104	320	241	173	760	379	262	202	152	131	510
7	110	105	194	233	190	478	328	241	207	150	131	220
8	105	132	160	378	211	398	307	237	234	160	129	164
9	105	119	809	295	194	358	308	240	204	150	126	141
10	110	110	666	245	168	325	289	260	209	197	123	134
11	108	108	316	216	176	344	273	267	229	187	125	130
12	107	105	230	204	174	304	273	290	185	163	178	127
13	106	105	192	251	171	285	703	584	177	181	159	132
14	155	104	174	284	175	278	520	456	174	170	136	232
15	126	105	162	227	190	264	383	300	171	143	129	160
16	113	107	159	210	234	251	329	303	369	139	126	137
17	112	117	160	201	204	247	300	244	1770	151	124	133
18	108	141	148	195	151	243	285	227	457	131	125	130
19	110	121	148	183	195	240	275	220	302	138	123	127
20	110	108	148	368	267	236	266	215	267	1210	122	122
21	107	104	152	1730	238	231	260	218	241	901	122	316
22	107	102	143	754	303	223	257	243	237	565	128	10400
23	107	110	136	426	695	266	252	274	230	334	161	1000
24	105	128	155	550	2330	1350	250	418	236	293	148	503
25	103	111	223	428	3550	641	246	403	234	251	147	363
26	106	103	171	307	2460	433	679	286	206	232	137	305
27	109	125	156	262	667	356	969	285	195	228	127	272
28	107	135	144	244	468	321	502	253	188	193	160	419
29	107	121	138	220	---	301	373	243	184	166	158	450
30	106	176	137	209	---	293	323	247	182	155	128	735
31	105	---	150	204	---	285	---	220	---	142	146	---
TOTAL	3505	3440	7050	12927	14506	13789	11235	8830	8458	7712	4299	18451
MEAN	113	115	227	417	518	445	375	285	282	249	139	615
MAX	155	176	809	2380	3550	2600	969	584	1770	1210	180	10400
MIN	103	102	111	151	151	223	246	215	171	131	122	122
CFSM	.74	.75	1.48	2.73	3.39	2.91	2.45	1.86	1.84	1.63	.91	4.02
IN.	.85	.84	1.71	3.14	3.53	3.35	2.73	2.15	2.06	1.88	1.05	4.49
CAL YR 1978 TOTAL	90876		MEAN 249	MAX 4000	MIN 102	CFSM 1.63	IN 22.10					
WTR YR 1979 TOTAL	114202		MEAN 313	MAX 10400	MIN 102	CFSM 2.05	IN 27.77					

PEE DEE RIVER BASIN

329

02118500 HUNTING CREEK NEAR HARMONY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANT- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
02...	1055	140	26	9.8
NOV				
02...	1434	115	12	3.7
DEC				
01...	0835	176	22	9.3
05...	1205	1070	470	1360
JAN				
02...	1503	3490	817	7700
03...	1447	575	236	444
21...	0900	2050	719	3980
24...	0820	509	219	301
24...	1335	705	293	558
FEB				
05...	1133	144	41	20
23...	1103	607	158	259
24...	1015	900	543	1320
25...	1510	3300	1860	16600
26...	1500	1240	688	2300
MAR				
05...	1545	3500	913	8630
07...	1325	481	394	512
28...	1500	299	150	121
SEP				
22...	1500	12200	466	15400

PEE DEE RIVER BASIN

02121493 LEONARD CREEK NEAR BETHESDA, N. C.

LOCATION.--Lat 35°53'14", long 80°12'30", Davidson County, Hydrologic Unit 03040103, on left downstream wingwall of bridge on Secondary Road 1837, 1.6 mi (2.6 km) upstream from Lexington City Lake, 2.0 mi (3.2 km) downstream from Cain Creek, 2.2 mi (3.5 km) east of Bethesda and 3.0 mi (4.8 km) southeast of Welcome.

DRAINAGE AREA.--5.16 mi² (13.36 km²).

PERIOD OF RECORD.--October 1978 to September 1979.

GAGE.--Water-stage recorder and concrete, rock-ledge control. Altitude of gage is 718 ft (218.8 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 to Nov. 8, which are poor. Recording rain gage at station. Suspended-sediment records for the current year are published on page 331 of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 531 ft³/s (15.0 m³/s) Sept. 22, 1979, gage height, 4.59 ft (1.399 m); minimum not determined, occurred during period of no gage-height record in October 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 260 ft³/s (7.4 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0230	393 11.1	4.09 1.247	May 14	0630	332 9.40	3.84 1.170
Feb. 24	1815	372 10.5	4.01 1.222	June 17	0045	465 13.2	4.36 1.329
Feb. 25	1915	304 8.61	3.72 1.134	Sept. 22	0745	*531 15.0	*4.59 1.399

Minimum not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	1.4	2.5	3.0	3.1	5.7	3.9	3.1	3.5	2.3	1.9	1.9
2	3.0	1.5	2.2	15	3.1	5.1	3.8	2.9	2.9	2.2	1.8	2.0
3	2.0	1.5	2.2	6.6	3.1	4.6	6.1	3.0	2.9	2.2	21	2.0
4	1.4	1.5	13	4.1	3.1	4.6	15	3.2	4.1	2.1	3.0	1.9
5	1.9	1.5	52	3.5	3.0	54	8.4	3.0	2.7	2.1	2.4	95
6	1.7	1.5	7.0	3.7	3.0	15	5.2	2.9	2.6	2.0	2.1	22
7	1.7	1.5	3.9	5.0	3.7	7.3	4.4	2.8	2.5	2.1	1.9	14
8	1.6	1.8	3.3	8.3	3.9	7.0	4.2	2.8	2.5	2.1	1.8	4.1
9	1.6	1.6	17	4.9	3.6	5.7	5.2	3.1	2.4	2.1	1.7	3.2
10	1.5	1.6	13	3.8	4.6	4.8	4.1	3.2	8.0	2.5	1.7	2.9
11	1.5	1.6	4.2	3.5	4.2	17	3.9	4.6	8.3	2.2	1.6	2.8
12	1.5	1.6	3.4	3.6	3.3	6.8	3.9	11	3.0	2.3	5.9	2.6
13	1.4	1.6	3.1	9.0	3.3	5.1	9.5	40	2.6	2.3	2.4	2.6
14	1.4	1.6	2.9	12	3.4	4.9	5.3	116	2.4	2.0	2.0	2.7
15	1.4	1.7	2.7	5.7	6.6	4.3	4.2	10	2.3	1.9	1.9	2.4
16	1.4	2.0	2.7	4.3	7.8	3.9	3.8	5.4	54	1.9	1.7	2.3
17	1.4	4.1	2.8	4.0	4.5	3.7	3.5	4.1	110	1.9	1.6	2.2
18	1.4	4.3	2.6	3.6	3.5	3.7	3.4	3.6	7.9	1.8	1.6	2.2
19	1.4	2.2	2.6	3.3	3.4	3.8	3.3	3.4	5.2	2.1	1.6	2.2
20	1.4	2.0	2.8	50	3.6	3.9	3.2	3.2	4.3	8.8	1.6	2.1
21	1.4	1.9	3.8	176	4.6	3.7	3.2	3.2	3.6	7.9	1.5	2.9
22	1.4	1.8	3.1	20	31	3.6	3.1	3.2	3.9	3.4	1.6	210
23	1.4	2.1	2.9	8.0	65	19	3.1	3.2	18	3.6	3.0	12
24	1.4	2.9	5.4	17	149	52	3.0	3.3	4.1	2.8	2.9	5.3
25	1.5	2.2	7.2	7.9	131	9.0	3.0	4.1	3.3	2.6	3.0	4.1
26	1.5	1.9	3.7	5.2	51	5.9	10	2.9	3.0	2.5	2.4	3.7
27	1.5	3.2	3.0	4.6	12	5.1	9.7	2.8	2.8	2.5	6.5	3.9
28	1.5	2.7	2.9	4.5	7.0	4.8	4.2	2.9	2.7	2.4	2.4	9.3
29	1.4	3.1	2.7	3.8	---	4.4	3.5	2.8	2.5	2.1	2.7	7.4
30	1.4	4.9	2.7	3.5	---	4.2	3.3	2.7	2.5	2.0	2.4	18
31	1.4	---	3.1	3.5	---	4.1	---	5.2	---	2.0	2.0	---
TOTAL	50.4	64.8	186.4	410.9	528.4	286.7	150.4	267.6	280.5	82.7	91.6	449.7
MEAN	1.63	2.16	6.01	13.3	18.9	9.25	5.01	8.63	9.35	2.67	2.95	15.0
MAX	4.0	4.9	52	176	149	54	15	116	110	8.8	21	210
MIN	1.4	1.4	2.2	3.0	3.0	3.6	3.0	2.7	2.3	1.8	1.5	1.9
CFSM	.32	.42	1.17	2.58	3.66	1.79	.97	1.67	1.81	.52	.57	2.91
IN.	.36	.47	1.34	2.96	3.81	2.07	1.08	1.93	2.02	.60	.66	3.24

WTR YR 1979 TOTAL 2850.1 MEAN 7.81 MAX 210 MIN 1.4 CFSM 1.51 IN 20.54

PEE DEE RIVER BASIN

331

02121493 LEONARD CREEK NEAR BETHESDA, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTAN- TANEOUS (CFS)	SEDIM- ENT, SUS- PENDED (MG/L)	SEDIM- ENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 30...	1230	3.7	51	.51
JAN 02...	1130	22	562	33
21...	1130	144	542	250
FEB 23...	1350	97	1480	388
24...	1040	64	1130	211
25...	1500	159	1750	799
JUL 21...	1350	4.3	59	.63
AUG 20...	1520	1.6	12	.05
SEP 05...	1115	101	1090	297

PEE DEE RIVER BASIN

02125000 BIG BEAR CREEK NEAR RICHFIELD, N. C.

LOCATION.--Lat 35°20'02", long 80°20'09", Stanly County, Hydrologic Unit 03040105, on left bank 300 ft (91 m) downstream from Little Creek, 400 ft (122 m) upstream from bridge on Secondary Road 1134, and 10 mi (16 km) southwest of Richfield.

DRAINAGE AREA.--55.7 mi² (144 km²).

PERIOD OF RECORD.--May 1954 to current year.

REVISED RECORDS.--WSP 1503: 1955, 1956 (M). WSP 1553: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 426.62 ft (130.034 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 1 ft³/s (0.03 m³/s), which are fair. Suspended-sediment records for the current year are published on page 333 of this report.

AVERAGE DISCHARGE.--25 years, 57.6 ft³/s (1.631 m³/s), 14.04 in/yr (357 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft³/s (314 m³/s) Aug. 22, 1967, gage height, 15.95 ft (4.862 m); no flow at times 1954, 1961-64, 1966-69, 1972, 1976-77.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1921 reached a stage of about 19 ft (5.8 m), from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s (68 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0330	3160 89.5	8.96 2.731	Mar. 24	0030	*6690 189	*12.79 3.898
Feb. 23	1400	4410 125	10.57 3.222	June 16	2330	5400 153	11.60 3.536
Feb. 24	1600	4150 118	10.26 3.127	Sept. 5	1400	3980 113	10.09 3.075
Feb. 25	1930	2470 70.0	7.94 2.420				

Minimum discharge, 0.05 ft³/s (0.001 m³/s) Aug. 21, gage height, 0.60 ft (0.183 m); minimum daily, 0.10 ft³/s (0.003 m³/s) Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	.43	3.4	7.0	26	96	32	28	17	6.5	1.1	.78
2	4.4	.50	2.5	63	23	79	28	22	9.8	5.6	.95	.53
3	2.0	.50	2.1	58	22	62	74	19	37	4.8	.80	.34
4	1.4	.50	3.5	26	21	57	964	31	112	4.4	.67	.50
5	1.1	.50	51	19	19	240	359	22	31	4.0	.55	1710
6	1.1	.50	30	17	18	101	134	18	16	3.5	.51	232
7	.86	.61	14	17	33	94	79	16	12	3.8	.44	43
8	.71	1.3	10	31	41	87	61	13	9.8	4.2	.40	19
9	.70	1.1	9.2	24	60	92	98	25	7.8	3.8	.33	11
10	.70	.93	9.8	18	49	65	70	29	7.3	3.9	.30	8.2
11	.70	.80	8.0	15	42	249	49	23	35	3.6	.30	6.8
12	.65	.73	6.9	22	46	129	42	17	11	3.2	.36	5.5
13	.60	.70	5.8	306	96	82	303	408	7.3	2.9	.42	5.0
14	.54	.70	5.1	175	116	68	155	417	5.7	2.7	.36	7.0
15	.44	.70	4.5	71	155	57	80	107	4.7	2.5	.30	5.3
16	.40	.73	4.3	46	133	43	53	50	793	2.0	.28	4.2
17	.40	1.3	4.7	36	68	37	40	29	1350	2.1	.20	3.4
18	.40	1.3	4.3	30	43	34	33	21	138	2.0	.20	2.9
19	.40	1.1	4.1	24	66	31	27	17	59	1.8	.20	2.6
20	.40	.85	4.1	325	74	28	23	15	36	1.8	.16	2.3
21	.40	.80	4.3	1530	201	25	21	13	24	3.3	.10	2.4
22	.40	.80	4.6	198	699	22	18	12	20	5.0	.14	3.1
23	.40	.90	4.3	97	1780	314	16	12	16	3.2	.37	3.9
24	.39	1.3	9.1	324	1960	2150	15	11	23	3.3	.62	3.8
25	.38	1.1	37	145	1160	239	14	24	19	3.8	.41	3.6
26	.40	.86	20	81	637	116	368	19	12	2.9	.31	3.4
27	.50	1.4	13	60	219	76	265	11	9.5	2.4	.30	3.7
28	.45	2.1	9.8	51	130	59	106	9.3	8.2	2.1	.30	4.8
29	.45	2.8	8.0	41	---	49	55	8.5	7.5	1.7	.35	6.5
30	.40	5.3	7.3	34	---	41	38	7.6	7.2	1.3	1.8	17
31	.40	---	7.0	31	---	36	---	8.0	---	1.2	.79	---
TOTAL	28.27	33.14	311.7	3922.0	7937	4916	3620	1462.4	2845.8	99.3	14.32	2122.55
MEAN	.91	1.10	10.1	127	283	159	121	47.2	94.9	3.20	.46	70.8
MAX	5.8	5.3	51	1530	1960	2150	964	417	1350	6.5	1.8	1710
MIN	.38	.43	2.1	7.0	18	22	14	7.6	4.7	1.2	.10	.34
CFSM	.02	.02	.18	2.28	5.08	2.86	2.17	.85	1.70	.06	.008	1.27
IN.	.02	.02	.21	2.62	5.30	3.28	2.42	.98	1.90	.07	.01	1.42
CAL YR 1978	TOTAL	19138.55	MEAN	52.4	MAX	1470	MIN	.10	CFSM	.94	IN	12.78
WTR YR 1979	TOTAL	27312.48	MEAN	74.8	MAX	2150	MIN	.10	CFSM	1.34	IN	18.24

PEE DEE RIVER BASIN

333

02125000 BIG BEAR CREEK NEAR RICHFIELD, N. C.

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
24...	1210	.40	2	.00
NOV				
09...	1018	1.1	5	.01
DEC				
13...	1200	5.4	1	.02
JAN				
17...	1050	35	7	.65
FEB				
24...	1108	1340	586	2120
24...	1435	3900	942	10300
MAR				
01...	1205	93	5	1.3
APR				
02...	1419	23	5	.38
30...	0956	39	8	.44
JUN				
28...	1230	3.4	8	.15
AUG				
06...	1105	.40	3	.00
SEP				
07...	1240	42	3	1.0

PEE DEE RIVER BASIN

02125557 GOURDVINE CREEK AT SECONDARY ROAD 1715 NEAR OLIVE BRANCH, N. C.

LOCATION.--Lat 35°06'02", long 80°20'11", Union County, Hydrologic Unit 03040105, on right bank 3 ft (1 m) downstream from bridge on Secondary Road 1715, 0.8 mi (1.3 km) downstream from Secondary Road 1006, 0.9 mi (1.4 km) southwest of Olive Branch, and 1.0 mi (1.6 km) upstream from mouth.

DRAINAGE AREA.--8.75 mi² (22.66 km²).

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 372 ft (113 m), from topographic map.

REMARKS.--Records good except those below 0.10 ft³/s (0.003 m³/s), which are fair. Recording rain gage at station. Suspended-sediment records for the current year are published on page 336 of this report.

EXTREMES FOR CURRENT PERIOD.--July to September 1978; Peak discharges above base of 610 ft³/s (17.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 4	0045	*1400 39.6	*6.75 2.057
Aug. 14	1730	1170 33.1	6.58 2.006

No flow Sept. 18-30.

Water year 1979:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0215	1520 43.0	6.81 2.076	June 16	1930	*2300 65.1	*7.15 2.179
Feb. 24	1500	1880 53.2	7.00 2.134	Sept. 5	0730	714 20.2	6.14 1.871
Mar. 23	2400	1300 36.8	6.68 2.036				

No flow Nov. 6, Aug. 17-28.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										.71	.14	.04
2										4.5	21	.05
3										93	1.9	8.1
4										87	.90	.73
5										21	.50	.22
6										3.9	7.0	.10
7										2.1	6.0	.05
8										1.5	5.0	.03
9										1.2	19	.02
10										.97	6.9	.36
11										.66	1.5	.12
12										.43	.99	.04
13										.31	.57	.03
14										.47	134	.02
15										1.9	15	.02
16										76	5.5	.01
17										5.9	3.0	.01
18										2.2	1.8	.00
19										1.4	1.3	.00
20										1.1	.83	.00
21										.80	.55	.00
22										.52	.36	.00
23										.34	.26	.00
24										.26	.22	.00
25										1.3	.15	.00
26										.79	.12	.00
27										.48	.10	.00
28										.45	.09	.00
29										.24	.08	.00
30										.16	.06	.00
31										.14	.04	---
TOTAL										311.73	234.86	9.95
MEAN										10.1	7.58	.33
MAX										93	134	8.1
MIN										.14	.04	.00
CFSM										1.15	.87	.04
IN.										1.33	1.00	.04

PEE DEE RIVER BASIN

335

02125557 GOURDVINE CREEK AT SECONDARY ROAD 1715 NEAR OLIVE BRANCH, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.01	.59	.30	2.7	4.7	3.2	3.2	2.3	.97	.59	.05
2	.26	.01	.20	11	2.2	7.5	2.8	2.7	.76	.67	.52	.04
3	.07	.01	.14	5.2	2.2	6.2	3.0	2.2	.86	.46	.37	.52
4	.03	.01	.20	2.3	2.2	5.4	53	2.1	3.0	.30	.20	23
5	.31	.01	4.5	1.7	1.9	14	17	1.8	.86	.24	.14	469
6	1.8	.00	2.5	1.7	1.8	8.7	7.3	1.8	.52	.14	.10	19
7	2.5	.01	1.1	8.4	7.8	5.9	4.7	1.7	.46	.24	.10	5.6
8	2.5	.05	.59	11	26	25	4.0	1.5	.37	.67	.09	3.2
9	.52	.04	.46	4.3	23	19	6.2	1.7	.20	.30	.07	2.0
10	.02	.05	.59	2.7	12	9.0	3.8	3.2	.14	.24	.06	1.6
11	.01	.06	.46	2.1	10	51	3.0	2.1	.10	.20	.05	1.4
12	.01	.05	.30	13	12	14	2.8	1.4	.10	.14	.07	1.0
13	.01	.07	.24	66	15	6.4	23	22	.09	.12	.01	1.3
14	.01	.07	.20	18	9.3	10	12	24	.07	.09	.02	1.5
15	.01	.07	.16	7.5	7.5	7.5	5.6	5.6	.05	.07	.02	.74
16	.01	.07	.16	5.0	5.9	5.2	3.8	3.2	331	15	.01	.52
17	.01	.08	.20	3.6	4.0	4.5	3.0	2.2	33	2.1	.00	.37
18	.01	.08	.20	3.0	3.4	4.3	2.5	1.7	7.0	45	.00	.37
19	.01	.07	.20	2.2	3.6	3.8	2.2	1.6	5.4	3.2	.00	.30
20	.01	.07	.16	42	5.6	3.4	1.9	1.4	4.0	1.6	.00	.24
21	.01	.06	.24	440	72	3.0	1.8	1.2	2.3	34	.00	.24
22	.01	.06	.24	20	129	2.7	1.7	1.2	1.9	12	.00	.76
23	.01	.08	.24	11	147	75	1.5	1.1	11	33	.00	.37
24	.01	.07	.86	53	512	154	1.4	.97	8.7	11	.00	.20
25	.01	.06	3.0	14	100	14	1.2	1.4	29	6.4	.00	.37
26	.01	.05	1.5	7.8	70	9.3	97	.97	4.3	6.7	.00	.37
27	.01	.12	.86	5.9	22	6.4	36	.67	2.7	3.0	.00	.46
28	.01	.12	.59	5.0	13	5.2	11	.52	1.8	2.1	.00	1.8
29	.01	.52	.46	3.8	---	4.5	5.6	.46	1.5	1.5	2.5	2.5
30	.01	2.8	.30	3.2	---	3.8	4.0	.46	1.2	1.1	1.4	1.7
31	.01	---	.30	3.2	---	3.6	---	2.7	---	.76	.10	---
TOTAL	9.62	4.84	21.74	777.90	1263.1	508.0	326.0	103.75	454.68	183.31	6.42	540.52
MEAN	.31	.16	.70	25.1	45.1	16.4	10.9	3.35	15.2	5.91	.21	18.0
MAX	2.5	2.8	4.5	440	512	154	97	29	331	45	2.5	469
MIN	.01	.00	.14	.30	1.8	2.7	1.2	.46	.05	.07	.00	.04
CFSM	.04	.02	.08	2.87	5.15	1.87	1.25	.38	1.74	.68	.02	2.06
IN.	.04	.02	.09	3.31	5.37	2.16	1.39	.44	1.93	.78	.03	2.30
WTR YR 1979	TOTAL	4199.88	MEAN	11.5	MAX	512	MIN	.00	CFSM	1.31	IN	17.85

02125557

PEE DEE RIVER BASIN

02125557 GOURDVINE CREEK AT SECONDARY ROAD 1715 NEAR OLIVE BRANCH, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
DEC 14...	0915	.17	2	.00
JAN 21...	1248	102	126	35
21...	1725	56	56	8.5
22...	1115	20	20	1.1
FEB 23...	1325	305	346	285
24...	1655	1760	730	3470
24...	1710	1510	672	2740
24...	1800	1050	545	1550
24...	1843	305	568	468
26...	1136	58	26	4.1
MAR 12...	0945	14	6	.23

02125696 LANE CREEK AT SECONDARY ROAD 2115 NEAR TRINITY, N. C.

LOCATION.--Lat 34°50'39", long 80°28'49", Union County, Hydrologic Unit 03040105, on left bank downstream of culvert on Secondary Road 2115 and 3.0 miles (4.8 km) southeast of Trinity.

DRAINAGE AREA.--3.98 mi² (10.31 km²).

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder and V-notch weir. Altitude of gage is 538 ft (164 m), from topographic map.

REMARKS.--Records good except those below 0.10 ft³/s (0.003 m³/s), which are fair. Recording rain gage at station. Suspended-sediment records for the current year are published on page 339 of this report.

EXTREMES FOR THE CURRENT PERIOD.--July to September 1978; Peak discharges above base of 360 ft³/s (10.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 5	0315	*868 24.6	*6.19 1.887	July 24	2130	376 10.6	4.86 1.481
July 16	0915	445 12.6	5.10 1.554				

No flow July 1-4, Aug. 2-4, 22 to Sept. 30.

Water year 1979:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0315	834 23.6	6.02 1.835	Mar. 23	2315	732 20.7	5.82 1.774
Feb. 24	1515	832 23.6	6.01 1.832	May 10	0645	*970 27.5	*6.25 1.905

No flow Oct. 1 to Jan. 1, June 14, 15, July 2-15, 19, 20, Aug. 4-24, 30 to Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										.00	.02	.00
2										.00	.00	.00
3										.00	.00	.00
4										.00	.00	.00
5										156	1.4	.00
6										1.5	12	.00
7										.25	8.1	.00
8										.11	2.5	.00
9										.07	3.0	.00
10										.05	3.3	.00
11										.04	.42	.00
12										.03	.23	.00
13										.02	.11	.00
14										23	7.5	.00
15										7.7	2.0	.00
16										74	.36	.00
17										3.2	.28	.00
18										.56	.15	.00
19										.18	.04	.00
20										.08	.01	.00
21										.05	.01	.00
22										.02	.00	.00
23										.01	.00	.00
24										35	.00	.00
25										7.6	.00	.00
26										.79	.00	.00
27										.19	.00	.00
28										.88	.00	.00
29										.08	.00	.00
30										.05	.00	.00
31										.04	.00	---
TOTAL										311.50	41.43	.00
MEAN										10.0	1.34	.000
MAX										156	12	.00
MIN										.00	.00	.00
CFSM										2.51	.34	.000
IN.										2.91	.39	.00

PEE DEE RIVER BASIN

02125696 LANE CREEK AT SECONDARY ROAD 2115 NEAR TRINITY, N. C.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				.00	.51	3.7	.64	.71	13	.02	.01	.00
2				1.4	.38	3.1	.51	.58	2.4	.00	.09	.10
3				1.5	.41	2.6	.52	.61	.87	.00	.02	.05
4				.30	.41	2.9	51	.46	.50	.00	.00	.58
5				.09	.31	20	12	.29	.28	.00	.00	160
6				.15	.29	7.5	4.2	.23	.19	.00	.00	6.8
7				.60	2.5	3.9	2.2	.20	.22	.00	.00	1.2
8				.84	10	16	1.5	.21	.29	.00	.00	.56
9				.26	16	12	15	.58	.15	.00	.00	.34
10				.16	9.3	5.0	4.6	172	.09	.00	.00	.24
11				.13	7.9	30	3.0	11	.07	.00	.00	.19
12				1.7	9.1	6.6	2.5	3.5	.04	.00	.00	.15
13				12	9.9	3.8	22	25	.01	.00	.00	.23
14				4.7	5.3	13	11	29	.00	.00	.00	.25
15				1.7	4.0	7.9	3.8	5.0	.00	.00	.00	.15
16				.84	3.1	3.5	1.7	2.3	26	.08	.00	.09
17				.63	1.6	2.5	.85	1.3	9.6	.05	.00	.06
18				.39	.84	2.0	.57	.68	2.5	.01	.00	.06
19				.29	2.2	1.5	.40	.48	.76	.00	.00	.06
20				4.5	6.3	1.2	.30	.27	.33	.00	.00	.05
21				207	56	.88	.23	.30	.18	.05	.00	.09
22				8.0	84	.63	.17	.28	.16	.32	.00	.15
23				3.9	102	64	.17	.19	.12	.17	.00	.08
24				27	230	82	.14	.14	.08	5.2	.00	.06
25				5.6	76	9.0	.12	.29	1.7	2.6	.93	.06
26				3.3	21	4.2	100	.19	.33	.62	.27	.07
27				2.5	7.9	2.9	18	.09	.10	1.1	.68	.10
28				1.9	4.8	2.0	4.8	.06	.07	1.5	.12	.73
29				1.0	---	1.5	2.3	.09	.03	.12	.01	37
30				.77	---	1.1	1.3	.05	.04	.04	.00	25
31				.79	---	.84	---	31	---	.01	.00	---
TOTAL	.00	.00	.00	293.94	672.05	317.75	265.52	287.08	60.11	11.89	2.13	234.50
MEAN	.000	.000	.000	9.48	24.0	10.3	8.85	9.26	2.00	.38	.069	7.82
MAX	.00	.00	.00	207	230	82	100	172	26	5.2	.93	160
MIN	.00	.00	.00	.00	.29	.63	.12	.05	.00	.00	.00	.00
CFSM	.000	.000	.000	2.38	6.03	2.59	2.22	2.33	.50	.10	.02	1.97
IN.	.00	.00	.00	2.75	6.28	2.97	2.48	2.68	.56	.11	.02	2.19
WTR YR 1979	TOTAL	2144.97	MEAN	5.88	MAX	230	MIN	.00	CFSM	1.48	IN	20.04

PEE DEE RIVER BASIN

339

02125696 LANE CREEK AT SECONDARY ROAD 2115 NEAR TRINITY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTANTANEOUS (CFS)	SEDI- MENT- SUS- PENDED (MG/L)	SEDI- MENT CHARGE- SUS- PENDED (T/DAY)
JAN				
18...	1400	438	4	.00
21...	1024	85	236	54
21...	1625	29	79	6.2
22...	1555	6.3	25	.43
FEB				
23...	1615	43	114	26
24...	1300	537	813	1180
24...	1505	830	1040	2330
24...	1945	127	258	88
26...	1315	17	18	.83
MAR				
12...	1045	6.3	6	.10

PEE DEE RIVER BASIN

02125699 WICKER BRANCH AT SECONDARY ROAD 1940 NEAR TRINITY, N. C.

LOCATION.--Lat 34°52'53", long 80°26'24", Union County, Hydrologic Unit 03040105, on right bank at upstream side of bridge on Secondary Road 1940, 2.8 miles (4.5 km) southwest of Allens crossroads, and 4.0 miles (6.4 km) northeast of Trinity.

DRAINAGE AREA.--5.83 mi² (15.1 km²).

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 520 ft (158 m), from topographic map.

REMARKS.--Records good except those below 0.10 ft³/s (0.009 m³/s), which are fair. Recording rain gage at station. Suspended-sediment records for the current year are published on page 342 of this report.

EXTREMES FOR THE CURRENT PERIOD.--July to September 1978; Peak discharges above base of 450 ft³/s (12.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 5	0345	609 17.2	4.55 1.387	July 16	1000	*847 24.0	*5.46 1.664
July 14	2315	538 15.2	4.26 1.298				

Minimum discharge, 0.02 ft³/s (0.001 m³/s) Sept. 19, 20, gage height, 0.20 ft (0.061 m); minimum daily, 0.03 ft³/s (0.001 m³/s) Sept. 19 - 24, 27 - 29.

Water Year 1979

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0300	*1260 35.7	*6.98 2.128	Sept. 5	1200	964 27.3	5.88 1.792
Feb. 24	1515	1040 29.5	6.18 1.884	Sept. 29	0845	591 16.7	4.48 1.366
Mar. 24	0015	1040 29.5	6.20 1.890				

Minimum discharge, 0.01 ft³/s (<0.001 m³/s) Aug. 13, 14, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										.09	.14	.04
2										.06	.10	.04
3										.06	.06	.27
4										.06	.06	.06
5									74	.87	.04	
6										1.5	8.2	.04
7										.59	3.1	.04
8										.32	2.4	.05
9										.20	23	.05
10										.13	14	.06
11										.09	2.5	.08
12										.06	1.5	.06
13										.06	1.0	.05
14									41	2.1	.06	
15									24	1.6	.05	
16									122	.77	.04	
17									2.9	.56	.04	
18									.80	.50	.04	
19									.55	.26	.03	
20									.37	.14	.03	
21									.25	59	.03	
22									.22	.05	.03	
23									.19	.05	.03	
24									14	.05	.03	
25									7.5	.05	.05	
26									1.1	.05	.05	
27									.53	.07	.03	
28									.36	.08	.03	
29									.33	.09	.03	
30									.30	.07	.04	
31									.21	.04	---	
TOTAL									293.83	122.46	1.52	
MEAN									9.48	3.95	.051	
MAX									122	59	.27	
MIN									.06	.04	.03	
CFS-1									1.63	.68	.009	
IN.									1.87	.78	.01	

PEE DEE RIVER BASIN

341

02125699 WICKER BRANCH AT SECONDARY ROAD 1940 NEAR TRINITY, N. C.--Continued

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.02	.05	.05	.57	3.7	1.2	1.3	7.4	.19	.06	.05
2	.04	.02	.06	2.0	.71	3.0	1.1	.48	1.5	.14	.06	.05
3	.04	.02	.05	1.5	.75	2.5	1.0	.93	.74	.11	.04	.05
4	.04	.02	.06	.51	.93	2.4	.57	1.0	.61	.09	.02	1.7
5	.18	.02	.10	.30	.44	13	12	.76	.46	.09	.03	10.4
6	.09	.02	.09	.25	.57	5.3	4.1	.66	2.6	.08	.04	6.6
7	.05	.03	.06	.33	2.5	3.5	2.4	.62	3.1	.17	.07	1.7
8	.05	.08	.06	1.3	10	15	1.9	.55	.86	.24	.06	.82
9	.02	.04	.07	.78	17	11	7.5	3.4	.47	.13	.04	.46
10	.03	.05	.07	.41	14	4.6	3.0	4.5	.31	.11	.04	.33
11	.03	.07	.04	.29	10	40	1.9	12	.23	.13	.07	.27
12	.02	.09	.04	2.2	11	7.2	1.5	4.4	.17	.12	.04	.22
13	.02	.06	.07	20	12	4.0	23	20	.13	.08	.01	.32
14	.02	.06	.02	5.5	10	.6	11	20	.11	.08	.01	.36
15	.03	.07	.02	2.1	5.0	5.3	4.0	5.5	.10	.05	.02	.20
16	.02	.07	.04	1.2	5.0	3.0	2.2	1.7	45	1.3	.03	.14
17	.02	.07	.05	.93	3.0	2.3	1.5	1.1	17	.75	.03	.11
18	.02	.07	.04	.83	2.0	2.0	1.2	.79	2.3	.19	.02	.09
19	.02	.04	.04	.59	2.2	1.7	1.2	.54	1.7	.09	.02	.09
20	.02	.04	.04	5.7	5.0	1.5	2.4	.53	1.2	.07	.02	.09
21	.02	.02	.07	295	40	1.3	.98	.48	.57	.75	.01	.14
22	.02	.02	.05	8.8	84	1.1	.62	.48	7.2	1.5	.03	.15
23	.02	.04	.08	4.0	100	.87	.57	.46	16	.52	.08	.11
24	.02	.09	.10	31	297	100	.50	.45	1.3	3.0	.06	.11
25	.02	.07	.15	5.6	128	10	.53	.88	3.6	1.5	.09	.11
26	.03	.08	.26	3.0	26	4.5	139	.44	1.4	.46	.11	.12
27	.02	.14	.15	2.3	5.9	3.0	23	.33	.63	.31	.09	.13
28	.02	.05	.09	1.9	5.2	2.3	5.4	.27	.41	.28	.08	.16
29	.02	.12	.18	1.3	---	1.8	2.7	.23	.30	.15	.09	88
30	.02	.08	.06	1.1	---	1.5	1.4	.23	.23	.64	.06	7.4
31	.02	---	.05	1.0	---	1.4	---	1	---	.04	.05	---
TOTAL	1.07	1.67	2.41	402.97	803.87	357.5	316.20	144.36	117.83	13.51	1.43	219.08
MEAN	.035	.056	.078	13.0	26.7	11.5	10.5	4.82	3.93	.44	.048	7.30
MAX	.13	.14	.26	295	297	100	139	45	45	3.0	.11	109
MIN	.02	.02	.02	.05	.71	1.1	.70	.23	.10	.07	.01	.05
CFSM	.006	.01	.01	2.23	4.42	1.97	1.80	.93	.67	.08	.008	1.25
IN.	.01	.01	.02	2.57	5.13	2.28	2.02	.95	.75	.09	.01	1.40
WTR YR 1979 TOTAL	2386.95		MEAN 6.54	MAX 297		MIN .01	CFSM 1.12	IN 15.23				

PEE DEE RIVER BASIN

02125699 WICKER BRANCH AT SECONDARY ROAD 1940 NEAR TRINITY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
09...	1137	.02	45	.01
DEC				
14...	1200	.02	6	.00
27...	1550	.10	6	.00
JAN				
14...	1236	.77	4	.01
21...	1123	97	112	29
21...	1440	45	100	12
22...	1347	7.4	27	.54
FEB				
23...	1551	110	96	29
24...	1202	604	751	1370
24...	1405	942	359	952
24...	1508	1000	316	853
25...	1240	22	19	1.1
MAR				
12...	1015	7.2	7	.14

02126000 ROCKY RIVER NEAR NORWOOD, N. C.

LOCATION.--Lat 35°08'54", long 80°10'33", Stanly County, Hydrologic Unit 03040105, on left bank 1,000 ft (300 m) downstream from Lanes Creek, 1.5 mi (2.4 km) upstream from bridge on Secondary Road 1935, 6 mi (10 km) southwest of Norwood, and 11.2 mi (18.0 km) upstream from mouth. Water-quality samples at medium and high stages collected at bridge on Secondary Road 1935, 1.5 mi (2.4 km) downstream.

DRAINAGE AREA.--1,370 mi² (3,550 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 822: Drainage area. WSP 852: 1937. WSP 1052: 1936(M). WSP 1503: 1935, 1945.

GAGE.--Water-stage recorder. Datum of gage is 212.91 ft (64.895 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--50 years, 1,338 ft³/s (37.89 m³/s), 13.26 in/yr (337 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft³/s (2,970 m³/s) Sept. 18, 1945, gage height, 46.37 ft (14.134 m), from floodmark; minimum, 17 ft³/s (0.48 m³/s) Oct. 8, 1954, gage height, 0.00 ft (0.000 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1908 reached a stage of 35 ft (10.7 m), from information by local residents, discharge, 67,600 ft³/s (1,910 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (450 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1300	31300 886	20.98 6.395	Apr. 27	0400	20500 581	15.73 4.795
Feb. 24	2400	*46300 1310	*27.34 8.333	June 17	0600	25200 714	18.11 5.520
Mar. 24	1100	33700 954	22.08 6.730	Sept. 5	2100	39500 1120	24.56 7.486

Minimum discharge, 80 ft³/s (2.27 m³/s) Oct. 17, gage height, 0.44 ft (0.134 m); minimum daily, 83 ft³/s (2.35 m³/s) Oct. 17.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	95	335	210	664	2750	828	1050	869	280	193	360
2	208	98	266	800	591	2120	756	836	736	262	197	269
3	226	100	195	2000	530	1680	747	714	500	249	185	193
4	171	104	180	900	50*	1390	5300	663	1200	222	209	191
5	133	100	843	500	497	3290	9980	655	2090	207	184	21500
6	124	91	1750	450	477	5510	3640	591	720	201	154	22500
7	119	95	759	700	656	2840	1950	564	481	199	137	4950
8	110	112	426	1500	1060	2080	1340	533	409	203	126	1560
9	102	142	321	900	2410	3400	1320	522	382	221	131	815
10	101	155	287	600	2100	2710	1970	665	339	221	129	521
11	98	135	300	500	1390	4410	1320	1710	362	216	126	406
12	101	114	257	450	1220	4740	1000	809	314	225	123	344
13	103	99	218	4000	1940	2570	4110	4580	280	217	119	316
14	106	96	207	6000	2320	1870	6000	7820	243	206	125	366
15	97	106	199	2000	2220	1930	2950	4140	219	201	127	418
16	87	107	194	1000	2650	1440	1650	1630	2280	188	119	306
17	83	112	194	800	1870	1090	1160	968	18200	209	117	254
18	89	162	199	600	1210	952	928	760	7280	537	114	243
19	89	195	197	557	936	871	788	624	2120	399	107	238
20	90	189	186	719	1380	806	699	527	1790	238	102	210
21	95	144	192	24900	3510	749	633	494	1000	356	100	201
22	91	126	200	17700	11100	681	580	465	688	862	102	213
23	89	123	214	5450	21200	810	533	464	629	692	101	449
24	90	131	204	4640	33100	27500	494	485	739	622	109	469
25	87	148	394	5150	37400	17900	470	558	2040	759	125	328
26	92	149	652	2610	30000	3530	4970	818	833	626	131	275
27	91	144	423	1580	13700	3447	15100	535	551	488	130	269
28	94	164	311	1220	4100	1520	5650	406	427	365	188	298
29	94	225	257	982	---	1220	2380	369	366	283	338	347
30	89	297	230	815	---	1050	1380	345	324	242	573	1110
31	86	---	220	721	---	925	---	324	---	204	284	---
TOTAL	3356	4058	10810	90954	180739	106864	80626	35624	48411	10400	5005	59919
MEAN	108	135	349	2934	6455	3447	2688	1149	1614	335	161	1997
MAX	226	297	1750	24900	37400	27500	15100	7820	18200	862	573	22500
MIN	83	91	180	210	477	681	470	324	219	188	100	191
CFSM	.08	.10	.26	2.14	4.71	2.52	1.96	.84	1.18	.25	.12	1.46
IN.	.09	.11	.29	2.47	4.91	2.90	2.19	.97	1.31	.28	.14	1.63
CAL YR 1978	TOTAL	540782	MEAN	1482	MAX	33900	MIN	83	CFSM	1.08	IN	14.68
WTR YR 1979	TOTAL	636766	MEAN	1745	MAX	37400	MIN	83	CFSM	1.27	IN	17.29

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1956-73, 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1955 to September 1967, October 1976 to current year.

WATER TEMPERATURES: October 1947 to September 1948, October 1955 to September 1967, October 1976 to current year.

REMARKS.--Samples collected at bridge on Secondary Road 1935, 1.5 mi (2.4 km) downstream from gaging station. At various times prior to 1976 samples were collected at bridge on Secondary Road 1943, 2.5 mi (4.0 km) upstream from gaging station. There is no change in water quality between sites. Miscellaneous chemical data published for water years 1945, 1955-56, 1958, 1960, 1963-64, 1966. Daily records of specific conductance for water years 1956-64 are available in files of district office in Raleigh, N. C. For water years 1958-67, data were published as Rocky River at Gaddy, near Norwood (station 02125681).

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,050 micromhos Sept. 9, 10, 11, 1966; minimum daily, 38 micromhos Jan. 31, 1960.

WATER TEMPERATURES: Maximum daily, 35.0°C July 18, 1977; minimum daily, 0.0°C on several days during most winters.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 752 micromhos Nov. 2; minimum daily, 59 micromhos Mar. 25.

WATER TEMPERATURES: Maximum daily, 32.5°C Aug. 2; minimum daily, 0.0°C Dec. 29, Jan. 12, 13, Feb. 10, 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- CORALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 18...	1130	93	690	7.8	13.5	50	11.6	56	0	13	5.8
DEC 11...	1200	295	--	8.3	7.5	70	11.8	43	0	10	4.4
JUN 26...	1130	784	140	6.7	20.5	70	10.3	36	11	8.3	3.6
SEP 04...	1300	180	--	6.5	25.0	35	11.8	36	0	7.8	3.9

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 18...	110	78	6.4	8.4	140	0	110	3.6	59	85	.4
DEC 11...	39	63	2.6	4.7	60	0	49	.5	36	35	.2
JUN 26...	11	37	.8	4.0	30	0	25	9.6	12	12	.1
SEP 04...	50	71	3.7	6.3	50	0	41	25	31	43	.3

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
OCT 18...	11	384	368	.52	96.4	.61	.01	.62	.63	.03	.03
DEC 11...	17	197	183	.27	157	1.2	.03	1.2	1.2	.13	.13
JUN 26...	12	110	88	.15	233	2.1	.03	2.1	2.1	.07	.04
SEP 04...	14	208	189	.28	101	1.3	.00	1.3	1.3	.10	.10

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS P04)
OCT 18...	--	.04	1.2	--	1.2	--	--	1.8	8.1	1.4	--
DEC 11...	--	.17	.79	.72	.92	.07	.85	2.1	9.4	.46	--
JUN 26...	.08	.05	.86	.46	.93	.43	.50	3.0	13	.28	.49
SEP 04...	.12	.13	1.4	.86	1.5	.54	.96	2.8	12	.77	1.9
	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTH0. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTH0. DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTH0. DIS- SOLVED (MG/L AS P04)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, FM BOT- TOM MA- TERIAL (UG/G)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 18...	4.3	1.1	.99	1.1	3.4	250	30	18	12	20	26
DEC 11...	1.4	.41	.41	.38	1.2	--	<10	<6	4	--	11
JUN 26...	.86	.15	.16	.13	.40	--	10	6	4	--	13
SEP 04...	2.4	.73	.63	.71	2.2	--	10	8	2	--	10
	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)
OCT 18...	8	18	<10	510	160	350	3400	--	--	--	20
DEC 11...	0	11	--	730	500	230	--	--	--	--	--
JUN 26...	8	5	--	2400	2200	190	--	3	3	0	--
SEP 04...	1	9	--	600	560	40	--	4	3	1	--
			ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)		
OCT 18...			60	20	40	40	12	.6	.10		
DEC 11...			40	10	30	--	--	--	.10		
JUN 26...			20	0	20	--	8.0	.8	.00		
SEP 04...			30	10	20	--	7.4	.2	.10		

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JUNE 1979

DATE TIME	OCT 18, 78 1130	JUN 26, 79 1130
TOTAL CELLS/ML	360	3600
DIVERSITY: DIVISION	0.5	1.0
..CLASS	0.5	1.0
...ORDER	0.7	1.0
...FAMILY	1.8	1.0
....GENUS	1.8	1.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
...SCENEDESMACEAE				
....CHUCIGENIA	--	-	150	4
....SCENEDESMUS	--	-	540#	15
CHRYSTOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	3	1	--	-
....STEPHANODISCUS	12	3	--	-
..PENNALES				
...ACHNANTHACEAE				
...COCCONEIS	3	1	--	-
...FRAGILARIACEAE				
....FRAGILARIA	--	-	39	1
....SYNEDRA	9	2	--	-
...NAVICULACEAE				
....NAVICULA	130#	36	39	1
...NITZSCHIACEAE				
....NITZSCHIA	170#	46	77	2
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...HORMOGONALES				
...OSCILLATORIACEAE				
....OSCILLATORIA	36	10	2700#	76

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	472	672	399	210	191	105	149	115	234	229	265	174
2	494	752	362	202	207	118	133	138	187	231	255	269
3	556	722	355	188	231	123	131	156	207	181	275	247
4	504	583	349	188	222	125	128	172	169	203	352	305
5	397	558	350	199	206	119	78	190	98	186	388	100
6	303	587	156	226	203	94	99	192	123	183	377	69
7	345	636	161	245	196	106	105	175	147	184	357	88
8	386	698	199	220	182	118	120	176	186	171	337	111
9	445	690	230	212	173	115	115	199	218	175	398	119
10	544	530	280	215	160	109	118	185	228	176	383	141
11	590	532	305	232	158	111	123	154	266	180	367	163
12	659	585	269	274	212	96	134	159	223	175	367	167
13	633	599	241	201	154	105	118	101	224	189	469	185
14	526	563	259	148	155	119	85	97	215	250	530	230
15	533	525	345	127	149	127	91	99	268	306	510	255
16	567	530	392	136	140	134	100	116	293	331	459	265
17	588	600	433	163	129	141	99	131	97	304	408	225
18	625	500	431	190	136	158	110	155	76	304	408	245
19	715	600	412	204	137	141	133	171	98	184	418	245
20	730	550	367	225	134	148	150	191	124	240	459	250
21	729	460	356	90	182	154	163	180	149	271	479	272
22	555	375	361	74	110	107	172	189	163	185	602	315
23	533	375	427	94	85	153	173	201	169	195	530	349
24	565	374	404	120	76	62	172	225	173	165	530	285
25	631	399	371	107	62	59	182	244	144	169	510	255
26	719	474	242	118	61	86	135	245	142	173	490	238
27	619	505	178	137	65	99	86	169	149	195	520	220
28	615	450	176	136	91	110	95	168	192	205	449	260
29	593	392	189	143	---	122	97	169	216	240	377	350
30	572	301	189	154	---	143	110	175	206	224	180	240
31	605	---	204	178	---	150	---	205	---	255	165	---
MEAN	560	537	303	173	150	121	123	169	180	215	407	223
WTR YR 1979	MEAN	264	MAX	756	MIN	54						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.5	13.0	8.0	3.0	3.0	7.0	16.5	16.5	22.0	26.0	32.0	27.0
2	16.0	13.0	8.0	3.0	2.0	7.0	17.0	17.0	23.0	27.0	32.5	26.0
3	17.0	12.0	8.0	4.0	1.0	8.0	16.0	17.0	23.0	27.0	32.0	25.0
4	17.0	13.0	10.0	1.0	3.0	9.0	13.0	18.5	23.0	28.0	28.0	25.0
5	18.0	12.0	11.0	1.0	3.0	11.0	13.0	19.0	21.0	28.0	29.0	21.0
6	18.0	14.0	9.0	2.0	2.0	10.0	13.0	17.0	22.0	23.0	30.0	23.0
7	16.0	13.0	9.0	3.0	2.0	10.0	13.0	18.5	22.0	20.0	30.0	24.0
8	17.0	13.0	10.0	5.0	1.0	9.0	13.0	21.5	23.0	21.0	31.0	24.5
9	15.0	13.0	12.0	3.0	1.0	9.0	15.0	20.5	27.0	21.0	32.0	22.0
10	14.5	13.0	9.0	1.5	0	8.5	14.0	20.0	24.0	21.0	31.0	23.0
11	15.0	14.0	7.5	1.5	1.0	9.0	14.0	21.0	25.0	27.0	31.0	23.0
12	16.0	14.0	5.0	0	1.0	8.0	15.0	23.0	24.5	28.5	26.0	23.5
13	18.0	14.0	2.0	0	2.0	9.0	15.0	19.0	25.0	30.0	26.5	23.0
14	19.0	14.0	4.0	2.0	3.0	10.0	15.0	18.5	24.5	30.0	26.0	24.5
15	16.0	15.0	3.0	1.5	5.0	9.5	14.0	19.0	24.0	31.0	26.0	24.0
16	15.0	15.0	2.0	1.5	7.0	9.0	14.0	20.0	20.0	29.0	26.0	24.0
17	14.0	14.0	4.0	1.5	5.5	7.0	15.0	19.0	17.0	30.0	23.0	23.5
18	13.0	14.0	3.0	4.0	2.0	9.0	15.0	19.0	19.0	29.0	26.0	24.0
19	13.0	14.0	4.0	2.0	1.0	11.5	15.5	19.0	21.0	26.0	26.0	25.0
20	13.0	12.0	4.0	1.5	0	13.0	16.0	19.0	21.5	28.0	29.0	23.5
21	14.0	11.0	7.0	6.0	1.0	15.0	16.5	19.0	21.5	28.0	29.0	23.0
22	14.0	10.0	5.5	4.0	3.0	14.0	17.5	20.0	24.0	25.0	25.0	24.0
23	15.0	10.0	5.0	3.5	5.0	13.0	19.0	21.5	25.0	26.0	26.0	27.0
24	16.0	12.0	3.0	5.0	5.0	11.0	19.5	21.0	24.0	26.0	27.0	19.0
25	14.0	9.0	4.0	5.0	6.0	10.0	18.0	19.0	22.0	26.0	28.0	18.5
26	14.0	9.0	3.0	2.0	6.0	9.0	16.0	17.0	22.0	26.0	26.5	19.0
27	15.0	8.0	3.0	2.5	6.0	8.5	16.5	17.0	24.0	29.0	27.5	20.0
28	15.0	9.0	1.0	3.0	7.0	10.0	16.0	20.0	24.0	29.0	27.5	20.0
29	15.0	8.0	0	3.0	---	12.0	13.0	20.0	25.0	29.5	26.0	20.5
30	15.0	8.0	1.0	4.0	---	15.0	15.0	21.0	26.0	30.5	25.5	21.0
31	13.0	---	3.0	3.0	---	16.0	---	22.0	---	---	26.5	---
MEAN	15.5	12.0	5.5	2.5	3.0	10.0	15.5	19.5	23.0	27.0	28.0	23.0
WTR YR 1979	MEAN	15.5	MAX	32.5	MIN	0						

PEE DEE RIVER BASIN

02126000 ROCKY RIVER NEAR NORWOOD, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM., * FINE THAN .062 MM
OCT 11...	1130	93	8	2.0	100
JUN 20...	1130	784	190	402	98

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER QUALITY DATA, PERIOD JULY TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
JUL 26...	1330	445	60	7.7	27.0	7.0	25	1.9	1300
AUG 22...	1400	146	330	8.2	29.0	8.0	26	1.5	90
SEP 19...	1315	106	600	7.3	27.0	7.0	41	1.9	40

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT 17...	1430	82	450	7.6	16.0	11.0	48	2.1	20
NOV 20...	1330	191	395	7.5	13.0	9.4	40	2.9	40
DEC 27...	1240	415	105	7.5	4.0	11.0	20	2.3	1300
JAN 24...	1530	5900	80	7.0	7.0	9.0	21	2.9	1300
FEB 13...	1400	2150	--	7.2	3.0	11.5	14	1.4	240
MAR 27...	1300	2060	--	7.1	12.0	9.4	15	1.1	270
APR 15...	1300	918	--	7.2	15.0	9.0	10	1.4	50
25...	--	470	--	8.0	20.0	9.0	11	--	40
MAY 30...	1100	345	155	7.5	21.0	8.0	15	1.1	50
JUN 28...	1100	430	175	7.0	22.0	6.0	19	1.0	280
JUL 24...	1330	501	210	6.5	25.0	6.5	31	2.3	2100
AUG 15...	--	127	800	7.2	25.0	7.5	28	--	60
22...	1030	100	490	6.8	25.0	8.0	29	2.1	10
SEP 26...	1345	275	220	7.7	20.0	8.0	19	1.1	100

02128000 LITTLE RIVER NEAR STAR, N. C.

LOCATION.--Lat 35°23'11", long 79°49'56", Montgomery County, Hydrologic Unit 03040104, on left bank 9 ft (3 m) downstream from bridge on Secondary Road 1340, 50 ft (15 m) upstream from Black Rock Branch, 0.2 mi (0.3 km) upstream from Norfolk Southern Railway bridge, 0.3 mi (0.5 km) downstream from West Fork Little River, and 3 mi (5 km) west of Star.

DRAINAGE AREA.--105 mi² (272 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-54. April 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 409.00 ft (124.663 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Suspended-sediment records for the current year are published on page 350 of this report.

AVERAGE DISCHARGE.--25 years, 112 ft³/s (3.172 m³/s), 14.49 in/yr (368 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s (295 m³/s) Oct. 15, 1954, gage height, 16.46 ft (5.017 m); minimum, 0.24 ft³/s (0.007 m³/s) Oct. 4, 5, 1968, gage height, 0.68 ft (0.207 m), may be affected by upstream storage releases for water supply.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1945 reached a stage of about 20 ft (6.0 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft³/s (65 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1000	5420 153	11.49 3.502	Apr. 27	0530	2730 77.3	8.02 2.444
Feb. 23	2100	3210 90.9	8.73 2.661	May 12	0100	2920 82.7	8.30 2.530
Feb. 24	2130	4870 138	10.83 3.301	June 4	0900	2860 81.0	8.21 2.502
Feb. 26	0230	3990 113	9.75 2.972	June 17	0430	3290 93.2	8.84 2.694
Mar. 24	1030	3480 98.6	9.11 2.777	Sept. 6	0130	*6670 189	*12.83 3.910

Minimum discharge, 2.5 ft³/s (0.071 m³/s) Oct. 25, 26, gage height, 1.22 ft (0.37 m); minimum daily, 4.1 ft³/s (0.12 m³/s) Oct. 15-18, 25-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	7.2	52	24	67	153	100	112	128	69	31	22
2	31	7.2	26	91	59	132	95	102	100	77	29	42
3	23	8.0	20	228	55	119	127	99	175	52	39	27
4	15	8.0	21	72	56	111	802	104	1490	46	50	85
5	11	11	176	42	53	152	544	95	239	44	29	4090
6	9.3	7.3	143	37	51	336	196	92	126	42	25	2500
7	17	6.5	47	87	85	150	138	87	106	42	23	163
8	12	12	30	367	95	128	121	82	97	44	22	93
9	9.0	12	27	123	116	150	129	86	90	44	21	61
10	7.2	15	33	71	104	116	149	95	85	44	20	47
11	6.5	17	37	49	90	336	112	326	105	43	20	43
12	5.7	13	26	45	85	239	105	847	93	41	25	40
13	5.7	10	22	396	104	137	295	638	74	41	32	39
14	4.8	9.6	21	537	124	118	254	929	65	39	30	40
15	4.1	9.6	20	210	139	136	142	285	60	37	24	36
16	4.1	9.8	19	102	213	109	117	148	394	56	21	33
17	4.1	11	22	77	124	97	106	116	1880	42	19	31
18	4.1	11	22	64	122	93	99	104	245	36	18	30
19	4.8	11	22	52	172	90	96	104	137	36	17	30
20	5.7	14	21	76	139	88	94	97	109	42	16	29
21	5.7	15	22	3750	203	85	90	93	97	107	15	32
22	6.5	13	31	496	737	81	88	95	93	163	18	36
23	6.5	13	34	171	1840	117	84	92	88	112	17	38
24	5.7	14	33	436	2630	2200	82	86	102	133	17	36
25	4.1	14	161	328	2920	373	80	92	122	96	16	33
26	4.1	14	75	140	2100	182	463	86	86	67	16	34
27	4.1	20	40	108	367	131	1730	78	72	62	14	36
28	5.7	32	31	97	203	114	364	77	65	91	22	39
29	6.5	38	27	86	---	105	168	76	58	44	143	41
30	5.7	68	25	76	---	102	128	82	54	37	61	38
31	7.2	---	24	72	---	102	---	82	---	34	28	---
TOTAL	262.9	451.2	1310	8510	13053	6582	7098	5487	6635	1863	878	7844
MEAN	8.48	15.0	42.3	275	466	212	237	177	221	60.1	28.3	261
MAX	31	68	176	3750	2920	2200	1730	929	1880	163	143	4090
MIN	4.1	6.5	19	24	51	81	80	76	54	34	14	22
CFSM	.08	.14	.40	2.62	4.44	2.02	2.26	1.69	2.11	.57	.27	2.49
IN.	.09	.16	.46	3.01	4.62	2.33	2.51	1.94	2.35	.66	.31	2.78

CAL YR 1978 TOTAL 39321.5 MEAN 108 MAX 2860 MIN 4.1 CFSM 1.03 IN 13.93
WTR YR 1979 TOTAL 59974.1 MEAN 164 MAX 4090 MIN 4.1 CFSM 1.56 IN 21.25

PEE DEE RIVER BASIN
02128000 LITTLE RIVER NEAR STAR, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
OCT							
06...	1400	8.0	10	.22	--	--	--
24...	1500	4.8	9	.12	--	--	--
NOV							
06...	1256	11	8	.25	--	--	--
DEC							
13...	0940	22	5	.30	--	--	--
JAN							
17...	1404	76	8	1.6	--	--	--
FEB							
24...	1303	1130	102	311	--	--	--
MAR							
01...	0905	155	7	2.9	--	--	--
APR							
04...	1600	1180	193	615	--	--	--
SEP							
05...	0855	3190	971	8360	40	46	55
05...	1010	3980	582	6250	--	--	--
05...	1115	4580	546	6750	--	--	--
05...	1240	5210	507	7130	--	--	--
05...	1526	5860	360	5700	78	81	82
07...	1100	161	19	8.3	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
OCT						
06...	--	--	--	--	--	--
24...	--	--	--	--	--	--
NOV						
06...	--	--	--	--	--	--
DEC						
13...	--	--	--	--	--	--
JAN						
17...	--	--	--	--	--	--
FEB						
24...	--	--	--	--	--	--
MAR						
01...	--	--	--	--	--	--
APR						
04...	--	--	--	--	--	--
SEP						
05...	69	78	84	94	99	100
05...	--	--	--	--	--	--
05...	--	--	--	--	--	--
05...	--	--	--	--	--	--
05...	82	--	83	87	92	100
07...	--	--	--	--	--	--

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.

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 (4.0 km) upstream from Falling Creek, 3.3 mi (5.3 km) downstream from Blewett Falls hydroelectric plant, 6 mi (10 km) west of Rockingham, and 192 mi (309 km) upstream from mouth in Winyah Bay.

DRAINAGE AREA.--6,870 mi² (17,790 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1906 to January 1912, October 1927 to current year. Published as Yadkin River near Pee Dee, N. C., August 1906 to January 1912.

REVISED RECORDS.--WSP 822: Drainage area. WSP 1203: 1928-37. WSP 1303: 1928-42 (monthly and yearly runoff), 1943-46 (adjusted monthly runoff). WSP 1503: 1906-12, 1928-32(m).

GAGE.--Water-stage recorder. Datum of gage is 120.68 ft (36.783 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). August 1906 to January 1912 nonrecording gage at site 3.3 mi (5.3 km) upstream at different datum. September 1927 to Sept. 30, 1931, water-stage recorder at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Water-discharge record good. Flow regulated since 1928 by Blewett Falls Lake and five other reservoirs upstream. (See p. 405).

AVERAGE DISCHARGE.--57 years (1906-11, 1927-79), 8,057 ft³/s (228.2 m³/s), 15.93 in/yr (405 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 276,000 ft³/s (7,820 m³/s) Aug. 27, 1908, gage height, 31.28 ft (9.534 m), present site and datum, from records of State Highway Commission; minimum, 50 ft³/s (1.42 m³/s) Dec. 2, 3, 1951; minimum daily, 58 ft³/s (1.64 m³/s) Dec. 2, 1951, result of abnormally low shutdown of Blewett Falls hydroelectric plant to produce steady flow for current-meter measurements at this gaging station; minimum discharge from normal regulations, 96 ft³/s (2.72 m³/s) Oct. 25, 1943; minimum daily, 120 ft³/s (3.40 m³/s) Oct. 8, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 133,000 ft³/s (3,770 m³/s) Feb. 26, gage height, 18.61 ft (5.672 m); minimum, 223 ft³/s (6.32 m³/s) Oct. 1, gage height, 0.80 ft (0.244 m); minimum daily, 245 ft³/s (6.94 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	245	4730	4500	282	10200	33600	11400	10200	9420	720	9210	3380		
2	347	5520	370	6170	10200	21500	11400	11200	9150	2240	9410	445		
3	3290	4330	290	8930	10200	21600	13500	10600	1770	3910	8320	5030		
4	5020	365	3020	9860	10400	14200	24100	10900	6550	670	2410	10300		
5	4960	300	4800	10500	10500	15600	31500	11400	15300	2740	599	34800		
6	2730	4210	6800	10500	10700	30900	18800	11200	12400	4220	4650	67100		
7	409	1210	10200	10600	10900	47200	12000	10500	10200	2760	5490	35500		
8	416	5700	10200	10400	11700	30600	13700	10200	9880	537	4720	12500		
9	4900	4780	10200	10400	12500	25200	13900	10200	8900	3860	5510	4850		
10	3350	3370	5300	10500	13600	20200	13600	10100	790	6500	5980	7340		
11	3270	1240	5950	10400	10700	18000	13700	9710	6590	5920	944	9720		
12	4070	520	5580	10300	10200	23400	13000	3520	8050	7500	406	8620		
13	4960	3720	8960	10500	10200	16500	14700	3190	7490	3330	3480	12800		
14	729	5390	8290	16100	8720	13900	21600	23200	8540	4440	3350	16100		
15	419	1790	9200	14600	8410	14700	17100	24200	8440	473	5160	3740		
16	3810	4260	9200	13300	9210	13600	14000	15500	7900	3330	4320	2810		
17	4230	4740	4130	11600	9020	12900	12800	13000	54300	3880	4790	444		
18	4190	360	5880	10400	6360	12800	11200	11200	56800	4990	903	5260		
19	3050	270	8890	9460	9170	11800	10800	10800	32900	7010	1060	7920		
20	3410	4850	5120	9560	8860	11600	10700	10600	14300	4850	4490	4320		
21	863	4500	4280	36100	10100	11300	9660	10400	11200	9160	4400	5760		
22	426	5350	5740	62800	14800	11500	7210	9790	11100	13200	4410	10100		
23	4290	400	2030	51600	37700	11400	5530	9720	10700	11900	3750	13300		
24	2680	5340	4190	29700	66400	35200	7300	9510	10500	10400	4510	31700		
25	4370	950	616	24800	94800	56300	9650	9110	10500	10600	574	49600		
26	4660	1020	5070	17200	124000	36000	9940	8980	10500	10900	3220	22000		
27	5050	5460	5550	15800	115000	19100	29100	9100	10400	10800	3520	13800		
28	888	4610	7860	13900	72600	17200	28700	9040	10200	10400	3270	15200		
29	385	5710	5650	12200	---	14200	18000	8740	9940	10300	3430	14800		
30	3220	9160	2640	10200	---	12900	12800	9450	6620	9730	5130	11400		
31	3370	---	3480	9810	---	13100	---	8360	---	8960	7310	---		
TOTAL	88007	104155	173986	488472	737550	648000	441390	338620	391330	190230	128726	440639		
MEAN	2839	3472	5612	15760	26340	20900	14710	10920	13040	6136	4152	14690		
MAX	5050	9160	10200	62800	124000	56300	31500	24200	56800	13200	9410	67100		
MIN	245	270	290	282	6360	11300	5530	3520	790	473	406	444		
(+)	-801	-755	+965	+1570	+741	-387	+118	-750	+40	+153	-394	+928		
CAL YR 1978	TOTAL	3361804	MEAN	9210	MAX	100000	MIN	214	MEAN±	9234	CFSM±	1.34	IN±	18.19
WTR YR 1979	TOTAL	4171105	MEAN	11430	MAX	124000	MIN	245	MEAN±	11544	CFSM±	1.68	IN±	22.80

† Change in contents, equivalent in cubic feet per second, in W. Kerr Scott Reservoir, furnished by Corps of Engineers; High Rock Lake, Tuckertown Reservoir, and Badin Lake, furnished by Yadkin, Inc.; and Lake Tillery and Blewett Falls Lake, furnished by Carolina Power and Light Co.

± Adjusted for change in contents.

PEE DEE RIVER BASIN

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued
(National stream-quality accounting network and pesticide station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-48, 1958 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1967, July to September 1973, March 1974 to current year.

WATER TEMPERATURES: October 1946 to September 1948, October 1957 to September 1967, July to September 1973, March 1974 to current year.

REMARKS.--Miscellaneous chemical data published for water years 1945, 1955-56. Daily records of specific conductance for water years 1958-64 are available in files of district office in Raleigh, N. C. Flow regulated by Blewett Falls Lake and five other reservoirs upstream.

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by the Environmental Protection Agency. Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 140 micromhos May 25, 1967; minimum daily, 48 micromhos July 15, 1975, Feb. 25, 1979.

WATER TEMPERATURES: Maximum daily, 33.0°C July 11, 1977; minimum daily, 0.0°C on many days in 1961-62.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 130 micromhos Dec. 8; minimum daily, 48 micromhos Feb. 25.

WATER TEMPERATURES: Maximum daily, 30.0°C July 28, Aug. 11; minimum daily, 4.0°C Feb. 20, 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER CAC03)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT												
04...	1045	6180	93	7.4	20.5	--	7.0	6.1	K13	76	20	0
NOV												
14...	1200	8920	97	7.2	15.0	--	10	8.2	K9	K26	22	0
DEC												
11...	1330	8830	90	7.3	12.5	--	5.0	9.4	34	K0	20	0
FEB												
13...	1130	10200	95	7.4	3.5	--	44	12.8	K65	96	23	7
MAR												
21...	1100	10800	64	6.7	12.0	--	150	10.2	21	K17	16	3
APR												
23...	1200	13800	66	6.5	19.0	--	40	8.2	23	27	19	4
MAY												
16...	1230	14100	66	7.1	22.0	--	45	8.7	130	K110	20	3
JUN												
13...	0730	6180	72	7.1	23.5	--	30	6.1	K18	21	19	0
JUL												
02...	1300	240	70	6.3	26.0	--	16	5.2	K12	K14	19	0
AUG												
08...	1500	8630	70	6.6	29.5	4	--	5.2	30	43	17	0
SEP												
04...	1130	10100	88	6.1	27.0	--	20	5.9	K8	29	18	0

K Results based on colony count outside the acceptable range (non-ideal colony count).

PEE DEE RIVER BASIN

353

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 04...	5.0	1.9	8.8	44	.9	2.9	32	0	26	2.0	6.7	7.7
NOV 14...	5.5	1.9	9.4	45	.9	2.5	28	0	23	2.8	5.7	7.3
DEC 11...	4.6	2.1	8.6	44	.8	2.7	32	0	26	2.6	6.8	6.9
FEB 13...	5.5	2.3	7.5	38	.7	2.4	20	0	16	1.3	9.8	8.8
MAR 21...	3.9	1.6	4.3	33	.5	1.9	16	0	13	5.1	6.9	4.3
APR 23...	4.5	1.9	5.0	34	.5	1.6	18	0	15	9.1	6.9	4.8
MAY 16...	4.7	1.9	4.0	28	.4	1.9	20	0	16	2.5	4.7	4.5
JUN 13...	4.6	1.9	5.7	36	.6	1.8	25	0	21	3.2	5.4	5.5
JUL 02...	4.5	1.9	5.0	33	.5	2.1	23	0	19	18	5.2	4.6
AUG 08...	3.7	1.8	6.0	41	.6	1.9	26	0	21	6.6	7.7	6.6
SEP 04...	4.1	2.0	9.8	50	1.0	2.3	27	0	22	34	7.2	7.7

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT 04...	.1	10	62	59	.08	1040	.52	.04	--	.66	.70	.00
NOV 14...	.1	11	59	57	.08	1420	.39	.05	--	.21	.26	.00
DEC 11...	.1	11	65	59	.09	1550	.48	.03	--	.14	.17	--
FEB 13...	.0	10	72	56	.10	1980	.80	.11	--	.19	.30	.17
MAR 21...	.1	8.9	52	40	.07	1520	.55	.10	--	.24	.34	.25
APR 23...	.1	11	58	45	.08	2160	.55	.03	.04	.44	.47	.31
MAY 16...	.0	10	57	42	.08	2170	.69	.06	.07	.41	.47	.08
JUN 13...	.1	11	73	48	.10	1220	.53	.05	.06	.30	.35	.00
JUL 02...	.1	11	64	46	.09	41.5	.64	.09	.11	.42	.51	.05
AUG 08...	.1	10	63	51	.09	1470	.33	.09	.11	.21	.30	.05
SEP 04...	.1	10	72	57	.10	1960	.04	.18	.22	.38	.56	.26

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible][illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible][illegible]

PEE DEE RIVER BASIN

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ZINC, DIS- SOLVED (UG/L AS Zn)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO- SURE (DAYS)
OCT 04...	--	11	--	--	96.0	84.1	--	14.0	.410	28
NOV 14...	0	--	6.7	.5	--	--	--	--	--	--
DEC 11...	--	6.5	--	--	--	--	--	--	--	--
FEB 13...	20	--	6.0	1.4	--	--	--	--	--	--
MAR 21...	--	11	--	--	1.02	.790	--	.300	.000	35
APR 23...	--	5.4	--	--	--	--	--	--	--	--
MAY 16...	0	--	6.8	1.0	1.26	1.02	276	.870	.310	22
JUN 13...	--	7.0	--	--	--	--	--	--	--	--
JUL 02...	--	3.4	--	--	3.31	2.91	41.2	9.72	1.77	18
AUG 08...	10	--	9.0	.4	--	--	--	--	--	--
SEP 04...	--	12	--	--	--	--	--	--	--	--

PEE DEE RIVER BASIN

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, PERIOD OCTOBER 1978 TO MAY 1979

		ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	P,P' DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	P,P' DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)
DATE	TIME	NOV 14... 1200	NOV 14... 1200	NOV 14... 1200	NOV 14... 1200	NOV 14... 1200	NOV 14... 1200
NOV 14...	1200	ND	ND	ND	2.8	ND	7.8
FEB 13...	1130	ND	ND	ND	--	ND	--
MAY 16...	1230	ND	ND	ND	--	ND	--
		DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	P,P' DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	P,P' DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
DATE	TIME	NOV 14... 1.4	NOV 14... 1.4	NOV 14... 1.4	NOV 14... 1.4	NOV 14... 1.4	NOV 14... 1.4
NOV 14...	1.4	3.5	ND	ND	ND	ND	ND
FEB 13...	--	--	--	ND	--	ND	--
MAY 16...	--	--	ND	--	ND	--	ND
		HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
DATE	TIME	NOV 14... ND	NOV 14... ND	NOV 14... ND	NOV 14... ND	NOV 14... ND	NOV 14... ND
NOV 14...	ND	ND	ND	ND	ND	ND	ND
FEB 13...	ND	--	ND	--	--	--	ND
MAY 16...	ND	--	ND	--	--	ND	--
		METHYL PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	METHYL PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
DATE	TIME	NOV 14... ND	NOV 14... ND	NOV 14... ND	NOV 14... ND	NOV 14... ND	NOV 14... ND
NOV 14...	ND	ND	ND	ND	ND	ND	ND
FEB 13...	--	--	--	--	--	ND	--
MAY 16...	ND	--	ND	--	--	ND	--

ND Not detected.

ND Not detected.

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

PHYTOPLANKTON ANALYSES, JULY TO SEPTEMBER 1978

DATE	JUL 24.78	Aug 4.78
TIME	1400	1445
TOTAL CELLS/ML	1600	1100
DIVERSITY: DIVISION	1.4	1.1
..CLASS	1.4	1.1
...ORDER	1.7	1.6
...FAMILY	1.8	1.8
...GENUS	2.2	1.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
...OOCYSTACEAE				
....ANKISTRODESMUS	22	1	43	4
....KIRCHNERIELLA	--	--	43	4
...SCENEDESMACEAE				
....SCENEDESMUS	400*	25	--	--
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	66	4	--	--
CHRYSOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
...COSCINODISCAEAE				
....CYCLOTELLA	44	3	43	4
...PENNALES				
....ACHNANTHACEAE				
....ACHNANTHES	--	--	22	2
...FRAGILARIACEAE				
....SYNEDRA	--	--	22	2
...NAVICULACEAE				
....NAVICULA	22	1	130	12
...NITZSCHIAEAE				
....NITZSCHIA	150	10	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...CHROOCOCCALES				
...CHROOCOCCACEAE				
....AGMENELLUM	710*	44	640*	64
....ANACYSTIS	180	11	--	--
...HORMOGONALES				
...OSCILLATORIACEAE				
....OSCILLATORIA	--	--	87	8

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PEE DEE RIVER BASIN

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

PHYTOPLANKTON ANALYSES: OCTOBER 1978 TO JULY 1979

DATE TIME	NOV 14,78 1200	MAR 21,79 1100	MAY 16,79 1230	JUN 13,79 0730	JUL 2,79 1300
TOTAL CELLS/ML	390	100	440	51	260
DIVERSITY: DIVISION	0.5	1.4	1.6	0.8	0.7
..CLASS	0.5	1.4	1.6	0.8	0.7
...ORDER	1.4	1.4	2.0	1.5	0.8
...FAMILY	2.3	1.4	2.7	1.5	0.8
....GENUS	2.5	1.9	2.8	1.5	1.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....COELASTRACEAE										
.....COELASTRUM	--	-	--	-	220#	27	--	-	--	-
.....OOCYSTACEAE										
.....ANKISTHODESMUS	--	-	20#	20	14	2	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	--	-	56	7	--	-	--	-
...VOLVOCALES										
....CHLAMYDOMONADACEAE										
.....CHLAMYDOMONAS	44	12	--	-	24	3	13#	25	13	5
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINOUISACEAE										
.....CYCLOTELLA	22	6	20#	20	14	2	13#	25	--	-
....HELOSIRA	130#	35	40#	40	98	12	--	-	13	5
...PENNALES										
....ACHNANTHACEAE										
....COCCONEIS	22	6	--	-	--	-	--	-	--	-
....CYMBELLACEAE										
.....CYMBELLA	--	-	--	-	14	2	--	-	--	-
....FRAGILARIACEAE										
.....SYNEDRA	--	-	--	-	28	3	--	-	--	-
....GOMPHONEMACEAE										
.....GOMPHONEMA	22	6	--	-	14	2	26#	50	--	-
....NAVICULACEAE										
.....NAVICULA	67#	18	--	-	--	-	--	-	13	5
....STAURONEIS	--	-	--	-	14	2	--	-	--	-
....NITZSCHIA	67#	18	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOMONADACEAE										
.....CRYPTOMONAS	--	-	--	-	14	2	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
.....AGMENELLUM	--	-	--	-	--	-	--	-	210#	80
.....ANACYSTIS	--	-	--	-	--	-	--	-	13	5
...HORMOGONALES										
....NOSTOCACEAE										
.....ANABAENA	--	-	--	-	42	5	--	-	--	-
....OSCILLATOIACEAE										
.....OSCILLATORIA	--	-	--	-	280#	33	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
.....TRACHELONAS	--	-	20#	20	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

 SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	96	100	105	81	60	62	68	66	69	72	84
2	100	99	101	99	79	63	63	65	65	68	67	90
3	97	97	97	94	81	73	66	63	63	68	65	81
4	87	98	93	94	83	62	54	65	69	69	70	90
5	92	95	102	92	81	62	66	65	80	75	69	57
6	98	90	97	92	79	64	67	66	78	76	77	57
7	88	94	105	91	83	60	68	65	71	74	74	66
8	90	98	130	92	81	57	68	67	65	73	77	66
9	93	101	104	90	78	56	61	65	70	73	82	67
10	95	106	93	91	81	63	61	68	69	74	83	68
11	95	98	81	92	90	60	63	69	69	74	77	69
12	93	97	79	89	83	62	65	70	67	72	78	66
13	89	101	97	89	93	67	65	73	73	72	79	73
14	84	103	92	95	85	61	64	81	72	71	78	66
15	86	110	96	105	88	63	65	69	71	70	80	69
16	88	111	94	97	90	64	67	69	68	70	81	75
17	86	108	92	91	84	60	63	67	70	70	84	70
18	87	105	92	90	88	64	67	67	63	66	82	69
19	85	103	99	99	85	62	62	66	59	71	84	77
20	93	106	99	89	87	53	63	65	62	72	82	83
21	90	102	95	86	78	53	63	67	61	80	88	85
22	89	96	95	67	74	52	55	65	65	64	92	99
23	88	103	99	70	74	62	69	67	70	60	83	80
24	86	110	101	66	65	58	72	63	72	72	82	83
25	85	110	103	68	48	54	72	67	73	70	94	73
26	86	104	106	75	55	56	78	69	71	66	94	83
27	95	103	106	75	51	57	76	69	81	72	84	76
28	96	108	107	77	58	56	70	75	75	70	83	76
29	93	104	115	77	---	54	54	73	70	68	85	73
30	89	98	114	78	---	56	66	71	69	70	81	75
31	91	---	108	78	---	51	---	67	---	69	80	---
MEAN	91	101	100	87	78	60	65	68	69	71	80	75
WTH YR 1979	MEAN	74	MAX	130	MIN	47						

 TEMPERATURE (DEG. C) OF WATER WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	18.5	13.0	11.5	5.5	7.0	15.0	15.0	23.0	25.0	27.0	---
2	23.5	18.0	13.0	9.0	5.5	7.0	15.5	14.0	23.0	26.0	27.5	---
3	23.0	17.0	12.5	8.0	5.0	6.0	15.0	14.5	23.5	26.0	28.0	---
4	22.5	16.0	14.0	8.5	6.0	9.5	14.0	20.0	23.0	28.0	28.0	27.0
5	23.0	17.0	13.5	7.5	5.0	10.5	15.0	14.0	23.0	28.0	29.5	23.5
6	23.0	17.5	13.5	7.5	5.0	9.5	15.5	19.0	22.0	25.0	29.0	24.0
7	21.0	17.0	13.5	8.0	4.5	9.0	15.5	14.5	22.5	26.0	24.0	26.5
8	21.0	16.5	13.5	8.0	5.5	9.0	15.0	20.0	23.0	27.0	29.0	25.0
9	22.0	16.5	14.0	8.0	4.5	10.5	15.0	15.5	25.5	24.5	29.0	25.0
10	21.0	16.5	13.5	8.0	4.5	10.5	16.0	20.0	25.0	25.0	28.5	24.0
11	21.0	17.5	13.0	7.0	4.5	10.0	15.0	21.0	24.0	25.0	30.0	24.0
12	21.0	17.5	12.0	6.5	5.0	10.0	16.0	22.5	24.0	25.5	26.5	25.0
13	20.5	17.5	10.5	6.0	5.0	11.0	16.0	21.0	24.5	26.0	28.0	25.0
14	21.0	16.5	11.0	6.0	5.5	11.5	16.0	21.0	24.0	26.0	27.5	25.0
15	20.0	17.5	10.5	6.5	6.5	11.0	16.5	20.0	23.5	26.0	27.5	26.0
16	19.5	17.5	11.0	6.5	7.0	11.0	16.5	21.0	21.5	26.0	26.5	25.0
17	19.5	17.0	11.0	6.5	6.0	11.0	17.0	21.0	20.0	27.5	26.0	25.0
18	19.0	17.0	10.0	6.5	5.0	12.0	17.0	21.0	21.0	26.0	27.0	25.0
19	19.0	17.0	10.0	6.5	4.5	12.5	17.5	21.0	22.0	26.5	27.0	25.5
20	19.0	16.5	10.0	6.0	4.0	13.0	17.5	21.0	22.5	26.5	27.0	25.5
21	19.0	16.5	11.0	7.0	4.0	13.5	17.0	21.0	22.0	26.0	27.0	24.5
22	19.0	16.0	10.5	7.5	6.0	13.0	18.5	22.0	24.0	25.5	26.0	25.0
23	19.0	15.5	10.0	6.0	5.5	12.5	18.0	21.5	24.0	25.0	26.0	24.0
24	18.5	15.0	9.0	6.5	6.5	12.0	19.0	21.5	24.0	25.5	26.5	24.0
25	18.5	14.0	8.5	6.5	7.0	12.0	18.0	21.0	23.5	26.5	27.0	22.0
26	18.5	13.5	8.5	6.5	6.5	12.0	14.5	20.5	23.5	26.0	27.0	22.0
27	19.5	13.5	8.5	6.0	7.5	12.0	14.5	20.0	23.0	26.0	---	21.5
28	18.5	14.0	8.5	6.5	7.0	12.5	18.0	21.0	24.0	30.0	---	22.0
29	18.5	13.5	8.0	6.0	---	14.0	18.0	21.0	24.0	26.5	---	21.5
30	19.0	13.0	7.5	6.0	---	14.5	18.5	21.5	25.0	27.0	---	23.0
31	14.5	---	10.0	5.5	---	14.0	---	22.0	---	27.5	---	---
MEAN	20.5	16.0	11.0	7.0	5.5	11.0	16.5	20.5	23.5	26.5	27.5	24.5
WTH YR 1979	MEAN	17.5	MAX	30.0	MIN	4.0						

PEE DEE RIVER BASIN

02129000 PEE DEE RIVER NEAR ROCKINGHAM, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM., % FINER THAN .062 MM
OCT 04...	1045	6140	11	184	100
NOV 14...	1200	8920	14	337	100
DEC 11...	1330	8830	13	310	100
FEB 13...	1130	10200	23	633	100
MAR 21...	1100	10800	42	1230	97
APR 23...	1200	13800	25	931	100
MAY 16...	1230	14100	31	1180	100
JUN 13...	0730	6180	23	384	95
JUL 02...	1300	240	17	11	94
AUG 08...	1500	8630	18	419	97
SEP 14...	1130	10100	19	518	93

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER QUALITY DATA, PERIOD JULY TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
JUL 26...	1450	8630	86	7.2	29.0	4.4	10	.5	50
AUG 29...	1515	9200	100	7.2	30.0	4.8	12	1.5	70
SEP 21...	1530	8720	103	6.5	27.0	5.6	11	.4	<10

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT 19...	1430	3950	90	--	18.0	8.0	16	1.3	10
NOV 21...	1450	8730	90	--	18.0	8.7	16	1.1	10
DEC 20...	1400	8820	80	--	10.0	10.8	<10	.5	10
JAN 17...	1415	11300	66	--	8.0	11.3	16	1.4	270
FEB 28...	1145	75100	50	6.0	7.0	12.8	20	2.3	460
MAR 22...	1435	11300	56	6.6	15.0	8.9	15	1.5	20
APR 25...	1345	9680	70	7.1	20.0	8.2	13	1.4	10
MAY 23...	1415	8540	70	6.0	23.0	6.2	15	1.5	60
JUN 12...	1410	8780	80	6.0	24.0	6.7	12	1.1	<10
JUL 25...	1155	10400	70	6.5	27.0	5.5	18	1.0	20
AUG 23...	1450	8300	90	6.5	27.0	7.6	13	.9	<10
SEP 20...	1435	8440	90	6.6	25.0	6.6	16	.5	<10

02133500 DROWNING CREEK NEAR HOFFMAN, N. C.

LOCATION.--Lat 35°03'38", long 79°29'39", Richmond County, Hydrologic Unit 03040203, on right bank 10 ft (3 m) downstream from bridge on U.S. Highway 1, 0.8 mi (1.3 km) downstream from Deep Creek, 1 mi (2 km) upstream from Seaboard Coast Line Railroad bridge, and 4 mi (6 km) northeast of Hoffman.

DRAINAGE AREA.--178 mi² (461 km²).

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 972: 1941(M).

GAGE.--Water-stage recorder. Altitude of gage is 270 ft (82 m), from topographic map.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 364 of this report.

AVERAGE DISCHARGE.--40 years, 261 ft³/s (7.392 m³/s), 19.91 in/yr (506 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s (309 m³/s) Sept. 18, 1945, gage height, 10.29 ft (3.136 m); minimum, 22 ft³/s (0.62 m³/s) Oct. 5, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s (24 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 23	2000	1050 29.7	6.33 1.929	Sept. 6	0800	*2460 69.7	*7.57 2.307
Feb. 27	0400	1540 43.6	6.85 2.088				

Minimum discharge, 62 ft³/s (1.76 m³/s) Oct. 1, gage height, 1.95 ft (0.594 m); minimum daily, 67 ft³/s (1.90 m³/s) Oct. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	77	342	124	278	771	287	424	191	97	107	94
2	127	78	299	157	267	612	270	323	253	94	101	111
3	138	78	191	239	253	525	261	269	263	88	232	103
4	95	78	150	283	236	472	303	243	228	42	259	98
5	83	80	178	252	227	463	486	233	289	79	135	1040
6	80	81	264	180	214	509	773	232	594	78	103	2290
7	77	79	326	170	223	584	744	223	515	80	93	1770
8	72	116	291	227	253	558	550	204	376	92	87	954
9	69	175	206	294	302	528	428	193	265	93	83	626
10	69	163	191	304	324	517	398	253	198	87	79	464
11	70	121	183	258	306	538	397	402	163	93	74	354
12	69	111	155	194	269	512	375	513	149	94	97	277
13	68	103	141	248	250	493	364	401	136	123	123	240
14	69	98	134	337	260	478	396	403	123	107	111	246
15	70	97	129	377	267	441	446	414	117	88	93	254
16	67	100	126	346	258	415	470	470	145	80	86	233
17	67	128	139	294	241	405	419	461	326	42	82	191
18	69	147	168	221	223	382	337	356	520	107	78	169
19	70	137	162	195	212	349	288	249	660	115	75	154
20	71	124	135	187	235	314	262	210	482	131	73	146
21	70	112	132	276	295	299	246	198	303	477	69	176
22	72	109	138	438	364	281	230	192	186	624	89	237
23	71	109	132	884	483	268	218	191	163	558	115	252
24	71	140	132	929	770	325	206	206	142	552	122	234
25	69	157	184	676	1120	424	196	265	137	410	108	226
26	69	130	211	569	1380	583	227	346	130	277	89	238
27	72	127	196	506	1450	602	371	339	120	224	86	237
28	74	197	146	439	1060	470	570	248	113	178	98	245
29	76	249	132	371	---	377	749	184	106	170	100	310
30	77	309	127	322	---	327	590	165	100	151	101	445
31	77	---	125	295	---	304	---	157	---	120	93	---
TOTAL	2371	3810	5565	10592	12020	14116	11857	9057	7493	5641	3241	12414
MEAN	76.5	127	180	342	429	455	395	292	250	182	105	414
MAX	138	309	342	929	1450	771	773	513	660	624	259	2290
MIN	67	77	125	124	212	268	196	157	100	78	69	94
CFSM	.43	.71	1.01	1.92	2.41	2.56	2.22	1.64	1.40	1.02	.59	2.33
IN.	.50	.80	1.16	2.21	2.51	2.95	2.45	1.89	1.57	1.18	.68	2.59
CAL YR 1978	TOTAL	83777	MEAN 230	MAX 1150	MIN 57	CFSM 1.29	IN 17.51					
WTH YR 1979	TOTAL	98177	MEAN 269	MAX 2290	MIN 67	CFSM 1.51	IN 20.52					

FEE DEE RIVER BASIN

02133500 DROWNING CREEK NEAR HOFFMAN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 25...	0940	69	6	1.1
NOV 07...	1000	80	4	.86
DEC 12...	1100	155	6	2.5
FEB 24...	1330	1040	1	2.8
MAY 01...	0925	436	2	2.4
SEP 05...	0728	630	11	19
05...	1745	1450	7	27
06...	0710	2440	22	145
07...	0815	1970	8	43

PEE DEE RIVER BASIN

365

02134500 LUMBER RIVER AT BOARDMAN, N. C.

LOCATION.--Lat 34°26'32", long 78°57'38", Robeson County, Hydrologic Unit 03040203, on right bank 50 ft (15 m) downstream from bridge on U.S. Highway 74, 1 mi (1.6 km) downstream from Seaboard Coast Line Railroad bridge at Boardman, 1.5 mi (2.4 km) downstream from Big Swamp, and 40.5 mi (65.2 km) upstream from mouth.

DRAINAGE AREA.--1,220 mi² (3,160 km²), approximately.

PERIOD OF RECORD.--September 1929 to current year.

REVISED RECORDS.--WSP 892: Drainage area. WSP 1303: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 72.05 ft (21.961 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 30, 1936, nonrecording gage at site 100 ft (30 m) downstream at same datum. Sept. 30, 1936, to June 8, 1943, nonrecording gage at present site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--50 years, 1,340 ft³/s (37.95 m³/s), 14.91 in/yr (379 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft³/s (379 m³/s) Sept. 24, 1945, gage height, 10.64 ft (3.243 m); minimum, 66 ft³/s (1.87 m³/s) Oct. 9, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1928 reached a stage of 11.8 ft (3.60 m), from floodmark witnessed by local resident, discharge, 25,000 ft³/s (708 m³/s). Flood of July 22, 1901, the highest during the period 1896-1913, reached a stage of 10.8 ft (3.29 m), from observations by Butters Lumber Co., discharge, 14,800 ft³/s (419 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,490 ft³/s (269 m³/s) Sept. 9, gage height, 10.05 ft (3.063 m); minimum, 152 ft³/s (4.30 m³/s) Oct. 31, gage height, 1.63 ft (0.497 m).

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	159	737	926	1890	4740	2840	826	736	658	1630	373
2	217	163	799	976	1960	5010	2670	867	716	537	1510	422
3	223	162	876	1030	1920	5100	2500	934	886	446	1360	465
4	228	170	940	1050	1820	5050	2360	1010	1340	404	1120	607
5	238	190	1000	1080	1680	5030	2250	1080	1250	360	894	1800
6	247	204	1090	1100	1560	5110	2100	1120	1070	331	687	6580
7	257	202	1150	1100	1560	5060	1950	1130	916	312	559	8440
8	268	203	1250	1110	1530	4920	1810	1100	824	298	476	9170
9	265	207	1360	1110	1490	4620	1760	1040	738	279	451	9460
10	250	225	1430	1120	1480	4370	1790	1020	669	261	429	9330
11	232	257	1480	1140	1480	4310	1820	1100	635	252	419	8870
12	217	297	1480	1170	1460	4290	1880	1010	622	244	397	8210
13	205	344	1430	1250	1430	4180	1940	995	597	245	354	6990
14	197	390	1380	1300	1400	4030	2020	1000	592	243	314	5920
15	189	428	1320	1370	1380	3880	2010	1080	611	234	288	4500
16	183	461	1280	1440	1360	3660	1920	1140	733	232	274	3560
17	176	477	1220	1490	1350	3450	1780	1210	805	236	276	2980
18	172	461	1140	1500	1360	3250	1630	1270	793	237	282	2680
19	171	415	1070	1490	1400	3050	1520	1310	757	292	280	2490
20	165	373	983	1480	1390	2860	1450	1350	741	406	263	2120
21	161	350	914	1570	1370	2670	1400	1340	741	442	244	1840
22	160	347	859	1620	1430	2480	1340	1260	734	524	247	1610
23	161	357	811	1680	1700	2310	1270	1170	728	652	253	1440
24	161	371	815	1800	2110	3070	1210	1120	782	775	254	1310
25	161	376	860	1830	2710	3080	1140	1050	1100	850	277	1190
26	159	372	887	1810	3720	3390	1090	973	1120	988	284	1100
27	157	368	922	1780	4360	3650	1000	916	1100	1130	295	992
28	157	377	940	1740	4430	3640	928	855	1050	1180	301	925
29	157	441	940	1700	---	3460	870	805	970	1350	328	974
30	155	616	927	1740	---	3250	831	772	804	1560	353	1230
31	153	---	925	1790	---	3040	---	744	---	1650	341	---
TOTAL	6041	9763	33215	43292	52730	120010	51079	32597	25160	17608	15440	107578
MEAN	195	325	1071	1397	1883	3871	1703	1052	839	568	498	3586
MAX	268	616	1480	1830	4430	5110	2840	1350	1340	1650	1630	9460
MIN	153	159	737	926	1350	2310	831	744	592	232	244	373
CFSM	.16	.27	.88	1.15	1.54	3.17	1.40	.86	.69	.47	.41	2.94
IN.	.18	.30	1.01	1.32	1.61	3.66	1.56	.99	.77	.54	.47	3.28
CAL YR 1978	TOTAL	544045	MEAN	1491	MAX	6230	MIN	153	CFSM	1.22	IN	16.59
WTR YR 1979	TOTAL	514513	MEAN	1410	MAX	9460	MIN	153	CFSM	1.16	IN	15.69

SANTÉE RIVER BASIN

02138000 CATAWBA RIVER NEAR MARION, N. C.

LOCATION.--Lat 35°42'26", long 82°02'00", McDowell County, Hydrologic Unit 03050101, on right bank 15 ft (5 m) downstream from bridge on U.S. Highway 221, 0.2 mi (0.3 km) downstream from Tom Creek, 2.2 mi (3.5 km) north-west of Marion, and at mile 294 (473 km). Records include flow of small tributary on right bank 250 ft (76 m) downstream.

DRAINAGE AREA.--171 mi² (443 km²) including area of small downstream tributary.

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

REVISED RECORDS.--WSP 1032: 1942, 1943(P).

GAGE.--Water-stage recorder. Datum of gage is 1,208 ft (368.2 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Some diurnal fluctuation and regulation for short periods of low flow caused by Lake Tahoma hydroelectric plant above station. About 4 ft³/s (0.11 m³/s) is diverted by the town of Marion for water supply. Suspended-sediment records for the current year are published on page 367 of this report.

AVERAGE DISCHARGE.--38 years, 348 ft³/s (9.855 m³/s), 27.64 in/yr (702 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) Nov. 6, 1977, gage height, 17.04 ft (5.194 m), from rating curve extended as explained below; minimum, 28 ft³/s (0.79 m³/s) Sept. 30, Oct. 1, 5, 1954, gage height, 0.50 ft (0.152 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 13, 1940 reached a stage of 19.34 ft (5.895 m), discharge, 71,400 ft³/s (2,020 m³/s), from rating curve extended above 10,000 ft³/s (283 m³/s), on basis of contracted opening measurements at gage height, 15.02 ft (4.578 m) and 19.34 ft (5.895 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft³/s (96 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 25	1900	4930 140	8.34 2.542	Sept. 5	1630	3830 108	6.98 2.128
Mar. 4	1500	*11100 314	*13.03 3.972	Sept. 14	0830	4090 116	7.31 2.228
Mar. 23	2300	9380 266	12.20 3.719	Sept. 22	0130	5790 164	9.34 2.847
Apr. 26	1130	3990 113	7.18 2.188				

Minimum discharge, 126 ft³/s (3.57 m³/s) Nov. 6, 7; minimum gage height, 1.17 ft (0.357 m) Nov. 13; minimum daily discharge, 128 ft³/s (3.62 m³/s) Nov. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	131	215	432	303	667	548	670	468	276	426	1340
2	182	130	201	1610	288	560	567	611	702	260	336	576
3	177	129	204	753	292	502	1090	579	788	254	290	619
4	176	130	357	484	288	7250	1480	592	560	251	276	736
5	168	132	700	395	273	5470	1220	570	477	257	265	1940
6	163	129	365	348	268	1620	976	529	432	253	255	1320
7	157	128	284	397	304	1260	852	490	420	365	247	747
8	156	134	254	542	273	1030	760	468	773	349	245	543
9	153	131	400	438	270	833	875	572	534	342	234	441
10	153	131	344	376	268	739	722	1040	578	465	232	380
11	155	132	310	344	266	674	655	815	539	371	280	342
12	148	135	278	329	265	598	744	911	434	513	296	315
13	148	133	260	393	270	559	1940	944	396	464	240	762
14	163	134	253	372	268	547	1200	946	371	377	226	2500
15	146	135	242	324	273	507	893	739	355	325	220	1100
16	141	137	243	306	330	476	792	633	383	303	214	732
17	141	195	246	297	322	466	741	559	736	277	210	572
18	141	265	225	289	293	457	665	515	435	263	210	490
19	141	176	228	274	332	442	611	489	385	275	206	433
20	139	154	227	554	303	432	575	468	383	514	200	386
21	139	150	228	1500	334	425	544	590	371	669	212	1220
22	141	150	216	960	448	410	520	537	361	588	258	2720
23	139	188	216	630	806	2420	493	822	336	505	258	1060
24	133	221	235	657	1440	3950	473	913	388	483	492	787
25	133	181	259	537	2900	1470	495	704	333	568	296	658
26	134	172	234	459	2340	1060	2720	573	316	432	454	568
27	135	219	222	430	1210	831	1570	514	301	387	318	662
28	135	220	215	403	840	717	1070	497	295	349	318	2330
29	137	207	211	359	---	656	855	454	290	326	266	1550
30	132	259	232	337	---	617	749	421	295	299	246	2190
31	129	---	452	332	---	580	---	568	---	407	394	---
TOTAL	4633	4872	8624	15861	16067	38925	27395	19733	13435	11767	8620	30019
MEAN	149	162	278	512	574	1256	913	637	448	380	278	1001
MAX	198	265	708	1610	2900	7250	2720	1040	788	669	492	2720
MIN	129	128	201	274	265	410	473	421	290	251	200	315
CFSM	1.87	1.95	1.63	2.99	3.36	7.35	5.34	3.73	2.62	2.22	1.63	5.85
IN.	1.01	1.06	1.88	3.45	3.50	8.47	5.96	4.29	2.92	2.56	1.88	6.53
CAL YR 1978 TOTAL	117182		MEAN 321	MAX 3460	MIN 128	CFSM 1.88	IN 25.49					
WTR YR 1979 TOTAL	199951		MEAN 548	MAX 7250	MIN 128	CFSM 3.21	IN 43.50					

Santee River Basin

367

02138000 CATAWBA RIVER NEAR MARION, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 11...	1345	151	5	2.0
DEC 13...	1030	258	7	4.9
JAN 16...	1330	319	6	5.2
MAR 05...	1315	4200	522	5920
06...	1245	1750	191	902
SEP 21...	1147	5490	892	13200

SANTÉE RIVER BASIN

02138500 LINVILLE RIVER NEAR NEBO, N. C.

LOCATION.--Lat 35°47'43", long 81°53'27", Burke County, Hydrologic Unit 03050101, in Pisgah National Forest, on right bank 370 ft (113 m) upstream from bridge on State Highway 126, 0.2 mi (0.3 km) downstream from Shooks Creek, 0.5 mi (0.8 km) upstream from Lake James, 2.0 mi (3.2 km) northeast of Longtown, and 6.0 mi (9.7 km) northeast of Nebo.

DRAINAGE AREA.--67.2 mi² (174.0 km²).

PERIOD OF RECORD.--May 1907 to August 1908 (fragmentary). June 1922 to current year. Published as "at Fonta Flora" prior to 1908 and as "at Branch" 1923-70. Records for October to December 1908, "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). WSP 1723: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,204.87 ft (367.244 m) National Geodetic Vertical Datum of 1929. May 1907 to August 1908 nonrecording gage about 1.2 mi (1.9 km) 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 (6.1 m) downstream from bridge on State Highway 126 at datum 1.00 ft (0.305 m) higher. Oct. 1, 1970 to Sept. 30, 1973 at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records fair except those for period of no gage-height record, Oct. 26 to Dec. 4, which are poor. Suspended-sediment records for the current year are published on page 500 of this report.

AVERAGE DISCHARGE.--57 years, (1922-79), 150 ft³/s (4.248 m³/s), 30.31 in/yr (770 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,500 ft³/s (1,120 m³/s) Aug. 13, 1940, gage height, 11.4 ft (3.47 m), site and datum then in use, from rating curve extended above 6,400 ft³/s (181 m³/s) on basis of slope-area measurement of peak flow; minimum, 2 ft³/s (0.057 m³/s) Jan. 9, 1956 (result of freezeup); minimum daily, 8 ft³/s (0.23 m³/s) Sept. 7-9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of about 11 ft (3.4 m) former site and datum, discharge, 34,600 ft³/s (980 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0730	1850 52.4	3.70 1.128	Apr. 26	1230	2330 66.0	4.13 1.259
Feb. 25	2200	2530 71.6	4.29 1.308	Sept. 5	1400	3350 94.9	4.90 1.494
Mar. 4	1630	7630 216	7.23 2.204	Sept. 14	0700	2310 65.4	4.11 1.253
Mar. 24	0100	5470 155	6.21 1.893	Sept. 21	2130	*8000 227	*7.36 2.243

Minimum daily, 33 ft³/s (0.93 m³/s) Nov. 7.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	35	50	213	127	330	215	272	183	100	142	653
2	55	34	48	1320	110	286	199	237	159	89	213	283
3	54	34	80	494	108	259	327	218	212	84	133	220
4	55	34	103	302	115	4250	556	213	200	82	108	315
5	56	34	284	235	96	2920	509	207	165	90	98	1570
6	56	34	190	199	90	881	368	184	146	95	90	927
7	53	33	132	197	122	570	302	166	144	88	85	466
8	49	37	112	314	98	450	267	151	236	97	78	325
9	45	39	220	245	96	368	264	161	230	92	72	254
10	45	38	295	203	72	309	246	240	382	120	68	212
11	45	37	181	179	80	287	212	206	284	129	72	177
12	45	36	146	163	80	255	213	213	205	142	90	150
13	45	35	127	174	89	230	528	430	174	152	79	474
14	52	34	115	181	92	208	434	380	153	111	67	1780
15	55	34	100	155	90	167	332	276	136	97	62	730
16	48	34	96	140	167	164	279	230	131	89	59	469
17	45	40	94	135	205	160	244	198	434	83	55	350
18	43	60	90	133	152	154	219	179	297	78	52	282
19	42	50	84	123	117	148	199	163	220	75	51	239
20	42	45	87	187	117	142	183	159	186	128	49	191
21	40	44	91	798	137	136	171	179	170	447	51	1290
22	40	43	93	459	165	129	160	185	173	445	59	2190
23	40	50	82	316	284	893	153	253	165	297	59	668
24	38	48	81	289	817	2900	144	306	164	223	114	466
25	37	44	134	245	1520	903	140	254	139	201	126	377
26	36	44	116	200	1260	552	1380	207	123	177	124	319
27	36	60	99	187	577	439	902	179	112	158	118	293
28	36	50	86	176	409	313	510	171	106	138	90	1080
29	35	65	77	152	---	294	388	157	101	120	76	748
30	35	55	93	131	---	261	317	144	98	113	87	667
31	35	---	145	129	---	234	---	185	---	110	99	---
TOTAL	1392	1260	3731	8374	7392	19592	10361	6703	5628	4450	2726	18165
MEAN	44.9	42.0	120	270	264	632	345	216	188	144	87.9	606
MAX	56	65	295	1320	1520	4250	1380	430	434	447	213	2190
MIN	35	33	48	123	72	129	140	144	98	75	49	150
CFSM	.67	.63	1.79	4.02	3.93	9.41	5.13	3.21	2.80	2.14	1.31	9.02
IN.	.77	.70	2.07	4.64	4.09	10.85	5.74	3.71	3.12	2.46	1.51	10.06
CAL YR 1978 TOTAL	47948	MEAN 131	MAX 1860	MIN 33	CFSM 1.95	IN 26.54						
WTR YR 1979 TOTAL	89774	MEAN 246	MAX 4250	MIN 33	CFSM 3.66	IN 49.70						

02142000 LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, N. C.

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 (0.5 km) downstream from Grassy Creek, 0.4 mi (0.6 km) upstream from Lambert Creek, 2.2 mi (3.5 km) northeast of All Healing Springs, and 4 mi (6.4 km) northwest of Taylorsville.

DRAINAGE AREA.--28.2 mi² (73.0 km²), revised.

PERIOD OF RECORD.--October to December 1952 (monthly discharge only), January 1953 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,070 ft (326 m), by barometer. Prior to June 13, 1953, non-recording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 500 of this report.

AVERAGE DISCHARGE.--27 years, 38.4 ft³/s (1.087 m³/s), 18.49 in/yr (470 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,850 ft³/s (137 m³/s) Aug. 10, 1970, gage height, 15.68 ft (4.779 m); minimum, 2.9 ft³/s (0.082 m³/s) Sept. 20, 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s (16 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0500	594 16.8	5.29 1.612	Mar. 5	0300	579 16.4	5.47 1.667
Jan. 21	0100	644 18.2	5.53 1.686	Mar. 23	2200	1500 42.5	8.84 2.694
Feb. 24	1730	682 19.3	5.71 1.740	July 20	1330	597 16.9	5.55 1.692
Feb. 25	1700	1280 36.2	8.05 2.454	Sept. 22	0430	*4660 132	*14.53 4.429

Minimum discharge, 8.0 ft³/s (0.23 m³/s) Feb. 18, gage height, 1.04 ft (0.317 m) result of freezeup; minimum daily, 13 ft³/s (0.37 m³/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	14	17	29	34	69	43	47	56	34	82	46
2	18	14	16	336	33	61	42	43	50	31	56	42
3	17	14	16	101	32	56	48	43	51	29	41	31
4	17	14	49	61	31	116	87	44	48	30	35	29
5	17	14	101	48	30	300	76	43	43	29	33	131
6	17	14	39	41	29	118	61	40	40	28	31	66
7	16	14	29	44	33	85	52	38	39	30	30	42
8	16	17	25	59	31	77	48	37	39	30	29	34
9	16	15	153	46	29	66	50	42	36	30	28	31
10	16	14	82	40	28	61	44	51	36	43	27	29
11	16	14	46	36	29	60	41	51	34	32	31	28
12	17	14	36	34	27	50	43	61	31	34	44	27
13	15	14	31	39	27	46	156	70	30	32	30	30
14	21	14	28	37	28	44	90	59	30	28	27	36
15	16	14	25	32	32	44	73	48	29	26	27	28
16	16	14	25	31	37	39	62	43	57	25	25	27
17	15	16	23	30	32	38	51	40	96	24	24	26
18	15	20	22	29	23	37	47	36	50	26	24	26
19	16	15	21	27	33	36	44	36	71	47	24	25
20	15	15	21	97	32	35	42	34	57	243	23	24
21	15	14	21	366	38	34	40	36	47	157	23	180
22	15	14	20	136	70	32	39	52	43	93	26	1500
23	14	18	19	86	190	289	38	59	46	69	27	114
24	13	18	25	111	379	336	37	76	92	56	25	76
25	14	15	31	86	643	115	38	69	57	51	26	62
26	14	15	25	67	247	84	166	54	46	48	24	54
27	15	20	23	56	114	70	115	47	41	46	23	52
28	14	17	21	50	83	62	71	45	38	43	23	103
29	15	18	20	43	---	56	58	42	36	39	22	83
30	14	22	19	39	---	53	51	38	37	36	21	87
31	15	---	22	37	---	46	---	78	---	50	23	---
TOTAL	490	465	1051	2276	2374	2615	1853	1502	1408	1519	934	3069
MEAN	15.8	15.5	33.9	73.4	84.8	84.4	61.8	48.5	46.9	49.0	30.1	102
MAX	21	22	153	366	643	336	166	78	96	243	82	1500
MIN	13	14	16	27	23	32	37	34	29	24	21	24
CFSM	.56	.55	1.20	2.60	3.01	2.99	2.19	1.72	1.66	1.74	1.07	3.62
IN.	.65	.61	1.39	3.00	3.13	3.45	2.44	1.98	1.85	2.00	1.23	4.05

CAL YR 1978 TOTAL 16577 MEAN 45.4 MAX 658 MIN 13 CFSM 1.61 IN 21.87
WTR YR 1979 TOTAL 19554 MEAN 53.6 MAX 1500 MIN 13 CFSM 1.90 IN 25.79

SANTEE RIVER BASIN

02142900 LONG CREEK NEAR PAW CREEK, N. C.

LOCATION.--Lat 35°19'42", long 80°54'35", Mecklenburg County, Hydrologic Unit 03050101, on left bank at upstream side of bridge on Secondary Road 2042, 600 ft (183 m) downstream from McIntyre Creek, 1.2 mi (1.9 km) upstream from Gutter Branch, and 3.6 mi (5.8 km) north of community of Paw Creek.

DRAINAGE AREA.--16.1 mi² (41.7 km²).

PERIOD OF RECORD.--June 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 648.7 ft (197.72 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional diversions for irrigation by upstream golf course. Suspended-sediment records for the current year are published on page 371 of this report.

AVERAGE DISCHARGE.--14 years, 18.2 ft³/s (0.515 m³/s), 15.35 in/yr (390 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,720 ft³/s (105 m³/s) May 30, 1975, gage height, 11.46 ft (3.493 m); minimum, 0.48 ft³/s (0.014 m³/s) Aug. 13, 1976, result of upstream diversions.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0330	800 22.7	7.83 2.387	Apr. 26	2145	690 19.5	7.21 2.198
Feb. 24	1730	*1360 38.5	*9.73 2.966	June 16	2145	840 23.8	7.95 2.423
Mar. 24	0115	760 21.5	7.60 2.316	Sept. 30	1145	1200 34.0	9.39 2.862

Minimum discharge, 1.3 ft³/s (0.037 m³/s) Oct. 9, gage height, 1.21 ft (0.369 m); minimum daily, 1.7 ft³/s (0.048 m³/s) Oct. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	2.2	3.3	6.5	8.4	21	10	12	9.4	5.4	3.1	5.0
2	2.5	2.2	2.7	27	7.5	18	12	10	6.9	4.5	2.9	4.0
3	2.1	2.2	4.2	11	7.6	15	22	9.6	16	4.1	2.8	3.0
4	1.9	2.2	38	9.0	7.6	15	135	9.6	9.4	4.0	2.6	3.2
5	1.9	2.2	74	7.0	7.3	34	43	9.1	6.5	3.7	2.6	58
6	1.9	2.3	13	6.8	7.1	21	22	9.3	5.8	3.6	2.4	50
7	1.8	2.4	7.0	9.0	10	15	16	8.8	6.0	4.4	2.4	15
8	1.8	3.0	5.4	12	12	27	14	8.1	6.2	4.7	2.3	8.7
9	1.7	1.9	9.0	6.0	15	31	38	8.9	5.3	3.9	2.3	6.0
10	1.7	1.8	7.2	7.4	12	19	21	10	4.9	4.3	2.1	4.9
11	1.7	1.8	5.1	7.0	10	53	15	8.5	5.2	3.9	2.4	4.3
12	2.1	1.8	4.5	17	13	24	14	7.6	4.5	3.7	2.8	4.0
13	2.2	1.8	4.3	24	22	15	132	59	4.1	4.0	2.3	4.0
14	2.6	2.2	4.0	18	23	17	40	64	5.1	3.5	2.2	4.7
15	1.9	2.3	3.8	11	39	14	22	18	4.9	3.3	2.0	3.6
16	2.0	2.0	3.9	9.2	31	12	16	12	206	3.5	1.9	3.4
17	1.9	2.7	4.6	7.9	17	11	13	9.1	107	5.1	1.8	3.3
18	2.0	6.2	3.9	7.5	10	11	12	7.8	18	3.5	1.8	3.5
19	2.1	2.6	3.8	7.0	18	11	10	7.3	10	3.4	1.8	3.3
20	2.1	2.3	3.8	100	23	10	9.5	6.9	8.7	3.6	1.8	3.0
21	2.1	2.2	6.1	353	61	9.6	9.1	7.2	7.2	7.3	1.8	3.8
22	2.1	2.2	4.5	42	131	8.9	11	7.5	7.3	10	1.8	18
23	2.1	2.5	3.9	23	229	80	14	7.4	36	4.7	2.4	5.2
24	2.1	4.2	19	92	703	188	14	7.8	28	8.0	2.0	4.3
25	2.2	2.5	11	32	574	31	11	16	12	13	10	4.6
26	2.2	2.3	8.0	19	131	20	295	7.7	7.8	8.2	6.0	4.1
27	2.2	4.9	6.0	15	40	18	121	6.5	6.3	5.1	10	4.3
28	2.2	4.2	4.9	13	25	13	29	8.8	5.6	4.3	5.0	8.4
29	2.3	4.4	4.5	11	---	13	19	6.1	5.2	3.7	3.0	15
30	2.3	8.3	4.3	9.8	---	11	15	5.6	5.1	3.4	2.5	408
31	2.3	---	4.3	9.4	---	11	---	7.7	---	3.1	2.8	---
TOTAL	71.3	85.8	282.0	923.5	2195.5	801.5	1154.6	381.9	570.3	150.9	93.6	670.6
MEAN	2.30	2.86	9.10	29.8	78.4	25.9	38.5	12.3	19.0	4.87	3.02	22.4
MAX	9.3	8.3	74	353	703	188	295	64	206	13	10	408
MIN	1.7	1.8	2.7	6.5	7.1	8.9	9.1	5.6	4.1	3.1	1.8	3.0
CFSM	.14	.18	.57	1.85	4.87	1.61	2.39	.76	1.18	.30	.19	1.39
IN.	.16	.20	.65	2.13	5.07	1.85	2.67	.88	1.32	.35	.22	1.55
CAL YR 1978 TOTAL	6936.2			MEAN 19.0	MAX 530	MIN 1.4	CFSM 1.18	IN 16.03				
WTR YR 1979 TOTAL	7381.5			MEAN 20.2	MAX 703	MIN 1.7	CFSM 1.26	IN 17.05				

Santee River Basin

371

02142900 LONG CREEK NEAR PAW CREEK, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
NOV												
28...	0805	4.3	29	.34	--	--	--	--	--	--	--	--
DEC												
1/...	0845	3.9	11	.12	--	--	--	--	--	--	--	--
JAN												
20...	1535	300	1020	325	--	--	--	--	--	--	--	--
20...	2115	315	870	740	--	--	--	--	--	--	--	--
21...	0610	690	545	1110	--	--	--	--	--	--	--	--
FEB												
23...	1820	325	390	342	--	--	--	--	--	--	--	--
25...	1725	1320	749	2670	24	36	45	54	62	67	74	80
MAR												
05...	1520	34	69	5.3	--	--	--	--	--	--	--	--
08...	1037	17	11	.50	--	--	--	--	--	--	--	--

02143000 HENRY FORK NEAR HENRY RIVER, N. C.

LOCATION.--Lat 35°41'06", long 81°24'03", Catawba County, Hydrologic Unit 03050102, on left bank 325 ft (99 m) downstream from bridge on Secondary Road 1124, at site of Old Link Ford, 1.2 mi (1.9 km) downstream from Burke-Catawba County line, and 2 mi (3 km) southeast of village of Henry River.

DRAINAGE AREA.--80 mi² (207 km²), approximately.

PERIOD OF RECORD.--July 1925 to November 1931, December 1941 to current year.

REVISED RECORDS.--WSP 952: 1928, 1930.

GAGE.--Water-stage recorder. Datum of gage is 891.0 ft (271.6 m) National Geodetic Vertical Datum of 1929. July 1925 to November 1931, at site 450 ft (137 m) upstream at same datum.

REMARKS.--Records good. The mill above the station which in previous years caused diurnal fluctuation and some regulation continued inactive. An average of 2.0 ft³/s (0.057 m³/s) was diverted for water supply by town of Morganton and wasted into Catawba River. Suspended-sediment records for the current year are published on page 373 of this report.

AVERAGE DISCHARGE.--43 years (1925-31, 1942-79), 133 ft³/s (3.767 m³/s), 22.58 in/yr (574 mm/yr).

EXTREMES FOR PERIOD OF RECORD: Maximum discharge, 15,300 ft³/s (433 m³/s) Oct. 2, 1929 gage height, 18.40 ft (5.608 m), site then in use, from rating curve extended above 2,300 ft³/s (65.1 m³/s) on basis of computation of peak flow over dam at Henry River, at gage height 29.2 ft (8.90 m); minimum, 3 ft³/s (0.085 m³/s) Dec. 20, 1942; minimum daily, 4 ft³/s (0.11 m³/s) Nov. 15, Dec. 20, 1942.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft (8.90 m) Aug. 13, 1940 at former site, from floodmarks, discharge, 31,300 ft³/s (886 m³/s). The flood of July 16, 1916 reached a stage of about 23 ft (7.0 m) at former site, discharge, 20,700 ft³/s (586 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,800 ft³/s (79 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 25	1730	3560 101	8.34 2.542	Sept. 22	0430	*3780 107	*8.70 2.652
Mar. 23	2330	3220 91.2	7.78 2.371				

Minimum discharge, 42 ft³/s (1.19 m³/s) Oct. 27, 28, 29, gage height, 1.07 ft (0.326 m); minimum daily, 42 ft³/s (1.19 m³/s) Oct. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	46	59	66	102	230	162	201	136	136	111	493
2	62	46	56	886	93	196	157	187	128	99	95	155
3	62	47	58	286	98	178	197	181	223	93	89	322
4	60	47	133	149	93	924	363	179	260	91	84	264
5	59	48	294	113	89	1290	357	171	159	94	81	615
6	57	59	123	98	87	485	240	165	140	96	81	368
7	55	66	82	110	98	330	200	159	132	112	78	175
8	52	63	71	217	101	281	184	155	161	116	76	131
9	52	60	175	168	94	241	193	158	138	103	73	111
10	52	55	190	125	80	213	173	170	129	138	71	102
11	52	53	107	106	82	209	162	152	127	116	69	94
12	52	52	84	99	84	187	165	152	117	103	75	89
13	51	52	73	132	87	175	601	174	113	106	72	96
14	53	52	67	154	90	170	424	152	109	98	68	138
15	50	50	62	128	96	160	284	139	108	91	66	108
16	49	49	62	108	127	151	230	134	142	94	65	93
17	50	50	61	99	118	148	202	128	309	87	64	89
18	49	53	59	92	89	147	186	126	164	83	63	86
19	52	54	57	85	120	145	176	124	134	133	63	83
20	52	54	57	321	117	141	169	122	123	211	62	79
21	48	52	56	1490	118	139	163	136	119	272	65	277
22	46	51	55	438	192	134	157	137	118	207	71	1780
23	46	52	55	238	647	602	152	202	140	165	94	351
24	49	52	55	303	1060	1210	149	331	141	149	81	215
25	44	52	79	288	1840	394	150	345	122	200	79	175
26	43	52	65	202	995	268	1100	199	109	147	72	153
27	42	54	59	163	416	220	724	162	105	128	123	154
28	42	55	57	146	283	194	336	153	102	130	87	533
29	43	56	55	126	---	181	255	142	100	120	79	447
30	45	57	55	116	---	172	223	135	113	106	72	1170
31	44	---	56	111	---	165	---	146	---	109	70	---
TOTAL	1575	1589	2575	7163	7496	9680	8234	5217	4221	3933	2399	8946
MEAN	50.8	53.0	83.1	231	268	312	274	168	141	127	77.4	298
MAX	62	66	294	1490	1840	1290	1100	345	309	272	123	1780
MIN	42	46	55	66	80	134	149	122	100	83	62	79
CFSM	.64	.66	1.04	2.89	3.35	3.90	3.43	2.10	1.76	1.59	.97	3.73
IN.	.73	.74	1.20	3.33	3.49	4.50	3.83	2.43	1.96	1.83	1.12	4.16
CAL YR 1978	TOTAL	53472	MEAN 146	MAX 2460	MIN 42	CFSM 1.83	IN 24.86					
WTR YR 1979	TOTAL	63028	MEAN 173	MAX 1840	MIN 42	CFSM 2.16	IN 29.31					

02143000 HENRY FORK NEAR HENRY RIVER, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
DEC												
04...	1045	75	5	1.0	--	--	--	--	--	--	--	--
JAN												
09...	0953	183	24	12	--	--	--	--	--	--	--	--
FEB												
02...	0933	95	238	61	--	--	--	--	--	--	--	--
25...	1145	1540	191	794	--	--	--	--	--	--	--	--
25...	1745	3550	1120	10700	18	26	42	54	67	80	89	96
MAR												
15...	1230	172	5	2.3	--	--	--	--	--	--	--	--
APR												
04...	1135	347	23	22	--	--	--	--	--	--	--	--
19...	0910	186	3	1.5	--	--	--	--	--	--	--	--
20...	0922	1460	110	434	--	--	--	--	--	--	--	--
26...	1417	1640	119	527	--	--	--	--	--	--	--	--
JUL												
19...	0900	164	13	5.8	--	--	--	--	--	--	--	--
20...	1540	304	87	71	--	--	--	--	--	--	--	--
SEP												
22...	0700	3080	726	5040	--	--	--	--	--	--	--	--

SANTEE RIVER BASIN

02143040 JACOB FORK AT RAMSEY, N. C.

LOCATION.--Lat 35°35'26", long 81°34'02", Burke County, Hydrologic Unit 03050102, on left bank 16 ft (5 m) downstream from bridge on Secondary Road 1924, 0.6 mi (1.0 km) downstream from Queens Creek, and 0.6 mi (1.0 km) north of Ramsey.

DRAINAGE AREA.--25.4 mi² (65.8 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1960-61. October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,103.00 ft (336.194 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--18 years, 50.7 ft³/s (1.436 m³/s), 27.11 in/yr (689 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,220 ft³/s (204 m³/s) Oct. 17, 1975, gage height, 19.74 ft (6.017 m), from rating curve extended above 3,400 ft³/s (96.3 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 7.3 ft³/s (0.21 m³/s) July 28, 29, 1966; minimum gage height, 1.58 ft (0.482 m) Sept. 3, 4, 5, 6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1940 reached a stage of about 39 ft (11.9 m), from information by local resident. Flood of July 1916 reached a stage of about 19 ft (5.8 m), from information by North Carolina State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0130	967 27.4	6.09 1.856	Mar. 23	2300	*1560 44.2	*8.57 2.612
Feb. 24	1530	649 18.4	4.86 1.481	Apr. 26	1930	1540 43.6	8.51 2.594
Feb. 25	1700	1090 30.9	6.69 2.039	Sept. 22	0200	1300 36.8	7.56 2.304
Mar. 4	2130	834 23.6	5.59 1.704				

Minimum discharge, 12 ft³/s (0.34 m³/s) Nov. 3, 6, gage height, 1.68 ft (0.512 m); minimum daily, 13 ft³/s (0.37 m³/s) Oct. 23-27, 29-31, Nov. 1-7, 11-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	13	17	25	37	71	51	65	43	34	31	35
2	18	13	15	291	35	63	50	61	40	31	31	26
3	17	13	16	82	32	50	64	60	52	29	29	31
4	17	13	66	47	31	492	124	59	46	29	27	34
5	16	13	108	35	30	453	117	57	42	29	26	149
6	17	13	38	31	30	158	76	54	40	29	26	73
7	16	13	27	44	141	108	63	53	42	37	25	40
8	16	15	25	123	33	93	59	53	108	34	24	32
9	15	14	67	68	30	76	67	54	54	33	23	28
10	15	14	62	47	29	69	59	54	46	43	23	26
11	15	13	35	39	29	66	56	52	47	34	23	25
12	15	13	28	36	28	61	57	51	40	32	23	24
13	15	13	24	51	30	58	223	56	37	33	22	31
14	15	13	22	68	30	55	142	52	36	33	21	40
15	14	14	21	51	34	52	90	48	35	31	20	30
16	14	14	20	41	50	48	71	48	51	33	20	26
17	14	16	19	37	42	47	63	46	86	29	19	25
18	14	21	19	34	82	46	58	43	52	27	19	24
19	14	15	19	31	118	45	55	42	43	30	18	23
20	14	14	18	147	46	44	54	42	40	49	18	23
21	14	14	19	566	49	43	52	45	39	72	39	151
22	14	14	18	132	94	41	50	38	38	52	29	442
23	13	17	17	75	282	230	49	59	36	42	31	75
24	13	16	21	108	396	550	48	110	38	41	28	51
25	13	15	27	98	597	200	50	105	36	48	27	44
26	13	14	21	66	285	110	699	63	34	41	24	39
27	13	23	20	55	122	80	285	52	33	42	22	42
28	14	19	18	50	84	50	113	48	32	59	28	226
29	13	19	18	44	---	57	33	45	32	42	54	128
30	13	24	18	41	---	55	72	42	34	35	28	371
31	13	---	21	39	---	53	---	46	---	32	25	---
TOTAL	460	457	884	2602	2830	3644	3100	1715	1332	1165	803	2314
MEAN	14.8	15.2	28.5	83.9	101	118	103	55.3	44.4	37.6	25.9	77.1
MAX	21	24	108	566	597	550	699	110	108	72	54	442
MIN	13	13	15	25	28	41	48	42	32	27	18	23
CFSM	.58	.60	1.12	3.30	3.98	4.65	4.06	2.18	1.75	1.48	1.02	3.04
IN.	.67	.67	1.29	3.81	4.14	5.34	4.54	2.51	1.95	1.71	1.18	3.39

CAL YR 1978 TOTAL 18278 MEAN 50.1 MAX 735 MIN 13 CFSM 1.97 IN 26.77
WTR YR 1979 TOTAL 21306 MEAN 58.4 MAX 699 MIN 13 CFSM 2.30 IN 31.20

SANTÉE RIVER BASIN

375

02143500 INDIAN CREEK NEAR LABORATORY, N. C.

LOCATION.--Lat 35°25'20", long 81°15'52", Lincoln County, Hydrologic Unit 03050102, on left bank 250 ft (76 m) upstream from remains of Rudisill Mill dam, 0.5 mi (0.8 km) upstream from bridge on Secondary Road 1252, 1.5 mi (2.4 km) upstream from mouth, 1.5 mi (2.4 km) south of Laboratory, and 3.5 mi (5.6 km) south of Lincolnton.

DRAINAGE AREA.--68.4 mi² (177.2 km²).

PERIOD OF RECORD.--August 1951 to current year.

REVISED RECORDS.--WRD N. C. 1971: 1970(M).

GAGE.--Water-stage recorder. Altitude of gage is 736 ft (224 m), by barometer.

REMARKS.--Records good.

AVERAGE DISCHARGE.--28 years, 92.2 ft³/s (2.611 m³/s), 18.31 in/yr (465 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,450 ft³/s (239 m³/s) Aug. 10, 1970, gage height, 10.61 ft (3.234 m); minimum, 4.6 ft³/s (0.13 m³/s) Oct. 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peak discharge of flood in October 1929 was 9,920 ft³/s (281 m³/s); flood in July 1916, 7,840 ft³/s (222 m³/s); flood in August 1940, 6,000 ft³/s (170 m³/s). Discharge based on computation of peak flow over dam 1 mi (2 km) downstream, using floodmarks and information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 26	0500	*1790 50.7	*5.11 1.588

Minimum discharge, 24 ft³/s (0.68 m³/s) Oct. 18, gage height, 0.85 ft (0.259 m); minimum daily, 27 ft³/s (0.76 m³/s) Oct. 18, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	29	38	43	67	151	76	88	76	58	68	39
2	44	28	35	377	63	130	74	81	66	49	58	50
3	35	28	37	174	63	114	104	77	67	46	55	40
4	33	29	80	95	63	211	292	78	70	45	46	38
5	35	31	278	77	59	1060	231	76	61	45	44	130
6	34	30	105	64	59	305	138	75	55	45	43	98
7	32	31	60	74	73	185	109	70	56	56	42	63
8	31	40	52	108	74	162	98	68	57	62	43	51
9	31	35	67	79	71	140	117	66	56	52	42	42
10	31	33	96	63	64	121	97	77	54	57	40	40
11	30	32	62	57	65	135	90	72	82	53	40	39
12	30	33	51	59	66	109	94	76	64	53	46	37
13	31	33	47	137	69	100	344	123	53	80	42	39
14	30	32	45	137	73	99	241	284	46	65	39	47
15	29	32	43	91	82	92	147	109	45	50	39	38
16	29	34	42	73	88	86	115	85	94	97	37	37
17	30	34	43	65	78	85	99	74	252	124	36	37
18	27	36	41	62	65	83	92	65	96	90	35	37
19	28	36	41	56	89	82	87	61	70	129	34	36
20	29	33	42	261	89	80	82	58	59	93	33	35
21	29	34	44	1170	116	78	80	64	56	411	36	45
22	29	33	42	329	258	74	78	68	58	129	47	285
23	30	37	40	167	418	143	74	82	596	96	50	91
24	28	43	47	301	874	271	73	250	191	92	45	67
25	27	35	57	181	1390	144	73	214	105	158	86	57
26	28	34	47	120	1160	111	382	106	83	103	65	48
27	29	45	43	102	302	95	259	83	72	81	50	49
28	28	46	41	95	193	89	140	79	61	76	66	68
29	28	39	41	83	---	85	109	71	55	61	56	90
30	28	46	41	78	---	82	94	65	54	58	43	179
31	28	---	41	76	---	79	---	70	---	54	38	---
TOTAL	965	1041	1795	4854	6131	4781	4089	2915	2810	2668	1444	1952
MEAN	31.1	34.7	57.9	157	219	154	136	94.0	93.7	86.1	46.6	65.1
MAX	54	46	278	1170	1390	1060	382	284	596	411	86	285
MIN	27	28	35	43	59	74	73	58	45	45	33	35
CFSM	.46	.51	.85	2.30	3.20	2.25	1.99	1.37	1.37	1.26	.68	.95
IN.	.52	.57	.98	2.64	3.33	2.60	2.22	1.59	1.53	1.45	.79	1.06
CAL YR 1978 TOTAL	34950											
WTR YR 1979 TOTAL	35445											
MEAN 95.8												
MAX 1790												
MIN 27												
CFSM 1.40												
IN 19.01												
MEAN 97.1												
MAX 1390												
MIN 27												
CFSM 1.42												
IN 19.28												

CAL YR 1978 TOTAL 34950 MEAN 95.8 MAX 1790 MIN 27 CFSM 1.40 IN 19.01
WTR YR 1979 TOTAL 35445 MEAN 97.1 MAX 1390 MIN 27 CFSM 1.42 IN 19.28

SANTÉE RIVER BASIN

02144000 LONG CREEK NEAR BESSEMER CITY, N. C.

LOCATION.--Lat 35°18'23", long 81°14'03", Gaston County, Hydrologic Unit 03050102, on right bank 700 ft (213 m) upstream from bridge on Secondary Road 1456, 2 mi (3 km) northeast of Bessemer City limits, and 8.2 mi (13.2 km) upstream from mouth.

DRAINAGE AREA.--31.4 mi² (81.3 km²).

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.

GAGE.--Water-stage recorder. Datum of gage is 706.1 ft (215.22 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Bessemer City diverts water supply from above gaging station and returns waste water to South Fork Catawba River below mouth of Long Creek, causing some diurnal fluctuation; an average of 1.8 ft³/s (0.051 m³/s) was diverted during the year. Suspended-sediment records for the current year are published on page 377 of this report.

AVERAGE DISCHARGE.--27 years, 36.5 ft³/s (1.034 m³/s), 15.78 in/yr (401 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft³/s (184 m³/s) Oct. 16, 1971, gage height, 9.10 ft (2.774 m), from rating curve extended above 2,100 ft³/s (59.5 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.4 ft³/s (0.011 m³/s) Oct. 7, 1954; minimum daily, 0.8 ft³/s (0.023 m³/s) Oct. 7, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 26 ft (7.92 m) at site on left bank 1,500 ft (460 m) upstream, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 21	0130	1010	28.6	5.43	1.655	Feb. 25	1730	1130	32.0	5.72	1.743
Feb. 24	1800	1080	30.6	5.59	1.704	Mar. 5	0700	*2410	68.2	*7.60	2.316

Minimum discharge, 6.5 ft³/s (0.18 m³/s) Oct. 25, gage height, 1.14 ft (0.347 m); minimum daily, 6.9 ft³/s (0.20 m³/s) Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	8.5	11	14	25	49	34	36	36	24	19	27
2	12	8.5	10	86	24	44	33	35	33	20	16	22
3	9.8	8.5	12	40	24	41	48	34	34	17	17	15
4	9.3	8.5	43	26	24	65	46	34	35	16	15	17
5	9.5	8.8	118	22	23	1330	61	32	26	16	14	128
6	9.3	8.8	31	21	23	114	46	34	25	16	14	4
7	8.4	8.9	20	26	30	69	41	32	28	20	13	27
8	8.3	12	17	37	28	62	39	31	24	22	12	20
9	8.0	9.6	21	26	29	57	63	32	22	20	12	17
10	7.9	8.5	19	23	26	48	44	35	20	22	12	16
11	7.8	8.3	16	21	25	70	40	30	20	19	12	14
12	7.5	8.6	15	25	27	52	40	29	18	17	12	14
13	7.4	8.6	14	76	34	46	186	34	16	20	11	15
14	7.5	9.2	13	60	35	44	85	29	16	23	11	19
15	7.5	9.0	13	36	41	41	58	26	15	16	11	13
16	7.6	8.7	13	29	41	38	47	25	71	29	10	13
17	7.9	9.8	13	26	31	37	42	24	71	49	9.7	13
18	7.7	10	12	24	24	36	40	24	35	29	9.7	13
19	7.7	9.3	12	21	41	36	37	23	27	48	9.4	13
20	7.7	9.1	12	180	39	35	35	22	21	24	9.0	12
21	7.5	9.0	16	560	70	33	34	24	21	76	9.0	18
22	7.6	9.2	13	84	134	32	33	31	20	49	9.9	66
23	7.6	10	12	53	128	121	32	36	85	33	13	23
24	7.2	12	23	124	635	116	32	71	75	37	11	19
25	6.9	10	32	60	759	54	32	46	41	75	54	19
26	7.8	9.7	23	43	275	45	182	31	27	61	35	17
27	8.2	15	18	37	80	40	83	27	24	39	55	19
28	8.1	13	15	34	58	38	53	28	22	28	20	35
29	8.3	12	14	30	---	37	45	27	20	23	15	44
30	8.3	15	14	28	---	36	39	25	20	20	12	196
31	8.4	---	14	27	---	35	---	32	---	19	18	---
TOTAL	282.7	296.1	629	1899	2733	2901	1680	479	948	927	500.7	932
MEAN	9.12	9.87	20.3	61.3	97.6	93.6	56.0	31.6	31.6	29.9	16.2	31.1
MAX	38	15	118	560	759	1330	186	71	85	76	55	196
MIN	6.9	8.3	10	14	23	32	32	22	15	16	9.0	12
CFSM	.29	.31	.65	1.95	3.11	2.98	1.78	1.01	1.01	.95	.52	.99
IN.	.33	.35	.75	2.25	3.24	3.44	1.99	1.16	1.12	1.10	.59	1.10
CAL YR 1978	TOTAL	13203.8	MEAN	36.2	MAX	883	MIN	6.9	CFSM	1.15	IN	15.64
WTR YR 1979	TOTAL	14707.5	MEAN	40.3	MAX	1330	MIN	6.9	CFSM	1.28	IN	17.42

SANTÉE RIVER BASIN

377

02144000 LONG CREEK NEAR BESSEMER CITY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDIMENT CHANGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
03...	1000	9.5	30	1.0	--	--	--	--	--	--	--	--
NOV												
03...	1044	3.4	9	.20	--	--	--	--	--	--	--	--
DEC												
08...	1040	32	29	2.5	--	--	--	--	--	--	--	--
JAN												
09...	1515	25	31	2.1	--	--	--	--	--	--	--	--
FEB												
15...	1545	41	12	1.3	--	--	--	--	--	--	--	--
25...	1420	887	1350	3230	20	26	37	46	53	72	85	96
25...	1630	1120	1820	5500	--	--	--	--	--	--	--	--
MAR												
05...	1158	2120	920	5270	40	57	68	73	76	80	85	92
05...	1225	2010	822	4460	--	--	--	--	--	--	--	--
05...	1430	1440	553	2210	--	--	--	--	--	--	--	--
15...	1228	40	29	3.1	--	--	--	--	--	--	--	--
APR												
04...	1320	163	297	131	--	--	--	--	--	--	--	--
26...	1047	283	412	315	--	--	--	--	--	--	--	--
26...	1313	232	237	149	--	--	--	--	--	--	--	--
JUL												
19...	1015	44	292	35	--	--	--	--	--	--	--	--

SANTÉE RIVER BASIN

02146300 IRWIN CREEK NEAR CHARLOTTE, N. C.

LOCATION.--Lat 35°11'51", long 80°54'10", Mecklenburg County, Hydrologic Unit 03050103, on left bank at sewage-disposal plant of city of Charlotte, 2,200 ft (671 m) upstream from Southern Railway bridge, 0.7 mi (1.1 km) upstream from Taggart Creek, 4.2 mi (6.8 km) southwest of city hall, Charlotte.

DRAINAGE AREA.--30.5 mi² (79.0 km²).

PERIOD OF RECORD.--May 1962 to current year. Prior to October 1963, published as Sugar (Irwin) Creek at Charlotte.

GAGE.--Water-stage recorder. Datum of gage is 591.53 ft (180.298 m) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte).

REMARKS.--Records good. Fluctuation at low flow caused by wash water, from city of Charlotte water filtration plants and industry, diverted into the basin from the Catawba River (city water supply). Wash water from city water plants averaged 0.96 ft³/s (0.027 m³/s). Creek channel improved by dredging in 1917 and maintained by Mecklenburg County Drainage Commission to present time. The drainage area is urbanized and has an impervious area of about 20 percent. Suspended-sediment records for the current year are published on page 500 of this report.

AVERAGE DISCHARGE.--17 years, 44.1 ft³/s (1.249 m³/s), 19.64 in/yr (499 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft³/s (251 m³/s) May 30, 1975, gage height, 18.04 ft (5.499 m); minimum, 3.9 ft³/s (0.11 m³/s) Aug. 7, 8, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 6, 1936 reached a stage of about 17.3 ft (5.27 m) at site 400 ft (122 m) downstream, from information by plant employee. Peak may have been affected by failure of Lakewood Dam 5 mi (8.0 km) upstream. Flood of Jan. 6, 1962 reached a stage of 14.32 ft (4.365 m), from floodmarks, discharge, 4,120 ft³/s (117 m³/s). Flood of Apr. 11, 1962 reached a stage of 15.18 ft (4.627 m), from floodmarks, discharge, 4,740 ft³/s (134 m³/s), on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0545	1730 49.0	9.14 2.786	June 16	1845	2720 77.0	11.59 3.533
Feb. 25	1815	2310 65.4	10.63 3.240	Sept. 5	1015	1420 40.2	8.21 2.502
Mar. 23	2115	3160 89.5	12.47 3.801	Sept. 30	0645	*4090 116	*13.77 4.197
Apr. 26	2000	1520 43.0	8.52 2.597				

Minimum discharge, 7.4 ft³/s (0.21 m³/s) Oct. 7, 28, 29, 30, gage height, 0.56 ft (0.171 m); minimum daily, 8.4 ft³/s (0.24 m³/s) Oct. 19, 28, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	9.8	12	15	19	61	28	33	30	18	23	24
2	11	9.4	11	87	18	45	27	31	20	17	13	14
3	11	9.9	39	23	18	39	83	28	155	17	15	56
4	11	10	145	16	17	41	256	30	34	15	11	133
5	12	8.7	161	16	16	166	62	37	21	15	11	670
6	9.0	10	29	15	18	45	42	33	20	17	11	51
7	8.8	22	23	33	39	39	36	25	20	34	11	26
8	9.2	25	19	34	70	48	33	25	21	17	11	20
9	9.5	9.1	48	19	52	39	104	28	19	17	12	17
10	9.7	9.4	24	16	28	28	34	34	19	16	10	17
11	9.7	8.9	20	16	26	116	29	39	21	16	14	17
12	9.7	9.2	15	89	34	36	36	24	18	16	12	17
13	9.7	9.1	15	263	41	29	317	284	17	50	10	20
14	9.6	12	15	70	31	40	68	90	14	18	10	20
15	9.0	10	15	33	35	30	45	35	15	15	10	14
16	9.2	16	19	27	31	27	40	28	592	29	10	13
17	9.1	58	18	26	21	24	39	25	119	46	8.9	13
18	9.5	30	14	25	31	22	35	23	44	33	9.3	14
19	9.4	11	14	24	95	21	32	22	33	17	9.3	13
20	9.4	9.3	14	459	95	20	28	21	30	17	9.3	13
21	8.6	12	36	633	184	19	27	24	27	117	9.6	25
22	10	9.9	15	62	154	18	26	26	40	43	15	50
23	8.6	34	14	37	490	508	23	23	88	22	37	13
24	10	18	97	182	893	269	24	88	38	49	19	13
25	8.6	10	33	43	698	63	31	64	26	58	28	14
26	15	9.2	18	31	189	46	679	22	22	25	18	15
27	9.6	49	15	26	78	41	139	20	22	16	23	31
28	9.4	15	15	27	62	37	51	29	21	16	14	102
29	9.7	59	14	22	---	35	40	22	21	14	45	36
30	9.5	26	13	22	---	32	35	19	18	14	13	1270
31	9.4	---	15	21	---	29	---	61	---	33	12	---
TOTAL	401.3	536.9	1908	2412	3484	2013	2445	1793	1585	847	464.4	2751
MEAN	12.9	17.4	32.5	77.6	124	64.9	81.6	41.7	52.8	27.3	15.0	91.7
MAX	113	59	195	633	893	508	679	284	592	117	45	1270
MIN	9.4	9.7	11	15	16	18	23	19	14	14	8.9	13
CFS	9.4	9.9	1.47	2.55	4.07	2.13	2.68	1.37	1.73	.90	.49	3.01
IN	9.4	9.5	1.23	2.74	4.25	2.46	2.99	1.58	1.93	1.03	.57	3.36
CAL YR 1975 TOTAL	15494.7		MEAN 42.4	MAX 858	MIN 8.2	CFSM 1.39	IN 18.89					
YR 1979 TOTAL	19243.8		MEAN 52.7	MAX 1270	MIN 8.4	CFSM 1.73	IN 23.47					

LOCATION.--Lat 35°08'52", long 80°51'29", Mecklenburg County, Hydrologic Unit 03050103, on left bank at downstream side of bridge on Secondary Road 3657 (Archdale Drive) in Charlotte, 0.7 mi (1.1 km) downstream from Little Hope Creek, and 5.3 mi (8.5 km) south of City Hall, Charlotte.

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

REMARKS.--Records good. The city of Charlotte diverted an average of 67.1 ft³/s (1.90 m³/s) for municipal water supply from Catawba River at Mountain Island Lake. An average of 19.9 ft³/s (0.56 m³/s) of sewage effluent from Little Sugar Creek waste treatment plant was discharged into the stream 0.4 mi (0.6 km) upstream from gage. Since 1911 the creek channel has been dredged and improved. The drainage area is urbanized and has an impervious area of about 20 percent. Suspended-sediment records for the current year are published on page 380 of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 22, 1975 reached a stage of about 12.7 ft (3.87 m), from flood-marks, discharge, 7,360 ft³/s (208 m³/s).

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Jan. 20	2330	4180	118	10.27	3.130	June 3	1030	2240	63.4	8.12	2.475
Feb. 25	1545	4510	128	10.57	3.222	June 16	1715	4280	121	10.36	3.158
Mar. 23	2100	*6900	195	*12.44	3.792	Aug. 31	1000	6340	180	12.09	3.685
Apr. 13	0615	2140	60.6	7.98	2.432	Sept. 5	1030	2140	60.6	7.99	2.435
Apr. 16	0415	2190	62.0	8.05	2.454	Sept. 30	0145	6450	183	12.16	3.706

Minimum discharge, 12 ft³/s (0.34 m³/s) Sept. 15, gage height, 1.81 ft (0.552 m); minimum daily, 22 ft³/s (0.62 m³/s) Oct. 8, 15, 22, 29, Nov. 5, 12, July 1, 4, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1979

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	206	25	24	26	34	65	34	47	44	22	30	62
2	30	24	27	158	34	53	33	45	32	24	26	31
3	26	24	26	38	37	47	100	44	345	23	29	27
4	26	23	244	30	30	53	200	46	49	22	24	150
5	30	22	233	24	35	457	43	45	35	30	24	1020
6	26	23	40	33	35	74	57	63	35	24	24	71
7	24	43	30	75	71	75	44	43	36	50	26	34
8	22	65	24	60	145	77	44	43	35	27	27	31
9	24	26	54	32	45	55	140	50	32	25	30	24
10	24	25	34	30	53	40	49	74	31	33	24	36
11	24	24	20	24	46	201	43	53	35	25	24	24
12	24	22	23	156	58	55	53	70	31	23	32	27
13	24	23	23	346	74	47	514	443	31	41	30	23
14	24	25	28	78	50	74	102	130	29	30	31	34
15	22	27	28	41	54	45	56	50	30	22	30	27
16	23	25	35	35	54	43	45	40	434	106	30	27
17	23	110	34	34	42	41	45	36	169	60	30	24
18	24	60	28	32	31	40	43	35	45	72	24	24
19	24	25	28	31	103	40	41	34	35	26	29	24
20	24	25	27	764	148	34	40	33	35	25	24	24
21	23	25	71	914	330	34	34	42	24	129	24	42
22	22	25	24	91	265	36	36	42	36	57	32	40
23	23	52	27	61	607	1030	36	38	162	43	34	27
24	23	40	144	241	1050	546	36	145	65	62	34	24
25	23	26	50	70	1210	77	41	112	37	107	53	30
26	28	24	31	51	224	50	1020	36	24	44	41	30
27	26	121	24	44	40	50	106	31	27	32	42	31
28	23	36	23	48	53	45	67	40	27	24	34	244
29	22	105	31	44	---	43	52	34	26	27	40	80
30	23	50	27	43	---	40	44	33	24	26	35	2020
31	24	---	27	41	---	55	---	65	---	40	96	---
TOTAL	934	1180	1644	3764	5427	3656	3746	2194	2514	1316	1691	4344
MEAN	30.1	39.3	54.6	122	144	118	127	57.7	44.0	42.5	35.2	147
MAX	206	121	244	414	1210	1330	1020	443	434	129	46	2020
MIN	22	22	27	26	31	35	33	31	25	22	26	27
CFS-4	.71	.42	1.24	2.86	4.55	2.77	2.48	1.64	1.47	1.00	.43	3.45
IMF	.82	1.03	1.44	3.29	4.74	3.20	3.31	1.43	2.20	1.15	.45	3.44
CAL YR 1978	TOTAL 29049	MEAN 79.6	MAX 1470	MIN 22	CFS-4 1.87	IMF 25.37						
WTR YR 1979	TOTAL 31888	MEAN 87.4	MAX 2020	MIN 22	CFS-4 2.05	IMF 27.85						

SANTEE RIVER BASIN

02146507 LITTLE SUGAR CREEK AT ARCHDALE ROAD AT CHARLOTTE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV				
02...	1110	29	31	2.4
DEC				
19...	1040	32	25	2.2
JAN				
20...	1315	1440	968	3760
20...	1455	1150	1380	4290
20...	2045	920	789	1960
20...	2240	3620	1220	11900
21...	0505	1240	1080	3620
22...	0750	89	41	9.9
23...	1120	56	28	4.2
FEB				
01...	1240	41	10	1.1
24...	2140	508	366	502
25...	0710	205	141	78
27...	1700	85	22	5.0
MAR				
04...	1455	88	36	8.6

02146600 McALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE, N. C.

LOCATION.--Lat 35°08'13", long 80°46'06", Mecklenburg County, Hydrologic Unit 03050103, near left bank on downstream end of bridge pier at Sardis Road (Secondary Road 3356), 1.7 mi (2.7 km) downstream from Irvins Creek, and 7 mi (11 km) southeast of city hall, Charlotte.

DRAINAGE AREA.--38.3 mi² (99.2 km²).

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 553.39 ft (168.673 m) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte).

REMARKS.--Records good except for period of no gage-height record Mar. 23 to Apr. 6, which are poor. Occasional minor fluctuation and regulation of unknown origin. Creek channel improved by dredging in 1917 and maintained by the Mecklenburg County Drainage Commission to present time. This drainage basin is adjacent to the city of Charlotte. The drainage basin is urban and has an impervious area of about 12 percent, expected development by 1995, about 22 percent. Suspended-sediment records for the current year are published on page 500 of this report.

AVERAGE DISCHARGE.--17 years, 40.4 ft³/s (1.144 m³/s), 14.32 in/yr (364 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,690 ft³/s (189 m³/s) Mar. 24, 1979, gage height, 16.7 ft (5.090 m) from floodmark; no flow Nov. 15, 1972, result of upstream construction; minimum, not affected by construction, 0.60 ft³/s (0.017 m³/s) Sept. 26, Oct. 6, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1962 reached a stage of about 14.0 ft (4.27 m), from floodmarks, discharge, 4,150 ft³/s (118 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (37 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0330	2750 77.8	11.69 3.563	Apr. 26	2015	2400 68.0	10.94 3.335
Feb. 23	1215	2080 58.9	10.20 3.109	May 13	0315	2200 62.3	10.50 3.200
Mar. 24	0130	*6690 189	*16.7 5.090	June 16	1800	1380 39.1	8.34 2.542
Apr. 13	0915	2500 70.8	11.16 3.402	Sept. 13	1515	1310 37.1	8.12 2.475

Minimum discharge, 0.07 ft³/s (0.002 m³/s) Nov. 20, result of coffer dam construction, gage height, 0.77 ft (0.235 m); minimum daily, 3.0 ft³/s (0.085 m³/s) Oct. 23-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	3.6	4.3	4.6	15	45	21	24	53	10	12	4.2
2	7.4	3.5	6.3	40	13	41	20	21	20	9.2	9.4	4.0
3	4.5	3.5	10	19	14	34	22	18	143	8.4	7.9	3.8
4	4.0	3.5	44	12	14	36	310	18	38	8.3	7.2	3.8
5	4.3	3.6	42	11	12	121	190	22	22	8.0	6.9	720
6	4.8	3.7	18	12	12	36	40	24	17	7.5	6.9	250
7	4.1	4.6	10	20	93	47	34	20	16	15	6.4	30
8	3.8	14	8.6	22	128	44	29	17	17	12	6.6	18
9	3.4	4.8	16	13	45	39	75	19	14	8.7	5.7	16
10	3.4	3.7	12	11	30	34	35	32	12	8.8	5.4	13
11	3.6	3.6	7.7	9.9	24	42	24	22	12	8.7	5.2	11
12	3.5	3.5	7.0	31	31	51	28	21	11	8.3	5.4	10
13	3.5	3.5	6.9	116	63	38	920	598	10	10	5.7	9.0
14	3.5	3.6	7.2	122	54	47	131	136	9.4	13	4.9	9.0
15	3.5	4.0	6.8	103	77	40	53	36	9.7	7.8	4.9	6.9
16	3.3	4.3	7.4	43	52	30	36	25	383	18	4.7	6.6
17	3.6	14	12	15	24	26	30	20	144	16	4.4	6.3
18	3.4	22	7.5	13	20	25	25	16	36	46	4.4	6.6
19	3.2	5.7	7.1	12	39	24	23	15	21	13	4.0	6.6
20	3.3	5.0	6.9	365	82	24	21	14	15	9.7	3.8	6.5
21	3.2	4.3	14	1290	207	24	20	14	13	38	3.8	7.9
22	3.1	4.3	14	185	310	22	19	14	13	47	3.5	22
23	3.0	9.5	10	36	759	80	16	14	30	55	4.7	7.6
24	3.0	11	10	178	687	2400	17	31	15	80	15	7.9
25	3.0	5.6	10	54	1080	600	16	41	17	35	6.9	9.4
26	3.4	4.8	10	30	693	156	963	19	12	23	5.2	8.3
27	4.6	28	9.9	33	89	50	254	14	11	14	9.4	11
28	3.5	13	8.8	30	55	33	58	15	11	12	13	95
29	3.4	26	8.1	21	---	28	36	13	11	10	20	54
30	3.4	24	7.9	18	---	26	29	13	10	9.2	10	218
31	3.5	---	7.9	18	---	23	---	151	---	8.7	5.2	---
TOTAL	153.2	248.2	416.3	2892.5	4726	4370	3499	1457	1151.5	578.4	219.4	1582.5
MEAN	4.94	8.27	13.4	93.3	169	141	117	47.0	38.4	18.7	7.08	52.8
MAX	42	28	92	1290	1080	2400	963	598	383	80	20	720
MIN	3.0	3.5	6.3	8.6	12	22	16	13	9.7	7.6	3.5	3.8
CFSM	.13	.22	.35	2.44	4.41	3.68	3.06	1.23	1.00	.49	.19	1.38
IN.	.15	.24	.40	2.81	4.59	4.24	3.40	1.42	1.12	.56	.21	1.54
CAL YR 1978 TOTAL	15772.2		MEAN 43.2	MAX 1010	MIN 2.7	CFSM 1.13	IN 15.32					
WTR YR 1979 TOTAL	21294.0		MEAN 58.3	MAX 2400	MIN 3.0	CFSM 1.52	IN 20.68					

SANTEE RIVER BASIN

02146700 McMULLEN CREEK AT SHARON VIEW ROAD NEAR CHARLOTTE, N. C.

LOCATION.--Lat 35°08'26", long 80°49'12", Mecklenburg County, Hydrologic Unit 03050103, on left downstream side of culvert wingwall at Sharon View Road (Secondary Road 3673), 3.3 mi (5.3 km) south of Queens College, Charlotte, and 6.9 mi (11.1 km) upstream from mouth.

DRAINAGE AREA.--6.98 mi² (18.08 km²).

PERIOD OF RECORD.--April 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 592.91 ft (180.719 m) National Geodetic Vertical Datum of 1929 (levels by city of Charlotte. Prior to Oct. 13, 1970, at site 73 ft (22.2 m) upstream at same datum. Oct. 13, 1970 to Dec. 30, 1971 at site 154 ft (47 m) downstream at datum 2.00 ft (0.610 m) lower.

REMARKS.--Records good except those for period of doubtful gage-height record, Oct. 20 to Dec. 3, which are poor. Creek channel improved by dredging in 1928. The drainage area is in the eastern part of the city and has an impervious area of about 15 percent. Suspended-sediment records for the current year are published on page 383 of this report.

AVERAGE DISCHARGE.--17 years, 7.71 ft³/s (0.218 m³/s), 15.00 in/yr (381 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,390 ft³/s (67.7 m³/s) Mar. 23, 1979, gage height, 9.91 ft (3.021 m); no flow Aug. 31, Sept. 1, 2, 1962, Sept. 19-23, 1963, Sept. 3, 4, Oct. 5, 1968, Oct. 8, 27, 28, 1970, Mar. 28, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1962 reached a stage of 7.5 ft (2.29 m), former site and datum, from floodmarks, discharge, 1,040 ft³/s (29.5 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 20	2315	856 24.2	6.33 1.929	May 12	2400	810 22.9	6.72 2.048
Feb. 25	1730	936 26.5	7.25 2.210	June 16	1645	609 17.2	5.74 1.750
Mar. 23	2215	*2390 67.7	*9.91 3.021	Sept. 30	0630	504 14.3	5.14 1.567

Minimum discharge, 0.10 ft³/s (0.003 m³/s) Oct. 26, gage height, 0.70 ft (0.213 m); minimum daily, 0.12 ft³/s (0.003 m³/s) Nov. 5, 6.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	.13	.70	.50	1.8	4.1	2.1	2.0	2.6	.83	1.5	.25
2	.40	.13	.42	1.8	1.4	3.6	2.1	1.7	1.4	.77	.59	3.1
3	.26	.13	.51	1.5	1.4	3.0	20	1.6	38	.73	.40	1.0
4	.22	.13	.40	.79	1.4	2.9	103	2.5	2.8	.71	.34	21
5	.24	.12	.20	.67	1.4	23	9.5	3.6	1.9	.61	.34	141
6	.21	.12	1.5	.87	1.3	3.5	4.1	4.9	1.6	.58	.31	3.7
7	.20	1.7	.74	5.4	7.0	3.0	2.9	1.6	1.7	6.3	.27	1.4
8	.17	4.2	.60	3.1	17	3.5	2.7	1.5	1.4	1.7	.29	.92
9	.21	.42	5.5	1.2	10	3.0	22	2.1	1.2	.97	.31	.78
10	.22	.27	1.1	.87	4.8	2.2	3.3	6.6	1.1	.99	.26	.56
11	.27	.27	.48	.84	3.7	14	2.5	2.1	1.4	.79	.25	.52
12	.29	.27	.42	22	8.8	2.7	5.8	2.8	1.0	.77	.85	.59
13	.33	.24	.44	45	12	2.2	128	93	.96	3.7	.41	.71
14	.47	.27	.54	6.1	8.1	2.1	12	8.9	.90	1.9	.25	1.3
15	.40	.50	.43	2.1	11	2.1	4.6	2.7	.91	.70	.23	.58
16	.40	.60	1.7	1.5	5.4	2.0	3.1	1.8	119	14	.21	.54
17	.35	12	1.4	1.2	3.0	2.1	2.5	1.5	13	2.9	.17	.64
18	.13	.21	.53	1.1	1.6	2.1	2.4	1.3	2.9	5.8	.19	.53
19	.15	.20	.48	.99	9.3	2.3	2.1	1.2	1.8	.98	.17	.52
20	.17	.14	.50	202	29	2.5	1.9	1.2	1.5	.75	.18	.39
21	.13	.14	4.8	138	64	2.5	1.8	2.1	1.3	5.2	.17	1.8
22	.13	.14	.67	6.5	60	2.2	1.8	1.6	1.3	2.1	.21	10
23	.13	2.0	.46	3.1	125	331	1.7	1.6	11	1.6	.24	.83
24	.13	.25	23	46	144	44	1.6	13	6.6	11	3.3	.97
25	.13	.16	2.9	4.5	216	7.2	3.8	8.7	3.7	4.2	.55	1.5
26	.33	.14	1.0	2.6	26	4.2	157	2.1	1.2	1.5	.56	1.2
27	.33	.40	.70	2.1	7.0	3.1	17	1.2	1.1	.84	.60	1.3
28	.17	1.4	.58	2.7	4.4	2.9	4.2	2.0	.98	.70	.49	22
29	.17	15	.49	1.7	---	2.7	2.6	1.2	1.0	.48	6.2	4.8
30	.13	2.6	.42	1.6	---	2.3	2.1	1.2	.93	.40	1.0	102
31	.13	---	.44	1.5	---	2.2	---	8.3	---	.48	.37	---
TOTAL	18.00	44.28	118.59	526.03	786.2	490.2	530.2	212.8	226.18	74.98	21.21	326.43
MEAN	.58	1.48	3.83	17.0	28.1	15.8	17.7	6.86	7.54	2.42	.68	10.9
MAX	11	15	40	202	216	331	157	93	119	14	6.2	141
MIN	.13	.12	.42	.50	1.3	2.0	1.6	1.2	.90	.40	.17	.25
CFSM	.08	.21	.55	2.44	4.03	2.26	2.54	.98	1.08	.35	.10	1.56
IN.	.10	.24	.63	2.80	4.19	2.61	2.83	1.13	1.21	.40	.11	1.74
CAL YR 1978	TOTAL	3407.04	MEAN	9.33	MAX	326	MIN	.12	CFSM	1.34	IN	18.16
WTR YR 1979	TOTAL	3375.10	MEAN	9.25	MAX	331	MIN	.12	CFSM	1.33	IN	17.99

SANTEE RIVER BASIN

383

02146700 MCMULLEN CREEK AT SHARON VIEW ROAD NEAR CHARLOTTE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)
DEC 19...	1230	.48	6	.01
JAN 20...	1425	264	535	341
20...	1750	35	144	33
20...	1950	50	542	117
20...	2305	354	2090	4020
21...	0045	184	254	126
22...	0720	7.3	17	.34
24...	0710	103	112	31
FEB 24...	0850	91	172	42
24...	2155	56	59	8.9
25...	0640	234	34	21

SANTEE RIVER BASIN

02146750 McALPINE CREEK BELOW McMULLEN CREEK NEAR PINEVILLE, N. C.

LOCATION.--Lat 35°03'59", long 80°52'12", Mecklenburg County, Hydrologic Unit, 03050103, on right bank at waste treatment plant of Charlotte, 150 ft (46 m) downstream from McMullen Creek, 735 ft (224 m) upstream from effluent outfall, and 2.1 mi (3.4 km) south of Pineville.

DRAINAGE AREA.--92.4 mi² (239.3 km²).

PERIOD OF RECORD.--April 1974 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 517.29 ft (157.670 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. The drainage area is the eastern side of the city of Charlotte and has an impervious area of about 10 percent. Suspended-sediment records for the current year are published on page 385 of this report.

AVERAGE DISCHARGE.--5 years, 139 ft³/s (3.936 m³/s), 20.43 in/yr (519 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,480 ft³/s (184 m³/s) Mar. 30, 1977, gage height, 12.16 ft (3.706 m); maximum gage height, 13.53 ft (4.124 m), Oct. 9, 1976 (affected by backwater from Sugar Creek); minimum, 2.2 ft³/s (0.062 m³/s) Sept. 5, 1977; minimum daily, 2.4 ft³/s (0.068 m³/s) Sept. 5, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1964, about 12.9 ft (3.93 m) Apr. 1, 1973, from information by plant operator.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,380 ft³/s (39 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1215	4120 117	9.72 2.963	Apr. 27	0445	2810 79.6	9.23 2.813
Feb. 25	2045	3870 110	9.40 2.865	May 13	0400	2000 56.6	7.79 2.374
Mar. 24	1015	*6010 170	*13.50 4.115	June 16	2345	2070 58.6	7.92 2.414
Apr. 4	2030	1880 53.2	7.56 2.304	Sept. 5	2100	2120 60.0	8.03 2.447
Apr. 13	1745	2490 70.5	8.68 2.646				

Minimum discharge, 3.5 ft³/s (0.099 m³/s) Oct. 25, 26, gage height, 1.02 ft (0.311 m); minimum daily, 3.6 ft³/s (0.102 m³/s) Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	5.2	1.7	16	35	92	45	55	269	17	21	9.1
2	1.8	5.1	1.3	9.1	31	79	43	46	46	16	22	9.1
3	8.6	5.4	15	6.4	30	66	115	41	421	15	15	17
4	7.1	5.2	8.4	28	30	63	1030	40	155	14	12	27
5	6.7	5.3	277	23	2.8	733	671	48	54	14	11	1350
6	7.6	6.2	4.4	21	26	205	132	79	40	13	10	628
7	5.9	6.1	23	30	52	101	84	45	35	32	10	55
8	5.2	28	1.8	63	95	90	67	38	38	35	9.7	33
9	5.2	12	26	36	114	85	170	38	29	18	9.0	23
10	5.2	7.3	33	25	78	65	89	98	25	18	8.6	19
11	5.4	7.2	16	23	58	364	62	54	23	16	8.1	16
12	5.2	7.4	14	53	69	128	61	72	21	15	8.9	16
13	5.2	7.0	13	634	154	82	1610	1540	18	19	11	16
14	5.1	7.2	13	275	138	95	731	738	17	25	8.4	19
15	4.8	7.9	13	72	178	93	152	122	16	15	7.9	16
16	4.4	8.8	13	46	152	57	92	69	489	16	7.4	15
17	4.4	20	25	53	77	52	68	49	1200	53	7.0	14
18	4.2	52	16	33	37	49	57	41	112	174	7.1	14
19	4.8	13	14	28	85	46	51	36	55	39	6.7	15
20	5.0	8.9	13	718	191	44	45	33	40	20	6.5	15
21	5.0	7.7	30	3560	616	42	41	38	34	40	6.2	15
22	4.8	8.0	24	618	1260	38	39	34	31	92	6.0	46
23	4.2	11	16	109	2190	531	36	35	127	55	7.8	17
24	4.0	26	80	620	2530	4210	36	50	40	235	27	15
25	3.6	11	100	180	2870	411	34	127	58	108	18	17
26	3.8	8.9	32	87	2050	119	1340	52	28	55	10	16
27	6.1	46	22	65	253	83	1780	32	23	30	8.8	17
28	6.1	39	18	57	123	68	204	32	20	26	23	88
29	5.2	37	16	45	---	59	94	28	20	19	15	462
30	5.5	65	16	40	---	53	70	26	18	16	36	781
31	5.2	---	16	39	---	48	---	90	---	17	9.9	---
TOTAL	211.5	484.8	1076	7737	13551	8251	9049	3826	3502	1277	375.0	3800.2
MEAN	6.82	16.2	34.7	250	484	266	302	123	117	41.2	12.1	127
MAX	40	65	277	3560	2870	4210	1780	1540	1200	235	36	1350
MIN	3.6	5.1	13	16	26	38	34	26	16	13	6.0	9.1
CFSM	.07	.18	.38	2.71	5.24	2.88	3.27	1.33	1.27	.45	.13	1.37
IN.	.09	.20	.43	3.11	5.46	3.32	3.64	1.54	1.41	.51	.15	1.53
CAL YR 1978 TOTAL	48388.8	MEAN 133	MAX 4450	MIN 3.6	CFSM 1.44	IN 19.48						
WTR YR 1979 TOTAL	53140.5	MEAN 146	MAX 4210	MIN 3.6	CFSM 1.58	IN 21.39						

SANTEE RIVER BASIN

385

02146750 MCALPINE CREEK BELOW MCMULLEN CREEK NEAR PINEVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA: WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 02...	1431	5.2	5	.07
DEC 07...	0850	24	18	1.2
JAN 17...	1430	39	11	1.2
21...	0830	3950	429	4580
FEB 23...	1230	2270	442	2710
24...	2115	3110	224	1880

SANTÉE RIVER BASIN

02146900 TWELVE MILE CREEK NEAR WAXHAW, N. C.

LOCATION.--Lat 34°57'06", long 80°45'23", Union County, Hydrologic Unit 03050103, on left bank 90 ft (27 m) upstream from bridge on State Highway 16, 680 ft (207 m) downstream from West Fork Twelve Mile Creek, and 2.5 mi (4.0 km) north of Waxhaw.

DRAINAGE AREA.--72.4 mi² (187.5 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-60, October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 489.04 ft (149.059 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1962, water-stage recorder at site 70 ft (21 m) downstream at same datum.

REMARKS.--Records good. Suspended-sediment records for the water year are published on page 387 of this report.

AVERAGE DISCHARGE.--19 years, 71.1 ft³/s (2.014 m³/s), 13.34 in/yr (339 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,700 ft³/s (218 m³/s) Apr. 1, 1973, gage height, 19.92 ft (6.072 m); no flow Oct. 6, 1968, Oct. 7-15, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1900, 23.6 ft (7.19 m) Sept. 7, 1949, from floodmarks. No flow observed on Oct. 6, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 20	1830	2320	65.7	13.39	4.081	Apr. 27	0500	2420	68.5	13.58	4.139
Feb. 25	0030	*3040	82.1	*14.63	4.459	Sept. 5	1330	1750	49.6	12.22	3.725
Mar. 24	1030	2100	59.5	12.96	3.950						

Minimum discharge, 1.0 ft³/s (0.028 m³/s) Oct. 25, 26, gage height, 1.40 ft (0.427 m); minimum daily, 1.7 ft³/s (0.048 m³/s) Oct. 20-25, 28-31, Nov. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	1.4	10	5.3	21	30	33	51	67	11	12	46
2	5.9	1.7	6.1	34	22	65	31	47	27	9.5	10	19
3	4.3	1.7	4.9	38	25	53	33	39	39	8.5	8.8	12
4	3.4	1.7	5.7	15	25	50	459	37	43	7.8	7.8	12
5	2.9	1.8	16	11	24	316	266	35	24	7.1	7.2	1290
6	2.8	1.9	15	9.9	22	132	91	48	20	6.5	6.7	462
7	2.8	3.4	9.8	11	35	77	57	41	18	10	6.7	57
8	2.5	4.8	7.1	25	58	63	46	33	26	17	6.7	34
9	2.4	4.9	6.4	21	131	74	95	32	18	12	6.1	27
10	2.1	4.1	6.5	14	82	51	69	155	15	10	5.4	23
11	2.0	3.4	5.3	11	55	249	43	82	14	10	5.0	38
12	2.0	3.1	5.0	12	62	101	87	55	13	9.4	5.3	14
13	1.9	2.7	4.7	165	121	61	600	370	12	10	6.3	12
14	1.9	2.6	4.6	99	83	58	315	492	11	9.1	5.8	12
15	1.9	2.4	4.3	31	68	76	111	96	10	7.6	4.8	11
16	1.8	2.5	4.3	19	52	40	72	57	153	13	4.5	9.5
17	1.8	3.0	5.0	16	34	38	55	42	318	16	4.1	8.7
18	1.8	4.1	5.0	16	26	36	47	35	50	14	3.8	7.4
19	1.8	3.6	4.6	15	37	34	42	31	28	14	3.6	7.4
20	1.7	3.1	4.4	131	60	32	39	28	20	12	3.4	7.3
21	1.7	2.9	4.9	1870	303	30	36	26	17	422	3.2	7.5
22	1.7	2.7	5.9	277	757	28	33	26	16	183	3.0	9.1
23	1.7	2.9	5.3	72	1650	158	32	26	83	75	3.2	9.1
24	1.7	4.9	12	277	2140	1390	31	26	29	108	5.2	8.2
25	1.7	3.7	30	113	1720	196	30	31	35	86	7.2	8.0
26	1.8	3.2	14	51	772	93	1050	30	22	48	6.7	8.4
27	1.8	4.6	9.4	37	205	52	1360	24	16	26	7.6	9.3
28	1.7	10	7.2	31	117	49	156	22	14	64	13	10
29	1.7	8.4	6.2	27	---	43	43	22	12	21	25	21
30	1.7	17	5.6	23	---	39	63	21	11	16	28	25
31	1.7	---	5.3	22	---	36	---	28	---	13	10	---
TOTAL	73.6	118.5	242.0	3499.2	8707	3816	5496	2088	1181	1277.7	236.1	2224.9
MEAN	2.37	3.95	7.81	113	311	123	183	67.4	39.4	41.2	7.62	74.2
MAX	6.9	17	30	1870	2140	1390	1360	492	318	422	28	1290
MIN	1.7	1.7	4.3	5.3	21	28	30	21	10	6.5	3.0	7.3
CFS4	.03	.06	.11	1.56	4.30	1.70	2.53	.93	.54	.57	.11	1.03
IN.	.04	.06	.12	1.80	4.47	1.96	2.82	1.07	.61	.66	.12	1.14
CAL YR 1978	TOTAL	31646.6	MEAN	86.7	MAX	2700	MIN 1.7	CFSM 1.20	IN 16.26			
WTR YR 1979	TOTAL	28960.1	MEAN	79.3	MAX	2140	MIN 1.7	CFSM 1.10	IN 14.88			

SANTEE RIVER BASIN

387

02146900 TWELVE MILE CREEK NEAR WAXHAW, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
04...	1315	3.0	19	.15
NOV				
03...	1200	4.8	4	.05
DEC				
14...	1300	5.5	3	.04
JAN				
17...	1315	18	16	.78
20...	1840	92	79	20

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

SANTEE RIVER BASIN

02151000 SECOND BROAD RIVER AT CLIFFSIDE, N. C.

LOCATION.--Lat 35°14'08", long 81°45'57", Rutherford County, Hydrologic Unit 03050105, on left bank 0.2 mi (0.3 km) downstream from dam at Cliffside Mills, at Cliffside, and 1.3 mi (2.1 km) upstream from mouth.

DRAINAGE AREA.--211 mi² (546 km²).

PERIOD OF RECORD.--June 1925 to current year.

REVISED RECORDS.--WSP 892: 1928(M), drainage area. WSP 1553: 1935-39(m).

GAGE.--Water-stage recorder. Datum of gage is 670.5 ft (204.37 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--Records good. Considerable diurnal fluctuation and some low-flow regulation by mills above station. Suspended-sediment records for the current year are published on page 391 of this report.

AVERAGE DISCHARGE.--54 years, 313 ft³/s (8.864 m³/s), 20.14 in/yr (512 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s) Aug. 14, 1940, gage height, 17.93 ft (5.465 m); minimum, 4 ft³/s (0.11 m³/s) Sept. 27, 1935, Aug. 3, 1937, July 24, 1943; minimum daily, 6 ft³/s (0.17 m³/s) June 9, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1800	3340 94.6	5.66 1.725	Feb. 26	1500	*4610 131	*7.00 2.134

Minimum discharge, 18 ft³/s (0.51 m³/s) June 9, gage height, 0.71 ft (0.216 m); minimum daily, 85 ft³/s (2.41 m³/s) Oct. 21, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	169	185	192	264	609	343	398	427	247	431	364
2	144	139	117	934	251	513	333	365	361	247	306	397
3	156	130	166	734	245	454	386	346	436	199	257	275
4	151	111	243	400	239	1360	673	348	687	218	236	524
5	139	130	659	302	239	2330	824	336	441	221	227	404
6	154	180	370	262	231	1080	564	332	376	234	245	473
7	103	129	243	260	260	722	467	322	341	310	229	343
8	119	114	214	445	256	522	423	313	688	224	159	290
9	177	194	211	377	243	514	452	317	510	262	231	240
10	128	98	376	306	231	441	427	349	315	305	197	238
11	149	165	264	272	221	431	382	330	446	300	166	232
12	151	117	214	259	231	396	382	408	380	287	222	180
13	86	170	201	347	234	366	963	350	313	316	225	209
14	162	161	135	348	245	353	1250	407	269	283	195	217
15	101	89	171	306	254	341	747	318	302	252	192	199
16	179	166	165	268	269	310	578	298	301	253	189	190
17	87	166	169	256	260	307	500	284	362	238	189	234
18	184	129	183	243	242	307	441	272	362	230	186	141
19	86	166	167	229	254	299	404	264	255	290	140	234
20	184	191	165	548	310	292	379	261	284	299	216	161
21	85	89	173	3050	320	285	356	410	256	424	184	191
22	134	172	178	1410	432	277	343	386	259	376	204	1180
23	171	126	149	679	1150	472	341	504	243	352	235	553
24	143	182	174	822	2050	2080	324	871	286	306	257	347
25	85	161	214	745	3170	1020	321	749	275	426	323	295
26	160	151	190	531	4100	646	1020	509	235	378	244	276
27	143	193	187	439	1460	511	994	414	225	373	243	287
28	137	194	173	386	783	454	607	386	226	326	220	588
29	107	158	149	347	---	415	445	365	214	282	218	1220
30	190	209	129	308	---	374	440	327	220	256	180	1910
31	103	---	173	286	---	357	---	417	---	248	210	---
TOTAL	4276	4551	6608	16343	18447	18908	16149	11956	10295	8962	6956	12392
MEAN	138	152	213	527	659	610	538	386	343	289	224	413
MAX	194	209	659	3050	4100	2330	1250	871	688	426	431	1910
MIN	85	89	119	192	221	277	321	261	214	199	140	141
CFSM	.65	.72	1.01	2.50	3.12	2.89	2.55	1.83	1.63	1.37	1.06	1.96
IN.	.75	.80	1.17	2.88	3.25	3.33	2.85	2.11	1.82	1.58	1.23	2.18
CAL YR 1978 TOTAL	121586	MEAN 333	MAX 4230	MIN 85	CFSM 1.58	IN 21.44						
WTR YR 1979 TOTAL	135843	MEAN 372	MAX 4100	MIN 85	CFSM 1.76	IN 23.95						

SANTEE RIVER BASIN

391

02151000 SECOND BROAD RIVER AT CLIFFSIDE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA. WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979.

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
FEB				
24...	1400	2410	766	4980
24...	1610	2580	400	2590
25...	1410	3290	601	5340
MAR				
05...	1420	2380	322	2070

SANTEE RIVER BASIN

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.

LOCATION.--Lat 35°12'39", long 81°41'52", Cleveland County, Hydrologic Unit 03050105, on right bank 0.5 mi (0.8 km) upstream from Sandy Run Creek, 3 mi (5 km) downstream from Second Broad River, and 3.5 mi (5.6 km) southwest of Boiling Springs. Water-quality samples collected at bridge on State Highway 150, 2.4 mi (3.9 km) downstream.

DRAINAGE AREA.--864 mi² (2,238 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1925 to current year.

REVISED RECORDS.--WSP 892: 1928, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 639.92 ft (195.048 m) National Geodetic Vertical Datum of 1929 (Duke Power Co. bench mark). Prior to July 20, 1934, at site 500 ft (152 m) upstream at datum 1 ft (0.305 m) higher.

REMARKS.--Records good. Considerable diurnal fluctuation and some regulation caused by powerplants above station.

AVERAGE DISCHARGE.--54 years, 1,513 ft³/s (42.85 m³/s), 23.78 in/yr (604 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,300 ft³/s (2,080 m³/s) Aug. 16, 1928, gage height, 24.3 ft (7.4 m), former site, present datum; minimum, 40 ft³/s (1.13 m³/s) Oct. 17, 1954, gage height, 1.02 ft (0.311 m); minimum daily, 105 ft³/s (2.97 m³/s) Oct. 10, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (250 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0800	12700 360	9.28 2.829	Mar. 5	1900	*17100 484	*11.21 3.417
Feb. 24	2000	11700 331	8.80 2.682	Mar. 24	2100	13700 388	9.73 2.966
Feb. 25	2330	15300 433	10.43 3.179	Sept. 30	1030	14500 411	10.08 3.072

Minimum discharge, 255 ft³/s (7.22 m³/s) Oct. 15, gage height, 1.47 ft (0.448 m); minimum daily, 530 ft³/s (15.0 m³/s) Oct. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	767	789	911	916	1550	2990	2270	2500	2340	1430	1590	1670
2	892	798	768	2740	1240	2660	1860	2380	2050	1280	1260	1920
3	807	712	848	3120	1380	2550	2350	1870	2090	1250	977	1470
4	797	774	823	2020	1350	6350	3700	2540	3150	1280	1090	1960
5	732	803	2360	1680	1240	15300	3910	2250	2380	1180	1090	2350
6	725	827	1980	1720	1480	8810	3230	2020	1930	1220	1160	2920
7	728	848	1410	1150	1390	4510	2250	2110	2000	1470	1060	1800
8	547	854	1080	2500	1320	5270	1870	1860	2580	1750	945	1650
9	762	840	1220	1780	1240	3650	2330	2060	3100	1780	1140	1340
10	712	674	1740	1780	1290	2830	2680	2720	2670	1550	890	1050
11	664	826	1550	1560	1250	2270	2170	3080	2400	1340	990	1140
12	578	761	1240	1580	1230	2190	2150	2880	1990	1880	832	1100
13	571	734	996	1900	1250	2140	4470	2870	1660	2090	1040	1410
14	786	577	1080	1580	1150	2230	6260	2880	1500	1900	1030	2120
15	667	606	906	1380	1220	2140	4080	2350	2100	1480	792	1970
16	722	762	863	1220	1330	2060	3370	2070	1530	1500	763	1450
17	566	684	796	1340	1350	2070	3120	1950	1760	1070	850	1340
18	698	780	818	1250	1290	1640	2660	1900	1660	965	966	1540
19	581	909	866	1110	1340	1840	2430	1980	1600	1430	674	1230
20	703	802	792	2130	1440	1730	2350	1780	1740	1490	770	1160
21	623	601	887	11000	1450	1640	2090	2190	1460	1900	815	1360
22	538	788	886	5460	1800	1860	2120	2080	1790	2030	956	4970
23	562	755	777	3400	3990	2370	1960	2550	1360	1950	1110	3340
24	666	854	670	3640	7760	11000	2010	3820	1770	1890	1300	2360
25	600	814	1040	2960	11000	7080	2150	3400	2260	1770	1610	2090
26	768	748	769	2550	13100	3750	4880	2860	1680	1500	1360	1790
27	848	846	985	2060	5190	3280	5820	2030	1140	1580	1190	1580
28	644	942	892	1800	3750	2990	3550	2820	1550	1950	1220	3090
29	530	828	865	1690	---	2560	3130	2140	1190	1800	1150	4690
30	715	881	761	1610	---	2490	2670	1770	1420	1230	1230	12800
31	674	---	790	1770	---	2310	---	2010	---	1670	1350	---
TOTAL	21173	23417	32369	72396	74370	116560	89890	73720	57850	48605	33200	70660
MEAN	683	781	1044	2335	2656	3760	2996	2378	1928	1568	1071	2355
MAX	892	942	2360	11000	13100	15300	6260	3820	3150	2090	1610	12800
MIN	530	577	670	916	1150	1640	1860	1770	1140	965	674	1050
CFSM	.79	.90	1.21	2.70	3.07	4.35	3.47	2.75	2.23	1.82	1.24	2.73
IN.	.91	1.01	1.39	3.12	3.20	5.02	3.87	3.17	2.49	2.09	1.43	3.04
CAL YR 1978	TOTAL	565427	MEAN	1549	MAX	17000	MIN	530	CFSM	1.79	IN	24.34
WTR YR 1979	TOTAL	714210	MEAN	1957	MAX	15300	MIN	530	CFSM	2.27	IN	30.75

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946, 1957-67, October 1978 to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1956 to September 1967, October 1978 to September 1979.

WATER TEMPERATURES: October 1945 to September 1946, October 1956 to September 1967, October 1978 to September 1979.

INSTRUMENTATION.--Water-quality monitor since October 1978.

REMARKS.--Daily records of specific conductance for period October 1956 to September 1964 are available in the district office in Raleigh, N. C. Malfunctions of water-quality monitor caused some loss of daily records during October, February, March, and September.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,000 micromhos Apr. 12, 1962; minimum daily, 22 micromhos Mar. 30, 1960. WATER TEMPERATURES: Maximum daily, 31.5°C June 22, 1964; minimum, 0.0°C on several days during winter months of most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 70 micromhos Aug. 3; minimum, (estimated) 23 micromhos Mar. 5.

WATER TEMPERATURES: Maximum, 30.5°C Aug. 9, 10; minimum, 0.0°C Feb. 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COHALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 12...	1230	625	51	7.6	16.5	10	12.2	14	0	3.7	1.2
NOV 01...	0825	930	48	6.7	11.0	20	6.2	13	0	3.4	1.1
APR 03...	1100	2330	34	6.3	15.0	15	9.6	9	0	2.3	.9
MAY 29...	0930	2300	36	6.6	18.0	20	12.2	10	0	2.5	.9
AUG 17...	0930	1130	49	6.7	19.5	5	13.8	12	0	3.1	1.0
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 12...	4.5	38	.5	1.3	25	0	21	1.0	3.4	3.3	.0
NOV 01...	3.0	30	.4	1.6	18	0	15	5.7	2.8	1.5	.0
APR 03...	2.6	34	.4	1.1	14	0	11	11	2.2	1.7	.0
MAY 29...	2.7	35	.4	.9	16	0	13	6.4	1.9	2.4	.0
AUG 17...	3.9	39	.5	1.2	16	0	13	5.1	4.4	2.9	.0
DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 12...	14	40	44	.05	67.5	--	--	--	--	--	--
NOV 01...	13	40	36	.05	100	.03	.00	.03	.03	1.1	.02
APR 03...	12	35	31	.05	220	.22	.01	.23	.24	--	.02
MAY 29...	13	34	33	.05	211	.19	.01	.20	.22	--	.01
AUG 17...	14	38	39	.05	116	.16	.01	.17	.20	--	.00

SANTEE RIVER BASIN

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--
NOV 01...	.00	--	.00	.28	.00	.30	.30	.00	250	.33	1.5
APR 03...	.02	--	.03	.17	.10	.19	.07	.12	--	.42	1.9
MAY 29...	.00	.01	.00	.57	.13	.58	.45	.13	--	.78	3.5
AUG 17...	.01	.00	.01	.17	.08	.17	.08	.09	--	.34	1.5
DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--
NOV 01...	.02	--	.06	.01	.01	.00	.00	36	1	0	1
APR 03...	.08	--	.25	.01	.01	.01	.03	--	1	0	1
MAY 29...	.04	--	.12	.01	.03	.00	.00	--	0	0	0
AUG 17...	.04	.12	.12	.02	.04	.05	.15	--	2	1	1
DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--
NOV 01...	0	0	0	10	10	0	2	1	1	2	1
APR 03...	0	0	0	20	20	0	1	0	1	7	5
MAY 29...	0	0	0	20	20	0	2	2	0	5	3
AUG 17...	1	1	0	20	10	10	0	0	1	6	0

SANTEE RIVER BASIN

395

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 12...	--	--	--	--	--	--	--	--	--	--
NOV 01...	1	490	380	110	12	8	4	40	20	20
APR 03...	2	2200	2100	120	10	10	0	90	80	8
MAY 29...	2	720	580	140	15	13	2	60	50	7
AUG 17...	6	490	320	170	3	3	0	10	1	9

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)
NOV 01...	<.5	.0	<.5	0	0	0	0	0
APR 03...	.5	.0	.5	0	0	0	30	10
MAY 29...	<.5	.0	<.5	0	0	0	70	60
AUG 17...	<.5	.0	<.5	0	0	0	20	10

DATE	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M
NOV 01...	10	3.6	1.3	.5	.00	--	--
APR 03...	20	2.1	.2	--	.00	2.48	1.92
MAY 29...	6	5.9	.3	--	.00	--	--
AUG 17...	7	4.3	.2	--	.00	--	--

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	60	47	51	55	45	47	51	45	48	48	43	45
2	56	45	49	56	43	50	52	46	49	45	36	40
3	51	44	47	56	45	50	50	46	48	35	34	35
4	56	44	50	55	44	47	51	49	50	38	35	37
5	57	44	51	50	44	46	48	38	40	39	37	38
6	59	44	52	54	45	48	39	38	38	39	36	37
7	59	45	51	54	41	46	41	39	40	40	38	40
8	57	46	50	51	43	47	47	41	43	40	34	36
9	60	46	52	56	45	51	48	40	44	40	35	36
10	54	44	49	58	46	52	47	39	41	41	35	37
11	58	45	50	56	46	50	40	39	39	39	37	38
12	62	50	59	56	43	48	43	38	40	40	38	38
13	62	47	53	55	47	51	48	43	44	39	37	38
14	60	48	53	53	46	49	49	43	46	41	37	39
15	58	43	51	57	47	52	51	46	48	42	38	40
16	54	46	49	56	47	50	54	48	50	44	41	42
17	55	44	49	58	49	53	55	50	52	45	38	41
18	56	47	50	57	46	52	51	47	49	46	39	42
19	59	47	52	53	45	48	50	45	47	47	42	44
20	62	49	55	53	44	48	52	46	49	46	38	41
21	64	51	61	53	45	50	54	49	51	36	28	31
22	---	---	62	52	45	50	53	47	50	32	30	31
23	---	---	61	52	40	45	53	48	50	33	32	33
24	---	---	55	55	47	50	55	51	53	35	33	35
25	---	---	56	52	44	47	51	41	44	36	35	35
26	---	---	53	49	44	47	46	43	44	35	34	35
27	---	---	47	52	45	47	45	40	42	40	34	36
28	---	---	48	46	42	44	45	41	42	40	35	37
29	---	---	49	49	44	46	49	45	46	39	35	37
30	---	---	47	48	45	46	49	44	47	42	36	38
31	48	45	46	---	---	---	50	47	48	42	36	38
MONTH	64	43	52	58	40	49	55	38	46	48	28	38
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	44	37	39	32	30	31	32	31	31	33	31	32
2	46	42	44	32	31	31	36	32	33	33	32	33
3	45	39	42	---	---	32	36	31	32	39	32	35
4	45	39	41	---	---	29	32	30	31	39	31	33
5	43	39	41	---	---	23	30	29	30	33	32	32
6	42	38	39	---	---	25	31	30	31	34	32	33
7	43	39	40	---	---	26	34	31	33	35	32	33
8	43	37	40	---	---	25	38	33	35	38	33	34
9	44	40	42	---	---	27	38	31	33	38	33	35
10	45	40	43	---	---	28	34	31	32	35	32	33
11	46	40	42	---	---	29	34	32	33	32	30	30
12	44	34	41	---	---	30	34	33	34	32	30	31
13	43	38	40	---	---	30	34	29	32	30	30	30
14	46	42	44	---	---	29	29	28	28	31	30	31
15	46	38	42	---	---	30	29	28	29	33	31	32
16	43	36	40	---	---	31	30	29	30	34	32	33
17	43	36	39	---	---	31	31	29	30	35	33	34
18	42	35	38	---	---	33	32	30	31	35	34	34
19	41	35	38	---	---	33	32	30	32	35	33	34
20	41	35	38	---	---	31	32	31	32	35	32	33
21	43	37	40	---	---	32	34	31	33	36	34	35
22	44	37	40	---	---	31	34	31	32	37	34	35
23	42	34	36	---	---	30	35	33	34	37	34	35
24	34	30	32	---	---	28	35	33	34	37	33	34
25	---	---	26	---	---	29	36	32	33	35	33	34
26	---	---	24	29	29	29	37	27	33	34	33	33
27	30	28	29	30	29	30	29	27	28	39	34	35
28	31	30	31	30	29	30	30	29	30	40	35	37
29	---	---	---	32	30	31	31	30	30	38	35	36
30	---	---	---	31	30	31	32	30	31	44	36	39
31	---	---	---	32	31	31	---	---	---	45	38	40
MONTH	46	28	38	32	29	30	38	27	32	45	30	34

SANTÉE RIVER BASIN

397

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C); WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	40	35	37	37	34	35	56	44	49	47	39	43
2	42	36	38	36	34	35	65	51	57	39	30	31
3	42	39	40	37	32	35	70	48	63	37	31	33
4	38	34	35	37	34	35	57	48	51	41	36	39
5	38	34	35	42	37	39	53	46	49	42	31	34
6	44	35	39	43	40	41	51	43	47	36	30	32
7	43	36	38	41	39	40	51	43	47	40	36	38
8	39	35	37	41	36	38	53	42	48	40	39	40
9	36	32	33	38	36	37	56	42	48	49	39	45
10	32	31	31	41	36	38	59	48	53	52	48	51
11	33	31	32	44	41	42	62	45	51	53	50	51
12	35	32	33	43	37	39	55	49	52	52	47	49
13	44	32	36	39	35	36	52	46	49	49	44	46
14	44	34	38	40	35	37	55	41	47	43	33	39
15	43	33	35	41	38	39	58	48	52	38	33	36
16	40	33	36	42	38	40	63	48	55	42	37	39
17	39	33	35	52	42	45	63	42	52	45	39	42
18	41	33	36	55	48	51	63	38	49	44	39	41
19	40	36	37	61	41	49	63	42	52	56	43	47
20	38	35	37	55	43	48	58	44	50	58	43	49
21	38	37	37	56	44	48	55	40	47	55	43	47
22	37	32	34	47	42	44	53	39	45	---	---	33
23	43	35	37	44	37	41	50	37	43	---	---	36
24	42	33	36	41	36	38	48	33	39	---	---	36
25	34	31	33	45	39	41	47	29	34	36	34	35
26	36	32	33	48	41	43	48	31	38	39	35	36
27	43	36	38	48	40	44	50	36	41	---	---	42
28	43	36	39	48	39	41	38	31	34	---	---	36
29	38	37	37	49	39	41	47	37	40	---	---	32
30	37	34	35	51	47	49	59	48	54	---	---	25
31	---	---	---	50	45	48	63	38	51	---	---	---
MONTH	44	31	36	61	32	41	70	29	48	58	30	39
YEAR	70	27	40									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.0	20.0	21.0	14.5	13.0	14.0	11.5	10.0	11.0	9.0	6.5	7.5
2	22.0	19.5	21.0	14.0	12.5	13.5	11.0	9.5	10.5	10.0	9.0	9.5
3	22.0	19.5	20.5	13.5	12.5	13.0	10.5	8.0	9.0	9.5	6.0	7.0
4	20.5	18.5	19.5	13.5	11.5	12.5	11.0	9.0	10.0	5.5	4.0	5.0
5	21.0	19.0	20.0	13.0	11.0	12.5	12.5	11.0	11.5	6.5	4.5	5.5
6	19.5	18.0	18.5	13.0	11.0	12.0	11.5	10.0	11.0	6.5	5.0	5.5
7	17.5	15.5	16.5	12.5	11.5	12.0	11.5	8.5	9.5	7.5	6.5	6.5
8	16.5	14.5	15.5	14.0	12.5	13.0	12.5	11.0	12.0	8.0	6.5	7.5
9	15.0	13.0	14.0	14.0	12.5	13.5	15.0	12.5	14.0	6.5	4.5	5.0
10	15.0	13.0	14.0	13.5	12.5	13.0	13.0	10.0	11.5	4.5	2.5	3.5
11	15.5	13.5	14.5	14.0	12.0	13.0	10.0	9.0	9.5	5.5	4.0	5.0
12	16.5	14.0	15.0	14.0	12.0	13.0	10.0	8.0	9.0	6.5	5.0	6.0
13	18.0	15.0	16.5	14.5	12.0	13.5	9.5	6.5	7.5	6.5	5.0	6.0
14	18.0	17.5	17.5	14.5	13.5	14.0	9.0	7.0	8.0	6.5	5.5	6.0
15	17.0	14.0	15.5	16.0	14.0	15.0	8.0	7.0	7.5	7.0	4.5	6.0
16	14.5	13.0	13.5	19.0	15.5	17.5	9.5	7.5	8.5	7.0	4.5	5.5
17	13.5	11.5	12.5	18.5	16.0	17.5	9.5	7.0	8.0	6.5	4.5	5.5
18	14.0	11.0	12.5	18.5	16.0	17.5	8.0	5.0	6.5	7.5	6.5	7.0
19	14.0	12.5	13.5	17.5	12.5	14.0	7.5	6.0	6.5	6.5	4.5	5.5
20	15.5	13.0	14.0	13.5	11.0	12.5	8.5	7.0	7.5	4.5	4.0	4.0
21	14.0	12.5	13.0	11.0	10.0	11.0	9.5	8.5	9.5	6.0	4.0	5.0
22	---	---	---	11.0	9.5	10.5	8.5	7.0	7.5	6.5	5.5	6.0
23	---	---	---	11.5	11.0	11.0	6.5	4.5	5.5	7.0	6.0	6.5
24	---	---	---	12.0	11.0	11.5	6.0	5.0	5.5	7.0	6.5	7.0
25	---	---	---	11.0	9.5	10.5	6.5	5.0	6.0	7.0	6.0	6.5
26	---	---	---	11.0	9.5	10.0	6.0	4.5	5.5	6.5	5.5	6.0
27	---	---	---	10.5	9.5	9.5	6.0	5.0	5.0	6.5	4.5	5.5
28	---	---	---	11.5	9.5	10.5	5.0	3.5	4.0	5.5	4.5	5.0
29	---	---	---	11.0	10.0	10.5	4.0	2.0	3.0	5.0	4.0	4.5
30	---	---	---	10.0	9.5	9.5	4.5	3.5	4.0	5.0	3.5	4.0
31	14.5	13.0	14.0	---	---	---	6.5	4.5	5.5	6.0	4.5	5.0
MONTH	22.0	11.0	16.0	19.0	9.5	12.5	15.0	2.0	8.0	10.0	2.5	6.0

SANTÉE RIVER BASIN

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	7.0	4.0	6.0	7.5	7.0	7.0	16.0	10.0	14.5	17.5	14.5	16.5
2	6.5	4.0	5.5	---	---	---	16.5	10.0	14.5	19.0	16.0	17.5
3	6.5	4.5	5.5	---	---	---	15.0	14.0	14.5	20.0	17.5	18.5
4	6.5	5.5	6.0	---	---	---	13.5	13.0	13.5	19.5	17.5	18.5
5	6.5	4.5	6.0	---	---	---	14.0	12.5	13.5	19.0	18.0	18.5
6	6.0	4.0	5.5	---	---	---	14.0	13.0	13.5	18.0	17.0	17.5
7	4.0	2.5	3.5	---	---	---	14.5	8.0	12.0	20.5	16.5	18.5
8	3.5	.5	2.0	---	---	---	14.5	7.5	12.0	19.5	17.5	18.5
9	4.0	3.0	3.5	---	---	---	16.5	13.5	15.0	19.5	18.0	19.0
10	3.5	2.0	3.0	---	---	---	15.5	5.0	12.5	19.5	18.0	19.0
11	3.5	1.5	2.5	---	---	---	14.5	13.5	14.0	20.0	18.0	19.0
12	4.0	2.5	3.5	---	---	---	14.5	13.5	14.0	20.5	18.5	19.5
13	5.0	4.0	4.5	---	---	---	14.0	14.0	14.0	20.5	19.5	20.0
14	6.5	4.5	5.0	---	---	---	14.5	13.5	14.0	21.0	19.0	20.0
15	9.0	6.5	7.5	---	---	---	14.5	13.5	14.0	22.5	19.5	21.0
16	10.5	9.0	9.5	---	---	---	15.0	13.0	14.0	22.5	19.5	21.0
17	10.0	7.0	8.5	---	---	---	15.0	13.0	14.0	22.0	19.0	20.5
18	7.0	1.5	3.0	---	---	---	15.0	13.0	14.0	22.0	18.5	20.5
19	2.0	.0	1.5	---	---	---	15.5	13.0	14.0	22.5	18.5	20.5
20	4.5	2.0	3.0	---	---	---	16.0	13.0	14.5	21.0	17.5	19.5
21	5.0	4.0	4.5	---	---	---	17.0	13.5	15.0	22.0	19.5	20.5
22	7.5	5.0	6.0	---	---	---	17.5	14.5	16.0	23.5	20.0	22.0
23	7.5	7.0	7.5	---	---	---	17.5	16.0	17.0	23.0	20.5	22.0
24	7.5	7.0	7.5	---	---	---	18.0	16.5	17.0	22.0	19.5	20.5
25	7.5	7.5	7.5	---	---	---	17.5	16.0	17.0	19.5	18.0	19.0
26	7.5	7.0	7.5	11.0	9.5	10.5	17.0	15.5	16.0	18.0	17.0	17.5
27	8.0	6.5	7.0	11.5	10.0	10.5	16.5	15.0	16.0	18.0	16.5	17.0
28	8.0	7.0	7.5	12.5	6.5	10.0	17.5	16.0	16.5	19.5	16.5	18.0
29	---	---	---	13.5	4.0	10.5	15.5	14.5	15.0	22.0	18.0	20.0
30	---	---	---	14.0	5.0	11.0	17.5	14.0	15.5	23.5	19.5	21.5
31	---	---	---	15.0	5.5	11.5	---	---	---	23.5	20.5	22.0
MONTH	10.5	.0	5.5	15.0	4.0	10.0	18.0	5.0	14.5	23.5	14.5	19.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	23.5	20.0	22.0	24.5	21.0	23.0	29.5	25.0	27.0	26.5	24.5	25.5
2	24.5	21.0	23.0	24.0	21.0	23.0	30.0	26.5	28.5	26.0	23.0	24.5
3	23.0	20.5	21.5	28.0	22.0	25.0	30.0	27.0	29.0	26.0	24.5	25.0
4	22.0	20.0	21.0	27.0	23.5	25.5	29.0	25.0	26.5	25.5	23.0	23.5

SANTEE RIVER BASIN

399

02151500 BROAD RIVER NEAR BOILING SPRINGS, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 12...	1230	625	8	13	95
DEC 05...	1420	2820	185	1410	45

02152100 FIRST BROAD RIVER NEAR CASAR, N. C.

LOCATION.--Lat 35°29'35", long 81°40'56", Cleveland County, Hydrologic Unit 03050105, on right bank 570 ft (174 m) upstream from bridge on Secondary Road 1530, 0.5 mi (0.8 km) upstream from No Business Creek, and 4.0 mi (6.4 km) southwest of Casar.

DRAINAGE AREA.--59.5 mi² (154.1 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949-56, March 1959 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 890 ft (271 m), from topographic map.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 401 of this report.

AVERAGE DISCHARGE.--20 years, 96.1 ft³/s (2.722 m³/s), 21.93 in/yr (557 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,760 ft³/s (220 m³/s) Oct. 17, 1975, gage height, 16.70 ft (5.090 m); minimum, 17 ft³/s (0.48 m³/s) July 20, 1970, gage height, 0.97 ft (0.296 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 and August 1940 reached a stage of about 25 ft (7.6 m), from information by local resident. A discharge of 14.5 ft³/s (0.41 m³/s) was measured on Sept. 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0130	1780 50.4	7.21 2.198	Mar. 23	2330	1780 50.4	7.21 2.198
Feb. 25	1800	1790 50.7	7.24 2.207	Sept. 30	2400	*2600 73.6	*9.21 2.807

Minimum discharge, 37 ft³/s (1.05 m³/s) Oct. 15, gage height, 0.68 ft (0.207 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	39	44	56	69	140	109	113	90	72	70	52
2	48	39	42	434	69	122	107	106	85	63	64	49
3	45	39	43	149	64	112	126	105	161	61	61	56
4	45	38	105	90	66	515	199	104	123	59	58	75
5	44	38	191	74	64	469	199	99	103	60	57	179
6	43	38	74	67	63	251	147	96	94	59	56	119
7	41	38	57	77	80	181	128	93	90	78	55	77
8	41	42	53	136	71	155	120	91	97	74	54	58
9	42	40	110	102	68	134	136	97	89	70	53	52
10	41	39	103	81	63	122	121	105	86	91	52	50
11	41	39	66	72	65	120	114	101	92	72	52	48
12	41	39	57	71	63	108	115	92	81	69	53	47
13	40	39	52	87	66	103	342	97	78	83	52	52
14	40	39	50	84	69	101	284	91	76	76	50	66
15	38	39	48	73	73	97	185	84	75	65	49	51
16	39	39	47	68	84	92	150	81	86	69	49	48
17	41	42	47	66	75	90	133	78	137	63	48	48
18	39	49	45	63	75	89	123	77	92	60	48	48
19	39	42	45	60	100	87	114	77	82	66	47	46
20	39	39	45	234	91	85	109	76	77	90	46	45
21	38	39	49	826	104	82	105	105	77	144	46	88
22	38	39	46	224	156	80	102	91	77	102	51	454
23	38	44	45	142	352	369	100	126	80	86	52	121
24	38	48	49	214	591	625	97	280	78	82	68	83
25	38	41	58	176	977	234	96	172	73	98	65	72
26	40	39	50	127	528	170	455	124	69	83	57	67
27	39	52	48	106	245	144	267	105	68	77	52	69
28	39	49	46	95	170	132	164	101	66	105	51	182
29	38	46	46	84	---	124	134	93	64	79	61	166
30	39	52	45	78	---	118	121	88	73	69	51	476
31	39	---	51	75	---	112	---	98	---	66	49	---
TOTAL	1266	1245	1857	4291	4565	5363	4702	3246	2619	2391	1677	3044
MEAN	40.8	41.5	59.9	138	163	173	157	105	87.3	77.1	54.1	101
MAX	55	52	191	826	977	625	455	280	161	144	70	476
MIN	38	38	42	56	63	80	96	76	64	59	46	45
CFSM	.69	.70	1.01	2.32	2.74	2.91	2.64	1.77	1.47	1.30	.91	1.70
IN.	.79	.78	1.16	2.68	2.85	3.35	2.94	2.03	1.64	1.49	1.05	1.90
CAL YR 1978 TOTAL	34404			MEAN 94.3	MAX 1170	MIN 38	CFSM 1.59	IN 21.51				
WTR YR 1979 TOTAL	36266			MEAN 99.4	MAX 977	MIN 38	CFSM 1.67	IN 22.67				

SANTEE RIVER BASIN

401

02152100 FIRST BROAD RIVER NEAR CASAR, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
05...	1100	41	2	.22
DEC				
14...	1030	50	1	.13
FEB				
24...	1000	570	375	577
24...	1100	680	684	1260
24...	1210	780	427	899
24...	1730	905	277	677
25...	1545	1560	896	3770
25...	1705	1730	827	3860
MAR				
05...	1145	470	103	131

SANTÉE RIVER BASIN

02152610 SUGAR BRANCH NEAR BOILING SPRINGS, N. C.

LOCATION.--Lat 35°15'00", long 81°37'20", Cleveland County, Hydrologic Unit 03050105, on left downstream wingwall of culvert on State Highway 150, 0.5 mi (0.8 km) upstream from mouth, and 2.8 mi (4.5 km) east of Boiling Springs.

DRAINAGE AREA.--1.49 mi² (3.86 km²).

PERIOD OF RECORD.--Annual maximum, water years 1954-68, June 1968 to current year.

REVISED RECORDS.--WRD N. C. 1970: 1968(M).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 696.83 ft (212.394 m) National Geodetic Vertical Datum of 1929. June 10, 1953 to May 31, 1968, crest-stage gage on left bank 31 ft (9 m) upstream from culvert entrance at datum 16.37 ft (4.990 m) higher.

REMARKS.--Records fair. Suspended-sediment records for the current year are published on page 403 of this report.

AVERAGE DISCHARGE.--11 years, 2.33 ft³/s (0.066 m³/s), 21.24 in/yr (539 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft³/s (31.4 m³/s) Oct. 16, 1971, gage height, 6.58 ft (2.01 m), from rating curve extended above 120 ft³/s (3.40 m³/s) on basis of computation of peak flow through culvert; minimum, 0.13 ft³/s (0.004 m³/s) Aug. 13, 14, 1977, gage height, 0.91 ft (0.277 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 25	1045	*176 4.98	*3.05 0.930

Minimum discharge, 0.51 ft³/s (0.014 m³/s) part of each day Oct. 14-17, 20-25, gage height, 1.14 ft (0.347 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	.60	.71	.90	1.4	2.6	1.7	1.7	2.1	1.3	1.3	.94
2	.76	.60	.69	8.2	1.3	2.4	1.7	1.6	1.7	1.1	1.2	.94
3	.72	.60	1.4	2.1	1.3	2.4	2.3	1.6	3.1	1.0	1.1	.93
4	.70	.61	3.6	1.6	1.3	10	5.2	1.6	1.7	.99	1.1	1.0
5	.69	.62	5.3	1.3	1.2	14	2.6	2.0	1.5	.96	1.0	2.1
6	.64	.63	1.4	1.3	1.3	3.6	2.3	1.8	2.0	.95	.99	1.1
7	.61	.68	1.1	1.7	1.6	2.9	2.0	1.6	1.5	1.8	.95	1.2
8	.60	.81	1.0	1.9	1.4	2.9	2.0	1.5	1.5	1.2	.93	1.1
9	.61	.67	1.2	1.4	1.4	2.5	2.5	1.6	1.4	1.3	.89	.94
10	.62	.67	.99	1.3	1.3	2.4	2.1	1.5	1.3	1.2	.87	.91
11	.61	.67	.93	1.2	1.4	2.6	2.0	1.4	1.2	1.1	1.1	.89
12	.60	.66	.90	1.6	1.6	2.3	2.4	1.3	1.1	1.6	1.0	.88
13	.59	.65	.87	3.4	1.9	2.2	7.0	1.4	1.1	1.2	.98	.98
14	.58	.67	.84	2.1	1.8	2.2	4.5	1.2	1.0	1.0	.94	.93
15	.52	.67	.82	1.6	1.8	2.1	3.0	1.1	1.0	1.7	.87	.85
16	.56	.67	.83	1.5	1.8	2.0	2.5	1.1	1.9	1.1	.85	.83
17	.55	.70	.79	1.3	1.6	1.9	2.2	1.1	1.5	.97	.83	.84
18	.56	.70	.78	1.3	1.5	1.8	2.0	1.1	1.2	5.0	.82	.84
19	.57	.64	.78	1.2	2.0	1.8	1.9	1.0	1.1	2.3	.79	.81
20	.56	.63	.78	32	1.8	1.8	1.8	1.1	1.1	3.5	.76	.76
21	.55	.64	.89	14	5.4	1.7	1.7	1.7	1.5	6.7	4.0	1.2
22	.55	.63	.73	3.8	8.0	1.7	1.6	1.2	1.7	2.9	2.1	8.4
23	.55	.79	.75	2.9	11	3.4	1.5	2.0	12	2.3	1.9	1.5
24	.53	.70	1.0	10	35	2.8	1.5	7.3	9.1	7.0	1.3	1.3
25	.56	.64	.92	2.9	38	2.3	1.8	2.4	2.1	5.6	2.8	1.2
26	.57	.63	.84	2.3	6.4	2.1	9.6	1.7	1.6	2.7	1.2	1.2
27	.58	1.1	.82	2.1	3.6	2.0	2.9	1.5	1.4	2.3	1.1	1.3
28	.57	.75	.81	1.9	2.9	1.9	2.3	3.5	1.3	1.9	1.1	3.6
29	.58	.82	.79	1.7	---	1.8	2.0	2.0	1.2	1.6	1.0	3.7
30	.55	.80	.79	1.6	---	1.8	1.8	1.6	1.6	1.5	.98	9.5
31	.58	---	.81	1.5	---	1.7	---	4.3	---	1.4	.94	---
TOTAL	19.42	20.65	34.91	113.60	141.0	89.6	80.4	57.5	63.5	67.17	37.69	52.67
MEAN	.63	.69	1.13	3.66	5.04	2.89	2.68	1.85	2.12	2.17	1.22	1.76
MAX	1.6	1.1	5.3	32	38	14	9.6	7.3	12	7.0	4.0	9.5
MIN	.52	.60	.69	.90	1.2	1.7	1.5	1.0	1.0	.95	.76	.76
CFSM	.42	.46	.76	2.46	3.38	1.94	1.80	1.24	1.42	1.46	.82	1.18
IN.	.48	.52	.87	2.83	3.52	2.24	2.01	1.43	1.58	1.68	.94	1.31

CAL YR 1978 TOTAL 893.75 MEAN 2.45 MAX 63 MIN .41 CFSM 1.64 IN 22.30
WTR YR 1979 TOTAL 778.11 MEAN 2.13 MAX 38 MIN .52 CFSM 1.43 IN 19.41

SANTÉE RIVER BASIN

403

02152610 SUGAR BRANCH NEAR BOILING SPRINGS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
05...	1345	.68	2	.00
DEC				
05...	0830	5.9	44	.70
JAN				
10...	0958	1.2	3	.01
FEB				
15...	0828	1.8	8	.04
25...	1525	85	3100	711
MAR				
05...	1328	6.4	32	.55
16...	0910	1.9	9	.05
APR				
26...	1155	7.2	41	.80

Lakes and Reservoirs in South Atlantic Slope basin

- 02067800; 02067820 TALBOTT AND TOWNES RESERVOIRS 1/--on Dan River. The two reservoirs are operated as a unit for storage of water for Pinnacles hydroelectric plant. Talbott Dam (drainage area, 20.2 mi² or 52.3 km²), lat 36°40'36", long 80°23'51", Patrick County, Va., Hydrologic Unit 03010103, 4.5 mi (7.2 km) northeast of Kibler. Townes Dam (drainage area, 32.9 mi² or 85.2 km²), lat 36°41'11", long 80°25'49", Patrick County, Va., Hydrologic Unit 03010103, 4 mi (6.4 km) north of Kibler. PERIOD OF RECORD, February 1939 to December 1945 and January 1948 to September 1960 (combined month-end contents only published in WSP 1723), October 1960 to current year.
- Total capacity of Talbott Reservoir, 350,000,000 ft³ (9,900,000 m³) and Townes Reservoir, 60,000,000 ft³ (1,700,000 m³). Storage was started in Talbott Reservoir on Feb. 13, 1939, and in Townes Reservoir several months earlier. Records furnished by City of Danville, Va. (See sta 02068500).
- 02077280 HYCO LAKE.--Lat 36°30'28", long 79°02'48", Person County, Hydrologic Unit 03010104, at outlet control structure 0.4 mi (0.6 km) northwest of dam on Hyco River, 1.1 mi (1.8 km) southwest of McGehees Mill and 8 mi (13 km) northwest of Roxboro. DRAINAGE AREA, 189 mi² (499 km²). 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 (121.856 m), National Geodetic Vertical Datum of 1929 (Levels by Carolina Power and Light Co.).
- 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 or 3.039 m gage height) Mar. 19, 1965. Total capacity at top of spillway is 3,288,000,000 ft³ (93,120,000 m³). Lake cannot be drawn below -0.03 ft or -0.009 m (bottom of gated flume).
- 02079964 LAKE GASTON.--Lat 36°30'04", long 77°48'43", Halifax County, Hydrologic Unit 03010106, at Gaston Dam on Roanoke River, 0.2 mi (0.3 km) upstream from Black Gut Creek, and 2.7 mi (4.3 km) northwest of Thelma. DRAINAGE AREA, 8,339 mi² (21,598 km²). PERIOD OF RECORD, October 1962 to current year. GAGE, water-stage recorder and staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.
- Lake, used mainly for hydroelectric power development, was first filled Oct. 13-15, 1962, and has a total capacity of 22,434,000,000 ft³ (635,330,000 m³). Usable capacity is 20,127,000,000 ft³ (570,000,000 m³) between elevations 165 ft or 50.3 m and 203 ft or 61.9 m (top of spillway gates) of which 2,788,000,000 ft³ (78,960,000 m³) between elevations 200 ft (61.0 m) and 203 ft (61.9 m) is reserved for flood control. Storage for power generation is 10,673,000,000 ft³ (302,260,000 m³) between elevations 185 ft (56.4 m) and 200 ft (61.0 m). Records furnished by Virginia Electric and Power Co. (See sta 02080500)
- 02080100 ROANOKE RAPIDS LAKE.--Lat 36°29'10", long 77°39'31", Halifax County, Hydrologic Unit 03010107, at Roanoke Rapids Dam on Roanoke River, 1.5 mi (2.4 km) upstream from bridge on State Highway 48, and 2.2 mi (3.5 km) north of Roanoke Rapids. DRAINAGE AREA, 8,395 mi² (21,743 km²). PERIOD OF RECORD, June 1955 to September 1960 (month-end contents only published in WSP 1723), October 1960 to current year. GAGE, water-stage recorder and staff gage. Datum of gage is National Geodetic Vertical Datum of 1929.
- Lake, used for hydroelectric power development, was put in operation June 25, 1955, and has a total capacity of 3,360,220,000 ft³ (95,161,400 m³) at normal highwater elevation of 132.0 ft (40.23 m) and 3,515,290,000 ft³ (99,553,000 m³) at elevation 132.75 ft or 40.462 m (top of gates). Records furnished by Virginia Electric and Power Co. (See sta 02080500)
- 02111391 W. KERR SCOTT RESERVOIR.--Lat 36°08'04", long 81°13'30", Wilkes County, Hydrologic Unit 03040101, at W. Kerr Scott Dam on Yadkin River, 0.1 mi (0.3 km) upstream from Fish Trap Creek, 2.0 mi (3.2 km) upstream from Millers Creek, and 4.0 mi (6.4 km) west of Wilkesboro. DRAINAGE AREA, 350 mi² (910 km²), approximately. PERIOD OF RECORD, August 1962 to current year. Gage, water-stage recorder and staff gage at dam. Datum of gage is National Geodetic Vertical Datum of 1929.
- Lake, used for flood control, low-flow augmentation and recreation. Some storage was affected during construction in July 1962, but gates were closed Aug. 22, 1962, and reservoir reached minimum pool elevation on Sept. 11, 1962. Total capacity is 6,664,680,000 ft³ (188,744,000 m³) of which 6,316,200,000 ft³ (178,870,000 m³) is controlled storage. Records furnished by Corps of Engineers. (See sta 02129000)
- 02122400 HIGH ROCK LAKE.--Lat 35°36'02", long 80°14'06", Davidson County, Hydrologic Unit 03040103, at High Rock Dam on Yadkin River, 0.8 mi (1.3 km) northwest of High Rock, 2 mi (3 km) upstream from Lick Creek, and 256 mi (412 km) upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,000 mi² (10,400 km²), approximately. PERIOD OF RECORD, November 1927 to September 1960 (month-end 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 (9.42 m) National Geodetic Vertical Datum of 1929.
- Lake, used for hydroelectric power development, was first put in operation Nov. 7, 1927. Total capacity is 11,090,000,000 ft³ (314,100,000 m³) and usable capacity is 10,230,000,000 ft³ (289,700,000 m³) between elevations 625 ft (190 m) and 655 ft (200 m) gage datum (top of gates). Records furnished by Yadkin, Inc. (See sta 02129000)
- 02122699 TUCKERTOWN RESERVOIR.--Lat 35°29'03", long 80°10'30", Stanly County, Hydrologic Unit 03040103, at Tuckertown Dam on Yadkin River, 2.5 mi (4.0 km) upstream from Garr Creek, 3.8 mi (6.1 km) northeast of New London and 250 mi (400 km) upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,120 mi² (10,670 km²), approximately. PERIOD OF RECORD, April 1962 to current year. GAGE, remote water-stage recorder in powerhouse. Datum of gage is 30.9 ft (9.42 m) National Geodetic Vertical Datum of 1929.
- Lake, used for hydroelectric power development, was first filled Apr. 6, 1962. Total capacity is 1,852,400,000 ft³ (52,460,000 m³) and usable capacity is 293,800,000 ft³ (8,320,000 m³) between elevations 593 ft (181 m) and 596 ft (182 m) gage datum. Records furnished by Yadkin, Inc. (See sta 02129000)
- 02122844 BADIN LAKE.--Lat 35°35'10", long 80°05'34", Stanly County, Hydrologic Unit 03040103, at Badin Dam on Yadkin River, 1.5 mi (2.4 km) northeast of Badin, 2.5 mi (4.0 km) upstream from Falls Dam, and 242 mi (389 km) upstream from mouth of Pee Dee River in Winyah Bay. DRAINAGE AREA, 4,180 mi² (10,800 km²), approximately. PERIOD OF RECORD, December 1917 to September 1960 (month-end 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 (9.42 m) National Geodetic Vertical Datum of 1929.
- 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 ft³ (297,302,200 m³) and usable capacity is 5,616,584,000 ft³ (159,061,600 m³) between elevations 510.00 ft (155.448 m) and 541.10 ft (164.927 m). Records furnished by Yadkin, Inc. (See sta 02129000)

1/ Included in this report because they materially affect runoff at Dan River near Francisco

Lakes and Reservoirs in South Atlantic Slope basin--Continued

- 02123736 LAKE TILLERY.--Lat 35°12'24", long 80°03'57", Stanly County, Hydrologic Unit 03040104, at Norwood Dam on Pee Dee River, 700 ft (213 m) upstream from Norfolk Southern Railroad bridge, 3.5 mi (5.6 km) southeast of Norwood, 5 mi (8 km) upstream from Rocky River, and 224 mi (360 km) upstream from mouth in Winyah Bay. DRAINAGE AREA, 4,600 mi² (12,000 km²), approximately. PERIOD OF RECORD, February 1928 to September 1960 (month-end 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 (11.787 m) National Geodetic Vertical Datum of 1929 (levels by Carolina Power and Light Co.).
- Lake, used for hydroelectric power development, was first put in operation during January 1928. Total capacity is 7,274,520,000 ft³ (206,014,000 m³) and usable capacity is 5,927,040,000 ft³ (167,854,000 m³) between elevations 200.5 ft (61.11 m) and 239.5 ft (73.00 m) gage datum (top of gates). Records furnished by Carolina Power and Light Co. (see sta 02129000)
- 02128800 BLEWETT FALLS LAKE.--Lat 34°58'58", long 79°52'40", Richmond County, Hydrologic Unit 03040104, at Blewett Falls Dam on Pee Dee River, 1.2 mi (1.9 km) upstream from Cartledge Creek, 6.5 mi (10.5 km) northwest of Rockingham, and 195 mi (314 km) upstream from mouth in Winyah Bay. DRAINAGE AREA, 6,830 mi² (18,000 km²), approximately. PERIOD OF RECORD, December 1929 to September 1960 (month-end 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 (11.912 m) National Geodetic Vertical Datum of 1929 (levels by Carolina Power and Light Co.).
- Lake, used for hydroelectric power development, was first put in use during 1911. Total capacity is 4,225,320,000 ft³ (119,661,000 m³) and usable capacity is 1,850,000,000 ft³ (52,400,000 m³) between elevations 120.0 ft (36.58 m) and 139.0 ft (42.37 m) gage datum (top of 4-foot flashboards). Records furnished by Carolina Power and Light Co. (See sta 02129000)
- 02138519 LAKE JAMES.--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 (3.4 km) northeast of Bridgewater and 279 mi (449 km) upstream from mouth of Wateree River. DRAINAGE AREA, 380 mi² (980 km²), approximately. PERIOD OF RECORD, March 1920 to September 1960 (month-end contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage with self-synchronous motor to indicator in power house. Staff gage at Catawba River Dam is also read when lake elevation drops below 1,160 ft or 353.6 m (60 ft or 18.3 m, gage datum) and lake becomes two separate reservoirs. Datum of gage is 1,100.00 ft (335.280 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).
- Lake (generally known as Bridgewater Reservoir), used for hydroelectric power development, was first put in operation May 5, 1919. The total capacity at elevation 100.0 ft (30.48 m) gage datum (crest of spillway) is 12,581,800,000 ft³ (356,317,000 m³) and usable capacity is 7,943,700,000 ft³ (224,970,000 m³) between elevations (gage datum) 65 ft (19.8 m) and 100 ft (30.5 m). Records furnished by Duke Power Co.
- 02141490 RHODHISS LAKE.--Lat 35°46'54", long 81°26'42", Caldwell County, Hydrologic Unit 03030101, at Rhodhiss Dam on Catawba River, 0.8 mi (1.3 km) west of Rhodhiss, 1.8 mi (2.9 km) south of Granite Falls, and 243 mi (391 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,090 mi² (2,820 km²), approximately. PERIOD OF RECORD, September 1935 to September 1960 (month-end 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 (272.83 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).
- Lake, used for hydroelectric power development, was first put in operation Feb. 18, 1925. Total capacity is 3,188,592,000 ft³ (90,300,900 m³) and usable capacity is 1,717,000,000 ft³ (48,630,000 m³) between elevations (gage datum) 85.0 ft (25.91 m) and 100.0 ft or 30.48 m (crest of spillway). Records furnished by Duke Power Co.
- 02141961 LAKE HICKORY.--Lat 35°49'28", long 81°11'28", Alexander County, Hydrologic Unit 03050101, at Oxford Dam on Catawba River, 2 mi (3 km) upstream from Lower Little River, 7 mi (11 km) south of Taylorsville, and 226 mi (364 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,310 mi² (3,390 km²), approximately. PERIOD OF RECORD, September 1935 to September 1960 (month-end 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 (254.51 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).
- 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 ft³ (157,260,500 m³). Sept. 30, 1935 to Sept. 30, 1957, the usable capacity considered as 2,277,970,200 ft³ (64,512,120 m³) between elevations (gage datum) 85.0 ft (25.91 m) and 100.0 ft (30.48 m) (top of flood gates). From Apr. 30, 1928 to Aug. 31, 1935, and Oct. 31, 1957, to Sept. 30, 1964, usable capacity considered as 3,378,400,000 ft³ (95,676,300 m³) between elevations 75.0 ft (22.86 m) and 100.0 ft or 30.48 m (top of flood gates) from Oct. 1, 1964 to present, usable capacity considered as 2,277,800,000 ft³ (64,507,000 m³) between elevations (gage datum) 85.0 ft (25.91 m) and 100.0 ft or 30.48 m (top of flood gates). Records furnished by Duke Power Co.
- 02142441 LOOKOUT SHOALS LAKE.--Lat 35°45'57", long 81°05'36", Catawba County, Hydrologic Unit 03050101, at Lookout Shoals Dam on Catawba River, 4 mi (6 km) upstream from bridge on U.S. Highways 64 and 70, 4.2 mi (6.8 km) north of Catawba, and 216 mi (348 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,450 mi² (3,760 km²), approximately. PERIOD OF RECORD, December 1915 to September 1960 (month-end 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 (224.97 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).
- Lake, used for hydroelectric power development, was first put in operation Dec. 2, 1915. Total capacity was originally 1,355,190,000 ft³ (38,379,000 m³). Capacity has been reduced by silting. Prior to October 1957 the usable capacity considered as 473,980,000 ft³ (13,423,000 m³) and October 1957 to Sept. 30, 1964, as 388,300,000 ft³ (11,000,000 m³) between elevations (gage datum) 90.0 ft (27.43 m) and 100.0 ft (30.48 m) (crest of spillway). From Oct. 1, 1964 to present, usable capacity considered as 208,200,000 ft³ (5,896,000 m³) between elevations (gage datum) 95.0 ft (28.96 m) and 100.0 ft or 30.48 m (crest of spillway). Flood of July 16, 1916, washed out an earth dike. Records furnished by Duke Power Co.
- 02142647 LAKE NORMAN.--Lat 35°26'05", long 80°57'28", Mecklenburg County, Hydrologic Unit 03050101, at Cowans Ford Dam on Catawba River, 0.8 mi (1.3 km) upstream from Derr Creek, 7.8 mi (12.6 km) southwest of Davidson, and 182 mi (293 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,790 mi² (4,640 km²), 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 (201.2 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).
- Lake, used for hydroelectric power development began filling in March 1962. Total capacity is 47,586,200,000 ft³ (1,347,640,000 m³) and usable capacity is 26,910,400,000 ft³ (762,102,500 m³) between elevations (gage datum) 75.0 ft (22.86 m) and 100 ft or 30.5 m (top of flood gates). Records furnished by Duke Power Co.

Lakes and Reservoirs in South Atlantic Slope basin--Continued

02142676 MOUNTAIN ISLAND LAKE.--Lat 35°20'03", long 80°59'12", Gaston County, Hydrologic Unit 0305010, at Mountain Island Dam on Catawba River, 1.5 mi (2.4 km) downstream from bridge on State Highway 16, 3 mi (5 km) northeast of Mount Holly, and 167 mi (269 km) upstream from mouth of Wateree River. DRAINAGE AREA, 1,860 mi² (4,820 km²), approximately. PERIOD OF RECORD, December 1923 to September 1960 (month-end contents only, published in WSP 1723), October 1960 to current year. GAGE, float gage, indicator and staff gage at dam. Datum of gage is 547.5 ft (166.88 m) National Geodetic Vertical Datum of 1929 (levels by Duke Power Co.).

Lake, used for hydroelectric power development, was first put in operation Dec. 16, 1923. Total capacity is 2,495,988,000 ft³ (70,686,380 m³). Prior to October 1964 usable capacity is considered 1,132,000,000 ft³ (32,060,000 m³) between elevations (gage datum) 90.0 ft (27.43 m) and 100.0 ft or 30.48 m (crest of spillway) October 1964 to present considered as 845,000,000 ft³ (23,900,000 m³) between elevations (gage datum), 93.0 ft (28.35 m) and 100.0 ft or 30.48 m (crest of spillway). Records furnished by Duke Power Co.

OTHER RESERVOIRS.--The following smaller reservoirs in the South Atlantic Slope basins are described below, but records of contents are not published herein:

02077229 LAKE ROXBORO.--Lat 79°08'26", long 36°20'55", Caswell County, Hydrologic Unit 03010104, part of Roxboro's municipal water supply on South Hyco Creek near Roseville. DRAINAGE AREA, 23.2 mi² (60.1 km²). Total capacity 380,991,000 ft³ (10,790,000 m³). Dam completed and filled April 1978. (See station 02077250).

02077303 ROXBORO STEAM-ELECTRIC GENERATING PLANT AFTERBAY RESERVOIR.--Lat 36°31'51", long 78°59'50", Person County, Hydrologic Unit 03010104, cooling water reservoir for Carolina Power and Light Company Plant, on Hyco River near McGehees Mill. DRAINAGE AREA, 196 mi² (508 km²). Total capacity is approximately 522,720,000 ft³ (144,803,000 m³) with a surface area of about 650 acres (260 ha) at a normal elevation of 385 ft (117 m), National Geodetic Vertical Datum of 1929. Dam completed May 30, 1974, and storage began Apr. 26, 1974; water in reservoir first reached normal water level elevation of 385 ft (117 m) on Aug. 22, 1974.

02086490 LAKE MICHIE.--Lat 36°09'02", long 79°49'49", Durham County, Hydrologic Unit 03020201, at Durham municipal dam on Flat River, 3 mi (5 km) southeast of Bahama, and 5 mi (8 km) upstream from confluence with Eno River. DRAINAGE AREA, 170 mi² (440 km²) approximately. PERIOD OF RECORD, October 1962 to April 1975.

Lake, used for municipal water supply, began filling in May 1926 and reached spillway elevation Dec. 26, 1926. Total capacity is 618,000,000 ft³ (17,500,000 m³) between elevations (gage datum) 300.0 ft (91.44 m) and 341 ft or 103.9 m (crest of spillway). (see sta 02087000)

02087339 LAKE JOHNSON.--Lat 35°45'44", long 78°42'17", Wake County, Hydrologic Unit 03020201, part of Raleigh's municipal water supply, on Walnut Creek near Raleigh. DRAINAGE AREA, 7.05 mi² (18.26 km²). Total capacity is 98,900,000 ft³ (2,800,000 m³). Dam was completed in 1923 and spillway raised to its present elevation in 1951. (See sta 02087500)

02087344 LAKE RALEIGH.--Lat 35°45'56", long 78°40'38", Wake County, Hydrologic Unit 03020201, part of Raleigh's municipal water supply, on Walnut Creek near Raleigh. DRAINAGE AREA, 12.3 mi² (31.9 km²). Total capacity is 13,400,000 ft³ (379,000 m³). Dam completed in 1914 and raised to its present elevation in 1919. (See sta 02087500)

02087588 LAKE WHEELER.--Lat 35°41'30", long 78°41'31", Wake County, Hydrologic Unit 03020201, part of Raleigh's municipal water supply on Swift Creek near Raleigh. DRAINAGE AREA, 38 mi² (98 km²), approximately. Total capacity is 267,400,000 ft³ (7,573,000 m³). Dam completed and storage began in 1956. (See sta 02087500)

02087701 LAKE BENSON.--Lat 35°39'44", long 78°36'42", Wake County, Hydrologic Unit 03020201, part of Raleigh's municipal water supply on Swift Creek near Garner. DRAINAGE AREA, 67 mi² (170 km²), approximately. Total capacity is 133,700,000 ft³ (3,786,000 m³). Lake, formerly known as Rand's Mill, acquired by city of Raleigh in 1927 and spillway raised to its present elevation in 1954. (See sta 02087500)

02090370 BUCKHORN RESERVOIR.--Lat 35°41'22", long 78°07'33", Wilson County, Hydrologic Unit 03020203, part of Wilson's municipal water supply on Contentnea Creek near Lucama. DRAINAGE AREA, 155 mi² (401 km²). Total capacity 133,680,000 ft³ (3,786,000 m³). Dam completed Nov. 12, 1976 and reservoir filled Dec. 1, 1976. (See sta 02090380).

02093981 LAKE HIGGINS.--Lat 36°10'11", long 79°52'49", Guilford County, Hydrologic Unit 03030002, part of Greensboro's municipal water supply, on Brush Creek near Greensboro. DRAINAGE AREA, 12 mi² (31 km²), approximately. Total capacity is 107,000,000 ft³ (3,030,000 m³). Reservoir first filled Mar. 1, 1957. (See sta 02094500)

02094117 LAKE BRANDT.--Lat 36°10'20", long 79°50'20", Guilford County, Hydrologic Unit 03030002, part of Greensboro's municipal water supply, on Reedy Fork and Horsepen Creek near Greensboro. DRAINAGE AREA, 70.0 mi² (181.3 km²), approximately. Total capacity is 294,000,000 ft³ (8,326,000 m³). Dam completed February 1923 and raised to present level 1959-60. Reservoir first filled at present level on Oct. 8, 1960. (See sta 02094500)

02094305 LAKE TOWNSEND.--Lat 36°11'25", long 79°43'57", Guilford County, Hydrologic Unit 03030002, part of Greensboro's municipal water supply, on Reedy Fork near Greensboro. DRAINAGE AREA, 105 mi² (272 km²). Total capacity is 869,000,000 ft³ (24,600,000 m³). Dam completed Oct. 18, 1968, and reservoir first filled Aug. 17, 1969. (See sta 02094500)

02096003 LAKE BURLINGTON.--Lat 36°10'25", long 79°24'53", Alamance County, Hydrologic Unit 03030002, part of Burlington's municipal water supply, on Stony Creek near Burlington. DRAINAGE AREA, 44 mi² (114 km²), approximately. Prior to October 1971 published as "Stony Creek Reservoir". Total capacity is 427,800,000 ft³ (12,120,000 m³). Dam completed August 1960 and reservoir first filled Jan. 28, 1961. (See sta 02096500)

02096432 STONY CREEK RESERVOIR.--Lat 36°07'37", long 79°24'20", Alamance County, Hydrologic Unit 03030002, part of Burlington's water supply on Stony Creek near Burlington. DRAINAGE AREA, 95.0 mi² (246.0 km²), approximately. Prior to October 1971 published as "Lake Burlington". Total capacity is 64,900,000 ft³ (1,840,000 m³). Dam completed and reservoir filled in 1928. (See sta 02096500)

02098495 OAK HOLLOW RESERVOIR.--Lat 36°00'42", long 79°59'11", Guilford County, Hydrologic Unit 03030003, part of High Point's municipal water supply, on West Fork Deep River, 1.8 mi (2.9 km) southwest of Deep River. DRAINAGE AREA, 32 mi² (83 km²), approximately. Total capacity is 468,000,000 ft³ (13,300,000 m³). Dead storage (non-withdrawal) is minor. Total surface area, about 725 acres (293 ha). Dam completed and storage began in May 1970. Reservoir first filled Dec. 24, 1970. (See sta 02099500)

SOUTH ATLANTIC SLOPE BASIN

407

Lakes and Reservoirs in South Atlantic Slope basin--Continued

- 02099096 HIGH POINT MUNICIPAL LAKE.--Lat 35°59'43", long 79°56'42", Guilford County, Hydrologic Unit 03030003, High Point's municipal water supply, on Deep River near High Point. DRAINAGE AREA, 61.4 mi² (159 m²). Total capacity is 220,588,000 ft³ (6,247,050 m³). Dam completed in 1926 and reservoir first filled in 1927. (See sta 02099500)
- 02102178 BUCKHORN RESERVOIR.--Lat 35°31'35", long 78°59'22", Chatham County, Hydrologic Unit 03030004, on Cape Fear River near Corinth. DRAINAGE AREA, 3,200 mi² (8,290 km²), approximately. Usable capacity is 69,700,000 ft³ (19,700,000 m³). Completed and filled in 1908. Hydroelectric power operation stopped Dec. 31, 1962.
- 02121461 LEXINGTON-THOMASVILLE RESERVOIR.--Lat 35°51'54", long 80°11'41", Davidson County, Hydrologic Unit 03050103, Lexington and Thomasville's municipal water supply on Abbotts Creek near Lexington. Drainage area, 70.3 mi² (182 km²). Total capacity is 284,100,000 ft³ (8,046,000 m³) of which 281,400,000 ft³ (7,969,000 m³) is usable. Dam completed Aug. 8, 1957, and reservoir first filled Nov. 23, 1957.
- 02184122 LAKE TOXAWAY.--Lat 35°07'27", long 82°55'56", Transylvania County, Hydrologic Unit 03060101, recreation lake on Toxaway River at town of Lake Toxaway. DRAINAGE AREA, 7.79 mi² (20.18 km²). Total surface area, about 640 acres (359 ha). Lake reached spillway elevation September 1961.

MONTHEND ELEVATIONS AND CONTENTS AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Combined contents (million cubic feet)	Change in contents (million cubic feet)	Gage height (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)	Elevation (feet)	Contents (million cubic feet)	Change in contents (million cubic feet)
02067800 & 02067820 Talbot & Townes Reservoirs												
02077280 Hyco Lake												
02079964 Lake Gaston												
02080100 Roanoke Rapids Lake												
Sept. 30.....		332.4	-	10.22	3327	-	199.28	18975	-	127.6	2564	-
Oct. 31.....		326.7	-5.7	10.05	3300	-27	199.59	19245	+270	127.6	2564	0
Nov. 30.....		326.9	+0.2	10.53	3375	+75	199.71	19350	+105	130.1	2990	+426
Dec. 31.....		304.7	-22.2	10.58	3383	+8	199.79	18419	-931	129.0	2790	-200
CAL YR 1978		-	-47.2		-	+28		-	-486		-	+110
Jan. 31.....		340.6	+35.9	10.67	3397	+14	199.64	19289	+870	131.4	3234	+444
Feb. 28.....		380.4	+39.8	11.10	3466	+69	200.56	20090	+801	131.1	3180	-54
Mar. 31.....		374.8	-5.6	10.67	3397	-69	199.74	19376	-714	130.5	3062	-118
Apr. 30.....		360.4	-14.4	10.60	3386	-11	199.24	18940	-436	130.3	3026	-36
May 31.....		342.2	-18.2	10.54	3376	-10	199.82	19445	+505	129.6	2898	-128
June 30.....		347.3	+5.1	10.46	3364	-12	199.67	19315	-130	131.4	3234	+336
July 31.....		351.1	+3.8	10.42	3358	-6	199.43	19105	-210	131.4	3234	0
Aug. 31.....		321.3	-29.8	10.29	3338	-20	199.58	19236	+131	130.3	3026	-208
Sept. 30.....		387.5	+66.2	10.68	3399	+61	200.00	19602	+366	131.2	3198	+172
WTR YR 1979		-	+55.1		-	+72		-	+627		-	+634
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)	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)
02111391 W. Kerr Scott Reservoir												
02122400 High Rock Lake												
02122699 Tuckertown Reservoir												
02122844 Badin Lake												
Sept. 30.....	1028.55	1691	-	649.41	7774	-	595.31	1781	-	539.31	10077	-
Oct. 31.....	1023.55	1403	-288	644.61	5502	-2272	595.30	1780	-1	540.71	10404	+327
Nov. 30.....	1020.10	1220	-183	641.47	4325	-1177	595.34	1784	+4	539.66	10171	-233
Dec. 31.....	1023.15	1381	+161	646.41	6296	+1971	595.27	1777	-7	539.84	10194	+23
CAL YR 1978		-	-405		-	+794		-	-1		-	+163
Jan. 31.....	1029.95	1783	+402	653.32	10001	+3705	595.13	1762	-15	540.48	10357	+163
Feb. 28.....	1032.20	1951	+168	655.00	11090	+1089	595.97	1849	+87	541.00	10474	+117
Mar. 31.....	1030.00	1786	-165	654.45	10683	-407	595.98	1850	+1	541.10	10498	+24
Apr. 30.....	1030.00	1786	0	654.67	10879	+196	595.64	1815	-35	540.92	10451	-47
May 31.....	1030.20	1803	+17	651.77	9096	-1783	595.50	1801	-14	540.05	10241	-210
June 30.....	1030.00	1786	-17	652.67	9638	+542	595.25	1775	-26	540.00	10241	0
July 31.....	1030.25	1807	+21	652.56	9577	-61	595.52	1803	+28	540.45	10334	+93
Aug. 31.....	1030.05	1790	-17	651.01	8644	-933	595.28	1778	-25	539.76	10194	-140
Sept. 30.....	1030.90	1864	+74	655.00	11090	+2446	595.92	1844	+66	541.07	10498	+304
WTR YR 1979		-	+173		-	+3316		-	+63		-	+421

SOUTH ATLANTIC SLOPE BASIN

Lakes and Reservoirs in South Atlantic Slope basin--Continued

MONTHEND ELEVATIONS AND CONTENTS AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	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)
	02123736 Lake Tillery			02128800 Blewett Falls Lake			02138519 Lake James			02141490 Rhodhiss Lake		
Sept. 30.....	239.4	5903	-	135.2	1460	-	95.2	11277	-	97.9	1409	-
Oct. 31.....	239.1	5837	-66	136.8	1620	+160	92.4	10564	-713	97.5	1353	-56
Nov. 30.....	238.0	5600	-237	135.7	1510	-110	90.2	10028	-536	97.1	1298	-55
Dec. 31.....	238.8	5772	+172	138.1	1756	+246	87.9	9490	-538	97.5	1353	+55
CAL YR 1978		-	+22		-	+166		-	-326		-	-14
Jan. 31.....	238.8	5772	0	137.8	1724	-32	90.6	10124	+634	96.6	1230	-123
Feb. 28.....	239.6	5947	+175	139.3	1880	+156	95.9	11460	+1336	99.0	1567	+337
Mar. 31.....	238.6	5729	-218	136.7	1610	-270	99.3	12385	+925	98.7	1523	-44
Apr. 30.....	239.3	5881	+152	137.1	1650	+40	99.4	12413	+28	98.0	1423	-100
May 31.....	239.3	5881	0	136.9	1630	-20	96.4	11593	-820	96.0	1150	-273
June 30.....	239.0	5815	-66	133.6	1300	-330	97.5	11889	+296	97.1	1298	+148
July 31.....	238.6	5729	-86	137.7	1714	+414	97.5	11889	0	96.1	1163	-135
Aug. 31.....	239.4	5903	+174	136.6	1600	-114	97.2	11808	-81	96.5	1216	+53
Sept. 30.....	237.3	5450	-453	136.3	1570	-30	101.5	13012	+1204	100.9	1855	+639
WTR YR 1979		-	-453		-	+110		-	+1735		-	+446
	02141961 Lake Hickory			02142441 Lookout Shoals Lake			02142647 Lake Norman			02142676 Mountain Island Lake		
Sept. 30.....	96.7	1708	-	98.0	121	-	95.1	41010	-	95.9	318	-
Oct. 31.....	96.4	1658	-50	97.8	113	-8	94.4	40130	-880	95.6	284	-34
Nov. 30.....	96.4	1658	0	97.2	88.0	-25	94.0	39630	-500	95.9	318	+34
Dec. 31.....	96.8	1724	+66	98.1	126	+38	91.7	36860	-2770	95.8	307	-11
CAL YR 1978		-	-135		-	+17		-	-1180		-	+23
Jan. 31.....	95.9	1576	-148	96.4	55.3	-71	93.5	39020	+2160	95.8	307	0
Feb. 28.....	99.5	2189	+613	98.7	151	+96	97.3	43880	+4860	98.0	575	+268
Mar. 31.....	99.8	2242	+53	99.7	195	+44	99.8	47310	+3430	95.8	307	-268
Apr. 30.....	98.8	2066	-176	99.3	177	-18	99.8	47310	0	96.0	330	+23
May 31.....	97.2	1791	-275	98.1	126	-51	98.4	45370	-1940	96.0	330	0
June 30.....	97.5	1842	+51	97.5	100	-26	98.4	45370	0	95.8	307	-23
July 31.....	96.9	1741	-101	97.8	113	+13	97.7	44420	-950	95.6	284	-23
Aug. 31.....	96.8	1724	-17	98.1	126	+13	96.2	42420	-2000	95.5	272	-12
Sept. 30.....	99.2	2136	+412	102.0	300	+174	99.3	46610	+4190	96.5	390	+118
WTR YR 1979		-	+428		-	+179		-	+5600		-	+72

KANAWHA RIVER BASIN

03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, N. C.

LOCATION.--Lat 36°23'40", long 81°24'27", Ashe County, Hydrologic Unit 05050001, on right bank 600 ft (183 m) upstream from bridge on State Highways 16 and 88, 0.2 mi (0.3 km) downstream from Bear Creek, and 4 mi (6.4 km) southeast of Jefferson.

DRAINAGE AREA.--207 mi² (536 km²).

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).

GAGE.--Water-stage recorder. Datum of gage is 2,657.04 ft (809.866 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1934, nonrecording gage on bridge 400 ft (122 m) downstream at same datum. Oct. 14, 1934, to Mar. 25, 1935, nonrecording gage at present site and datum.

REMARKS.--Records good, except those for period Dec. 14 to Feb. 22, which are fair to poor. Suspended-sediment records for the current year are published on page 410 of this report.

AVERAGE DISCHARGE.--55 years, 430 ft³/s (12.18 m³/s), 28.21 in/yr (717 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,800 ft³/s (1,500 m³/s) Aug. 14, 1940, gage height, 22.50 ft (6.858 m) from rating curve extended above 5,100 ft³/s (144 m³/s) on basis of slope-area measurement of peak flow; minimum, 52 ft³/s (1.47 m³/s) Dec. 24, 1943, result of freezeup; minimum daily, 65 ft³/s (1.84 m³/s) Sept. 9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 15, 1916 reached a stage of 18.0 ft (5.49 m), from floodmarks witnessed by local resident, discharge, 35,200 ft³/s (997 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft³/s (74 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1400	2610 73.9	5.34 1.628	Sept. 5	1830	3080 87.2	5.74 1.750
Feb. 26	0330	3720 105	6.24 1.902	Sept. 22	0300	*9660 274	*9.52 2.902
Mar. 5	0630	9590 272	9.49 2.893	Sept. 29	0030	3170 89.8	5.82 1.774
Mar. 24	0900	7050 200	8.29 2.527				

Minimum discharge, 129 ft³/s (3.65 m³/s) Dec. 29, result of freezeup; minimum daily, 135 ft³/s (3.82 m³/s) Nov. 6.

DISCHARGE, 14 CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	140	254	447	375	720	706	635	565	389	576	660
2	166	139	195	1860	355	643	684	599	516	360	532	700
3	161	141	179	976	380	591	859	579	654	346	418	472
4	156	139	206	535	370	3190	1230	600	658	347	381	459
5	155	136	390	420	350	7390	1100	602	531	480	361	1470
6	157	135	347	370	375	2340	872	553	482	391	350	2270
7	152	136	235	379	340	1410	760	524	456	357	340	1010
8	146	143	204	565	365	1100	710	506	611	367	332	706
9	147	148	323	415	380	987	727	521	499	360	323	577
10	149	144	560	340	350	823	714	575	547	499	316	510
11	148	139	311	325	375	788	632	575	494	595	323	461
12	146	140	253	340	365	696	637	575	452	434	492	426
13	148	141	227	323	390	635	1300	767	412	446	378	581
14	175	139	205	337	400	604	1040	732	395	399	328	1900
15	195	142	165	280	550	586	815	606	386	383	311	1150
16	161	150	185	275	715	526	728	556	400	363	301	774
17	154	169	210	284	615	505	674	518	1180	345	293	653
18	152	201	185	264	340	489	633	496	826	353	292	581
19	149	201	150	259	472	603	478	610	441	286	534	
20	146	162	197	347	370	457	579	475	531	557	279	492
21	143	152	214	1220	460	443	555	565	503	1430	290	1370
22	145	145	225	804	605	429	541	550	506	1280	317	6970
23	145	161	198	527	780	773	537	586	524	780	366	1870
24	145	230	291	485	1270	5940	519	713	460	667	401	1300
25	142	229	315	451	2400	2390	509	638	449	606	404	1060
26	140	172	287	320	2700	1380	1340	571	419	545	342	915
27	142	179	232	350	1220	1070	1340	531	396	516	371	838
28	142	206	195	380	871	950	893	543	386	445	322	1660
29	141	205	165	400	---	446	763	519	382	455	324	2180
30	139	317	145	355	---	778	688	484	409	435	302	1810
31	146	---	310	355	---	733	---	590	---	430	287	---
TOTAL	4687	4981	7554	14988	18335	40784	23688	17762	15639	15851	10938	36359
MEAN	151	166	244	483	655	1316	790	573	521	511	353	1212
MAX	195	317	560	1860	2700	7390	1340	767	1180	1430	576	6970
MIN	139	135	155	259	270	429	504	475	382	345	279	426
CFS	4.73	4.80	1.15	2.33	3.15	6.36	3.82	2.77	2.52	2.47	1.71	5.86
IN	4.94	4.90	1.35	2.69	3.39	7.33	4.26	3.19	2.81	2.85	1.97	6.53
CAL YR 1978	TOTAL	145579	MEAN	399	MAX	4283	MIN	135	CFS	1.93	IN	26.16
WTR YR 1979	TOTAL	211567	MEAN	536	MAX	7390	MIN	135	CFS	2.80	IN	38.02

KANAWHA RIVER BASIN

03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDIMENT, SUS- PENDED (MG/L)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED.	SED.	SED.	SED.	SED.	SED.	SED.	SED.
					SUSP.	SUSP.	SUSP.	SUSP.	SUSP.	SUSP.	SUSP.	SUSP.
					FALL DIAM. % FINER THAN .002 MM	FALL DIAM. % FINER THAN .004 MM	FALL DIAM. % FINER THAN .008 MM	FALL DIAM. % FINER THAN .016 MM	FALL DIAM. % FINER THAN .031 MM	FALL DIAM. % FINER THAN .062 MM	FALL DIAM. % FINER THAN .125 MM	FALL DIAM. % FINER THAN .250 MM
OCT												
12...	1230	151	1	.41	--	--	--	--	--	--	--	--
JAN												
17...	1510	310	10	3.4	--	--	--	--	--	--	--	--
MAR												
04...	1400	3400	1150	10500	--	--	--	--	--	--	--	--
04...	1720	5820	1310	20600	--	--	--	--	--	--	--	--
APR												
04...	1225	1130	107	333	--	--	--	--	--	--	--	--
SEP												
05...	1610	2350	597	3790	--	--	--	--	--	--	--	--
05...	1905	3050	798	6570	--	--	--	--	--	--	--	--
05...	2030	2900	723	5660	--	--	--	--	--	--	--	--
06...	1355	2020	285	1550	--	--	--	--	--	--	--	--
07...	0557	886	74	177	--	--	--	--	--	--	--	--
14...	1315	2230	333	2010	--	--	--	--	--	--	--	--
22...	0300	9610	1840	47700	20	25	29	40	45	51	59	78

03439000 FRENCH BROAD RIVER AT ROSMAN, N. C.

LOCATION.--Lat 35°08'32", long 82°49'28", Transylvania County, Hydrologic Unit 06010105, on left bank at upstream side of bridge on U.S. Highway 178 at Rosman, 1.0 mi (1.6 km) upstream from East Fork, and at mile 216.4 (348.2 km).

DRAINAGE AREA.--67.9 mi² (175.9 km²).

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 (662.583 m) National Geodetic Vertical Datum of 1929. Prior to June 30, 1909, nonrecording gage at site 500 ft (152 m) downstream at different datum. Jan. 1, 1936, to July 6, 1937, nonrecording gage at present site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 412 of this report.

AVERAGE DISCHARGE.--45 years (1907-8, 1935-79), 242 ft³/s (6.853 m³/s), 48.40 in/yr (1,229 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s (382 m³/s) Oct. 4, 1964, gage height, 14.95 ft (4.557 m); minimum, 23 ft³/s (0.65 m³/s) Jan. 3, 1940, gage height, 1.51 ft (0.460 m), result of freezeup; minimum daily, 37 ft³/s (1.05 m³/s) Sept. 25-28, Oct. 5, 6, 25, 26, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 13.9 ft (4.24 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 20	2230	2360 66.8	7.22 2.201	Mar. 23	1800	2540 71.9	7.52 2.292
Feb. 25	1415	2370 67.1	7.24 2.207	Sept. 21	2045	5800 164	11.24 3.426
Mar. 4	1130	*8630 244	*12.84 3.914				

Minimum discharge, 57 ft³/s (1.61 m³/s) Oct. 18, gage height, 1.63 ft (0.497 m), from regulation caused by road construction above gage; minimum daily, 70 ft³/s (1.98 m³/s) Nov. 12, 13, 14, 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	74	101	498	257	433	387	391	417	164	245	232
2	100	73	92	799	248	373	376	371	323	157	210	293
3	94	73	106	395	246	490	669	366	399	154	197	264
4	93	72	464	303	240	4550	741	361	324	151	189	238
5	89	72	418	265	230	2400	599	354	319	154	179	261
6	86	72	226	243	231	1330	507	269	295	154	172	228
7	85	72	176	558	244	1030	461	335	290	141	166	202
8	84	75	172	628	219	968	434	335	341	214	162	185
9	84	75	564	400	213	748	530	442	299	245	155	173
10	85	72	335	333	204	661	443	555	287	366	192	164
11	84	72	242	296	201	627	416	551	269	257	164	157
12	82	70	202	288	204	576	549	554	251	663	164	150
13	82	70	179	316	210	532	1520	618	240	444	146	255
14	82	70	162	287	207	524	458	549	233	249	142	844
15	79	70	149	257	224	477	717	462	227	253	134	350
16	80	70	145	243	262	452	616	415	225	233	135	279
17	79	181	140	233	249	430	555	343	224	209	132	256
18	80	196	130	223	258	416	512	361	212	200	130	237
19	80	96	127	213	236	398	480	345	206	197	127	220
20	80	84	125	816	219	333	454	346	211	245	125	205
21	79	80	131	968	271	376	432	417	205	560	134	1720
22	77	77	121	543	313	356	412	367	205	377	132	1420
23	76	94	117	434	619	1220	395	434	192	340	181	674
24	75	93	147	449	980	1230	382	487	187	317	192	519
25	76	81	159	369	1360	716	412	414	145	342	224	444
26	76	77	131	341	857	581	805	366	182	343	425	394
27	76	137	123	328	544	517	607	342	175	292	257	488
28	75	110	118	310	487	477	493	330	172	264	205	1030
29	75	117	116	292	---	449	445	310	170	241	162	756
30	74	122	174	281	---	423	415	298	178	221	198	626
31	74	---	313	276	---	401	---	355	---	243	226	---
TOTAL	2563	2697	5906	12185	10087	24388	16762	12631	7443	8601	5586	13271
MEAN	82.7	89.9	191	393	360	787	559	407	248	277	180	442
MAX	122	196	564	968	1360	4550	1520	618	417	663	425	1720
MIN	74	70	92	213	201	356	376	298	170	151	125	150
CFSM	1.22	1.32	2.81	5.79	5.30	11.6	8.23	5.99	3.65	4.08	2.65	6.51
IN	1.40	1.48	3.24	6.68	5.53	13.36	9.18	5.92	4.08	4.71	3.06	7.27
CAL YR 1978	TOTAL	76854	MEAN	211	MAX	1680	MIN	70	CFSM	3.11	IN	42.10
WTR YR 1979	TOTAL	122120	MEAN	335	MAX	4550	MIN	70	CFSM	4.93	IN	66.90

TENNESSEE RIVER BASIN

03439000 FRENCH BROAD RIVER AT ROSMAN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STRENGTH- FLOW- INSTANT- TENDOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
03...	1450	75	3	.77
23...	1200	79	21	4.5
20...				
07...	1130	76	5	1.0
05...				
04...	0940	7950	2080	44700
04...	1015	8740	1240	29300
04...	1133	8950	894	21600
04...	1240	7770	654	13700
04...	1515	8820	422	7770
04...	1615	8920	384	5100

LOCATION.--Lat 35°16'23", long 82°42'21", Transylvania County, Hydrologic Unit 06010105, on right bank 150 ft (46 m) upstream from bridge on State Highway 280, 2.1 mi (3.4 km) downstream from Avery Creek, 3.3 mi (5.3 km) northeast of Brevard, and at mile 2.2 (3.5 km).

GAGE.--Water-stage recorder. Datum of gage is 2,115.13 ft (644.692 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to May 17, 1934, nonrecording gage, at site 50 ft (15 m) downstream at same datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft³/s (238 m³/s) Aug. 15, 1928, gage height, 11.8 ft (3.597 m); minimum, 13 ft³/s (0.37 m³/s) Oct. 11, 1954, gage height, 0.31 ft (0.094 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Jan. 20	2145	1580	44.7	4.36	1.329	Mar. 23	1745	1710	48.4	4.55	1.387
Feb. 25	1345	1470	41.6	4.19	1.277	Sept. 14	0130	1750	49.6	4.61	1.405
Mar. 4	0945	*3870	110	*7.40	2.256	Sept. 21	2130	3300	93.5	6.68	2.036

Minimum discharge, 29 ft³/s (0.82 m³/s) Oct. 30, 31, Nov. 3, 4, 5, 6, 7, gage height, 0.46 ft (0.140 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	30	45	250	124	256	199	219	164	95	105	134
2	41	30	40	471	120	228	196	206	202	90	96	155
3	38	30	49	227	119	238	409	201	231	88	92	132
4	37	29	250	169	116	2190	448	213	185	86	88	118
5	36	29	254	137	110	1160	353	244	171	100	84	166
6	35	29	112	124	108	529	293	286	159	88	80	150
7	33	30	80	264	119	444	260	276	175	170	78	126
8	33	32	79	324	108	409	243	217	293	122	76	110
9	34	30	260	210	101	352	342	319	222	144	77	101
10	34	30	164	171	103	319	272	441	195	221	76	94
11	34	30	113	149	100	294	247	373	179	154	76	88
12	33	30	94	146	98	265	316	310	160	353	76	83
13	33	30	83	186	101	246	641	335	151	225	69	260
14	33	30	74	161	98	240	476	311	143	163	67	685
15	32	30	69	135	118	222	374	269	137	141	66	267
16	32	30	67	125	151	208	324	243	134	128	65	201
17	31	90	65	119	135	198	292	224	133	114	63	172
18	32	96	59	113	124	190	268	211	125	108	62	154
19	31	40	59	106	136	182	250	199	128	106	60	137
20	31	35	57	452	121	177	235	192	141	111	87	125
21	31	33	59	585	154	171	222	209	124	164	80	884
22	31	32	54	325	193	162	211	191	119	180	85	694
23	31	40	52	256	398	637	202	227	112	181	138	363
24	31	40	70	251	595	735	196	248	110	156	117	289
25	31	33	77	200	812	394	221	212	108	165	124	244
26	31	31	62	181	516	318	532	190	107	165	267	225
27	32	74	57	173	359	278	365	179	101	146	163	430
28	32	51	54	162	295	252	290	176	99	136	133	700
29	31	52	59	148	---	235	255	164	97	119	113	480
30	31	61	77	140	---	221	234	158	106	109	131	320
31	30	---	195	137	---	209	---	176	---	108	130	---
TOTAL	1040	1187	2889	6607	5632	12107	9206	7369	4511	4436	3024	8087
MEAN	33.5	39.6	93.2	213	201	391	307	238	150	143	97.5	270
MAX	55	96	260	585	812	2190	681	441	293	353	267	884
MIN	30	29	40	106	98	162	196	158	97	86	60	83
CFNS4	.83	.98	2.31	5.27	4.98	9.68	7.60	5.89	3.71	3.54	2.41	6.68
IN.	.96	1.09	2.66	6.08	5.19	11.15	8.48	6.79	4.15	4.08	2.78	7.44

CAL YR 1978	TOTAL	40987	MEAN	112	MAX	983	MIN	29	CFSM	2.77	IN	37.74
WTR YR 1979	TOTAL	66095	MEAN	181	MAX	2190	MIN	29	CFSM	4.48	IN	60.86

TENNESSEE RIVER BASIN

03441000 DAVIDSON RIVER NEAR BREVARD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
04...	1115	36	1	.10
20...	1325	32	1	.09
DEC				
11...	1550	102	1	.28
MAR				
04...	1330	3190	326	2810
04...	1600	2690	222	1560

TENNESSEE RIVER BASIN

415

03441440 LITTLE RIVER ABOVE HIGH FALLS, NEAR CEDAR MOUNTAIN, N. C.

LOCATION.--Lat 35°11'32", long 82°36'49", Transylvania County, Hydrologic Unit 06010105, on left bank 100 ft (30.5 m) upstream from High Falls, 0.2 mi (0.3 km) upstream from Grassy Creek, 1.0 mi (1.6 km) downstream from Reason-over Creek, 3.8 mi (6.1 km) northeast of Cedar Mountain, and at mile 7.8 (12.6 km).

DRAINAGE AREA.--26.8 mi² (69.4 km²).

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,513.27 ft (766.045 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good. E. I. du Pont de Nemours and Company plant 0.5 mi (0.8 km) above gage diverted about 0.96 ft³/s (0.027 m³/s) for industrial use. Since 1969, more than 7.82 mi² (20.25 km²) of total drainage affected by occasional filling and/or draining of recreational lakes on tributaries upstream.

AVERAGE DISCHARGE.--17 years, 112 ft³/s (3.172 m³/s), 56.75 in/yr (1,441 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,600 ft³/s (159 m³/s) Oct. 4, 1964, gage height, 7.30 ft (2.225 m); minimum, 13 ft³/s (0.37 m³/s) Oct. 7, 1970, gage height, 1.23 ft (0.375 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0115	932 26.4	3.39 1.033	Apr. 13	1700	818 23.2	3.23 0.984
Feb. 25	1945	1020 28.9	3.52 1.073	June 8	0730	1250 35.4	3.81 1.161
Mar. 4	1715	*3630 103	*6.00 1.829	Sept. 22	0345	1020 28.9	3.51 1.070
Mar. 23	2330	939 26.6	3.40 1.036				

Minimum discharge, 25 ft³/s (0.71 m³/s) Nov. 3, 4, gage height, 1.30 ft (0.396 m).

DISCHARGE, IN CUBIC FEET PER SECOND, AT HIGH FALLS, LITTLE RIVER, OCTOBER 1962 TO SEPTEMBER 1979
WATER VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	26	50	211	120	230	160	158	194	49	74	205
2	43	27	40	463	115	221	150	154	171	89	66	148
3	37	26	50	235	115	226	243	150	164	88	63	126
4	34	26	200	172	112	2010	335	151	156	74	69	115
5	33	26	240	139	110	1250	262	145	141	79	55	140
6	31	28	140	125	110	57	210	137	129	97	53	122
7	30	29	90	274	120	415	190	124	137	174	50	102
8	29	28	80	407	115	356	178	124	132	157	44	91
9	29	27	300	262	100	290	214	144	334	120	48	77
10	29	28	170	210	95	230	181	183	230	171	45	60
11	29	26	120	175	84	254	157	282	190	161	48	58
12	28	26	95	153	85	234	196	230	170	192	48	53
13	28	27	55	166	92	218	710	264	150	141	44	95
14	30	27	77	156	99	145	307	230	140	146	43	160
15	28	27	70	135	93	141	320	184	130	117	42	101
16	27	27	65	125	111	177	276	164	125	123	42	82
17	27	47	65	119	110	174	226	162	125	114	41	74
18	27	90	60	115	106	171	144	152	120	111	55	70
19	26	47	64	107	131	164	141	151	126	110	56	65
20	26	41	55	341	110	151	174	144	117	104	61	61
21	26	39	58	736	123	151	166	172	109	129	60	340
22	26	35	53	350	151	145	145	154	110	112	59	710
23	26	33	49	262	338	434	148	297	101	103	54	264
24	27	37	61	290	514	573	145	390	103	100	67	187
25	26	35	74	230	738	334	156	303	105	104	59	160
26	29	34	67	200	577	234	415	254	105	95	151	141
27	30	70	62	150	311	214	294	210	102	87	78	165
28	30	60	60	150	270	202	230	144	86	88	68	331
29	27	30	55	140	---	142	212	154	89	76	59	552
30	27	60	76	130	---	177	174	154	84	68	79	412
31	27	---	160	125	---	157	---	157	---	79	93	---
TOTAL	930	1114	2415	6903	5151	10677	7207	5473	4980	3541	1874	5267
MEAN	30.0	37.1	44.0	223	184	344	240	143	166	114	60.5	176
MAX	58	90	300	736	738	2010	710	380	432	192	151	710
MIN	26	26	40	107	84	145	145	124	86	68	41	53
CFSM	1.12	1.38	3.51	8.32	6.87	12.8	8.46	7.20	6.19	4.25	2.26	6.57
IN.	1.29	1.55	4.05	9.56	7.15	14.92	10.00	1.29	6.91	4.91	2.60	7.31
CAL YR 1978 TOTAL	32802	MEAN	89.9	MAX	1160	MIN	26	CFSM	3.35	IN	45.53	
WTR YR 1979 TOTAL	56532	MEAN	155	MAX	2010	MIN	26	CFSM	5.78	IN	78.47	

03443000 FRENCH BROAD RIVER AT BLANTYRE, N. C.

LOCATION.--Lat 35°17'56", long 82°37'27", Transylvania County, Hydrologic Unit 06010105, on left bank 40 ft (12 m) upstream from bridge on Secondary Road 1503, 700 ft (213 m) east of railroad at Blantyre, 3.5 mi (5.6 km) downstream from Little River, and at mile 183.7 (295.6 km).

DRAINAGE AREA.--296 mi² (767 km²).

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 (627.986 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to July 5, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good, except those above 2,600 ft³/s (73.6 m³/s), which are fair. Considerable diurnal fluctuation at low flow caused by powerplant about 8 mi (13 km) above station. Suspended-sediment records for the current year are published on page 417 of this report.

AVERAGE DISCHARGE.--59 years, 998 ft³/s (28.26 m³/s), 45.79 in/yr (1,163 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) Oct. 5, 1964, gage height, 25.50 ft (7.772 m), from floodmarks; minimum, 119 ft³/s (3.37 m³/s) Oct. 1, 1954, gage height, 2.36 ft (0.719 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, 27.1 ft (8.26 m) July 16, 1916, from floodmarks (from studies by Tennessee Valley Authority).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,300 ft³/s (120 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	2230	5350 152	17.55 5.349	Mar. 24	2315	5880 167	18.07 5.508
Feb. 26	0515	6110 173	18.27 5.569	Apr. 14	1530	5340 151	17.54 5.346
Mar. 5	1015	*15500 439	*22.01 6.709	Sept. 23	1200	6260 177	18.39 5.605

Minimum discharge, 269 ft³/s (7.62 m³/s) Oct. 30, gage height, 4.27 ft (1.301 m); minimum daily, 272 ft³/s (7.70 m³/s) Oct. 22, 29.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	417	342	514	1330	1120	2110	1740	1670	1740	783	991	1170
2	415	341	481	3670	1080	1820	1670	1580	1530	744	867	1150
3	418	313	455	3090	1040	1630	2430	1530	1670	726	812	1060
4	394	294	1540	1570	1020	5400	3520	1510	1510	717	769	1020
5	384	295	3000	1230	904	13300	3510	1500	1420	751	737	1120
6	380	294	1530	1100	957	6570	2560	1650	1340	737	712	1130
7	371	293	954	1690	1050	5230	2050	1450	1250	1030	678	954
8	355	300	553	3510	977	4320	1870	1400	2580	1310	689	870
9	341	302	1400	2510	935	3520	2230	1690	1960	949	709	815
10	333	297	2270	1620	886	2920	2050	2670	1570	1400	685	772
11	333	294	1240	1360	880	2630	1790	2460	1530	1300	621	746
12	329	288	954	1240	831	2370	1910	2350	1330	1370	668	714
13	329	287	880	1380	920	2180	4180	2470	1240	1850	613	867
14	346	285	755	1330	911	2110	5220	2700	1170	1210	592	2530
15	333	285	735	1150	955	2020	4640	2100	1110	1030	585	1640
16	321	287	737	1050	1090	1650	3220	1800	1080	1010	573	1160
17	321	387	751	1000	1070	1780	2510	1620	1100	887	551	1020
18	318	1120	671	905	1000	1720	2180	1520	1040	838	518	982
19	320	541	517	920	1030	1650	2000	1440	1020	859	477	913
20	291	441	575	2050	966	1610	1870	1390	1050	906	522	853
21	276	491	577	5040	1060	1630	1770	1600	992	1640	603	1870
22	272	374	551	5080	1350	1530	1680	1520	964	1690	607	5130
23	288	395	541	3060	2730	2550	1610	1840	944	1360	772	6040
24	315	430	571	2360	3770	5550	1560	2400	906	1180	735	4020
25	310	374	721	2620	5090	5360	1540	2300	886	1310	835	1880
26	318	350	611	1680	5370	3550	3200	1790	865	1310	1820	1510
27	325	464	555	1530	4780	2440	3450	1580	835	1390	1260	1600
28	267	583	541	1440	2950	2210	2470	1480	817	1480	982	3210
29	272	479	523	1310	---	2040	1970	1390	799	1080	851	3990
30	285	604	569	1230	---	1910	1740	1320	806	956	759	4090
31	307	---	1170	1190	---	1820	---	1380	---	892	971	---
TOTAL	10306	11810	28358	59638	46841	94240	74220	55100	37054	34695	23564	54826
MEAN	332	394	915	1924	1673	3169	2474	1777	1235	1119	760	1828
MAX	416	1120	3000	5080	5370	13300	5220	2700	2580	1850	1820	6040
MIN	272	285	455	920	880	1530	1540	1320	799	717	477	714
CFSM	1.12	1.33	3.09	6.50	5.65	10.7	8.36	6.00	4.17	3.78	2.57	6.18
IN.	1.30	1.48	3.57	7.50	5.89	12.35	9.33	6.92	4.66	4.36	2.96	6.89

CAL YR 1978 TOTAL 355266 MEAN 973 MAX 7250 MIN 272 CFSM 3.29 IN 44.65
WTR YR 1979 TOTAL 534662 MEAN 1465 MAX 13300 MIN 272 CFSM 4.95 IN 67.19

TENNESSEE RIVER BASIN

417

03443000 FRENCH BROAD RIVER AT BLANTYRE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANT- ANEGUS (CFS)	SEMI- MENT, SUS- PENDED (MG/L)	SEMI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
04...	1030	402	14	15
20...	1410	301	9	7.3
NOV				
09...	1420	299	3	2.4
DEC				
18...	1210	642	8	14
JAN				
04...	1415	5210	279	3930
04...	1705	5260	234	4290
04...	1820	5880	136	2530
04...	1900	7230	267	5210
05...	0015	15300	133	5490
06...	1445	5520	36	634

TENNESSEE RIVER BASIN

03446000 MILLS RIVER NEAR MILLS RIVER, N. C.

LOCATION.--Lat 35°23'56", long 82°35'46", Henderson County, Hydrologic Unit 06010105, on right bank 1.5 mi (2.4 km) downstream from confluence of North and South Forks, 1.8 mi (2.9 km) northwest of Mills River, 4.2 mi (6.8 km) northwest of Horseshoe, and at mile 4.6 (7.4 km).

DRAINAGE AREA.--66.7 mi² (172.8 km²).

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 (636.566 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to Oct. 1, 1926, nonrecording gage at site 500 ft (152 m) up-stream at datum 2.97 ft (0.905 m) higher.

REMARKS.--Records good. City of Hendersonville diverted an average of 4.76 ft³/s (0.13 m³/s) from North Fork and Bradley Creek for municipal water supply. Suspended-sediment records for the current year are published on page 419 of this report.

AVERAGE DISCHARGE.--48 years, 170 ft³/s (4.814 m³/s), 34.61 in/yr (879 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft³/s (379 m³/s) Aug. 30, 1940, gage height, 13.62 ft (4.151 m), from rating curve extended above 6,200 ft³/s (176 m³/s) on basis of slope-area measurement of peak flow; minimum, 16 ft³/s (0.45 m³/s) Dec. 24, 1943, gage height, 1.33 ft (0.405 m), result of freezeup; minimum daily, 18 ft³/s (0.51 m³/s) Sept. 30, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since 1876 is probably that of Aug. 30, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0030	1230 34.8	4.21 1.283	Mar. 23	2300	1710 48.4	5.01 1.527
Feb. 25	1545	1840 52.1	5.25 1.600	Sept. 14	0515	1210 34.3	4.18 1.274
Mar. 4	1545	*3580 101	*8.58 2.615	Sept. 21	2345	2480 70.2	6.50 1.981

Minimum discharge, 43 ft³/s (1.22 m³/s) several days in November, gage height, 1.62 ft (0.494 m).

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	44	66	201	160	341	300	321	230	122	132	212
2	67	43	58	565	160	341	288	301	235	115	126	223
3	61	44	58	314	160	321	599	291	266	113	112	225
4	60	43	234	243	150	2230	678	310	230	110	107	185
5	59	43	361	195	145	1540	571	325	212	149	102	321
6	56	43	186	174	140	874	468	391	201	117	97	322
7	53	45	133	260	155	667	413	316	206	198	93	237
8	53	47	118	352	140	562	381	304	400	170	91	193
9	53	44	212	261	135	482	437	375	269	170	88	167
10	53	43	221	221	135	435	370	545	245	225	93	151
11	52	43	161	197	135	405	341	474	228	179	103	139
12	51	43	135	188	130	364	392	416	207	250	105	128
13	50	43	119	221	130	337	783	426	195	226	87	239
14	53	43	108	207	130	327	636	387	186	174	84	712
15	50	43	98	181	155	299	503	350	179	152	80	352
16	49	43	96	170	195	281	437	323	177	147	78	269
17	49	60	93	163	180	269	394	301	178	129	76	231
18	50	90	86	164	165	259	363	284	164	122	75	208
19	49	172	86	147	180	249	339	270	161	120	73	189
20	49	91	87	401	160	239	321	265	166	122	84	172
21	48	58	88	808	187	232	305	288	160	183	82	667
22	47	48	81	452	224	221	290	272	154	201	85	1080
23	46	55	77	344	407	676	278	292	145	188	168	498
24	46	55	91	331	690	1150	268	347	142	160	135	390
25	46	49	116	265	1170	626	280	320	142	166	119	332
26	46	46	92	235	830	497	685	278	137	158	254	295
27	46	67	86	222	540	432	554	258	134	152	180	355
28	48	78	78	210	439	393	431	247	129	152	151	772
29	45	63	78	200	---	362	377	233	124	129	139	683
30	45	86	99	190	---	338	345	223	132	122	176	663
31	45	---	173	175	---	318	---	253	---	129	194	---
TOTAL	1598	1715	3776	8257	7527	16107	12827	9986	5734	4850	3569	10610
MEAN	51.5	57.2	122	266	269	520	428	322	191	156	115	354
MAX	73	172	361	808	1170	2230	783	545	400	250	254	1080
MIN	45	43	58	147	130	221	268	223	124	110	73	128
CFSM	.77	.86	1.83	3.99	4.03	7.80	6.42	4.83	2.86	2.34	1.72	5.31
IN.	.89	.96	2.11	4.61	4.20	8.98	7.15	5.57	3.20	2.70	1.99	5.92
CAL YR 1978 TOTAL	59106		MEAN 162	MAX 1680	MIN 43	CFSM 2.43	IN 32.96					
WTR YR 1979 TOTAL	86556		MEAN 237	MAX 2230	MIN 43	CFSM 3.55	IN 48.27					

TENNESSEE RIVER BASIN

419

03446000 MILLS RIVER NEAR MILLS RIVER, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 04...	1330	60	1	.16
NOV 07...	1520	44	2	.24
MAR 04...	1355	3420	471	4350
04...	1535	3580	258	2490
04...	1750	3200	200	1730
05...	1430	1350	57	208

TENNESSEE RIVER BASIN

03448000 FRENCH BROAD RIVER AT BENT CREEK, N. C.

LOCATION.--Lat 35°30'07", long 82°35'35", Buncombe County, Hydrologic Unit 06010105, on left bank 50 ft (15 m) downstream from Bent Creek, 6.2 mi (10 km) upstream from Homin Creek, 6.7 mi (10.8 km) south of Asheville, and at mile 157.7 (253.7 km).

DRAINAGE AREA.--676 mi² (1,751 km²).

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,995.91 ft (608.353 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 421 of this report. Some diurnal fluctuation at low flow caused by powerplant about 34 mi (55 km) above station.

AVERAGE DISCHARGE.--46 years, 1,706 ft³/s (48.31 m³/s), 34.27 in/yr (870 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft³/s (867 m³/s) Oct. 5, 1964, gage height, 15.80 ft (4.816 m); minimum, 230 ft³/s (6.5 m³/s) Oct. 4, 5, 10, 11, 12, 1954, gage height, 2.05 ft (0.625 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, 27.3 ft (8.32 m) July 15, 1916 (from floodmarks and studies by Tennessee Valley Authority). Flood in August 1928 reached a stage of about 16.1 ft (4.91 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0330	7300 207	6.85 2.088	Apr. 4	1400	6260 177	6.27 1.911
Feb. 26	0830	9860 279	8.12 2.475	Apr. 14	0715	7600 215	7.01 2.137
Mar. 6	0230	*21200 600	*12.66 3.859	Sept. 22	0415	6920 196	6.64 2.024
Mar. 24	1815	10200 289	8.25 2.515	Sept. 29	1900	6150 174	6.21 1.893

Minimum discharge, 483 ft³/s (13.7 m³/s) Oct. 30, 31, gage height, 2.42 ft (0.738 m); minimum daily, 490 ft³/s (13.9 m³/s) Oct. 30.

DISCHARGE - 1.0 CUBIC FEET PER SECOND - WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	688	542	475	1690	1810	4250	2380	2510	2450	1400	1620	1750
2	772	574	445	4570	1470	3020	2240	2320	2490	1310	1520	1750
3	719	502	313	4310	1520	2570	3890	2340	3060	1280	1400	1730
4	714	523	1600	3010	1500	7470	5590	2440	2650	1290	1330	1620
5	691	509	4000	1470	1460	16400	5520	2440	2300	1400	1290	2180
6	688	507	2440	1780	1460	14300	4620	3120	2190	1350	1200	2290
7	535	516	1640	1450	1500	10300	3470	2490	2040	1550	1180	1760
8	627	519	1530	3830	1550	7040	3020	2280	3620	2310	1120	1590
9	621	526	2170	3840	1450	5610	3350	2550	3850	1790	1140	1570
10	525	518	3270	2550	1360	4550	3330	4250	2960	2190	1140	1480
11	513	514	2110	1440	1360	3640	2860	4140	2580	2330	1120	1400
12	509	513	1510	1710	1360	3350	2930	3870	2230	2070	1150	1340
13	573	505	1510	1470	1430	3010	6450	3890	2030	2920	1110	1430
14	573	494	1370	1890	1450	2850	7500	4130	1890	2250	1060	3330
15	505	510	1270	1800	1460	2710	7160	3530	1790	1820	1000	3100
16	504	514	1410	1440	1500	2430	6040	2950	1740	1690	980	1940
17	509	506	1170	1460	1510	2290	4470	2620	1860	1620	965	1670
18	500	1500	1120	1460	1460	2190	3450	2420	1740	1590	930	1620
19	561	1160	1640	1450	1470	2090	3060	2290	1650	1590	905	1610
20	554	439	1610	2540	1470	2010	2820	2180	1680	1590	860	1580
21	509	720	1030	6940	1570	2020	2620	2380	1670	2040	940	2290
22	501	673	1010	6630	2140	1950	2500	2500	1640	2920	1050	6520
23	499	710	940	5940	3590	3390	2350	3010	1610	2360	1200	5990
24	534	764	954	4770	5680	9280	2250	3780	1750	1960	1560	5860
25	550	709	1190	3650	7880	8540	2190	3810	1620	2020	1400	4920
26	549	635	1130	2730	9570	7120	4030	3010	1510	2070	2220	2630
27	559	729	1000	2360	8380	4910	4950	2550	1500	2000	2280	2460
28	551	1010	926	2170	5490	3400	4280	2360	1420	3000	1640	4010
29	505	917	856	1920	---	2990	3160	2180	1400	1980	1590	5030
30	490	1060	920	1760	---	2740	2740	2060	1430	1660	1530	5670
31	508	---	1330	1650	---	2550	---	2370	---	1610	1520	---
TOTAL	18252	20373	44731	87030	74590	155600	115220	88770	62350	58960	39950	82160
MEAN	589	679	1443	2807	2664	5019	3841	2864	2078	1902	1289	2739
MAX	772	1500	4000	6940	9570	18300	7500	4250	3850	3000	2280	6520
MIN	490	494	805	1450	1360	1960	2190	2060	1400	1280	860	1340
CFS/1	4.87	1.00	2.14	4.15	3.94	7.43	5.68	4.24	3.07	2.81	1.91	4.05
IN.	1.00	1.12	2.46	4.79	4.10	8.56	6.34	4.88	3.43	3.24	2.20	4.52

CAL YR 1978 TOTAL 573040 MEAN 1570 MAX 13400 MIN 490 CFSM 2.32 IN 31.53
WTR YR 1979 TOTAL 847986 MEAN 2323 MAX 18300 MIN 490 CFSM 3.44 IN 46.66

TENNESSEE RIVER BASIN

421

03448000 FRENCH BROAD RIVER AT BENT CREEK, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)
OCT				
03...	1315	728	14	28
25...	1500	556	4	6.0
NOV				
14...	0915	504	5	6.4
DEC				
18...	1510	1160	5	16
JAN				
19...	1215	1450	13	51
21...	1530	5760	305	5570
22...	1610	5520	152	2680
FEB				
23...	1610	4010	167	2030
26...	1405	4640	210	5470
27...	1400	4250	121	2700
MAR				
04...	1435	3650	213	4980
04...	1645	3920	820	19700
05...	1345	16500	399	17800
05...	1330	18200	171	8400

TENNESSEE RIVER BASIN

03451000 SWANNANOA RIVER AT BILTMORE, N. C.

LOCATION.--Lat 35°34'06", long 82°32'42", Buncombe County, Hydrologic Unit 06010105, on left bank at Biltmore, 100 ft (30.5 m) downstream from Biltmore Avenue Bridge, 200 ft (61 m) upstream from Southern Railway bridge, and 1.6 mi (2.6 km) upstream from mouth.

DRAINAGE AREA.--130 mi² (337 km²).

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 (602.462 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Dec. 1, 1920, to Sept. 30, 1926, nonrecording gage at site 100 ft (30.5 m) upstream at same datum.

REMARKS.--Records good. Considerable regulation by Lake Craig 3.6 mi (5.8 km) above station from 1925 to 1950 (reservoir silted). No diversion from Beetree Reservoir above station by city of Asheville for water supply since June 1963. City of Asheville diverted an average of 33.4 ft³/s (0.95 m³/s) for water supply from Burnett Lake on North Fork Swannanoa River 20 mi (32 km) above station (see p. 484); an average of 34.8 ft³/s (0.99 m³/s) was discharged as sewage effluent into the French Broad River below station. Textile mills, the town of Black Mountain, and recreational camps diverted about 8 ft³/s (0.23 m³/s) above station, of which about half was discharged into the French Broad River below station. Complete record of diversions and return water not available. Suspended-sediment records for the current year are published on page 423 of this report.

AVERAGE DISCHARGE.--52 years (1920-26, 1933-79), 163 ft³/s (4.616 m³/s) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s (521 m³/s) Aug. 13, 1940, gage height, 19.00 ft (5.791 m), from rating curve extended above 8,400 ft³/s (238 m³/s) on basis of computation of peak flow over dam 3.6 mi (5.8 km) above station; minimum, 1.1 ft³/s (0.031 m³/s) Oct. 9, 14, 15, 1941; minimum daily, 1.2 ft³/s (0.034 m³/s) Oct. 14, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed, 26 ft (7.9 m), discharge, 40,000 ft³/s (1,130 m³/s) in April 1791, from studies by Tennessee Valley Authority. Flood of July 1916 reached a stage of 20.7 ft (6.31 m), discharge, 23,000 ft³/s (651 m³/s), from flood profile by Tennessee Valley Authority. Flood of Aug. 16, 1928, reached a stage of 18.74 ft (5.712 m), from floodmarks, discharge, 17,800 ft³/s (504 m³/s). High stages are subject to backwater from French Broad River.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,280 ft³/s (92.9 m³/s) Mar. 5, gage height, 8.14 ft (2.481 m); minimum daily discharge, 34 ft³/s (0.96 m³/s) Oct. 7, 13, 17, 18, 20, 24, Nov. 8; minimum gage height, 1.26 ft (0.384 m) Oct. 7.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	35	54	171	127	375	262	250	347	108	119	274
2	42	35	54	652	120	315	245	232	293	100	102	154
3	39	37	53	280	117	286	859	222	276	96	91	153
4	39	37	154	147	114	1710	1010	217	250	103	86	202
5	39	40	245	141	103	2400	797	251	221	110	86	654
6	35	35	126	130	94	1230	579	226	198	93	79	772
7	34	37	93	254	110	608	455	199	215	200	76	406
8	40	34	74	433	106	519	398	184	350	141	71	259
9	37	37	317	330	94	416	488	238	330	200	70	195
10	35	35	155	253	89	358	387	426	285	251	71	152
11	37	35	125	215	88	342	344	430	235	226	71	126
12	37	40	99	100	89	287	390	390	200	233	75	108
13	34	37	95	150	96	256	1160	586	177	240	68	347
14	42	37	50	153	91	269	823	605	151	232	64	1370
15	42	44	70	137	92	235	620	457	140	185	63	623
16	35	37	73	124	115	210	503	367	143	156	62	382
17	34	50	74	114	117	208	421	307	260	133	58	280
18	34	82	65	114	115	197	368	274	204	119	58	236
19	35	54	60	104	141	182	328	244	173	156	61	190
20	34	42	50	341	129	172	302	257	165	151	53	164
21	35	39	78	410	150	182	282	340	163	298	52	616
22	40	40	65	550	188	155	262	268	159	308	63	1430
23	37	77	67	378	266	771	241	400	145	257	74	644
24	34	78	55	383	833	1880	226	460	179	220	99	431
25	35	55	100	280	1310	1010	224	408	143	207	82	334
26	35	49	75	227	1110	640	589	360	130	193	202	277
27	37	59	72	205	644	446	477	324	121	251	138	254
28	37	58	66	198	468	404	369	316	116	172	103	326
29	42	59	61	167	---	350	314	279	111	148	83	500
30	37	89	70	149	---	307	276	244	123	129	69	774
31	39	---	118	140	---	201	---	390	---	117	86	---
TOTAL	1161	1433	3024	8195	7133	17095	13999	10155	6003	5533	2535	12633
MEAN	37.5	47.8	97.5	264	255	551	467	328	200	178	81.8	421
MAX	49	89	307	910	1310	2400	1160	605	350	308	202	1430
MIN	34	34	54	104	88	155	224	188	111	93	52	108
CAL YR 1978	TOTAL	53038	MEAN	145	MAX	2230	MIN	34				
WTR YR 1979	TOTAL	88899	MEAN	244	MAX	2400	MIN	34				

TENNESSEE RIVER BASIN

423

03451000 SWANNANOA RIVER AT BILTMORE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
02...	1530	33	20	1.8	--	--	--	--	--	--	--	--
NOV												
14...	1045	26	3	.21	--	--	--	--	--	--	--	--
JAN												
14...	1505	112	392	119	--	--	--	--	--	--	--	--
FEB												
28...	1430	420	42	48	--	--	--	--	--	--	--	--
APR												
13...	0535	1290	691	2410	--	--	--	--	--	--	--	--
SEP												
05...	1710	1020	2880	7930	--	--	--	--	--	--	--	--
14...	0705	1970	1480	7870	--	--	--	--	--	--	--	--
14...	1050	1600	486	2100	--	--	--	--	--	--	--	--
22...	0120	2210	1120	6680	18	22	26	36	40	52	70	89

TENNESSEE RIVER BASIN

03451500 FRENCH BROAD RIVER AT ASHEVILLE, N. C.

LOCATION.--Lat 35°36'32", long 82°34'41", Buncombe County, Hydrologic Unit 06010105, on right bank 27 ft (8.2 m) upstream from Pearson Bridge (Secondary Road 1348) at Asheville, 1.4 mi (2.3 km) downstream from bridge on U.S. Highways 19 and 23, 3.2 mi (5.1 km) downstream from Swannanoa River, and at mile 145.8 (234.6 km).

DRAINAGE AREA.--945 mi² (2,448 km²).

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), 1927(M).

GAGE.--Water-stage recorder. Datum of gage is 1,950.28 ft (594.445 m) National Geodetic Vertical Datum of 1929. 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 (2.4 km) upstream at datum 11.52 ft (3.511 m) higher. Oct. 1, 1922, to Aug. 9, 1930, nonrecording gage at present site and datum.

REMARKS.--Records good. Many small diversions from tributaries above station for water supply. Diversions by city of Asheville and others from upstream tributaries in the Swannanoa River basin totaled about 41 ft³/s (1.16 m³/s), see sta 03451000, of which 34.8 ft³/s (0.99 m³/s) was discharged as sewage effluent 4 mi (6.4 km) below station. Slight diurnal fluctuation and occasional slight regulation at low flow caused by powerplant 46 mi (74 km) upstream and small reservoirs above station. Suspended-sediment records for the current year are published on page 501 of this report.

AVERAGE DISCHARGE.--84 years, 2,102 ft³/s (59.53 m³/s), 30.21 in/yr (767 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110,000 ft³/s (3,115 m³/s) July 16, 1916, gage height, 23.1 ft (7.04 m), present site and datum, from floodmarks, from rating curve extended above 43,000 ft³/s (1,218 m³/s); minimum, 239 ft³/s (6.77 m³/s) at times in August and September 1925, gage height, 0.16 ft (0.049 m).

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 (5.5 m), from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (250 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0615	9370 265	5.76 1.756	Mar. 24	1515	13000 368	7.15 2.179
Feb. 25	1830	12500 354	6.97 2.124	Apr. 13	2145	9910 281	5.98 1.823
Mar. 6	0645	*23300 660	*10.07 3.069	Sept. 22	0500	9880 280	5.97 1.820

Minimum discharge, 611 ft³/s (17.3 m³/s) Oct. 23, 30, 31, gage height, 1.14 ft (0.347 m); minimum daily, 627 ft³/s (17.8 m³/s) Oct. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	833	650	1130	2160	2090	5290	3130	3350	3050	1670	1880	2160
2	911	675	993	5460	1940	3720	3000	3150	3090	1570	1800	2140
3	874	669	935	5040	1980	3330	5850	3010	3470	1510	1620	2160
4	861	663	1080	3740	1910	11000	7600	3020	3240	1510	1540	2010
5	835	645	4490	2490	1840	19000	7250	3070	2820	1680	1480	3140
6	787	640	3630	2180	1780	21300	5970	3670	2700	1570	1410	3560
7	752	647	2150	2330	1840	12900	4540	3110	2500	1970	1370	2500
8	756	649	1720	4440	1890	8610	3910	2870	3960	2630	1330	2020
9	781	658	2420	4510	1770	6760	4360	3030	4480	2270	1330	1800
10	766	652	3780	3330	1620	5520	4240	4980	3650	2560	1340	1640
11	736	635	2700	2590	1630	4710	3710	5160	3130	2730	1330	1540
12	715	641	1990	2340	1650	4090	3800	4700	2730	2490	1350	1450
13	722	633	1710	2440	1710	3680	8610	5020	2490	3230	1290	1720
14	725	640	1540	2500	1730	3520	9560	5270	2330	2710	1200	5130
15	723	649	1410	2220	1790	3380	8860	4500	2220	2210	1170	4230
16	704	649	1350	2010	2030	3100	7520	4750	2170	2010	1150	2760
17	690	697	1310	1910	2100	2970	5690	3350	2390	1870	1120	2270
18	671	1520	1260	1850	1960	2870	4420	3100	2230	1710	1090	2070
19	669	1520	1230	1770	1970	2770	3950	2950	2070	1730	1050	1930
20	590	989	1170	2560	1940	2630	3680	2860	2070	1750	1000	1770
21	647	850	1200	8710	2030	2640	3480	3100	2060	2360	1110	2780
22	640	801	1170	7870	2680	2570	3300	3100	1990	3430	1210	8800
23	631	874	1110	6930	3810	4270	3150	3750	1900	2860	1420	7170
24	639	923	1140	5730	6420	12600	3040	4490	2130	2420	1720	6700
25	661	855	1410	4380	10300	11200	2960	4640	1920	2350	1530	5900
26	542	788	1350	3310	11400	8840	5070	3780	1820	2410	2510	3270
27	654	819	1190	2920	10100	6250	6280	3240	1750	2470	2810	2930
28	571	1090	1120	2750	7910	4350	5430	3040	1690	3290	2000	4530
29	645	1080	1070	2510	---	3800	4160	2850	1660	2380	1700	5940
30	628	1190	1100	2330	---	3520	3620	2690	1720	1990	1600	6910
31	627	---	1470	2230	---	3500	---	3070	---	1830	1640	---
TOTAL	22306	24411	21929	107540	92430	194590	150140	111670	75430	69170	46100	102930
MEAN	720	814	1675	3469	3115	6277	5005	4602	2514	2231	1487	3431
MAX	911	1520	4490	4710	11900	21300	9560	5270	4480	3430	2810	8800
MIN	627	633	430	1770	1620	2570	2960	2690	1660	1510	1000	1450
CFS	76	86	177	357	351	664	530	381	266	236	157	363
IN	2.68	2.96	5.34	4.23	3.65	7.60	5.41	4.40	2.97	2.72	1.81	4.05
CAL YR 1978 TOTAL	716291	MEAN	1962	MAX	18200	MIN	627	CFSM	2.08	IN	28.20	
WTR YR 1979 TOTAL	1049035	MEAN	2874	MAX	21300	MIN	627	CFSM	3.04	IN	41.30	

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.

LOCATION.--Lat 35°47'10", long 82°39'39", Madison County, Hydrologic Unit 06010105, on right bank 0.7 mi (1.1 km) upstream from Hayes Creek, 1.0 mi (1.6 km) downstream from Ivy River, 1.5 mi (2.4 km) southeast of Marshall, and at mile 126.7 (203.9 km).

DRAINAGE AREA.--1,332 mi² (3,450 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1942 to current year.

REVISED RECORDS.--WSP 1436: 1954(M).

GAGE.--Water-stage recorder. Datum of gage is 1,646.79 ft (501.942 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Small diversions from tributaries for water supply. Slight diurnal fluctuation and occasional slight regulation at low flow caused by small reservoirs above station. Prior to July 1963, some regulation by Weaverville plant of Carolina Power and Light Company 15 mi (24 km) upstream.

AVERAGE DISCHARGE.--37 years, 2,495 ft³/s (70.66 m³/s), 25.44 in/yr (646 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,000 ft³/s (1,530 m³/s) Nov. 6, 1977, gage height, 13.64 ft (4.157 m), minimum, 193 ft³/s (5.47 m³/s) Sept. 13, 14, 1954, gage height, 0.36 ft (0.110 m); minimum daily, 292 ft³/s (8.27 m³/s) Sept. 27, 28, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791, 22.0 ft (6.71 m) July 16, 1916, discharge, 115,000 ft³/s (3,257 m³/s), and flood of Aug. 30, 1940, reached a stage of 16.6 ft (5.06 m), discharge, 70,000 ft³/s (1,982 m³/s), from high-water marks, flood profiles, and studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (280 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1030	10400 295	5.42 1.652	Apr. 3	1400	11600 329	5.76 1.756
Feb. 25	1730	14500 411	6.50 1.981	Apr. 13	1815	11200 317	5.66 1.725
Mar. 6	0730	*21500 609	*8.13 2.478	Sept. 22	0645	10000 283	5.33 1.625
Mar. 24	1215	15400 436	6.72 2.048				

Minimum discharge, 728 ft³/s (20.6 m³/s) Oct. 31, gage height, 1.04 ft (0.317 m); minimum daily, 733 ft³/s (20.8 m³/s) Oct. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	914	759	1310	2450	2380	6050	3630	3750	3520	1910	2130	2350
2	996	774	1150	6600	2180	4490	3480	3540	3560	1770	2060	2340
3	984	798	1070	5640	2250	3950	7860	3390	3980	1690	1860	2420
4	973	784	1560	4510	2170	11400	9320	3380	3940	1670	1760	2240
5	954	747	4610	3010	2080	19200	8380	3440	3320	2220	1670	3700
6	912	738	4100	2560	2000	20400	6740	3440	3140	1800	1600	4570
7	862	747	2510	2530	2030	13200	5340	3530	2880	2160	1550	3070
8	845	776	1940	4610	2140	8880	4620	3230	3910	2960	1500	2430
9	866	766	2770	4870	2020	6980	5020	3270	4670	2690	1480	2110
10	877	756	4150	3930	1850	5850	4940	4900	4220	3020	1490	1910
11	859	747	3250	3010	1820	5220	4390	5320	3510	3190	1540	1780
12	826	738	2300	2670	1880	4580	4400	4940	3070	3090	1620	1660
13	835	747	1960	2680	1950	4180	9410	5270	2790	3610	1480	1690
14	896	766	1760	2800	1960	4000	10400	5540	2590	3270	1380	4960
15	847	768	1580	2490	2040	3880	9250	4860	2470	2570	1320	4710
16	821	782	1520	2260	2430	3580	7930	4130	2390	2340	1310	3230
17	813	793	1480	2140	2530	3380	6240	3720	2830	2170	1270	2580
18	792	1350	1410	2090	2350	3260	5020	3440	2590	1970	1240	2340
19	797	1770	1390	2000	2300	3160	4510	3270	2370	1940	1210	2190
20	808	1180	1360	2540	2290	3060	4180	3130	2360	3010	1150	2010
21	785	983	1420	9350	2420	2990	3960	3480	2360	4010	1190	2660
22	748	925	1400	8210	3200	2920	3770	3510	2300	4640	1430	8960
23	752	1020	1310	7090	4200	4440	3600	4050	2170	3680	1500	7130
24	744	1160	1350	6190	7950	14500	3480	4730	2380	2970	1960	6530
25	773	1010	1800	5000	11600	12000	3380	4980	2230	2740	1760	6020
26	763	930	1680	3900	12800	9280	4840	4310	2090	2820	2680	3890
27	765	925	1460	3380	10500	6770	6390	3700	1990	2700	3310	3240
28	776	1150	1330	3180	8360	5010	5670	3510	1920	3630	2400	4440
29	761	1300	1270	2880	---	4370	4600	3280	1870	2840	1990	5710
30	742	1450	1270	2640	---	4040	4020	3070	1940	2320	1840	6770
31	733	---	1660	2540	---	3810	---	3550	---	2100	1880	---
TOTAL	25819	28139	59130	119750	103680	208830	168770	122160	85360	83500	52560	109640
MEAN	833	938	1907	3863	3703	6736	5626	3941	2845	2694	1695	3655
MAX	996	1770	4610	9350	12800	20400	10400	5540	4670	4640	3310	8960
MIN	733	738	1070	2000	1820	2920	3380	3070	1870	1670	1150	1660
CFSM	.63	.70	1.43	2.90	2.78	5.06	4.22	2.96	2.14	2.02	1.27	2.74
IN.	.72	.79	1.65	3.34	2.90	5.83	4.71	3.41	2.38	2.33	1.47	3.06
CAL YR 1978	TOTAL	827247	MEAN	2266	MAX	21800	MIN	733	CFSM	1.70	IN	23.10
WTR YR 1979	TOTAL	1167338	MEAN	3198	MAX	20400	MIN	733	CFSM	2.40	IN	32.60

TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-67, 1973-78, March to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1967, August 1973 to September 1978, March to September 1979.
WATER TEMPERATURES: October 1957 to September 1967, August 1973 to September 1978, March to September 1979.

REMARKS.--Daily records of specific conductance for water years 1958-64 are available in files of district office in Raleigh, N. C.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 237 micromhos Feb. 28, 1978; minimum daily, 33 micromhos May 31, 1976.
WATER TEMPERATURES: Maximum daily, 28.5°C Aug. 8, 1964; minimum daily, 0.0°C on several days during winter months of most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily observed, 127 micromhos Aug. 23; minimum daily observed, 39 micromhos Sept. 24.
WATER TEMPERATURES: Maximum daily observed, 25.0°C Aug. 11; minimum daily observed, 8.0°C Mar. 27, 28.

WATER QUALITY DATA, PERIOD MARCH TO SEPTEMBER 1979

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	
DATE	TIME			(UNITS)									
MAR 27...	1215	5720	49	7.4	8.0	20	13.2	9100	770	3800	11	0	
APR 23...	1130	3620	56	7.4	15.0	7.0	12.2	5200	200	3600	13	0	
JUN 13...	1030	2770	72	7.2	18.5	15	5.4	6000	450	14000	15	0	
JUL 03...	1115	1690	85	6.8	20.5	5.0	5.7	2900	160	8400	18	2	
AUG 20...	1100	1150	105	6.6	23.5	3.0	8.1	2100	70	11000	21	0	
		CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	
DATE													
MAR 27...	2.9	.9	3.7	40	.5	.9	13	0	11	.8	6.7	2.4	
APR 23...	3.6	1.0	5.0	43	.6	.9	15	0	13	1.0	7.8	2.4	
JUN 13...	4.2	1.0	6.8	48	.8	1.0	19	0	16	1.9	9.3	3.0	
JUL 03...	5.2	1.1	8.7	50	.9	1.1	20	0	16	5.1	16	3.5	
AUG 20...	6.7	1.1	12	53	1.1	1.3	26	0	21	10	22	4.8	
		FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)
DATE													
MAR 27...	.0	7.8	36	32	.05	653	.36	.05	--	.19	.24	.07	
APR 23...	.0	9.2	42	38	.06	411	.32	.07	.08	.10	.17	.10	
JUN 13...	.1	9.8	48	45	.07	359	.33	.06	.07	.42	.48	.42	
JUL 03...	.0	9.9	67	55	.09	306	.62	.08	.10	.15	.23	.05	
AUG 20...	.1	7.7	70	69	.10	217	.41	.11	.13	.24	.35	.05	

TENNESSEE RIVER BASIN

427

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, PERIOD MARCH TO SEPTEMBER 1979

DATE	NITRO- GEN + AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
MAR 27...	.17	.60	2.7	.05	--	--	.03	1	1	0	100	0
APR 23...	.07	.49	2.2	.06	--	.18	.03	--	--	--	--	--
JUN 13...	.06	.81	3.6	.10	--	.31	.06	2	1	1	<50	<30
JUL 03...	.18	.85	3.8	.14	--	.43	.07	--	--	--	--	--
AUG 20...	.30	.76	3.4	.13	--	.40	.10	3	1	2	<50	<20

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
MAR 27...	100	0	0	0	<10	<9	1	3	3	0	4
APR 23...	--	--	--	--	--	--	--	--	--	--	--
JUN 13...	20	2	2	0	20	0	30	0	0	0	6
JUL 03...	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	30	1	1	0	20	10	10	2	1	1	3

DATE	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
MAR 27...	3	1	3400	3300	130	6	5	1	8	0	10
APR 23...	--	--	--	--	--	--	--	--	--	--	--
JUN 13...	5	1	1300	1200	150	9	5	4	60	50	7
JUL 03...	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	1	2	300	140	160	2	2	0	20	10	10

TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, PERIOD MARCH TO SEPTEMBER 1979

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)
MAR 27...	<.5	.0	<.5	0	0	0	0	0	0	30	20
APR 23...	--	--	--	--	--	--	--	--	--	--	--
JUN 13...	<.5	.0	<.5	0	0	0	0	0	0	30	30
JUL 03...	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	<.5	.0	<.5	0	0	0	0	0	0	10	7
DATE	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS RATIO ASH WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO- SURE (DAYS)	
MAR 27...	10	--	2.9	.4	--	--	--	--	--	--	
APR 23...	--	2.3	--	--	.000	.000	.00	.000	.000	26	
JUN 13...	0	--	2.2	.5	--	--	--	--	--	--	
JUL 03...	--	2.4	--	--	--	--	--	--	--	--	
AUG 20...	3	--	2.8	.5	--	--	--	--	--	--	

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

PHYTOPLANKTON ANALYSES, JULY TO SEPTEMBER 1978

DATE	JUL 24, 78
TIME	1115
TOTAL CELLS/ML	3300
DIVERSITY: DIVISION	0.8
CLASS	0.9
ORDER	1.2
FAMILY	1.9
GENUS	2.2

ORGANISM	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)		
CHLOROPHYCEAE		
CHLOROCOCCALES		
OOCYSTACEAE		
ANKISTRODESMUS	57	2
CHLORELLA	43	1
CHODATELLA	43	1
DICTYOSPHAERIUM	43	1
SCENEDESMACEAE		
CRUCIGENIA	57	2
SCENEDESMUS	2200#	64
TETRASPORALES		
PALMELLACEAE		
SPHAEROCYSTIS	230	7
ZYGNEMATALES		
DESMIDIACEAE		
STAURASTRUM	*	0
CHRYSTOPHYTA		
BACILLARIOPHYCEAE		
CENTRALES		
COSCINODISCACEAE		
CYCLOTELLA	*	0
PENNALES		
ACHNANTHACEAE		
ACHNANTHES	29	1
COCconeis	86	3
RHOICUSPHENIA	72	2
CYMBELLACEAE		
CYMBELLA	*	0
FRAGILARIACEAE		
FRAGILARIA	29	1
SYNEDRA	29	1
GOMPHONEMATACEAE		
GOMPHONEMA	57	2
NAVICULACEAE		
NAVICULA	300	9
NITZSCHIACEAE		
NITZSCHIA	*	0
SURIPELLACEAE		
SURIPELLA	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)		
CYANOPHYCEAE		
CHROOCOCCALES		
CHROOCOCCACEAE		
ANACYSTIS	29	1
EUGLENOPHYTA (EUGLENOIDS)		
EUGLENOPHYCEAE		
EUGLENALES		
EUGLENACEAE		
TRACHELOMONAS	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

DATE TIME	MAY 27,79 1215	JUN 13,79 1030	JUL 3,79 1115
TOTAL CELLS/ML	450	390	740
DIVERSITY: DIVISION	1.6	0.4	1.4
..CLASS	1.6	0.8	1.4
...ORDER	1.7	0.9	1.5
...FAMILY	2.1	0.9	2.3
....GENUS	2.6	0.9	2.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....OOCYSTACEAE						
.....ANKISTHODESMUS	71#	16	--	-	13	2
.....CHODATELLA	--	-	--	-	13	2
...SCENEDESMACEAE						
....SCENEDESMUS	20	4	26	7	--	-
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	--	-	26	4
...ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIMUM	--	-	--	-	26	4
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	10	2	--	-	--	-
....MELOSIRA	15	3	26	7	--	-
...PENNALES						
...ACHNANTHACEAE						
....COCCONEIS	--	-	--	-	13	2
...CYMBELLACEAE						
....CYMBELLA	5	1	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	--	-	140#	19
....FRAGILARIA	5	1	--	-	--	-
....SYNEURA	20	4	--	-	26	4
...NAVICULACEAE						
....NAVICULA	15	3	--	-	65	9
...NITZSCHACEAE						
....NITZSCHIA	5	1	13	3	91	12
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	320#	44
...OSCILLATOIACEAE						
....OSCILLATORIA	50	11	320#	83	--	-
....SPIRULINA	210#	46	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	25	5	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TENNESSEE RIVER BASIN

431

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), PERIOD MARCH TO SEPTEMBER 1979

ONCE-DAILY												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	54	53	63	78	92	94
2						---	53	57	61	79	92	77
3						---	64	59	58	81	91	72
4						---	55	60	59	85	94	71
5						---	48	59	59	82	96	75
6						---	48	57	64	91	93	65
7						---	51	55	66	85	99	65
8						---	52	59	68	83	107	71
9						---	51	62	62	69	109	75
10						---	53	61	57	83	111	78
11						---	53	49	57	88	107	88
12						---	56	51	61	67	101	94
13						---	58	48	63	69	102	94
14						---	48	48	67	59	108	73
15						---	42	47	69	61	111	56
16						---	40	51	69	67	122	50
17						---	44	54	69	74	126	60
18						---	44	55	65	83	124	71
19						---	52	56	75	80	117	78
20						---	55	56	72	75	117	61
21						---	53	44	75	78	123	87
22						---	53	59	77	78	124	63
23						---	53	60	75	61	127	44
24						---	57	59	75	71	119	39
25						---	62	62	73	75	100	57
26						---	60	52	77	81	95	49
27						49	47	53	69	78	81	63
28						50	43	53	82	76	68	65
29						52	44	55	85	64	81	52
30						54	46	60	83	72	89	63
31						53	---	62	---	83	93	---
MEAN						52	51	56	69	76	104	69
WTR YR 1979	MEAN	70		44	127	61	39					

TEMPERATURE (DEG. C) OF WATER, PERIOD MARCH TO SEPTEMBER 1979

ONCE-DAILY												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	14.0	12.0	19.0	20.0	23.0	22.0
2						---	15.0	11.0	19.0	18.0	23.0	21.0
3						---	13.0	16.0	20.0	19.0	22.0	20.0
4						---	13.0	16.0	19.0	22.0	22.0	21.0
5						---	11.0	15.0	16.0	21.0	22.0	20.0
6						---	11.0	16.0	19.0	20.0	23.0	20.0
7						---	9.0	16.0	19.0	18.0	23.0	21.0
8						---	11.0	16.0	21.5	19.0	24.0	20.0
9						---	12.0	19.0	20.0	17.0	24.0	19.0
10						---	11.0	18.0	21.5	19.0	24.0	19.0
11						---	13.0	17.0	19.0	18.0	25.0	19.0
12						---	13.0	18.0	16.0	20.0	22.0	18.0
13						---	13.0	18.0	19.0	20.0	20.0	20.0
14						---	13.0	17.0	18.0	20.0	22.0	20.0
15						---	13.0	16.0	18.0	21.0	22.0	18.0
16						---	12.0	16.0	18.0	21.0	18.0	19.0
17						---	12.0	15.0	16.0	23.0	20.0	18.0
18						---	11.0	16.0	18.0	22.0	21.0	19.0
19						---	12.0	16.0	19.0	20.5	22.0	18.0
20						---	12.0	17.0	20.0	18.0	23.0	17.0
21						---	13.0	17.0	19.0	20.5	24.0	18.0
22						---	14.0	19.0	19.0	19.0	22.0	19.0
23						---	15.0	18.0	20.0	20.0	22.0	17.0
24						---	15.0	18.0	22.0	21.0	22.0	17.0
25						---	16.0	14.0	19.0	21.0	22.0	16.0
26						---	15.0	14.0	18.0	21.0	21.0	16.0
27						15.0	13.0	13.0	19.0	21.0	21.0	17.0
28						15.0	13.0	14.0	20.0	22.0	21.0	17.0
29						10.0	11.0	15.0	19.0	22.0	23.0	18.0
30						12.0	12.0	16.0	19.0	22.0	22.0	19.0
31						13.0	---	15.0	---	23.0	22.0	---
MEAN						10.0	12.5	16.0	19.0	20.5	22.0	19.0
WTR YR 1979	MEAN	15.0		44	25.0	61	39					

TENNESSEE RIVER BASIN

03453500 FRENCH BROAD RIVER AT MARSHALL, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SEDI- MENT, SUSPENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUSPENDED (T/DAY)	SED. SUSP. DIAM. * FINER THAN .062 MM
OCT					
02...	1015	1060	12	34	--
NOV					
14...	1310	752	4	4.1	--
JAN					
18...	1740	2070	15	44	--
MAR					
27...	1215	6720	33	1510	--
APR					
23...	1130	3620	27	264	--
JUN					
13...	1030	2770	47	352	41
JUL					
03...	1115	1690	16	73	85
AUG					
20...	1100	1150	12	37	92

WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
WATER QUALITY DATA, PERIOD AUGUST TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
AUG									
31...	1600	1360	120	7.4	27.0	7.6	14	1.9	1200
SEP									
13...	1421	1110	143	7.7	25.0	7.9	15	2.9	250

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
NOV									
08...	1225	776	120	7.6	12.0	10.5	16	1.9	30
DEC									
13...	1430	1930	60	7.2	6.0	10.2	11	1.6	240
JAN									
10...	1131	3920	--	7.0	2.0	12.5	10	1.3	480
FEB									
25...	1155	10600	--	6.9	8.0	10.5	25	1.9	1600
MAR									
21...	1420	2990	--	7.1	16.0	8.1	12	2.3	780
APR									
02...	1020	3460	--	7.1	13.0	9.8	<10	1.3	480
MAY									
10...	1030	5100	65	7.3	18.0	8.5	13	1.8	2900
JUN									
11...	1620	3480	64	7.2	20.0	8.0	20	1.9	6500
JUL									
18...	1210	1960	92	7.3	23.0	8.7	10	1.3	560
AUG									
13...	1115	1480	100	7.5	21.0	8.2	10	1.7	220
SEP									
12...	1155	1650	85	7.3	19.0	8.8	15	1.4	260

03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN, NEAR HAZELWOOD, N. C.

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 (183 m) upstream from Big Creek, 1.1 mi (1.8 km) upstream from Lake Logan, 6.7 mi (10.8 km) southeast of Hazelwood, and at mile 9.3 (15.0 km).

DRAINAGE AREA.--27.6 mi² (71.5 km²).

PERIOD OF RECORD.--February 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,976.00 ft (907.085 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 434 of this report.

AVERAGE DISCHARGE.--25 years, 105 ft³/s (2.974 m³/s), 51.66 in/yr (1,312 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,740 ft³/s (276 m³/s) Feb. 13, 1966, gage height, 9.5 ft (2.90 m), from floodmarks; minimum, 9.4 ft³/s (0.27 m³/s) Sept. 29, 30, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 4	0615	4750 135	6.76 2.060	Sept. 14	0030	3730 106	6.07 1.850
Mar. 23	1830	2140 60.6	4.84 1.475	Sept. 21	2030	*6470 183	*7.82 2.384

Minimum daily discharge, 16 ft³/s (0.45 m³/s) Nov. 4, 5, 6, 10, 11, 12, 13, 14, 16; minimum gage height, 0.98 ft (0.299 m) Nov. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	17	36	370	95	176	129	130	150	42	112	97
2	25	17	31	472	90	160	132	122	148	40	86	135
3	23	17	41	178	91	214	622	122	150	39	79	104
4	23	16	310	140	80	2380	437	144	126	38	73	85
5	22	16	223	125	75	726	269	130	109	45	69	328
6	21	16	76	122	75	414	220	130	101	40	65	161
7	20	17	60	384	82	327	195	109	93	131	60	120
8	20	19	62	344	73	279	183	115	94	64	59	103
9	20	17	417	183	68	238	355	294	87	86	59	92
10	20	16	131	160	67	221	209	263	84	138	62	83
11	20	16	92	136	65	204	189	271	85	76	59	75
12	20	16	77	137	65	182	272	194	71	371	60	70
13	20	16	68	166	63	168	791	223	67	125	54	509
14	22	16	60	133	62	192	357	189	64	93	51	814
15	20	17	60	111	103	159	276	160	59	123	48	207
16	20	16	61	100	153	146	238	146	58	107	48	168
17	20	43	59	97	97	137	212	134	67	80	47	147
18	20	55	53	91	90	131	193	125	55	71	46	135
19	20	20	53	86	85	124	178	117	52	70	44	121
20	20	18	57	538	82	118	165	112	52	86	47	112
21	20	18	73	371	160	113	155	131	52	208	50	1460
22	20	17	53	199	177	107	145	116	50	159	68	455
23	19	31	49	169	457	739	137	133	46	144	94	259
24	19	40	95	163	638	465	130	172	46	115	65	212
25	19	23	89	138	694	238	166	127	47	149	80	182
26	19	20	64	130	311	200	434	114	45	150	297	162
27	19	88	55	132	228	182	205	109	43	121	155	246
28	18	50	55	119	195	167	164	133	42	105	92	584
29	18	60	55	106	---	154	148	108	41	98	73	279
30	18	55	112	105	---	144	139	101	50	84	96	299
31	17	---	314	97	---	136	---	260	---	130	84	---
TOTAL	636	803	3041	5802	4521	9341	7445	4734	2234	3328	2382	7804
MEAN	20.5	26.8	98.1	187	161	301	248	153	74.5	107	76.8	260
MAX	34	88	417	538	694	2380	791	294	150	371	297	1460
MIN	17	16	31	86	62	107	129	101	41	38	44	70
CFSM	.74	.97	3.55	6.78	5.83	10.9	8.99	5.54	2.70	3.88	2.78	9.42
IN.	.86	1.08	4.10	7.82	6.09	12.59	10.03	6.38	3.01	4.49	3.21	10.52

CAL YR 1978	TOTAL	32370	MEAN	88.7	MAX	1160	MIN	16	CFSM	3.21	IN	43.63
WTR YR 1979	TOTAL	52071	MEAN	143	MAX	2380	MIN	16	CFSM	5.18	IN	70.18

TENNESSEE RIVER BASIN

03455500 WEST FORK PIGEON RIVER ABOVE LAKE LOGAN NEAR HAZELWOOD, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
04...	1250	23	1	.06
21...	1100	20	0	.00
NOV				
13...	1210	16	1	.04
DEC				
11...	1145	87	2	.47
JAN				
04...	1135	2220	170	1020

TENNESSEE RIVER BASIN

435

03456000 WEST FORK PIGEON RIVER BELOW LAKE LOGAN, NEAR WAYNESVILLE, N. C.

LOCATION.--Lat 35°26'38", long 82°54'46", Haywood County, Hydrologic Unit 06010106, on right bank at downstream side of bridge on Secondary Road 1111 at Riverside Church, 2.6 mi (4.2 km) downstream from Little East Fork Pigeon River, 3.4 mi (5.5 km) downstream from Lake Logan, 3.8 mi (6.1 km) upstream from confluence with East Fork Pigeon River, and 5.3 mi (8.5 km) southeast of Waynesville.

DRAINAGE AREA.--55.3 mi² (143.2 km²).

PERIOD OF RECORD.--March 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,725.08 ft (830.604 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good. Considerable regulation at times caused by Lake Logan (see p. 484). Suspended-sediment records for the current year are published on page 436 of this report.

AVERAGE DISCHARGE.--25 years, 166 ft³/s (4.701 m³/s), 40.76 in/yr (1,035 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft³/s (314 m³/s) May 15, 1976, gage height, 10.52 ft (3.206 m), from rating curve extended above 3,300 ft³/s (93.5 m³/s); minimum, 7.6 ft³/s (0.22 m³/s) Sept. 7, 1954, minimum gage height, 0.10 ft (0.030 m) Oct. 22, 23, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,590 ft³/s (158 m³/s) Sept. 21, gage height, 7.94 ft (2.420 m); minimum, 26 ft³/s (0.74 m³/s) Nov. 18, gage height, 0.34 ft (0.104 m); minimum daily, 33 ft³/s (0.93 m³/s) Nov. 19.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	44	42	376	143	298	217	233	220	80	152	135
2	48	42	40	722	146	268	222	216	209	74	115	161
3	46	42	39	298	146	282	783	212	210	72	106	154
4	45	47	75	223	137	2980	700	229	179	72	100	123
5	48	46	115	189	128	1140	496	218	169	79	94	480
6	47	43	73	178	127	693	412	213	160	73	89	274
7	48	45	53	446	137	553	370	186	152	174	85	192
8	50	47	50	537	120	476	340	186	154	118	82	160
9	50	42	461	304	115	411	400	343	149	109	78	141
10	49	45	211	252	108	375	360	402	146	182	86	128
11	50	41	137	222	113	348	310	416	146	118	81	116
12	50	37	114	209	112	307	408	306	127	420	85	106
13	48	37	100	244	110	281	1060	330	121	186	75	597
14	48	36	89	204	108	304	618	295	116	138	70	1040
15	47	36	81	162	151	258	489	250	112	137	67	332
16	49	36	85	156	217	239	421	231	110	162	66	259
17	48	41	88	149	161	225	375	213	128	116	64	223
18	49	43	74	141	139	214	338	193	109	104	62	201
19	48	33	73	131	136	203	309	183	102	101	59	181
20	47	40	88	669	131	194	283	171	101	115	59	162
21	46	42	89	718	235	186	265	226	99	242	72	1440
22	44	44	77	390	273	177	248	183	98	216	77	745
23	44	44	69	317	573	894	235	201	91	196	137	418
24	44	42	115	300	798	680	224	256	89	154	87	349
25	43	41	142	245	918	405	249	196	90	179	96	300
26	41	42	95	227	533	342	643	179	87	190	333	264
27	42	49	83	222	410	306	369	170	82	162	199	372
28	44	37	76	207	346	280	291	199	81	144	140	749
29	42	52	76	183	---	259	266	167	79	131	109	454
30	45	47	115	172	---	242	252	159	92	116	128	505
31	45	---	384	166	---	228	---	339	---	148	134	---
TOTAL	1448	1263	3409	8961	6771	14048	11953	7301	3808	4508	3187	10761
MEAN	46.7	42.1	110	289	242	453	398	236	127	145	103	359
MAX	53	52	461	722	918	2980	1060	416	220	420	333	1440
MIN	41	33	39	131	108	177	217	159	79	72	59	106
(+)	-516	+299	+390	-5	+6	-3	-1	+2	-7	+8	-6	+17
MEAN†	30.1	52.1	123	289	242	453	398	236	127	146	103	359
CFSM†	0.54	0.94	2.22	5.23	4.38	8.19	7.20	4.27	2.30	2.64	1.86	6.49
IN.†	0.63	1.05	2.55	6.02	4.56	9.45	8.04	4.91	2.56	3.04	2.14	7.25

CAL YR 1978 TOTAL 51287 MEAN 141 MAX 1400 MIN 33 MEAN† 141 CFSM† 2.55 IN.† 34.47
 WTR YR 1979 TOTAL 77418 MEAN 212 MAX 2980 MIN 33 MEAN† 213 CFSM† 3.85 IN.† 52.20

† Change in contents, in cfs-days, in Lake Logan.

‡ Adjusted for change in lake contents.

TENNESSEE RIVER BASIN

03456000 WEST FORK PIGEON RIVER BELOW LAKE LOGAN NEAR WAYNESVILLE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
04...	1430	44	2	.24
NOV				
09...	1515	42	3	.34
DEC				
11...	1345	131	4	1.4
FEB				
25...	1305	1800	47	228
26...	1130	527	8	11
MAR				
04...	1105	4100	169	1870
04...	1500	3220	80	696
SEP				
21...	2020	3640	129	1270
21...	2110	5520	331	4930

TENNESSEE RIVER BASIN

437

03456500 EAST FORK PIGEON RIVER NEAR CANTON, N. C.

LOCATION.--Lat 35°27'42", long 82°52'12", Haywood County, Hydrologic Unit 06010106, on right bank 800 ft (244 m) upstream from bridge on U.S. Highway 276, 0.3 mi (0.5 km) downstream from Dix Creek, 1.6 mi (2.6 km) upstream from confluence with West Fork Pigeon River, and 5.2 mi (8.4 km) southwest of Canton.

DRAINAGE AREA.--51.5 mi² (133.4 km²).

PERIOD OF RECORD.--March 1954 to current year.

REVISED RECORDS.--WRD N. C. 1973: 1966(M), 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 2,674.34 ft (815.139 m) National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark).

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 438 of this report.

AVERAGE DISCHARGE.--25 years, 147 ft³/s (4.163 m³/s), 38.76 in/yr (985 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) May 28, 1973, gage height, 11.19 ft (3.411 m), from rating curve extended above 4,600 ft³/s (130 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 12 ft³/s (0.34 m³/s) Jan. 9, 1956, result of freezeup; minimum gage height, 0.81 ft (0.247 m) Dec. 15, 1958, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 20	2300	1810 51.3	4.51 1.375	Apr. 3	1300	1540 43.6	4.02 1.225
Feb. 25	1430	2120 60.0	4.88 1.487	July 12	1000	1540 43.6	4.03 1.228
Mar. 4	1015	*8480 240	*9.27 2.825	Sept. 14	0200	4750 135	6.95 2.118
Mar. 23	1815	2190 62.0	4.77 1.454	Sept. 21	2215	6630 188	8.16 2.487

Minimum daily discharge, 24 ft³/s (0.68 m³/s) Nov. 4, 5, 6, 7, 10, 11, 12, 13; minimum gage height, 1.06 ft (0.323 m) Nov. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	25	39	215	114	293	209	258	147	55	92	98
2	34	25	34	551	115	254	201	236	138	51	73	108
3	30	25	35	251	114	250	778	222	152	50	68	113
4	28	24	190	196	106	4150	702	226	130	50	65	95
5	27	24	213	161	99	1870	527	212	118	77	61	420
6	26	24	96	146	97	988	425	231	113	54	58	278
7	26	24	74	256	168	711	361	191	109	110	56	185
8	26	26	70	318	92	555	320	186	106	82	53	147
9	27	25	228	208	86	450	427	339	104	80	51	125
10	27	24	147	180	86	389	324	523	102	124	53	110
11	27	24	108	159	85	346	293	456	100	46	50	98
12	26	24	91	151	85	297	369	366	90	472	54	90
13	26	24	82	186	85	268	922	355	86	209	49	516
14	27	25	74	162	82	260	667	317	82	138	47	1660
15	26	25	67	135	111	229	512	277	79	114	45	569
16	26	25	65	126	154	205	427	251	79	107	44	406
17	26	33	65	120	135	190	367	227	90	91	42	323
18	26	84	58	112	130	179	323	208	77	83	42	276
19	25	32	57	104	120	168	291	192	72	80	40	239
20	25	26	57	422	109	158	265	186	71	87	39	209
21	25	25	62	627	160	148	244	203	71	136	50	1840
22	25	25	54	337	198	142	224	175	68	136	44	1240
23	25	29	51	266	402	803	208	176	64	120	104	619
24	25	32	72	250	658	1100	193	186	63	105	70	441
25	25	27	102	203	1020	555	217	160	63	109	72	348
26	26	25	70	182	659	424	787	147	61	106	182	290
27	26	54	61	175	437	350	483	138	58	96	117	405
28	26	46	59	169	347	305	372	140	57	92	112	759
29	26	43	61	148	---	272	317	128	56	81	81	546
30	26	62	74	140	---	247	283	121	60	75	97	527
31	25	---	209	133	---	225	---	196	---	93	107	---
TOTAL	830	936	2725	6789	6058	16781	12038	7229	2666	3348	2118	13080
MEAN	26.8	31.2	87.9	219	216	541	401	233	88.9	108	68.3	436
MAX	39	84	228	627	1020	4150	922	523	152	472	182	1840
MIN	25	24	34	104	82	142	193	121	56	50	39	90
CFSM	.52	.61	1.71	4.25	4.19	10.5	7.79	4.52	1.73	2.10	1.33	8.47
IN.	.60	.68	1.97	4.90	4.38	12.12	8.70	5.22	1.93	2.42	1.53	9.45
CAL YR 1978	TOTAL	41666	MEAN 114	MAX 1340	MIN 24	CFSM 2.21	IN 30.10					
WTR YR 1979	TOTAL	74598	MEAN 204	MAX 4150	MIN 24	CFSM 3.96	IN 53.88					

TENNESSEE RIVER BASIN

03456500 EAST FORK PIGEON RIVER NEAR CANTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT 13...	1245	26	11	.77	--	--	--	--	--	--	--	--
DEC 11...	1430	104	1	.28	--	--	--	--	--	--	--	--
JAN 18...	1225	113	3	.92	--	--	--	--	--	--	--	--
FEB 25...	1245	1800	352	1710	--	--	--	--	--	--	--	--
26...	1155	638	34	59	--	--	--	--	--	--	--	--
MAR 04...	1025	8440	1230	28000	--	--	--	--	--	--	--	--
04...	1425	5970	504	8120	--	--	--	--	--	--	--	--
APR 03...	1420	1370	253	936	--	--	--	--	--	--	--	--
SEP 14...	0930	1460	114	449	--	--	--	--	--	--	--	--
14...	1130	1250	70	236	--	--	--	--	--	--	--	--
21...	1945	5860	255	4040	--	--	--	--	--	--	--	--
21...	2140	5290	286	4090	--	--	--	--	--	--	--	--
21...	2215	6800	365	6700	4	5	12	24	38	50	67	87
21...	2320	4140	207	2310	--	--	--	--	--	--	--	--

03457000 PIGEON RIVER AT CANTON, N. C.

LOCATION.--Lat 35°31'30", long 82°50'28", Haywood County, Hydrologic Unit 06010106, on left bank 100 ft (30 m) upstream from small tributary, 200 ft (61 m) downstream from Pigeon Street Bridge, 0.5 mi (0.8 km) from U.S. Highways 19 and 23 at Canton, and at mile 64.1 (103.1 km). Records include flow of small tributary.

DRAINAGE AREA.--133 mi² (344 km²) includes that of small tributary below gage.

PERIOD OF RECORD.--May 1907 to June 1909, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 853: 1929-37(M). WSP 1306: 1908(M).

GAGE.--Water-stage recorder. Datum of gage is 2,572.22 ft (784.013 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to June 1909, nonrecording gage at bridge 0.4 mi (0.6 km) downstream at different datum. Dec. 6, 1928, to Jan. 3, 1929, nonrecording gage at present site and datum.

REMARKS.--Records good. Occasional diurnal fluctuation and considerable regulation at low flow caused by Lake Logan on West Fork Pigeon River 12 mi (19 km) upstream (see p. 484). Town of Canton diverted above station an average of 1.96 ft³/s (0.055 m³/s) for municipal water supply. Suspended-sediment records for the current year are published on page 440 of this report.

AVERAGE DISCHARGE.--52 years (1907-8, 1928-79), 324 ft³/s (9.176 m³/s), 33.08 in/yr (840 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft³/s (895 m³/s) Aug. 30, 1940, gage height, 20.75 ft (6.325 m), from floodmarks in gage well; minimum, 15 ft³/s (0.42 m³/s) Jan. 8, 1956, gage height, 0.04 ft (0.012 m), result of freezeup; minimum daily, 27 ft³/s (0.76 m³/s) Sept. 7, 1954.

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 (5.58 m), discharge, 25,700 ft³/s (728 m³/s), from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (110 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0030	4170 118	6.78 2.067	Mar. 23	1945	4450 126	7.05 2.149
Feb. 25	1545	4230 120	6.84 2.085	Sept. 14	0400	6560 186	8.84 2.694
Mar. 4	1245	*12600 357	*12.44 3.792	Sept. 21	2400	10000 283	11.09 3.380

Minimum discharge, 63 ft³/s (1.78 m³/s) Nov. 15, 17, gage height, 0.70 ft (0.213 m); minimum daily, 65 ft³/s (1.84 m³/s) Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	72	84	479	246	649	420	498	412	155	295	248
2	90	71	77	1510	240	565	410	458	363	141	211	243
3	84	70	77	596	256	520	1900	438	407	137	195	310
4	81	74	250	423	238	6710	1560	457	333	138	184	231
5	83	74	330	353	223	3540	1120	439	313	186	174	962
6	81	72	174	317	217	1790	883	453	297	146	167	626
7	79	71	127	643	244	1320	749	387	284	300	160	407
8	81	76	113	991	214	1070	669	376	278	245	153	330
9	81	72	656	540	204	877	1020	590	277	204	147	287
10	82	71	386	441	183	759	737	1000	276	334	154	257
11	82	71	237	382	190	703	648	893	269	237	146	233
12	83	69	197	352	198	598	775	697	240	889	157	214
13	80	67	171	421	201	541	2190	702	227	441	143	952
14	82	66	152	376	191	557	1470	651	219	305	133	2820
15	79	65	137	297	244	433	1110	545	215	258	126	930
16	79	66	137	284	361	439	921	494	214	309	125	658
17	79	68	147	269	312	410	796	451	243	229	120	531
18	79	134	122	255	257	366	700	416	212	207	118	460
19	79	73	122	234	260	365	630	386	196	203	114	408
20	77	72	129	921	241	346	573	372	196	218	110	360
21	78	72	145	1780	374	332	529	448	192	403	133	2550
22	76	73	128	819	491	314	490	381	188	455	124	2600
23	75	78	115	639	1000	1490	456	400	174	362	262	1120
24	75	78	147	607	1030	1990	431	472	172	291	169	864
25	74	73	250	480	2180	1010	443	381	172	304	167	708
26	72	71	162	435	1430	777	1440	349	167	328	542	603
27	71	97	141	400	968	661	925	327	157	269	335	754
28	73	91	126	377	770	585	685	358	154	266	279	1620
29	71	95	128	321	---	522	596	318	151	235	207	1090
30	73	113	157	301	---	479	544	302	168	215	206	1150
31	73	---	556	293	---	445	---	528	---	226	283	---
TOTAL	2448	2315	3690	16536	13563	31233	25825	14967	7166	8656	5839	24526
MEAN	79.0	77.2	119	533	484	1008	861	483	239	279	188	818
MAX	96	134	650	1780	2180	6710	2190	1000	412	889	542	2820
MIN	71	55	77	234	183	314	410	302	151	137	110	214
(†)	-454.4	+358.2	+446.8	+47.7	+59.0	+54.7	+58.2	+67.6	+55.2	+71.1	+59.0	+77.5
MEAN†	64.3	89.1	204	535	486	1009	863	485	241	282	190	820
CFSM†	0.48	0.67	1.53	4.02	3.65	7.59	6.49	3.65	1.81	2.12	1.43	6.17
IN.†	0.56	0.75	1.77	4.64	3.81	8.75	7.24	4.20	2.02	2.44	1.65	6.88
CAL YR 1978	TOTAL 100010	MEAN 274	MAX 3430	MIN 65	MEAN† 276	CFSM† 2.08	IN.† 28.17					
WTR YR 1979	TOTAL 154904	MEAN 436	MAX 6710	MIN 65	MEAN† 438	CFSM† 3.29	IN.† 44.71					

† Diversion by city of Canton, and change in contents in Lake Logan, equivalent in cfs-days. Records of diversion furnished by city of Canton.

‡ Adjusted for diversion and change in lake contents.

TENNESSEE RIVER BASIN

03457000 PIGEON RIVER AT CANTON, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
04...	0900	78	4	.84
NOV				
13...	1520	64	2	.35
JAN				
18...	1015	267	2	1.4
MAY				
04...	0935	9270	851	21300
04...	1215	12300	748	24800
04...	1230	12400	554	18500
04...	1300	12600	582	19800
04...	1330	12400	433	14500
04...	1530	9220	309	7690
04...	1800	8250	221	4920

TENNESSEE RIVER BASIN

441

03459500 PIGEON RIVER NEAR HEPKO, N. C.

LOCATION.--Lat 35°38'07", long 82°59'22", Haywood County, Hydrologic Unit 06010106, on left bank 95 ft (29 m) east of Interstate Highway 40, 0.8 mi (1.3 km) downstream from Jonathan Creek, 2.0 mi (3.2 km) south of Hepco, 2.4 mi (3.9 km) upstream from Pines Creek, and at mile 45.1 (72.6 km).

DRAINAGE AREA.--350 mi² (906 km²).

WATER-DISCHARGE RECORDS

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 (711.998 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Considerable regulation by Lake Junaluska on Richland Creek and Lake Logan on West Fork Pigeon River for periods at low flow, combined capacity of reservoirs, about 2,000 ft³/s-day (4.894 hm³). (See p. 484).

AVERAGE DISCHARGE.--52 years, 681 ft³/s (19.29 m³/s), 26.42 in/yr (671 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,700 ft³/s (926 m³/s) Aug. 30, 1940, gage height, 15.82 ft (4.822 m), from floodmark in gage house, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurements at gage heights 14.94 ft (4.554 m) and 15.82 ft (4.822 m); minimum, 81 ft³/s (2.29 m³/s) Sept. 30, 1941; minimum gage height, 0.81 ft (0.247 m) Sept. 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 1876 and February 1902 reached a stage of about 18 ft (5.5 m), from flood profiles by Tennessee Valley Authority, discharge, about 42,000 ft³/s (1,190 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0530	6180 175	7.13 2.173	Apr. 3	1515	6580 186	7.34 2.237
Feb. 25	1930	6200 176	7.14 2.176	Sept. 14	0815	6620 187	7.36 2.243
Mar. 4	1645	*15400 436	*10.97 3.344	Sept. 22	0300	11200 317	9.43 2.874

Minimum discharge, 135 ft³/s (3.82 m³/s) Oct. 27, Nov. 4, gage height, 1.13 ft (0.344 m); minimum daily, 138 ft³/s (3.91 m³/s) Oct. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	145	273	925	638	1360	868	405	772	357	555	585
2	181	144	229	3120	593	1190	883	874	657	319	434	500
3	164	142	227	1390	646	1050	4130	831	738	310	399	584
4	166	139	961	951	608	8110	3540	834	661	309	384	483
5	159	145	1030	805	565	6500	2440	849	610	452	365	1390
6	154	144	544	726	547	3440	1890	829	586	342	347	1460
7	149	154	398	1250	598	2640	1640	774	568	538	329	856
8	149	182	352	2390	556	2190	1540	750	579	620	318	688
9	152	177	1490	1320	529	1810	1870	775	566	449	308	594
10	156	169	1070	1040	456	1600	1820	1360	522	650	303	527
11	154	173	632	898	496	1540	1570	1270	456	546	315	478
12	153	167	517	811	515	1310	1610	1050	424	946	390	436
13	153	165	456	847	533	1200	4460	1130	402	843	319	692
14	190	164	409	823	508	1240	3380	1070	389	571	288	3250
15	158	168	369	672	610	1140	2420	919	379	498	274	1260
16	152	164	368	637	780	1010	2020	838	373	527	272	901
17	152	177	389	611	739	954	1740	777	450	441	260	754
18	152	359	340	591	635	907	1620	739	397	399	254	675
19	151	224	328	551	636	954	1480	710	359	403	245	619
20	152	179	335	1860	593	798	1370	686	391	610	239	552
21	149	175	434	4300	906	768	1270	802	417	907	305	865
22	147	175	383	2050	1180	737	1120	720	415	1010	319	4590
23	146	220	331	1500	1640	1710	885	711	431	745	487	1520
24	145	266	427	1390	3290	3610	884	834	395	619	353	1190
25	142	205	674	1170	3910	1840	923	815	393	602	365	1010
26	143	184	472	979	2980	1460	1890	749	375	677	738	889
27	141	274	411	915	2010	1270	1650	705	353	649	672	941
28	138	318	366	916	1610	1130	1200	749	343	603	586	1970
29	141	382	352	791	---	1040	1070	656	337	508	450	1570
30	139	426	392	737	---	963	987	624	376	462	494	1970
31	140	---	944	723	---	909	---	760	---	451	599	---
TOTAL	4751	6106	15903	37639	29307	56340	54220	26095	14114	17363	11966	33799
MEAN	153	204	513	1214	1047	1817	1807	842	470	560	386	1127
MAX	190	426	1490	4300	3910	8110	4460	1360	772	1010	738	4590
MIN	138	139	227	551	456	737	868	624	337	309	239	436
CAL YR 1978 TOTAL	218051		MEAN 597	MAX 7110	MIN 138							
WTR YR 1979 TOTAL	307603		MEAN 843	MAX 8110	MIN 138							

TENNESSEE RIVER BASIN

03459500 PIGEON RIVER NEAR HEPKO, N. C.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-73; October 1978 to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1978 to September 1979.

WATER TEMPERATURES: October 1978 to September 1979.

INSTRUMENTATION.--Water-quality monitor since October 1978.

REMARKS.--During period 1968-73, data were collected at bridge on Interstate Highway 40 and published as Pigeon River at Hepco (station 03459620)

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1930 micromhos Oct. 29, 30; minimum, 50 micromhos Mar. 4, 5, Sept. 21, 22.

WATER TEMPERATURES: Maximum, 30°C Aug. 9; minimum, 1.0°C Feb. 2, 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 17...	1230	153	1600	7.5	10.5	500	--	340	290	130	4.3
NOV 20...	1015	175	800	--	11.0	500	9.9	160	120	59	3.9
DEC 05...	1315	1110	320	7.7	10.0	100	10.1	70	41	22	3.7
MAR 19...	1220	856	320	7.2	11.5	60	11.2	68	42	25	1.4
JUN 20...	0930	384	800	7.7	21.5	150	6.2	160	110	62	2.2
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 17...	190	54	4.5	8.0	68	0	56	3.4	68	440	.1
NOV 20...	95	55	3.2	5.1	59	0	48	--	44	190	.1
DEC 05...	38	53	2.0	2.7	36	0	30	1.1	24	72	.1
MAR 19...	31	49	1.6	1.8	32	0	26	3.2	15	66	.1
JUN 20...	97	55	3.3	4.7	63	0	52	2.0	31	210	.1
DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 17...	15	1180	893	1.60	487	.45	.02	.47	.45	.4	.00
NOV 20...	13	559	442	.76	264	.41	.02	.43	.39	--	.02
DEC 05...	9.4	234	192	.32	701	.45	.01	.46	.42	--	.02
MAR 19...	9.0	221	168	.30	511	.48	.01	.49	.50	--	.19
JUN 20...	11	524	454	.71	543	.85	.01	.86	.87	--	.01

TENNESSEE RIVER BASIN

443

03459500 PIGEON RIVER NEAR HEPKO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
DATE	AS N)	AS NH4)	AS NH4)	AS N)	AS N)	AS N)	AS N)	AS N)	AS N)	AS N)	AS N)
OCT 17...	.00	--	.00	.91	.67	.91	.24	.67	250	1.4	6.1
NOV 20...	.00	--	.00	.77	.58	.79	.21	.58	--	1.2	5.4
DEC 05...	.05	--	.06	.90	.42	.92	.45	.47	--	1.4	6.1
MAR 19...	.17	--	.22	.28	.24	.47	.01	.46	--	.96	4.3
JUN 20...	.04	.01	.05	1.2	.72	1.2	.44	.76	--	2.1	9.1
	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS P04)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)
DATE	AS P)	AS P04)	AS P04)	AS P)	AS P)	AS P)	AS P04)	AS P)	AS AS)	AS AS)	AS AS)
OCT 17...	.48	--	1.5	.40	.43	.39	1.2	120	7	--	--
NOV 20...	.37	--	1.1	.29	.28	.26	.80	--	2	0	?
DEC 05...	.28	--	.86	.09	.06	.06	.18	--	2	1	1
MAR 19...	.10	--	.31	.07	.06	.06	.18	--	1	0	1
JUN 20...	.36	--	1.1	.24	.21	.21	.64	--	3	1	2
	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, FM BOT- TOM MA- TERIAL (UG/G)	
DATE	AS AS)	AS BA)	AS CD)	AS CD)	AS CD)	AS CD)	AS CR)	AS CR)	AS CR)	AS CR)	AS CR)
OCT 17...	0	100	0	--	--	<10	10	6	4	<10	
NOV 20...	--	100	1	0	2	--	20	16	4	--	
DEC 05...	--	--	6	0	6	--	<10	<7	3	--	
MAR 19...	--	--	0	0	0	--	10	10	0	--	
JUN 20...	--	--	0	0	1	--	30	20	10	--	
	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	
DATE	AS CO)	AS CO)	AS CO)	AS CO)	AS CU)	AS CU)	AS CU)	AS CU)	AS FE)	AS FE)	
OCT 17...	--	--	--	10	4	2	2	<10	780	230	
NOV 20...	1	0	1	--	1	0	1	--	660	390	
DEC 05...	1	1	0	--	10	3	7	--	2500	2100	
MAR 19...	0	0	0	--	62	60	2	--	480	390	
JUN 20...	1	1	0	--	10	8	2	--	1100	940	

TENNESSEE RIVER BASIN

03459500 PIGEON RIVER NEAR HEPKO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
OCT 17...	550	4100	1	0	1	10	340	--	--	80
NOV 20...	270	--	5	0	8	--	200	60	140	--
DEC 05...	450	--	--	--	--	--	230	60	170	--
MAR 19...	90	--	5	1	4	--	90	30	60	--
JUN 20...	160	--	10	6	4	--	240	130	110	--
DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 17...	<.5	--	--	.00	0	--	--	0	0	10
NOV 20...	<.5	.0	<.5	--	0	0	0	--	0	0
DEC 05...	<.5	.0	<.5	--	0	0	0	--	--	30
MAR 19...	<.5	.0	<.5	--	0	0	0	--	--	20
JUN 20...	<.5	.0	<.5	--	0	0	0	--	--	40
DATE	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	LENGTH OF EXPO- SURE (DAYS)
OCT 17...	0	10	30	37	4.6	.01	.10	--	--	--
NOV 20...	0	0	--	18	1.8	--	.00	4.65	2.99	33
DEC 05...	10	20	--	9.2	4.4	--	.10	--	--	--
MAR 19...	20	0	--	8.4	.4	--	.10	--	--	--
JUN 20...	40	0	--	16	1.0	--	.20	--	--	--

03459500 PIGEON RIVER NEAR HEPCO, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	OCT 17,78 1230	NOV 20,78 1015	JUN 20,79 0930
TOTAL CELLS/ML	3600	18000	140000
DIVERSITY: DIVISION	0.7	0.8	0.0
..CLASS	0.7	0.8	0.0
..ORDER	1.0	1.6	0.0
...FAMILY	1.2	1.7	0.0
....GENUS	1.3	2.1	0.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....OOCYSTACEAE						
....ANKISTRODESMUS	--	-	400	2	--	-
....KIRCHNERIELLA	--	-	120	1	--	-
....SELENASTRUM	--	-	490	3	--	-
...SCENEDESMACEAE						
....SCENEDESMUS	--	-	250	1	--	-
..TETRASPORALES						
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	120	1	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	*	0	92	1	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIIUM	--	-	*	0	--	-
....STAUROSTRUM	--	-	*	0	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	64	2	280	2	--	-
....MELOSIIRA	160	4	*	0	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	120	1	--	-
....COCCONEIS	*	0	--	-	--	-
...CYMBELLACEAE						
....EPITHEMIA	*	0	--	-	--	-
...DIATOMACEAE						
....DIATOMA	*	0	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	*	0	--	-	--	-
....FRAGILARIA	--	-	--	-	*	0
....SYNEDRA	21	1	--	-	*	0
...GOMPHONEMACEAE						
....GOMPHONEMA	--	-	--	-	*	0
...NAVICULACEAE						
....NAVICULA	220	6	180	1	*	0
...NITZSCHACEAE						
....NITZSCHIA	130	4	520	3	*	0
...SURIPELLACEAE						
....SURIPELLA	*	0	--	-	--	-

TENNESSEE RIVER BASIN

03459500 PIGEON RIVER NEAR HEPCO, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	OCT 17, 78 1230		NOV 20, 78 1015		JUN 20, 79 0930	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
....ANACYSTIS	43	1	2500	13	--	-
...HORMOGONALES						
....OSCILLATORIA						
....OSCILLATORIA	2900#	80	11000#	62	140000#	100
...CHROOCOCCALES						
....CHROOCOCCACEAE						
....GOMPHOSPHAERIA	--	-	1700	9	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
....EUGLENA	--	-	0	0	--	-
....PHACUS	0	0	--	-	--	-
....TRACHELOMONAS	0	0	0	0	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 0 - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03459500 PIGEON RIVER NEAR HEPSCO, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER: WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH					
1	---	---	15.5	12.5	11.5	8.5	11.5	9.5	3.5	2.0	10.5	8.0				
2	---	---	16.5	13.0	11.5	9.5	11.0	5.5	4.0	1.0	12.0	8.5				
3	---	---	15.5	12.5	14.5	10.5	5.0	3.0	5.5	3.5	10.5	9.5				
4	---	---	15.0	11.5	14.0	11.0	4.5	2.0	7.5	5.0	11.0	10.0				
5	---	---	15.0	10.5	12.5	10.5	5.0	3.5	5.0	3.5	12.0	10.0				
6	---	---	15.0	11.0	11.5	9.0	7.5	5.0	5.0	2.5	11.0	9.0				
7	---	---	14.0	12.0	12.0	8.5	9.0	7.5	5.5	2.5	10.0	8.0				
8	---	---	15.5	13.5	16.0	12.5	9.0	4.5	5.5	3.0	10.0	8.5				
9	---	---	16.0	13.5	16.0	10.0	4.5	3.0	5.5	3.0	11.0	8.0				
10	---	---	15.5	12.5	10.0	6.5	5.0	2.5	4.5	1.0	11.0	9.0				
11	---	---	16.0	12.5	8.0	5.5	6.0	3.5	6.0	3.0	10.0	8.0				
12	---	---	15.5	12.5	8.0	5.5	6.5	5.0	7.0	4.5	11.0	7.0				
13	---	---	16.0	13.0	8.0	5.0	8.0	6.5	6.5	5.0	12.0	8.0				
14	---	---	16.5	13.5	7.0	5.0	8.0	4.5	8.0	5.0	12.5	10.0				
15	---	---	17.0	15.5	6.5	3.5	5.0	2.5	11.0	7.5	11.0	8.0				
16	---	---	17.0	14.5	8.5	6.0	6.5	4.0	10.5	8.0	11.0	6.5				
17	---	---	17.5	14.0	8.5	6.0	8.5	6.0	8.0	5.5	12.5	7.0				
18	---	---	16.0	13.5	7.0	4.5	8.5	7.0	5.5	1.5	14.0	8.5				
19	15.5	13.5	15.0	13.0	10.0	7.0	7.0	5.5	6.5	3.5	15.5	10.5				
20	16.5	12.5	14.0	12.5	14.0	10.0	8.5	7.5	6.5	2.5	17.0	13.0				
21	16.5	12.0	14.5	12.0	14.0	9.0	8.0	6.0	8.5	6.5	18.0	14.0				
22	17.5	13.0	14.0	12.0	8.5	6.5	7.0	5.0	9.5	7.0	15.5	13.5				
23	18.0	14.0	13.5	13.0	7.5	5.0	7.0	5.0	10.0	8.5	14.0	11.5				
24	19.0	16.5	15.0	11.0	7.5	6.5	6.5	4.5	9.5	8.5	11.5	10.5				
25	13.0	14.5	11.5	9.5	5.5	7.0	5.0	3.5	10.0	8.5	10.0	7.5				
26	20.0	16.5	11.5	10.0	7.5	5.0	5.5	3.0	8.5	6.0	10.5	6.0				
27	19.0	16.5	13.5	11.0	6.5	4.5	7.5	4.5	8.5	5.5	10.0	8.0				
28	17.5	15.0	14.0	10.5	5.5	3.0	6.5	4.5	9.5	6.5	13.5	8.5				
29	17.0	13.0	11.5	9.5	6.5	3.0	5.5	3.5	---	---	15.0	11.5				
30	17.0	13.5	12.5	9.5	9.0	6.0	6.0	3.0	---	---	17.0	13.0				
31	16.0	12.5	---	---	10.5	8.5	6.0	4.5	---	---	16.0	14.5				
MONTH	20.0	12.0	17.5	9.5	16.0	3.0	11.5	2.0	11.0	1.0	18.0	6.0				
DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER						
1	18.0	15.0	18.5	13.5	22.5	18.0	25.5	21.0	28.5	24.5	24.0	22.0				
2	16.5	15.5	20.0	14.5	23.0	19.5	24.5	20.5	28.0	24.5	25.0	22.0				
3	15.5	12.5	18.5	16.5	22.0	20.5	26.5	21.0	26.5	24.0	24.5	23.0				
4	14.5	12.0	20.5	16.5	23.0	19.5	26.5	22.0	27.5	23.0	24.5	22.5				
5	14.5	11.5	19.5	17.0	24.5	19.0	26.0	23.5	27.5	23.0	23.5	20.5				
6	14.0	11.0	22.0	17.0	23.5	20.0	24.0	22.0	28.0	23.5	22.5	20.0				
7	14.0	10.5	22.5	17.5	23.5	20.5	21.5	20.5	29.0	24.0	24.5	21.5				
8	14.5	12.0	22.0	18.5	24.5	21.0	21.5	20.0	29.5	24.5	24.0	21.0				
9	14.0	12.0	21.5	19.0	25.5	22.0	21.0	20.5	30.0	24.5	24.0	20.5				
10	15.0	11.0	20.5	18.0	24.0	22.0	22.5	20.0	29.0	25.5	24.0	20.5				
11	15.0	12.5	21.5	18.0	24.0	20.5	23.0	20.5	27.5	25.0	24.0	20.5				
12	15.0	13.5	22.0	19.5	23.5	16.5	25.0	21.0	25.5	23.0	22.5	19.5				
13	14.0	13.0	20.5	19.0	24.0	19.0	24.0	21.0	26.0	21.0	23.0	21.0				
14	15.0	12.0	21.0	17.0	24.5	19.5	24.5	21.5	26.5	22.5	21.0	19.0				
15	15.0	11.5	20.5	16.5	24.0	19.5	25.5	22.5	24.5	22.0	21.0	18.5				
16	15.0	11.5	20.5	16.0	21.5	18.5	26.5	22.5	26.0	21.0	21.0	19.0				
17	15.5	11.5	20.5	15.0	21.5	17.0	28.0	23.5	26.0	21.5	21.0	19.0				
18	15.5	11.5	21.0	15.0	25.0	18.5	27.5	24.0	27.0	22.0	21.0	19.0				
19	16.0	12.0	21.5	16.0	26.5	21.0	26.5	24.0	28.0	23.0	22.5	20.0				
20	17.0	12.5	22.0	17.5	24.0	22.5	24.0	22.5	29.0	24.5	21.0	19.0				
21	16.5	13.5	21.5	18.5	24.0	21.5	22.5	22.0	26.0	24.0	20.5	18.0				
22	17.0	14.0	22.0	19.0	27.0	21.5	22.5	21.0	25.5	22.0	18.5	17.5				
23	17.5	14.5	20.5	19.0	26.0	21.5	24.0	21.0	26.0	23.0	18.5	17.5				
24	18.0	15.5	20.5	18.0	24.5	23.0	25.0	21.5	26.5	22.5	18.0	17.0				
25	17.0	16.0	18.0	15.0	24.0	21.0	24.0	23.0	26.0	23.5	19.0	17.0				
26	16.0	15.5	18.5	13.5	25.0	20.0	24.0	22.5	25.5	22.5	19.5	18.0				
27	17.5	14.5	17.0	14.5	25.0	20.0	25.0	22.0	26.0	22.5	18.5	17.5				
28	17.0	14.5	19.5	15.5	25.5	20.0	26.5	22.0	26.0	23.5	18.0	17.0				
29	16.5	12.5	21.0	17.0	23.0	21.0	27.0	23.5	26.5	23.5	20.0	18.0				
30	17.5	12.5	20.5	17.0	25.0	20.5	28.0	23.5	26.5	23.0	20.0	18.0				
31	---	---	21.0	19.0	---	---	27.5	24.0	25.5	22.5	---	---				
MONTH	18.0	10.5	22.5	13.5	27.0	17.0	28.0	20.0	30.0	21.0	25.0	17.0				
YEAR	30.0	1.0														

TENNESSEE RIVER BASIN

449

03459500 PIGEON RIVER NEAR HEPKO, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT							
03...	1100	165	12	5.3	--	--	--
17...	1230	153	14	5.8	--	--	--
NOV							
20...	1015	175	12	5.7	--	--	--
DEC							
05...	1315	1110	61	183	--	--	--
JAN							
11...	1145	892	10	24	--	--	--
22...	1430	1910	73	376	--	--	--
23...	1400	1460	45	177	--	--	--
FEB							
21...	1450	970	93	244	--	--	--
25...	1430	3720	310	3110	--	--	--
MAR							
04...	1620	15900	1500	64400	2	6	10
19...	1220	856	6	14	--	--	--
MAY							
14...	1430	1020	26	72	--	--	--
JUN							
20...	0930	384	41	43	--	--	--
AUG							
27...	1515	661	57	102	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
OCT						
03...	--	--	--	--	--	94
17...	--	--	--	--	--	94
NOV						
20...	--	--	--	--	--	94
DEC						
05...	--	--	--	--	--	66
JAN						
11...	--	--	--	--	--	64
22...	--	--	--	--	--	36
23...	--	--	--	--	--	42
FEB						
21...	--	--	--	--	--	56
25...	--	--	--	--	--	41
MAR						
04...	22	32	46	60	78	--
19...	--	--	--	--	--	95
MAY						
14...	--	--	--	--	--	92
JUN						
20...	--	--	--	--	--	91
AUG						
27...	--	--	--	--	--	72

TENNESSEE RIVER BASIN

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.
(HYDROLOGIC BENCH-MARK STATION)

LOCATION.--Lat 35°40'02", long 83°04'23", Haywood County, Hydrologic Unit 06010106, in Great Smoky Mountains National Park, on left bank 20 ft (6 m) downstream from bridge on State Highway 284, 500 ft (152 m) upstream from Little Cataloochee Creek, 2 mi (3 km) north of Cataloochee and 3.7 mi (6.0 km) upstream from mouth.

DRAINAGE AREA.--49.2 mi² (127.4 km²).

WATER-DISCHARGE RECORDS

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 (748.857 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Water-discharge record good. Records for Class A evaporation station 2.4 mi (3.9 km) upstream published in reports of National Climatic Center, NOAA, U.S. Department of Commerce.

AVERAGE DISCHARGE.--36 years, 111 ft³/s (3.144 m³/s), 30.64 in/yr (778 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s (144 m³/s) Mar. 6, 1963, gage height, 8.08 ft (2.463 m); minimum, 9 ft³/s (0.25 m³/s) Jan. 2, 1940, Dec. 17, 24, 1943, gage height, 1.87 ft (0.57 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,000 ft³/s (28 m³/s) and Maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1030	1240 35.1	4.95 1.509	Mar. 4	1645	1370 38.8	5.09 1.551
Jan. 20	2230	*1610 45.6	*5.35 1.631	Apr. 3	1130	1010 28.6	4.66 1.420

Minimum discharge, 25 ft³/s (0.71 m³/s) Nov. 11, 12, 13, 14, 15, 16, 17, gage height, 2.06 ft (0.628 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	27	58	152	112	231	115	103	85	48	70	109
2	36	27	48	436	105	201	135	99	82	46	65	75
3	34	25	53	262	100	140	563	103	93	45	61	176
4	36	25	239	209	98	933	471	112	90	46	60	136
5	34	25	198	167	91	712	363	100	79	79	56	260
6	31	25	118	151	89	451	289	95	76	50	53	238
7	30	26	93	298	95	346	242	92	74	70	52	157
8	30	28	82	538	84	293	212	89	91	61	50	124
9	31	26	581	326	80	235	311	88	92	65	49	105
10	30	25	290	249	78	220	250	89	93	86	48	93
11	29	25	181	202	80	197	226	86	83	66	47	83
12	29	25	139	174	79	173	233	87	77	67	57	75
13	30	25	115	156	74	158	623	94	73	66	48	84
14	44	25	100	140	72	163	517	85	69	61	44	78
15	32	25	89	120	87	143	382	78	66	56	43	69
16	30	25	87	111	113	133	307	75	65	54	42	64
17	29	42	80	106	104	126	258	72	84	50	40	61
18	29	55	71	102	99	121	224	70	66	51	40	54
19	29	29	69	96	98	116	199	69	61	74	38	57
20	28	27	68	605	94	112	180	68	61	134	37	55
21	28	26	103	968	120	108	164	84	61	294	77	178
22	28	26	76	486	145	105	152	71	59	210	86	208
23	27	57	71	331	229	151	142	82	58	147	61	120
24	27	66	97	276	572	250	133	115	62	120	51	105
25	27	36	104	216	638	194	130	92	59	111	48	95
26	27	31	92	185	494	170	147	85	54	109	70	88
27	27	59	86	174	344	155	137	93	51	101	59	96
28	27	73	85	156	270	143	114	106	50	94	63	113
29	27	110	82	137	---	134	112	90	49	84	55	119
30	27	91	86	126	---	126	107	85	59	78	66	109
31	27	---	129	121	---	120	---	89	---	76	109	---
TOTAL	943	1137	3770	7776	4644	6900	7442	2736	2122	2699	1745	3389
MEAN	30.4	37.9	122	251	166	223	248	88.3	70.7	87.1	56.3	113
MAX	44	110	581	968	638	933	623	115	93	294	109	260
MIN	27	25	48	96	72	105	107	68	49	45	37	55
CFSM	.62	.77	2.48	5.10	3.37	4.53	5.04	1.80	1.44	1.77	1.14	2.30
IN.	.71	.86	2.85	5.88	3.51	5.22	5.63	2.07	1.60	2.04	1.32	2.56

CAL YR 1978 TOTAL 36133 MEAN 99.0 MAX 890 MIN 25 CFSM 2.01 IN 27.32
WTR YR 1979 TOTAL 45303 MEAN 124 MAX 968 MIN 25 CFSM 2.52 IN 34.25

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued
(Hydrologic bench-mark and pesticide station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1973 to current year.

WATER TEMPERATURES: October 1962 to current year.

INSTRUMENTATION.--Temperature recorder since October 1962. Water-quality monitor since May 1974.

REMARKS.--Miscellaneous chemical data published for 1945 water year.

COOPERATION.--Chemical and biological data shown in last table were furnished by the North Carolina Department of Natural Resources and Community Development.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 43 micromhos June 13, 1974; minimum, 10 micromhos Jan. 12, 13, Feb. 2, 8, 10, 1975, Jan. 10, 19, 1976, Feb. 8, Dec. 28, 1978, Jan. 3-8, 10, 11, 12, 1979.

WATER TEMPERATURES: Maximum, 23.5°C Aug. 5, 1977; minimum, 0.0°C on several days during winter months of most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 25 micromhos Dec. 2; minimum, 10 micromhos Dec. 28, Jan. 3-8, 10, 11, 12.

WATER TEMPERATURES: Maximum, 20.0°C Aug. 1; minimum, 0.0°C Dec. 29, Jan. 26, 29, 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLO- R (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ PER 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT 16...	1215	30	12	6.6	8.0	20	8.5	86	5	400	5	0
NOV 20...	1320	27	17	--	8.5	10	12.0	30	5	450	5	3
29...	1805	298	--	--	--	--	--	--	--	--	--	--
JAN 30...	1200	122	12	7.7	1.0	0	16.0	1	<1	<10	4	0
MAR 21...	1030	108	13	7.4	10.0	5	11.2	--	--	--	3	0
MAY 29...	1215	95	14	7.1	11.0	10	8.6	14	7	470	4	0
SEP 10...	1300	95	16	6.6	14.5	3	7.5	58	9	1900	3	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 16...	1.3	.4	.8	24	.2	.6	8	0	7	3.2	1.2	.7
NOV 20...	1.3	.4	1.6	37	.3	.9	2	0	2	--	1.7	.8
29...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 30...	.9	.4	1.0	32	.2	.5	7	0	6	.2	.9	.6
MAR 21...	.9	.2	1.1	39	.3	.5	7	0	6	.5	.9	.7
MAY 29...	1.0	.3	1.1	35	.2	.5	6	0	5	.8	.8	1.1
SEP 10...	.9	.2	1.0	37	.2	.5	7	0	6	2.8	.7	.4

TENNESSEE RIVER BASIN

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)
OCT 16...	.0	8.7	18	18	.02	1.46	.03	.00	.03	.03	.8
NOV 20...	.0	9.0	20	17	.03	1.46	.01	.00	.01	.02	--
29...	--	--	--	--	--	--	--	--	--	--	--
JAN 30...	.0	7.2	15	16	.02	4.94	.18	.00	.18	.17	--
MAR 21...	.0	7.3	18	16	.02	5.25	.14	.00	.14	.10	--
MAY 29...	.0	7.4	19	16	.03	4.87	.14	.00	.14	.14	--
SEP 10...	.0	7.2	28	15	.04	7.18	.16	.00	.16	.15	--
DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)
OCT 16...	.00	.01	--	.01	.00	.00	.00	.00	.00	700	.03
NOV 20...	.00	.00	--	.00	.00	.04	.00	.00	.04	--	.01
29...	--	--	--	--	--	--	--	--	--	--	--
JAN 30...	.00	.00	--	.00	.00	.00	.00	.00	.00	--	.13
MAR 21...	.01	.00	--	.00	.04	.01	.10	.09	.01	--	.24
MAY 29...	.00	.00	.00	.00	.30	--	.30	--	--	--	.44
SEP 10...	.01	.00	.01	.00	.05	.08	.06	.00	.08	--	.22
DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, DIS- SOLVED (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/KG AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)
OCT 16...	.13	.01	--	.03	.01	.01	.00	.00	370	0	0
NOV 20...	.04	.00	--	.00	.00	.01	.01	.03	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
JAN 30...	.80	.00	--	.00	.00	.01	.00	.00	--	--	--
MAR 21...	1.1	.01	--	.03	.01	.01	.01	.03	--	--	--
MAY 29...	1.9	.00	.00	.00	.01	.00	.00	.00	--	--	--
SEP 10...	.97	.00	.00	.00	.01	.00	.00	.00	--	2	--
DATE	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 16...	0	2	<10	<10	<10	0	<10	<10	1	1	0
NOV 20...	--	--	--	10	10	0	--	--	0	0	0
29...	--	--	--	--	--	--	--	--	--	--	--
JAN 30...	--	--	--	<10	<8	2	--	--	0	0	0
MAR 21...	--	--	--	10	10	0	--	--	5	0	5
MAY 29...	--	--	--	20	20	0	--	--	1	1	0
SEP 10...	0	0	--	<10	8	2	--	--	1	1	0

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

TENNESSEE RIVER BASIN

03460000 CATALOOCHIE CREEK NEAR CATALOOCHIE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	DDI, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 16...	.0	--	--	.00	.0	.00	.00	.0	--	--
NOV 20...	--	--	--	--	--	--	--	--	--	--
NOV 29...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.0
JAN 30...	--	--	--	--	--	--	--	--	--	--
MAR 21...	--	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
OCT 16...	.00	.0	.00	.0	.00	.0	--	--	--	--
NOV 20...	--	--	--	--	--	--	--	--	--	--
NOV 29...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
JAN 30...	--	--	--	--	--	--	--	--	--	--
MAR 21...	--	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)
OCT 16...	--	--	--	--	.00	--	--	.00	0
NOV 20...	--	--	--	--	--	--	--	--	--
NOV 29...	.00	.0	.00	.0	.00	.00	.0	.00	0
MAR 21...	--	--	--	--	--	--	--	--	--

DATE	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL ASH WEIGHT G/SQ M	LENGTH OF EXPO- SURE (DAYS)
OCT 16...	0	--	--	.00	.00	.00	--	--	--
NOV 20...	--	--	--	--	--	--	.236	.079	34
NOV 29...	0	.00	.0	--	--	--	--	--	--
MAR 21...	--	--	--	--	--	--	.320	.080	34

TENNESSEE RIVER BASIN

455

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

PHYTOPLANKTON ANALYSES, JULY TO SEPTEMBER 1978

DATE JUL 25, 78
TIME 1045

TOTAL CELLS/ML 97

DIVERSITY: DIVISION 0.0
..CLASS 0.0
...ORDER 0.0
...FAMILY 1.1
....GENUS 1.8

ORGANISM	CELLS /ML	PER- CENT
CHRYSTOPHYTA		
..BACILLARIOPHYCEAE		
...PENNALES		
....ACHNANTHACEAE		
.....ACHNANTHES	41	43
....COCCULIDIS	22	29
...GOMPHONEMACEAE		
....GOMPHONEMA	14	14
...NAVICULACEAE		
....NAVICULA	14	14

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TENNESSEE RIVER BASIN

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO MARCH 1979

DATE TIME	OCT 16, 78 1215	NOV 20, 78 1320	MAR 21, 79 1030			
TOTAL CELLS/ML	60	110	340			
DIVERSITY: DIVISION	1.1	0.0	1.6			
..CLASS	1.1	0.0	1.6			
...ORDER	1.2	0.0	1.8			
...FAMILY	2.4	1.5	2.6			
...GENUS	2.7	1.5	2.6			
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTHODESMUS	--	-	--	-	5	1
....TREPANARIA	2	3	--	-	--	-
...SCENEDESMACEAE						
...ACTINASTRUM	--	-	--	-	20	6
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	4	6	--	-	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISACEAE						
...CYCLOTELLA	--	-	--	-	10	3
..PENNALES						
...ACHNANTHACEAE						
...ACHNANTHES	--	-	69#	63	--	-
...COCCONEIS	2	3	--	-	--	-
...CYMBELLACEAE						
...CYMBELLA	2	3	--	-	15	4
...DIATOMACEAE						
...DIATOMA	--	-	--	-	10	3
...FRAGILARIACEAE						
...FRAGILARIA	20#	32	--	-	--	-
...SYNEORA	5	9	--	-	--	-
...GOMPHONEMATAACEAE						
...GOMPHONEMA	--	-	14	13	45	13
...MERIDIONACEAE						
...MERIDION	--	-	--	-	10	3
...NAVICULACEAE						
...NAVICULA	11#	18	14	13	55#	16
...NITZSCHIACEAE						
...NITZSCHIA	5	9	14	13	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOMONADACEAE						
...CRYPTOMONAS	--	-	--	-	5	1
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...HORMOGONALES						
...OSCILLATORIACEAE						
...OSCILLATORIA	11#	18	--	-	150#	44
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
...TRACHELOMONAS	--	-	--	-	15	4

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) v WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN				
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER		
1	14	14	15	14	19	17	20	19	18	16	22	21	18	16	22	21	18	16	22	21			
2	15	14	15	14	20	18	20	19	18	15	22	21	19	15	22	21	19	15	22	21			
3	15	14	15	14	20	19	20	18	19	17	22	19	17	22	19	17	22	19	17	22			
4	14	14	16	14	19	19	20	18	19	17	20	19	17	20	19	17	20	19	17	20			
5	14	13	16	15	19	17	20	19	19	17	20	19	17	20	19	17	20	19	17	20			
6	13	13	16	15	19	17	20	19	20	17	20	19	17	20	19	17	20	19	17	20			
7	13	13	16	15	20	17	20	20	19	17	19	17	19	17	19	17	19	17	19	17			
8	14	13	17	16	20	17	20	19	19	18	20	18	18	20	18	18	20	18	18	20			
9	14	13	17	16	19	18	20	19	20	19	20	19	20	19	20	19	20	19	20	19			
10	14	13	18	17	19	17	19	19	20	20	20	17	20	20	20	17	20	20	17	20			
11	14	13	18	15	20	19	19	18	20	20	18	17	20	20	18	17	20	20	18	17			
12	14	14	17	16	19	18	19	18	21	20	19	17	20	20	19	17	20	20	19	17			
13	15	14	17	17	19	17	19	18	20	20	20	19	20	20	20	19	20	20	19	20			
14	14	13	17	16	18	17	19	18	20	19	20	19	20	20	19	20	20	19	20	19			
15	13	13	17	16	18	17	19	17	20	20	19	18	20	20	19	18	20	20	19	18			
16	13	13	17	16	18	17	19	17	20	19	20	19	20	20	19	20	20	19	20	19			
17	13	13	16	16	18	17	20	17	21	20	20	19	20	20	19	20	20	19	20	19			
18	13	13	16	14	18	17	20	19	21	20	21	20	20	20	21	20	20	20	21	20			
19	13	13	16	14	19	17	22	20	21	20	20	19	20	20	20	19	20	20	19	20			
20	14	13	16	15	19	18	21	19	21	20	21	20	21	20	21	20	21	20	21	20			
21	14	13	17	16	19	18	19	17	22	19	22	19	22	20	22	19	22	20	22	19			
22	14	13	17	16	19	17	17	17	23	20	20	19	22	20	20	19	22	20	20	19			
23	14	13	17	17	19	18	17	17	22	22	20	19	22	22	20	19	22	22	20	19			
24	14	13	18	17	19	19	17	17	22	22	20	19	22	22	20	19	22	22	20	19			
25	15	14	18	17	19	18	18	17	22	22	20	19	22	22	20	19	22	22	20	19			
26	15	14	17	16	19	18	18	17	22	22	20	19	22	22	20	19	22	22	20	19			
27	15	14	17	16	20	18	18	16	22	22	21	20	22	22	21	20	22	22	21	20			
28	15	14	17	16	19	18	18	16	22	22	21	20	22	22	21	20	22	22	21	20			
29	14	13	17	16	19	19	19	17	22	22	21	20	22	22	21	20	22	22	21	20			
30	14	14	17	16	20	19	19	17	22	20	21	20	22	20	21	20	22	20	21	20			
31	---	---	18	17	---	---	19	17	22	21	---	---	---	---	---	---	---	---	---	---			
MONTH	15	13	18	14	20	17	22	16	23	16	22	17	22	16	22	17	22	16	22	17			
YEAR	25	10																					

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	12.5	9.5	7.0	8.5	5.5	9.5	8.0	2.0	1.5	9.5	7.0
2	13.5	11.5	9.5	6.5	7.5	4.5	9.0	3.5	2.0	1.5	9.5	6.5
3	14.0	11.0	9.0	6.0	9.0	6.0	2.5	1.0	6.5	1.5	9.0	7.0
4	15.5	12.0	8.5	6.5	12.0	9.5	2.0	.5	5.5	3.0	10.5	9.0
5	13.0	10.5	9.0	6.0	10.0	7.5	3.5	2.0	3.5	1.0	11.5	9.5
6	11.5	9.5	8.5	6.0	8.0	5.0	5.5	3.5	4.5	1.5	9.5	8.0
7	11.5	10.0	8.5	6.0	9.0	6.0	7.0	5.0	3.5	1.5	8.5	6.0
8	10.5	8.0	9.5	8.0	13.0	8.5	7.0	4.0	3.5	1.5	8.5	7.0
9	9.5	6.5	9.0	7.0	13.5	6.5	3.5	2.0	3.0	1.5	9.5	5.5
10	10.5	6.5	9.0	6.0	6.0	2.0	4.0	2.0	1.5	1.5	7.0	5.0
11	10.5	8.0	10.0	6.5	4.0	2.0	5.0	2.5	1.5	1.0	7.0	3.5
12	12.0	9.5	10.0	6.0	4.0	2.0	6.0	4.5	2.5	1.5	7.0	3.0
13	13.5	10.5	10.0	7.0	4.0	2.0	7.0	5.5	3.5	2.0	9.0	3.5
14	13.0	9.5	12.0	8.5	3.0	1.5	7.0	3.0	5.0	2.0	9.0	6.5
15	9.5	7.0	12.5	10.0	2.5	.5	2.5	1.5	6.0	3.5	6.5	4.0
16	8.5	6.0	12.5	10.5	6.5	2.0	5.5	1.5	5.5	4.5	6.0	1.5
17	8.5	6.5	13.0	11.0	5.5	2.0	4.0	5.0	4.5	3.0	9.5	4.5
18	8.5	4.5	13.0	10.0	3.5	1.0	7.5	5.5	3.0	1.5	11.5	6.5
19	8.5	5.0	10.0	7.5	7.5	3.0	6.0	3.5	3.0	1.5	13.0	8.5
20	9.5	6.0	9.0	7.0	10.5	7.0	9.5	5.0	4.0	1.5	13.0	9.0
21	10.5	6.0	9.0	6.5	10.5	5.0	10.0	6.5	5.5	4.0	11.5	10.0
22	11.5	7.0	8.5	6.5	4.5	2.0	7.0	6.0	6.5	4.0	11.5	9.0
23	12.0	8.0	9.5	8.5	2.5	1.0	7.5	5.5	7.0	6.0	10.0	9.0
24	13.5	10.0	10.0	8.0	3.5	2.0	7.0	4.0	8.0	6.5	9.5	6.0
25	11.5	8.5	9.0	5.0	4.0	2.0	5.5	2.5	8.5	7.0	6.0	3.0
26	14.5	10.5	7.5	5.5	2.5	1.5	2.5	.0	7.0	3.0	5.5	1.5
27	13.5	10.5	9.5	6.5	2.0	1.0	4.5	2.0	5.0	3.0	6.5	4.0
28	11.0	9.0	10.5	9.0	1.5	.5	4.5	1.5	6.5	3.0	10.0	5.5
29	10.5	8.5	9.5	6.5	2.5	.0	1.5	.0	---	---	11.0	8.5
30	11.0	8.5	9.0	7.0	6.0	2.0	1.5	.0	---	---	12.0	9.5
31	10.0	7.0	---	---	8.5	5.5	2.0	.5	---	---	13.0	10.5
MONTH	15.5	4.5	13.0	5.0	13.5	.0	10.0	.0	8.5	1.0	13.0	1.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.5	11.5	13.0	8.5	16.0	12.0	16.5	13.0	20.0	16.5	16.5	15.0
2	13.5	12.0	13.5	9.0	16.0	12.0	16.0	12.5	19.5	16.5	17.0	14.5
3	13.0	10.5	13.5	11.0	16.0	13.5	16.0	13.0	18.5	16.0	16.5	15.0
4	12.5	10.0	15.5	11.0	16.0	13.5	17.5	14.0	18.5	15.5	17.0	14.5
5	11.5	9.0	14.5	12.0	15.5	13.0	17.0	15.5	18.5	15.5	16.5	14.5
6	11.0	8.5	15.5	11.0	15.0	13.0	15.5	13.5	19.5	15.5	16.5	14.5
7	12.0	7.5	16.0	11.5	17.0	13.5	15.0	14.5	19.5	16.0	16.5	14.5
8	11.5	9.0	15.0	12.0	17.5	15.0	15.5	14.0	18.5	14.5	16.0	14.5
9	11.5	9.0	15.5	13.0	17.0	16.0	15.0	13.5	18.5	16.0	16.0	13.5
10	13.5	8.0	15.0	13.0	17.0	15.5	16.5	14.5	18.5	16.0	16.0	14.5
11	13.5	9.5	16.0	13.0	16.5	14.0	16.0	14.0	17.0	16.0	16.0	13.5
12	13.0	11.0	16.0	12.0	15.5	12.0	17.5	14.5	17.0	15.5	16.0	13.0
13	12.0	11.0	14.5	13.0	15.5	12.5	17.5	15.5	16.0	13.5	16.5	15.5
14	12.0	9.0	14.5	12.0	15.5	13.0	17.0	14.5	17.0	13.5	17.0	16.0
15	11.5	7.0	14.0	9.5	16.0	13.0	18.0	15.0	16.0	14.0	16.5	14.0
16	11.0	7.0	14.0	11.0	14.5	13.5	17.5	14.0	16.0	13.0	16.5	14.0
17	13.0	7.0	13.5	7.0	14.5	11.5	19.0	15.0	16.5	13.5	16.0	13.5
18	11.5	8.0	13.5	6.5	17.0	11.5	17.0	14.5	16.5	14.0	16.5	14.0
19	12.0	8.0	14.0	7.0	16.5	13.0	16.5	15.0	17.5	14.5	16.5	14.0
20	12.0	7.5	14.5	12.0	15.5	13.5	16.5	14.5	19.0	15.5	15.5	13.5
21	13.0	9.0	14.0	13.0	15.5	14.0	15.0	14.0	17.5	15.5	15.0	13.5
22	12.5	9.5	14.0	11.5	15.5	12.5	16.0	13.5	17.5	15.0	15.5	13.5
23	14.5	10.5	13.5	11.5	15.5	13.5	16.0	14.0	18.0	16.0	15.0	12.5
24	13.5	12.0	15.0	11.0	15.5	14.5	17.0	13.0	17.5	15.5	14.0	12.5
25	13.0	12.0	12.0	8.0	16.0	13.5	16.0	14.5	17.5	14.5	15.5	12.5
26	13.5	12.0	11.0	6.5	15.5	12.5	15.5	14.5	17.0	16.0	14.5	12.5
27	14.5	12.0	10.0	7.5	15.5	12.0	17.0	15.5	18.0	15.5	14.0	13.0
28	14.0	11.0	11.5	9.5	14.5	12.0	18.0	15.5	17.0	15.5	14.5	13.0
29	13.0	9.0	13.5	11.0	14.0	12.5	19.0	16.5	17.0	14.5	16.5	14.0
30	13.5	9.0	13.5	10.0	15.5	13.0	19.5	16.5	18.5	15.5	15.0	13.5
31	---	---	14.5	12.0	---	---	18.5	17.0	17.0	14.5	---	---
MONTH	14.5	7.0	16.5	6.5	18.5	11.5	19.5	12.5	20.0	13.0	17.0	12.5
YEAR	20.0	.0										

TENNESSEE RIVER BASIN

459

03460000 CATALOOCHEE CREEK NEAR CATALOOCHEE, N. C.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
03...	1430	35	1	.09	100
16...	1215	30	4	.32	94
NOV					
09...	1115	27	1	.07	100
20...	1320	27	2	.15	--
DEC					
11...	1430	174	4	1.9	--
JAN					
19...	1330	98	0	.00	100
30...	1200	122	0	.00	100
FEB					
28...	1245	282	0	.00	100
MAR					
21...	1030	108	0	.00	100
MAY					
11...	1115	87	2	.47	100
29...	1215	95	1	.26	100
SEP					
04...	1220	140	4	1.5	73
10...	1300	45	4	1.0	67

 WATER QUALITY DATA FURNISHED BY NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
 WATER QUALITY DATA, PERIOD AUGUST TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
AUG									
06...	0845	72	15	6.8	16.0	8.4	<10	.5	20
SEP									
11...	1430	52	15	7.0	18.0	9.0	<10	.5	20

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
OCT									
23...	1245	27	--	6.9	--	--	<10	<.5	10
NOV									
28...	1330	91	--	--	10.0	--	<10	1.1	10
DEC									
14...	1240	98	11	6.5	3.0	12.0	<10	.2	<10
JAN									
30...	1445	131	--	6.6	3.0	10.0	<10	<.1	<10
FEB									
27...	1100	340	--	6.4	3.0	9.6	<10	.4	<10
MAR									
26...	1325	167	--	6.7	6.0	9.8	<10	.2	<10
MAY									
17...	1120	74	21	6.8	10.0	9.9	<10	.4	<10
29...	--	90	--	--	11.0	--	--	--	7
JUN									
19...	1530	61	16	7.0	18.0	9.4	<10	.2	10
JUL									
24...	1500	116	15	6.8	16.0	9.1	<10	.2	10
AUG									
22...	1145	70	15	6.7	16.0	8.7	13	.5	104
SEP									
10...	1245	93	--	--	14.5	--	--	--	9
18...	1400	59	10	6.7	15.0	9.3	<10	.4	6

TENNESSEE RIVER BASIN

03463300 SOUTH TOE RIVER NEAR CELO, N. C.

LOCATION.--Lat 35°49'52", long 82°11'04", Yancey County, Hydrologic Unit 06010108, on right bank on Secondary Road 1168, 800 ft (244 m) upstream from bridge on Secondary Road 1167, 0.3 mi (0.5 km) downstream from Whiteoak Creek, 1.9 mi (3.1 km) southeast of Celo, and at mile 20.1 (32.3 km).

DRAINAGE AREA.--43.4 mi² (112.4 km²).

PERIOD OF RECORD.--July 1957 to current year.

REVISED RECORDS.--WSP 1910: 1958-59.

GAGE.--Water-stage recorder. Datum of gage is 2,658 ft (810.16 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 461 of this report.

AVERAGE DISCHARGE.--22 years, 151 ft³/s (4.276 m³/s), 47.25 in/yr (1,200 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s (932 m³/s) Nov. 6, 1977, gage height, 17.41 ft (5.307 m), from outside floodmarks, from rating curve extended above 4,500 ft³/s (127 m³/s) on basis of slope-area measurement of peak flow; minimum, 14 ft³/s (0.40 m³/s) Dec. 26, 1958, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,800 ft³/s (79 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 4	1015	4900 139	5.85 1.783	Sept. 14	0130	7840 222	7.45 2.271
Mar. 23	Unknown	7350 208	7.22 2.201	Sept. 21	2045	*8150 231	*7.59 2.313
Sept. 5	0945	5830 165	6.45 1.966				

Minimum discharge, 32 ft³/s (0.91 m³/s) Nov. 13, 14, 15, 16, gage height, 0.64 ft (0.195 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	37	99	423	130	286	211	234	195	81	89	199
2	65	36	85	895	125	256	206	213	174	76	78	104
3	63	35	82	345	120	262	577	201	187	74	71	105
4	63	35	282	257	114	3160	563	190	182	74	65	151
5	60	35	369	205	107	1560	396	196	156	81	61	1830
6	56	35	182	181	102	725	311	191	143	70	58	482
7	53	35	142	343	110	532	169	142	106	55	55	261
8	52	35	124	414	115	436	251	159	156	104	52	193
9	51	35	258	246	94	349	331	345	156	126	50	157
10	51	33	173	216	100	307	267	458	154	167	53	134
11	50	33	137	184	95	252	238	286	142	127	57	117
12	49	33	122	170	94	194	269	288	126	138	92	106
13	47	33	110	195	94	164	546	350	117	124	56	1480
14	56	32	100	177	88	170	357	341	110	104	50	2100
15	48	32	94	159	113	165	292	269	104	95	46	526
16	45	33	95	138	182	160	260	234	113	89	46	363
17	45	99	92	136	145	155	234	209	353	78	43	288
18	44	178	81	142	130	150	213	190	170	72	42	244
19	43	65	82	128	140	150	197	176	137	76	40	210
20	42	52	87	645	145	145	183	165	132	102	38	183
21	42	47	119	667	149	140	171	193	125	214	39	1400
22	42	44	93	336	184	140	161	177	120	196	46	848
23	41	88	83	267	467	2000	153	219	111	174	51	437
24	40	168	106	256	860	3500	146	251	131	170	86	400
25	40	86	138	216	1100	1000	188	208	115	183	57	330
26	40	71	104	189	649	600	1370	187	105	144	103	283
27	40	135	92	180	420	430	499	176	98	137	82	389
28	40	110	90	170	333	350	346	178	94	115	74	1080
29	38	115	94	155	---	260	289	161	91	102	60	550
30	38	133	129	150	---	250	258	146	91	92	55	569
31	37	---	371	137	---	228	---	250	---	87	75	---
TOTAL	1492	1938	4215	8322	6505	18476	9757	7010	4230	3578	1870	15519
MEAN	48.1	64.6	136	268	232	596	325	226	141	115	60.3	517
MAX	71	178	371	895	1100	3500	1370	458	353	214	103	2100
MIN	37	32	81	128	88	140	146	146	91	70	38	104
CFSM	1.11	1.49	3.13	6.18	5.35	13.7	7.49	5.21	3.25	2.65	1.39	11.9
IN.	1.28	1.66	3.61	7.13	5.58	15.84	8.36	6.01	3.63	3.07	1.60	13.30

CAL YR 1978	TOTAL	49878	MEAN 137	MAX 1670	MIN 27	CFSM 3.16	IN 42.75
WTR YR 1979	TOTAL	82912	MEAN 227	MAX 3500	MIN 32	CFSM 5.23	IN 71.07

461

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED.	SED.	SED.	SED.	SED.	SED.	SED.	SED.
					SUSP. FALL DIAM. % FINER THAN .002 MM	SUSP. FALL DIAM. % FINER THAN .004 MM	SUSP. FALL DIAM. % FINER THAN .006 MM	SUSP. FALL DIAM. % FINER THAN .016 MM	SUSP. FALL DIAM. % FINER THAN .031 MM	SUSP. FALL DIAM. % FINER THAN .062 MM	SUSP. FALL DIAM. % FINER THAN .125 MM	SUSP. FALL DIAM. % FINER THAN .250 MM
OCT	12...	1615	45	0	.00	--	--	--	--	--	--	--
NOV	08...	1115	38	0	.00	--	--	--	--	--	--	--
DEC	13...	1320	107	1	.29	--	--	--	--	--	--	--
JAN	16...	0953	137	0	.00	--	--	--	--	--	--	--
FEB	23...	1240	500	4	5.4	--	--	--	--	--	--	--
	24...	1430	1390	64	240	--	--	--	--	--	--	--
	25...	1540	1940	259	1360	--	--	--	--	--	--	--
	26...	1150	615	0	.00	--	--	--	--	--	--	--
MAR	05...	1520	1140	44	135	--	--	--	--	--	--	--
	30...	1215	246	2	1.3	--	--	--	--	--	--	--
APR	04...	1745	621	17	29	--	--	--	--	--	--	--
	13...	1015	597	18	29	--	--	--	--	--	--	--
SEP	05...	1440	2080	121	680	--	--	--	--	--	--	--
	05...	1900	1320	30	107	--	--	--	--	--	--	--
	06...	0930	490	9	12	--	--	--	--	--	--	--
	14...	0925	1540	71	295	--	--	--	--	--	--	--
	21...	1815	2290	381	2360	--	--	--	--	--	--	--
	21...	1845	3350	378	3420	--	--	--	--	--	--	--
	21...	1900	3910	382	4030	10	12	16	22	27	34	51
	21...	1930	5980	484	7820	--	--	--	--	--	--	--
	21...	2000	7440	646	13000	--	--	--	--	--	--	--
	21...	2030	8040	749	16300	--	--	--	--	--	--	--
	21...	2100	7670	640	13300	12	16	20	26	32	42	61
	21...	2135	4960	325	4350	--	--	--	--	--	--	--

TENNESSEE RIVER BASIN

03479000 WATAUGA RIVER NEAR SUGAR GROVE, N. C.

LOCATION.--Lat 36°14'18", long 81°49'22", Watauga County, Hydrologic Unit 06010103, on right bank 250 ft (76 m) upstream from bridge on Secondary Road 1121, 300 ft (91 m) downstream from Cove Creek, 2.3 mi (3.7 km) south-west of Sugar Grove, and at mile 64.4 (103.6 km).

DRAINAGE AREA.--90.8 mi² (235.2 km²).

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 2,607.84 ft (794.870 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except those for period Jan. 9 to Feb. 19, which are fair to poor. Slight diurnal fluctuation at low flow caused by small mills above station. Suspended-sediment records for the current year are published on page 463 of this report.

AVERAGE DISCHARGE.--40 years, 177 ft³/s (5.013 m³/s), 26.47 in/yr (672 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,800 ft³/s (1,440 m³/s) Aug. 13, 1940, gage height, 29.6 ft (9.02 m), from profile based on floodmarks, from rating curve extended above 4,900 ft³/s (139 m³/s) on basis of slope-area measurement of peak flow; minimum, 6.5 ft³/s (0.18 m³/s) Jan. 1, 1954, gage height, 1.13 ft (0.344 m), result of freezeup; minimum daily, 13 ft³/s (0.37 m³/s) Sept. 19, 30, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1916 reached a stage of 22.1 ft (6.736 m), from floodmarks on barn 0.25 mi (0.4 km) above station as witnessed by local resident, discharge, 28,000 ft³/s (793 m³/s), from rating curve extended above 4,900 ft³/s (139 m³/s) on basis of slope-area measurement at gage height 29.6 ft (9.022 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0645	2160 61.2	6.72 2.048	Sept. 1	0400	3290 93.2	7.84 2.390
Feb. 25	1800	3410 96.6	8.26 2.518	Sept. 5	1730	2640 74.8	7.06 2.152
Mar. 5	0100	10300 292	13.56 4.133	Sept. 14	0715	3980 113	8.59 2.618
Mar. 23	2130	10800 306	13.83 4.215	Sept. 21	2245	*11900 337	*14.49 4.417
July 20	2100	2320 65.7	6.63 2.021	Sept. 28	1315	2720 77.0	7.15 2.179

Minimum discharge, 22 ft³/s (0.62 m³/s) Dec. 18, gage height, 1.38 ft (0.421 m), result of freezeup; minimum daily, 29 ft³/s (0.82 m³/s) Nov. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	32	73	241	150	388	263	261	175	122	332	1200
2	37	32	54	1490	140	316	246	236	152	110	291	305
3	35	31	54	446	135	252	641	225	171	104	178	236
4	37	30	47	296	130	4790	746	242	162	189	146	208
5	36	29	210	219	125	4210	595	221	141	231	130	1320
6	34	29	108	189	120	1160	434	196	131	136	120	1020
7	32	31	80	219	125	694	348	180	125	126	112	475
8	33	34	71	292	130	510	306	170	160	122	105	319
9	33	32	250	220	115	394	336	183	143	120	98	247
10	34	31	206	140	115	334	277	216	190	277	95	207
11	34	31	125	169	110	328	244	183	177	203	159	178
12	34	31	105	150	110	272	264	567	139	180	149	157
13	37	31	90	159	110	246	608	762	125	161	108	334
14	70	31	65	152	145	254	473	461	117	154	94	2200
15	41	34	64	135	200	224	370	347	111	135	90	772
16	38	36	76	125	240	205	308	287	127	126	86	452
17	36	45	76	117	170	194	267	242	873	114	81	336
18	35	84	68	123	180	186	238	215	425	105	79	276
19	34	49	68	111	200	178	219	191	279	99	77	239
20	34	40	82	369	222	170	206	179	219	632	75	214
21	33	37	149	900	278	168	194	245	196	1310	75	1910
22	33	36	117	497	402	156	164	198	214	949	82	2590
23	33	61	92	327	615	2470	177	204	496	75	841	841
24	32	93	126	317	1140	4450	165	243	179	338	143	532
25	32	55	204	260	1940	1390	162	229	164	269	87	413
26	31	47	138	240	1480	737	889	216	145	236	125	342
27	32	66	111	215	716	525	752	196	133	221	98	318
28	32	69	106	195	494	415	468	200	126	197	97	1450
29	31	91	119	140	---	350	362	191	136	178	79	917
30	31	126	90	170	---	309	302	166	136	162	73	710
31	31	---	147	160	---	251	---	183	---	147	75	---
TOTAL	1094	1404	3486	8853	10081	26586	11046	7835	5773	7949	3614	20718
MEAN	35.3	46.8	112	286	360	858	368	253	192	256	117	691
MAX	70	126	280	1490	1960	4790	889	762	873	1310	332	2590
MIN	31	29	54	111	110	156	162	166	111	99	73	157
CFS#	.39	.52	1.23	3.15	3.97	9.45	4.05	2.79	2.12	2.82	1.29	7.61
IN.	.45	.58	1.43	3.63	4.13	10.89	4.53	3.21	2.37	3.26	1.48	8.49
CAL YR 1978 TOTAL	53848		MEAN 148	MAX 3070	MIN 29	CFS# 1.63	IN 22.06					
WTR YR 1979 TOTAL	108439		MEAN 297	MAX 4790	MIN 29	CFS# 3.27	IN 44.43					

TENNESSEE RIVER BASIN

463

03479000 WATAUGA RIVER NEAR SUGAR GROVE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
12...	1000	34	2	.18
NOV				
08...	1425	35	2	.19
JAN				
17...	1045	115	5	1.6
FEB				
22...	1440	366	82	81
24...	1725	1690	281	1280
27...	1120	677	94	172
MAR				
04...	1215	6330	1200	20500
04...	1545	7180	746	14500
APR				
04...	0720	772	124	258
SEP				
05...	1640	2600	220	1540
06...	1100	987	48	128
06...	1500	838	53	120
14...	1150	2520	92	626
14...	1515	1810	51	249
22...	0130	6890	214	3980
22...	0445	3720	121	1220

TENNESSEE RIVER BASIN

03500000 LITTLE TENNESSEE RIVER NEAR PRENTISS, N. C.

LOCATION.--Lat 35°08'57", long 83°22'46", Macon County, Hydrologic Unit 06010202, on left bank 600 ft (183 m) upstream from Owenby Branch, 0.5 mi (0.8 km) upstream from Cartoogechaye Creek, 2 mi (3 km) north of Prentiss, and at mile 119.5 (192.3 km).

DRAINAGE AREA.--140 mi² (363 km²).

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 (612.157 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Since Oct. 1, 1954, auxiliary water-stage recorder 0.5 mi (0.8 km) downstream from base gage at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--36 years, 398 ft³/s (11.27 m³/s), 38.61 in/yr (981 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) Oct. 4, 1964, gage height, 17.30 ft (5.273 m); minimum, 65 ft³/s (1.84 m³/s) Oct. 16, 17, 1954, gage height, 1.21 ft (0.369 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1898 reached a stage of about 15 ft (4.6 m), from profiles by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1200	1970 55.8	5.49 1.673	Apr. 3	1515	1850 52.4	5.11 1.558
Feb. 24	2200	1880 53.2	5.17 1.576	Apr. 13	2400	3080 87.2	8.30 2.530
Mar. 4	2200	*9110 258	*14.54 4.432	Sept. 22	1245	2400 68.0	6.28 1.914
Mar. 24	0800	2560 72.5	6.83 2.082				

Minimum daily discharge, 97 ft³/s (2.75 m³/s) Nov. 14; minimum gage height, 1.49 ft (0.454 m) Nov. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	107	145	541	396	632	577	584	546	272	333	467
2	155	108	127	1270	376	616	566	562	503	260	300	370
3	140	105	127	713	374	579	1490	561	753	254	284	386
4	137	105	526	511	365	3880	1480	572	625	249	274	370
5	132	104	634	432	346	5250	1150	554	569	243	261	342
6	128	104	339	402	341	2050	913	521	515	246	247	314
7	123	104	245	707	395	1470	807	499	488	524	239	296
8	123	112	236	1120	354	1280	749	503	542	409	232	278
9	124	107	759	689	345	1100	985	609	491	353	225	265
10	124	103	649	551	322	992	817	915	466	579	219	250
11	123	103	390	490	315	924	740	794	478	444	220	241
12	121	102	308	456	313	836	789	734	428	623	292	232
13	120	100	267	472	320	781	2150	833	408	562	222	289
14	121	97	236	436	312	771	2510	739	392	425	212	578
15	117	98	214	386	320	717	1410	634	379	385	204	374
16	116	99	208	364	354	667	1170	581	371	339	200	317
17	114	115	224	352	343	635	1030	544	368	313	192	294
18	115	263	195	338	352	610	927	516	352	296	190	298
19	114	127	187	322	339	587	858	497	338	292	185	282
20	114	108	184	857	327	566	810	486	330	290	184	263
21	112	101	195	1830	456	565	765	649	331	599	193	726
22	113	101	181	981	598	539	730	562	330	494	179	2140
23	111	123	171	732	806	1080	697	645	317	408	325	938
24	110	145	211	787	1430	2140	669	937	310	433	235	669
25	113	114	304	654	1670	1120	657	762	314	665	377	565
26	115	105	228	572	1390	875	849	639	304	607	896	509
27	113	163	204	536	928	771	821	573	289	499	791	525
28	113	165	189	509	766	708	703	582	284	446	606	1020
29	113	151	180	465	---	664	649	531	278	399	451	951
30	111	187	244	441	---	628	613	506	287	355	380	899
31	106	---	589	429	---	600	---	548	---	334	363	---
TOTAL	3762	3626	8896	19345	14953	34683	29081	19172	12388	12597	9511	15448
MEAN	121	121	287	624	534	1119	969	618	413	406	307	515
MAX	171	263	759	1830	1670	5250	2510	937	753	665	896	2140
MIN	106	97	127	322	312	539	566	486	278	243	179	232
CFSM	.86	.86	2.05	4.46	3.81	7.99	6.92	4.41	2.95	2.90	2.19	3.68
IN.	1.00	.96	2.36	5.14	3.97	9.22	7.73	5.09	3.29	3.35	2.53	4.10

CAL YR 1978	TOTAL	119680	MEAN 328	MAX 2610	MIN 97	CFSM 2.34	IN 31.80
WTR YR 1979	TOTAL	183462	MEAN 503	MAX 5250	MIN 97	CFSM 3.59	IN 48.75

03500240 CARTOOGEC HAYE CREEK NEAR FRANKLIN, N. C.

LOCATION.--Lat 35°09'31", long 83°23'39", Macon County, Hydrologic Unit 06010202, on downstream side of center pier of bridge on Secondary Road 1152, 0.1 mi (0.2 km) downstream from unnamed creek, 1.8 mi (2.9 km) south of Franklin, and 1.9 mi (3.1 km) upstream from mouth.

DRAINAGE AREA.--57.1 mi² (147.9 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1944, 1947, 1953-55, 1960. June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,017.18 ft (614.836 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 466 of this report.

AVERAGE DISCHARGE.--18 years, 149 ft³/s (4.220 m³/s), 35.44 in/yr (900 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,720 ft³/s (134 m³/s) Oct. 4, 1964, gage height, 12.96 ft (3.950 m); minimum, 30 ft³/s (0.85 m³/s) Oct. 7, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1949 reached a stage of 15.6 ft (4.755 m), from studies by Tennessee Valley Authority, discharge, about 7,000 ft³/s (198 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0045	1130 32.0	6.56 1.999	Mar. 23	1915	1320 37.4	7.33 2.234
Mar. 4	1815	*2800 79.3	*10.77 3.283	Apr. 13	1830	1500 42.5	8.06 2.457

Minimum discharge, 30 ft³/s (0.85 m³/s) Oct. 7, gage height, 1.22 ft (0.372 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	35	56	216	132	230	193	195	186	98	118	94
2	36	35	51	537	127	204	194	187	179	95	111	81
3	35	33	53	274	125	199	641	187	237	93	106	80
4	35	34	226	184	121	1980	511	183	214	92	104	79
5	34	34	183	147	114	1200	384	177	189	91	99	80
6	33	34	95	149	113	626	313	168	176	91	96	75
7	32	35	74	312	141	456	276	162	165	239	93	76
8	32	36	72	513	121	373	257	164	188	137	90	71
9	33	34	294	292	115	315	425	184	221	143	88	69
10	34	34	179	217	108	262	324	224	236	231	87	67
11	34	34	114	181	106	267	283	284	197	163	91	65
12	33	33	93	164	109	237	310	265	170	234	102	64
13	33	32	81	166	115	222	1190	263	156	192	87	79
14	34	32	75	150	110	235	840	245	147	159	84	217
15	33	33	70	130	121	213	536	214	140	141	81	103
16	33	33	72	121	144	200	424	197	136	125	80	87
17	33	42	74	116	138	192	361	184	135	114	78	81
18	33	66	68	112	144	184	321	174	129	108	77	82
19	34	35	68	106	127	177	293	167	123	106	77	78
20	33	34	67	488	125	171	274	163	120	107	84	74
21	32	34	80	827	190	169	259	222	121	271	88	289
22	33	34	71	421	266	164	245	178	120	228	81	313
23	33	48	68	298	343	577	233	195	112	169	124	173
24	33	46	115	300	635	781	225	269	124	149	91	136
25	35	39	139	233	637	428	228	224	121	227	129	118
26	35	38	102	207	453	322	299	202	113	208	224	108
27	35	63	88	194	325	271	258	189	107	187	161	144
28	35	63	79	184	264	242	230	208	103	166	111	328
29	35	85	76	161	---	221	215	186	100	156	91	233
30	34	77	96	150	---	209	204	176	107	134	83	227
31	35	---	221	144	---	199	---	198	---	126	86	---
TOTAL	1051	1245	3200	7694	5569	11546	10746	6234	4572	4780	3102	3772
MEAN	33.9	41.5	103	248	199	372	358	201	152	154	100	126
MAX	39	85	294	827	637	1980	1190	284	237	271	224	328
MIN	32	32	51	106	106	104	193	162	100	91	77	64
CFSM	.59	.73	1.80	4.34	3.49	6.52	6.27	3.52	2.66	2.70	1.75	2.21
IN.	.68	.81	2.08	5.01	3.63	7.52	7.00	4.06	2.98	3.11	2.02	2.46
CAL YR 1978	TOTAL	40153	MEAN 110	MAX 1130	MIN 32	CFSM 1.93	IN 26.16					
WTR YR 1979	TOTAL	63511	MEAN 174	MAX 1980	MIN 32	CFSM 3.05	IN 41.38					

TENNESSEE RIVER BASIN

03500240 CARTOOGECWAYE CREEK NEAR FRANKLIN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
04...	1155	34	6	.55	95
25...	0930	32	4	.35	--
DEC					
12...	1310	91	6	1.5	--
JAN					
17...	1045	118	7	2.2	--
21...	0930	903	411	1000	--
21...	1300	809	626	1800	--
21...	1630	696	292	549	--
22...	1550	374	136	137	--
FEB					
24...	1400	879	520	1230	--
APR					
13...	1125	1060	191	547	--
13...	1330	1240	436	1460	--
13...	1600	1410	358	1360	--

03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, N. C.

LOCATION.--Lat 35°20'11", long 83°31'39", Swain County, Hydrologic Unit 06010202, on left bank on Secondary Road 1113 (revised), 0.8 mi (1.3 km) downstream from DeHart Creek, 0.8 mi (1.3 km) north of Needmore, 2.4 mi (3.9 km) downstream from Brush Creek, 6.3 mi (10.1 km) downstream from Tellico Creek and at mile 92.9 (149.5 km).

DRAINAGE AREA.--436 mi² (1,129 km²).

PERIOD OF RECORD.--October 1943 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 (36.811 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good. Considerable diurnal fluctuation caused by Porters Bend powerplant at Lake Emory 20 mi (32 km) upstream. Suspended-sediment records for the current year are published on page 468 of this report.

AVERAGE DISCHARGE.--36 years, 1,080 ft³/s (30.59 m³/s), 33.64 in/yr (854 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft³/s (626 m³/s) Oct. 5, 1964, gage height, 12.87 ft (3.923 m) in gage well, 13.06 ft (3.981 m) from outside gage; minimum, 52 ft³/s (1.47 m³/s) Nov. 7, 8, 1954, gage height, 1.16 ft (0.354 m); minimum daily, 71 ft³/s (2.01 m³/s) Nov. 7, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of October 1898 and Aug. 30, 1940, reached stages of about 13 ft (4.0 m) and 11.5 ft (3.5 m), respectively, from flood profiles by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (140 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0530	7060 200	6.59 2.009	Apr. 3	1900	5730 162	5.99 1.826
Feb. 24	2100	6330 179	6.27 1.911	Apr. 14	0100	9970 282	7.84 2.390
Mar. 5	0215	*17600 498	*10.93 3.331	Sept. 22	0600	6940 197	6.54 1.993
Mar. 24	0215	7400 210	6.74 2.054				

Minimum discharge, 207 ft³/s (5.86 m³/s) Oct. 29, gage height, 1.64 ft (0.500 m); minimum daily, 247 ft³/s (7.00 m³/s) Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	314	281	488	1400	996	1970	1420	1390	1350	631	802	947
2	401	280	373	3780	941	1730	1380	1340	1180	617	752	855
3	359	284	407	2360	939	1580	3940	1330	1810	601	715	889
4	325	291	1220	1460	909	8250	4410	1350	1670	602	677	837
5	316	250	1900	1160	864	14200	3350	1330	1390	609	651	736
6	302	300	949	1040	843	6370	2560	1240	1240	592	622	783
7	294	304	671	1600	979	4230	2140	1170	1160	1280	603	697
8	285	286	595	3640	904	3430	1930	1170	1240	1340	593	643
9	289	319	1690	2190	849	2870	2610	1310	1350	859	578	628
10	293	289	2010	1580	774	2540	1650	1250	1250	1420	578	601
11	315	283	1020	1310	786	2330	1910	1770	1160	1210	574	576
12	297	269	773	1180	781	2070	1970	1690	1040	1330	730	568
13	287	293	676	1190	800	1890	7200	1790	978	1650	591	590
14	303	298	598	1130	782	1900	8010	1710	933	1100	550	1390
15	289	269	550	997	809	1780	4440	1420	894	959	537	938
16	285	272	541	854	965	1600	3300	1320	867	854	526	757
17	326	324	573	870	1000	1500	2810	1240	877	767	510	679
18	286	595	503	839	972	1440	2430	1170	834	682	496	696
19	287	450	496	805	943	1370	2130	1130	803	717	492	655
20	287	352	489	2370	887	1340	1960	1100	764	726	477	632
21	302	307	537	6250	1120	1310	1750	1410	761	1380	522	1080
22	247	313	542	3450	1750	1260	1660	1360	783	1760	647	5550
23	320	366	498	2300	2300	2270	1610	1370	744	1130	1070	2540
24	302	445	570	2220	4330	6310	1690	2130	743	1010	685	1550
25	297	398	961	1920	5550	3360	1630	1860	763	1550	854	1260
26	267	326	710	1510	4680	2460	1980	1520	730	1580	1840	1150
27	304	373	610	1430	2990	2040	2020	1360	682	1290	1730	1110
28	287	506	564	1370	2350	1860	1690	1420	672	1190	1390	2190
29	249	541	535	1210	---	1690	1560	1280	650	1060	966	2550
30	320	591	559	1120	---	1570	1470	1200	662	927	835	2320
31	296	---	1370	1080	---	1480	---	1230	---	824	852	---
TOTAL	9331	10455	23983	55615	42793	90110	79200	43960	30000	32247	23445	36397
MEAN	301	349	774	1794	1524	2907	2640	1418	1000	1040	756	1213
MAX	401	595	2010	6250	5550	14200	8010	2130	1810	1760	1840	5550
MIN	247	250	373	805	774	1260	1380	1100	650	592	477	568
CFSM	.69	.80	1.78	4.12	3.51	6.67	6.06	3.25	2.29	2.39	1.73	2.78
IN.	.80	.89	2.05	4.75	3.65	7.69	6.76	3.75	2.56	2.75	2.00	3.11
CAL YR 1978	TOTAL	319380	MEAN	875	MAX	9290	MIN	247	CFSM	2.01	IN	27.25
WTR YR 1979	TOTAL	477536	MEAN	1308	MAX	14200	MIN	247	CFSM	3.00	IN	40.74

TENNESSEE RIVER BASIN

03503000 LITTLE TENNESSEE RIVER AT NEEDMORE, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT												
10...	1325	326	4	3.5	--	--	--	--	--	--	--	--
DEC												
14...	1125	537	8	12	--	--	--	--	--	--	--	--
JAN												
08...	1315	3830	426	4410	--	--	--	--	--	--	--	--
16...	1300	456	9	23	--	--	--	--	--	--	--	--
21...	0930	6960	685	12900	--	--	--	--	--	--	--	--
21...	1215	6460	434	7570	--	--	--	--	--	--	--	--
22...	1740	2970	68	545	--	--	--	--	--	--	--	--
23...	1035	2320	96	601	--	--	--	--	--	--	--	--
FEB												
23...	1515	2490	223	1500	--	--	--	--	--	--	--	--
24...	1300	4560	126	1550	--	--	--	--	--	--	--	--
24...	1650	5770	545	8490	4	12	19	34	48	61	73	90
APR												
13...	1740	9600	705	18300	--	--	--	--	--	--	--	--

TENNESSEE RIVER BASIN

469

03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, N. C.

LOCATION.--Lat 35°07'35", long 83°37'11", Macon County, Hydrologic Unit 06010202, on right bank on Nantahala Forest Service Road 437, 300 ft (91 m) upstream from Roaring Fork, 0.2 mi (0.3 km) downstream from Buck Creek, 5 mi (8 km) downstream from town of Rainbow Springs, and at mile 34.3 (55.2 km).

DRAINAGE AREA.--51.9 mi² (134.4 km²).

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 (936.641 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional slight diurnal fluctuation at low flow caused by small ponds on tributaries above station. Suspended-sediment records for the current year are published on page 470 of this report.

AVERAGE DISCHARGE.--39 years, 207 ft³/s (5.862 m³/s), 54.16 in/yr (1,376 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft³/s (178 m³/s) June 16, 1949, gage height, 9.70 ft (2.957 m), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of slope-area measurement of peak flow; minimum, 33 ft³/s (0.93 m³/s) Nov. 18, 19, 1953, gage height, 0.60 ft (0.183 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1030	1510 42.8	3.91 1.192	Mar. 23	1545	2040 57.8	4.71 1.436
Mar. 4	1745	*3670 104	*6.82 2.079	Apr. 13	1515	1830 51.8	4.40 1.341

Minimum daily discharge, 45 ft³/s (1.27 m³/s) Oct. 7; minimum gage height, 0.64 ft (0.195 m) Nov. 14, 15, 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	48	91	456	240	433	306	255	349	120	212	124
2	53	48	76	684	235	387	320	244	320	115	194	114
3	50	48	75	460	229	374	805	251	396	112	182	161
4	50	48	385	353	219	2560	642	243	370	109	172	129
5	48	48	311	300	206	1600	534	232	323	106	164	130
6	46	48	174	330	205	1040	469	213	299	104	156	117
7	45	57	135	634	242	801	417	203	278	290	150	109
8	46	59	118	774	199	671	401	205	271	145	145	104
9	47	51	604	524	191	577	620	280	259	166	140	100
10	49	50	326	429	185	536	463	329	264	266	135	95
11	49	49	224	365	180	492	420	280	301	183	154	91
12	48	49	181	334	176	430	484	292	239	331	157	102
13	48	48	158	319	177	393	1370	360	223	253	129	323
14	49	47	141	289	172	408	973	318	211	244	123	211
15	48	46	123	252	209	355	727	280	199	208	119	162
16	48	47	141	235	268	329	616	257	191	178	115	149
17	47	115	141	230	248	312	546	240	186	162	111	151
18	46	143	119	226	244	296	490	227	177	174	108	149
19	46	56	119	222	217	281	442	216	167	159	103	138
20	48	51	117	746	204	266	405	209	163	162	101	129
21	48	48	149	875	327	268	377	384	163	522	99	506
22	48	47	121	592	369	262	348	273	157	386	97	420
23	48	97	117	486	565	818	326	346	148	281	151	296
24	48	94	188	460	972	874	308	590	164	259	106	249
25	46	59	197	383	962	602	322	438	157	420	171	222
26	47	51	162	351	714	500	442	368	142	381	306	206
27	47	128	146	337	577	437	347	343	135	329	229	256
28	48	177	134	313	492	396	309	525	131	290	154	386
29	48	157	124	284	---	366	269	393	126	294	138	326
30	48	139	220	268	---	347	272	349	134	244	130	338
31	48	---	499	260	---	324	---	390	---	229	125	---
TOTAL	1500	2153	5821	12771	9224	17735	14790	9533	6643	7222	4576	5993
MEAN	48.4	71.8	188	412	329	572	493	308	221	233	148	200
MAX	65	177	604	875	972	2560	1370	590	396	522	306	506
MIN	45	46	75	222	172	262	272	203	126	104	97	91
CFSM	.93	1.38	3.62	7.94	6.34	11.0	9.50	5.93	4.26	4.49	2.85	3.85
IN.	1.08	1.54	4.17	9.15	6.61	12.71	10.60	6.83	4.76	5.18	3.28	4.30

CAL YR 1978	TOTAL	59171	MEAN 162	MAX 1080	MIN 45	CFSM 3.12	IN 42.41
WTR YR 1979	TOTAL	97961	MEAN 268	MAX 2560	MIN 45	CFSM 5.16	IN 70.21

TENNESSEE RIVER BASIN

03504000 NANTAHALA RIVER NEAR RAINBOW SPRINGS, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
04...	1410	51	0	.00
25...	1215	46	1	.12
DEC				
12...	1430	176	0	.00
JAN				
17...	1330	233	1	.63
21...	1045	985	15	40
21...	1410	810	16	35
22...	1500	565	83	127
FEB				
22...	1130	335	1	.90
MAR				
23...	1120	401	3	3.2
APR				
04...	0930	787	14	30
13...	1240	1440	47	183
13...	1450	1830	76	376
MAY				
24...	1100	640	111	192
JUN				
19...	1240	168	3	1.4
JUL				
12...	1120	479	37	48
12...	1300	420	29	33

TENNESSEE RIVER BASIN

471

03505500 NANTAHALA RIVER AT NANTAHALA, N. C.

LOCATION.--Lat 35°17'55", long 83°39'22", Swain County, Hydrologic Unit 06010202, on left bank on U.S. Highway 19, 1.0 mi (1.6 km) northeast of Nantahala, 2.3 mi (3.7 km) downstream from Rowlin Creek, 2.8 mi (4.5 km) downstream from Nantahala Dam powerhouse, and at mile 10.8 (17.4 km).

DRAINAGE AREA.--144 mi² (373 km²).

PERIOD OF RECORD.--May 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,894.68 ft (577.498 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority).

REMARKS.--Records good except those for Jan. 6-18, Feb. 25 to Mar. 27, Sept. 27-30, which are fair. Flow regulated by Nantahala Lake 12 mi (19 km) upstream (see p. 483) and Queens Creek Lake, capacity, about 300 ft³/s-day (734,000 m³). Suspended-sediment records for the current year are published on page 472 of this report.

AVERAGE DISCHARGE.--37 years, 501 ft³/s (14.19 m³/s), 47.25 in/yr (1,200 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,740 ft³/s (219 m³/s) Mar. 30, 1975, gage height, 8.32 ft (2.536 m); minimum, 13 ft³/s (0.45 m³/s) Sept. 6, 1975; minimum gage height, 1.19 ft (0.363 m) Nov. 9, 1953; minimum daily discharge, 17 ft³/s (0.48 m³/s) Nov. 8, 16, 1952, Oct. 25, 1953, Aug. 3, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,080 ft³/s (116 m³/s) Apr. 13, gage height, 6.25 ft (1.905 m) minimum, 17 ft³/s (0.48 m³/s) Nov. 6, 12, 13, gage height, 1.36 ft (0.415 m); minimum daily, 18 ft³/s (0.51 m³/s) Nov. 5, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	254	264	148	743	670	782	760	779	351	762	518
2	32	188	87	829	733	750	796	755	765	372	748	469
3	30	176	34	929	720	800	1100	751	800	389	742	473
4	28	46	605	549	618	2000	1240	749	807	398	534	513
5	42	18	538	485	668	1900	1200	739	816	421	511	550
6	346	377	235	750	672	1150	897	735	819	383	559	535
7	396	404	135	700	698	900	918	675	764	512	531	534
8	350	314	287	950	682	820	904	743	776	369	516	519
9	299	290	851	700	676	780	1950	744	801	377	512	436
10	390	212	573	650	718	760	1300	722	793	439	512	525
11	418	102	475	650	660	800	1100	638	777	432	456	515
12	419	18	279	600	663	760	1200	493	761	465	458	512
13	414	172	141	460	559	700	3260	407	663	515	499	519
14	418	332	288	550	566	800	2500	454	560	436	500	512
15	255	332	318	700	547	780	2000	569	649	403	490	495
16	443	171	57	550	560	740	1500	547	556	415	497	507
17	482	30	71	470	530	720	1100	495	463	405	496	514
18	566	46	312	480	471	700	1200	525	475	415	472	509
19	574	33	130	501	484	690	1150	430	495	443	409	513
20	201	269	56	1050	546	630	1100	389	464	492	454	483
21	396	214	159	1250	510	700	1000	517	476	744	496	609
22	23	302	56	1030	525	680	900	624	467	940	508	657
23	412	35	51	882	580	750	850	666	410	850	541	705
24	383	159	91	876	480	1100	820	699	313	829	495	470
25	428	293	127	819	500	1000	820	685	419	821	449	702
26	326	64	316	803	600	900	800	672	422	807	479	701
27	189	228	493	798	750	880	800	661	414	818	565	600
28	123	322	353	788	690	865	780	735	425	818	549	750
29	59	672	464	772	---	852	760	762	331	815	550	650
30	425	345	251	762	---	830	780	756	425	788	513	680
31	264	---	126	756	---	798	---	774	---	771	585	---
TOTAL	9164	6418	8223	22237	17149	27245	35507	19871	17885	17433	16388	16675
MEAN	296	214	265	717	612	879	1184	641	596	562	529	556
MAX	574	672	851	1250	750	2000	3260	774	819	940	762	750
MIN	23	18	34	148	471	670	760	389	313	351	409	436
(+)	-5400	-1582.4	+5711.2	+10145.1	+2624.6	+8678.7	+410	+274.3	-2052.7	+394.5	-4803.3	-3713.2
MEAN†	121	161	449	1045	706	1159	1197	650	528	575	374	432
CFSM†	0.84	1.12	3.12	7.26	4.90	8.05	8.31	4.51	3.67	3.99	2.60	3.00
IN.†	0.97	1.25	3.60	8.36	5.11	9.28	9.28	5.20	4.09	4.60	2.99	3.35

CAL YR 1978 TOTAL 150531 MEAN 412 MAX 1670 MIN 18 MEAN† 402 CFSM† 2.79 IN.† 37.90
WTR YR 1979 TOTAL 214195 MEAN 587 MAX 3260 MIN 18 MEAN† 616 CFSM† 4.28 IN.† 58.08

† Change in contents, in cfs-days,, in Nantahala and Queens Creek Lakes; furnished by Tennessee Valley Authority and Nantahala Power & Light Co.

‡ Adjusted for change in contents in Nantahala and Queens Creek Lakes
Note.--No gage-height record Jan. 6-18, Feb. 25 to Mar. 27, Sept. 27-30.

TENNESSEE RIVER BASIN
03505500 NANTAHALA RIVER AT NANTAHALA, N. C.
WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
05...	1410	42	0	.00
DEC				
13...	1330	74	0	.00
JAN				
21...	0845	1530	61	252
21...	1515	1390	17	64
22...	1705	980	8	21
23...	1000	920	4	9.9
FEB				
23...	1420	783	6	13
APR				
13...	1820	3930	251	2660
JUN				
13...	1515	661	3	5.4

03510500 TUCKASEGEE RIVER AT DILLSBORO, N. C.

LOCATION.--Lat 35°21'59", long 83°15'38", Jackson County, Hydrologic Unit 06010203, on left bank on Secondary Road 1377, 0.4 mi (0.6 km) downstream from Scott Creek, 0.5 mi (0.8 km) downstream from bridge on U.S. Highway 23 at Dillsboro, and at mile 31.1 (50.0 km).

DRAINAGE AREA.--347 mi² (899 km²).

PERIOD OF RECORD.--June 1928 to current year (prior to October 1933 monthly discharge only, published in WSP 1306; figures of daily discharge published in WSP 663, 683, 698, 713, 728, 743, are unreliable).

REVISED RECORDS.--WSP823: Drainage area. WSP 923: 1940(M). WSP 1306: 1929-33. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,950.15 ft (594.406 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to May 24, 1934, nonrecording gage at site below Scott Creek 0.4 mi (0.6 km) upstream at datum 7.27 ft (2.216 m) higher.

REMARKS.--Records good. Considerable diurnal fluctuation caused by Dillsboro powerplant 0.7 mi (1.1 km) above station. Flow partly regulated by Thorpe Reservoir 28 mi (45 km) upstream (see p. 483), and by Cedar Cliff Lake, Bear Creek Lake, and Tennessee Creek project lakes (see p. 485). Suspended-sediment records for the current year are published on page 474 of this report.

AVERAGE DISCHARGE.--51 years, 798 ft³/s (22.60 m³/s), 31.23 in/yr (793 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,600 ft³/s (1,490 m³/s) Aug. 30, 1940, gage height, 21.96 ft (6.693 m), from floodmarks, from rating curve extended above 8,400 ft³/s (238 m³/s) on basis of slope-area measurements and computation of peak flow over dam; minimum, 35 ft³/s (0.99 m³/s) Sept. 17, 1953, gage height, 1.60 ft (0.488 m); minimum daily, 107 ft³/s (3.03 m³/s) Sept. 19, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1840 was approximately equal to that of Aug. 30, 1940, from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 4	1700	*10600 300	*10.42 3.176	Apr. 13	1600	4700 133	7.25 2.210

Minimum discharge, 134 ft³/s (3.79 m³/s) Oct. 23, gage height, 2.07 ft (0.631 m); minimum daily, 194 ft³/s (5.49 m³/s) Nov. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	701	363	362	954	880	1310	1320	1440	1020	344	920	740
2	667	314	255	2070	350	1320	1100	1480	778	426	804	582
3	710	365	277	1550	688	1290	2790	1480	924	458	733	565
4	754	342	890	1270	490	5600	2470	1470	872	525	691	645
5	768	199	936	863	686	5350	2150	1450	867	772	495	1150
6	650	231	513	879	1050	3050	1940	1040	837	983	664	981
7	720	325	365	1250	1010	2460	1840	825	728	1410	732	694
8	541	362	505	1780	742	2130	1770	964	945	1020	963	590
9	515	294	1580	1360	724	1920	2230	1330	874	825	983	554
10	474	303	1130	1220	792	1810	1920	1390	649	1280	1010	584
11	451	215	876	1100	621	1740	1770	1360	727	958	1030	526
12	453	214	795	1100	585	1640	1780	1340	970	1020	861	517
13	467	194	660	927	607	1600	3470	1160	1050	1230	763	711
14	407	268	534	734	643	1670	3690	1790	961	741	478	1270
15	321	309	726	879	548	1570	2680	1130	1040	529	477	933
16	364	279	501	774	794	1470	2310	843	788	469	467	665
17	479	278	318	712	647	1410	2130	871	442	507	458	611
18	516	319	515	755	534	1380	1990	1160	581	506	463	735
19	550	211	560	786	523	1360	1900	1130	639	560	393	972
20	465	219	395	1910	545	1370	1830	935	682	689	430	854
21	261	285	489	2340	1130	1330	1780	1130	569	1050	489	1190
22	284	272	477	1650	1240	1310	1730	1040	537	877	572	1920
23	341	359	331	1440	1360	1420	1620	1220	521	699	907	1400
24	457	298	392	1480	2090	2350	1580	1150	425	1120	507	1080
25	457	274	469	1380	2230	1910	1410	895	423	894	630	1260
26	436	250	394	1230	2000	1740	1670	860	504	1020	1050	1070
27	427	368	520	1110	1680	1650	1630	980	480	1030	1160	878
28	241	382	613	981	1490	1590	1460	879	467	913	702	1190
29	207	552	929	909	---	1550	1380	878	482	905	597	1200
30	347	483	631	902	---	1510	1420	911	514	732	568	1230
31	453	---	661	758	---	1470	---	988	---	809	696	---
TOTAL	14884	9127	18600	37053	27179	59790	59260	35019	21296	25301	21693	27297
MEAN	480	304	600	1195	971	1929	1975	1130	710	816	700	910
MAX	768	552	1580	2340	2230	5600	3970	1480	1050	1410	1160	1920
MIN	207	194	255	712	490	1290	1100	825	423	344	393	517

CAL YR 1978 TOTAL 276371 MEAN 757 MAX 4160 MIN 194
WTR YR 1979 TOTAL 356499 MEAN 977 MAX 5600 MIN 194

TENNESSEE RIVER BASIN

03510500 TUCKASEGEE RIVER AT DILLSBORO, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
JAN				
21...	0830	2400	628	4070
21...	1505	2010	1590	8630
FEB				
23...	1110	1450	27	106
24...	1000	2350	684	4340
APR				
13...	1030	3640	357	3510
13...	1655	4700	760	9640

TENNESSEE RIVER BASIN

475

03512000 OCONALUFTEE RIVER AT BIRDTOWN, N. C.

LOCATION.--Lat 35°27'42", long 83°21'13", Swain County, Hydrologic Unit 06010203, in Cherokee Indian Reservation, on left bank 200 ft (61 m) upstream from bridge on Secondary Road 1359, 0.5 mi (0.8 km) south of Birdtown, 0.6 mi (1.0 km) downstream from Adams Creek, 0.6 mi (1.0 km) upstream from Goose Creek, 2.2 mi (3.5 km) southwest of Cherokee and at mile 3.1 (5.0 km).

DRAINAGE AREA.--184 mi² (477 km²).

PERIOD OF RECORD.--July 1945 to September 1946, July 1948 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,843.30 ft (561.838 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 476 of this report.

AVERAGE DISCHARGE.--32 years, 523 ft³/s (14.81 m³/s), 38.60 in/yr (980 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,900 ft³/s (450 m³/s) Dec. 30, 1969, gage height, 12.46 ft (3.798 m), from floodmarks; minimum, 80 ft³/s (2.27 m³/s) Oct. 19, 1954, gage height, 0.66 ft (0.201 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Nov. 19, 1906 and Mar. 27, 1913 reached stages of 18 ft (5.5 m) and 14.5 ft (4.42 m), respectively, discharge not determined, from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (110 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1130	5530 157	6.22 1.896	Feb. 24	1500	5560 157	6.24 1.902
Jan. 8	0030	4480 127	5.48 1.670	Mar. 4	1245	*9210 261	*8.51 2.594
Jan. 20	2200	7750 219	7.63 2.326	Sept. 21	2400	5700 161	6.33 1.929

Minimum daily discharge, 108 ft³/s (3.06 m³/s) Nov. 3, 4, 5, 6; minimum gage height, 0.91 ft (0.277 m) Nov. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	114	279	1650	492	958	542	463	544	274	516	721
2	153	111	426	2950	484	844	571	447	507	255	474	500
3	145	108	1820	1510	472	800	1960	484	591	252	444	675
4	149	108	881	1030	459	5330	1710	511	653	263	426	622
5	144	108	576	824	421	3830	1390	487	527	505	396	728
6	135	108	464	736	410	2200	1110	447	476	349	375	1010
7	131	113	429	1760	447	1610	941	429	445	495	356	550
8	128	125	396	2900	393	1290	843	417	454	487	341	467
9	129	117	2520	1570	377	1050	1440	423	501	453	327	420
10	130	116	1310	1170	362	951	1090	428	539	807	317	389
11	126	118	811	942	365	903	957	419	478	519	334	343
12	125	116	630	821	353	778	1010	424	432	588	399	297
13	129	116	515	749	349	719	2690	543	396	616	317	294
14	221	116	447	685	341	750	2170	479	376	529	296	314
15	146	117	405	577	372	681	1600	429	355	471	283	295
16	133	120	403	533	508	621	1290	405	341	448	277	274
17	129	140	393	520	513	588	1090	387	396	399	267	264
18	127	148	342	509	473	564	952	377	358	378	260	259
19	127	133	332	472	445	545	855	368	326	390	253	251
20	125	128	341	2950	422	528	780	367	319	832	246	239
21	121	131	542	4050	574	509	724	467	333	2320	311	913
22	121	449	422	2090	736	503	677	404	335	1660	797	1790
23	121	359	376	1440	1460	789	641	478	300	1070	433	661
24	120	215	471	1220	3230	1530	606	715	323	872	365	513
25	118	199	573	958	3110	953	581	754	352	921	395	443
26	119	405	456	826	2050	791	602	607	304	940	553	402
27	118	391	414	760	1410	717	610	578	287	902	512	401
28	117	680	380	707	1110	660	538	844	277	877	459	568
29	113	459	362	623	---	622	503	652	271	730	408	930
30	113	336	462	574	---	587	480	561	315	634	389	730
31	113	---	1340	558	---	560	---	570	---	572	450	---
TOTAL	4109	6004	19518	38664	22138	33761	30953	15364	12111	20808	11976	16263
MEAN	133	200	630	1247	791	1089	1032	496	404	671	386	542
MAX	221	680	2520	4050	3230	5330	2690	844	653	2320	797	1790
MIN	113	108	279	472	341	503	480	367	271	252	246	239
CFSM	.72	1.09	3.42	6.78	4.30	5.92	5.61	2.70	2.20	3.65	2.10	2.95
IN.	.83	1.21	3.95	7.82	4.48	6.83	6.26	3.11	2.45	4.21	2.42	3.29

CAL YR 1978 TOTAL 175646 MEAN 481 MAX 3750 MIN 108 CFSM 2.61 IN 35.51
WTR YR 1979 TOTAL 231669 MEAN 635 MAX 5330 MIN 108 CFSM 3.45 IN 46.84

TENNESSEE RIVER BASIN

03512000 OCONALUFTEE RIVER AT BIRDTOWN, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT				
02...	1330	152	1	.41
NOV				
06...	1130	107	4	1.2
DEC				
08...	1645	419	4	4.5
14...	1400	427	2	2.3
JAN				
08...	1100	2740	118	873
08...	1500	2360	264	1680
16...	1540	529	7	10
21...	0800	4140	364	4070
21...	1045	4300	213	2470
21...	1340	3830	209	2160
22...	1600	1940	58	304
23...	1135	1420	32	123
FEB				
23...	1600	1680	126	572
24...	1110	2940	463	3680
24...	1750	4570	256	3160
MAR				
05...	1030	3680	129	1280

03513000 TUCKASEGEE RIVER AT BRYSON CITY, N. C.

LOCATION.--Lat 35°25'40", long 83°26'50", Swain County, Hydrologic Unit 06010203, on left bank 400 ft (122 m) downstream from bridge on Secondary Road 1364, Everett Street, in Bryson City, 0.6 mi (1.0 km) downstream from Deep Creek, and at mile 12.6 (20.3 km).

DRAINAGE AREA.--655 mi² (1,696 km²).

PERIOD OF RECORD.--October 1897 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 (522.592 m) National Geodetic Vertical Datum of 1929 (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 (122 m) upstream at datum 2.00 ft (0.610 m) higher. Feb. 3, 1914, to May 17, 1920, water-stage recorder at site 200 ft (61 m) upstream at datum 2.00 ft (0.610 m) higher. June 28, 1927, to Sept. 30, 1960, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. Considerable diurnal fluctuation caused by powerplants above station. Flow regulated by Thorpe Reservoir, Cedar Cliff Lake, Bear Creek Lake, Tennessee Creek project lakes (see pp.483,485), and two small reservoirs with combined capacity of 250 ft³/s-day (612,000 m³). Suspended-sediment records for the current year are published on page 478 of this report.

AVERAGE DISCHARGE.--82 years, 1,597 ft³/s (45.23 m³/s), 33.11 in/yr (841 mm/yr) unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,600 ft³/s (1,740 m³/s) Aug. 30, 1940, gage height, 15.96 ft (4.865 m), datum then in use, from rating curve extended above 28,000 ft³/s (793 m³/s) on basis of slope-area measurement of peak flow; minimum, 27 ft³/s (0.76 m³/s) Sept. 10, 1925, minimum gage height, 0.47 ft (0.143 m) Oct. 26, 1952, datum then in use; minimum daily discharge, 31 ft³/s (0.88 m³/s) Sept. 9, 10, 1925, caused by filling reservoir on Oconaluftee River; minimum daily during normal regulation, 186 ft³/s (5.27 m³/s) Oct. 13, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1840, Mar. 6, 1867, and June 1876 reached stages of 22 ft (6.7 m), 19 ft (5.8 m), and 19 ft (5.8 m), respectively, present site and datum, discharge not determined, from studies by Tennessee Valley Authority. The flood in May 1840 exceeded all other observed floods at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (250 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1315	9500 269	6.90 2.103	Mar. 4	2015	*22900 649	*11.44 3.487
Jan. 20	2300	15600 442	9.16 2.792	Apr. 13	1830	9580 271	6.93 2.112
Feb. 24	1615	10900 309	7.44 2.268	Sept. 21	2300	10600 300	7.35 2.240

Minimum discharge, 336 ft³/s (9.52 m³/s) Nov. 17, gage height, 1.46 ft (0.445 m); minimum daily, 368 ft³/s (10.4 m³/s) Nov. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	556	874	3070	1660	2930	2350	2260	1990	810	1790	1530
2	874	556	704	6530	1590	2750	1970	2300	1690	743	1670	1310
3	939	455	631	4000	1520	2580	5590	2370	1820	936	1420	1340
4	990	536	2910	2970	1190	13000	5290	2380	1950	917	1550	1290
5	1010	474	2780	2170	1190	11800	4470	2340	1630	1390	1140	1840
6	873	368	1540	1980	1730	6720	3810	1960	1710	1500	1090	2280
7	930	491	1120	3700	1770	5220	3430	1560	1450	2270	1330	1400
8	786	557	933	6290	1380	4400	3210	1570	1680	1910	1540	1270
9	729	485	5070	3830	1260	3790	4650	2060	1560	1480	1550	1110
10	723	469	3290	3050	1340	3500	3830	2170	1680	2790	1560	1090
11	641	430	2070	2560	1290	3350	3430	2120	1390	2010	1600	1020
12	640	393	1860	2420	1060	3010	3510	2060	1680	1980	1560	960
13	654	370	1350	2090	1140	2860	7990	2140	1730	2450	1390	994
14	822	406	1150	1730	1170	2980	7370	2110	1520	1890	1000	1840
15	563	472	1290	1760	1180	2780	5450	1940	1650	1350	897	1550
16	441	461	1180	1600	1460	2590	4600	1470	1470	1200	909	1050
17	668	451	867	1480	1610	2440	4070	1400	1100	1170	901	1020
18	706	738	807	1510	1320	2390	3680	1760	1030	1150	868	1100
19	740	444	1110	1470	1180	2320	3420	1720	1180	1150	834	1430
20	674	383	857	5610	1190	2320	3230	1570	1160	1850	772	1290
21	531	466	1160	8920	2010	2250	3070	1820	1170	4420	894	2510
22	502	420	1050	4970	2510	2210	2950	1710	1070	3840	1570	4570
23	413	674	947	3750	3560	3040	2780	2060	1030	2450	1710	2450
24	642	1020	947	3430	5640	5120	2660	2370	945	2520	1080	1940
25	647	557	1400	2960	7060	3630	2530	2030	946	2410	1230	1930
26	625	550	1030	2630	5390	3130	2640	1790	977	2520	1820	1770
27	612	753	1020	2350	4080	2900	2750	1950	945	2650	2090	1490
28	523	952	1160	2130	3350	2750	2500	2120	905	2270	1440	2020
29	400	1180	1430	1880	---	2520	2220	1880	909	2190	1260	2630
30	382	1480	1390	1340	---	2540	2300	1860	1020	1800	1110	2470
31	632	---	2700	1540	---	2450	---	1830	---	1660	1380	---
TOTAL	21362	17557	46627	96320	62030	116380	111750	60680	40977	59676	40955	50494
MEAN	689	565	1504	3107	2215	3754	3725	1957	1366	1925	1321	1683
MAX	1050	1480	5070	8920	7060	13000	7990	2380	1990	4420	2090	4570
MIN	382	368	631	1470	1060	2210	1470	1400	905	743	772	960

CAL YR 1978 TOTAL 537429 MEAN 1472 MAX 10600 MIN 368
#TR YR 1979 TOTAL 724868 MEAN 1945 MAX 13000 MIN 368

TENNESSEE RIVER BASIN

03513000 TUCKASEGEE RIVER AT BRYSON CITY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
NOV												
16...	1220	524	4	5.7	--	--	--	--	--	--	--	--
JAN												
08...	1220	5850	148	2340	--	--	--	--	--	--	--	--
16...	1015	1480	6	24	--	--	--	--	--	--	--	--
21...	0715	9600	454	11800	--	--	--	--	--	--	--	--
21...	1130	9170	335	8290	--	--	--	--	--	--	--	--
22...	1630	4590	192	2380	--	--	--	--	--	--	--	--
23...	1105	3830	68	703	--	--	--	--	--	--	--	--
FEB												
23...	1320	3420	67	619	--	--	--	--	--	--	--	--
24...	1140	6490	252	4420	--	--	--	--	--	--	--	--
24...	1720	10400	525	14700	10	12	18	29	41	59	74	91
APR												
04...	1340	2620	89	630	--	--	--	--	--	--	--	--

03548500 HIWASSEE RIVER ABOVE MURPHY, N. C.

LOCATION.--Lat 35°04'50", long 84°00'10", Cherokee County, Hydrologic Unit 06020002, on right bank on U.S. Highway 64, 600 ft (183 m) upstream from Will Scott Creek, 2.0 mi (3.2 km) southeast of Murphy, and at mile 99.1 (159.5 km).

DRAINAGE AREA.--406 mi² (1,052 km²).

PERIOD OF RECORD.--June 1896 to August 1897, gage heights only, October 1897 to current year. Published as "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 (468.853 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to Jan. 30, 1921, nonrecording gage at bridge 2.8 mi (4.5 km) downstream at datum 30.40 ft (9.266 m) lower. Jan. 30, 1921, to Nov. 8, 1926, nonrecording gage 2.8 mi (4.5 km) downstream at datum 28.40 ft (8.656 m) lower. Nov. 9, 1926, to Apr. 30, 1940, water-stage recorder 2.8 mi (4.5 km) downstream at datum 28.20 ft (8.595 m) lower.

REMARKS.--Records good. Considerable diurnal fluctuation since 1924 caused by Mission powerplant at Andrews Dam 7 mi (11 km) upstream, normal regulated storage, about 75 ft³/s-day (184,000 m³). Flow regulated since 1942 by Chatuge Lake 22 mi (35 km) upstream (see p. 484). Suspended-sediment records for the current year are published on page 480 of this report.

AVERAGE DISCHARGE.--82 years (1897-1979), 925 ft³/s (26.20 m³/s), 30.94 in/yr (786 mm/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,100 ft³/s (654 m³/s) Mar. 19, 1899, gage height, 18.4 ft (5.61 m), from graph based on gage readings, site and datum then in use, from rating curve extended above 5,000 ft³/s (142 m³/s); minimum daily, 10 ft³/s (0.28 m³/s) Dec. 3, 1924, result of freezeup and filling of Andrews Lake; minimum daily during normal regulation, 62 ft³/s (1.76 m³/s) Oct. 19, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed is that of Mar. 19, 1899.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,400 ft³/s (295 m³/s) Mar. 4, gage height, 10.30 ft (3.139 m); minimum, 91 ft³/s (2.58 m³/s) Nov. 4, 6, 7, 10, 11, 16, 17, gage height, 2.04 ft (0.622 m); minimum daily, 91 ft³/s (2.58 m³/s) Nov. 6, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	102	448	986	1160	1320	475	1870	1580	316	1370	1440
2	529	101	286	2480	1100	1400	793	1840	1460	443	1260	912
3	350	97	171	1810	835	1340	2360	1870	956	1060	1260	854
4	686	94	570	1600	394	6570	1970	1880	1520	1120	1040	1260
5	425	93	1030	1540	939	4750	1670	1850	1560	1050	567	1250
6	164	91	526	1260	1120	2820	1400	1840	1630	1030	738	1180
7	427	93	274	1360	915	2520	900	1320	1510	1070	1140	1100
8	180	98	231	3200	918	2360	704	419	1570	475	1120	717
9	385	97	1290	2390	934	2200	1950	410	1030	327	1080	298
10	543	118	1110	1370	1220	2160	1960	414	729	1170	1110	642
11	374	91	753	1500	528	2190	1690	396	895	1130	1030	1030
12	518	95	653	997	521	2050	1710	406	753	1310	586	1030
13	598	97	701	511	356	2000	7020	486	835	1490	737	1190
14	552	113	619	862	342	2070	4520	476	1140	1340	674	776
15	237	119	479	1050	342	2000	3080	398	921	1350	1180	521
16	461	105	234	913	846	1960	2630	376	950	506	1070	284
17	875	100	263	692	975	1570	2420	468	652	1200	1050	748
18	665	136	415	919	562	1300	2300	443	761	1200	1170	1150
19	872	113	620	921	636	1410	2210	537	1110	1270	849	1150
20	436	256	229	2210	867	1430	2140	657	1120	1210	934	1150
21	183	238	554	3170	1020	1440	2120	991	1120	1500	1080	1170
22	145	262	760	1760	1340	1400	1590	1140	1130	3620	1440	909
23	482	176	268	1480	1330	1550	1590	1250	1020	1430	1820	406
24	705	195	460	1640	1750	2150	2010	1920	530	1690	1270	815
25	616	146	733	1620	1850	1840	1980	1450	540	1660	1290	1190
26	268	137	573	973	2010	1230	2120	1210	1120	1700	1120	1170
27	162	158	1150	591	1740	1320	2060	769	1110	1760	1100	1190
28	137	232	698	565	1460	1350	1960	1360	1090	1720	1390	1370
29	151	790	921	847	---	1280	1920	1570	1090	1300	1400	886
30	144	522	487	1210	---	1400	1890	1500	1040	1460	1300	453
31	122	---	999	776	---	849	---	1580	---	1440	1350	---
TOTAL	12545	5065	18505	43203	28010	61229	63142	33096	32472	39347	34525	28241
MEAN	405	169	597	1394	1000	1975	2105	1068	1082	1269	1114	941
MAX	875	790	1290	3200	2010	6570	7020	1920	1630	3620	1820	1440
MIN	122	91	171	511	342	849	475	376	530	316	567	284
CAL YR 1978	TOTAL	273543	MEAN	749	MAX	4550	MIN	91	MEAN	728	CFSM	1.79
WTR YR 1979	TOTAL	399380	MEAN	1094	MAX	7020	MIN	91	MEAN	1160	CFSM	2.86
											IN.	24.33
												38.80

* Adjusted for change in contents in Chatuge Lake.

TENNESSEE RIVER BASIN

03548500 HIWASSEE RIVER ABOVE MURPHY, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 05...	1115	167	3	1.4
NOV 09...	1120	96	5	1.3
DEC 13...	1040	300	3	2.4
JAN 21...	1035	3110	83	697
JAN 21...	1330	2850	64	492
FEB 22...	1520	2180	29	171

03550000 VALLEY RIVER AT TOMOTLA, N. C.

LOCATION.--Lat 35°08'20", long 83°58'50", Cherokee County, Hydrologic Unit 06020002, on right bank 15 ft (4.6 m) downstream from bridge on Secondary Road 1373 at Tomotla, 0.2 mi (0.3 km) upstream from Rogers Creek, 4.7 mi (7.6 km) northeast of Murphy, and at mile 6.6 (10.6 km).

DRAINAGE AREA.--104 mi² (269 km²).

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).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,556.46 ft (474.409 m) National Geodetic Vertical Datum of 1929 (levels by Tennessee Valley Authority). Prior to May 11, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good. Suspended-sediment records for the current year are published on page 482 of this report.

AVERAGE DISCHARGE.--67 years (1904-9, 1914-16, 1919-79), 257 ft³/s (7.278 m³/s), 33.56 in/yr (852 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Nov. 19, 1906, gage height, 20.5 ft (6.25 m), from flood profile by Tennessee Valley Authority, from rating curve extended above 5,800 ft³/s (164 m³/s) on basis of slope-conveyance study; minimum, 12 ft³/s (0.34 m³/s) several times in August and September 1925, gage height, 0.52 ft (0.158 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 1898 reached a stage of 21.2 ft (6.464 m), from floodmark by Tennessee Valley Authority, discharge, about 20,000 ft³/s (566 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,700 ft³/s (48 m³/s) and Maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1245	1820 51.5	6.63 2.021	Mar. 4	1545	*6150 174	*14.57 4.441
Jan. 8	0200	2500 70.8	8.50 2.591	Apr. 13	1730	3390 96.0	10.50 3.200
Jan. 21	0030	3340 94.6	10.40 3.170				

Minimum discharge, 32 ft³/s (0.91 m³/s) Oct. 23, 24, 25, 26; minimum gage height, 1.69 ft (0.515 m) several days in October and November.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	35	95	638	273	471	274	238	349	131	243	309
2	51	35	77	1350	254	409	299	227	304	123	221	263
3	44	35	81	689	253	398	1010	263	446	120	202	288
4	43	34	347	434	246	4000	955	240	647	118	188	279
5	43	35	326	338	229	2720	702	230	427	126	174	234
6	40	35	174	367	224	1330	546	215	344	114	163	211
7	39	37	129	1010	404	935	453	204	282	264	154	197
8	38	41	110	1800	324	731	413	197	258	187	147	176
9	38	37	890	851	294	586	1030	193	249	201	139	163
10	38	36	469	546	262	540	744	194	255	296	134	154
11	38	36	259	421	247	536	579	187	334	265	157	146
12	37	36	186	357	240	455	619	189	243	432	181	137
13	37	35	151	321	233	414	2470	198	211	390	135	137
14	41	36	130	288	222	477	1760	178	200	406	126	188
15	38	37	116	249	230	423	1100	165	185	406	122	141
16	37	38	129	229	282	386	800	158	176	302	118	130
17	36	51	142	219	280	360	637	151	179	242	112	128
18	36	79	116	225	287	341	541	146	166	211	109	134
19	36	45	120	215	258	323	475	144	154	195	106	127
20	36	41	123	1490	253	308	429	146	146	278	101	119
21	34	39	195	2230	466	313	394	266	159	843	98	285
22	34	39	165	1130	635	292	365	190	157	915	174	325
23	34	86	144	734	677	323	342	236	139	525	458	214
24	34	86	274	724	1190	790	322	433	166	405	239	182
25	34	57	404	550	1260	552	316	315	203	385	299	163
26	34	49	279	462	969	436	338	265	150	423	383	153
27	34	96	218	424	684	379	303	271	137	398	508	178
28	34	118	180	394	545	343	277	528	131	363	504	402
29	35	182	158	343	---	316	261	386	127	363	418	402
30	35	170	206	315	---	297	250	316	181	298	335	297
31	35	---	687	301	---	283	---	329	---	268	303	---
TOTAL	1186	1716	7080	19644	11721	20467	19004	7398	7105	9993	6751	6262
MEAN	38.3	57.2	228	634	419	660	633	239	237	322	218	209
MAX	63	182	890	2230	1260	4000	2470	528	647	915	508	402
MIN	34	34	77	215	222	283	250	144	127	114	98	119
CFSM	.37	.55	2.19	6.10	4.03	6.35	6.09	2.30	2.28	3.10	2.10	2.01
IN.	.42	.61	2.53	7.03	4.19	7.32	6.80	2.65	2.54	3.57	2.41	2.24

CAL YR	TOTAL	MEAN	MAX	MIN	CFSM	IN
1978	72240	198	4000	34	1.90	25.84
1979	118327	324	4000	34	3.12	42.32

TENNESSEE RIVER BASIN

03550000 VALLEY RIVER AT TOMOTLA, N. C.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
05...	1235	41	9	1.0
24...	1330	33	7	.62
JAN				
18...	1115	221	11	6.6
21...	0945	2340	258	1630
21...	1120	2190	246	1460
21...	1250	2050	215	1190
21...	1430	1930	175	912
23...	0900	755	25	51
FEB				
22...	1630	627	34	58
24...	1530	1490	238	957

Lakes and Reservoirs in Ohio River basin

03460242 LAKE WALTERS.--Lat 35°41'41", long 83°03'02", Haywood County, Hydrologic Unit 06010206, at Waterville Dam on Pigeon River, 0.1 mi (0.2 km) downstream from Cataloochee Creek, 5.5 mi (8.8 km) southeast of Mount Sterling, and at mile 38.0 (61.1 km). DRAINAGE AREA, 455 mi² (1,178 km²). PERIOD OF RECORD, October 1961 to current year. GAGE, nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by single arch, variable radius, concrete dam with fourteen taintor gates 10 ft (3 m) high by 24 ft (7.3 m) wide. Dam was completed in 1929 and filling began October 1929; water in reservoir first reached minimum pool elevation November 1929. Total capacity (new capacity table put into use Jan. 1, 1971), at elevation 2,258.6 ft (688.42 m), top of gates, is 12,800 ft³/s-day (31.32 hm³), of which 10,400 ft³/s-day (25.45 hm³) is controlled storage above elevation 2,175 ft (662.9 m), minimum pool. Reservoir is used for power. Prior to Jan. 1, 1971 records furnished by Carolina Power and Light Co. Gage-height record furnished by Carolina Power and Light Co.; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 12,800 ft³/s-day (31.32 hm³) several days each year, elevation, 2,258.6 ft (688.42 m); minimum observed, 2,860 ft³/s-day (6.998 hm³) Oct. 26, 1973, elevation, 2,180.6 ft (664.65 m).

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 12,800 ft³/s-day (31.32 hm³) Feb. 26-28, Mar. 4-8, Apr. 5, 6, 9, 13-17, elevation, 2,258.6 ft (688.42 m); minimum observed, 4,170 ft³/s-day (10.20 hm³) Oct. 1, elevation, 2,195.6 ft (669.22 m).

03504500 NANTAHALA LAKE.--Lat 35°11'56", long 83°39'17", Macon County, Hydrologic Unit 06010202, at Nantahala Dam on Nantahala River, 4.2 mi (6.8 km) southeast of Topton, 5.5 mi (8.8 km) upstream from Whiteoak Creek, and at mile 22.8 (36.7 km). DRAINAGE AREA, 91.0 mi² (235.7 km²). PERIOD OF RECORD, January 1942 to current year. Prior to October 1944 monthend contents only, published in WSP 1306. GAGE, water-stage recorder. Datum of gage is 122.16 ft (37.234 m) National Geodetic Vertical Datum of 1929 (levels by Aluminum Co. of America); gage readings have been reduced to elevations NGVD. Prior to June 3, 1942, nonrecording gage at same site and datum.

Reservoir is formed by rockfill dam with side channel gate-controlled spillway supplemented by fuse-plug dam. Dam completed and storage began Jan. 30, 1942; water in reservoir first reached minimum pool elevation Feb. 16, 1942. Total capacity (based on 1969 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 2,890.0 ft (880.72 m), top of gates, is 69,200 ft³/s-day (169.3 hm³), of which 63,500 ft³/s-day (155.4 hm³) is controlled storage above 2,758.84 ft (840.894 m), minimum pool. Reservoir is used for flood control and power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority. (See sta 03505500)

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 70,400 ft³/s-day (172.3 hm³) Apr. 12, 1957, elevation, 2,890.55 ft (881.040 m); minimum, after first filling, 6,700 ft³/s-day (16.39 hm³) Jan. 28, 1955, elevation, 2,760.11 ft (841.282 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 69,200 ft³/s-day (169.3 hm³) Apr. 17, elevation, 2,889.98 ft (880.866 m); minimum, 40,800 ft³/s-day (99.84 hm³) Dec. 1, elevation, 2,848.63 ft (868.262 m).

03507500 THORPE RESERVOIR.--Lat 35°11'46", long 83°09'09", Jackson County, Hydrologic Unit 06010203, at Thorpe Dam on West Fork Tuckasegee River, 2.3 mi (3.7 km) northwest of Glenville, 3.0 mi (4.8 km) upstream from Shoal Creek, and at mile 9.7 (15.6 km). DRAINAGE AREA, 36.7 mi² (95.1 km²). PERIOD OF RECORD, February 1941 to current year. Prior to October 1944 monthend contents only, published in WSP 1306. Prior to October 1948, published as Glenville Reservoir. GAGE, water-stage recorder. Datum of gage is 391.75 ft (119.405 m) National Geodetic Vertical Datum of 1929 (levels by Aluminum Co. of America); gage readings have been reduced to elevations NGVD. Prior to Apr. 9, 1941, nonrecording gage at same site and datum.

Reservoir is formed by earth and rock dam and six 40 ft (12.2 m) fuse-plug dams. Side channel spillway equipped with two taintor gates 12 ft (3.7 m) high by 25 ft (7.6 m) 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; new capacity table put into use Jan. 1, 1971), at elevation 3,100.0 ft (944.88 m), top of gates, is 35,500 ft³/s-day (86.87 hm³), of which 33,700 ft³/s-day (82.46 hm³) is controlled storage above elevation 3,023.25 ft (921.487 m), minimum pool. Reservoir is used for flood control and power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 35,700 ft³/s-day (87.36 hm³) Mar. 13, 1950, elevation, 3,100.01 ft (944.883 m); minimum, after first filling, 2,200 ft³/s-day (5.383 hm³) Feb. 5, 1955, Jan. 13, 1956; minimum elevation, 3,025.10 ft (922.050 m) Feb. 5, 1955.

EXTREMES FOR CURRENT YEAR: Maximum contents, 35,100 ft³/s-day (85.89 hm³) Apr. 4, elevation, 3,099.41 ft (944.700 m); minimum, 19,100 ft³/s-day (46.74 hm³) Dec. 1, elevation, 3,074.33 ft (937.056 m).

03514500 FONTANA LAKE.--Lat 35°27'07", long 83°48'18", Graham County, Hydrologic Unit 06010202, at Fontana Dam on Little Tennessee River, 5.7 mi (9.2 km) upstream from Twenty Mile Creek, 9.0 mi (14.5 km) north of Robbinsville, 9.6 mi (15.4 km) upstream from Cheoah Dam, and at mile 61.0 (98.1 km). DRAINAGE AREA, 1,571 mi² (4,069 km²). PERIOD OF RECORD, October 1944 to current year. Prior to November 1944, monthend contents only, published in WSP 1306. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by gravity nonoverflow type concrete dam. Spillway equipped with four radial gates 35 ft (10.7 m) high by 35 ft (10.7 m) wide. Storage 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; new capacity table put into use Jan. 1, 1971), at elevation, 1,710.0 ft (521.208 m), top of gates, is 727,500 ft³/s-day (1,780 hm³), of which 578,000 ft³/s-day (1,414 hm³) is controlled storage above elevation 1,525.0 ft (464.82 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 728,600 ft³/s-day (1,783 hm³) May 28, 1973, elevation, 1,710.20 ft (521.269 m); minimum, after first filling, 78,300 ft³/s-day (191.6 hm³) Jan. 29, 1955, elevation, 1,472.0 ft (448.666 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 710,600 ft³/s-day (1,739 hm³) July 23, elevation, 1,707.05 ft (520.309 m); minimum, 367,700 ft³/s-day (899.8 hm³) Nov. 29, elevation, 1,623.75 ft (494.919 m).

03516500 SANTEEHLAH LAKE.--Lat 35°22'38", long 83°52'33", Graham County, Hydrologic Unit 06010204, at Santeehlah Dam on Cheoah River, 1 mi (1.6 km) downstream from Santeehlah Creek, 5.5 mi (8.8 km) northwest of Robbinsville, and at mile 9.3 (15.0 km). DRAINAGE AREA, 176 mi² (456 km²). PERIOD OF RECORD, December 1927 to current year. Prior to October 1946 monthend contents only, published in WSP 1306. GAGE, water-stage recorder. Datum of gage is 122.92 ft (37.466 m) National Geodetic Vertical Datum of 1929 (levels by Aluminum Co. of America); gage readings have been reduced to elevations NGVD. Prior to February 1937, nonrecording gage at same site and datum.

Reservoir is formed by concrete gravity and arch dam with concrete spillway controlled by six taintor gates 12 ft (3.7 m) high by 25 ft (7.6 m) wide. Dam completed and storage 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), at elevation 1,817.0 ft (553.822 m), top of gates, is 78,800 ft³/s-day (192.8 hm³), of which 66,600 ft³/s-day (163.0 hm³) is controlled storage above 1,740.08 ft (530.377 m), minimum pool. Reservoir is used for power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

Lakes and Reservoir in Ohio River basin--Continued

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 81,100 ft³/s-day (198.5 hm³) Sept. 3, 1928, elevation, 1,817.90 ft (554.096 m); minimum, after first filling, 13,100 ft³/s-day (32.06 hm³) Feb. 6, 1940, elevation, 1,741.39 ft (530.776 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 79,100 ft³/s-day (193.6 hm³) Apr. 14, elevation, 1,817.20 ft (553.883 m); minimum, 34,900 ft³/s-day (85.40 hm³) Nov. 17, elevation, 1,777.53 ft (541.791 m).

03546500 CHATUGE LAKE.--Lat 35°01'01", long 83°47'28", Clay County, Hydrologic Unit 06020002, at Chatuge Dam on Hiwassee River, 2.0 mi (3.2 km) upstream from Hyatt Mill Creek, 2.5 mi (4.0 km) downstream from Georgia-North Carolina State line, 2.4 mi (3.9 km) southeast of Hayesville, and at mile 121.0 (194.7 km). DRAINAGE AREA, 189 mi² (490 km²). PERIOD OF RECORD, February 1942 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 4, 1942, nonrecording gage at same site and datum.

Reservoir is formed by a rolled earthfill dam with side channel spillway equipped with flashboards. Dam completed and storage began Feb. 12, 1942; water in reservoir first reached minimum pool elevation Feb. 26, 1942. Total capacity (based on 1965 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 1,928.0 ft (587.654 m), top of flashboards, is 121,200 ft³/s-day (296.6 hm³), of which 111,900 ft³/s-day (273.8 hm³) is controlled storage above elevation 1,860.0 ft (566.928 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority. (See sta 03548500)

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 124,200 ft³/s-day (303.9 hm³) Apr. 20, 1943, elevation, 1,927.80 ft (587.593 m); minimum, after first filling, 9,400 ft³/s-day (23.0 hm³) Sept. 5, 1947, Jan. 27, 1956; minimum elevation, 1,860.11 ft (566.962 m) Sept. 5, 1947.

EXTREMES FOR CURRENT YEAR: Maximum contents, 116,900 ft³/s-day (286.1 hm³) June 3, elevation, 1,926.76 ft (587.276 m); minimum, 66,800 ft³/s-day (163.5 hm³) Oct. 26, elevation, 1,908.61 ft (581.744 m).

03554500 HIWASSEE LAKE.--Lat 35°09'01", long 84°10'40", Cherokee County, Hydrologic Unit 06020002, at Hiwassee Dam on Hiwassee River, 0.3 mi (0.5 km) northwest of village of Hiwassee Dam, 3.9 mi (6.3 km) upstream from Shoal Creek, and at mile 75.8 (122.0 km). DRAINAGE AREA, 968 mi² (2,507 km²). PERIOD OF RECORD, September 1939 to current year. GAGE, water-stage recorder. Datum of gage is 0.63 ft (0.192 m) below National Geodetic Vertical Datum of 1929.

Reservoir is formed by gravity overflow concrete dam with seven taintor gates 23 ft (7.0 m) high by 32 ft (9.8 m) wide. Slight storage began Apr. 13, 1939, during construction; systematic storage operation began Jan. 14, 1940; dam completed February 1940; water in reservoir first reached minimum pool elevation Feb. 23, 1940. Total capacity (based on 1965 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 1,526.5 ft (465.277 m), top of gates, is 218,800 ft³/s-day (535.4 hm³) of which 182,700 ft³/s-day (447.1 hm³) is controlled storage above elevation 1,415.0 ft (431.292 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 223,400 ft³/s-day (546.7 hm³) May 28, 1973, elevation, 1,528.02 ft (465.740 m); minimum, after first filling, 35,800 ft³/s-day (87.60 hm³) Jan. 28, 1948, elevation, 1,413.41 ft (430.807 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 210,600 ft³/s-day (515.3 hm³) June 6, elevation, 1,523.83 ft (464.463 m); minimum, 74,400 ft³/s-day (182.1 hm³) Dec. 4, elevation, 1,458.65 ft (444.597 m).

03555500 APALACHIA LAKE.--Lat 35°10'04", long 84°17'49", Cherokee County, Hydrologic Unit 06020002, at Apalachia Dam on Hiwassee River, 0.1 mi (0.2 km) upstream from North Carolina-Tennessee State line, 1.5 mi (2.4 km) northeast of Fanner, Tenn., 9.8 mi (15.8 km) downstream from Hiwassee Dam, and at mile 66.0 (106.2 km). DRAINAGE AREA, 1,018 mi² (2,637 km²). PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete gravity dam. Spillway equipped with 10 radial gates. Dam completed and storage began Feb. 14, 1943; water in reservoir first reached minimum pool elevation Feb. 21, 1943. Total capacity (based on 1965 resurvey; new capacity table put into use Jan. 1, 1971), at elevation 1,280.00 ft (390.144 m), top of gates, is 29,100 ft³/s-day (71.21 hm³), of which 24,500 ft³/s-day (59.95 hm³) is controlled storage above elevation 1,212.00 ft (369.418 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 30,300 ft³/s-day (74.14 hm³) June 13, 1952, elevation, 1,281.40 ft (390.571 m); minimum, after first filling, 15,300 ft³/s-day (37.44 hm³) Apr. 25, 1971, elevation, 1,251.00 ft (381.305 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 29,100 ft³/s-day (71.21 hm³) Oct. 9, elevation, 1,279.98 ft (390.138 m); minimum, 18,700 ft³/s-day (45.76 hm³) Mar. 27, elevation, 1,259.34 ft (383.847 m).

OTHER RESERVOIRS.--The following smaller reservoirs in the Tennessee River basin are described below, but records of contents are not published herein:

03447832 LAKE JULIAN.--Lat 35°28'37", long 82°32'51", Buncombe County, Hydrologic Unit 06010105, cooling water reservoir for Carolina Power and Light Co. plant, on Powells Creek near Skyland. Prior to November 1967, published as Asheville Steam-electric Generating Plant Lake. DRAINAGE AREA, 4.78 mi² (12.38 km²). Total capacity is 4,540 ft³/s-day (11.11 hm³), of which 2,120 ft³/s-day (5.188 hm³) is controlled storage. Storage began Mar. 27, 1963, and lake reached spillway elevation of 2,160 ft (658.4 m) on June 3, 1963. Most of initial storage and occasional supplemental storage provided by pumped diversion from French Broad River.

03448959 BURNETT LAKE.--Lat 35°39'44", long 82°20'43", Buncombe County, Hydrologic Unit 06010105, part of Asheville's municipal water supply, on North Fork Swannanoa River near Black Mountain. DRAINAGE AREA, 21.9 mi² (56.7 km²). Total capacity is 11,600 ft³/s-day (28.39 hm³), crest of spillway, of which 8,900 ft³/s-day (21.78 hm³) is controlled storage. Storage began Jan. 28, 1954. (See sta 03451000)

03450134 BEETREE RESERVOIR.--Lat 35°38'27", long 82°24'04", Buncombe County, Hydrologic Unit 06010105, part of Asheville's municipal water supply, on Beetree Creek near Swannanoa. DRAINAGE AREA, 7.62 mi² (19.74 km²). Total capacity is 844 ft³/s-day (2.065 hm³), of which 823 ft³/s-day (2.014 hm³) is controlled storage. Dam completed December 1926, and storage began Jan. 11, 1927; water in reservoir first reached maximum pool elevation Mar. 8, 1927. No diversion since June 1963.

03455773 LAKE LOGAN.--Lat 35°25'15", long 82°55'30", Haywood County, Hydrologic Unit 06010106, on West Fork Pigeon River near Canton, and at mile 7.0 (11.3 km). DRAINAGE AREA, 33.3 mi² (86.2 km²). Total capacity is 1,040 ft³/s-day (2.545 hm³), top of flashboards, all of which is usable. Storage began November 1931. (See sta 03456000)

03458319 LAKE JUNALUSKA.--Lat 35°31'38", long 82°57'48", Haywood County, Hydrologic Unit 06010106, on Richland Creek at Lake Junaluska and at mile 2.4 (3.9 km). DRAINAGE AREA, 63.6 mi² (164.7 km²). Total surface area, about 195 acres (789,000 m²). Lake reached spillway elevation in the spring of 1913.

Lakes and Reservoirs in Ohio River basin--Continued

03500466 SEQUOYAH LAKE.--Lat 35°04'02", long 83°13'31", Macon County, Hydrologic Unit 06010202, on Cullasaja River near Highlands, and at mile 18.4 (29.6 km). DRAINAGE AREA, 14.4 mi² (37.3 km²). Total capacity is 233 ft³/s-day (570,000 m³), spillway crest, of which approximately 116 ft³/s-day (284,000 m³) is usable. Storage began in 1926.

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 DRAINAGE AREA, 24.9 mi² (64.5 km²) on Tuckasegee River near Tuckasegee, Jackson County, Hydrologic Unit 06010203, is at lat 35°12'48", long 83°00'08", Wolf Creek Dam DRAINAGE AREA, 15.2 mi² (39.4 km²) on Wolf Creek near Tuckasegee, is at lat 35°13'18", long 83°00'00". Total capacity of East Fork Lake is 671 ft³/s-day (1.642 hm³), of which 625 ft³/s-day (1.529 hm³) is controlled storage. Storage began Apr. 18, 1955. Total capacity of Wolf Creek Lake is 5,070 ft³/s-day (12.41 hm³), of which 3,850 ft³/s-day (9.421 hm³) is controlled storage. Storage began Mar. 22, 1955. (See sta 03510500)

03507216 BEAR CREEK LAKE.--Lat 35°14'29", long 83°04'22", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee. DRAINAGE AREA, 75.3 mi² (195.0 km²). Total capacity is 17,500 ft³/s-day (42.82 hm³), of which 2,290 ft³/s-day (5.604 hm³) is controlled storage. Storage began Oct. 9, 1953. (See sta 03510500)

03507289 CEDAR CLIFF LAKE.--Lat 35°15'12", long 83°05'58", Jackson County, Hydrologic Unit 06010203, on Tuckasegee River near Tuckasegee, and at mile 51.9 (83.5 km). DRAINAGE AREA, 80.3 mi² (208.0 km²). Total capacity is 3,200 ft³/s-day (7.830 hm³) of which 400 ft³/s-day (979,000 m³) is controlled storage. Storage began Apr. 26, 1952. (See sta 03510500)

03515152 CHEOAH LAKE.--Lat 35°26'54", long 83°56'11", Graham County, Hydrologic Unit 06010202, on Little Tennessee River at Cheoah, and at mile 51.4 (82.7 km). DRAINAGE AREA, 1,608 mi² (4,165 km²). Total capacity is 17,700 ft³/s-day (43.31 hm³), of which 3,700 ft³/s-day (9.054 hm³) is controlled storage. Storage began Dec. 8, 1918.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs- days)	Gage height (feet)	Contents (cfs- days)	Change in contents (cfs- days)	Gage height (feet)	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs- days)
	03460242 Lake Walters			03504500 Nantahala Lake			03507500 Thorpe Reservoir			03514500 Fontana Lake		
Sept. 30.....	2190.0	3630	-	2860.31	47900	-	3081.92	23400	-	1647.54	446000	-
Oct. 31.....	2231.2	8590	+4960	2851.54	42500	-5400	3076.35	20200	-3200	1634.76	404000	-42000
Nov. 30.....	2227.4	8050	-540	2848.80	40900	-1600	3074.46	19200	-1000	1624.26	369300	-34700
Dec. 31.....	2219.6	7010	-1040	2858.31	46700	+5800	3077.12	20600	+1400	1625.85	374500	+5200
CAL YR 1978	-	-	-3240	-	-	-3700	-	-	-1500	-	-	-35700
Jan. 31.....	2224.6	7670	+660	2873.60	56900	+10200	3083.12	24100	+3500	1644.00	433600	+59100
Feb. 28.....	2258.1	12760	+5090	2877.27	59500	+2600	3088.82	27800	+3700	1652.92	466800	+33200
Mar. 31.....	2222.3	7360	-5400	2888.70	68200	+8700	3096.83	33300	+5500	1665.73	518800	+52000
Apr. 30.....	2231.0	8560	+1200	2889.19	68600	+400	3098.57	34500	+1200	1700.85	679300	+160500
May 31.....	2233.4	8920	+360	2889.48	68800	+200	3097.87	34000	-500	1704.36	696600	+17300
June 30.....	2243.6	10460	+1540	2886.83	66700	-2100	3097.51	33800	-200	1704.23	696000	-600
July 31.....	2238.7	9710	-750	2887.36	67100	+400	3097.06	33400	-400	1705.16	700700	+4700
Aug. 31.....	2248.4	11210	+1500	2881.06	62300	-4800	3093.26	30800	-2600	1690.68	629400	-71300
Sept. 30.....	2246.8	10960	-250	2876.04	58600	-3700	3095.42	32300	+1500	1677.90	570400	-59000
WTR YR 1979	-	-	+7330	-	-	+10700	-	-	+8900	-	-	+124400

Date	Gage height (feet)	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs- days)
	03516500 Santeetlah Lake			03546500 Chatuge Lake			03554500 Hiwassee Lake			03555500 Apalachia Lake		
Sept. 30.....	1786.24	42600	-	1911.47	73100	-	1496.65	138600	-	1277.60	27800	-
Oct. 31.....	1780.22	37100	-5500	1908.75	67100	-6000	1477.14	101400	-37200	1276.45	27100	-700
Nov. 30.....	1778.72	35900	-1200	1910.03	69800	+2700	1460.35	76600	-24800	1278.80	28400	+1300
Dec. 31.....	1791.08	47300	+11400	1911.88	74100	+4300	1465.60	83400	+6800	1276.90	27400	-1000
CAL YR 1978	-	-	-2100	-	-	-7900	-	-	-14000	-	-	+700
Jan. 31.....	1805.78	63800	+16500	1913.88	79000	+4900	1478.79	104300	+20900	1276.94	27400	0
Feb. 28.....	1806.93	65200	+1400	1916.67	86400	+7400	1484.15	113600	+9300	1276.15	26900	-500
Mar. 31.....	1813.65	74200	+9000	1921.16	98700	+12300	1492.83	130300	+16700	1275.05	26300	-600
Apr. 30.....	1814.93	76000	+1800	1924.89	110500	+11800	1521.62	203400	+73100	1277.32	27600	+1300
May 31.....	1813.18	73600	-2400	1926.49	116000	+5500	1523.37	209200	+5800	1275.61	26600	-1000
June 30.....	1812.27	72300	-1300	1925.47	112500	-3500	1520.02	198200	-11000	1276.40	27100	+500
July 31.....	1814.96	76000	+3700	1924.55	109400	-3100	1522.02	204700	+6500	1275.47	26600	-500
Aug. 31.....	1806.41	64600	-11400	1921.33	99300	-10100	1517.77	191500	-13200	1277.21	27500	+900
Sept. 30.....	1801.98	59200	-5400	1920.66	97300	-2000	1511.18	174000	-17500	1274.90	26200	-1300
WTR YR 1979	-	-	+16600	-	-	+24200	-	-	+35400	-	-	-1600

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 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. Those measurements and others collected for some special reasons are called measurements at miscellaneous sites.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower 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 crest-stage partial-record stations

						Annual maximum	
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis-charge (ft ³ /s)
Pamlico River basin							
02084148	Chicod Creek at Secondary Road 1565 near Grimes-land, N. C.	Lat 35°31'57", long 77°11'13, Pitt County, at bridge on Secondary Road 1565, 2.0 miles upstream from Cow Swamp, and 2.2 miles south of Grimes-land.	a19	1976-79	2-26-79	26.38	665
02084158	Cow Swamp near Grimes-land, N. C.	Lat 35°32'00", long 77°13'30", Pitt County, at bridge on Secondary Road 1756, 1 mile upstream from mouth.	a17	1976-79	6-12-79	22.65	900
Pee Dee River basin							
02112247	Elkin River at Elkin, N.C.	Lat 36°15'12", long 80°51'46", Surry County, at bridge on State Highway 268, 1 mile upstream from mouth, and 1 mile west of Elkin.	35.4	1971-79	9-22-79	13.26	5,300
Santee River basin							
02152500	First Broad River near Lawndale, N. C.	Lat 35°22'53", long 81°32'50", Cleveland County, on right bank at village of Double Shoals, 0.4 mile downstream from Shoal Rock Creek, 500 ft downstream from bridge on Secondary Road 1809, and 2.5 miles southeast of Lawndale.	198	+1940-71, 1972-79	2-25-79	8.35	4,110

† Operated as a continuous record gaging station.

a Approximately.

MEASUREMENTS AT MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Date	Discharge (ft ³ /s)
Roanoke River basin						
02068015 Dan River	Roanoke River	Lat 36°31'33", long 80°22'16", Stokes County, at bridge on Secondary Road 1432, 2.4 miles downstream from Little Dan River, and 2.8 miles east of Asbury.	a110	1970, 1973-74, 1976-78	12-13-78 6-13-79	109 162
02069000 Dan River	Roanoke River	Lat 36°19'08", long 80°03'00", Stokes County, at bridge on Secondary Road 2023, at Pine Hall, 1.5 miles upstream from Belews Creek.	481	†1923-26, 1975-78	10-26-78 12-18-78	202 313
02069222 Dan River	Roanoke River	Lat 36°22'20", long 80°59'38", Rockingham County, at bridge on Secondary Road 1138, and 1.8 miles southwest of Madison.	a600	1970, 1974, 1976-78	10-26-78 12-18-78	200 334
02074282 Wolf Island Creek	Dan River	Lat 36°23'30", long 79°40'08", Rockingham County, at bridge on Secondary Road 1998, 1.5 miles northwest of Reidsville, and 9 miles upstream from Quagna Creek.	a3.8	1970, 1974, 1976-78	12-18-78	2.45
02074360 Wolf Island Creek	Dan River	Lat 36°31'54", long 79°30'07", Caswell County, at bridge on State Highway 700, 0.5 mile upstream from mouth, and 2.5 miles northwest of Pelham.	a69	1954, 1956-64, 1966, 1968, 1970, 1974-78	7-19-79	56.6
02075198 Dan River	Roanoke River	Lat 36°32'77", long 79°12'55", Caswell County, at Milton, 0.5 mile upstream from Country Line Creek.	2,322	1970, 1974, 1976-78	9-27-78 12-19-78	1,350 1,610
0207520780 Country Line Creek	Dan River	Lat 36°18'46", long 79°30'48", Caswell County, at bridge on Secondary Road 1146, and 1.2 miles south-southwest of Ashland.	a6.7	1974-78	7-19-79	3.18
0207527050 Country Line Creek	Dan River	Lat 36°32'16", long 79°12'04", Caswell County, at bridge on State Highway 57, 0.4 mile east-southeast of Milton, and 0.8 mile upstream from mouth.	a137	1974-78	7-19-79	637
0207718130 Hycro Creek	Hycro River	Lat 36°17'24", long 79°15'43", Caswell County, at Secondary Road 1767, 2.8 miles northeast of Baynes, and 3.2 miles upstream from confluence of Lynch Creek.	a5.1	1974-78	7-19-79	69
02077227 South Hycro Creek	Hycro River	Lat 35°16'00", long 79°08'50", Person County, at bridge on State Highway 49, 1.5 miles southwest of Gordonton, and 2.5 miles upstream from confluence of Sugar Tree Creek.	a11	1968, 1976, 1978	4-24-79	5.36
02077629 Mayo Creek tributary	Mayo Creek	Lat 36°23'55", long 78°54'05", Person County, at bridge on Secondary Road 1520, 0.8 mile upstream from mouth, and 1 miles northwest of Allensville.	.68	1966, 1968, 1976	4-24-79	.37
0207920940 Island Creek	Roanoke River	Lat 36°26'10", long 78°32'37", Granville County, at bridge on Secondary Road 1430, 0.3 mile downstream from Howlett Creek, and 1.7 miles southeast of Stovall.	a13	1974-76, 1978	4-30-79	6.29
02079264 Nutbush Creek	Roanoke River	Lat 36°22'10", long 78°24'31", Vance County, at bridge on Secondary Road 1317, 0.1 mile upstream from Buggs Island Reservoir, and 3 miles north of Henderson.	a3.9	1970, 1974, 1976, 1978	4-30-79	5.27
0207966152 Smith Creek	Roanoke River	Lat 36°27'12", long 78°15'51", Warren County, at culvert on Secondary Road 1224, 2 miles northwest of Ridgeway, and 4.2 miles upstream from Ellington Branch.	a5.7	1976	4-23-79	1.63
02079717 Smith Creek	Roanoke River	Lat 36°32'27", long 78°11'43", Warren County, at bridge on U.S. Highway 1, 0.3 mile downstream from Blue Mud Creek, and 2.1 miles west of Paschall.	a53	1954, 1961-63, 1966, 1976	4-23-79	36.3

† Operated as a continuous-record gaging station.

a Estimated.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Pamlico River basin						
02081552 Tar River	Pamlico River	Lat 36°11'25", long 78°33'33", Granville County, at bridge on Secondary Road 1622, 0.5 mile upstream from Sand Creek, and 3.5 miles north of Wilton.	215	1970, 1973-74, 1976	4-30-79	81.9
02083432 Deep Creek	Fishing Creek	Lat 35°57'20", long 77°30'10", Edgecombe County, at bridge on U.S. Highway 258, 1 mile upstream from mouth, and 4 miles northeast of Tarboro.	a94	1954, 1974	#7-24-78	8.65
02084148 Chicod Creek	Tar River	Lat 35°31'57", long 77°11'13", Pitt County, at bridge on Secondary Road 1565, 2 miles upstream from Cow Swamp, and 2.2 miles south of Grimesland.	a19	1975-78	1-30-79 7-10-79 8-27-79	30.8 .83 0
02084158 Cow Swamp	Tar River	Lat 35°31'57", long 77°11'13", Pitt County, at bridge on Secondary Road 1756, 1 mile upstream from mouth, and 3 miles south-west of Grimesland.	a17	1975-78	1-30-79 7-10-79 8-27-79	15.9 .74 .02
Neuse River basin						
02085079 Eno River	Neuse River	Lat 36°04'19", long 78°51'47", Durham County, at bridge on Secondary Road 1004, 1.3 miles upstream from Little River, and 1.5 miles northeast of Weaver.	a150	1954-55, 1958, 1968, 1972-74, 1976, 1978	5- 1-79	78.9
02085302 South Flat River	Flat River	Lat 36°17'40", long 79°03'54", Person County, at bridge on Secondary Road 1112, 1.3 miles upstream from confluence of Bushy Fork Creek, and 1.8 miles northwest of Hurdle Mills.	6.2	1974-76, 1978	4-24-79	2.40
02085320 South Flat River	Neuse River	Lat 36°15'43", long 79°00'45", Person County, at bridge on Secondary Road 1120, 0.2 mile upstream from confluence of Lick Creek, and 2.2 miles southeast of Hurdle Mills.	10	1974-75	4-24-79	13.3
02087173 Horse Creek tributary	Horse Creek	Lat 36°02'33", long 78°31'03", Franklin County, at Secondary Road 1140, 0.2 mile upstream from mouth, and 2.7 miles south-east of Pocomoke.	a1.1	1976	4-30-79	1.05
02087370 Big Branch	Walnut Creek	Lat 35°44'28", long 78°34'06", Wake County, at bridge on Secondary Road 2542, 1 mile upstream from mouth, and 3 miles northeast of Garner.	a12	1953-58, 1960, 1970, 1972-73, 1976	5- 3-79	6.94
02087499 Neuse River tributary	Neuse River	Lat 35°39'05", long 78°24'11", Johnston County, 0.2 mile upstream from Secondary Road 1705, and 3 miles east of Clayton.	a1.3		5- 1-79	.78
02087885 Middle Creek	Swift Creek	Lat 35°42'54", long 78°50'27", Wake County, at Durham and Southern Railroad, 1.4 mile southeast of Apex, 5.1 miles upstream from Basal Creek, and 10.8 miles upstream from mouth.	.6	1973-76	4-30-79	.14
02088270 Mill Creek	Neuse River	Lat 35°20'31", long 78°12'51", Johnston County, at bridge on Secondary Road 1200, 0.1 mile upstream from Mill Branch, and 0.5 mile north of Cox Mill.	a170	1974, 1976, 1978	5- 2-79	58.1
0208837825 Little River	Neuse River	Lat 35°57'08", long 78°24'28", Franklin County, at bridge on U.S. Highway 401, 2.1 miles southwest of Harris Crossroads, and 3.2 miles upstream from Cedar Fork.	a7.9	1974-76	4-30-79	3.26
Cape Fear River basin						
02093248 Haw River	Cape Fear River	Lat 36°11'52", long 79°59'08", Guilford County, at bridge on State Highway 68, 1.6 miles north of Oak Ridge, and 1.8 miles upstream from Rocky Branch.	7.9	1962, 1966, 1971, 1973-78	12-18-78 7-20-79	6.53 3.94
02095091 South Buffalo Creek	Buffalo Creek	Lat 36°06'45", long 79°40'19", Guilford County, at bridge on Secondary Road 2821, 0.8 mile northwest of McLeansville, and 1.4 miles upstream from mouth.	43.1	1969-70, 1973, 1976-78	10-10-78 10-26-78 7-19-79	24.6 15.9 25.2

a Estimated

* Not previously published

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Cape Fear River basin--Continued						
02095554 Buffalo Creek	Reedy Fork	Lat 36°08'34", long 79°38'54", Guilford County, at bridge on Secondary Road 2795, 1.2 miles upstream from Blackwood Creek, and 2.6 miles north of McLeansville.	91.6	1969-71, 1973, 1976-78	10-10-78 10-26-78 7-19-79	52.7 46.7 62.3
02095681 Reedy Fork	Haw River	Lat 36°10'06", long 79°30'29", Alamance County, at bridge on State Highway 87, at Ossipee, and 0.5 mile upstream from mouth.	254	1969-70, 1973, 1976-78	10-10-78 12-19-78 7-19-79	90.1 150 77.6
*0209659814 Little Alamance Creek	Big Alamance Creek	Lat 35°55'52", long 79°40'34", Guilford County, at culvert on Secondary Road 3549 (Old U.S. Highway 421), 0.1 mile downstream from unnamed tributary, and 2 miles north-northwest of Julian.	a2.0	1974, 1976-77	12-20-78 7-18-79	.63 2.09
02096788 Big Alamance Creek	Haw River	Lat 36°01'01", long 79°24'50", Alamance County, at bridge on Secondary Road 2309, 0.5 mile downstream from Stinking Quarter Creek, and 1.8 miles east of Bellemont.	247	1974-77	†6-23-78 10-27-78 12-20-78 7-18-79	226 12.7 86.6 46.4
02096879 Haw River	Cape Fear River	Lat 35°53'39", long 79°15'15", Alamance County, at bridge on Secondary Road 1005, 0.7 mile upstream from Cane Creek, and 5.8 miles north of Terrells.	1,090	1974-75	12-20-78 7-18-79	451 496
02096975 Ward Branch	Pokeberry Creek	Lat 35°46'40", long 79°05'44", Chatham County, at Secondary Road 1700, 0.9 mile upstream from mouth, and 1.7 miles east of Bynum.	1.29	1976	4-26-79	1.79
02097203 New Hope Creek	New Hope River	Lat 35°59'31", long 79°02'45", Orange County, at bridge on Secondary Road 1730, 0.5 mile downstream from Old Field Creek, and 1.5 miles east of Blackwood.	a22	1962, 1966, 1968, 1971, 1973, 1976, 1978	5- 1-79	10.2
0209746350 Morgan Creek	New Hope River	Lat 35°57'44", long 79°08'06", Orange County, at culvert on Secondary Road 1112, and 1.7 miles east-southeast of Dobson.	a2.2	1974-76, 1978	5- 1-79	1.77
02099484 Richland Creek	Deep River	Lat 35°56'26", long 79°54'08", Guilford County, at bridge on Secondary Road 1147, 0.2 mile upstream from mouth, and 4 miles southwest of Groomtown.	16.3	1971, 1973-76, 1978	7-18-79	11.3
02101463 Deep River	Cape Fear River	Lat 35°33'18", long 79°17'17", Chatham County, at Gulf bridge on Secondary Road 1007, 2.4 miles upstream from Picket Creek, and 3.5 miles southeast of Goldston.	a1,050	1970, 1973, 1976	4-25-79	463
02101686 North Prong Rocky River	Rocky River	Lat 35°51'51", long 79°32'34", Randolph County, at bridge on State Highway 49, 1.5 miles north-east of Liberty, and 6.3 miles upstream from mouth.	a2.6	1974, 1976-78	7-18-79	.78
02101946 Rocky River	Deep River	Lat 35°31'20", long 79°11'18", Chatham County, at bridge on State Highway 87, 3 miles upstream from mouth, and 4 miles northeast of Coalglenn.	a230	1974, 1976	4-26-79	146
02102634 Upper Little River	Cape Fear River	Lat 35°19'33", long 78°43'21", Harnett County, at bridge on Secondary Road 2021, 1.5 miles upstream from mouth, and 2.8 miles west of Erwin.	a210	1968, 1974-76	4-23-79	148
02103550 Little River	Cape Fear River	Lat 35°15'49", long 78°44'26", Harnett County, at bridge on State Highway 217, 0.5 mile downstream from Stewarts Creek, and 0.5 mile north of Linden.	a4.70	1974, 1976	4-23-79	420
02104362 Beaver Creek	Little Rockfish Creek	Lat 35°02'39", long 78°58'40", Cumberland County, at bridge on U.S. Highway 401, 1.1 miles south of Skibo, and 1.3 miles upstream from Cumberland Creek.	24.7	1974-75	4-24-79	21.0
02104380 Beaver Creek	Little Rockfish Creek	Lat 35°00'00", long 78°58'44", Cumberland County, at bridge on Secondary Road 1141 at Cumberland, and 1 mile upstream from mouth.	32.2	1961-65, 1968, 1973-75	4-24-79	26.3

* Previously published as 0209659285

† Not previously published.

a Approximately.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Cape Fear River basin--Continued						
0210450005 Rockfish Creek	Cape Fear River	Lat 34°57'57", long 78°55'00", Cumberland County, at bridge on U.S. Highway 301, 0.1 mile down- stream from Little Rockfish Creek, and 1.7 miles east of Hope Mills.	286	1974-76	4-24-79	332
0210591620 Great Coharie Creek	Black River	Lat 35°14'38", long 78°27'00", Sampson County, at bridge on Secondary Road 1636, 1.4 miles north-northeast of Timothy, and 5.2 miles upstream from confluence of Beaverdam Creek.	a1.7	1974-76	4-27-79	.56
02105966 Great Coharie Creek	Black River	Lat 34°50'05", long 78°21'55", Sampson County, at bridge on Secondary Road 1206, 0.2 mile upstream from Little Coharie Creek, and 1.8 miles northwest of Ingold.	a210	1955-56, 1976	4-30-79	121
02106044 Little Coharie Creek	Great Coharie Creek	Lat 34°50'10", long 78°22'20", Sampson County, at bridge on Secondary Road 1207, 0.2 mile upstream from mouth, and 1.8 miles northwest of Ingold.	a160	1955-56, 1976	4-30-79	103
0210604420 Great Coharie Creek tributary	Great Coharie Creek	Lat 34°47'46", long 78°21'47", Sampson County, on Secondary Road 1135, 0.8 mile upstream from mouth, and 1.8 miles northeast of Garland.	a2.5	1973-74	4-30-79	.86
0210604480 Great Coharie Creek	Black River	Lat 34°47'15", long 78°19'23", Sampson County, at bridge on Secondary Road 1134, 0.6 mile upstream from mouth, and 4.1 miles east of Garland.	380	1974-76	4-30-79	248
0210608640 Six Runs Creek	Black River	Lat 35°07'13", long 78°15'05", Sampson County, at bridge on Secondary Road 1740, 0.6 mile up- stream from Hoe Swamp, and 2.1 miles north- west of Hargrove Crossroads.	a14	1974-76	4-27-79	14.2
02106467 Six Runs Creek	Black River	Lat 34°47'40", long 78°18'45", Sampson County, at bridge on Secondary Road 1003, 0.3 mile upstream from mouth, and 3 miles southeast of Ingold.	a270	1974, 1976	4-30-79	134
02106621 Black River	South River	Lat 35°29'26", long 78°42'37", Harnett County, at bridge on Secondary Road 1544, 1.5 miles northwest of Barclaysville, and 15 miles up- stream from Popes Pond.	a4.3	1973-74, 1976, 1978	4-23-79	2.48
02106648 Black River	South River	Lat 35°20'52", long 78°37'28", Harnett County, at bridge on Secondary Road 1722, and 3 miles north-northwest of Dunn.	a38	1977-78	7-30-79 9-26-79	.36 4.88
02106681 Black River	South River	Lat 35°17'03", long 78°38'21", Harnett County, at bridge on Secondary Road 1780, 1.5 miles downstream from Pope's Pond, and 2.2 miles southwest of Dunn.	a49	1973, 1977-78	2-27-79 3-12-79 3-28-79 4-10-79 6-11-79 6-14-79 7-24-79 8-31-79 9-11-79	444 150 240 80.8 11.9 5.44 3.27 2.31 79.9
02106760 Mingo Swamp	South River	Lat 35°16'18", long 78°35'11", Harnett County, at bridge on U.S. Highway 421, 1 mile down- stream from Stony Run, and 2.7 miles south- east of Dunn.	a50	1955, 1957-64, 1973, 1976	4-23-79	19.4
02107171 South River	Black River	Lat 34°38'23", long 78°18'48", Sampson County, at bridge on Secondary Road 1007, 2 miles southwest of Kerr, and 5.5 miles upstream from mouth.	a470	1955-56, 1974, 1976	4-30-79	285
02108534 Rockfish Creek	Northeast Cape Fear River	Lat 34°43'03", long 77°58'48", Duplin County, at bridge on U.S. Highway 117, 1 mile down- stream from Sawyer Creek, and 1.5 miles south of Wallace.	a150	1976, 1978	5- 8-79	16.2
Waccamaw River basin						
02108963 Big Creek	Lake Waccamaw	Lat 34°19'18", long 78°27'18", Columbus County, at bridge on U.S. Highways 74 and 76, 2.9 miles upstream from mouth, and 3.1 miles west of Bolton.	a70	1975-76	5- 7-79	.21

a Approximately.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

491

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Waccamaw River basin--Continued						
02108994 Brown Marsh Swamp	Brown Marsh	Lat 34°31'32", long 78°38'57", Bladen County, at culvert on U.S. Highway 701, 0.2 mile upstream from Whites Creek, and 2.7 miles north of Clarkton.	25.8	1971-73, 1976	5- 8-79	0
02109481 Juniper Creek	Waccamaw River	Lat 34°06'07", long 78°18'25", Brunswick County, at State Highway 211, and 4.2 miles north-northeast of Prospect.	a6.4		5- 7-79	9.55
Pee Dee River basin						
02113576 Ararat River	Yadkin River	Lat 36°33'12", long 80°34'07", Surry County, at bridge on State Highway 104, 2.1 miles northeast of Salem, and 2.2 miles upstream from Johnsons Creek.	36.2	1970-77	12-13-78 5- 8-79 6-13-79 8- 3-79	39.7 64.2 60.8 44.8
02114101 Ararat River	Yadkin River	Lat 36°18'08", long 80°31'55", Surry County, at bridge on Secondary Road 2080, 2.2 miles northeast of Siloam, and 2.2 miles upstream from mouth.	a310	1974-78	10-25-78 12-13-78 6-13-79	170 308 451
0211668555 Dutchmans Creek	Yadkin River	Lat 36°01'13", long 80°39'13", Davie County, at bridge on Secondary Road 1002, 0.6 mile upstream from confluence of Steelman Creek, and 3.5 miles northwest of Stanleys Store.	a13	1974-77	5-18-79 7-17-79	23.6 10.3
02119000 South Yadkin River	Yadkin River	Lat 35°48'18", long 80°33'30", Davie County, at Cooleemee, upstream from State Highway 801, 2.5 miles upstream from Third Creek, and 7.2 miles upstream from mouth.	569	+1928-65, 1970-78	7-17-79	557
02120640 Third Creek	South Yadkin River	Lat 35°47'26", long 80°34'17", Rowan County, at bridge on State Highway 801, 1 mile south of Cooleemee, and 3 miles upstream from mouth.	a180	1952-53, 1963-69, 1978	10- 5-78 7-17-79	92.7 142
02121360 Swearing Creek	Yadkin River	Lat 34°45'19", long 80°18'22", Davie County, at bridge on Secondary Road 1130, 0.5 mile east of Linwood, and 2 miles upstream from mouth.	35.3	1948-57, 1961-63, 1970-71, 1973, 1975-78	7-17-79 8-20-79	13.9 12.7
02121500 Abbotts Creek	Yadkin River	Lat 35°48'23", long 80°14'05", Davidson County, above bridge on Secondary Road 1243, 1.5 miles southeast of Lexington, and 4.9 miles downstream from Rich Fork.	174	+1940-57 1970-78	7-17-79	32.4
02123113 Uwharrie River	Pee Dee River	Lat 35°48'25", long 79°59'50", Randolph County, at bridge on Secondary Road 1549, 4.5 miles upstream from Little Uwharrie River, and 7.5 miles southwest of Glenola.	a32	1961-62, 1974-78	5- 9-79 7-17-79	14.6 3.94
02123500 Uwharrie River	Pee Dee River	Lat 35°25'47", long 80°01'05", Montgomery County, 300 ft downstream from State High- way 109, 1 mile upstream from McLeans Creek, and 3 miles south of Eldorado.	347	+1938-71, 1974	10-27-78 3-23-79	14.0 239
02123881 Rocky River	Pee Dee River	Lat 35°28'28", long 80°46'47", Mecklenburg County, at bridge on Secondary Road 1608, 1.3 miles upstream from West Branch, and 4.5 miles southeast of Davidson.	13.4	1970-78	11-22-78 2-16-79 3-14-79 8-20-79	7.85 24.6 24.4 6.4
02121460 Mallard Creek	Rocky River	Lat 35°20'11", long 80°40'06", Cabarrus County, at bridge on Secondary Road 1300, 0.2 mile upstream from mouth, and 1.3 mile northwest of Harrisburg.	41.2	1955-65, 1971, 1973, 1975-78	11-22-78 3-14-79 8-20-79	5.01 50.7 3.52
02124374 Irish Buffalo Creek	Rocky River	Lat 35°20'50", long 80°32'52", Cabarrus County, at bridge on Secondary Road 1132, 1 mile south of Faggarts Crossroads, and 1 mile upstream from mouth.	44.7	1974-78	10- 5-78 12-12-78 3-14-79 8-20-79	18.1 24.6 47.2 10.8
02124401 Rocky River	Pee Dee River	Lat 35°19'26", long 80°30'59", Cabarrus County, at bridge on U.S. Highway 601, 1 mile upstream from Hamby Branch, and 3 miles southeast of Faggarts Crossroads.	390	1970-71, 1973-78	12-12-78 3-14-79 8-20-79	134 557 81.7
02124823 Long Creek	Rocky River	Lat 35°28'21", long 80°17'37", Stanly County, at bridge on Secondary Road 1454, 1.9 miles west of Richfield, and 15.2 miles upstream from mouth.	a5.0	1974-78	7-12-78 10-31-78 12-12-78 3-22-79	‡.04 .09 1.78 2.11

+ Operated as a continuous-record gaging station.

‡ Not previously published.

a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Pee Dee River basin--Continued						
02125126 Long Creek	Rocky River	Lat 35°13'05", long 80°15'28", Stanly County, at bridge on Secondary Road 1917, 1 mile upstream from mouth, and 4.4 miles east of Oakboro.	198	1970-71, 1973-77	10-31-78 12-12-78 3-22-79	17.0 38.7 120
02127560 Little River	Pee Dee River	Lat 35°37'22", long 79°51'18", Randolph County, at bridge on Secondary Road 1142, 1.8 miles southwest of Ulah, and 1.9 miles upstream from confluence of Big Branch.	a5.3	1974-76, 1978	10-29-78 3-23-79 7-17-79	.35 4.32 1.19
02128038 White Oak Creek	Cedar Creek	Lat 35°20'46", long 79°47'58", Montgomery County, at culvert on Secondary Road 1556, 1.5 miles southwest of Biscoe, and 1.9 miles upstream from mouth.	1.29	1970	10-27-78 3-23-79	1.35 .59
02129341 Hitchcock Creek	Pee Dee River	Lat 34°55'05", long 79°49'50", Richmond County, downstream from dam at Cordova, and 1.2 miles upstream from mouth.	140	1970-71, 1974	10-26-78 3-21-79	39.3 227
0212955844 Marks Creek	Pee Dee River	Lat 34°51'45", long 79°43'09", Richmond County, at bridge on Secondary Road 1812, 1.3 miles downstream from City Lake spillway, and 2.4 miles southwest of Hamlet.	a13	1970-71	10-26-78 3-21-79	3.62 11.7
02130000 Pee Dee River	Atlantic Ocean	Lat 34°42'28", long 79°52'26", Chesterfield County, S.C., at bridge on U.S. Highway 1, 0.1 mile upstream from Seaboard Coast Line Railroad bridge, and 0.6 miles northeast of Cheraw, S.C.	7,320	1974-75	6-27-79 8- 8-79	9,870 3,210
02132172 Gum Swamp	Little Pee Dee River	Lat 34°47'58", long 79°31'56", Scotland County, at bridge on U.S. Highway 74, 2.8 miles upstream from Lower Beaverdam Creek, and 3.9 miles southeast of Old Hundred.	55.8	1973-75	10-26-78 3-22-79	35.2 77.4
02132269 Leith Creek	Little Pee Dee River	Lat 34°44'32", long 79°25'09", Scotland County, at bridge on Secondary Road 1609, 4 miles west of Maxton, and 5.4 miles upstream from mouth.	22.7	1973-75	10-26-78 3-22-79	3.54 26.1
02132336 Big Shoe Heel Creek	Little Pee Dee River	Lat 34°35'15", long 79°22'20", Robeson County, at bridge on Secondary Road 1101, 2.2 miles upstream from Wilkinson Swamp, and 4 miles southwest of Raemon.	a120	1973-74, 1976	5- 7-79	140
02132910 Drowning Creek	Lumber River	Lat 35°11'16", long 79°38'55", Moore County, at bridge on State Highway 73, 2 miles southwest of Jackson Springs, and 3 miles upstream from Jackson Creek.	a32	1949-54, 1957-59, 1962, 1968-69, 1973-75	†7-14-78 10-26-78 3-21-79	15.8 11.1 49.9
02133581 Drowning Creek	Lumber River	Lat 35°01'24", long 79°26'36", Richmond County, at bridge on U.S. Highway 15, 1.3 miles up- stream from Quewhiffle Creek, and 5.8 miles east of Hoffman.	247	1959, 1962, 1974, 1976-77	†7-14-78 10-25-78 6-27-79	143 120 186
02134128 Raft Swamp	Lumber River	Lat 34°39'42", long 79°04'00", Robeson County, at bridge on Secondary Road 1527, 2.5 miles upstream from mouth, and 5 miles east of Moss Neck.	a170	1954, 1959, 1962, 1968, 1974, 1976	5- 7-79	110
0213451925 Ashpole Swamp	Lumber River	Lat 34°36'43", long 79°15'29", Robeson County, at bridge on State Highway 710, 0.5 mile up- stream from unnamed tributary, and 0.9 mile west-southwest of Elrod.	a2.0	1974-76	5- 7-79	.14
02134582 Old Field Swamp	Hog Swamp	Lat 34°29'40", long 79°06'10", Robeson County, at bridge on State Highway 130, and 0.5 mile east of Fairmont.	a17	1973-74	5- 7-79	2.16
Santee River basin						
02136500 Catawba River	Santee River	Lat 35°37'14", long 82°10'45", McDowell County, at bridge on Secondary Road 1103, 0.5 mile upstream from Mill Creek, and 0.5 mile south of Old Fort.	12.8	1907, 1949-54, 1956, 1963-64, 1970-75, 1978	10-26-78	9.70

† Not previously published.

a Approximately.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

493

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Santee River basin--Continued						
02138288 Linville River	Catawba River	Lat 36°04'22", long 81°52'14", Avery County, at culvert on State Highway 105, at Linville, and 1.8 miles upstream from Grandmother Creek.	a5.7	1970-77	10-26-78 5-1-79	2.93 11.5
02139282 Catawba River	Santee River	Lat 35°44'58", long 81°42'20", Burke County, 0.8 mile downstream from Silver Creek, and 1 mile northwest of Morganton.	593	1968, 1970-77	2-13-79 5-17-79 8-17-79	2,400 2,220 228
02140304 Wilson Creek	Johns River	Lat 37°05'49", long 81°48'28", Avery County, at bridge on U.S. Highway 221, 0.8 mile upstream from Linn Core Branch, and 2.7 miles northwest of Gragg.	.74	1964, 1969-70, 1978	10-26-78 5-1-79	.11 3.71
02140991 Johns River	Catawba River	Lat 35°50'01", long 81°42'43", Burke County, at bridge on Secondary Road 1438, 0.2 mile down- stream from Sims Branch, and 0.8 mile north- east of Arneys Store.	202	1974-78	2-13-79 5-17-79	221 387
02141245 Lower Creek	Catawba River	Lat 35°49'31", long 81°38'10", Burke County, at bridge on Secondary Road 1501, 0.8 mile down- stream from Husband Creek, and 7 miles north- east of Morganton.	86.6	1949-50, 1964-69, 1972-73, 1975-78	10-18-78 10-25-78 3-13-79 5-17-79	53.3 58.3 83.0 99.0
02142872 Fites Creek	Catawba River	Lat 35°17'15", long 81°01'25", Gaston County, at bridge on State Highway 273, 0.7 mile upstream from mouth, and 0.9 mile south-southwest of of Mount Holly.	a3.9	1976-77	10-23-78 2-16-79 3-15-79 5-11-79 8-22-79	1.18 6.10 4.60 2.78 1.59
02142916 Long Creek	Catawba River	Lat 35°17'53", long 80°58'45", Mecklenburg County, at bridge on State Highway 27, 2.3 miles downstream from Gum Branch, and 3 miles northwest of Thrift.	32.2	1969-73, 1975-78	10-20-78 2-16-79 5-11-79 8-23-79	2.6 69.8 14.6 6.19
02143027 Henry Fork	South Fork Catawba River	Lat 35°39'27", long 81°18'33", Catawba County, at bridge on Secondary Road 1143, 1.7 miles up- stream from mouth, and 2.5 miles northwest of Startown.	106	1970-71, 1973-74, 1978	10-20-78 2-13-79 5-17-79 8-21-79	64.0 116 169 88.1
02143069 South Fork Catawba River	Catawba River	Lat 35°31'58", long 81°18'20", Catawba County, at bridge on State Highway 10, 1 mile downstream from Henry Fork, and 2.2 miles west of Startown.	a210	1974-77	2-14-79 8-21-79	237 140
02143260 Clark Creek	South Fork Catawba River	Lat 35°28'30", long 81°16'00", Lincoln County, at bridge on Secondary Road 1008, at Lincolnton, and 0.2 mile upstream from mouth.	a92	1947, 1949-57, 1962-64, 1970-72, 1975, 1978	10-24-78 2-14-79 8-21-79	48.1 103 52.0
02145640 Crowders Creek	Catawba River	Lat 35°08'15", long 81°08'15", York County, S.C., at bridge on Ridge Road, 3.4 miles upstream from Beaver Dam Creek, and 3.2 miles east-southeast of Bowling Green, S. C.	a96	1970-77	2-16-79 5-11-79 8-21-79	125 105 34.8
02146211 Irwin Creek	Sugar Creek	Lat 35°15'43", long 80°50'14", Mecklenburg County, at culvert on U.S. Highway 21, in Charlotte, and 3.4 miles upstream from mouth.	a26	1970-73, 1976-77	10-27-78 5-11-79 8-23-79	.77 3.27 1.13
02146398 Sugar Creek	Catawba River	Lat 35°04'30", long 80°54'20", Mecklenburg County, at railroad bridge on N.C.-S.C. State line, 1 mile upstream from Little Sugar Creek, and 1 mile southwest of Pineville.	a69	1964-78	10-27-78 11-22-78 3-14-79 5-10-79 8-23-79	35.3 38.3 80.9 109 46.6
02146421 Little Sugar Creek	Sugar Creek	Lat 35°10'21", long 80°50'49", Mecklenburg County, at bridge on Secondary Road 3814, at Charlotte, and 1.3 miles upstream from Briar Creek.	a16	1969-75, 1978	3-14-79 5-11-79 8-23-79	11.8 8.58 2.54
02146538 Little Sugar Creek	Sugar Creek	Lat 35°04'40", long 80°53'10", Mecklenburg County, at bridge on U.S. Highway 521, 0.5 mile southeast of Pineville, and 3.5 miles upstream from mouth.	49.3	1969-78	10-27-78 3-14-79 5-10-79 8-22-79	19.7 61.0 129 33.2
02146556 McAlpine Creek	Sugar Creek	Lat 35°09'46", long 80°43'57", Mecklenburg County, at bridge on Secondary Road 3156, 0.2 mile upstream from Campbell Creek, and 5 miles west of Mint Hill.	8.66	1969-78	10-23-78 5-10-79 8-23-79	.53 6.42 .74

a Approximately.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
02146760 McAlpine Creek	Sugar Creek	Lat 35°03'43", long 80°52'39", Mecklenburg County, at bridge on U.S. Highway 521, 1 mile downstream from McMullen Creek, and 2 miles south of Pineville.	92.9	1949-57, 1962-67, 1969-78	10-23-78 3-19-79 5-10-79 8-22-79	15.0 72.5 194 5.84
02146858 Six Mile Creek	Catawba River	Lat 35°00'40", long 80°49'40", Mecklenburg County, at bridge on Secondary Road 3635, 2 miles downstream from Flat Branch, and 6.2 miles southeast of Pineville.	a21	1974-77	5-10-79 8-22-79	42.0 .62
0214690555 Twelvemile Creek	Catawba River	Lat 34°56'40", long 80°46'20", Union County, at bridge on Secondary Road 1301, 2.2 miles northwest of Waxhaw, and 3 miles upstream from confluence of Sixmile Creek.	a76	1974-77	5-10-79	267
02148751 Broad River	Santee River	Lat 35°25'27", long 82°09'56", Rutherford County, at bridge on U.S. Highway 74, 0.2 mile west of Uree, and 2.8 miles downstream from Cane Creek.	a100	1970-71, 1973-75	†6- 1-78 †7-27-78	373 174
02149716 Silver Creek	Green River	Lat 35°18'35", long 82°12'10", Polk County, at Secondary Road 1138, 1.6 miles upstream from mouth, and 2.4 miles west-northwest of Mill Springs.	a1.2	1975-77	10-31-78	1.74
0215027770 Broad River	Santee River	Lat 35°13'00", long 81°46'45", Rutherford County, at bridge on U.S. Highway 221A, 1.2 miles upstream from confluence of Second Broad River, and 1.5 miles southwest of Cliffside.	a624	1974-76	†5-31-78 5- 3-79	922 1,220
02150495 Second Broad River	Broad River	Lat 35°24'16", long 81°52'20", Rutherford County, at bridge on Secondary Road 1538, 2.2 miles southeast of Logan, and 2.7 miles upstream from Catheys Creek.	a89	1971, 1973, 1975-77	†6- 1-78 †7-27-78	101 90.1
02151742 Sandy Run Creek	Broad River	Lat 35°15'22", long 81°41'48", Cleveland County, at bridge on Secondary Road 1003, 0.8 mile downstream from Sandy Creek tributary 2, and 1.8 miles northwest of Boiling Springs.	a52	1970-73, 1977-78	10-26-78	27.2
02152546 Brushy Creek	First Broad River	Lat 35°19'15", long 81°35'35", Cleveland County, at bridge on Secondary Road 1342, 0.8 mile downstream from Little Creek, and 2 miles east of Washburn.	20.1	1970-77	10-31-78	13.5
02152564 Brushy Creek	First Broad River	Lat 35°18'08", long 81°34'43", Cleveland County, at bridge on Secondary Road 1308, 2.2 miles northwest of Shelby, and 2.4 miles upstream from mouth.	26.7	1970-73	10-26-78	16.3
02152580 Brushy Creek	First Broad River	Lat 35°17'41", long 81°34'51", Cleveland County, at bridge on U.S. Highway 74, 0.7 mile west of Shelby, and 1 mile upstream from mouth.	27.6	1952, 1955, 1964-67, 1970-77	10-31-78	17.0
02152587 Hickory Creek	First Broad River	Lat 35°14'40", long 81°33'50", Cleveland County, at bridge on Secondary Road 1110, 0.2 mile upstream from Little Hickory Creek, and 3.8 miles south of Shelby.	14.6	1959, 1964, 1970-73, 1977	10-26-78	3.79
02152623 Broad River	Wateree River	Lat 35°10'30", long 81°36'40", Cleveland County, at N.C.-S.C. State line, 2.5 mi downstream from First Broad River, and 4.5 miles southwest of Earl.	a1,270		†5-31-78 †7-27-78 10-31-78	2,900 2,330 1,060
02153280 Buffalo Creek	Broad River	Lat 35°20'50", long 81°28'50", Cleveland County, at bridge on Secondary Road 1908, 1.8 miles upstream from Long Creek, and 3 miles southwest of Waco.	a44	1950-56, 1959, 1962-64, 1976-77	†6- 1-78	66.8
02153328 Potts Creek	Muddy Fork	Lat 35°16'00", long 81°25'30", Cleveland County, at bridge on Secondary Road 1001, 0.5 mile south of Oak Grove, and 2 miles upstream from mouth.	a10	1970-73	10-26-78	5.18
02153456 Buffalo Creek	Broad River	Lat 35°10'21", long 81°31'03", Cleveland County, at bridge on State Highway 198, 0.1 mile upstream from N.C.-S.C. State line, and 4 miles west of Grover.	a170	1968-77	10-31-78	30.5

† Not previously published.

a Approximately.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Santee River basin--Continued						
02153872 North Pacolet River	Pacolet River	Lat 35°13'19", long 82°19'24", Polk County, at bridge on U.S. Highway 176, 0.5 mile down- stream from Bear Creek, and 2.6 miles south- east of Saluda.	47.8	1970-71, 1973-77	5- 3-79 6- 5-79	56.5 62.6
02154020 North Pacolet River	Pacolet River	Lat 35°12'58", long 82°10'52", Polk County, at bridge on Secondary Road 1517, 1.2 miles downstream from Horse Creek, and 5.6 miles southwest of Sandy Plains.	44.8	1968-77	5- 3-79	194
Savannah River basin						
02176908 Chattooga River	Tugaloo Creek	Lat 35°04'26", long 83°06'27", Jackson County, at bridge on Secondary Road 1107, 0.8 mile upstream from Fowler Creek, and 2.3 miles south of Cashiers.	7.69	1969-73, 1977	10-25-78	6.92
DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979, IN OHIO RIVER BASIN						
Kanawha River basin						
03160271 South Fork New River	New River	Lat 36°13'14", long 81°38'25", Watauga County, at bridge on U.S. Highway 421, and 2 miles east of Boone.	34.6	1925, 1955-56, 1960, 1962, 1974-78	5- 1-79	119
03162850 New River	Kanawha River	Lat 36°33'08", long 81°11'00", Alleghany County, at bridge on Secondary Road 1345, 0.8 mile downstream from Rock Creek, and 1.3 miles north- northeast of Amelia.	820	1968-69, 1971-75	5-15-79 9-20-79	3,050 1,520
03162852 Little River	New River	Lat 36°27'35", long 81°10'04", Alleghany County, at bridge on Secondary Road 1140, 0.6 mile downstream from confluence of Cheek Branch, and 1 mile southwest of Whitehead.	4.8	1974-75, 1978	10-13-78 5-15-79 9-20-79	3.70 16.6 9.64
03162951 Little River	New River	Lat 36°32'33", long 81°01'15", Alleghany County, at bridge on State Highway 18, 1 mile downstream from Brush Creek, and 0.5 mile west of Blevins Crossroads.	110	1974-75, 1978	10-13-78 5-15-79 9-20-79	85.4 284 177
Tennessee River basin						
03438879 West Fork French Broad River	French Broad River	Lat 35°08'20", long 82°51'04", Transylvania County, at bridge on U.S. Highway 64, 1.2 miles upstream from North Fork, and 1.7 miles west of Rosman.	27.2	1968-74, 1977	10-24-78 11-13-78	32.2 30.1
03438881 West Fork French Broad River	French Broad River	Lat 35°08'28", long 82°50'20", Transylvania County, at bridge on Secondary Road 1135, 0.1 mile upstream from North Fork, and 1 mile west of Rosman.	29.4	1944, 1953-55, 1963, 1966, 1968-73, 1977	11- 1-78 11-13-78	25.6 31.7
03439471 Galloway Creek	French Broad River	Lat 35°09'06", long 82°48'40", Transylvania County, at culvert on entrance road to American Thread Company from U.S. Highway 64, 0.5 mile upstream from mouth, and 0.5 mile south of Calvert.	.56	1968-75	10-24-78 11-13-78	.83 .82
03440272 King Creek	French Broad River	Lat 35°14'22", long 82°43'49", Transylvania County, at culvert on U.S. Highway 64, at Brevard, and 1.3 miles upstream from mouth.	.37	1968-69, 1971-75, 1977	10-24-78 11-13-78	2.02 1.78
03440293 French Broad River	Tennessee River	Lat 35°15'03", long 82°41'58", Transylvania County, at bridge on Secondary Road 1540, at Dunns Rock, and 0.3 mile upatream from Davidson River, and at mile 192.1.	170	1968-70, 1973-74, 1976-78	4-17-79	1,320
03444500 South Fork Mills River	Mills River	Lat 35°21'58", long 82°44'22", Transylvania County, at The Pink Beds in Pisgah Forest, 0.1 mile downstream from Thompson Creek, and 9 miles north of Brevard.	9.99	+1925-49, 1950, 1953-55, 1960, 1962-64, +1965-73	10-24-78 11-13-78	5.11 4.76

† Operated as a continuous-record gaging station.

a Approximately.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Tennessee River basin--Continued						
03445425 North Fork Mills River	Mills River	Lat 35°24'20", long 82°38'32", Henderson County, downstream from sewage effluent outfall, 0.2 mile upstream from boundary of Pisgah National Forest, and 0.5 mile downstream from Rocky Fork.	18.9	1969-74	10-25-78	11.2
03446363 Mud Creek	French Broad River	Lat 35°20'30", long 82°28'05", Henderson County, at bridge on Secondary Road 1508, 0.4 mile southeast of Balfour, and 0.6 mile upstream from Clear Creek.	53.1	1968-74, 1977	10-25-78	34.4
0344745449 Pinner Creek tributary	Pinner Creek	Lat 35°26'58", long 83°30'00", Buncombe County, 250 ft upstream from mouth, and 0.6 mile south-east of Oak Park.	a0.4	1974-78	8-21-79	.45
0344745950 Pinner Creek	Cane Creek	Lat 35°26'22", long 82°29'31", Henderson County, 0.2 mile upstream from mouth, and 1 mile north-east of Fletcher.	a20	1974-78	8-21-79	1.59
03448500 Hominy Creek	French Broad River	Lat 35°32'28", long 82°40'35", Buncombe County, 0.1 mile downstream from Pole Creek, 0.4 mile downstream from bridge on State Highway 151, 1 mile east of Candler, and at mile 10.3.	79.8	+1942-77	10-24-78	30.9
03450000 Beetree Creek	Swannanoa River	Lat 35°39'11", long 82°24'20", Buncombe County, 1,000 ft upstream from Beetree Reservoir, and 3.8 miles north of Swannanoa.	5.46	+1926-75	10-24-78	1.56
					11- 2-78	1.11
					7-16-79	17.3
					7-19-79	12.4
		8- 7-79	6.11			
0345092403 Ross Creek	Swannanoa River	Lat 35°35'30", long 82°31'49", Buncombe County, at bridge, 0.2 mile upstream from U.S. Highways 70-74, and 1.6 miles east of Asheville.	2.2		7-16-79 7-19-79 8- 7-79	.92 .78 .66
03451644 Lee Creek	French Broad River	Lat 35°36'52", long 82°37'41", Buncombe County, at culvert on Secondary Road 1369, 4.1 miles upstream from mouth, and 4.6 miles northeast of Enka.	.84	1970-75	11- 2-78	.26
03451826 Reems Creek	French Broad River	Lat 35°41'20", long 82°35'40", Buncombe County, 800 ft upstream from Wagner Branch, and 2 miles west of Weaverville.	33.4	1968-78	11- 2-78	5.41
03452826 Banjo Branch	Gabriel Creek	Lat 35°50'33", long 82°33'31", Madison County, at culvert on Secondary Road 1356, 1.1 miles upstream from mouth, and 1.2 miles northwest of Mars Hill.	.71	1968-73, 1975	11- 2-78	.09
03457138 Pigeon River	French Broad River	Lat 35°32'55", long 82°56'21", Haywood County, at bridge on road connecting Secondary Roads 1513 and 1519, 0.5 mile upstream from Richlands Creek, 2 miles east of Junaluska Dam, and at mile 55.5	167	1969-78	11- 1-78	91.9
03457332 Richland Creek	Pigeon River	Lat 35°27'50", long 83°00'40", Haywood County, 0.1 mile upstream from Hyatt Creek and 0.5 mile south of Hazelwood.	10.9	1968-75	11-13-78	6.52
03458421 Richland Creek	Pigeon River	Lat 35°32'51", long 82°56'44", Haywood County, at bridge on Secondary Road 1519, 0.2 mile upstream from mouth, and 2.2 miles northwest of Clyde.	68.4	1969-73, 1975-76, 1978	11- 1-78	4.97
03458441 Pigeon River	French Broad River	Lat 35°33'41", long 82°57'14", Haywood County, at bridge on Secondary Road 1625, 0.5 mile downstream from Yates Cove, and 3 miles northwest of Clyde.	238	1968-78	11- 1-78	98.5
03458638 Pigeon River	French Broad River	Lat 35°36'52", long 82°58'01", Haywood County, at bridge on Secondary Road 1363, 0.1 mile downstream from Dotson Branch, and 1.8 mile northwest of Crabtree.	278	1969-78	11- 1-78	128
03459920 Rough Fork	Palmer Creek	Lat 35°36'38", long 83°07'47", Haywood County, at road crossing, 400 ft upstream from Messer Fork, and 3.5 miles southwest of Cataloochee.	6.10	b1967-69	11- 1-78	45.4
03459930 Palmer Creek	Cataloochee Creek	Lat 35°38'17", long 83°07'36", Haywood County, 20 ft upstream from Pretty Hollow Creek, and 2.6 miles west of Cataloochee.	12.9	b1967-69	11- 1-78	88.2

+ Operated as a continuous-record gaging station.

a Approximately.

b Published as a Low flow Partial-record station

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Tennessee River basin--Continued						
03459990 Caldwell Fork	Cataloochee Creek	Lat 35°37'50", long 83°05'12", Haywood County, at mouth, and 0.6 mile southwest of Cataloochee.	15.8	b1967-69	12-11-78	37.0
03460166 Cataloochee Creek	Pigeon River	Lat 35°40'06", long 83°04'20", Haywood County, downstream from Little Cataloochee Creek, and 2.2 miles north of Cataloochee.	57.7	b1932	12-11-78	21.1
03461976 North Toe River	Nolichucky River	Lat 35°58'42", long 82°00'59", Avery County, at bridge on U.S. Highway 19E, 0.1 mile downstream from Jones Creek, 0.7 mile north of Ingalls, and at mile 50.9.	74.1	1969-71, 1973-74, 1976-78	10-27-78 4-20-79	43.2 234
03463021 North Toe River	Nolichucky River	Lat 35°55'46", long 82°06'57", Mitchell County, at bridge on Secondary Road 1162, at Penland, 0.4 mile downstream from Bear Creek, and at mile 27.6.	145	1969-70, 1972-75, 1978	10-27-78 4-20-79	79.6 409
03463801 Cane River	Nolichucky River	Lat 35°54'16", long 82°19'59", Yancey County, upstream from Pine Swamp Branch, and 2.1 miles southwest of Burnsville.	54.4	1969-73, 1975-78	10-25-78 11- 8-78 4-30-79	26.1 27.4 190
03463802 McIntosh Branch	Pine Branch	Lat 35°54'49", long 82°18'14", Yancey County, at culvert on W. Main Street (old U.S. 19E) 0.1 mile upstream from mouth, and 1.2 miles west of Burnsville.	.39	1969-74, 1977	10-25-78	.11
03478720 Watauga River	South Fork Holston River	Lat 36°09'23", long 81°46'14", Watauga County, at bridge on Secondary Road 1559, at Foscoe, and 0.1 mile downstream from Moodys Mill Creek.	10.6	1955, 1960-67, 1969, 1974-78	5- 1-79	58.7
03478934 Cove Creek	Watauga River	Lat 36°15'13", long 81°47'27", Watauga County, at bridge on U.S. Highway 321, at Sugar Grove, and 100 ft upstream from Brush Fork.	30.6	1960, 1971-73, 1975	5- 1-79	35.2
03499936 Little Tennessee River	Tennessee River	Lat 35°01'00", long 83°22'53", Macon County, at bridge on Secondary Road 1683, at Norton, and 0.1 mile downstream from Norton Branch.	63.8	1968-70, 1972-75, 1977-78	4-24-79	354
03500012 Jones Creek	Little Tennessee River	Lat 35°06'53", long 83°27'56", Macon County, at bridge on Secondary Road 1128, 0.8 mile upstream from Allison Creek, and 1.7 miles southeast of Cartoogechaye.	5.81	1968-74	10-25-78	8.82
03500324 Mill Creek	Cullasaja River	Lat 35°03'18", long 83°11'49", Macon County, at culvert on U.S. Highway 64 at Highlands, and 0.4 mile upstream from Satulah Branch.	1.15	1958, 1968-73	10-25-78	.86
03502000 Little Tennessee River	Tennessee River	Lat 35°13'59", long 83°23'32", Macon County, 0.2 mile upstream from State Highway 28, at Iotla, and 0.2 mile upstream from Iotla Creek.	323	+1929-45, 1972-78	4-24-79	1,380
03503561 Nantahala River	Little Tennessee River	Lat 35°05'39", long 83°33'38", Macon County, at Rainbow Springs, and 0.3 mile upstream from Black Creek.	24.2	1953, 1974-78	10-25-78 4-24-79	24.4 168
03509000 Scott Creek	Tuckasegee River	Lat 35°23'02", long 83°12'51", Jackson County, at bridge on Secondary Road 1432, 0.2 mile downstream from Allens Bridge, and 0.8 mile northwest of Sylva.	50.7	+1941-75	10-26-78	34.3
03515522 Long Creek	Cheoah River	Lat 35°18'39", long 83°48'52", Graham County, at bridge on Secondary Road 1127, at Milltown, and 0.4 mile downstream from Poson Branch.	6.03	1968-74	10-24-78	2.13
03515633 Cheoah River	Little Tennessee River	Lat 35°20'05", long 83°48'20", Graham County, 0.1 mile upstream from Mountain Creek, and 0.9 mile north of Robbinsville.	55.3	1968-71, 1973-78	10-24-78	15.4
0354840250 Hiwassee River	Tennessee River	Lat 35°03'28", long 83°56'31", Clay County, at bridge on U.S. Highway 64, 1.5 miles upstream from Brasstown Creek, and 8.3 miles west of Hayesville.	a381	1974-78	4-30-79	1,340

† Operated as a continuous-record gaging station.

a Approximately.

b Published as a low-flow Partial-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Tennessee River basin--Continued						
03549124 Valley River	Hiwassee River	Lat 35°12'00", long 83°47'58", Cherokee County, at bridge on Secondary Road 1389, 0.1 mile down- stream from Worm Creek, and 0.4 mile southwest of Buffalo.	20.7	1944,	10-24-78	5.62
				1953, 1958, 1963, 1966, 1974, 1976-78	4-30-79	57.1
03549583 Valley River	Hiwassee River	Lat 35°12'10", long 83°50'27", Cherokee County, at bridge on U.S. Highway 19, 0.2 mile up- stream from Webb Creek, and 0.9 mile west of Andrews.	49.4	1968-70, 1973	10-24-78	13.1

ANALYSES OF SAMPLES COLLECTED AT GAGING STATIONS AND MISCELLANEOUS SITES

499

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
PAMLICO RIVER BASIN				
02082770 - SWIFT CREEK AT HILLIARDSTON, N. C. (LAT 36 06 42 LONG 077 55 16)				
OCT , 1978				
30...	1020	33	2	.18
02082950 - LITTLE FISHING CREEK NEAR WHITE OAK N C (LAT 36 11 08 LONG 077 52 34)				
OCT , 1978				
30...	1045	18	4	.19
NEUSE RIVER BASIN				
02085070 - ENO RIVER NEAR DURHAM, N. C. (LAT 36 04 21 LONG 078 54 24)				
OCT , 1978				
30...	1115	6.5	2	.04
02085220 - LITTLE RIVER NEAR ORANGE FACTORY N C (LAT 36 08 20 LONG 078 54 24)				
OCT , 1978				
30...	1145	4.8	5	.06
02087000 - NEUSE RIVER NEAR NORTHSIDE N C (LAT 36 02 54 LONG 078 44 50)				
OCT , 1978				
30...	1020	11	5	.15
02088000 - MIDDLE CREEK NEAR CLAYTON, N. C. (LAT 35 34 12 LONG 078 35 30)				
OCT , 1978				
30...	0920	11	13	.39
02088500 - LITTLE RIVER NEAR PRINCETON, N. C. (LAT 35 30 40 LONG 078 09 36)				
DEC , 1978				
12...	1440	296	4	3.2
02091000 - NAHUNTA SWAMP NEAR SHINE, N. C. (LAT 35 29 20 LONG 077 48 22)				
DEC , 1978				
22...	1055	50	4	.54
CAPE FEAR RIVER BASIN				
02099500 - DEEP RIVER NEAR RANDLEMAN, N.C. (LAT 35 54 06 LONG 079 51 05)				
DEC , 1978				
13...	1520	123	29	9.6

ANALYSES OF SAMPLES COLLECTED AT GAGING STATIONS AND MISCELLANEOUS SITES
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
------	------	---	---	--

CAPE FEAR RIVER BASIN--Continued

02102000 - DEEP RIVER AT MONCURE, N.C. (LAT 35 37 41 LONG 079 06 48)

OCT , 1978				
30...	0915	47	2	.25

02102908 - FLAT CREEK NEAR INVERNESS N C (LAT 35 10 54 LONG 079 10 40)

OCT , 1978				
23...	1130	5.9	1	.02
SEP , 1979				
05...	1447	269	68	49

PEE DEE RIVER BASIN

02120700 - SECOND CREEK NEAR BARBER NC (LAT 35 43 05 LONG 080 35 45.01)

JUL , 1979				
19...	0950	43	2010	233
21...	1055	100	275	74
25...	0435	155	739	309
AUG				
20...	1030	31	30	2.5
SEP				
08...	0450	300	246	199
22...	1320	1620	2130	9320

02121100 - NORTH POTTS CREEK AT LINWOOD N C (LAT 34 45 28 LONG 080 19 24.01)

JUL , 1979				
19...	1110	14	244	9.4
25...	1220	12	146	4.7
AUG				
20...	1230	4.6	34	.42
SEP				
05...	1005	92	627	156
05...	1420	350	763	721

SANTEE RIVER BASIN

02138500 - LINVILLE RIVER NEAR NEBO N C (LAT 35 47 43 LONG 081 53 27)

JAN , 1979				
02...	1310	1490	87	350
08...	1135	335	8	7.2

02142000 - LOWER LITTLE RIVER NEAR ALL HEALING SPRINGS, N. (LAT 35 56 50 LONG 081 13 57)

JAN , 1979				
02...	0920	449	1080	1310
SEP				
22...	0850	926	1700	4250

02146300 - IRWIN CREEK NEAR CHARLOTTE, N. C. (LAT 35 11 50 LONG 080 54 20)

DEC , 1978				
19...	1410	14	26	.98
JAN , 1979				
08...	1208	40	44	4.8

02146600 - MCALPINE CREEK AT SARDIS ROAD NEAR CHARLOTTE N C (LAT 35 08 13 LONG 080 46 06)

NOV , 1978				
16...	1405	5.5	32	.48
JAN , 1979				
17...	1120	14	13	.49

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
TENNESSEE RIVER BASIN				
03451500 - FRENCH BROAD RIVER AT ASHEVILLE, N. C. (LAT 35 36 32 LONG 082 34 41)				

OCT , 1978

03...	1145	854	18	42
25...	0945	700	6	11

03461976 - NORTH TOE RIVER NEAR INGALLS NC (LAT 35 58 42 LONG 082 00 59)

OCT , 1978

27...	1400	43	3	.35
-------	------	----	---	-----

FEB , 1979

24...	1015	740	234	468
24...	1155	950	502	1290
24...	1350	1050	775	2200
24...	1910	860	370	859
25...	1240	1020	398	1100
26...	1325	580	55	86

APR

20...	1030	234	4	2.5
-------	------	-----	---	-----

03463021 - NORTH TOE RIVER AT PENLAND NC (LAT 35 55 46 LONG 082 06 57)

OCT , 1978

27...	1240	80	8	1.7
-------	------	----	---	-----

FEB , 1979

24...	1115	1250	1160	3920
24...	1245	1400	1100	4160
24...	1545	1600	912	3940
25...	1200	1650	1280	5700
25...	1435	2000	1580	8530
26...	1240	890	253	608

APR

20...	1330	409	54	60
-------	------	-----	----	----

GROUND-WATER LEVELS

BEAUFORT COUNTY

351932076480001. Local number, NC-13.

LOCATION.--Lat 35°19'32", long 76°48'00", Hydrologic Unit 03020104, near Aurora. Owner: North Carolina Phosphate Company.

AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 167 ft (50.9 m), drilled to 186 ft (56.7 m), cased to 186 ft (56.7 m).

DATUM.--Altitude of land-surface is 10 ft (3 m). Measuring point: Top of casing, 0.13 ft (0.04 m) above land-surface datum.

REMARKS.--Since 1965 water levels affected by nearby pumping associated with mining operations.

PERIOD OF RECORD.--June 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.38 ft (0.42 m) below land-surface datum, Apr. 9, 1965; lowest measured, 71.49 ft (21.79 m) below land surface datum, Sept. 29, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.18	68.61	69.65	---	68.80	68.42	70.49	69.70	68.65	---	---	70.71
10	68.26	68.77	70.44	70.46	69.54	68.33	70.24	---	68.62	---	---	70.90
15	68.25	68.81	70.47	69.39	69.61	69.68	69.81	69.64	69.66	70.32	---	70.94
20	68.26	68.74	69.82	68.49	69.86	70.15	69.90	69.20	70.19	70.82	---	71.04
25	67.71	69.43	68.78	68.67	69.40	70.12	70.04	68.91	69.97	70.92	69.84	70.70
EUM	67.54	69.66	70.48	68.77	68.38	69.44	69.95	69.90	70.46	---	70.24	71.30
WTR YR 1979	MEAN			69.60	HIGH			67.54 OCT 31	LOW			71.45 SEP 29

353314077041001. Local number, NC-14.

LOCATION.--Lat 35°33'14", long 77°04'10", Hydrologic Unit 03020104, at Washington. Owner: National Spinning Company.

AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 111 ft (33.8 m), drilled to 158 ft (48.2 m), gravel walled to 90 ft (27.4 m).

DATUM.--Land-surface datum is 9.42 ft (2.871 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, at land-surface datum.

REMARKS.--Water levels affected by pumping from nearby wells.

PERIOD OF RECORD.--May 1948 to November 1961, February 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.02 ft (0.31 m) above land-surface datum, Apr. 10, 1964; lowest, 25.37 ft (7.73 m) below land-surface datum, July 22, 1972.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.08	19.38	19.44	9.10	19.20	18.50	11.25	18.10	18.33	9.16	18.59	13.81
2	17.63	19.57	14.49	14.07	19.14	18.57	18.20	18.57	16.34	8.74	18.76	9.90
3	19.65	13.56	10.13	16.94	16.37	14.34	18.45	18.72	9.48	8.51	18.80	10.30
4	18.67	9.83	18.05	19.12	11.66	9.51	18.75	18.46	15.07	8.49	16.32	17.19
5	19.61	9.36	18.96	20.04	18.19	15.52	18.96	18.59	17.57	8.53	10.30	17.74
6	19.98	13.91	19.63	19.56	18.78	17.82	18.90	11.40	18.04	8.23	17.12	18.23
7	18.97	18.97	19.81	11.71	19.03	18.19	18.89	14.45	18.34	8.03	18.41	18.41
8	14.53	19.39	20.06	17.31	19.16	18.23	14.18	18.29	18.38	7.95	19.02	17.13
9	19.49	19.50	14.16	19.38	18.96	18.41	17.73	18.61	18.36	13.00	18.78	11.01
10	19.60	19.58	12.90	19.67	16.77	18.48	18.97	18.92	10.82	16.97	18.35	17.62
11	19.48	17.62	18.69	19.58	11.08	---	19.18	19.08	16.75	17.63	13.78	18.67
12	19.55	12.56	19.75	18.07	16.82	17.54	19.11	18.78	17.66	18.10	9.80	18.64
13	19.68	15.41	20.15	15.70	18.93	18.16	18.93	11.44	17.90	18.47	14.70	18.68
14	17.39	19.32	20.33	10.70	19.08	18.52	18.85	16.84	17.95	15.46	18.21	18.56
15	10.25	19.66	20.16	18.01	19.11	18.74	14.05	18.16	18.14	9.49	18.84	15.42
16	17.38	19.75	20.02	19.26	19.01	18.69	10.35	18.39	17.33	15.24	19.08	12.47
17	19.03	19.73	19.87	19.35	18.43	18.72	16.98	18.50	9.92	17.80	19.00	16.40
18	19.42	20.12	19.72	19.33	11.01	11.56	18.57	18.59	16.56	18.05	15.12	17.92
19	19.87	12.08	19.94	19.15	15.49	14.63	18.74	18.47	17.95	18.23	10.09	18.21
20	17.56	18.49	19.03	13.96	18.52	18.18	18.73	10.91	18.04	18.42	16.69	18.36
21	11.45	19.52	17.75	10.54	19.03	18.35	18.67	16.07	18.19	16.63	18.34	18.41
22	9.83	19.95	14.72	18.39	19.09	17.46	11.97	17.81	18.36	9.86	18.65	17.40
23	16.56	17.02	10.53	18.77	19.18	18.46	16.19	18.26	16.81	16.97	18.67	11.51
24	19.19	19.14	9.84	18.93	18.30	18.09	18.34	17.88	10.26	17.99	14.81	17.82
25	19.45	12.35	9.79	19.32	10.67	10.75	18.59	16.64	16.98	18.64	10.17	18.56
26	19.60	10.10	9.91	19.30	17.42	17.60	18.47	17.18	17.84	18.78	9.91	18.73
27	18.17	18.04	9.50	11.53	18.31	18.47	18.59	9.62	18.04	18.81	16.79	18.84
28	14.52	19.52	9.15	10.63	18.36	18.50	17.87	15.35	18.33	15.02	18.15	19.05
29	12.19	19.73	9.40	18.19	---	18.55	10.14	17.66	18.56	9.93	18.47	15.44
30	16.38	19.59	9.24	18.85	---	18.99	16.09	18.07	11.64	15.68	18.78	12.60
31	19.03	---	9.07	18.95	---	16.36	---	18.34	---	18.25	17.45	---
MEAN	17.23	17.09	15.62	16.88	17.33	17.13	17.09	16.97	16.46	14.23	16.46	16.43
WTR YR 1979	MEAN			16.57	HIGH			7.95	LOW			20.33

GROUND-WATER LEVELS

503

BEAUFORT COUNTY--Continued

353227076374001. Local number, NC-15.

LOCATION.--Lat 35°32'27", long 76°37'40", Hydrologic Unit 03020104, Belhaven. Owner: City of Belhaven.

AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 246 ft (75.0 m), drilled to 260 ft (79.2 m), cased to 260 ft (79.2 m).

DATUM.--Land-surface datum is 3.50 ft (1.066 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 5.00 ft (1.52 m) above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.25 ft (0.08 m) below land-surface datum, July 24, 1965; lowest, 14.87 ft (4.53 m) below land-surface datum, Oct. 4, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 2	12.12	Dec. 19	12.89	Mar. 12	12.02	May 1	11.74	June 12	11.64	July 16	11.88
Nov. 14	12.72	Jan. 31	12.17								

353343076371801. Local number, NC-75.

LOCATION.--Lat 35°33'43", long 76°37'18", Hydrologic Unit 03020104, near Belhaven. Owner: J. W. Younce.

AQUIFER.--Yorktown Formation of late Miocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 145 ft (44.2 m), cased to 120 ft (36.6 m).

DATUM.--Altitude of land-surface datum is 3.8 ft (1.2 m). Measuring points: Top of casing, 2.00 ft (0.61 m) above land-surface datum.

REMARKS.--Water levels affected by pumping from nearby municipal supply wells.

PERIOD OF RECORD.--September 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.39 ft (0.42 m) below land-surface datum, Jan. 14-15, 1968; lowest, 14.65 ft (4.46 m) below land-surface datum, Mar. 23, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.30	9.52	8.74	7.88	7.04	6.93	6.98		---	8.56	8.57	9.58
10	10.25	10.17	8.75	7.21	7.35	7.48	7.28		---	8.76	9.85	9.05
15	9.38	9.92	10.47	7.32	7.49	6.84	6.84		7.91	8.54	9.54	9.20
20	10.02	9.61	8.94	7.13	8.02	6.89	7.26		7.69	9.02	9.58	9.34
25	10.23	9.69	8.88	6.77	6.99	6.69	7.31		7.57	8.60	10.10	9.10
END	9.77	9.28	8.63	6.66	7.18	7.46	6.90		8.01	8.68	10.31	8.40

WTR YR 1979 MEAN 8.45 HIGH 6.64 JAN 21 LOW 10.54 AUG 30 AND OTHERS

352615077083401. Local number, NC-137.

LOCATION.--Lat 35°26'15", long 77°08'34", Hydrologic Unit 03020202, near Wilmar. Owner: N.C. Department of Transportation.

AQUIFER.--Limestone of Castle Hayne Formation of middle and late Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 142 ft (43.3 m), cased to 72 ft (21.9 m).

DATUM.--Measuring point: Top of casing, 57.64 ft (17.568 m) National Geodetic Vertical Datum of 1929.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.94 ft (11.26 m) NGVD, Feb. 3, 1972; lowest, 30.63 ft (9.34 m) NGVD, Nov. 26, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.71	31.01	31.03	32.41	34.35	35.12	35.46	35.38	35.62	35.53	34.93	33.86
10	31.50	30.94	31.13	32.78	34.47	35.24	35.35	35.33	35.60	35.38	34.74	33.77
15	31.48	30.84	31.40	33.17	34.57	35.30	35.47	35.35	35.60	35.24	34.51	33.93
20	31.38	30.71	31.76	33.59	34.68	35.39	35.36	35.36	35.60	35.07	34.25	33.99
25	31.25	30.70	31.99	33.96	35.06	35.50	35.34	35.50	35.66	35.09	34.09	34.15
END	31.12	30.90	32.12	34.24	34.98	35.36	35.39	35.46	35.62	35.03	33.90	34.37

WTR YR 1979 MEAN 33.91 MAX 35.72 JUN 11 AND OTHERS MIN 30.65 NOV 26

GROUND-WATER LEVELS

BEAUFORT COUNTY--Continued

352615077083402. Local number, NC-138.

LOCATION.--Lat 36°26'15", long 77°08'34", Hydrologic Unit, 03020202, near Wilmar. Owner: N.C. Department of Transportation.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in (0.10 m), depth 12 ft (3.7 m), cased to 7 ft (2.1 m).

DATUM.--Measuring point: Top of casing, 58.14 ft (17.721 m) National Geodetic Vertical Datum of 1929.

PERIOD OF RECORD.--August 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.00 ft (17.98 m) NGVD, May 24, 1979; lowest, 51.11 ft (15.58 m) NGVD, Nov. 24-27, 1979.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.05	51.22	52.24	54.45	55.54	56.74	---	56.88	58.51	---	55.10	55.03
10	51.78	51.16	52.37	55.24	56.03	56.72	---	56.49	57.45	---	54.42	55.85
15	51.64	51.18	52.38	56.47	56.63	---	---	57.72	56.83	---	54.12	56.19
20	51.54	51.15	52.34	56.54	56.76	---	---	57.91	56.71	55.66	53.68	55.54
25	51.44	51.11	52.76	56.76	57.11	---	56.44	58.60	56.74	56.60	54.82	56.19
EOY	51.31	51.86	53.03	56.64	56.86	---	57.26	57.91	56.17	55.96	54.42	56.75

WTR YR 1979 MEAN 54.94 HIGH 56.78 MAY 24 MIN 51.11 NOV 25 AND OTHERS

BERTIE COUNTY

355930076570001. Local number, NC-32.

LOCATION.--Lat 35°59'30", long 76°57'00", Hydrologic Unit 03010107, at Windsor. Owner: Town of Windsor.

AQUIFER.--Sand of Black Creek Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 78 ft (23.8 m), drilled to 360 ft (106.7 m), gravel-walled.

DATUM.--Land-surface datum is 28.38 ft (8.650 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.25 ft (0.38 m) above land-surface datum. Measuring point changed from 1.4 ft (0.43 m) above land-surface datum May 22, 1979.

PERIOD OF RECORD.--June 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.22 ft (4.99 m) below land-surface datum, Aug. 14, 1958; lowest, 36.78 ft (11.21 m) below land-surface datum, Aug. 24, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.84	28.01	28.85	29.64	28.87	28.98	27.96	24.14	28.71	28.61	29.91	30.31
10	27.84	27.97	29.43	29.94	29.01	28.37	27.84	28.98	28.78	28.59	30.02	30.04
15	27.78	28.03	29.36	29.16	29.53	28.57	27.84	28.55	28.67	29.02	30.37	30.19
20	27.76	27.94	29.44	29.16	29.60	28.72	27.91	28.42	28.11	28.94	30.52	30.14
25	27.82	28.15	29.43	28.62	29.25	28.44	27.72	29.59	28.28	29.11	30.46	29.96
EOY	27.95	28.65	29.46	28.62	28.92	28.10	27.54	29.09	28.54	29.18	30.09	30.15

WTR YR 1979 MEAN 28.93 HIGH 27.72 APR 25 LOW 30.99 AUG 17

BRUNSWICK COUNTY

335535078011001. Local number, NC-22

LOCATION.--Lat 33°55'35", long 78°01'10", Hydrologic Unit 03030005, at Southport. Owner: Town of Southport.

AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 10 in (0.25 m), depth 163 ft (49.7 m), cased to 60 ft (18.3 m).

DATUM.--Land-surface datum is 20.5 ft (6.25 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 5.27 ft (1.61 m) above land-surface datum.

REMARKS.--Water levels affected by pumping from nearby municipal wells.

PERIOD OF RECORD.--February 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.14 ft (4.61 m) below land-surface datum, Mar. 29, 1965; lowest, 31.90 ft (9.72 m) below land-surface datum, Apr. 16, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.72	22.24	19.88	21.21	21.01	20.36	20.87	21.72	20.68	21.42	21.85	19.77
10	21.00	22.00	20.59	20.96	21.33	20.68	21.07	20.92	21.72	21.27	22.15	20.34
15	21.48	21.28	21.05	21.01	21.07	20.68	21.27	20.74	20.26	21.36	21.74	20.45
20	21.44	20.62	20.95	20.44	21.53	20.82	21.82	---	20.83	21.45	21.83	20.58
25	22.26	20.51	20.75	20.79	20.73	20.41	22.08	---	21.33	21.51	21.62	20.46
EOY	22.58	20.81	21.40	20.83	20.80	20.94	21.78	---	20.91	21.79	21.49	20.42

WTR YR 1979 MEAN 21.14 HIGH 19.35 SEP 6 LOW 22.64 OCT 30

GROUND-WATER LEVELS

505

CARTERET COUNTY

344323076451301. Local number, NC-139.

LOCATION.--Lat 34°43'23", long 76°45'13", Hydrologic Unit 03020106, Morehead City. Owner: North Carolina Department of Natural and Economic Resources.

AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 192 ft (58.5 m), cased to 180 ft (54.9 m).

DATUM.--Land-surface datum is 8.72 ft (2.658 m) National Geodetic Vertical Datum of 1929 (levels by N.C. Department of Natural and Economic Resources). Measuring point: Top of casing, 1.73 ft (0.53 m) above land-surface datum.

PERIOD OF RECORD.--January 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.23 ft (1.29 m) below land-surface datum, Dec. 7, 1976; lowest, 8.52 ft (2.60 m) below land-surface datum, Sept. 23, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.07	---	6.50	6.65	6.25	5.90	5.96	6.37	6.52	7.27	7.67	7.34
10	7.35	---	6.76	6.55	6.14	5.86	5.13	5.27	6.80	7.16	7.76	7.34
15	7.44	6.94	6.59	6.51	6.09	5.10	5.99	6.34	6.89	7.16	7.88	7.41
20	7.08	7.10	6.48	6.07	6.40	5.89	6.26	5.13	6.87	7.35	7.66	7.15
25	---	6.57	6.37	6.11	5.71	5.39	6.36	6.53	7.12	7.58	7.87	7.02
END	---	6.44	6.53	6.95	5.37	6.19	6.32	6.83	6.92	7.51	7.72	6.94
WTR YR 1979			MEAN	6.71	HIGH	5.23	44-24	LOW	7.94	AUG 26		

CHOWAN COUNTY

361842076364001. Local number, NC-31.

LOCATION.--Lat 36°18'42", long 76°36'40", Hydrologic Unit 03010203, near Gliden. Owner: U.S. Geological Survey.

AQUIFER.--Beaufort Formation of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 242 ft (73.8 m), cased to 232 ft (70.7 m), screened from 232 ft (70.7 m) to 242 ft (73.8 m).

DATUM.--Land-surface datum is 37.50 (11.430 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.05 ft (0.62 m) above land-surface datum.

PERIOD OF RECORD.--October 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.12 ft (4.61 m) below land-surface datum, Feb. 25, 1965; lowest measured, 18.44 ft (5.62 m) below land-surface datum, Oct. 3, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	18.44	Dec. 18	17.98	Mar. 13	18.12	June 4	18.03	July 16	18.34	Aug. 22	18.32
Nov. 8	18.39	Jan. 29	17.99	Apr. 24	18.19						

361427076393001. Local number, NC-58.

LOCATION.--Lat 36°14'27", long 76°39'30", Hydrologic Unit 03010203, Chowan County High School, near Icaria.

Owner: Chowan County Board of Education.

AQUIFER.--Sands of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 320 ft (97.5 m), reported cased to 320 ft (97.5 m).

DATUM.--Land-surface datum is 26.58 ft (8.102 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.90 ft (0.27 m) above land-surface datum.

PERIOD OF RECORD.--June 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.91 ft (2.41 m) below land-surface datum, Mar. 13, 1957; lowest measured, 13.38 ft (4.08 m) below land-surface datum, Oct. 5, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	12.08	Dec. 18	12.14	Mar. 13	11.89	June 4	11.46	July 16	11.79	Aug. 22	11.93
Nov. 8	12.16	Jan. 29	11.92	Apr. 24	11.75						

GROUND-WATER LEVELS

CHOWAN COUNTY--Continued

361350076392701. Local number, NC-78.

LOCATION.--Lat 36°13'50", long 76°39'27", Hydrologic Unit 03010203, near Tyner. Owner: R. H. Hollowell.

AQUIFER.--Sand of post-Miocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 14 ft (4.3 m), dug to 16 ft (4.9 m), lined with concrete.

DATUM.--Altitude of land-surface datum is 30 ft (9 m). Measuring point: Top of instrument shelf, 2.35 ft (0.72 m) above land-surface datum.

PERIOD OF RECORD.--June 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.03 ft (0.009 m) above land-surface datum, May 4, 1978; lowest, 6.91 ft (2.11 m) below land-surface datum, Dec. 6, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.21	5.11	8.84	9.97	1.53	1.15	0.67	0.80	0.64	3.04	3.86	1.60
10	4.42	3.55	1.03	1.01	1.10	1.09	1.48	1.35	1.78	4.19	4.51	2.53
15	4.89	4.41	1.02	0.83	1.35	1.16	1.07	0.54	1.63	4.60	4.98	3.88
20	7.31	4.74	1.70	1.01	0.68	1.04	1.90	0.63	2.42	4.50	5.43	4.48
25	5.65	4.43	0.51	0.80	0.44	0.95	2.54	0.54	1.68	3.62	5.67	4.74
EOM	5.47	0.68	1.47	1.24	0.88	1.78	1.04	1.31	3.23	3.99	5.60	4.77
WTR YR 1979			MEAN	2.55	HIGH	0.44 FEB 25 AND OTHERS	LOW	6.14 NOV 4				

CRAVEN COUNTY

352309077102901. Local number, NC-16.

LOCATION.--Lat 35°23'09", long 77°10'29", Hydrologic Unit 03020202, near Wilmar. Owner: U.S. Geological Survey (formerly W. L. Elkes).

AQUIFER.--Pee Dee Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 322 ft (98.1 m), cased to 300 ft (91.4 m), screened 300 to 320 ft (91.4 to 97.5 m).

DATUM.--Altitude of land-surface datum is 49 ft (15 m). Measuring point: Top of casing, 0.30 ft (0.09 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.01 ft (4.58 m) below land-surface datum, Aug. 23, 1966; lowest measured, 23.77 ft (7.24 m) below land-surface datum, Aug. 27, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	23.17	Dec. 19	23.44	Mar. 12	23.52	Apr. 23	23.60	June 12	23.41	Aug. 27	23.77
Nov. 13	23.62	Jan. 24	23.10								

351049077175501. Local number, NC-44.

LOCATION.--Lat 35°10'49", long 77°17'55", Hydrologic Unit 03020202, Cove City. Owner: City of New Bern.

AQUIFER.--Black Creek Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 854 ft (260.3 m), multi-screened. Screened intervals: 705-715 ft (214.9-217.9 m), 781-786 ft (238.0-239.6 m), 828-833 ft (252.4-253.9 m).

DATUM.--Land-surface datum is 36.73 ft (11.195 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 2.06 ft (0.63 m) above land-surface datum.

REMARKS.--Water levels affected by nearby pumping.

PERIOD OF RECORD.--March 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.01 ft (1.83 m) below land-surface datum, Aug. 25-26, 1965; lowest measured, 90.68 ft (27.64 m) below land-surface datum, Aug. 7-8, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	81.10	---							---	---	86.08	87.62
10	---	---							---	---	88.52	86.57
15	---	80.09							---	85.55	86.80	85.95
20	---	---							---	---	87.40	84.62
25	---	---							85.36	86.74	86.83	---
EOM	---	---							85.41	87.78	86.83	85.26
WTR YR 1979			MEAN	85.82	HIGH	80.05 NOV 14 AND OTHERS	LOW	90.16 AUG 8				

GROUND-WATER LEVELS

507

CRAVEN COUNTY--Continued

350455077105001. Local number, NC-45.

LOCATION.--Lat 35°04'55", long 77°10'50", Hydrologic Unit 03020204, near Rhems. Owner: O. D. Simmons.

AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 45 ft (13.7 m), cased to 42 ft (12.8 m).

DATUM.--Altitude of land-surface datum is 35 ft (11 m). Measuring point: Top of casing, 1.32 ft (0.40 m) above land-surface datum.

REMARKS.--Well was originally drilled to 1,000 ft (304.8 m) as test well but was back filled to depth of approximately 47 ft (14.3 m).

PERIOD OF RECORD.--July 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.90 ft (0.27 m) below land-surface datum, Sept. 6, 1979; lowest, 13.04 ft (3.97 m) below land-surface datum, Oct. 16, 1968.

WATER LEVEL* IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.58	10.93	10.28	4.70	4.24	3.45	4.17	4.51	3.21	5.35	5.46	3.99
10	9.92	11.03	9.65	4.31	4.18	3.46	4.36	4.90	3.78	5.60	6.02	3.37
15	10.14	11.17	9.66	3.95	4.16	3.61	4.34	4.63	3.62	6.26	6.82	3.61
20	10.36	11.30	9.71	4.07	4.06	3.83	4.75	4.37	4.14	6.66	7.47	4.01
25	10.59	11.39	4.28	3.49	3.29	3.65	5.15	3.93	4.49	5.28	7.41	4.33
FORM	10.83	11.04	6.94	3.87	3.11	3.94	4.13	3.64	4.68	5.74	6.83	3.98

WTR YR 1979 MEAN 5.99 HIGH 3.01 FEB 26 LOW 11.46 NOV 28 AND OTHERS

350904077130601. Local number, NC-48.

LOCATION.--Lat 35°09'04", long 77°13'06", Hydrologic Unit 03020202, Tuscarora. Owner: International Paper Company.

AQUIFER.--Sand of Black Creek Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 310 ft (94.5 m), drilled to 887 ft (270.4 m), cased to 440 ft (134.1 m).

DATUM.--Altitude of land-surface datum is 38 ft (12 m). Measuring point: Top of casing, 2.60 ft (0.79 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.55 ft (0.17 m) above land-surface datum, June 24, 1963; lowest measured, 8.19 ft (2.50 m) below land-surface datum, Aug. 17-18, 1979.

WATER LEVEL* IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.53	7.67	7.52	7.66	7.62	---	7.71	7.79	7.73	7.88	8.02	
10	7.65	7.67	7.64	7.62	7.65	---	7.75	7.94	7.85	7.95	8.08	
15	7.61	7.72	7.69	7.59	7.61	7.71	7.70	7.77	7.88	7.97	8.13	
20	7.63	7.74	7.60	7.52	7.67	7.73	7.83	7.75	7.90	7.98	8.17	
25	7.68	7.72	7.50	7.41	---	7.59	7.86	7.64	7.68	7.91	8.14	
FORM	7.74	7.73	7.70	7.51	---	7.80	7.79	7.80	7.89	7.94	8.09	

WTR YR 1979 MEAN 7.75 HIGH 7.31 JAN 21 LOW 8.18 AUG 17 AND OTHERS

GROUND-WATER LEVELS

CUMBERLAND COUNTY

345803078564901. Local number, NC-84.

LOCATION.--Lat 34°58'03", long 78°56'44", Hydrologic Unit 03030004, Hope Mills. Owner: Robert Deaver.

AQUIFER.--Slate of Paleozoic age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 410 ft (125.0 m), drilled to 509 ft (155.1 m), cased to 238 ft (72.5 m).

DATUM.--Altitude of land-surface datum is 110 ft (34 m). Measuring point: Top of instrument shelf, 1.80 ft (0.55 m) above land-surface datum.

PERIOD OF RECORD.--April 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.38 ft (9.56 m) below land-surface datum, Apr. 3, 1975; lowest, 92.03 ft (28.05 m) below land-surface datum, June 3, 1967.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.09	33.32	33.04	33.42	33.62	33.27	33.24	33.40	33.61	34.19	34.59	34.57
10	33.23	33.27	33.23	33.36	33.57	33.22	33.27	33.41	33.75	34.30	34.68	34.65
15	33.20	33.37	33.28	33.43	33.32	33.32	33.24	33.48	33.93	34.37	34.78	34.65
20	33.24	33.41	33.14	33.43	33.39	33.27	33.39	33.51	33.97	34.47	34.82	34.73
25	33.31	33.30	33.18	33.36	33.12	33.08	33.39	33.45	34.00	34.37	34.84	34.77
FORM	33.41	33.17	33.39	33.45	33.27	33.31	33.38	33.70	34.03	34.46	34.88	34.62

WTR YR 1979

MEAN

33.69

HIGH

33.04 MAR 24

LOW

34.88 AUG 31 AND OTHERS

DAVIE COUNTY

355339080332601. Local number, NC-110.

LOCATION.--Lat 35°53'39", long 80°33'26", Hydrologic Unit 03040102, near Mocksville. Owner: H. S. Larew.

AQUIFER.--Weathered granite of Paleozoic age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 28 ft (8.5 m), dug to 32 ft (9.8 m), lined with rock.

DATUM.--Altitude of land-surface datum is 830 ft (253 m). Measuring point: Top of wooden platform, 3.60 ft (1.10 m) above land-surface datum.

PERIOD OF RECORD.--January 1932 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 12.47 ft (3.80 m) below land-surface datum, Apr. 1, 1973; lowest measured, 28.66 ft (8.74 m) below land-surface datum, Feb. 15, 1942.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 7	19.73	Dec. 17	19.95	Feb. 17	17.50	Apr. 21	16.00	June 23	16.33	Aug. 25	18.93
Oct. 14	19.99	Dec. 23	19.97	Feb. 24	17.32	Apr. 28	16.07	June 30	16.70	Aug. 31	19.09
Oct. 21	20.19	Dec. 26	19.76	Mar. 3	15.41	May 5	16.35	July 7	17.21	Sept. 8	18.57
Nov. 4	20.54	Dec. 30	19.93	Mar. 10	15.00	May 12	16.60	July 14	17.44	Sept. 17	19.04
Nov. 11	20.73	Jan. 6	19.51	Mar. 17	15.48	May 19	16.22	July 21	17.70	Sept. 22	15.90
Nov. 18	20.56	Jan. 13	18.92	Mar. 24	15.09	May 26	16.46	July 28	17.93	Sept. 29	18.94
Nov. 25	21.03	Jan. 21	13.27	Mar. 31	15.79	June 2	19.42	Aug. 4	18.13		
Dec. 2	21.20	Jan. 27	17.31	Apr. 7	15.75	June 9	16.91	Aug. 11	18.37		
Dec. 9	17.82	Feb. 12	17.62	Apr. 14	15.61	June 17	14.86	Aug. 18	18.66		

GROUND-WATER LEVELS

509

DUPLIN COUNTY

350030078060001. Local number, NC-69.

LOCATION.--Lat 35°00'30", long 78°06'00", Hydrologic Unit 03030006, at Warsaw. Owner: City of Warsaw.

AQUIFER.--Black Creek Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 10 in (0.25 m), depth 102 ft (31.1 m), believed cased to 102 ft (31.1 m).

DATUM.--Altitude of land-surface datum is 145 ft (44 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

REMARKS.--Water levels affected by intermittent pumping from nearby municipal wells.

PERIOD OF RECORD.--January 1963 to October 1964, January 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.69 ft (13.32 m) below land-surface datum, Feb. 23, 1967; lowest, 49.89 ft (15.21 m) below land-surface datum, Aug. 23, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47.05	47.48	47.70	47.42	47.01	46.83	46.42	46.56	46.58	46.66	46.84	47.45
2	46.99	47.53	47.69	47.57	47.02	46.83	46.40	46.58	46.60	46.69	46.88	47.58
3	47.00	47.55	47.70	47.44	47.02	46.83	46.39	46.62	46.64	46.71	46.90	47.83
4	47.03	47.52	47.64	47.44	47.00	46.82	46.36	46.64	46.58	46.73	46.93	47.49
5	47.06	47.53	47.62	47.43	47.00	46.77	46.32	46.74	46.56	46.72	46.96	47.23
6	47.07	47.54	47.63	47.41	47.01	46.65	46.34	46.72	46.59	46.76	46.98	47.21
7	47.10	47.50	47.64	47.39	46.91	46.83	46.37	46.70	46.63	46.79	46.99	47.18
8	47.15	47.45	47.64	47.32	46.94	46.62	46.35	46.70	46.65	46.81	47.03	47.14
9	47.17	47.52	47.59	47.28	46.93	46.64	46.27	46.73	46.76	46.79	47.06	47.21
10	47.28	47.52	47.66	47.19	46.97	46.64	46.28	46.71	47.10	46.79	47.10	47.18
11	47.50	47.50	47.72	47.19	46.99	46.59	46.30	46.82	46.67	46.78	47.10	47.26
12	47.30	47.53	47.67	47.11	47.08	46.62	46.29	47.22	46.58	46.80	47.09	47.29
13	47.25	47.56	47.67	47.11	47.27	46.62	46.26	46.83	46.63	46.83	47.13	47.30
14	47.23	47.55	47.67	47.13	47.09	46.57	46.25	46.78	46.65	46.85	47.15	47.26
15	47.26	47.53	47.66	47.21	46.99	46.56	46.25	46.75	46.67	46.89	47.17	47.30
16	47.28	47.63	47.65	47.22	46.96	46.59	46.27	46.78	46.63	46.92	47.19	47.34
17	47.29	47.66	47.64	47.20	47.03	46.59	46.29	46.82	46.55	46.95	47.23	47.36
18	47.31	47.66	47.64	47.17	47.02	46.57	46.30	46.82	46.53	46.99	47.17	47.35
19	47.37	47.71	47.60	47.20	46.93	46.56	46.30	46.74	46.56	46.97	47.07	47.34
20	47.35	47.74	47.58	47.12	46.98	46.55	46.32	46.66	46.61	47.10	47.09	47.38
21	47.36	47.74	47.53	46.99	46.98	46.54	46.34	46.59	46.63	46.84	47.17	47.35
22	47.39	47.75	47.60	47.08	46.97	46.55	46.35	46.64	46.65	46.80	47.11	47.31
23	47.39	47.76	47.62	47.12	46.95	46.53	46.34	46.64	46.65	46.83	47.23	47.33
24	47.40	47.72	47.57	47.01	46.88	46.39	46.22	46.60	46.61	46.84	47.24	47.34
25	47.43	47.76	47.52	47.03	46.82	46.39	46.15	46.55	46.60	46.81	47.29	47.31
26	47.44	47.78	47.54	47.03	46.77	46.43	46.07	46.49	46.59	46.74	47.32	47.30
27	47.43	47.77	47.55	47.02	46.80	46.45	46.02	46.46	46.61	46.74	47.35	47.13
28	47.43	47.75	47.58	46.98	46.83	46.50	46.11	46.56	46.61	46.77	47.37	47.08
29	47.52	47.76	47.58	47.01	---	46.48	46.40	46.48	46.63	46.81	47.41	47.16
30	47.57	47.70	47.53	47.01	---	46.47	46.50	46.46	46.64	46.82	47.43	47.11
31	47.53	---	47.39	47.01	---	46.45	---	46.56	---	46.84	47.47	---
MEAN	47.29	47.62	47.61	47.19	46.97	46.59	46.29	46.68	46.63	46.82	47.14	47.30
WTR YR 1979	MEAN	47.01		HIGH	46.02		LOW	47.83				

EDGEcombe COUNTY

355845077264501. Local number, NC-72.

LOCATION.--Lat 35°58'45", long 77°26'45", Hydrologic Unit 03020102, Speed. Owner: Melvin Howell.

AQUIFER.--Sands of Tuscaloosa Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 94 ft (28.7 m), drilled to 100 ft (30.5 m), cased to 95 ft (29.0 m).

DATUM.--Land-surface datum is 54.51 (16.615 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.90 ft (0.58 m) above land-surface datum.

PERIOD OF RECORD.--March 1946 to May 1965, April 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.17 ft (0.05 m) below land-surface datum, Sept. 27, 1955; lowest measured, 12.16 ft (3.71 m) below land-surface datum, June 11, 1953.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.53	---	7.69	6.78	6.29	5.91	5.69	6.48	5.64	6.71	7.43	8.71
10	7.75	8.26	7.39	6.63	6.15	5.04	5.85	6.43	6.06	6.99	8.36	---
15	7.88	8.26	7.20	6.63	6.23	5.69	5.94	5.95	5.81	7.33	8.38	---
20	8.09	8.24	7.08	6.26	6.23	5.80	6.13	5.95	6.31	7.41	8.45	---
25	8.18	8.18	7.14	6.06	5.95	5.69	6.40	5.69	6.29	7.65	8.79	---
FORM	---	7.92	7.04	6.33	5.71	5.79	6.31	5.88	6.52	7.51	8.79	---
WTR YR 1979			MEAN	6.86	HIGH	5.55	JUN 12	LOW	8.93	SEP 1		

GROUND-WATER LEVELS

GATES COUNTY

362044076362301. Local number, NC-30.

LOCATION.--Lat 36°20'44", long 76°36'23", Hydrologic Unit 03010203, Hobbsville. Owner: Mrs. T. W. Blanchard.

AQUIFER.--Black Creek Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 494 ft (150.6 m), believed cased to 494 ft (150.6 m).

DATUM.--Land-surface datum is 38.16 ft (11.631 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.50 ft (0.15 m) above land-surface datum.

PERIOD OF RECORD.--November 1961 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.40 ft (5.61 m) below land-surface datum, Mar. 8, 1962; lowest measured, 26.22 ft (7.99 m) below land-surface datum, Aug. 22, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	23.22	Dec. 18	23.00	Mar. 13	22.99	June 4	22.88	July 16	22.24	Aug. 22	26.22
Nov. 8	23.22	Jan. 29	22.87	Apr. 24	23.05						

362751076484701. Local number, NC-54.

LOCATION.--Lat 36°27'51", long 76°48'47", Hydrologic Unit 03010203, Roduco. Owner: James Wright.

AQUIFER.--Beaufort Formation of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 231 ft (70.4 m), cased to 217 ft (66.1 m).

DATUM.--Land-surface datum is 37.35 ft (11.384 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.28 ft (0.39 m) above land-surface datum. Measuring point changed from 1.80 ft (0.55 m) above land-surface datum Mar. 26, 1979.

PERIOD OF RECORD.--November 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.84 ft (3.91 m) below land-surface datum, Mar. 5, 1966; lowest, 18.61 ft (5.67 m) below land-surface datum, Feb. 10-11, Dec. 1, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.04	17.08	17.22	17.29	17.01	---	16.76	---	16.94	17.48	17.19	17.44
10	17.17	17.21	17.24	17.03	17.09	---	17.38	17.17	17.42	17.43	17.42	17.46
15	17.06	17.23	17.00	17.36	17.07	---	17.19	16.80	---	17.24	17.20	17.18
20	16.98	17.39	17.04	17.09	17.62	---	17.27	16.90	---	---	17.15	17.15
25	17.33	17.28	17.16	16.94	---	---	17.25	16.65	17.14	17.49	17.28	---
EOM	17.33	17.11	17.29	16.96	---	16.87	---	---	17.15	17.17	17.57	---

WTR YR 1979

MEAN 17.18 HIGH 16.65 MAY 25 LOW 18.42 DEC 1

HARNETT COUNTY

352052078372801. Local number, HR-52.

LOCATION.--Lat 35°20'52", long 78°37'28", Hydrologic Unit 03030006, at SR 1722 near Dunn. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 8.4 ft (2.56 m), cased to 8.4 ft (2.56 m).

DATUM.--Measuring point: File cut on top of casing, 178.83 ft (54.507 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.85 ft (53.90 m) NGVD, Feb. 27, 1979; lowest measured, 170.45 ft (51.95 m) NGVD, Sept. 8, 1977.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 6	172.02	Dec. 1	174.63	Mar. 12	175.96	June 4	175.24	July 11	172.94	Aug. 21	170.93
Oct. 20	171.12	Dec. 14	174.58	Mar. 28	176.12	June 8	174.69	July 24	172.46	Aug. 22	171.16
Nov. 9	171.73	Jan. 3	175.18	Apr. 10	175.38	June 11	174.23	July 26	173.91	Aug. 23	171.15
Nov. 20	173.61	Feb. 15	174.19	May 17	176.01	June 14	173.92	July 30	173.55	Sept. 11	175.14
Nov. 28	174.07	Feb. 27	176.85	May 24	176.17	June 28	173.97	Aug. 15	171.44	Sept. 26	173.99

GROUND-WATER LEVELS

511

HARNETT COUNTY--Continued

352052078372802. Local number HR-53.

LOCATION.--Lat 35°20'52", long 78°37'28", Hydrologic Unit 03030006, at SR 1722 near Dunn. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 8.4 ft (2.56 m), cased to 8.4 ft (2.56 m).

DATUM.--Measuring point: File cut on top of casing, 179.04 ft (54.571 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.65 ft (53.84 m) NGVD, Feb. 27, 1979; lowest measured, 170.44 ft (51.95 m) NGVD, Aug. 1, 1977.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 6	171.91	Dec. 1	174.77	Mar. 12	175.87	June 4	175.27	July 11	172.76	Aug. 21	170.57
Oct. 20	170.92	Dec. 14	174.65	Mar. 28	175.91	June 8	174.72	July 24	172.70	Aug. 22	170.98
Nov. 9	172.45	Jan. 3	175.19	Apr. 10	175.36	June 11	174.30	July 26	173.64	Aug. 23	170.94
Nov. 20	173.55	Feb. 15	175.17	May 17	175.89	June 14	173.91	July 30	173.45	Sept. 11	175.31
Nov. 28	174.34	Feb. 27	176.65	May 24	176.03	June 28	173.87	Aug. 15	171.03	Sept. 26	174.05

352052078372201. Local number, HR-54.

LOCATION.--Lat 35°20'52", long 78°37'22", Hydrologic Unit 03030006, at SR 1722 near Dunn. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 7.5 ft (2.29 m), cased to 7.5 ft (2.29 m).

DATUM.--Measuring point: File cut on top of casing, 178.08 ft (54.279 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.96 ft (53.94 m) NGVD, Feb. 27, 1979; lowest measured, 172.86 ft (52.69 m) NGVD, Aug. 1, 1977.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 6	173.91	Dec. 1	175.85	Mar. 12	176.10	June 8	175.49	July 24	174.79	Aug. 22	173.79
Oct. 20	173.02	Dec. 14	175.71	Mar. 28	176.16	June 11	175.45	July 26	175.62	Aug. 23	173.77
Nov. 9	175.56	Jan. 3	175.94	Apr. 10	175.88	June 14	175.28	July 30	174.94	Sept. 11	175.79
Nov. 20	173.83	Feb. 15	175.85	May 17	176.31	June 28	175.21	Aug. 15	173.21	Sept. 26	175.46
Nov. 28	175.69	Feb. 27	176.96	June 4	175.98	July 11	174.30	Aug. 21	172.88		

351659078381501. Local number, HR-55.

LOCATION.--Lat 35°16'59", long 78°38'15", Hydrologic Unit 03030006, at Secondary Road 1780 near Dunn. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 8.0 ft (2.44 m), cased to 8.0 ft (2.44 m).

DATUM.--Measuring point: File cut on top of casing, 155.76 ft (47.475 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 152.85 ft (46.59 m) NGVD, Apr. 29, 1978; lowest, 147.28 ft (44.89 m) NGVD, Aug. 21, 1979.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	150.24	150.23	151.10	151.42	151.14	148.81	148.98	148.49	148.36	148.24	148.02	148.87
10	150.16	150.81	151.37	151.42	151.09	148.87	148.60	148.50	148.36	148.13	147.78	148.48
15	150.12	150.61	151.20	151.66	149.02	148.86	148.76	148.45	148.39	147.95	147.59	148.36
20	150.13	150.50	151.19	151.56	148.73	148.71	148.54	148.38	148.45	147.95	147.32	148.28
25	150.14	150.51	151.28	151.63	149.60	149.39	148.50	148.42	148.70	148.33	148.42	148.28
END	150.15	151.23	151.30	151.35	149.63	148.81	148.51	148.43	148.40	148.24	148.38	149.19

WTR YR 1979

MEAN 149.39 MAX 151.69 JAN 16 AND OTHERS MIN 147.32 AUG 20

GROUND-WATER LEVELS

HARNETT COUNTY--Continued

351659078381502. Local number, HR-56.

LOCATION.--Lat 35°16'59", long 78°38'15", Hydrologic Unit 03030006, at SR 1780 near Dunn. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 10.8 ft (3.29 m), cased to 10.8 ft (3.29 m).

DATUM.--Measuring point: File cut on top of casing, 156.61 ft (47.735 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 152.24 ft (46.40 m) NGVD, Apr. 27, 1978; lowest measured, 146.96 ft (44.79 m) NGVD, Aug. 21, 1979.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 6	149.98	Dec. 1	151.35	Mar. 12	149.87	June 4	148.75	July 11	147.81	Aug. 21	146.96
Oct. 20	149.76	Dec. 14	151.16	Mar. 28	149.65	June 8	148.47	July 24	148.37	Aug. 22	147.77
Nov. 9	150.91	Jan. 3	151.34	Apr. 10	149.85	June 11	148.33	July 26	148.40	Aug. 23	147.79
Nov. 20	150.43	Feb. 15	150.08	May 17	149.44	June 14	148.17	July 30	148.09	Sept. 11	148.82
Nov. 28	150.78	Feb. 27	150.37	May 24	149.68	June 28	148.62	Aug. 15	147.23	Sept. 26	148.44

351657078381001. Local number, HR-57.

LOCATION.--Lat 35°16'57", long 78°38'10", Hydrologic Unit 03030006, at SR 1780 near Dunn. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 6.8 ft (2.07 m), cased to 6.8 ft (2.07 m).

DATUM.--Measuring point: File cut on top of casing, 159.32 ft (48.561 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 158.04 ft (48.17 m) NGVD, May 24, 1979; lowest measured, 156.59 ft (47.73 m) NGVD, Aug. 21, 1979.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 6	157.39	Dec. 1	157.87	Mar. 12	157.94	June 4	157.97	July 11	157.17	Aug. 21	156.59
Oct. 20	157.00	Dec. 14	157.79	Mar. 28	157.92	June 8	157.86	July 24	157.79	Aug. 22	157.29
Nov. 9	157.58	Jan. 3	157.88	Apr. 10	157.85	June 11	157.84	July 26	157.86	Aug. 23	157.25
Nov. 20	157.40	Feb. 15	157.88	May 17	157.90	June 14	157.43	July 30	157.48	Sept. 11	158.00
Nov. 28	157.70	Feb. 27	157.97	May 24	158.04	June 28	157.89	Aug. 15	156.82	Sept. 26	157.97

HAYWOOD COUNTY

352315082484401. Local number, NC-40.

LOCATION.--Lat 35°23'15", long 82°48'44", Hydrologic Unit 06010106, near Cruso. Owner: Champion Paper and Fiber Company

AQUIFER.--Phyllitic rock of the Snowbird Group of Precambrian age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 12 in (0.30 m), depth 19 ft (5.8 m), cased to 19 ft (5.8 m).

DATUM.--Land surface datum is 3,148.26 ft (959.590 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--December 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.24 ft (0.38 m) below land-surface datum, Mar. 12, 1977; lowest, 6.27 ft (1.91 m) below land-surface datum, Nov. 1, 1963.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.71	5.89	4.88	5.13	5.37		3.13	3.32	3.86	4.46	4.77	4.37
10	5.76	5.89	5.03	5.10	5.43		3.19	3.14	3.97	4.32	---	4.88
15	5.81	5.91	5.52	5.37	5.40		3.05	3.40	4.07	4.29	---	4.09
20	5.84	5.77	5.72	4.96	5.22		3.15	3.55	4.19	4.55	---	4.75
25	5.85	5.84	5.59	4.95	---		3.23	3.59	4.30	4.53	---	4.14
EQM	5.87	5.65	5.42	5.25	---		3.18	3.72	4.41	4.66	4.92	3.55

WTR YR 1979

MEAN

4.69

HIGH

2.80

APR 13 AN: OTHERS

LOW

5.93

NOV 16

513

HERTFORD COUNTY

LOCATION.--Lat 36°28'45", long 77°00'55", Hydrologic Unit 03010203, Como. Owner: Charles DeLoatch.
AQUIFER.--Sands of Tuscaloosa Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well; diam

to 340 ft (103.6 m).

DATUM.--Land-surface datum is 28.40 ft (8.656 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.79 ft (0.85 m) above land-surface datum.

PERIOD OF RECORD.--December 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.36 ft (14.74 m) below land-surface datum, May 30-31, 1966;
lowest measured, 90.83 ft (27.68 m) below land-surface datum, Aug. 24, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	89.78	Dec. 19	89.78	Mar. 14	89.48	June 5	90.05	July 17	89.78	Aug. 24	90.83
Nov. 9	89.98	Jan. 30	89.29	Apr. 24	90.00						

LOCATION.--Lat 36°26'42", long 77°05'15", Hydrologic Unit 03010203, Murfreesboro. Owner: Town of Murfreesboro. AQUIFER.--Black Creek Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled public-supply (standby)

well characteristics: drilled public supply (standby) artesian well, diameter 3 in (0.08 m), depth 215 ft (65.5 m), cased to 215 ft (65.5 m).

DATUM.--land-surface datum is 13.09 ft (3.989 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.89 ft (1.49 m) above land-surface datum.

PERIOD OF RECORD.--February 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.26 ft (1.91 m) above land-surface datum, Apr. 8, 1964; lowest, 1.12 ft (0.34 m) below land-surface datum, Sept. 25, 1971.

WATER LEVEL, IN FEET ABOVE LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	-0.35	Dec. 19	-0.25	Mar. 14	-0.16	June 5	+0.02	July 17	-0.51	Aug. 24	-0.60
Nov. 9	-0.44	Jan. 30	0.00	Apr. 24	-0.22						

LOCATION.--Lat 36°23'51", long 76°55'54", Hydrologic Unit 03010203, Winton. Owner: Town of Winton.

AQUIFER.--Sand of Black Creek Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 283 ft (86.3 m), drilled to 309 ft (94.2 m), cased to 237 ft (72.2 m).

DATUM.--Land-surface datum is 41.70 ft (12.710 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of instrument shelf, 0.70 ft (0.21 m) above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.58 ft (8.41 m) below land-surface datum, Sept. 17, 1967;
lowest, 30.35 ft (9.25 m) below land-surface datum, Mar. 18, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	29.46	Dec. 18	29.52	Mar. 14	29.10	June 4	28.94	July 17	29.36	Aug. 22	29.16
Nov. 9	29.47	Jan. 29	29.39	Apr. 24	29.05						

HOKE COUNTY

LOCATION.--Lat 35°03'40", long 79°21'25", Hydrologic Unit 03040203, McCain. Owner: North Carolina Tuberculosis Sanitarium.

AQUIFER.--Tuscaloosa Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 24 m (0.61 m), depth 76 ft (23.2 m), drilled to 309 ft (94.2 m), cased to 309 ft (94.2 m), gravel-walled.

DATUM.--Altitude of land-surface datum is 355 ft (108 m). Measuring point: Top of casing, 1.40 ft (0.43 m) above land-surface datum.

PERIOD OF RECORD.--April 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.60 ft (0.49 m) below land-surface datum, May 7, 1973; lowest, 8.27 ft (2.52 m) below land-surface datum, Oct. 14, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

GROUND-WATER LEVELS

JONES COUNTY

350103077150601. Local number, NC-73.

LOCATION.--Lat 35°01'03", long 77°15'06", Hydrologic Unit 03020204, near Pollocksville. Owners: Oak Grove Marine Air Station.

AQUIFER.--Castle Hayne Limestone Formation of middle and late Eocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 8 in (0.20 m), depth 18 ft (5.5 m), cased to 18 ft (5.5 m).

DATUM.--Land-surface datum is 11.31 ft (3.447 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf 3.28 ft (1.00 m) above land-surface datum. Measuring point changed from 3.40 ft (1.04 m) above land-surface datum May 7, 1979.

PERIOD OF RECORD.--May 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.40 ft (1.34 m) below land-surface datum, Nov. 5, 1971; lowest, 10.12 ft (3.08 m) below land-surface datum, Jan. 19-20, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.28	8.74	8.79	8.58	7.52	---	7.04	7.54	7.57	---	8.32	8.78
10	8.37	8.79	8.89	8.31	7.51	---	7.25	7.73	7.54	---	8.46	7.61
15	8.46	8.80	8.95	8.14	7.67	6.19	7.40	7.87	7.40	---	8.61	7.20
20	8.53	8.86	9.07	7.89	---	6.37	7.54	7.89	---	7.97	8.72	7.34
25	8.64	8.87	9.08	7.68	---	6.56	7.65	7.85	---	8.04	8.79	7.50
FOH	8.70	8.84	9.02	7.45	---	6.52	7.48	7.73	---	8.17	8.89	7.60

WTR YR 1979 MEAN 8.04 HIGH 6.10 MAR 13 LOW 9.14 DEC 23 AND OTHERS

LENOIR COUNTY

350306077444201. Local number, NC-51.

LOCATION.--Lat 35°03'06", long 77°44'42", Hydrologic Unit 03020202, Pink Hill School, Pink Hill. Owner: Lenoir County Board of Education.

AQUIFER.--Pee Dee Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 151 ft (46.0 m), drilled to 195 ft (59.4 m), cased to 125 ft (38.1 m).

DATUM.--Altitude of land-surface datum is 134 ft (41 m). Measuring point: Top of instrument shelf, 1.45 ft (0.44 m) above land-surface datum.

PERIOD OF RECORD.--April 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.03 ft (15.86 m) below land-surface datum, Apr. 8, 1973; lowest, 59.64 ft (18.18 m) below land-surface datum, July 20-21, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 4	55.03	Dec. 20	55.73	Mar. 13	54.68	June 19	55.15	July 19	54.56	Aug. 29	55.01
Nov. 9	55.95	Jan. 25	55.09	Apr. 24	54.60						

351600077381001. Local number, NC-128.

LOCATION.--Lat 35°16'00", long 77°38'10", Hydrologic Unit 03020202, Kinston. Owner: City of Kinston.

AQUIFER.--Sands of Black Creek Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 10 in (0.25 in), depth 300 ft (91.4 m), cased to 160 ft (48.8 m).

DATUM.--Land-surface datum is 33.5 ft (10.21 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.10 ft (0.64 m) above land-surface datum.

PERIOD OF RECORD.--September 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.83 ft (10.62 m) below land-surface datum, Dec. 30, 1968; lowest, 68.36 ft (20.84 m) below land-surface datum, Oct. 7-8, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	64.52	62.99	---	61.08	61.09	61.00	---	63.93	64.20	---	---	66.42
10	64.24	62.69	---	61.39	61.84	61.23	---	64.06	64.11	---	---	65.79
15	64.02	62.76	---	61.12	62.05	62.28	---	63.94	63.91	---	---	66.67
20	63.85	62.69	61.99	61.18	62.14	62.82	---	63.71	64.60	65.43	---	67.69
25	63.44	---	61.50	61.15	61.84	62.72	64.21	63.49	64.47	---	---	67.31
FOH	63.07	---	61.34	60.67	61.77	---	63.79	63.65	64.95	---	66.53	66.64

WTR YR 1979

MEAN 63.40 HIGH 60.67 JAN 31 LOW 67.69 SEP 20

GROUND-WATER LEVELS

515

MARTIN COUNTY

355734077180001. Local number, NC-43.

LOCATION.--Lat 35°57'34", long 77°18'00", Hydrologic Unit 03010107, at West Martin School, Oak City. Owner: Martin County Board of Education.

AQUIFER.--Black Creek Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 4 in (0.10 m), depth 88 ft (26.8 m), cased to 88 ft (26.8 m).

DATUM.--Land-surface datum is 81.75 ft (24.917 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.13 ft (0.34 m) above land-surface datum. Measuring point changed from 1.73 ft (0.53 m) above land-surface datum Sept. 19, 1978.

PERIOD OF RECORD.--February 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.67 ft (3.56 m) below land-surface datum, June 8, 1961; lowest, 19.32 ft (5.89 m) below land-surface datum, Nov. 8-9, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.60	18.12	---	13.77	12.68	12.33	12.88	13.17	12.55	13.47	14.61	15.48
10	17.60	---	---	13.28	12.59	12.19	12.89	13.26	12.61	13.85	14.44	14.52
15	17.65	---	---	12.91	12.59	12.18	12.96	12.95	12.57	14.16	14.54	14.05
20	17.71	---	---	12.69	12.69	12.45	13.06	12.60	12.63	14.50	14.82	13.98
25	17.80	---	14.22	12.49	12.63	12.64	13.11	12.51	12.89	14.71	15.15	14.00
EOM	17.93	---	14.11	12.53	12.42	12.82	13.15	12.54	13.14	14.72	15.39	13.98
WTR YR 1979	MEAN			13.92	HIGH			12.14 MAR 12 AND OTHERS	LOW			18.29 NOV 3 AND OTHERS

MOORE COUNTY

350636079283601. Local number, NC-122.

LOCATION.--Lat 35°06'36", long 79°28'36", Hydrologic Unit 03040203, Pinebluff. Owner: H. A. Keith.

AQUIFER.--Sands of Tuscaloosa Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 47 ft (14.3 m), cribbed with brick.

DATUM.--Altitude of land-surface datum is 412 ft (126 m). Measuring point: Top of wooden platform, 3.55 ft (1.08 m) above land-surface datum.

PERIOD OF RECORD.--April 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.71 ft (8.75 m) below land-surface datum, Oct. 8, 1971; lowest measured, dry several times 1951-52, 1977-79.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	44.60	Dec. 12	45.17	Mar. 21	32.62	June 6	33.92	Aug. 8	41.77	Sept. 7	42.93
Nov. 7	44.91	Jan. 18	(f)	May 1	33.07						
f Dry											

NEW HANOVER COUNTY

341000077524201. Local number, NC-20.

LOCATION.--Lat 34°10'00", long 77°52'42", Hydrologic Unit 03030005, near Wilmington. Owner: Walter J. Hodder.

AQUIFER.--Pee Dee Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 3 in (0.08 m), depth 169 ft (51.5 m), drilled to 173 ft (52.7 m), cased to 173 ft (52.7 m).

DATUM.--Land-surface datum is 21.30 ft (6.492 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 0.06 ft (0.02 m) above land-surface datum.

PERIOD OF RECORD.--November 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.42 ft (2.87 m) below land-surface datum, June 10, 1966; lowest, 19.94 ft (6.08 m) below land-surface datum, June 10, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.39	15.88	15.33	14.92	14.10	13.55				---	15.60	14.63
10	15.91	15.83	15.38	14.76	14.02	13.08				---	16.08	13.54
15	15.96	15.65	15.38	14.53	13.97	13.11				18.21	16.00	12.98
20	16.02	15.81	15.39	14.07	14.05	13.41				16.28	16.84	12.91
25	16.58	15.85	15.27	13.73	13.81	13.35				15.19	15.62	12.83
EOM	15.92	15.62	15.16	13.88	13.56	13.74				15.30	15.51	12.65
WTR YR 1979	MEAN			14.91	HIGH			12.65 SEP 30	LOW			18.21 JUL 15

GROUND-WATER LEVELS

NEW HANOVER COUNTY--Continued

342205077515401. Local number, NC-61.

LOCATION.--Lat 34°22'05", long 66°51'54", Hydrologic Unit 03030007, near Wilmington. Owner: Martin Marietta.

AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.

WELL CHARACTERISTICS.--Bored observation artesian well, diameter 2 in (0.05 m), depth 31 ft (9.4 m), bored to 85 ft (25.9 m), cased to 43 ft (13.1 m).

DATUM.--Land-surface datum is 15.93 ft (4.855 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--September 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.86 ft (0.57 m) below land-surface datum, Sept. 4, 1968; lowest, 25.21 ft (7.68 m) below land-surface datum, Dec. 23-24, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.34	24.73	25.00	24.99	24.03	23.70	22.90	23.04	23.27	23.34	24.20	23.92
10	24.43	24.77	25.07	24.85	24.00	23.47	23.06	23.18	23.49	23.46	24.33	---
15	24.46	24.81	25.13	23.46	24.01	23.24	23.09	23.22	23.40	23.62	24.42	---
20	24.53	24.85	25.19	23.97	24.00	23.14	23.11	23.20	23.27	23.80	24.54	---
25	24.60	24.89	25.11	24.03	23.85	23.01	23.14	23.21	23.20	23.93	24.63	---
EOM	24.66	24.95	25.06	24.03	23.83	22.96	23.08	23.25	23.23	24.08	24.72	---

WTR YR 1979 MEAN 23.97 HIGH 22.90 JAN 13 AND OTHERS LOW 25.20 DEC 23

NORTHAMPTON COUNTY

361608077162601. Local number, NC-27.

LOCATION.--Lat 36°16'08", long 77°16'26", Hydrologic Unit 03010204, at Rich Square. Owner: Boomer Ice Company.

AQUIFER.--Sand of Tuscaloosa Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 57 ft (17.4 m), drilled to 88 ft (26.8 m), cased to 78 ft (23.8 m).

DATUM.--Land-surface datum is 74.44 ft (22.689 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.70 ft (0.52 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.86 ft (1.48 m) below land-surface datum, Feb. 25, 1960; lowest, 14.99 ft (4.57 m) below land-surface datum, Sept. 29-30, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.46	12.97	12.69	11.58	---	---	---	9.10	6.14	9.49	---	12.01
10	12.56	13.00	12.46	11.04	---	---	---	9.53	6.84	10.01	---	10.90
15	12.66	13.01	12.30	10.17	6.45	---	---	7.39	6.40	10.58	---	11.10
20	12.75	12.99	12.25	9.89	---	---	---	5.33	7.07	---	---	11.37
25	12.86	13.00	12.24	8.70	---	---	---	5.54	7.92	---	11.96	11.53
EOM	12.97	12.88	12.20	9.07	---	---	8.76	6.28	8.66	---	12.10	11.60

WTR YR 1979 MEAN 10.49 HIGH 5.38 MAY 26 LOW 13.04 NOV 3

ONSLow COUNTY

344425077272501. Local number, NC-52.

LOCATION.--Lat 34°44'25", long 77°27'25", Hydrologic Unit 03030001, at Camp Geiger, near Jacksonville. Owner: U.S. Marine Corps.

AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 18 in (0.46 m), depth 68 ft (20.7 m), drilled to 70 ft (21.3 m), cased to 23 ft (7.0 m).

DATUM.--Land-surface datum is 24.45 ft (7.452 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 1.90 ft (0.58 m) above land-surface datum.

PERIOD OF RECORD.--January 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.97 ft (0.60 m) below land-surface datum, Jan. 26, 1978; lowest, 10.44 ft (3.18 m) below land-surface datum, Jan. 3, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.17	8.14	7.48	5.17	4.89	3.69	4.71	5.32	4.88	5.59	5.70	5.72
10	7.35	8.25	7.60	4.85	4.84	3.13	4.95	5.56	5.17	5.75	5.94	4.42
15	7.58	8.37	7.49	4.28	4.94	3.69	4.99	5.17	5.31	6.06	6.09	4.00
20	7.73	8.42	7.51	4.46	4.82	4.22	5.40	5.14	4.98	6.34	6.34	4.03
25	7.89	8.48	6.31	3.62	2.73	3.91	5.61	4.40	5.21	4.97	6.62	3.98
EOM	7.98	8.19	6.38	4.41	3.41	4.54	4.97	---	5.27	5.39	6.68	3.96

WTR YR 1979 MEAN 5.66 HIGH 2.63 FEB 26 LOW 8.52 NOV 28

GROUND-WATER LEVELS

517

ONslow COUNTY--Continued

344525077254501. Local number, NC-85.

LOCATION.--Lat 34°45'25", long 77°25'45", Hydrologic Unit 03030001, at Jacksonville. Owner: Carolina Power and Light Company.

AQUIFER.--Castle Hayne Limestone of middle and late Eocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 106 ft (32.3 m), cased to 106 ft (32.3 m).

DATUM.--Altitude of land-surface datum is 20 ft (6 m). Measuring point: Top of instrument shelf, 3.20 ft (0.98 m) above land-surface datum.

PERIOD OF RECORD.--January 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.86 ft (2.09 m) below land-surface datum, June 10, 1964; lowest, 21.76 ft (6.63 m) below land-surface datum, June 21, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.28	14.46	14.14	13.63	12.89	13.11	11.89	12.21	11.84	12.61	13.62	13.72
10	14.40	14.39	14.74	13.71	13.24	12.65	12.01	11.99	12.47	12.58	14.15	---
15	14.28	13.99	14.50	13.59	13.47	12.59	11.93	11.88	12.88	12.77	13.92	---
20	13.88	14.13	14.30	13.18	14.04	12.85	11.96	11.88	12.25	12.98	13.95	---
25	14.50	13.79	13.41	12.75	13.28	12.52	12.18	12.18	12.39	13.30	14.19	---
EOM	14.51	13.93	13.37	12.32	12.92	12.41	11.98	12.15	12.44	13.53	14.22	---

WTR YR 1979 MEAN 13.22 HIGH 11.81 JUN 6 LOW 14.90 DEC 8

ORANGE COUNTY

355522079043001. Local number, NC-126.

LOCATION.--Lat 35°55'22", long 79°04'30", Hydrologic Unit 03030002, Chapel Hill. Owner: Chi Psi Fraternity.

AQUIFER.--Weathered granite of Paleozoic age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 48 ft (14.6 m), lined with rock.

DATUM.--Land-surface datum is 511.50 ft (155.905 m) National Geodetic Vertical Datum of 1929. Measuring point: gage pointer, 3.15 ft (0.96 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.43 ft (11.10 m) below land-surface datum, May 9, 1960; lowest measured, dry, Oct. 11 to Dec. 31, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 2	42.05	Dec. 4	42.95	Feb. 5	43.05	Apr. 2	39.77	June 26	38.90	Aug. 21	39.95
Oct. 9	42.20	Dec. 11	43.35	Feb. 12	42.49	Apr. 9	40.16	July 2	38.85	Sept. 3	40.74
Oct. 16	42.22	Dec. 18	43.38	Feb. 20	42.42	Apr. 23	40.28	July 11	39.00	Sept. 10	40.67
Oct. 23	42.48	Dec. 27	43.50	Feb. 26	41.27	Apr. 30	40.26	July 16	38.47	Sept. 17	40.72
Oct. 30	42.68	Jan. 2	43.60	Mar. 5	40.85	May 7	40.30	July 24	38.53		
Nov. 6	42.77	Jan. 8	43.50	Mar. 12	40.56	May 29	38.69	Aug. 1	39.56		
Nov. 13	42.75	Jan. 15	43.50	Mar. 19	40.17	June 4	38.85	Aug. 7	39.58		
Nov. 20	43.05	Jan. 22	43.08	Mar. 25	40.12	June 11	38.80	Aug. 14	39.80		

PASQUOTANK COUNTY

361833076173001. Local number, NC-86.

LOCATION.--Lat 36°18'33", long 76°17'30", Hydrologic Unit 03010205, Elizabeth City. Owner: C. T. Winslow.

AQUIFER.--Sands of post-Miocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 18 in (0.46 m), depth 8 ft (2.4 m), lined with tile.

DATUM.--Land-surface datum is 12.53 ft (3.819 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of instrument shelf, 3.14 ft (0.96 m) above land-surface datum. Measuring point changed from 2.13 ft (0.65 m) above land-surface datum July 12, 1978.

PERIOD OF RECORD.--June 1935 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.70 ft (0.52 m) above land-surface datum, Feb. 28, 1968; lowest, 8.00 ft (2.44 m) below land-surface datum, Dec. 21, 1943.

WATER LEVEL, IN FEET ABOVE OR BELOW (-) LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	-4.84	-5.21	-4.87	-2.47	-0.46	.35	.72	-0.28	.09	-2.28	-0.74	.31
10	-4.93	-5.17	---	-0.43	-0.31	.62	.15	-0.73	-0.72	-2.58	-0.89	.08
15	-4.99	-5.20	---	.53	-0.43	-0.28	.47	.81	-0.93	-2.93	-0.40	-0.56
20	-5.04	-5.25	-4.62	-0.04	.40	-0.26	-0.43	.80	-1.38	-0.29	-0.86	-1.14
25	-5.13	-5.25	-4.39	.63	1.02	.06	-0.71	.82	-1.68	.59	-1.29	.75
EOM	-5.20	-4.99	-4.44	-0.13	.76	-0.57	-0.10	-0.37	-1.92	.53	-2.06	1.00

WTR YR 1979 MEAN -1.48 MAX 1.11 SEP 6 MIN -5.28 NOV 26

GROUND WATER LEVELS
PASQUOTANK COUNTY--Continued

361556076102402. Local number, NC-141.

LOCATION.--Lat 36°15'56", long 76°10'24", Hydrologic Unit 03010205, U.S. Coast Guard Air Base, near Elizabeth City. Owner: U.S. Coast Guard.

AQUIFER.--Yorktown Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 3 in (0.08 m), depth 64 ft (19.4 m).

DATUM.--Land surface datum is 8.59 ft (2.618 m) National Geodetic Vertical Datum of 1929. Measuring Point: Top of instrument shelf, 0.93 ft (0.28 m) above land-surface datum. Measuring point changed from 1.50 ft (0.46 m) below land-surface datum Mar. 13, 1979.

PERIOD OF RECORD.--June 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.24 ft (1.57 m) below land-surface datum, Mar. 7-8, 1979; lowest recorded, 8.23 ft (2.51 m), below land-surface datum, Oct. 17, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.85	---	7.30	6.85	6.51	5.72	---	---	5.62	6.77	6.82	---
10	7.98	---	7.25	6.44	6.75	5.48	---	---	6.06	6.99	7.04	---
15	8.10	7.72	7.48	5.66	6.78	---	---	---	6.33	7.03	6.94	---
20	---	7.86	7.50	6.33	6.86	---	---	---	6.72	6.95	7.13	---
25	---	7.93	7.44	5.55	5.95	---	---	5.50	6.64	7.02	---	---
EOM	---	7.53	7.65	6.20	5.44	---	---	6.07	6.75	6.89	---	---
WTR YR 1979				MEAN	6.79	HIGH	5.15 MAR 7	LOW	8.13 OCT 17			

PENDER COUNTY

342500077553001. Local number, NC-26.

LOCATION.--Lat 34°25'00", long 77°55'30", Hydrologic Unit 03030007, Rocky Point. Owner: Arvida Farms.

AQUIFER.--Pee Dee Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (0.15 m), depth 141 ft (43.0 m), cased to 141 ft (43.0 m).

DATUM.--Altitude of land-surface datum is 20 ft (6 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--December 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.97 ft (0.30 m) below land-surface datum, May 14-15, 1966, Jan. 16, 1975; lowest, 6.25 ft (1.91 m) below land-surface datum, May 5, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.60	4.47	3.53	1.74	1.91	1.66	2.05	---	1.85	2.09	2.45	2.38
10	3.78	4.54	2.89	1.62	1.94	1.42	2.14	---	1.99	2.33	2.43	1.70
15	3.94	4.56	2.73	1.50	2.00	1.51	2.13	---	1.79	2.50	2.29	1.66
20	4.12	4.60	2.72	1.63	2.03	1.72	2.13	---	1.67	2.61	2.31	1.53
25	4.25	4.63	2.52	1.57	1.73	1.82	2.26	---	1.85	2.52	2.43	1.42
EOM	4.39	4.60	2.03	1.73	1.51	1.92	2.17	---	1.90	2.38	2.59	1.50
WTR YR 1979				MEAN	2.48	HIGH	1.42 MAR 10 AND OTHERS	LOW	4.65 NOV 27 AND OTHERS			

PITT COUNTY

353352077150101. Local number, PI-527.

LOCATION.--Lat 35°33'52", long 77°15'01", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 14.6 ft (4.45 m), cased to 9.6 ft (2.93 m).

DATUM.--Measuring point: Top of casing, 28.43 ft (8.665 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--During most summers, water levels affected for short periods by nearby pumping used for irrigation of row crops.

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.54 ft (7.78 m) NGVD, May 5, 1978; lowest, 19.06 ft (5.81 m) NGVD, July 6, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.80	21.89	22.72	23.07	23.19	23.53	23.68	23.25	23.55	23.15	22.39	22.86
10	21.64	22.13	22.72	23.02	23.17	23.62	23.33	23.10	23.05	22.73	22.17	22.50
15	21.66	22.11	22.65	23.58	23.14	23.46	23.52	23.33	23.41	22.55	22.37	22.43
20	21.61	22.24	22.67	23.33	23.19	23.30	23.21	23.40	23.15	22.73	21.80	22.18
25	21.64	22.25	22.94	23.71	23.83	23.33	23.10	23.73	23.32	22.93	21.83	22.35
EOM	21.75	22.86	22.72	23.35	23.85	23.13	23.36	23.35	22.90	22.51	21.68	22.61
WTR YR 1979				MEAN	22.82	MAX	24.50 FEB 26	MIN	21.60 OCT 24			

GROUND-WATER LEVELS

519

PITT COUNTY --Continued

353350077150101. Local number, PI-528.

LOCATION.--Lat 35°33'50", long 77°15'01", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 14.2 ft (4.33 m), cased to 9.2 ft (2.80 m).

DATUM.--Measuring point: Top of casing, 35.96 ft (10.961 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--During most summers, water levels affected for short periods by nearby pumping used for irrigation of row crops.

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 31.82 ft (9.70 m) NGVD, Nov. 6-7, 1977; lowest, 25.91 ft (7.90 m) NGVD, Aug. 15-17, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.69	26.72	---	---	---	28.04	29.38	28.28	28.01	27.94	27.38	27.80
10	26.65	26.78	27.59	---	---	29.02	28.50	28.18	28.22	27.83	27.26	27.95
15	26.65	26.80	27.53	---	28.20	28.58	28.86	28.34	28.48	27.71	27.24	27.81
20	26.65	26.81	27.51	---	28.34	28.40	28.33	28.54	28.18	27.54	27.10	27.70
25	26.66	26.81	---	---	30.03	28.36	28.26	29.07	28.13	27.78	27.05	27.69
END	26.68	---	---	28.63	29.41	28.17	28.43	28.50	28.02	27.50	26.95	28.25

WITH YR 1979 MEAN 27.45 MAX 30.03 FEB 25 MIN 26.54 OCT 7 AND OTHERS

353304077151401. Local number, PI-529.

LOCATION.--Lat 35°33'04", long 77°15'14", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 14.4 ft (4.39 m), cased to 9.4 ft (2.87 m).

DATUM.--Measuring point: Top of casing, 49.93 ft (15.219 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 47.57 ft (14.50 m) NGVD, Jan. 26, 1978; lowest, 41.34 ft (12.60 m) NGVD, Nov. 6-7, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	42.26	41.39	43.25	44.54	45.97	46.87	---	46.70	46.93	46.51	45.19	44.95
10	42.01	41.60	43.50	44.63	45.93	46.95	---	46.44	46.26	45.79	44.85	46.23
15	41.85	41.47	43.26	45.91	45.91	46.75	---	47.01	46.91	45.54	44.97	46.04
20	41.71	41.80	43.15	45.93	46.11	---	---	47.11	46.42	45.36	44.55	45.72
25	41.57	41.58	43.58	46.63	47.23	---	46.00	47.27	46.87	46.31	44.35	45.63
END	41.48	43.03	43.47	46.14	46.94	---	46.87	46.92	46.13	45.57	44.03	46.42

WITH YR 1979 MEAN 44.47 MAX 47.37 MAY 24 MIN 41.34 NOV 6 AND OTHERS

353255077150601. Local number, PI-530.

Location.--Lat 35°32'55", long 77°15'06", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 21.1 ft (6.43 m), cased to 16.1 ft (4.91 m).

DATUM.--Measuring point: Top of casing, 51.92 ft (15.825 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service). Top of casing raised from 51.12 ft (15.581 m) NGVD July 11, 1979.

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.75 ft (15.47 m) NGVD, Mar. 24, 1977; lowest measured, 43.00 ft (13.11 m) NGVD, Nov. 15, 1978.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	43.70	Dec. 14	44.23	Mar. 19	50.15	Apr. 24	49.76	July 10	48.74	Aug. 28	45.32
Nov. 15	43.00	Jan. 29	49.27								

GROUND-WATER LEVELS

PITT COUNTY--Continued

353232077154301. Local number, PI-531.

LOCATION.--Lat 35°32'32", long 77°15'43", Hydrologic Unit 03020103, at Galloway Crossroads. Owner; U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 20.4 ft (6.22 m) cased to 15.4 ft (4.69 m).

DATUM.--Measuring point: Top of casing, 57.69 ft (17.583 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.87 ft (17.03 m) NGVD, May 2, 1978; lowest measured, 48.96 ft (14.92 m) NGVD, Nov. 15, 1978.

WATER LEVEL, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 5	50.24	Dec. 14	48.99	Mar. 19	54.63	June 5	55.60	July 11	55.36	Aug. 28	54.02
Nov. 15	48.96	Jan. 30	52.02	Apr. 24	55.19						

353219077153801. Local number, PI-532.

LOCATION.--Lat 35°32'19", long 77°15'38", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 10.9 ft (3.32 m), cased to 5.9 ft (1.80 m).

DATUM.--Measuring point: Top of casing, 57.31 ft (17.468 m) National Geodetic Vertical Datum of 1929, (levels by Soil Conservation Service).

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.11 ft (16.80 m) NGVD, May 4, 1978; lowest, 47.43 ft (14.46 m) NGVD, Nov. 6-8, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.99	47.45	49.82	52.82	53.05	53.63	53.76	53.07	53.71	52.42	---	51.42
10	47.75	47.79	50.62	52.74	53.19	53.77	53.11	52.80	52.82	51.88	---	---
15	47.67	47.58	50.22	53.73	53.05	53.55	53.72	53.56	53.38	51.62	---	---
20	47.60	47.97	49.89	53.47	53.23	53.19	52.99	53.73	52.97	---	---	---
25	47.52	47.80	51.22	53.82	54.48	53.19	52.56	54.03	53.21	---	---	---
FOU	47.49	48.96	50.83	53.35	53.93	52.70	53.41	53.48	52.47	---	49.96	---
WTR YR 1979			MEAN	51.69	MAX	54.48	FEB 25	AN) OTHERS	MIN	47.43	NOV 7	

353208077153801. Local number, PI-533.

LOCATION.--Lat 35°32'08", long 77°15'38", Hydrologic Unit 03020103, at Galloway Crossroads. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 9.3 ft (2.83 m), cased to 4.3 ft (1.31 m).

DATUM.--Measuring point: Top of casing, 53.61 ft (16.340 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.03 ft (15.86 m) NGVD, Feb. 25, 1979; lowest, 45.93 ft (14.00 m) NGVD, Nov. 6, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.55	46.00	48.46	50.16	49.80	50.64	50.79	50.23	50.32	49.76	48.67	49.92
10	46.33	46.18	48.60	49.87	49.81	50.78	50.11	49.60	49.60	48.97	48.25	50.09
15	46.27	46.00	48.35	51.09	49.68	50.50	50.66	50.39	50.17	49.06	48.21	49.81
20	46.19	46.34	48.17	50.51	49.99	49.95	49.81	50.46	49.78	49.01	47.79	49.33
25	46.10	46.16	49.50	51.00	51.50	50.00	49.47	50.94	50.17	49.93	47.73	49.15
FOU	46.05	49.22	48.70	50.22	51.08	49.50	50.16	50.36	49.35	49.12	47.38	50.34
WTR YR 1979			MEAN	49.08	MAX	51.67	FEB 26	MIN	45.95	NOV 7		

GROUND-WATER LEVELS

521

PITT COUNTY--Continued

353043077150001. Local number, PI-534.

LOCATION.--Lat 35°30'43", long 77°15'00", Hydrologic Unit 03020103, at Blackjack. Owner: U.S. Geological Survey.

AQUIFER.--Fluvial deposits of sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 6 in (0.15 m), depth 9.6 ft (2.93 m), cased to 4.6 ft (1.40 m).

DATUM.--Measuring point: Top of casing, 35.84 ft (10.924 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service). Top of casing raised from 34.01 ft (10.366 m) NGVD Mar. 19, 1979.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.02 ft (10.37 m) NGVD, June 11, 1979; lowest, 28.34 ft (8.64 m) NGVD, July 31, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.20	28.51	31.25	---	31.17	31.94	32.30	31.02	32.03	30.24		
10	28.94	23.91	31.35	---	31.82	31.89	31.52	30.47	30.48	29.76		
15	28.85	29.12	30.79	---	31.57	31.04	32.16	32.23	31.10	30.05		
20	28.75	29.15	30.86	---	32.36	31.09	30.64	32.18	30.57	32.17		
25	28.64	29.23	---	---	32.62	32.02	32.52	32.27	32.13	32.11		
END	28.52	30.65	---	31.55	32.20	30.71	31.14	31.61	30.25	---		

WTR YR 1979 MEAN 30.78 MAX 33.15 JUN 12 MIN 28.50 NOV 3 AND OTHERS

SAMPSON COUNTY

350030078194001. Local number, NC-24.

LOCATION.--Lat 35°00'30", long 78°19'40", Hydrologic Unit 03030006, at Clinton. Owner: City of Clinton.

AQUIFER.--Tuscaloosa Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 314 ft (95.7 m), multi-screened, top of screens 257 and 307 ft (78.3 and 93.6 m). Originally drilled to 385 ft (117.3 m).

DATUM.--Land-surface datum is 157.5 ft (48.01 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.40 ft (0.12 m) above land-surface datum.

PERIOD OF RECORD.--May 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.83 ft (5.43 m) below land-surface datum, Oct. 13, 1964; lowest, 28.69 ft (8.74 m) below land-surface datum, Oct. 15, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.08	26.59	26.42	26.38	26.08	25.36	23.69	23.94	---	24.51	24.50	24.61
10	26.19	26.56	26.40	26.31	26.03	24.78	23.66	23.95	23.91	24.68	24.90	23.92
15	26.31	26.52	26.45	26.23	26.02	24.43	23.58	---	24.01	24.92	24.85	23.91
20	26.58	26.56	26.49	26.19	26.00	24.28	23.63	---	23.98	24.85	25.01	24.00
25	26.60	26.56	26.46	26.06	25.64	23.96	23.69	---	24.09	24.24	24.88	24.05
END	26.60	26.41	26.52	26.06	25.53	23.83	23.87	---	24.30	24.29	25.06	23.72

WTR YR 1979 MEAN 25.17 HIGH 23.58 APR 14 AND OTHERS LOW 26.60 OCT 21 AND OTHERS

GROUND-WATER LEVELS

TRANSYLVANIA COUNTY

351808082374301. Local number, NC-127.

LOCATION.--Lat 35°18'08", long 82°37'43", Hydrologic Unit 06010105, Blantyre. Owner: Neal Hawkins.

AQUIFER.--Granite of Paleozoic age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 5 ft (1.5 m), depth 48 ft (14.6 m), lined with rock.

DATUM.--Land-surface datum is 2,146.39 ft (654.220 m) National Geodetic Vertical Datum of 1929. Measuring point: Nail in 4" x 4" stringer, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--July 1932 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.99 ft (7.62 m) below land-surface datum, June 4, 1979; lowest, 41.32 ft (12.59 m) below land-surface datum, Jan. 2, 1945, Dec. 25-27, 1954, Jan. 2, 3, 7, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 1	30.06	Nov. 27	32.10	Jan. 29	31.34	Apr. 2	27.34	May 28	25.08	July 31	26.87
Oct. 4	30.14	Dec. 4	32.24	Feb. 2	31.49	Apr. 3	27.95	June 4	24.99	Aug. 6	27.20
Oct. 9	30.25	Dec. 11	32.40	Feb. 12	30.75	Apr. 9	27.02	June 11	25.04	Aug. 13	27.27
Oct. 16	30.30	Dec. 18	32.71	Feb. 19	30.38	Apr. 16	26.25	June 18	25.14	Aug. 20	27.62
Oct. 23	30.72	Dec. 26	32.70	Feb. 23	29.94	Apr. 23	26.23	June 25	25.22	Aug. 27	27.73
Oct. 30	30.80	Jan. 2	32.62	Feb. 26	29.95	Apr. 30	25.84	July 2	25.26	Sept. 3	28.19
Nov. 6	31.21	Jan. 8	32.44	Mar. 5	26.97	May 7	25.51	July 9	28.90	Sept. 10	28.40
Nov. 9	31.43	Jan. 15	32.15	Mar. 12	28.95	May 10	25.33	July 16	26.24	Sept. 17	28.12
Nov. 13	31.25	Jan. 17	32.12	Mar. 19	28.61	May 14	25.35	July 23	26.55	Sept. 24	27.74
Nov. 20	31.32	Jan. 22	30.54	Mar. 26	27.41	May 21	25.30	July 30	26.73		

WASHINGTON COUNTY

354834076255001. Local number, NC-65.

LOCATION.--Lat 35°48'34", long 76°25'50", Hydrologic Unit 03010205, near Creswell. Owner: M. V. Cahoon.

AQUIFER.--Castle Hayne Limestone Formation of middle and late Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (0.05 m), depth 228 ft (69.5 m), drilled to 249 ft (75.9 m), cased to 249 ft (75.9 m).

DATUM.--Altitude of land-surface datum is 6 ft (2 m). Measuring point: Top of instrument shelf, 2.80 ft (0.85 m) above land-surface datum.

PERIOD OF RECORD.--March 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.29 ft (0.09 m) above land-surface datum, May 3, 1972; lowest measured, 2.85 ft (0.87 m) below land-surface datum, Aug. 22, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 3	2.57	Dec. 19	2.63	Mar. 14	2.47	June 5	2.45	Aug. 22	2.85	Sept. 19	2.73
Nov. 14	2.75	Jan. 31	2.39	May 1	2.61	July 25	2.76				

354347076313301. Local number WS-87.

LOCATION.--Lat 35°43'47", long 76°31'33", Hydrologic Unit 03020104, near Wenona. Owner: U.S. Geological Survey.

AQUIFER.--Marine sands and clays of post-miocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 3 in (0.08 m), depth 20 ft (6.10 m), cased to 16 ft (4.88 m), screen from 16 ft (4.88 m) to 20 ft (6.10 m).

DATUM.--Altitude of gage is 8 ft (2.4 m), from topographic map. Measuring point: Mark at top of casing, 16.49 ft (5.03 m). Top of casing is 1.9 ft (0.58 m) above land surface.

PERIOD OF RECORD.--April 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.28 ft (3.74 m) approximate NGVD, May 26, 1977; lowest, 8.19 ft (2.50 m) approximate NGVD, Nov. 7-8, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.21	8.23	9.52	10.94	10.87	11.21	11.02	10.94	11.03	10.50	9.77	9.74
10	9.02	8.48	9.73	11.05	10.90	11.31	10.95	10.96	10.85	10.36	9.57	10.27
15	8.83	8.56	9.73	11.31	10.84	11.12	11.10	11.43	10.78	10.21	9.47	10.14
20	8.66	8.44	9.72	11.11	10.93	11.01	10.97	11.41	10.68	10.10	9.27	9.98
25	8.46	8.39	9.99	11.17	11.29	10.98	10.84	11.37	10.62	10.10	9.63	9.93
END	8.29	8.86	10.11	11.00	11.46	10.85	11.01	11.11	10.51	9.94	9.50	9.98

WTR YR 1979

MEAN 10.23 MAY 11.56 FEB 26 AND OTHERS MIN 8.19 NOV 7

GROUND-WATER LEVELS

523

WASHINGTON COUNTY--Continued

354347076313302. Local number WS-88.

LOCATION.--Lat 35°43'47", long 76°31'33", Hydrologic Unit 03020104, near Wenona. Owner: U.S. Geological Survey.

AQUIFER.--Stratified deposits undifferentiated of Holocene Age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 3 in (0.08 m), depth 8 ft (2.44 m), cased to 4 ft (1.22 m), screen from 4 ft (1.22 m) to 8 ft (2.44 m).

DATUM.--Altitude of gage is 8 ft (2.4 m), from topographic map. Measuring point: three filed notches at top of casing, 15.66 ft (4.77 m). Top of casing is 1.1 ft (0.34 m) above land surface.

PERIOD OF RECORD.--October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.92 ft (3.94 m) approximate NGVD, Feb. 26, 1979; lowest, 8.85 ft (2.70 m) approximate NGVD, Nov. 8, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.82	8.91	9.93	12.04	11.97	12.44	12.28	12.10	12.14	11.37	10.46	10.41
10	9.61	9.00	10.34	12.04	12.05	12.60	12.11	12.04	11.94	11.19	10.31	10.74
15	9.41	9.06	10.44	12.05	11.96	12.37	12.34	12.81	11.83	10.98	10.20	10.59
20	9.23	9.02	10.46	12.05	12.16	12.21	12.11	12.64	11.70	10.84	10.10	10.44
25	9.66	8.95	11.05	12.07	12.67	12.14	11.94	12.55	11.55	10.76	10.33	10.39
EOM	9.03	9.71	11.16	12.06	12.73	11.98	12.15	12.27	11.42	10.61	10.18	10.36

WTR YR 1979

MEAN 11.13 MAX 12.91 FEB 26 MIN 8.90 NOV 4

354324076420202. Local number WS-89.

LOCATION.--Lat 35°43'24", long 76°42'02", Hydrologic Unit 03020104, near Wenona. Owner: U.S. Geological Survey.

AQUIFER.--Marine sands and clays of post-Miocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 3 in (0.08 m), depth 14.0 ft (4.27 m), cased to 10 ft (3.05 m), screen from 10 ft (3.05 m) to 14 ft (4.27 m).

DATUM.--Altitude of gage is 18 ft (5.5 m), from topographic map. Measuring point: Mark at top of casing, 20.40 ft (6.22 m). Top of casing is 2.4 ft (0.73 m) above land surface.

PERIOD OF RECORD.--October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.06 ft (4.59 m) approximate NGVD, Feb. 26-27, 1979; lowest, 4.34 ft (1.32 m) approximate NGVD, Oct. 24, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	10.51	11.45	14.42	14.35	14.73	14.56	14.61	14.48	14.18	12.30	11.73
10	---	10.57	12.38	14.69	14.41	14.82	14.66	14.66	14.40	13.72	11.86	13.82
15	---	10.60	12.62	14.69	14.43	14.67	14.57	14.65	14.37	13.37	11.81	13.28
20	---	10.53	12.61	14.70	14.39	14.48	14.45	14.91	14.56	13.17	11.46	12.64
25	6.57	10.53	12.74	14.71	14.83	14.51	14.28	14.92	14.57	13.09	11.27	12.36
EOM	10.37	10.66	13.78	14.55	14.98	14.39	14.70	14.61	14.59	12.75	11.44	12.58

WTR YR 1979

MEAN 13.40 MAX 15.05 FEB 27 MIN 6.57 OCT 25

354410076464901. Local number WS-90.

LOCATION.--Lat 35°44'10", long 76°46'49", Hydrologic Unit 03020104, near Hoke. Owner: U.S. Geological Survey.

AQUIFER.--Marine sands and clays of post-Miocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 3 in (0.08 m), depth 15.0 ft (4.57 m), cased to 11 ft (3.35 m), screen from 11 ft (3.35 m) to 15 ft (4.57 m).

DATUM.--Altitude of gage is 35 ft (10.7 m), from topographic map. Measuring point: Mark at top of casing, 37.30 ft (11.37 m). Top of casing is 2.30 ft (0.70 m) above land surface.

PERIOD OF RECORD.--November 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 33.50 ft (10.21 m) approximate NGVD, May 26-27, 1979; lowest, 27.38 ft (8.34 m) approximate NGVD, Nov. 12-23, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	27.74	29.52	33.12	33.31	33.13	33.17	33.30	32.80	30.91	29.94
10	---	---	27.95	30.60	33.14	33.37	33.21	33.11	33.23	32.39	30.78	31.28
15	---	27.38	28.13	31.63	33.14	33.35	33.20	33.14	33.13	32.02	30.55	31.82
20	---	27.38	28.29	32.37	33.16	33.24	33.17	33.35	33.11	31.69	30.27	31.90
25	---	27.40	28.50	32.91	33.27	33.15	33.02	33.49	33.07	31.51	29.99	31.87
EOM	---	27.53	28.80	33.11	33.34	33.13	33.19	33.42	33.07	31.13	29.84	32.14

WTR YR 1979

MEAN 31.66 MAX 33.50 MAY 26 MIN 27.38 NOV 13 AND OTHERS

GROUND-WATER LEVELS

WAYNE COUNTY

352006077581001. Local number, NC-25.

LOCATION.--Lat 35°20'06", long 77°58'10", Hydrologic Unit 03020201, Seymour Johnson AFB, Goldsboro. Owner: U.S. Air Force.

AQUIFER.--Tuscaloosa Formation of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 87 ft (26.5 m), cased to 31 ft (9.4 m).

DATUM.--Altitude of land-surface datum is 70 ft (21 m). Measuring point: Top of casing, 0.50 ft (0.15 m) above land-surface datum.

REMARKS.--Water levels affected by nearby pumping.

PERIOD OF RECORD.--August 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.24 ft (0.07 m) above land-surface datum, Jan. 29, 1978; lowest measured, 22.57 ft (6.88 m) below land-surface datum, Nov. 21, 1973.

WATER LEVEL* IN FEET BELOW LAND SURFACE DATUM* WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.42	10.76	10.80	10.15	6.87	17.92	4.95	6.75	6.81	7.02	9.24	8.40
10	10.29	10.87	10.82	10.05	8.06	18.35	5.12	7.03	6.67	7.59	9.76	6.03
15	10.50	10.71	10.34	9.82	8.33	18.63	5.00	6.99	5.53	8.65	9.82	4.65
20	10.54	10.74	10.14	9.16	7.59	3.68	5.87	6.57	6.24	8.99	10.06	6.69
25	10.94	9.73	9.87	8.78	7.75	4.51	6.22	5.76	6.67	8.79	10.05	6.60
FORM	10.76	10.08	9.78	6.86	5.88	4.25	6.46	6.08	6.51	8.69	10.16	5.22

WTR YR 1979

MEAN 8.58 HIGH 3.39 MAR 19 LOW 16.63 MAR 3 AND OTHERS

QUALITY OF GROUND WATER

525

354347076313301 PUNGO NATIONAL WILDLIFE REFUGE DEEP WELL #3

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT 04...	1230	128	5.6	18.0	300	260	<1	<1	<1	24	0
DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS C03)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	
OCT 04...	7.1	1.5	5.7	33	.5	.8	50	0	41	201	10
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	
OCT 04...	7.0	.2	75	199	154	.27	.00	.02	.01	.01	
DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	
OCT 04...	1.2	.34	.86	1.2	5.4	.14	.43	.09	28	1.6	

QUALITY OF GROUND WATER

354342076311601 PUNGO NATIONAL WILDLIFE REFUGE SHALLOW WELL #4

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	COLIFORM, TOTAL, IMMEDIATE (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-VF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	ACIDITY TOTAL HEATED (MG/L AS H)
OCT 04...	1015	80	4.0	20.0	1500	360	<1	<1	<1	5	5	1.0
DATE	ACIDITY (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD-SORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CaCO3)	CARBON DIOXIDE, DIS-SOLVED (MG/L AS CO2)	SULFATE, DIS-SOLVED (MG/L AS SO4)
OCT 04...	50	1.1	.5	4.5	64	.9	.5	.0	0	0	.0	20
DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITROGEN, NO2+NO3 (MG/L AS N)	NITROGEN, NO2+NO3, DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT 04...	9.9	.0	6.1	169	47	.23	.00	.11	.06	.07	2.5	.50
DATE	NITROGEN, AMMONIA + ORGANIC, DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS P04)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC, DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC, SUSPENDED, TOTAL (MG/L AS C)
OCT 04...	2.0	2.6	11	.07	.21	.10	4	3400	60	80	31	1.8

A P P E N D I X

APPENDIX

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
39332	ALDRIN, SUSPENDED TOTAL (UG/L)
39332	ALDRIN, SUSPENDED (UG/L)
01505	ALPHA, SUSPENDED TOTAL (PCI/L)
01505	ALPHA, SUSPENDED (PCI/L)
01506	ALPHA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
01506	ALPHA, SUSPENDED, COUNTING ERROR (PCI/L)
01105	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
01105	ALUMINUM, TOTAL (UG/L AS AL)
01107	ALUMINUM, SUSPENDED RECOVERABLE (UG/L AS AL)
01107	ALUMINUM, SUSPENDED (UG/L AS AL)
01108	ALUMINUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AL)
01108	ALUMINUM, TOTAL IN BOTTOM MATERIAL (UG/G AS AL)
01096	ANTIMONY, SUSPENDED TOTAL (UG/L AS Sb)
01096	ANTIMONY, SUSPENDED (UG/L AS Sb)
39502	AROCLOX, SUSPENDED TOTAL, 1244 PCN SERIES (UG/L)
39502	AROCLOX, SUSPENDED, 1244 PCN SERIES (UG/L)
39506	AROCLOX, SUSPENDED TOTAL, 1254 PCN SERIES (UG/L)
39506	AROCLOX, SUSPENDED, 1254 PCN SERIES (UG/L)
39510	AROCLOX, SUSPENDED TOTAL, 1269 PCN SERIES (UG/L)
39510	AROCLOX, SUSPENDED, 1269 PCN SERIES (UG/L)
01001	ARSENIC, SUSPENDED TOTAL (UG/L AS As)
01001	ARSENIC, SUSPENDED (UG/L AS As)
01006	BARIUM, SUSPENDED RECOVERABLE (UG/L AS Ba)
01006	BARIUM, SUSPENDED (UG/L AS Ba)
01007	BARIUM, TOTAL RECOVERABLE (UG/L AS Ba)
01007	BARIUM, TOTAL (UG/L AS Ba)
01008	BARIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS Ba)
01008	BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS Ba)
01011	BERYLLIUM, SUSPENDED RECOVERABLE (UG/L AS Be)
01011	BERYLLIUM, SUSPENDED (UG/L AS Be)
01012	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS Be)
01012	BERYLLIUM, TOTAL (UG/L AS Be)
01013	BERYLLIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS Be)
01013	BERYLLIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS Be)
03505	BETA, SUSPENDED TOTAL (PCI/L)
03505	BETA, SUSPENDED (PCI/L)
03506	BETA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
03506	BETA, SUSPENDED, COUNTING ERROR (PCI/L)
01016	BISMUTH, SUSPENDED TOTAL (UG/L AS Bi)
01016	BISMUTH, SUSPENDED (UG/L AS Bi)
01021	BORON, SUSPENDED RECOVERABLE (UG/L AS B)
01021	BORON, SUSPENDED (UG/L AS B)
01022	BORON, TOTAL RECOVERABLE (UG/L AS B)
01022	BORON, TOTAL (UG/L AS B)
01023	BORON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS B)
01023	BORON, TOTAL IN BOTTOM MATERIAL (UG/G AS B)
01026	CADMIUM, SUSPENDED RECOVERABLE (UG/L AS Cd)
01026	CADMIUM, SUSPENDED (UG/L AS Cd)
01027	CADMIUM, TOTAL RECOVERABLE (UG/L AS Cd)
01027	CADMIUM, TOTAL (UG/L AS Cd)
01028	CADMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS Cd)
01028	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS Cd)
00916	CALCIUM, TOTAL RECOVERABLE (MG/L AS Ca)
00916	CALCIUM, TOTAL (MG/L AS Ca)
07052	CALCIUM 45, SUSPENDED TOTAL (PCI/L)
07052	CALCIUM 45, SUSPENDED (PCI/L)

APPENDIX

529

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
07053	CALCIUM 45, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07053	CALCIUM 45, SUSPENDED, COUNTING ERROR (PCI/L)
00663	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00663	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00658	CARBON, INORGANIC, SUSPENDED TOTAL (MG/L AS C)
00658	CARBON, INORGANIC, SUSPENDED (MG/L AS C)
00659	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00659	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00654	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00654	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED (MG/L AS C)
01116	CESIUM, SUSPENDED TOTAL (UG/L AS CS)
01116	CESIUM, SUSPENDED (UG/L AS CS)
23494	CESIUM 137, SUSPENDED TOTAL (PCI/L)
23494	CESIUM 137, SUSPENDED (PCI/L)
23495	CESIUM 137, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
23495	CESIUM 137, SUSPENDED, COUNTING ERROR (PCI/L)
23412	CESIUM 134, SUSPENDED TOTAL (PCI/L)
23412	CESIUM 134, SUSPENDED (PCI/L)
23413	CESIUM 134, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
23413	CESIUM 134, SUSPENDED, COUNTING ERROR (PCI/L)
39353	CHLORINE, SUSPENDED TOTAL (UG/L)
39353	CHLORINE, SUSPENDED (UG/L)
01029	CHROMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CR)
01029	CHROMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CR)
01031	CHROMIUM, SUSPENDED RECOVERABLE (UG/L AS CR)
01031	CHROMIUM, SUSPENDED (UG/L AS CR)
01034	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
01034	CHROMIUM, TOTAL (UG/L AS CR)
01036	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)
01036	COBALT, SUSPENDED (UG/L AS CO)
01037	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
01037	COBALT, TOTAL (UG/L AS CO)
01038	COBALT, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CO)
01038	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G AS CO)
01041	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
01041	COPPER, SUSPENDED (UG/L AS CU)
01042	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
01042	COPPER, TOTAL (UG/L AS CU)
01043	COPPER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CU)
01043	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G AS CU)
39362	DDO, SUSPENDED TOTAL (UG/L)
39362	DDO, SUSPENDED (UG/L)
39367	DEE, SUSPENDED TOTAL (UG/L)
39367	DEE, SUSPENDED (UG/L)
39372	DDT, SUSPENDED TOTAL (UG/L)
39372	DDT, SUSPENDED (UG/L)
39573	DIAZINON, SUSPENDED TOTAL (UG/L)
39573	DIAZINON, SUSPENDED (UG/L)
39382	DIELDRIN, SUSPENDED TOTAL (UG/L)
39382	DIELDRIN, SUSPENDED (UG/L)
39392	ENDRIN, SUSPENDED TOTAL (UG/L)
39392	ENDRIN, SUSPENDED (UG/L)
01121	GALLIUM, SUSPENDED TOTAL (UG/L AS GA)
01121	GALLIUM, SUSPENDED (UG/L AS GA)
01126	GERMANIUM, SUSPENDED TOTAL (UG/L AS GE)
01126	GERMANIUM, SUSPENDED (UG/L AS GE)

APPENDIX

PARAMETER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS U NATURAL)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/L AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/G AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/L AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/L AS U NATURAL)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS SR/YT-90)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS SR/YT-90)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS CS-137)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS CS-137)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS SR/YT-90)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS SR/YT-90)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS CS-137)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS CS-137)
39412	HEPTACHLOR, SUSPENDED TOTAL (UG/L)
39412	HEPTACHLOR, SUSPENDED (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED TOTAL (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED (UG/L)
01044	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
01044	IRON, SUSPENDED (UG/L AS FE)
01045	IRON, TOTAL RECOVERABLE (UG/L AS FE)
01045	IRON, TOTAL (UG/L AS FE)
01170	IRON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS FE)
01170	IRON, TOTAL IN BOTTOM MATERIAL (UG/G AS FE)
07062	IRON 59, SUSPENDED TOTAL (PCI/L)
07062	IRON 59, SUSPENDED (PCI/L)
07063	IRON 59, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07063	IRON 59, SUSPENDED, COUNTING ERROR (PCI/L)
39432	ISODRIN, SUSPENDED TOTAL (UG/L)
39432	ISODRIN, SUSPENDED (UG/L)
01050	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)
01050	LEAD, SUSPENDED (UG/L AS PB)
01051	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
01051	LEAD, TOTAL (UG/L AS PB)
01052	LEAD, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS PB)
01052	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G AS PB)
39342	LINDANE, SUSPENDED TOTAL (UG/L)
39342	LINDANE, SUSPENDED (UG/L)
01131	LITHIUM, SUSPENDED RECOVERABLE (UG/L AS LI)
01131	LITHIUM, SUSPENDED (UG/L AS LI)
01132	LITHIUM, TOTAL RECOVERABLE (UG/L AS LI)
01132	LITHIUM, TOTAL (UG/L AS LI)
00926	MAGNESIUM, SUSPENDED RECOVERABLE (MG/L AS MG)
00926	MAGNESIUM, SUSPENDED (MG/L AS MG)

APPENDIX

531

PARA-
METER
CODEFIRST LINE - NEW TERMINOLOGY
SECOND LINE - OLD TERMINOLOGY

00927	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)
00927	MAGNESIUM, TOTAL (MG/L AS MG)
39533	MALATHION, SUSPENDED TOTAL (UG/L)
39533	MALATHION, SUSPENDED (UG/L)
01053	MANGANESE, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MN)
01053	MANGANESE, TOTAL IN BOTTOM MATERIAL (UG/G AS MN)
01054	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)
01054	MANGANESE, SUSPENDED (UG/L AS MN)
01055	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
01055	MANGANESE, TOTAL (UG/L AS MN)
71895	MERCURY, SUSPENDED RECOVERABLE (UG/L AS HG)
71895	MERCURY, SUSPENDED (UG/L AS HG)
71900	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)
71900	MERCURY, TOTAL (UG/L AS HG)
71921	MERCURY, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS HG)
71921	MERCURY, TOTAL IN BOTTOM MATERIAL (UG/G AS HG)
39603	METHYL PARATHION, SUSPENDED TOTAL (UG/L)
39603	METHYL PARATHION, SUSPENDED (UG/L)
39757	MIREX, SUSPENDED TOTAL (UG/L)
39757	MIREX, SUSPENDED (UG/L)
01061	MOLYBDENUM, SUSPENDED RECOVERABLE (UG/L AS MO)
01061	MOLYBDENUM, SUSPENDED (UG/L AS MO)
01062	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
01062	MOLYBDENUM, TOTAL (UG/L AS MO)
01063	MOLYBDENUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MO)
01063	MOLYBDENUM, TOTAL IN BOTTOM MATERIAL (UG/G AS MO)
01066	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
01066	NICKEL, SUSPENDED (UG/L AS NI)
01067	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
01067	NICKEL, TOTAL (UG/L AS NI)
01068	NICKEL, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS NI)
01068	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G AS NI)
00623	NITROGEN, AMMONIA PLUS ORGANIC, DISSOLVED (MG/L AS N)
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)
00624	NITROGEN, AMMONIA PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS N)
00624	NITROGEN, KJELDAHL, SUSPENDED (MG/L AS N)
00625	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (MG/L AS N)
00625	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)
00626	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00626	NITROGEN, KJELDAHL, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
39543	PARATHION, SUSPENDED TOTAL (UG/L)
39543	PARATHION, SUSPENDED (UG/L)
39518	PCH, SUSPENDED TOTAL (UG/L)
39518	PCH, SUSPENDED (UG/L)
09505	RADIUM 226, SUSPENDED TOTAL (PCI/L)
09505	RADIUM 226, SUSPENDED (PCI/L)
07082	RHODAMINE WT, SUSPENDED TOTAL (UG/L)
07082	RHODAMINE WT, SUSPENDED (UG/L)
01136	RUBIDIUM, SUSPENDED TOTAL (UG/L AS RB)
01136	RUBIDIUM, SUSPENDED (UG/L AS RB)
29633	SCANDIUM 46, SUSPENDED TOTAL (PCI/L)
29633	SCANDIUM 46, SUSPENDED (PCI/L)
29634	SCANDIUM 46, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
29634	SCANDIUM 46, SUSPENDED, COUNTING ERROR (PCI/L)
01146	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)
01146	SELENIUM, SUSPENDED (UG/L AS SE)
07102	SELENIUM 75, SUSPENDED TOTAL (PCI/L)
07102	SELENIUM 75, SUSPENDED (PCI/L)

APPENDIX

PARA- METER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
07103	SELENIUM 75, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07103	SELENIUM 75, SUSPENDED, COUNTING ERROR (PCI/L)
01076	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)
01076	SILVER, SUSPENDED (UG/L AS AG)
01077	SILVER, TOTAL RECOVERABLE (UG/L AS AG)
01077	SILVER, TOTAL (UG/L AS AG)
01078	SILVER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AG)
01078	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G AS AG)
07122	SILVER 110, SUSPENDED TOTAL (PCI/L)
07122	SILVER 110, SUSPENDED (PCI/L)
07123	SILVER 110, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07123	SILVER 110, SUSPENDED, COUNTING ERROR (PCI/L)
39763	SILVER, SUSPENDED TOTAL (UG/L)
39763	SILVER, SUSPENDED (UG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED TOTAL (MG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED (MG/L)
01081	STRONTIUM, SUSPENDED RECOVERABLE (UG/L AS SR)
01081	STRONTIUM, SUSPENDED (UG/L AS SR)
01082	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)
01082	STRONTIUM, TOTAL (UG/L AS SR)
01083	STRONTIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS SR)
01083	STRONTIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS SR)
13505	STRONTIUM 90, SUSPENDED TOTAL (PCI/L)
13505	STRONTIUM 90, SUSPENDED (PCI/L)
13506	STRONTIUM 90, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
13506	STRONTIUM 90, SUSPENDED, COUNTING ERROR (PCI/L)
07142	SULFUR 35, SUSPENDED TOTAL (PCI/L)
07142	SULFUR 35, SUSPENDED (PCI/L)
07143	SULFUR 35, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07143	SULFUR 35, SUSPENDED, COUNTING ERROR (PCI/L)

PARA- METER CODE	FIRST LINE - NEW TERMINOLOGY SECOND LINE - OLD TERMINOLOGY
01101	TIN, SUSPENDED RECOVERABLE (UG/L AS SN)
01101	TIN, SUSPENDED (UG/L AS SN)
01102	TIN, TOTAL RECOVERABLE (UG/L AS SN)
01102	TIN, TOTAL (UG/L AS SN)
01151	TITANIUM, SUSPENDED TOTAL (UG/L AS TI)
01151	TITANIUM, SUSPENDED (UG/L AS TI)
39402	TOXAPHENE, SUSPENDED TOTAL (UG/L)
39402	TOXAPHENE, SUSPENDED (UG/L)
07010	TRITIUM, SUSPENDED TOTAL (PCI/L)
07010	TRITIUM, SUSPENDED (PCI/L)
07011	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07011	TRITIUM, SUSPENDED, COUNTING ERROR (PCI/L)
07014	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (TRITIUM UNITS)
07014	TRITIUM, SUSPENDED, COUNTING ERROR (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED TOTAL (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED (TRITIUM UNITS)
22705	URANIUM, NATURAL, SUSPENDED TOTAL (UG/L AS U NATURAL)
22705	URANIUM, NATURAL, SUSPENDED (UG/L AS U NATURAL)
01006	VANADIUM, SUSPENDED TOTAL (UG/L AS V)
01006	VANADIUM, SUSPENDED (UG/L AS V)
01091	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
01091	ZINC, SUSPENDED (UG/L AS ZN)
01092	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
01092	ZINC, TOTAL (UG/L AS ZN)
01093	ZINC, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS ZN)
01093	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G AS ZN)
01161	ZIRCONIUM, SUSPENDED TOTAL (UG/L AS ZR)
01161	ZIRCONIUM, SUSPENDED (UG/L AS ZR)
39733	2,4-D, SUSPENDED TOTAL (UG/L)
39733	2,4-D, SUSPENDED (UG/L)
39743	2,4,5-T, SUSPENDED TOTAL (UG/L)
39743	2,4,5-T, SUSPENDED (UG/L)

THIS PAGE IS INTENTIONALLY BLANK

	Page		Page
Abbotts Creek at Lexington.....	491	Boiling Springs, Broad River near.....	392-399
Acknowledgment.....	2	Sandy Run Creek near.....	494
Acre-foot, definition of.....	3	Sugar Branch near.....	402,403
Ahoskie, Ahoskie Creek at.....	20,21	Bolton, Big Creek near.....	490
Ahoskie Creek at Ahoskie.....	20,21	Boone, South Fork New River at U.S. Highway	
Albemarle Canal near Swindell.....	123-138	421 near.....	495
Algae, definition of.....	3	Bottom material, definition of.....	4
Allensville, Mayo Creek tributary near.....	487	Bowling Green, S.C., Crowders Creek near.....	493
All Healing Springs, Lower Little River near..	369,500	Brevard, Davidson River near.....	413,414
Amelia, New River at.....	495	King Creek at U.S. Highway 64 at.....	495
Analyses of samples collected at miscellaneous		Broad River, at Uree.....	494
sites (Ohio River basin).....	501	at State Line near Earl.....	494
Analyses of samples collected at miscellaneous		at U.S. Highway 221A near Cliffside.....	494
sites (South Atlantic Slope basin).....	499	near Boiling Springs.....	392-399
Andrews, Valley River near.....	497	Brown Marsh Swamp at U.S. Highway 701 near	
Apex, Middle Creek at Durham and Southern		Clarkton.....	491
Railroad, near.....	488	Brunswick County, ground water records in....	504
Appalachia Lake, change in contents in.....	484,485	Brushy Creek at Dover Mill near Shelby.....	494
Appendix.....	527	at U.S. Highway 74 near Shelby.....	494
Aquifer, definition of.....	3	near Washburn.....	494
Ararat, Ararat River at.....	305,306	Bryson City, Tuckasegee River at.....	477,478,483,485
Ararat River, at Ararat.....	305,306	Buckhead Creek near Owens.....	247,248
near Salem.....	491	Buckhorn Creek near Corinth.....	244
near Siloam.....	491	Buckhorn Reservoir (Cape Fear River basin)....	407
Arneys Store, Johns River at.....	493	Buckhorn Reservoir (Neuse River basin).....	406
Artesian, Definition of.....	3	Buffalo Creek (tributary to Reedy Fork) near	
Asbury, Dan River below SEO near.....	487	McLeansville.....	489
Asheville, French Broad River at.....	424,501	Buffalo Creek, (tributary to Broad River) near	
Ross Creek near.....	496	Grover.....	494
Ashepole Swamp at State Highway 710 at Elrod..	492	near Waco.....	494
Ashland, Country Line Creek at SR 1146 near...	487	Buffalo, Valley River at.....	498
Ash mass, definition of.....	4	Burnett Lake.....	484
Atwood, Salem Creek near.....	311,312	Burnsville, Cane River at.....	497
		McIntosh Branch near.....	497
Bacteria, definition of.....	3	Bynum, Haw River near.....	223,224
Badin Lake, change in contents in.....	404,407	Ward Branch near.....	489
Bahama, Flat River at.....	141		
Balfour, Mud Creek at.....	496	Caldwell Fork at Cataloochee.....	497
Banjo Branch at Mars Hill.....	496	Calvert, Galloway Creek above SEO near.....	495
Barber, Second Creek near.....	500	Candler, Hominy Creek at.....	496
Barclaysville, Black River near.....	490	Cane River at Burnsville.....	497
Baynes, Hyco Creek at SR 1767 near.....	487	Canton, East Fork Pigeon River near.....	437,438
Bear Creek Lake.....	485	Pigeon River at.....	439,440,484
Bear Creek near Parkstown.....	166-168	Cape Fear River, at Lillington.....	245
Beaufort County, ground water records in.....	502-504	at Lock 1 near Kelly.....	251-264
Beaver Creek, at Cumberland.....	489	at William O. Huske Lock near Tarheel.....	249,250
near Skibo.....	489	Cape Fear River basin, gaging-station records	
Beaverdam Creek near Grantham.....	157-159	in.....	213-284
Bed material, definition of.....	4	lakes and reservoirs in.....	406-407
Beetree Creek near Swannanoa.....	496	measurements at miscellaneous sites in....	488-490
Beetree Reservoir.....	484	Carteret County, ground water records in....	505
Bellemont, Big Alamance Creek near.....	489	Cartoogechaye Creek near Franklin.....	465,466
Bent Creek, French Broad River at.....	420,421	Cartoogechaye, Jones Creek at.....	497
Bertie County, ground water records in.....	504	Casar, First Broad River near.....	400,401
Bessemer City, Long Creek near.....	367,377	Cashiers, Chattooga River near.....	495
Bethel, Conetoe Creek near.....	81,82	Cataloochee Creek at Cataloochee.....	497
Bethesda, Leonard Creek near.....	330,331	Cataloochee, Cataloochee Creek at.....	497
Bethel Hill, Mayo Creek near.....	48,49	Caldwell Fork at.....	496
Big Alamance Creek near Bellemont.....	489	Cataloochee Creek near.....	450-459
near Elon College.....	221,222	Palmer Creek near.....	496
Big Bear Creek, near Richfield.....	332,333	Rough Fork near.....	496
Big Branch near Garner.....	488	Catawba River, at Morganton.....	493
Big Creek near Bolton.....	490	at Old Fort.....	492
Big shoe Heel Creek near Raemon.....	492	near Marion.....	366,367
Biltmore, Swannanoa River at.....	422,423,484	South Fork, near Startown.....	493
Biochemical Oxygen demand, definition of.....	4	Cedar Cliff Lake.....	485
Biomass, definition of.....	4	Cedar Mountain, Little River above High Falls	
Birdtown, Oconaluftee River at.....	475,476	near.....	415
Bisco, White Oak Creek near.....	492	Cells/volume/, definition of.....	4
Black River, (tributary to South River) at		Celo, South Toe River near.....	460,461
SR 1722 near Dunn.....	267,270,490	Cfs-day, definition of.....	4
near Barclaysville.....	490	Charlotte, Irwin Creek at U.S. Highway 21 at..	493
near Dunn.....	276,490	Irwin Creek near.....	378,500
near Erwin.....	271-275	Little Sugar Creek at Archdale Road at.....	379,380
Black River (tributary to Cape Fear River)		Little Sugar Creek at Secondary Road 3814	
near Tomahawk.....	265,266	at.....	493
Blackwood, New Hope Creek near.....	489	McAlpine Creek at Sardis Road near.....	381,500
Blantyre, French Broad River at.....	416,417	McMullen Creek at Sharon View Road near....	382,383
Blevins Crossroads, Little River near.....	495	Chattooga River near Cashiers.....	495
Blewett Falls Lake, change in contents in.....	405,408	Chatuge Lake, change in contents in.....	484,485
Boardman, Lumber River at.....	365	Chemical oxygen demand, definition of.....	4

	Page		Page
Cheoah Lake.....	485	Drowning Creek at U.S. Highway 15 near Hoffman.....	492
Cheoah River near Robbinsville.....	497	near Hoffman.....	363,364
Cheraw, S. C., Pee Dee River at.....	492	near Jackson Springs.....	492
Chicod Creek, at SR 1565 near Grimesland.....	83-86,486,488	Dry mass, definition of.....	4
at SR 1760 near Simpson.....	91-98	Dunn, Black River at SR 1722 near.....	267-270,490
Chinquapin, Northeast Cape Fear River near.....	279,280	Black River near.....	276,490
Chlorophyll, definition of.....	4	Mingo Swamp near.....	490
Chowan County, ground water records in.....	505-506	Dunns Rock, French Broad River at.....	495
Chowan River basin, gaging-station records in.....	19-21	Duplin County, ground water records in.....	509
Clark Creek at Lincolnton.....	493	Durham Creek, at Edward.....	105,106
Clarkton, Brown Marsh Swamp at U.S. Highway 701 near.....	491	Durham, Eno River near.....	139,499
Clayton, Middle Creek near.....	156,499	Dutchmans Creek at Secondary Road 1002 near Stanley's Store.....	491
Neuse River near.....	154,406		
Neuse River tributary above Secondary Road 1705 near.....	488	East Fork Lake.....	485
Clemmons, South Fork Muddy Creek near.....	315,316	Earl, Broad River at State Line near.....	494
Cliffside, Broad River at U.S. Highway 221A near.....	494	Eden, Smith River at.....	26,27
Second Broad River at.....	390,391	Edgecombe County, ground water records in.....	509
Clyde, Pigeon River at.....	496	Edward, Durham Creek at.....	105,106
Richland Creek near.....	496	Eldorado, Uwharrie River near.....	491
Coalglen, Rocky River near.....	489	Elk Creek at Elkville.....	289,290
Color unit, definition of.....	4	Elkin, Elkin River at.....	486
Conetoe Creek near Bethel.....	81,82	Yadkin River at.....	297,298,404
Contentnea Creek, at Hookerton.....	187-194	Elkin River at Elkin.....	486
near Lucama.....	181,406	Elkville, Elk Creek at.....	289,290
Contents, definition of.....	4	Elon College, Big Alamance Creek near.....	221,222
Control, definition of.....	4	Elrod, Ashepole Swamp at State Highway 710 at Enfield, Fishing Creek near.....	68,69
Coolemees, South Yadkin River at.....	491	Enka, Lee Creek near.....	496
Third Creek at.....	491	Enon, Yadkin River at.....	309,310,404
Cooperation, record of.....	1	Eno River near Durham.....	139,499
Copeland, Fisher River near.....	301,302	near Weaver.....	488
Cordova, Hitchcock Creek at.....	492	Erwin, Black River near.....	271-275
Corinth, Buckhorn Creek near.....	244	Upper Little River near.....	489
Country Line Creek at SR 1146 near Ashland.....	487	Eureka, Turner Swamp near.....	185
at State Highway 57 at Milton.....	487		
Cove Creek (tributary to Watauga River) at Sugar Grove.....	497	Faggarts Crossroads, Irish Buffalo Creek near.....	491
Cove Creek (Santee River basin) near Lake Lure.....	388,389	Rocky River near.....	491
Cow Swamp near Grimesland.....	87-90,486,488	Fairmont, Oldfield Swamp near.....	492
Cox Mill, Mill Creek at.....	488	Falls, Neuse River near.....	143-153
Crabtree, Pigeon River below.....	496	Farmville, Little Contentnea Creek near.....	195,196
Craven County, ground water records in.....	506-507	Pecal Coliform bacteria, definition of.....	3
Creeping Swamp near Vanceboro.....	198	Pecal Streptococcal bacteria, definition of.....	4
Crowders Creek near Bowling Green.....	493	First Broad River, near Casar.....	400,401
Cubic feet per second, definition of.....	4	near Lawndale.....	486
Cubic feet per second per square mile, definition of.....	4	Fisher River near Copeland.....	301,302
Cumberland, Beaver Creek at.....	489	Fishing Creek, near Enfield.....	68,69
Cumberland County, ground water records in.....	508	Fites Creek at State Highway 273 at Mount Holly.....	493
		Flat Creek near Inverness.....	246,500
Daileys Creek near Liddell.....	163-165	Flat River at Bahama.....	141
Dalton, Little Yadkin River at.....	307,308	Fletcher, Pinner Creek near.....	496
Dan River, at Madison Industrial Site.....	487	Fontana Lake, change in contents in.....	483,485
at Milton.....	487	Fork, Humpy Creek near.....	324,325
at Pine Hall.....	487	Foscoe, Watauga River at.....	497
below SEO near Asbury.....	487	Francisco, Dan River near.....	22,23,404
near Francisco.....	22,23,404	Franklin, Cartoogechaye Creek near.....	465,466
near Mayfield.....	28-36,404	Freeland, Waccamaw River at.....	285,286
near Wentworth.....	24,25,404	French Broad River, at Asheville.....	424,501
Data, accuracy of.....	10	at Bent Creek.....	420,421
collected by other agencies.....	11	at Blantyre.....	416,417
ground-water level records, collection of.....	12	at Dunns Rock.....	495
other available.....	11	at Marshall.....	425-432
surface-water records, collection and computation of.....	9	at Rosman.....	411,412
water-quality, collection and examination of.....	11	West Fork, at Rosman.....	495
Davidson River, near Brevard.....	413,414	West Fork, near Rosman.....	495
Davidson, Rocky River near.....	491		
Dave County, ground water records in.....	508	Gage-height, definition of.....	5
Deep Creek near Tarboro.....	488	Gaging-station, definition of.....	5
Deep River at Goldston.....	489	Galloway Creek above SEO near Calvert.....	495
at Moncure.....	243,500	Garner, Big Branch near.....	488
at Ramseur.....	230-240,407	Garland, Great Coharie Creek at Secondary Road 1134 near.....	490
at Randleman.....	229,406,407,499	Great Coharie Creek tributary near.....	490
East Fork near High Point.....	227,228	Gates County, ground water records in.....	510
Definition of Terms.....	3	Gibsonville, Reedy Fork near.....	215,216,406
Dillsboro, Tuckasegee River at.....	473,474,483,485	Glenola, Uwharrie River near.....	491
Discharge, definition of.....	4	Goldsboro, Neuse River near.....	162
Dissolved, definition of.....	4	Gordonton, South Hyco Creek near.....	487
Dobsons Crossroads, Morgan Creek at Secondary Road 1112 near.....	489	Gourd Vine Creek at Secondary Road 1715 near Olive Branch.....	334-336
Double Creek near Roseville.....	40,41	Gragg, Wilson Creek near.....	493
Downstream order and station numbering, explanation of.....	7	Grantham, Beaverdam Creek near.....	157-159
Drainage area, definition of.....	4	Great Coharie Creek, at Secondary Road 1134 near Garland.....	490
Drainage basin, definition of.....	4	at Secondary Road 1636 near Timothy.....	490
		near Ingold.....	490
		tributary near Garland.....	490
		Greensboro, North Buffalo Creek near.....	217,218

INDEX

	Page		Page
Grimesland, Chicod Creek at Secondary Road		Jackson Springs, Drowning Creek at.....	537
1565 near.....	83-86,486,488	Jacob Fork at Ramsey.....	492
Cow Swamp near.....	87-90,486,488	Jefferson, South Fork New River near.....	374
Groomtown, Richland Creek near.....	489	Johns River, at Arneys Store.....	409,410
Ground-water level records, explanation of....	12	Jones County, ground water records in.....	493
Ground-water records.....	502-526	Jones Creek near Cartoogechaye.....	514
Grover, Buffalo Creek near.....	494	Julian, Little Alamance Creek near.....	497
Gum Swamp Creek near Old Hundred.....	492	Junaluska, Pigeon River near.....	489
		Juniper Branch near Simpson.....	496
Hamlet, Marks Creek at Secondary Road 1812		Juniper Creek at State Highway 211 near	99-103
near.....	492	Prospect	491
Hardness, definition of.....	5		
Hargrove Crossroads, Six Runs Creek at		Kanawha River basin, gaging-station	
Secondary Road 1740 near.....	490	records in.....	409
Harmony, Hunting Creek near.....	328,329	measurements at miscellaneous sites in....	495
Harnett County, Ground water records in.....	510-512	Kelly, Cape Fear River at Lock 1 near.....	251-264
Harrisburg, Mallard Creek at.....	491	Kenly, Little River near.....	160
Harris Crossroads, Little River at U.S.		Kerr, John H., Reservoir.....	50
Highway 401 near.....	488	Kerr, South River near.....	490
Haw River, at Haw River.....	219,220,406	King Creek at U.S. Highway 64 at Brevard.....	495
below B. Everett Jordan Dam near Haywood....	225,226	Kinston, Neuse River near.....	169-180
near Bynum.....	223,224		
near Oak Ridge.....	488	Laboratory, Indian Creek near.....	375
near Terrells.....	489	Lakes and reservoirs:	
Hayesville, Hiwassee River at U.S. Highway		Ohio River basin.....	483-485
64 near.....	497	Appalachia Lake, change in contents in... 484,485	
Haywood County, ground water records in.....	512	Bear Creek Lake.....	485
Hazelwood, Richland Creek above.....	496	Beetree Reservoir.....	484
West Fork Pigeon River above Lake Logan		Burnett Lake.....	484
near.....	433,434	Cedar Cliff Lake.....	485
Henderson, Nutbush Creek near.....	487	Chatuge Lake, change in contents in.....	484,485
Henry Fork, near Henry River.....	372,373	Cheoah Lake.....	485
near Startown.....	493	East Fork Lake.....	485
Henry River, Henry Fork near.....	372,373	Fontana Lake, change in contents in.....	483,485
Hepco, Pigeon River near.....	441-449,484	Hiwassee Lake, change in contents in.....	484,485
Herring Run near Washington.....	104	Julian, Lake.....	484
Hertford County, ground water records in.....	513	Junaluska, Lake.....	484
Hewletts Creek at SR 1102 at Wilmington.....	211,212	Logan, Lake.....	484
Hickory Creek at Shelby.....	494	Nantahala Lake, change in contents in....	483,485
Highlands, Mill Creek at U.S. 64 at.....	497	Queens Creek Lake.....	471
High Point, East Fork Deep River near.....	227,228	Santeetlah Lake, change in contents in....	483,485
Municipal Lake.....	407	Sequoyah Lake.....	485
High Rock Lake, change in contents in.....	404,407	Tennessee Creek Project lakes.....	485
Hilliardston, Swift Creek at.....	66,499	Thorpe Reservoir, change in contents in... 483,485	
Hitchcock Creek at Cordova.....	492	Walters, Lake, change in contents in.....	483,485
Hiwassee Lake, change in contents in.....	484,485	Wolf Creek Lake.....	485
Hiwassee River, above Murphy.....	479,480,484	South Atlantic Slope basins.....	404-408
at U.S. Highway 64 near Hayesville.....	497	Badin Lake, change in contents in.....	404,407
Hoffman, Drowning Creek at U.S. Highway 15		Benson, Lake.....	406
near.....	492	Blewett Falls Lake, change in contents in. 405,408	
Drowning Creek near.....	363,364	Brandt, Lake.....	406
Hoke County, ground water records in.....	513	Buckhorn Reservoir (Cape Fear River basin) 407	
Hoke, Van Swamp near.....	115-122	Buckhorn Reservoir (Neuse River basin)....	406
Hominy Creek at Candler.....	496	Burlington, Lake.....	406
Hominy Swamp at Phillips Street at Wilson....	182-184	Gaston, Lake, change in contents in.....	404,407
Hookerton, Contentnea Creek at.....	187-194	Hickory Lake, change in contents in.....	405,408
Hope Mills, Rockfish Creek at U.S. Highway		Higgins, Lake.....	406
301 near.....	490	High Point Municipal Lake.....	407
Horse Creek tributary at SR 1140 near		High Rock Lake, change in contents in....	404-407
Pokemoke.....	488	Hycoc Lake, change in contents in.....	404,407
Humpy Creek near Fork.....	324,325	James Lake, change in contents in.....	405,408
Hunting Creek near Harmony.....	328,329	Johnson, Lake.....	406
Hurdle Mills, South Flat River at Secondary		Kerr, John H., Reservoir.....	50
Road 1112 near.....	488	Lexington-Thomasville Reservoir.....	407
South Flat River at Secondary Road 1120		Lookout Shoals Lake, change in contents in 405,408	
near.....	488	Michie, Lake.....	406
Hycoc Creek, at SR 1767 near Baynes.....	487	Mountain Island Lake, change in contents	
near Leasburg.....	37-39	in.....	406,408
Hycoc River, below Afterbay Dam near		Norman, Lake, change in contents in.....	405,408
McGehees Mill.....	45-47,406	Oak Hollow Reservoir.....	406
Hydrologic bench-mark station, definition of..	8	Philpott Reservoir.....	26
Hydrologic conditions.....	2	Raleigh, Lake.....	406
Hydrologic unit, definition of.....	5	Rhodhiss Lake, change in contents in.....	405,408
		Roanoke Rapids Lake, change in contents	
Indian Creek (Santee River basin) near		in.....	404,407
Laboratory.....	375	Roxboro Lake.....	406
Ingalls, North Toe River near.....	497	Roxboro Steam-Electric Generating Plant	
Ingold, Great Coharie Creek near.....	490	Afterbay Reservoir.....	406
Little Coharie Creek near.....	490	Scott, W. Kerr, Reservoir, change in	
Six Runs Creek near.....	490	contents in.....	404,407
Instantaneous discharge, definition of.....	4	Stony Creek Reservoir.....	406
Introduction.....	1	Talbott Reservoir, change in contents in..	407
Inverness, Flat Creek near.....	246,500	Tillery, Lake, change in contents in.....	405,408
Iotla, Little Tennessee River at.....	497	Townes Reservoir, change in contents in... 407	
Irish Buffalo Creek at Faggarts Crossroads....	491	Townsend, Lake.....	407
Irwin Creek at U.S. Highway 21 at Charlotte... 493		Toxaway, Lake.....	406
near Charlotte.....	378,500	Tuckertown Reservoir, change in contents	
Island Creek at Secondary Road 1430 near		in.....	404,407
Stovall.....	487	Wheeler, Lake.....	406
		Lake Benson.....	406

	Page		Page
Lake Brandt.....	406	Mallard Creek at Harrisburg.....	491
Lake Burlington.....	406	Map showing location of continuous gaging stations.....	15
Lake Gaston, change in contents in.....	404,407	Map showing location of observation well sites.....	17
Lake Hickory, change in contents in.....	405,408	Map showing location of water-quality stations.....	17
Lake Higgins.....	406	Marion, Catawba River near.....	366,367
Lake Hyco, change in contents in.....	404,407	Marks Creek at Secondary Road 1812 near Hamlet.....	492
Lake James, change in contents in.....	405,408	Marshall, French Broad River at.....	425-432
Lake Johnson.....	406	Mars Hill, Banjo Branch at.....	496
Lake Junaluska.....	484	Martin County, ground water records in.....	515
Lake Logan.....	484	Maxton, Leigh Creek near.....	492
Lake Lure, Cove Creek near.....	388,389	Mayfield, Dan River near.....	28-36,404
Lake Michie.....	406	Mayo Creek, near Bethel Hill.....	48,49
Lake Norman, change in contents in.....	405,408	tributary near Allensville.....	487
Lake Raleigh.....	406	McAlpine Creek, at Sardis Road near Charlotte.....	381,500
Lake Roxboro.....	406	below McMullen Creek near Pineville.....	384,385
Lake Tillery, change in contents in.....	405,408	near Mint Hill.....	493
Lake Townsend.....	407	near Pineville.....	494
Lake Toxaway.....	406	McGehees Mill, Hyco River below Afterbay Dam near.....	45-47,406
Lake Walters.....	483,485	McIntosh Branch near Burnsville.....	497
Lake Wheeler.....	406	McLeansville, Buffalo Creek (tributary to Reedy Fork) near.....	489
Lane Creek at Secondary Road 2115 near Trinity.....	337-339	South Buffalo Creek at.....	488
Lawndale, First Broad River at.....	486	McMullen Creek at Sharon View Road near Charlotte.....	382,383
Leasburg, Hyco Creek near.....	37-39	Mean concentration, definition of.....	6
Lee Creek near Enka.....	496	Mean discharge, definition of.....	4
Leigh Creek near Maxton.....	492	Methylene blue active substance.....	5
Lenoir County, ground water records in.....	514	Micrograms per litre, definition of.....	5
Leonard Creek near Bethesda.....	330,331	Middle Creek, at Durham & Southern Railroad near Apex.....	488
Lexington, Abbotts Creek at.....	491	near Clayton.....	156,499
Lexington-Thomasville Reservoir.....	407	Mill Creek (upper Neuse River basin) at Cox Mill.....	488
Liberty, North Prong Rocky River near.....	489	Mill Creek (tributary to Cullasaja River) at U.S. Highway 64 at Highlands.....	497
Liddell, Daileys Creek near.....	163-165	Milligrams per litre, definition of.....	5
Lillington, Cape Fear River at.....	245	Mill Spring, Silver Creek at Secondary Road 1132.....	494
Lincolnton, Clark Creek at.....	493	Mills River near Mills River.....	418,419
Linden, Little River at State Highway 217.....	489	North Fork, below Mills River Recreation Area South Fork, at the Pink Beds.....	496 495
Linville, Linville, River at State Highway 105 at.....	493	Mills River Recreation Area, North Fork Mills River below.....	496
Linville River, at State Highway 105 at Linville.....	493	Milltown, Long Creek at.....	497
near Nebo.....	368,500	Milton, Country Line Creek at State Highway 57 at.....	487
Linwood, North Potts Creek at.....	500	Dan River at.....	487
Swearing Creek at.....	491	Mingo Swamp near Dunn.....	490
Little Alamance Creek near Julian.....	489	Mint Hill, McAlpine Creek near.....	493
Little Coharie Creek near Ingold.....	490	Mitchell River near State Road.....	299,300
Little Contentnea Creek near Farmville.....	195,196	Mocksville, South Yadkin River near.....	326,327
Little Fishing Creek near White Oak.....	67,499	Moncure, Deep River at.....	243,500
Little River, (tributary to French Broad River) above High Falls near Cedar Mountain.....	415	Haw River below B. Everett Jordan Dam near.....	225,226
Little River, (Cape Fear River basin) at State Highway 217 at Linden.....	489	Moore County, ground water records in.....	515
Little River (Kanawha River basin) at Secondary Road 1140 at Whitehead.....	495	Morgan Creek at Secondary Road 1112 near Dobsons Crossroads.....	489
near Blevins Crossroads.....	495	Morganton, Catawba River at.....	493
Little River (tributary to Pee Dee River) at Secondary Road 1142 near Ulah.....	492	Lower Creek near.....	493
near Star.....	349,350	Moss Neck, Raft Swamp near.....	492
Little River, (tributary to Neuse River) near Harris Crossroads.....	488	Mountain Island Lake, change in contents in.....	406,408
near Kenly.....	160	Mount Holly, Fites Creek at State Highway 273 at.....	493
near Princeton.....	161,499	Mount Vernon Springs, Tick Creek near.....	241,242
Little River, (tributary to Eno River) near Orange Factory.....	140,499	Mud Creek at Balfour.....	496
Little Rockfish Creek at Wallace.....	283,284	Muddy Creek, near Muddy Creek.....	313,314
Little Sugar Creek, at Archdale Road at Charlotte.....	379,380	South Fork near Clemmons.....	315,316
at Secondary Road 3814 at Charlotte.....	493	Murphy, Hiwassee River above.....	479,480,484
near Pineville.....	493	Nahunta Swamp near Shine.....	186,499
Little Tennessee River, at Iotla.....	497	Nantahala Lake, change in contents in.....	483,485
at Needmore.....	467,468	Nantahala, Nantahala River at.....	471,482,480
near Norton.....	497	Nantahala River, at Nantahala.....	471,472,480
near Prentiss.....	464	at U.S. Highway 64 at Rainbow Springs.....	497
Little Yadkin River at Dalton.....	307,308	near Rainbow Springs.....	469,470
Logan, Second Broad River near.....	494	National Geodetic Vertical Datum of 1929, definition of.....	5
Long Creek (tributary to Cheoah River) at Milltown.....	497	National stream-quality accounting network, definition of.....	8
Long Creek, (tributary to Rocky River) at SR 1454 near Richfield.....	491	Nebo, Linville River near.....	368,500
near Oakboro.....	492	Needmore, Little Tennessee River at.....	467,468
Long Creek, (tributary to Catawba River) near Thrift.....	493	Neuse River, at Kinston.....	169-180
near Paw Creek.....	370,371	at Smithfield.....	155,406
Long Creek, (tributary to South Fork Catawba River) near Bessemer City.....	376,377	at Streets Ferry near Vanceboro.....	197
Lookout Shoals Lake, change in contents in.....	405,408	near Clayton.....	154,406
Louisburg, Tar River at U.S. Highway 401 at Louisburg.....	62,63	near Falls.....	143-153
Lower Creek near Morganton.....	493	near Goldsboro.....	162
Lower Little River near All Healing Springs.....	369,500	near Northside.....	142,406,499
Lucama, Contentnea Creek near.....	181,406		
Lumber River at Boardman.....	365		
Madison Industrial Site, Dan River at.....	487		

	Page		Page
Neuse River,--Continued		Pine Hall, Dan River at.....	487
tributary above Secondary Road 1705 near		Pineville, Little Sugar Creek near.....	493
Clayton.....	488	McAlpine Creek below McMullen Creek near....	384,385
Neuse River basin, gaging-station records in..	139-210	McAlpine Creek near.....	494
lakes and reservoirs in.....	406	Sixmile Creek near.....	494
measurements at miscellaneous sites in.....	488	Sugar Creek at State Line near.....	493
New Hanover, County, ground water records in..	515-516	Pinner Creek, near Fletcher.....	496
New Hope Creek near Blackwood.....	489	Unnamed tributary to, near Oak Park.....	496
New River, (Kanaawa River basin) at Amelia....	495	Pitt County, ground water records in.....	518-521
South Fork, at U.S. Highway 421 near Boone..	495	Plankton, definition of.....	6
South Fork, near Jefferson.....	409,410	Pocomoke, Horse Creek tributary at SR	
Northeast Cape Fear River near Chinguapin.....	279,280	1140 near.....	488
Northampton County, ground water records in..	516	Potocasi Creek near Union.....	19
Northside, Neuse River near.....	142,406,499	Potts Creek at Oak Grove.....	494
North Buffalo Creek near Greensboro.....	217,218	Prentiss, Little Tennessee River at.....	464
North Lake Canal above Pungo Lake near Wenona..	107-114	Princeton, Little River near.....	161,499
North Pacolet River below SEO near Saluda....	495	Prospect, Juniper Creek at State Highway 211	
near Sandy Plains.....	495	near.....	491
North Potts Creek at Linwood.....	500	Publications on Techniques of Water-resources	
North Toe River, at Penland.....	497,501	Investigations.....	12,13
near Ingalls.....	497,501		
North Wilkesboro, Reddies River at.....	291,292	Radiochemical program, definition of.....	8
Norton, Little Tennessee River near.....	497	Raemon, Big Shoe Heel Creek near.....	492
Norwood, Rocky River near.....	343-348	Raft Swamp near Moss Neck.....	492
Numbering system for wells.....	8	Rainbow Springs, Nantahala River at U.S.	
Nutbush Creek near Henderson.....	487	Highway 64 at.....	497
		Nantahala River near.....	469,470
Oakboro, Long Creek near.....	492	Ramseur, Deep River at.....	230-240,407
Oak Grove, Potts Creek at.....	494	Ramsey, Jacob Fork at.....	374
Oak Hollow Reservoir.....	406	Randleman, Deep River near.....	229,406,407,499
Oak Park, Unnamed tributary to Pinner		Reddies River at North Wilkesboro.....	291,292
Creek near.....	496	Reedy Fork, at Ossipee.....	489
Oak Ridge, Haw River near.....	488	near Gibsonville.....	215,216,406
Reedy Fork near.....	213,214	near Oak Ridge.....	213,214
Oconaluftee River at Birdtown.....	475,476	Reems Creek near Weaverville.....	496
Ohio River basin, gaging-station records in..	409-482	Reidsville, Wolf Island Creek at.....	487
lakes and reservoirs in.....	483-485	Reservoir. See lakes and reservoirs.	
measurements at miscellaneous sites in.....	495-498	Rhodhiss Lake, change in contents in.....	405,408
Old Field Swamp near Fairmont.....	492	Richfield, Big Bear Creek near.....	332,333
Old Fort, Catawba River at.....	492	Long Creek at SR 1454 near.....	491
Old Hundred, Gum Swamp Creek near.....	492	Richland Creek (tributary to Pigeon River)	
Olive Branch, Gourdvine Creek at Secondary		above Hyatt Creek at Hazelwood.....	496
Road 1715 near.....	334-336	near Clyde.....	496
Onslow County, ground water records in.....	516-517	Richland Creek (tributary to Deep River)	
Orange County, ground water records in.....	517	near Groomtown.....	489
Orange Factory, Little River near.....	140,499	Ridgeway, Smith Creek at.....	487
Organic mass, definition of.....	4	Roanoke Rapids Lake, change in contents in....	404,407
Organism count/area, definition of.....	5	Roanoke Rapids, Roanoke River at.....	50-60,404
Organism count/volume, definition of.....	5	Roanoke River at Roanoke Rapids.....	50-60,404
Organism, definition of.....	5	Roanoke River basin, gaging station records in	22-60
Ossipee, Reedy Fork at.....	489	lakes and reservoirs in.....	404,406,407
Owens, Buckhead Creek near.....	247,248	measurements at miscellaneous sites in.....	487
		Roaring River near Roaring River.....	295,296
Palmer Creek near Cataloochee.....	496	Robbinsville, Cheoah River near.....	497
Pamlico River basin, crest-stage partial-		Rockfish Creek (tributary to Northeast Cape	
record stations in.....	486	Fear River) at U.S. Highway 117 near	
gaging-station records in.....	61-138	Wallace.....	490
measurements at miscellaneous sites in.....	488	near Wallace.....	281,282
Parkersburg, South River near.....	277,278	Rockfish Creek (tributary to Cape Fear River)	
Parkstown, Bear Creek near.....	166-168	at U.S. Highway 301 near Hope Mills.....	490
Partial-record stations, definition of.....	5	Rockingham, Pee Dee River near.....	351-362,405
Particle-size classification, definition of...	5	Rocky Mount, Tar River at N.C. Highway 97	
Particle-size, definition of.....	5	at.....	65
Paschall, Smith Creek near.....	487	Tar River below Tar River Reservoir near....	64
Pasquotank County, ground water records in....	517-518	Rocky River, (tributary to Pee Dee River) near	
Patterson, Yadkin River at.....	287,288	Davidson.....	491
Paw Creek, Long Creek near.....	370,371	near Faggarts Crossroads.....	491
Pee Dee River basin, crest-stage partial-		near Norwood.....	343-348
record stations in.....	486	Rocky River (Cape Fear River basin) near	
gaging-station records in.....	287-365	Coalglen.....	489
lakes and reservoirs in.....	404,405,406,407	North Prong near Liberty.....	489
measurements at miscellaneous sites in.....	491,492	Roseboro, Little Coharie Creek near.....	263,264
Pee Dee River, at Cheraw, S. C.....	492	Roseville, Double Creek near.....	40,41
near Rockingham.....	351-362,405	South Hyco Creek near.....	42-44,406
Pelham, Wolf Island Creek near.....	487	Rosman, French Broad River at.....	411,412
Pender County, ground water records in.....	518	West Fork French Broad River at.....	495
Penland, North Toe River at.....	497	West Fork French Broad River near.....	495
Percent composition, definition of.....	5	Ross Creek near Asheville.....	496
Periphyton, definition of.....	5	Rough Fork near Cataloochee.....	496
Pesticide program.....	8	Roxboro Steam-Electric Generating Plant	
Pesticides, definition of.....	6	Afterbay Reservoir.....	406
Philpott Reservoir.....	26	Runoff in inches, definition of.....	6
Phytoplankton, definition of.....	6		
Picocurie, definition of.....	6	Salem, Ararat River near.....	491
Pigeon River, at Canton.....	439,440,484	Salem Creek near Atwood.....	311,312
at Clyde.....	496	Saluda, North Pacolet River below SEO near....	495
below Crabtree.....	496	Sampson County, ground water records in.....	521
near Hepco.....	441-449,484	Sandy Plains, North Pacolet River near.....	495
near Lake Junaluska.....	496	Sandy Run Creek near Boiling Springs.....	494
East Fork, near Canton.....	437,438	Santee River basin, crest-stage partial-	
West Fork, above Lake Logan near Hazelwood..	433,434	record stations in.....	486
West Fork, below Lake Logan near		gaging-station records in.....	366-402
Waynesville.....	435,436,484	lakes and reservoirs in.....	405,406,408

	Page		Page
Santee River basin--Continued		Tar River--Continued	
measurements at miscellaneous sites in.....	492-495	at U.S. Highway 401 at Louisburg.....	62,63
Santeetlah Lake, change in contents in.....	483,485	below Tar River Reservoir near Rocky Mount..	64
Scott Creek above Sylva.....	497	near Tar River.....	61
Scott, W. Kerr, Reservoir, change in		near Wilton.....	488
contents in.....	404,407	Taxonomy, definition of.....	7
Second Broad River, at Cliffside.....	390,391	Tennessee Creek Project Lakes.....	485
near Logan.....	494	Tennessee River basin, gaging-station records	
Second Creek near Barber.....	500	in.....	411-482
Sediment, definition of.....	6	lakes and reservoirs in.....	483-485
Sediment, explanation of.....	11	measurements at miscellaneous sites in.....	495-498
Sequoyah Lake.....	485	Terrells, Haw River near.....	489
Shelby, Brushy Creek at Dover Mill near.....	494	The Pink Beds, South Fork Mills River at.....	495
Brushy Creek at U.S. Highway 74 near.....	494	Third Creek at Cooleemee.....	491
Hickory Creek at.....	494	Thorpe Reservoir, change in contents in.....	483,485
Shine, Nahunta Swamp near.....	186,499	Thrift, Long Creek at State Highway 27 near...	493
Siloam, Ararat River near.....	491	Tick Creek near Mount Vernon Springs.....	241,242
Yadkin River at.....	303,304,404	Timothy, Great Coharie Creek at.....	490
Silver Creek at Secondary Road 1138 near		Tomahawk, Black River near.....	265,266
Millsprings.....	494	Tomotla, Valley River at.....	481,482
Simpson, Chicod Creek at SR 1760 near.....	91-98	Tons per acre-foot, definition of.....	7
Juniper Branch near.....	99-103	Tons per day, definition of.....	7
Six Mile Creek near Pineville.....	494	Total Coliform bacteria, definition of.....	3
Six Runs Creek at Secondary Road 1740 near		Total, definition of.....	7
Hargrove Crossroads.....	490	load, definition of.....	7
near Ingold.....	490	recoverable, definition of.....	7
Skibo, Beaver Creek near.....	489	recoverable from bottom material, definition	
Smith Creek at Secondary Road 1224 near		of.....	7
Ridgeway.....	487	in bottom material, definition of.....	7
near Paschall.....	487	Total organism count, definition of.....	5
Smith River at Eden.....	26,27	Townes Reservoir, change in contents in.....	407
Smithfield, Neuse River at.....	155,406	Transylvania County, ground water records in..	522
Solute, definition of.....	6	Trent River near Trenton.....	201-210
South Atlantic Slope basins, crest-stage		Trenton, Trent River near.....	201-210
partial-record stations in.....	486	Trinity, Lane Creek at Secondary Road 2115	
gaging-station records in.....	19-403	near.....	337-339
lakes and reservoirs in.....	404-408	Wicker Branch at Secondary Road 1940 near...	340-342
measurements at miscellaneous sites in.....	487-495	Tritium network, definition of.....	8
South Buffalo Creek at McLeansville.....	488	Tuckasegee River, at Bryson City.....	477,478,483,485
South Flat River at Secondary Road 1112 near		at Dillsboro.....	473,474,483,485
Hurdle Mills.....	488	Tuckertown Reservoir, change in contents	
at Secondary Road 1120 near Hurdle Mills...	488	in.....	404,407
South Hyco Creek near Gordonton.....	487	Turner Swamp near Eureka.....	185
near Roseville.....	42-44,406	Twelve Mile Creek at Secondary Road 1301 near	
South River near Kerr.....	490	Waxhaw.....	494
near Parkersburg.....	277,278	near Waxhaw.....	386,387
South Toe River near Celo.....	460,461	Ulah, Little River at Secondary Road 1142 near	492
South Yadkin River, at Cooleemee.....	491	Union, Potecasi Creek near.....	19
near Mocksville.....	326,327	Uree, Broad River at.....	494
Special Networks and Programs.....	8	Upper Little River near Erwin.....	489
Specific conductance, definition of.....	6	Uwharrie River near Eldorado.....	491
Stage and Water-discharge Records, explanation		near Glenola.....	491
of.....	9	Valley River, at Buffalo.....	497
Stage-discharge relation.....	6	at Tomotla.....	481,482
Stanleys Store, Dutchmans, Creek at Secondary		near Andrews.....	498
Road 1002.....	491	Vanceboro, Creeping Swamp near.....	198
Star, Little River near.....	349,350	Neuse River at Streets Ferry near.....	197
Startown, Henry Fork near.....	493	Swift Creek near.....	199,200
South Fork Catawba River at.....	493	Van Swamp near Hoke.....	115-122
State Road, Mitchell River near.....	299,300	Waccamaw River, at Freeland.....	285,286
Stony Creek Reservoir.....	406	Waccamaw River basin, gaging-station	
Streamflow, definition of.....	6	records in.....	285
Stovall, Island Creek at Secondary Road		measurements at miscellaneous sites in.....	490,491
1430 near.....	487	Waco, Buffalo Creek near.....	494
Sugar Branch near Boiling Springs.....	402,403	Wallace, Little Rockfish Creek at.....	283,284
Sugar Creek at State Line near Pineville.....	493	Rockfish Creek at U.S. Highway 117 near....	490
Sugar Grove, Cove Creek at.....	497	Rockfish Creek near.....	281,282
Watauga River near.....	462,463	Ward Branch near Bynum.....	489
Suspended, recoverable, definition of.....	6	Washburn, Brushy Creek near.....	494
Suspended-sediment concentration, definition		Washington County, ground water records in...	522,523
of.....	6	Washington, Herring Run near.....	104
Suspended-sediment discharge, definition of...	6	Watauga River, at Foscoe.....	497
Suspended-sediment load, definition of.....	6	near Sugar Grove.....	462,463
Suspended, total, definition of.....	6	Water analysis, explanation of.....	11
Swannanoa, Beetre Creek near.....	496	Water-quality records, explanation of.....	11
Swannanoa River, at Biltmore.....	422,423,484	Water temperature, explanation of.....	11
Swearing Creek at Linwood.....	491	Water year, definition of.....	7
Swift Creek, (tributary to Tar River) at		Waxhaw, Twelve Mile Creek at Secondary Road	
Hilliardston.....	66,499	1301 near.....	494
Swift Creek, (tributary to Neuse River)		Twelve Mile Creek near.....	386,387
near Vanceboro.....	199,200	Wayne County, ground water records in.....	524
Swindell, Albemarle Canal near.....	123-138	Waynesville, West Fork Pigeon River below	
Sylva, Scott Creek above.....	497	Lake Logan near.....	435,436,484
Talbott Reservoir, change in contents in.....	407	Weaver, Eno River near.....	488
Tarboro, Deep Creek near.....	488	Weaverville, Reems Creek near.....	496
Tar River at.....	70-80	Wenona, North Lake Canal above Pungo Lake near	107-114
Tarheel, Cape Fear River at William O. Huske		Wentworth, Dan River near.....	24,25,404
Lock near.....	249,250		
Tar River, at N.C. 97 at Rocky Mount.....	65		
at Tarboro.....	70-80		

INDEX

541

	Page		Page
Wet mass, definition of.....	4	Wolf Creek Lake.....	485
Whitehead, Little River at Secondary Road		WRD, definition of.....	7
1140 at.....	495	WSP, definition of.....	7
White Oak Creek near Bisco.....	492		
White Oak, Little Fishing Creek near.....	67,499	Yadkin College, Yadkin River at.....	317-323,404
Wicker Branch at Secondary Road 1940 near		Yadkin River, at Elkin.....	297,298,404
Trinity.....	340-342	at Enon.....	309,310,404
Wilkesboro, Yadkin River at.....	293,294,404	at Patterson.....	287,288
Wilmington, Hewletts Creek at Secondary Road		at Siloam.....	303,304,404
1102 at.....	211,212	at Wilkesboro.....	293,294,404
Wilson Creek near Gragg.....	493	at Yadkin College.....	317-323,404
Wilson, Hominy Swamp at Phillips Street at....	182-184		
Wilton, Tar River near.....	488	Zooplankton, definition of.....	6
Wolf Island Creek, at Reidsville.....	487		
near Pelham.....	487		

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

3 1818 00453282 4



USGS LIBRARY - RESTON

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF THE INTERIOR
INT 413



U.S. DEPARTMENT OF THE INTERIOR
Geological Survey
P.O.Box 2857
Raleigh, NC 27602

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300
SPECIAL 4TH CLASS BOOK RATE