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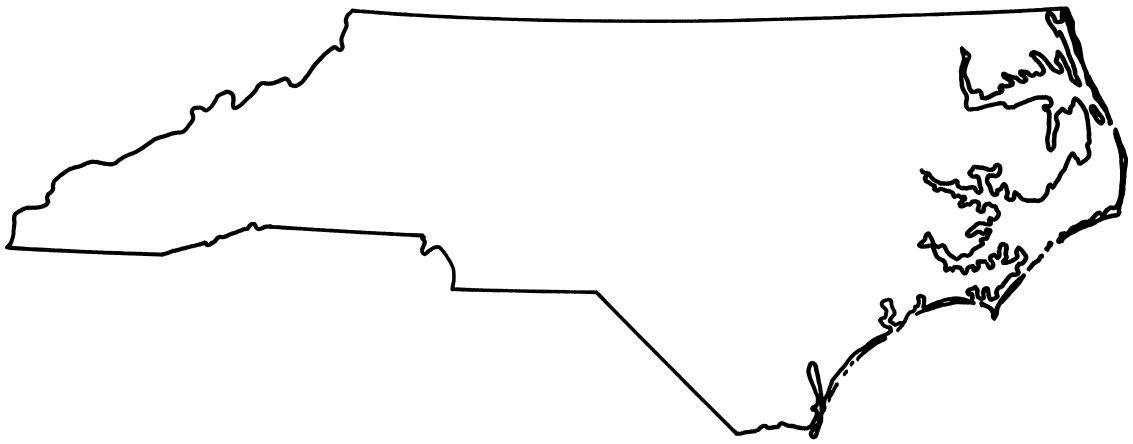
Water Resources Data North Carolina Water Year 2004

Volume 1
Surface-Water Records



Water-Data Report NC-04-1

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

Calendar for Water Year 2004

2003

October

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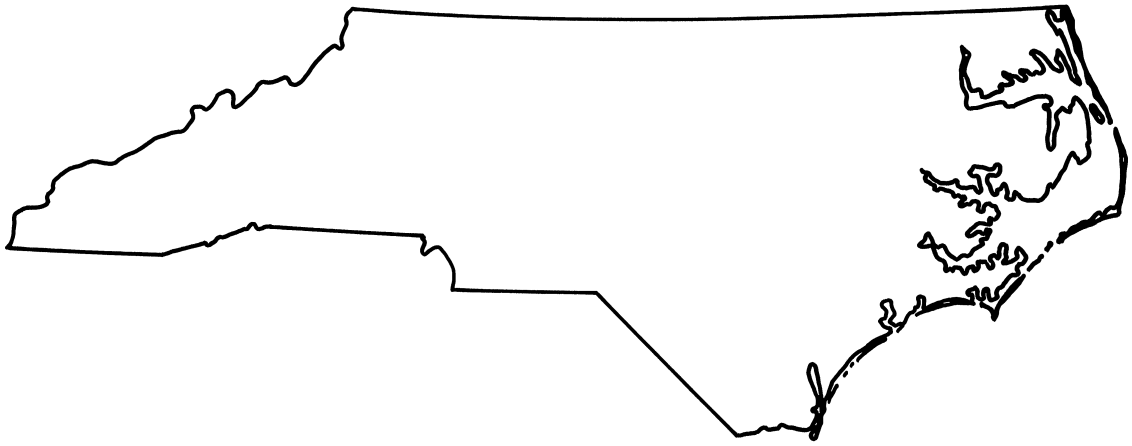
Water Resources Data North Carolina Water Year 2004

Volume 1. Surface-Water Records

By D.A. Walters, J.B. Robinson, and R.G. Barker

Water-Data Report NC-04-1



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

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

U.S. Department of the Interior
Gale A. Norton, Secretary

U.S. Geological Survey
Charles G. Groat, Director

2005

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PREFACE

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

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

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Pamilee L. Breton edited much of the text, tables, and graphs of this report. Pamilee L. Breton, Jeffrey L. Corbett, Kay E. Hedrick, and Ramona J. Traynor assembled the report.

This report was prepared in cooperation with the State of North Carolina, other agencies, and under the general supervision of Gerald L. Ryan, District Chief; and Jess D. Weaver, Regional Hydrologist, Southeastern Region.

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13. ABSTRACT *(Maximum 200 words)*

Water-resources data for the 2004 water year for North Carolina consist of discharge records for 217 gaging stations; stage only records for 22 gaging stations; elevations for 9 stations; stage and contents for 58 lakes and reservoirs; water quality for 39 gaging stations and 5 miscellaneous sites, and continuous water quality for 35 sites; and continuous precipitation at 127 sites. Additional water data were collected at 51 sites not involved in the systematic data-collection program, and are published as miscellaneous measurements.

The collection of water-resources data in North Carolina is part of the National Water-Data System operated by the U.S. Geological Survey in cooperation with State, municipal, and Federal agencies.

North Carolina, Hydrologic data, Surface water, Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analysis, Sediments, Water temperature, Sampling, Water level, Water analysis, Elevation, Precipitation

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CONTENTS

ILLUSTRATIONS

ILLUSTRATIONS

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

Letter after station name designates type of data: (d) discharge, (g) gage height, (c) chemical, (s) sediment, (e) elevation, (p) precipitation; and continuously monitored water-quality characteristics: (t) water temperature; (k) specific conductance; (h), pH; (o) dissolved oxygen; (n) salinity.

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

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

Station number	Station name	Drainage area (mi^2)	Period of record
	Chowan River Basin		
02053400	Ahoskie Creek near Rich Square, NC	3.70	1964-73
02053450	Ahoskie Creek at Mintons Store, NC	24.0	1964-73
02053510	Ahoskie Creek tributary at Poortown, NC	2.60	1963-73
	Roanoke River Basin		
02068000	Dan River near Asbury, NC	71.4	1924-26
02069000	Dan River at Pine Hall, NC	501	1924-26, 1986-91
02071500	Dan River at Leaksville, NC	1,150	1929-49
02074218	Dan River near Mayfield, NC	1,778	1976-84
02075160	Moon Creek near Yanceyville, NC	29.90	1961-74, 1988-89
02077230	South Hyco Creek near Hesters Store, NC	29.9	1964-67
02077240	Double Creek near Roseville, NC	7.47	1964-75, 1977-82
02077250	South Hyco Creek near Roseville, NC	56.5	1966-80
02077300	Hyco River at McGehees Mill, NC	191	1964-73
02077660	Mayo Creek near Woodsdale, NC	52.7	1975-77
	Pamlico River Basin		
02081800	Cedar Creek near Louisburg, NC	47.8	1956-75
02082000	Tar River near Nashville, NC	701	1928-71
02082500	Sapony Creek near Nashville, NC	64.8	1950-70
02082610	Tar River near Rocky Mount, NC	930	1971-73
0208273070	Devils Cradle Creek at NC 39 near Kearney, NC	2.89	1984-85
02082731	Devils Cradle Creek nr Alert, NC	13.4	1993-97
020837837	Conetoe Creek at Conetoe, NC	65.4	2002-03
02083800	Conetoe Creek near Bethel, NC	78.1	1956-02
02083833	Pete Mitchell Swamp at Sr1409 nr Penny Hill, NC	11.0	1993-97
02084070	Green Mill Run at Arlington Boulevard at Greenville, NC	9.10	1980-85
02084164	Juniper Branch near Simpson, NC	7.5	1975-86
0208423100	Flat Swamp at SR 1157 near Robersonville, NC	21.3	1986-88
02084317	Black Swamp near Batts Crossroads, NC	1.02	1982
02084500	Herring Run near Washington, NC	9.59	1950-80
02084540	Durham Creek near Edwards, NC	26.0	1950-04
02084556	North Lake Canal above Pungo Lake near Wenona, NC	.29	1976-80
02084558	Albemarle Canal near Swindell, NC	68.0	1977-81
0208463120	Outflow Ditch from Jennett Sedge at Buxton, NC	Indeterminate	1994-95
	Neuse River Basin		
02084903	Sevenmile Creek tributary at SR 1120 near Buckhorn, NC	1.34	1981-82
02084904	Sevenmile Creek tributary at I-85 near Miles, NC	.004	1981-82
02084905	Sevenmile Creek tributary at SR 1144 near Miles, NC	1.57	1981-82
02084908	Sevenmile Creek tributary at I-85 near Efland, NC	.29	1981-82
02084909	Sevenmile Creek near Efland, NC	14.1	1987-04
02085220	Little River near Orange Factory, NC	80.4	1962-87
02086000	Dial Creek near Bahama, NC	4.76	1925-71, 1989-91
0208650112	Flat River tributary near Willardsville, NC	1.14	1988-90
02086624	Knap of Reeds Creek near Butner, NC	43.0	1982-95

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Neuse River Basin--Continued		
02086849	Ellerbee Creek nr Gorman, NC	21.9	1982-89, 1991-95
02087000	Neuse River near Northside, NC	535	1927-80
0208700780	Little Lick Creek above Secondary Road 1814 near Oak Grove, NC	10.1	1982-95
0208705200	Smith Creek at Grissom, NC	6.2	1984-85
0208721055	Perry Creek at SR 2012 near Millbrook, NC	2.43	1986-89
0208732810	Marsh Creek at SR 2030 at Millbrook, NC	1.44	1986-89
02087570	Neuse River at Smithfield, NC	1,206	1959-90
02088315	Beaverdam Creek near Grantham, NC	5.01	1978-82
02088470	Little River near Kenly, NC	191	1964-89
02088682	Big Ditch at Retha Street at Goldsboro, NC	2.17	1980-84
02089216	Daileys Creek near Liddell, NC	3.80	1978-81
02089222	Bear Creek near Parkstown, NC	4.27	1978-82
02090500	Contentnea Creek near Wilson, NC	236	1930-54
02090512	Hominy Swamp at Phillips Street at Wilson, NC	8.20	1978-85
02090625	Turner Swamp near Eureka, NC	2.1	1968-87
02090960	Nahunta Swamp near Pikeville, NC	19.0	2000-03
0209096970	Moccasin Run near Patetown, NC	1.89	1988-98
02091700	Little Contentnea Creek near Farmville, NC	93.3	1956-87
0209173192	Drainage Ditch to Tributary to Sandy Run near Lizzie, NC	0.02	1999-02
0209173200	Sandy Run near Lizzie, NC	29.0	1999-00
02091737	Little Contentnea Creek near Willow Green, NC	145	1999-02
02091960	Creeping Swamp near Calico, NC	9.80	1971-77
02091970	Creeping Swamp near Vanceboro, NC	27.0	1971-85
02092000	Swift Creek near Vanceboro, NC	182	1950-89
02092020	Palmetto Swamp near Vanceboro, NC	24.0	1971-76
0209257120	W. P. Brice Creek below SR 1101 near Riverdale, NC	11.2	1986-91
	Hewletts Creek Basin		
02093229	Hewletts Creek at SR 102 near Wilmington, NC	1.98	1977-90
	Cape Fear River Basin		
0209330990	Brooks Lake tributary near Browns Summit, NC	.06	1985-90
0209331325	Candy Creek at SR 2700 near Monticello, NC	1.10	1985-90
02093500	Haw River near Benaja, NC	168	1928-71
0209387778	Brush Creek at Fleming Road at Greensboro, NC	7.42	1999-04
02094000	Horsepen Creek at Battle Ground, NC	15.9	1925-31, 1934-59
02094412	Reedy Fork near Browns Summit, NC	125	1999-01
0209509100	South Buffalo Creek at SR 2821 at McLeansville, NC	43.5	1986-88
0209555450	Buffalo Creek at SR 2719 near Osceola, NC	97.4	1986-87
0209560800	Reedy Fork Creek at NC 61 near Osceola, NC	243	1986-88
02096000	Stony Creek near Burlington, NC	44.2	1952-59
02096700	Big Alamance Creek near Elon College, NC	116	1957-80
02096842	Cane Creek 0.1mile above SR 1126 near Buckhorn, NC	.64	1979-81
02096850	Cane Creek near Teer, NC	33.7	1959-73
02097000	Haw River near Pittsboro, NC	1,310	1928-73
02097243	Third Fork Creek at Durham, NC	1.68	1968-73
0209736050	Battle Branch near Chapel Hill, NC	0.42	1996-01
02097500	Morgan Creek near Chapel Hill, NC	30.1	1923-32
0209782150	New Hope River tributary at SR 1716 near Farrington, NC	2.05	1986-88
02098000	New Hope River near Pittsboro, NC	285	1949-73
02098500	West Fork Deep River near High Point, NC	32.1	1923-26, 1928-58
02099500	Deep River near Randleman, NC	125	1929-04

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Cape Fear River Basin--Continued		
02100000	Muddy Creek near Archdale, NC	16.7	1934-41
02101000	Bear Creek at Robbins, NC	134	1939-71
0210106600	Deep River nr Glendon, NC	859	1993-96
0210108450	Suck Creek tributary near Zion Grove, NC	.67	1986-88
02102897	Lower Little River near Lobelia, NC	110	2003
02103000	Little River at Manchester, NC	348	1938-50
02103500	Little River at Linden, NC	459	1928-71
02104000	Cape Fear River at Fayetteville, NC	4,395	1889-1903
			1928-40
02104387	Buckhead Creek near Owens, NC	2.62	1976-80
02104500	Rockfish Creek near Hope Mills, NC	292	1929-31
			1939-54
02105524	Ellis Creek tributary at SR 1325 near White Oak, NC	1.81	1979-81
02106000	Little Coharie Creek near Roseboro, NC	92.8	1950-92
02106681	Black River near Dunn, NC	48.3	1976-77
02107000	South River near Parkersburg, NC	379	1951-86
02107500	Colly Creek near Kelly, NC	103	1950-71
02107600	Northeast Cape Fear River near Seven Springs, NC	47.5	1958-75
0210782005	Nahunga Creek at SR 1301 near Warsaw, NC	8.30	1983-90
0210783230	Herrings Marsh Run near Summerlins Crossroads, NC	2.25	1991-99
0210783240	Herrings Marsh Run Tributary near Summerlins Crossroads, NC	1.49	1991-00
0210783273	Herrings Marsh Run Tributary at Red Hill, NC	1.14	1991-97
0210783276	Herrings Marsh Run below SR 1306 at Red Hill, NC	9.11	1991-99
0210789100	Grove Creek at Kenansville, NC	22.6	1983-90
0210797940	Limestone Creek at NC 24 near Hadley, NC	1.61	1986-88
02108500	Rockfish Creek near Wallace, NC	69.3	1955-81
02108548	Little Rockfish Creek at Wallace, NC	7.8	1976-92
	Pee Dee River Basin		
02112500	Fisher River near Dobson, NC	109	1920-32
02113500	Yadkin River at Siloam, NC	1,226	1976-87
02115500	Forbush Creek near Yadkinville, NC	22.1	1940-71
02115750	Muddy Creek near Lewisville, NC	82.8	1964-70
02115800	Silas Creek near Clemmons, NC	11.8	1964-70
02115842	Tar Branch tributary at First Street at Winston-Salem, NC	.04	1979-82
02115850	Salem Creek at Winston-Salem, NC	51.3	1964-70
02115854	Salem Creek tributary at Hawthorne Road, Winston-Salem, NC	.50	1979-82
02115856	Salem Creek near Atwood, NC	65.6	1971-82
02115860	Muddy Creek near Muddy Creek, NC	186	1964-79
			1988-91
02115900	South Fork Muddy Creek near Clemmons, NC	42.9	1964-79
			1988-91
02117030	Humpy Creek near Fork, NC	1.05	1968-83
02117500	Rocky Creek at Turnersburg, NC	101	1940-71
02119000	South Yadkin River at Cooleemee, NC	569	1928-65
02119400	Third Creek near Stony Point, NC	4.84	1956-69
02120500	Third Creek at Cleveland, NC	87.4	1940-71
02121000	Yadkin River near Salisbury, NC	3,450	1895-1927
02121180	North Potts Creek at Linwood, NC	9.62	1980-90
02121493	Leonard Creek near Bethesda, NC	5.16	1978-81
02122500	Yadkin River at High Rock, NC	4,000	1919-27
02123000	Uwharrie River near Trinity, NC	11.3	1934-41
02123500	Uwharrie River near Eldorado, NC	342	1938-71
02123567	Dutchmans Creek near Uwharrie, NC	3.44	1982-83
			1986-04
0212429930	Wiberly Branch near Wilgrove, NC	0.35	1984-93
0212429960	Reedy Creek Tributary No. 2 below Wiberly Branch near Mint Hill, NC	1.00	1988-93

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

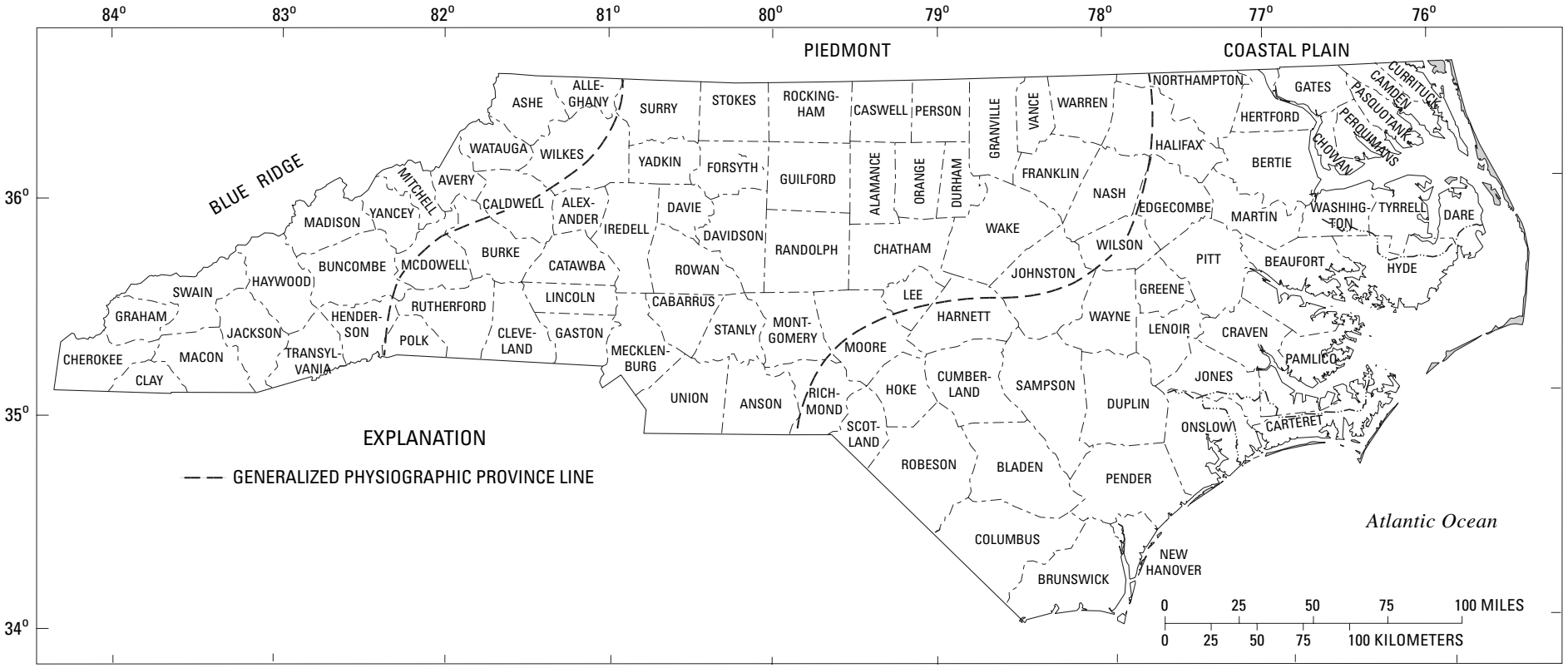
Station number	Station name	Drainage area (mi^2)	Period of record
	Pee Dee River Basin--Continued		
02124471	Dutch Buffalo Creek at NC 49 near Mount Pleasant, NC	45.1	1985-87
02125500	Richardson Creek near Marshville, NC	170	1940-44
02125557	Gourdvine Creek at SR 1715 near Olive Branch, NC	8.75	1978-82
02125696	Lane Creek at SR 2115 near Trinity, NC	3.98	1969-79
02125699	Wicker Branch at SR 1940 near Trinity, NC	5.83	1978-82
02125816	Lane's Creek near Marshville, NC	87.8	1985-87
02126500	Little Brown Creek near Polkton, NC	13.5	1935-41
02127000	Brown Creek near Polkton, NC	110	1937-71
02127500	Pee Dee River near Ansonville, NC	6,330	1938-42
02129500	North Fork Jones Creek near Wadesboro, NC	9.43	1935-41
0213228795	Jordan Creek near Silver Hill, NC	0.36	1983-93
	Santee River Basin		
02137000	Mill Creek at Old Fort, NC	20.7	1960-75
02138000	Catawba River near Marion, NC	172	1941-81
0213875850	High Shoals Creek near Dysartsville, NC	2.38	1986-88
02139200	Bailey Fork near Morganton, NC	7.86	1966-70
02139650	East Prong near Morganton, NC	8.94	1966-74
0214042720	North Harper Creek near Kawana, NC	1.25	1986-88
02141150	Lower Creek at Mulberry Street at Lenoir, NC	31.8	1966-78
02141245	Lower Creek at SR1501 near Morganton, NC	89.5	1993-94
0214183365	Upper Little River at SR1740 near Petra Mills, NC	33.9	1993-94
0214192500	Middle Little River at Moretz Dam near Bethlehem, NC	46.1	1993-94
02142500	Catawba River at Catawba, NC	1,535	1896-99 1935-62
02142600	Mountain Creek near Terrell, NC	42.4	1957-62
02142651	McDowell Creek at Westmoreland Road near Cornelius, NC	2.35	1994-97
0214266075	Gar Creek at Secondary Road 2120 near Oakdale, NC	2.67	1994-97
0214399575	Long Creek Tributary at Headwaters near Bessemer City, NC	0.16	1993-01
0214399580	Long Creek Tributary below Headwaters near Bessemer City, NC	0.22	1993-01
0214620760	Irwin Creek at Starita Road at Charlotte, NC	4.40	1989-94
0214620805	Irwin Creek Tributary below Starita Road at Charlotte, NC	0.02	1994-98
0214635212	Unnamed Tributary to Sugar Creek at Crompton Street near Charlotte, NC	0.06	1995-98
0214643840	Edwards Branch Tributary Storm Drain at Charlotte, NC	0.02	1994-98
02146450	Briar Creek at Sharon Road, Charlotte, NC	18.5	1962-73
02146500	Little Sugar Creek near Charlotte, NC	41.0	1924-78
0214650690	Little Sugar Creek Tributary at Rose Valley Drive near Charlotte, NC	0.12	1993-98
02146579	Irvin's Creek at Lebanon Road near Mint Hill, NC	5.27	1983-90
0214666925	Four Mile Creek Tributary near Providence, NC	0.27	1994-98
0214669980	McMullen Creek Tributary near Charlotte, NC	0.13	1993-98
0214677974	Steele Creek above Secondary Road 1344 near Shopton, NC	3.57	1990-98
0214678230	Walker Branch at SR1123 near Pine Harbor, NC	4.52	1991-94
02148500	Broad River near Chimney Rock, NC	97.0	1927-58
02149702	Green River near Saluda, NC	104	1972-75
02150000	Green River near Mill Spring, NC	174	1940-54
02151000	Second Broad River at Cliffside, NC	220	1925-97
02152000	Sandy Run Creek near Boiling Springs, NC	67.0	1925-28
02152500	First Broad River near Lawndale, NC	200	1940-71
02152610	Sugar Branch near Boiling Springs, NC	1.42	1968-87
	Kanawha River Basin		
03161500	South Fork New River near Crumpler, NC	325	1908-16
03162500	North Fork New River at Crumpler, NC	277	1908-16 1928-58

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Tennessee River Basin		
03439500	French Broad at Calvert, NC	103	1924-55
03440500	Davidson River near Davidson River, NC	31.0	1904-09
03441440	Little River above High Falls near Cedar Mountain, NC	26.8	1963-90
03441500	Little River near Penrose, NC	41.4	1942-55
03442000	Crab Creek near Penrose, NC	10.9	1942-55
03444000	Boylston Creek near Horseshoe, NC	14.8	1942-55
03444500	South Fork Mills River at the Pink Beds, NC	9.99	1926-49
			1965-73
03445000	South Fork Mills River near Sitton, NC	40.0	1904-09
			1925-26
03445500	North Fork Mills River at Pinkbed, NC	23.1	1904-09
03446500	Clear Creek near Hendersonville, NC	42.2	1945-55
03447000	Mud Creek at Naples, NC	109	1938-55
03447500	Cane Creek at Fletcher, NC	63.1	1942-58
03448000	French Broad River at Bent Creek, NC	676	1933-86
03448500	Hominy Creek at Candler, NC	79.8	1942-77
03448960	North Fork Swannanoa River below Burnett Reservoir near Black Mountain, NC	22.1	1976-77
03449000	North Fork Swannanoa River near Black Mountain, NC	23.8	1926-58
03449500	Swannanoa River at Swannanoa, NC	58.8	1907-09
			1926-31
0345092550	Ross Creek at Beaucatcher Road at Asheville, NC	2.46	1986-89
0345112600	Nasty Branch at Asheville, NC	1.19	1986-89
03451510	Reed Creek above Barnard Avenue at Asheville, NC	2.13	1986-89
03452000	Sandymush Creek near Alexander, NC	79.5	1942-55
03452001	Sandymush Creek 1.1 mile above mouth near Alexander, NC	79.5	1975-77
03454000	Big Laurel Creek near Stackhouse, NC	126	1934-71
03454500	French Broad River at Hot Springs, NC	1,567	1934-49
03456000	West Fork Pigeon River below Lake Logan near Waynesville, NC	55.3	1954-80
0345638607	Unnamed Tributary to Pisgah Creek at Flat Laurel Gap, NC	0.07	2001-03
03457000	Pigeon River at Canton, NC	133	1907-09
			1928-83
03457500	Allen Creek near Hazelwood, NC	14.4	1949-72
03458500	Pigeon River near Crabtree, NC	243	1920-29
03459000	Jonathan Creek near Cove Creek, NC	65.3	1930-72
03460500	Pigeon River near Mount Sterling, NC	460	1924-30
03462000	North Toe River at Altapass, NC	104	1938-57
03462500	North Toe River above Spruce Pine, NC	111	1934-38
03463500	South Toe River at Newdale, NC	60.8	1934-52
03464000	Cane River near Sioux, NC	157	1934-71
03464500	Nolichucky River at Poplar, NC	608	1925-55
03480500	Elk River near Banner Elk, NC	17.8	1934-40
03481000	Elk River near Elk Park, NC	42.0	1934-55
03500500	Cullasaja River at Highlands, NC	14.9	1931-71
03501000	Cullasaja River at Cullasaja, NC	86.5	1907-09
			1921-71
03501500	Little Tennessee River at Franklin, NC	295	1909-10
			1921-25
03502000	Little Tennessee River at Iotla, NC	323	1929-45
03502500	Little Tennessee River at Etna, NC	374	1926-29
03503500	Little Tennessee River at Almond, NC	451	1912-17
03505500	Nantahala River at Nantahala, NC	144	1942-81
03506500	Nantahala River at Almond, NC	174	1912-17
			1920-43
03507000	Little Tennessee River at Judson, NC	664	1912-44
03508000	Tuckasegee River at Tuckasegee, NC	143	1934-76
03508136	Caney Fork near Cowarts, NC	32.0	1975-76
03508910	Scott Creek at Willets-Ochre Hill, NC	22.4	1993-95

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station number	Station name	Drainage area (mi^2)	Period of record
	Tennessee River Basin--Continued		
03509000	Scott Creek above Sylva, NC	51.0	1941-75
			1993-95
03509500	Scott Creek at Sylva, NC	55.0	1928-41
03510500	Tuckasegee River at Dillsboro, NC	347	1933-81
03511000	Oconaluftee River at Cherokee, NC	131	1921-49
03513500	Noland Creek near Bryson City, NC	13.8	1935-71
03514000	Hazel Creek at Proctor, NC	44.4	1942-52
03515000	Little Tennessee River at Fontana Dam, NC	1,571	1938-55
03516000	Snowbird Creek near Robbinsville, NC	42.0	1942-52
03517000	Cheoah River at Johnson, NC	177	1912-18
			1920-26
03517500	Cheoah River at Tapoco, NC	215	1924-27
03546000	Shooting Creek near Hayesville, NC	37.6	1922-24
			1942-45
			1946-55
03547000	Hiwassee River below Chatuge Dam near Hayesville, NC	190	1942-74
03548000	Hiwassee River below Hayesville, NC	252	1934-45
03554000	Nottely River near Ranger, NC	272	1901-05
			1914-17
			1919-29
			1932-45
03555000	Hiwassee River at Hiwassee Dam, NC	968	1934-43



COUNTIES AND PHYSIOGRAPHIC PROVINCES OF NORTH CAROLINA

INTRODUCTION

Water-resources data for the 2004 water year for North Carolina consist of records of stage, discharge, water quality for streams; stage and contents for lakes and reservoirs; precipitation; and ground-water levels and water quality of ground water. This volume contains discharge records for 217 gaging stations; stage and contents for 58 lakes and reservoirs; stage only records for 22 gaging stations; elevations for 9 stations; water quality for 39 gaging stations and 5 miscellaneous sites, and continuous water quality for 35 sites; and continuous precipitation at 127 sites. Additional water data were collected at 51 sites not involved in the systematic data-collection program, and are published as miscellaneous measurements in this report. The collection of water-resources data in North Carolina is a part of the National Water-Data System operated by the U.S. Geological Survey in cooperation with State, municipal, and Federal agencies.

Stream-discharge records, and contents and stage for lakes or reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were published annually; beginning in 1961, these water-supply papers were published every 5 years through 1970. Records of chemical quality, water temperature, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Water-supply papers can be found in the libraries of principal cities and universities throughout the United States or can be purchased from the U.S. Geological Survey, Branch of Information Services, Denver Federal Center, Box 25286, Denver, Colorado 80225-0425.

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

Publication of streamflow and water-quality data, beginning with the 1971 water year, and ground-water data, beginning with the 1975 water year, currently is limited to reports on a State-by-State basis. Beginning with the 1975 water year, these Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report NC-04-1A." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161. Beginning with the 2001 water year, water-data reports are available online at *http://nc.water.usgs.gov/reports/WDR/*.

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

COOPERATION

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

North Carolina Department of Environment and Natural Resources
North Carolina Division of Emergency Management
North Carolina Department of Transportation
Water and Sewer Authority of Cabarrus County
Buncombe County Soil & Water Conservation District
Triangle Area Water Supply Monitoring Steering Committee
Winston-Salem/Forsyth County Utility Commission
City of Brevard
City of Morganton
City of Greensboro
City of Raleigh
City of Rocky Mount
City of Durham
City of Charlotte
City of Danville, Virginia
Mecklenburg County
Hiwassee River Watershed Coalition
Pender County Emergency Management
Upper Cape Fear River Basin Association
Asheville-Buncombe Water Authority

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

Corps of Engineers, U.S. Army
Tennessee Valley Authority
U.S. Environmental Protection Agency
U.S. Fish & Wildlife Service

The following organizations aided in collecting records:

Progress Energy
Yadkin, Inc.
Blue Ridge Paper Products
Duke Power Company
Tapoco, Inc.
Cook Industries

SUMMARY OF WATER-RESOURCES CONDITIONS

Precipitation

Despite the tropical systems affecting North Carolina during the 2004 water year, of the six key National Weather Service (NWS) precipitation stations (fig. 1), the Charlotte and Greensboro stations experienced below-average precipitation for the year; the four remaining sites recorded positive departures from average of less than 5 inches for the year (fig. 2). The NWS reported the following total annual precipitation amounts for the 2004 water year: Asheville, 51.80 inches (4.75 inches above average); Charlotte, 42.22 inches (1.29 inches below average); Greensboro, 35.84 inches (7.30 inches below average); Raleigh, 47.11 inches (4.06 inches above average); Wilmington, 60.71 inches (3.64 inches above average); and Elizabeth City, 52.66 inches (5.68 inches above average).

Precipitation amounts for the first quarter (October through December) of the 2004 water year were below average across the State except in Wilmington and Elizabeth City. Precipitation amounts in the western part of the State varied from 1.38 inches below average in Asheville to 5.53 inches below average in Charlotte, in the central part of the State from 1.24 inches below average in Raleigh to 3.28 inches below average in Greensboro, and in the eastern part of the State from 4.72 inches above average in Elizabeth City to 6.23 inches above average in Wilmington. Average precipitation amounts are mean monthly values based on data from 1971 through 2000, the 30-year base period used by the National Weather Service. Precipitation data recorded at two of the six key National Weather Service stations in the State (fig. 1) indicate that below-average precipitation amounts occurred in all months during the first quarter at Charlotte and Greensboro (fig. 2).

The second quarter of the 2004 water year (January through March) brought even drier conditions to the State. Precipitation was below average at all six index sites in January and March. The greatest precipitation amount recorded during the quarter was in Wilmington, but the total for the quarter remained 3.09 inches below average. Below-average precipitation for the quarter was recorded at Raleigh (3.66 inches), Asheville (5.43 inches), Greensboro (5.58 inches), and Charlotte (5.86 inches). Elizabeth City had the greatest deficit (6.28 inches below average) and the least amount of total precipitation (6.07 inches) during the second quarter.

The third quarter (April through June) brought above-average precipitation to the western and northeastern parts of the State. Elizabeth City had the greatest amount of precipitation during this period (3.63 inches above average); Charlotte and Asheville also had above-average precipitation (2.30 and 1.27 inches, respectively) in the western part of the State. Precipitation amounts ranged from 4.02 (Greensboro) and 0.62 (Raleigh) inches below average in the central part of the State to 4.88 inches below average in Wilmington in the southeastern part of the State. All six National Weather Service stations recorded below-average precipitation amounts in April in all three provinces of North Carolina.

During the fourth quarter (July through September), precipitation amounts were above average throughout the entire State, primarily as a result of an active hurricane season. The six index sites reported precipitation amounts ranging from 3.61 to 10.29 inches above average for the quarter—10.29 inches at Asheville, 7.80 inches at Charlotte, 5.58 inches at Greensboro, 9.58 inches at Raleigh, 5.38 inches at Wilmington, and 3.61 inches at Elizabeth City. During September 2004, high rainfall amounts from two hurricanes, Frances and Ivan, were recorded in several Blue Ridge counties in North Carolina. As much as 18 inches of rainfall was reported during a 5-day period (September 5–9) from Hurricane Frances, and as much as 9 inches of rainfall was reported during a 3-day period (September 16–18) from Hurricane Ivan (Neal Lott, National Oceanic and Atmospheric Administration, Asheville, N.C., written commun., 2004). The National Climatic Data Center indicated that the Asheville Regional Airport reported a new record for the wettest September and the wettest month ever, with a monthly precipitation total of 13.71 inches.

Surface Water

Streamflow conditions in North Carolina are influenced greatly by precipitation. Intense precipitation can produce rapid responses in streamflow. Streamflow also declines following periods of low precipitation. The rate and magnitude of these responses depend on basin size, shape, topography, geology, land cover, the season, evapotranspiration, and the amount of ground water in storage. The effects of variable precipitation on streamflow in North Carolina during the 2004 water year are illustrated in figures 3–8.

Monthly conditions are depicted in maps (figs. 3 and 4) that show the areas of above-normal, normal, and below-normal streamflow. Hydrographs of daily mean discharge for basins representing each of the three physiographic provinces of the State and the Sand Hills are shown in figures 5–8. Data for the period of record from 34 index streamgaging stations across the State were used to compute monthly flow statistics (figs. 3 and 4). These stations are located on streams that are free of significant regulations or diversions and range in size from about 30 to 1,400 square miles. “Above-normal” streamflow is flow in the upper quartile, "normal" streamflow is flow in the middle two quartiles, and "below-normal" refers to streamflow in the lower quartile.

Despite below-normal precipitation at index sites in central and western North Carolina during the first quarter (October through December) of the 2004 water year (fig. 3), all 34 index streamgaging stations recorded normal or above-normal streamflow conditions. During the period from January through March, streamflow decreased to below-normal or normal conditions as a result of deficient precipitation across the State, a condition that generally continued during the third quarter of the water year (April through June). The last quarter of the water year (July through September) was marked by increased tropical activity across the State, and much of the excess precipitation occurred during September in the Blue Ridge and western Piedmont Provinces. Precipitation associated with the remnants of Hurricane Frances early in September resulted in extensive flooding and new period-of-record peak streamflow at some gages in western North Carolina. Just over a week later, precipitation associated with the remnants of Hurricane Ivan brought additional flooding and, in some cases, eclipsed the previous peaks from Hurricane Frances. Many streamgages, particularly those in the Blue Ridge Province, recorded the highest monthly mean streamflow for the period of record and period-of-record peak river stage and streamflow. At 15 of the 34 index stations, record high monthly mean streamflow for September for the period of record was established. The combination of these two events over a short period of time resulted in widespread property damage from flooding.

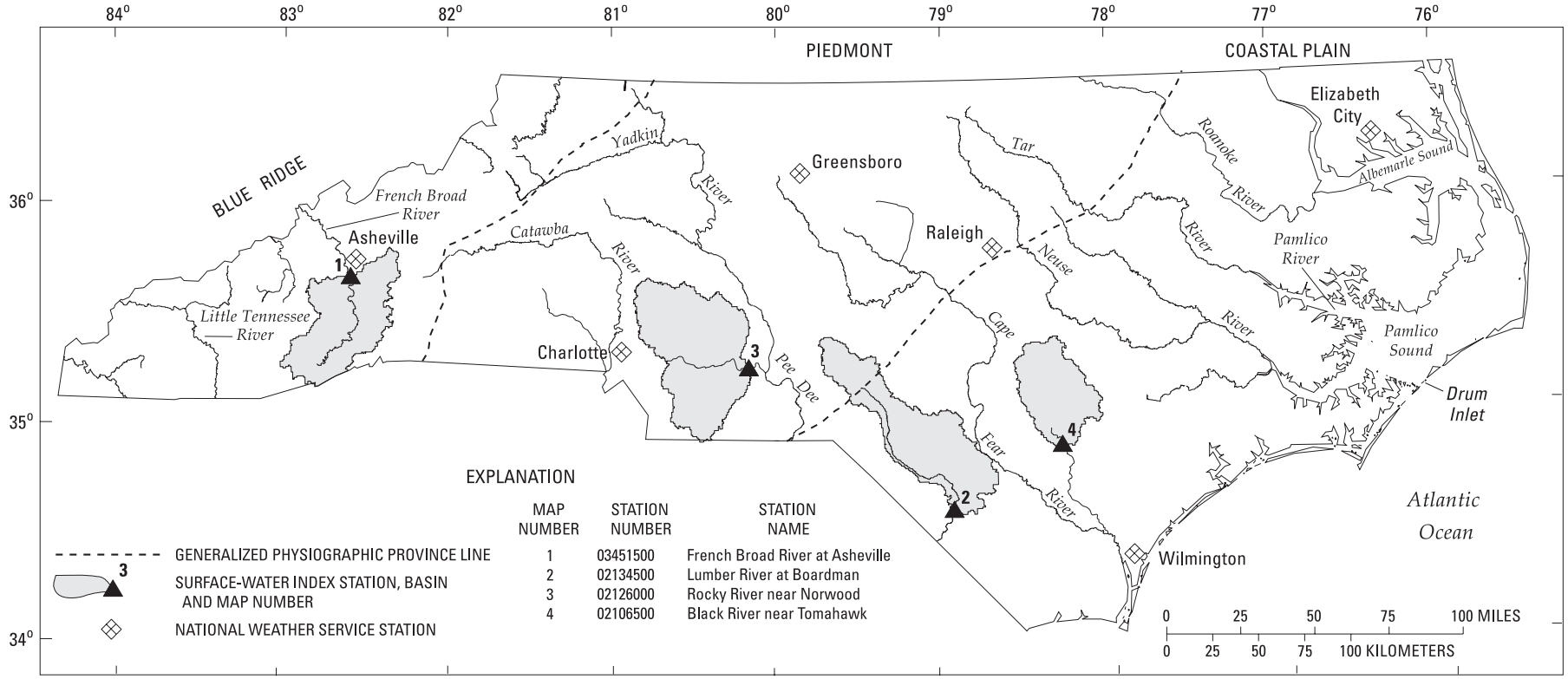


Figure 1. Locations of selected long-term index stations for collecting precipitation and discharge in North Carolina.

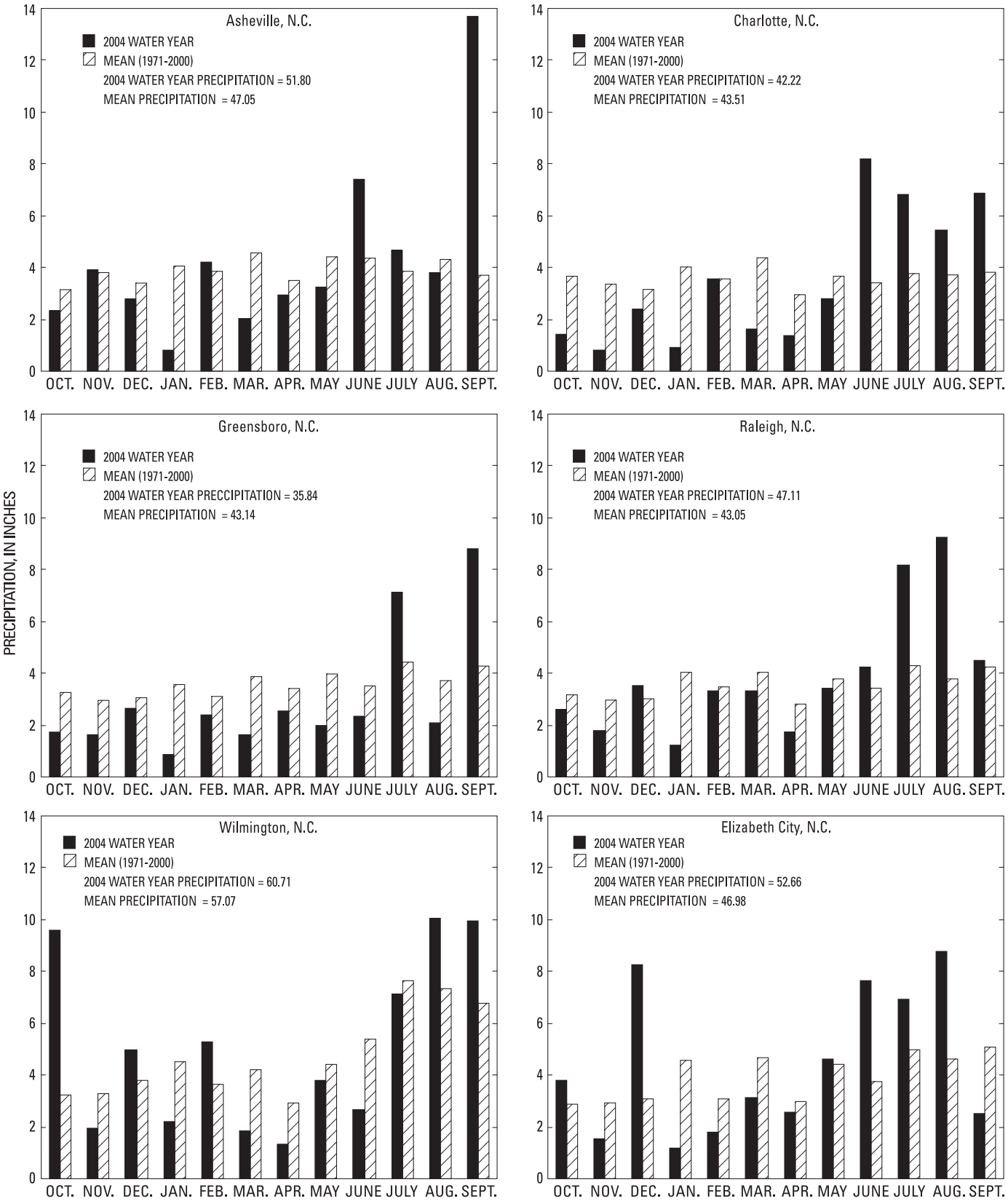


Figure 2. Monthly precipitation for the 2004 water year and mean monthly precipitation for the period 1971-2000 at index stations across North Carolina (data from the National Oceanic and Atmospheric Administration).

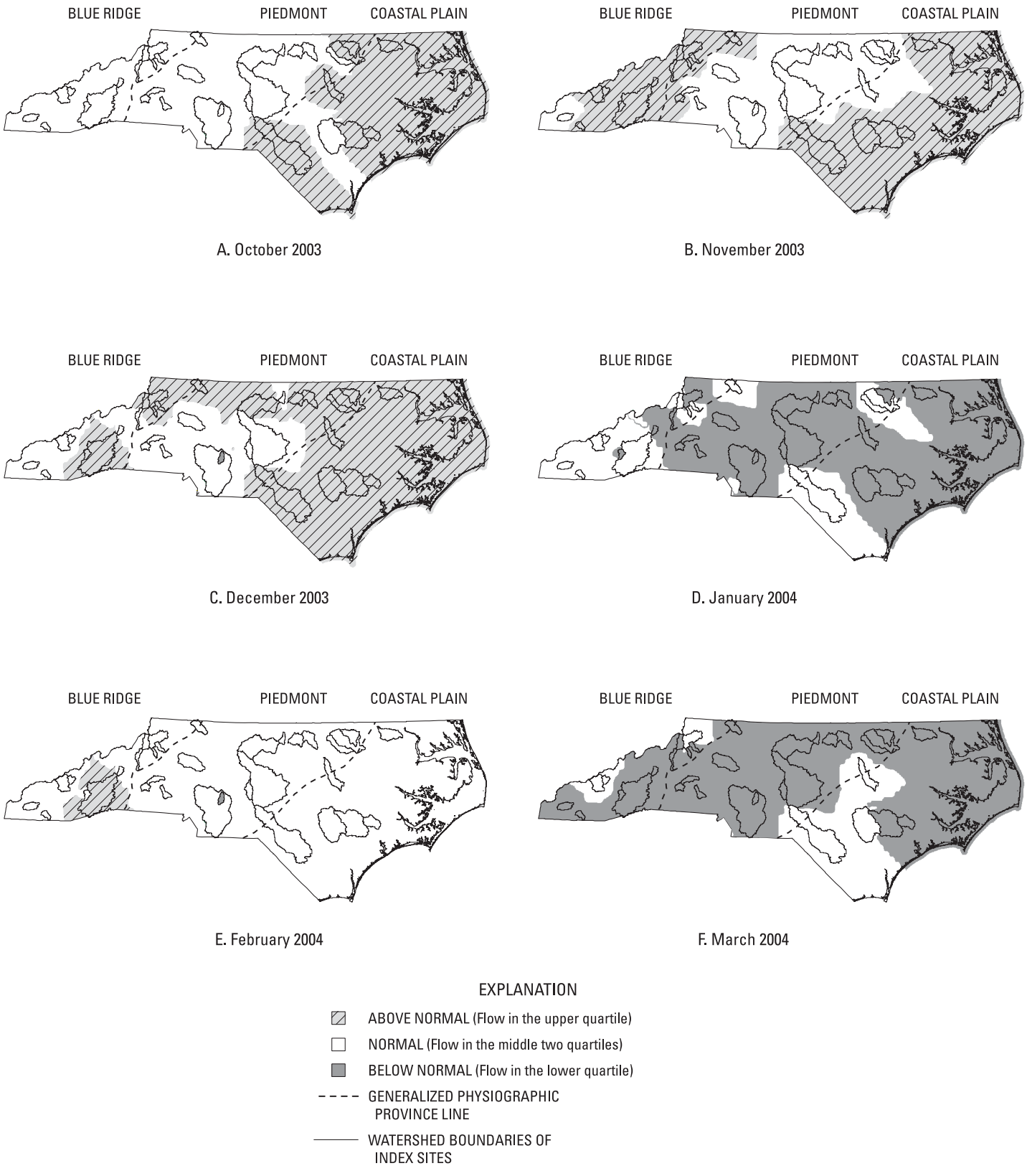


Figure 3. Monthly streamflow in North Carolina during October 2003 - March 2004.

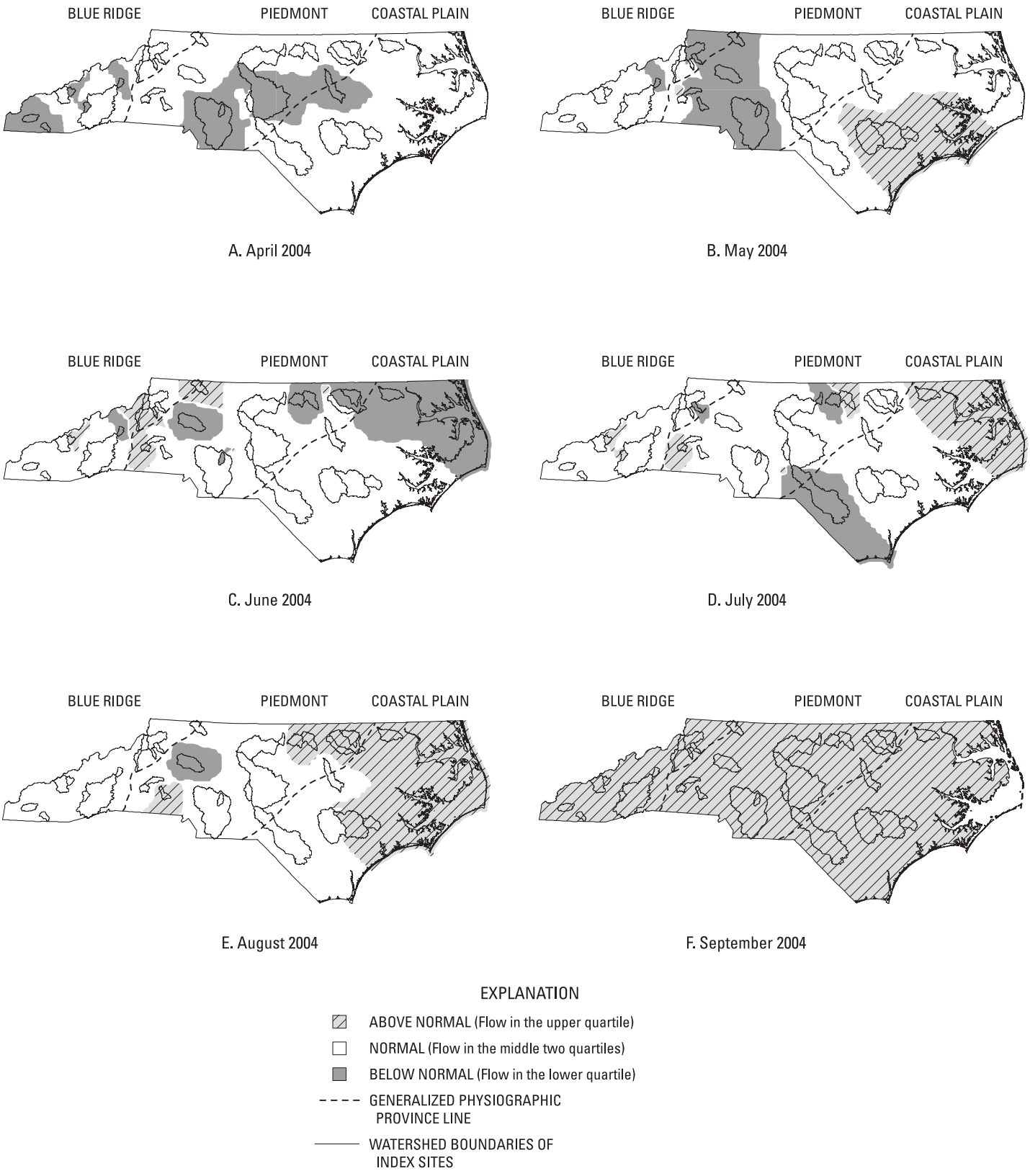


Figure 4. Monthly streamflow in North Carolina during April 2004 - September 2004.

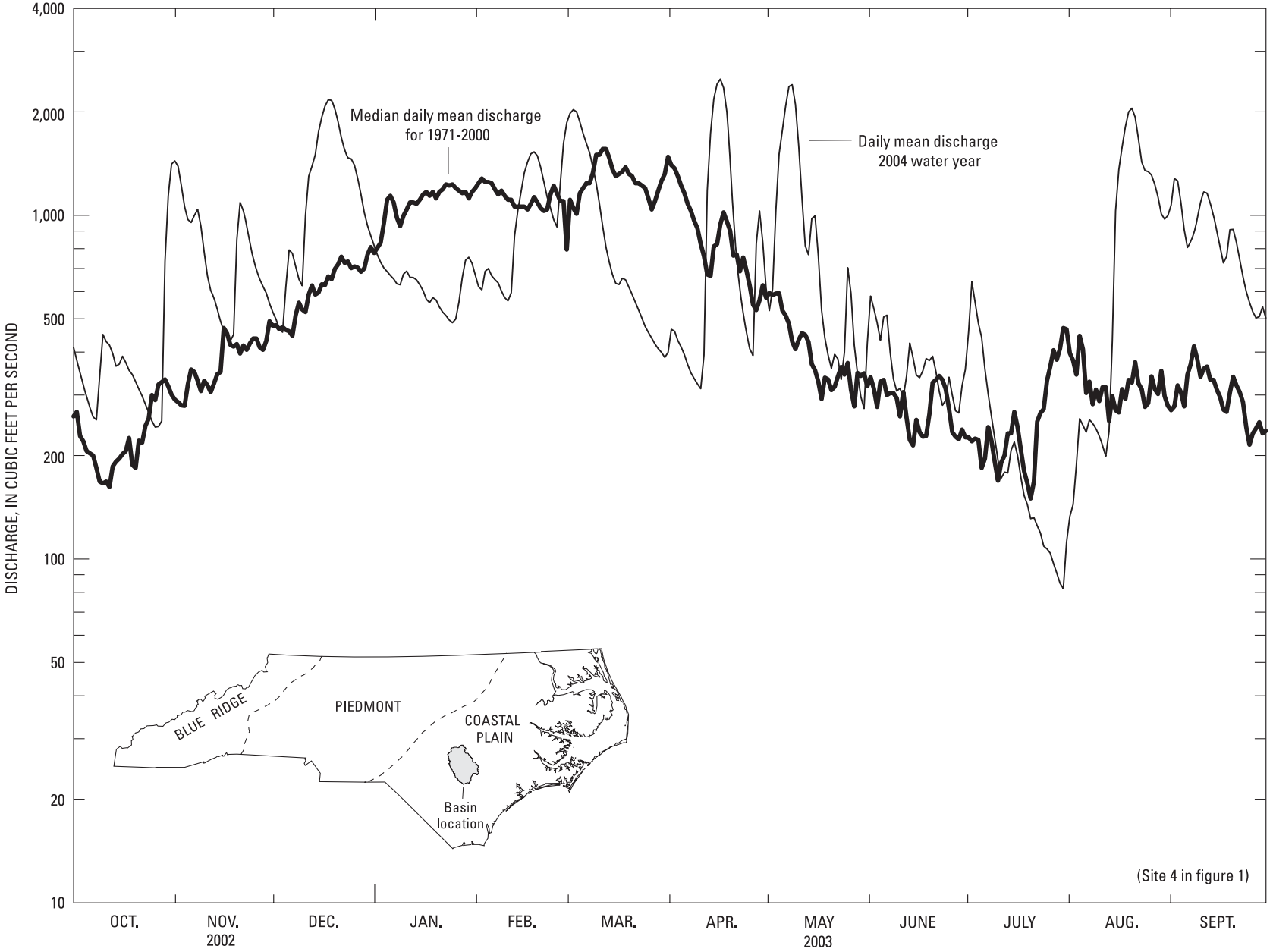


Figure 5. Daily mean discharge for the 2004 water year and median daily mean discharge for water years 1971-2000 for Black River near Tomahawk (02106500).

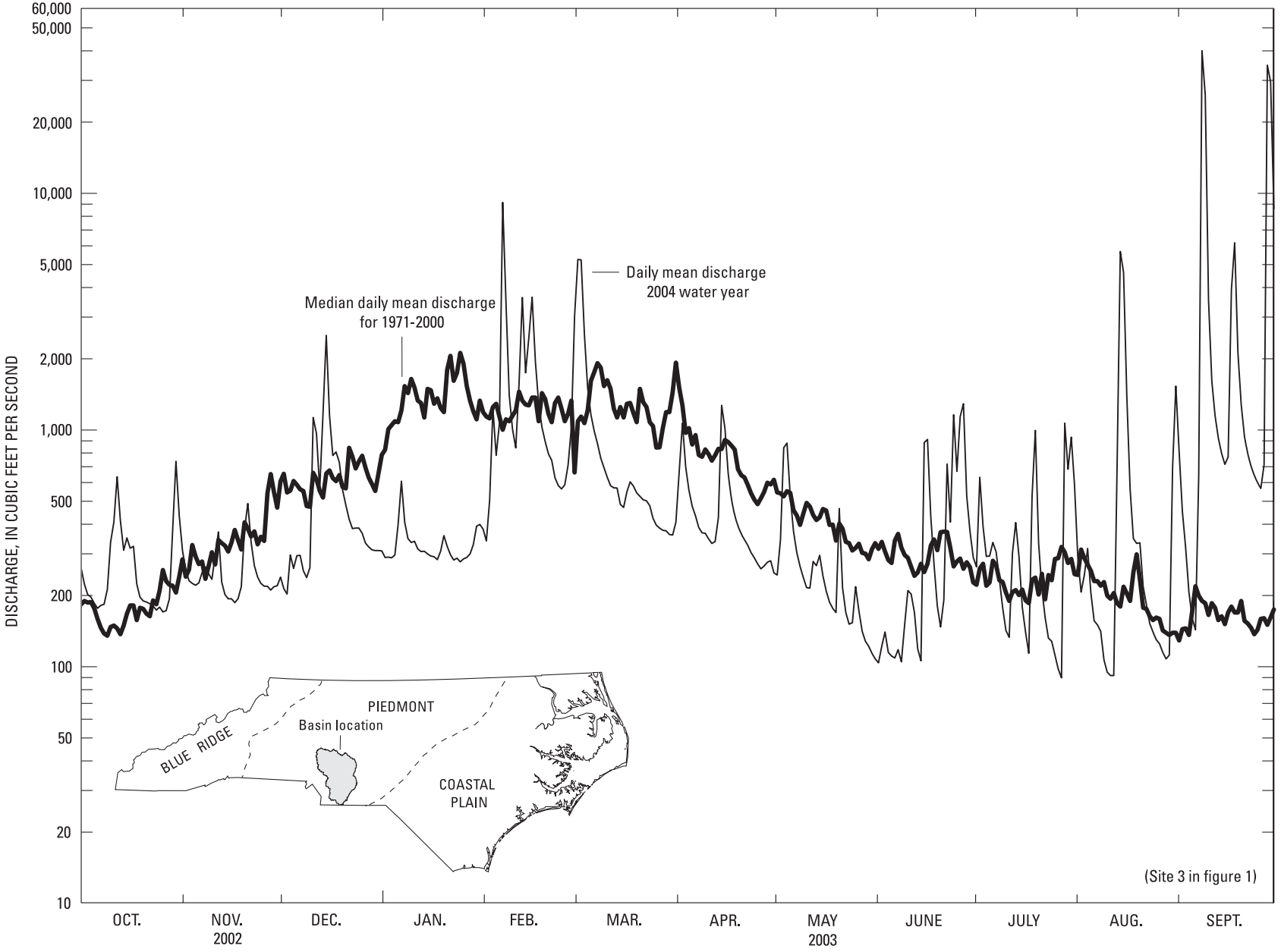


Figure 6. Daily mean discharge for the 2004 water year and median daily mean discharge for water years 1971-2000 for Rocky River near Norwood (02126000).

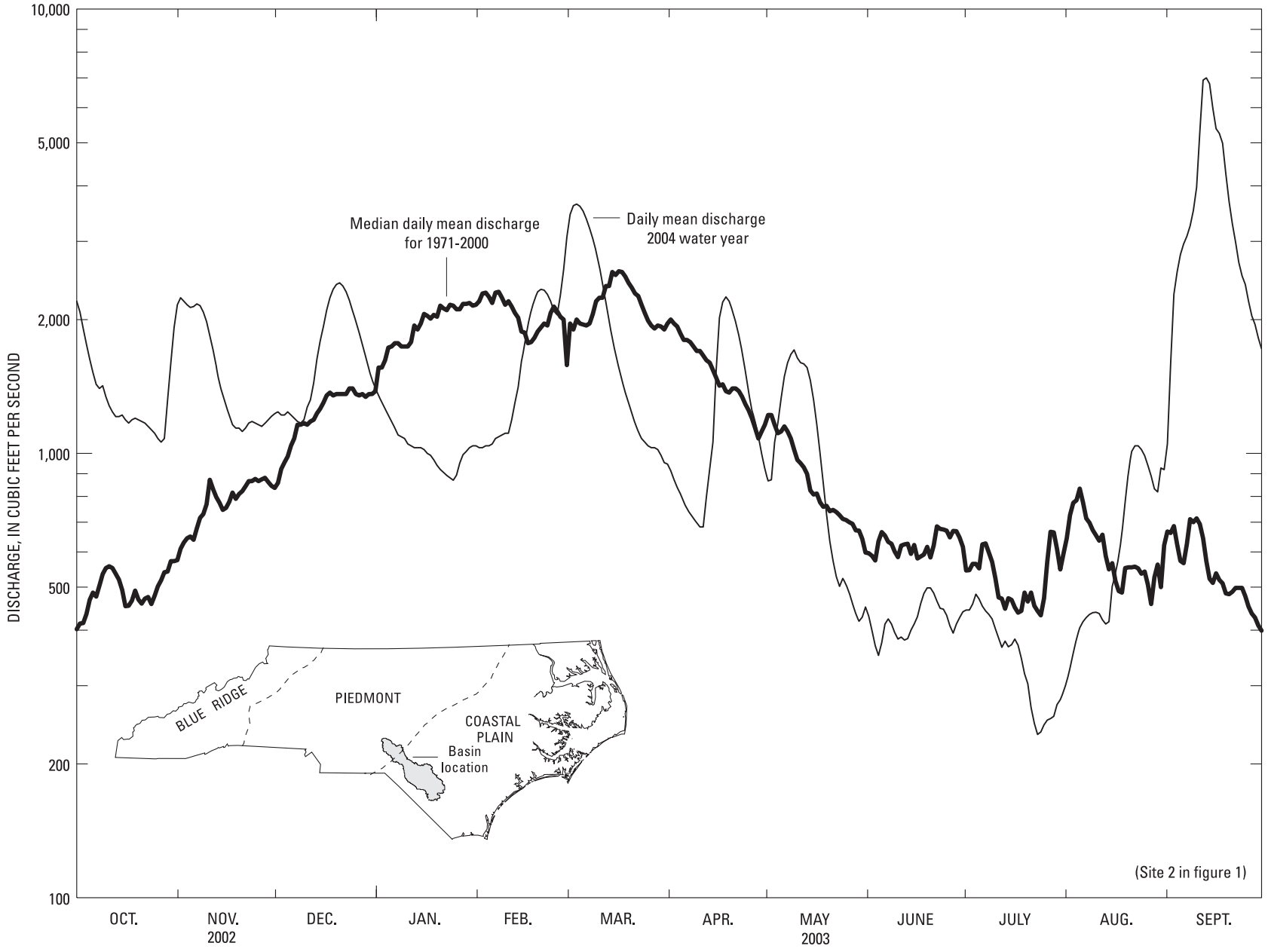


Figure 7. Daily mean discharge for the 2004 water year and median daily mean discharge for water years 1971-2000 for Lumber River at Boardman (02134500).

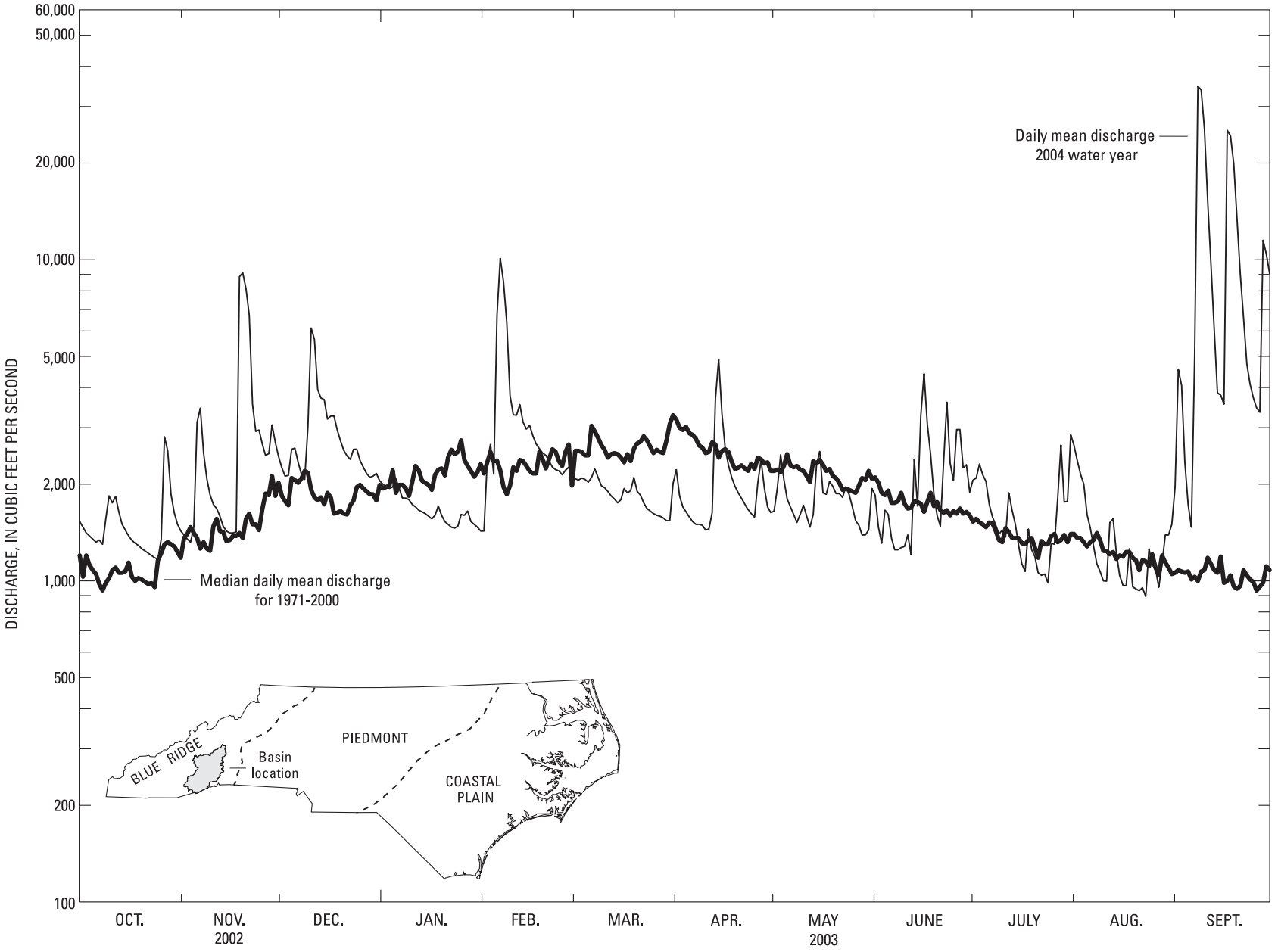


Figure 8. Daily mean discharge for the 2004 water year and median daily mean discharge for water years 1971-2000 for French Broad River at Asheville (03451500).

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, hydrologic-station records in USGS reports have been listed in order of 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 entering between two main-stream stations is listed between those stations. 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 located with respect to the stream to which it is immediately tributary is indicated by an indention in that list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation indicates which stations are on tributaries between any two stations and the rank of the tributary on which each station is located.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 09004100, which appears just to the left of the station name, includes a 2-digit part number “09” plus the 6-digit (or 8-digit) downstream order number “004100.” In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The USGS well and miscellaneous site-numbering system is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site 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, and the next 7 digits denote degrees, minutes, and seconds of longitude; the last 2 digits are a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and miscellaneous site are the same, a sequential number such as “01,” “02,” and so forth, would be assigned as one would for wells (see fig. 10). The 8-digit, downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

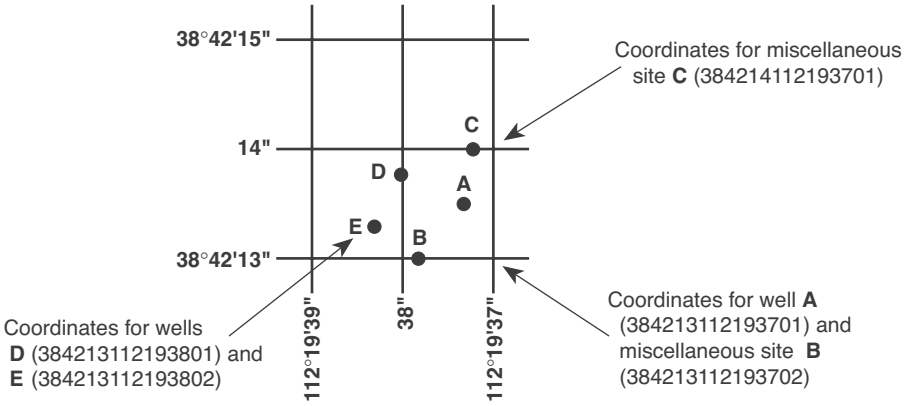


Figure 9. System for numbering wells and miscellaneous sites (latitude and longitude).

Local well numbers in this report generally fall within two numbering systems. All wells are indicated by a two-letter county prefix followed by a sequential number, such as ME-301 for a well in Mecklenburg County and RB-185 for a well in Robeson County. In addition, wells that belong in the statewide North Carolina observation-well program are indicated by the prefix NC- followed by a sequential number, for example NC-160.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from *http://water.usgs.gov/hbn/*.

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

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) is a network of monitoring sites that provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from *http://bqs.usgs.gov/acidrain/*.

The USGS National Water-Quality Assessment (NAWQA) Program is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents is measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a

wide range of spatial and temporal scales will provide information for water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program may be accessed from *http://water.usgs.gov/nawqa/*.

The USGS National Streamflow Information Program (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from *http://water.usgs.gov/nsip/*.

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes 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 a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2, which may be accessed from *http://water.usgs.gov/pubs/twri/*. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standardization (ISO).

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors based on individual discharge measurements and notes by engineers and observers are used when 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 controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence 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 at some distance from the base gage.

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

At some stations, 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 stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. 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 from other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the volume or 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 changes are 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 stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the 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 from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

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

Station Manuscript

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

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

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

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

REVISED RECORDS.—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

GAGE.—The type of gage in current use, the datum of the current gage referred to a standard datum, and a condensed history of the types, locations, and datums of previous gages are given under this heading.

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

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

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the USGS.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (*http://water.usgs.gov/nwis/nwis*). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations to document the revision in a REVISED RECORDS entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. Any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

Data Table of Daily Mean Values

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

Statistics of Monthly Mean Data

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

Summary Statistics

A table titled SUMMARY STATISTICS follows the statistics of monthly mean data tabulation. This table consists of four columns with the first column containing the line headings of the statistics being

reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, WATER YEARS __-__, will consist of all of the station records within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below), except for the ANNUAL 7-DAY MINIMUM statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

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

The following summary statistics data are provided with each continuous record of discharge. Comments that follow clarify information presented under the various line headings of the SUMMARY STATISTICS table.

ANNUAL TOTAL.—The sum of the daily mean values of discharge for the year.

ANNUAL MEAN.—The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

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

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

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

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

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

MAXIMUM PEAK FLOW.—The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

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

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified. This identification is shown either by flagging individual daily values with the letter “e” and noting in a table footnote, “e–Estimated,” or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

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 degree of accuracy of the records is stated in the REMARKS in the station description. "Excellent" indicates that about 95 percent of the daily discharges are within 5 percent of the true value; "good" within 10 percent; and "fair," within 15 percent. "Poor" indicates that daily discharges have less than "fair" accuracy. Different accuracies may be attributed to different parts of a given record.

Values 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 ft^3/s; to the nearest tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharge values 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, values 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 Records Available

Information of a more detailed nature than that published for most of the stream-gaging stations such as discharge measurements, gage-height records, and rating tables is available from the District office. Also, most stream-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 (see address that is shown on the back of the title page of this report).

EXPLANATION OF PRECIPITATION RECORDS

Data Collection and Computation

Rainfall data generally are collected using electronic data loggers that measure the rainfall in 0.01-inch increments every 15 minutes using either a tipping-bucket rain gage or a collection well gage. Twenty-four hour rainfall totals are tabulated and presented. A 24-hour period extends from just past midnight of the previous day to midnight of the current day. Snowfall-affected data can result during cold weather when snow fills the rain-gage funnel and then melts as temperatures rise. Snowfall-affected data are subject to errors. Missing values are indicated by this symbol "---" in the table.

Data Presentation

Precipitation records collected at surface-water gaging stations are identified with the same station number and name as the stream-gaging station. Where a surface-water daily-record station is not available, the precipitation record is published with its own name and latitude-longitude identification number.

Information pertinent to the history of a precipitation station is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, period of record, and general remarks.

The following information is provided with each precipitation station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

INSTRUMENTATION.—Information on the type of rainfall collection system is given.

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analysis usually are collected at or near stream-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, water temperature, sediment discharge, and so forth); extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, sampling date, or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*.

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 at several verticals 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 and minimum values (and sometimes mean or median values) for each constituent measured, and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

SURFACE-WATER-QUALITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data are useful in the interpretation of surface-water quality. Records of surface-water quality in this report involve a variety of types of data and measurement frequencies.

Classification of Records

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

A careful distinction needs to be made between *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently.

Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Rating classifications for continuous water-quality records

[≤less than or equal to; ± plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Rating			
	Excellent	Good	Fair	Poor
Water temperature	≤±0.2 °C	> ±0.2 to 0.5 °C	> ±0.5 to 0.8 °C	> ±0.8 °C

Rating classifications for continuous water-quality records

[≤ less than or equal to; ± plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Rating			
	Excellent	Good	Fair	Poor
Specific conductance	≤±3%	> ±3 to 10%	> ±10 to 15%	> ±15%
Dissolved oxygen	≤±0.3 mg/L	> ±0.3 to 0.5 mg/L	> ±0.5 to 0.8 mg/L	> ±0.8 mg/L
pH	≤±0.2 unit	> ±0.2 to 0.5 unit	> ±0.5 to 0.8 unit	> ±0.8 unit
Turbidity	≤±5%	> ±5 to 10%	> ±10 to 15%	> ±15%

Arrangement of Records

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

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS District office (see address that is shown on the back of title page in this report).

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

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

Sediment

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

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

At other stations, suspended-sediment samples are collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time 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.

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

Laboratory Measurements

Samples for biochemical oxygen demand (BOD) and indicator bacteria are analyzed locally. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRIs, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. The TWRI publications may be accessed from *http://water.usgs.gov/pubs/twri/*. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

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

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

LOCATION.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

DRAINAGE AREA.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

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

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

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

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

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

REVISIONS.—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (*http://waterdata.usgs.gov/nwis*). Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are made on an annual basis.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this section:

Printed Output	Remark
E	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

Water-Quality Control Data

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDLs) and laboratory reporting levels (LRLs). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a non-detection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as less than LRL for samples in which the analyte was either not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of “E.” These data should be used with the understanding that their uncertainty is greater than that of data reported without the E remark code.

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

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated in the overall data-collection process. The blank solution used to develop specific types of

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

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

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

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

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

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

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

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

Reference Samples

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

Replicate Samples

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

Concurrent samples—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

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

Split sample—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

Spike Samples

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

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

Generally, only ground-water-level data from selected wells with continuous recorders from a basic network of observation wells are published in this report. This basic network contains observation wells located so that the most significant data are obtained from the fewest wells in the most important aquifers.

Site Identification Numbers

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 produced for local needs. (See NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES, p. 13, for a detailed explanation).

Data Collection and Computation

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.

Most methods for collecting and analyzing water samples are described in the TWRIs referred to in the On-site Measurements and Sample Collection and the Laboratory Measurements sections in this report. In addition, TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1 through A9. The TWRI publications may be accessed from *http://water.usgs.gov/pubs/twri/*. The values in this report represent water-quality conditions at the time of sampling, as much as possible, and that are consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. Trained personnel collected all samples. The wells sampled were pumped long enough to ensure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum above 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. For example, in a measurement of a depth of water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

Data Presentation

Water-level data are presented in alphabetical order by county. The primary identification number for a given well is the 15-digit site identification number that appears in the upper left corner of the table. The secondary identification number is the local or county well number. Well locations are shown in figures 5 and 6: each well is identified on the map by its local well or county well number.

Each well record consists of three parts: the well description, the data table of water levels observed during the water year, and, for most wells, a hydrograph following the data table. Well descriptions are presented in the headings preceding the tabular data.

The following comments clarify information presented in these various headings.

LOCATION.—This paragraph follows the well-identification number and reports the hydrologic-unit number and a geographic point of reference. Latitudes and longitudes used in this report are referenced to the North American Datum of 1983 (NAD83).

AQUIFER.—This entry designates by name and geologic age the aquifer that the well taps.

WELL CHARACTERISTICS.—This entry describes the well in terms of depth, casing diameter and depth or screened interval, method of construction, use, and changes since construction.

INSTRUMENTATION.—This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on continuous, monthly, or some other frequency of measurement.

DATUM.—This entry describes both the measuring point and the land-surface elevation at the well. The altitude of the land-surface datum is described in feet above the altitude datum; it is reported with a precision depending on the method of determination. The measuring point is described physically (such as top of casing, top of instrument shelf, and so forth), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above National Geodetic Vertical Datum of 1929 (NGVD 29); it is reported with a precision depending on the method of determination.

REMARKS.—This entry describes factors that may influence the water level in a well or the measurement of the water level, when various methods of measurement were begun, and the network (climatic, terrane, local, or areal effects) or the special project to which the well belongs.

PERIOD OF RECORD.—This entry indicates the time period for which records are published for the well, the month and year at the start of publication of water-level records by the USGS, and the words “to current year” if the records are to be continued into the following year. Time periods for which water-level records are available, but are not published by the USGS, may be noted.

EXTREMES FOR PERIOD OF RECORD.—This entry contains the highest and lowest instantaneously recorded or measured water levels of the period of published record, with respect to land-surface datum or sea level, and the dates of occurrence.

Water-Level Tables

A table of water levels follows the well description for each well. Water-level measurements in this report are given in feet with reference to either sea level or land-surface datum (lsd). Missing records are indicated by dashes in place of the water-level value.

For wells not equipped with recorders, water-level measurements were obtained periodically by steel or electric tape. Tables of periodic water-level measurements in these wells show the date of measurement and the measured water-level value.

Hydrographs

Hydrographs are a graphic display of water-level fluctuations over a period of time. In this report, current water year and, when appropriate, period-of-record hydrographs are shown. Hydrographs that display periodic water-level measurements show points that may be connected with a dashed line from one measurement to the next. Hydrographs that display recorder data show a solid line representing the mean water level recorded for each day. Missing data are indicated by a blank space or break in a hydrograph. Missing data may occur as a result of recorder malfunctions, battery failures, or mechanical problems related to the response of the recorder's float mechanism to water-level fluctuations in a well.

GROUND-WATER-QUALITY DATA

Data Collection and Computation

The ground-water-quality data in this report were obtained as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some wells within a county but not for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide.

Most methods for collecting and analyzing water samples are described in the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRI), which may be accessed from *http://water.usgs.gov/pubs/twri/*. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRI, Book 1, Chapter D2; and Book 5, Chapters A1, A3, and A4 and Book 9, Chapters A1-A6. Also, detailed information on collecting, treating, and shipping samples may be obtained from the USGS District office (see address shown on back of title page in this report).

Laboratory Measurements

Analysis for sulfide and measurement of alkalinity, pH, water temperature, specific conductance, and dissolved oxygen are performed on site. All other sample analyses are performed at the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used by the USGS laboratory are given in TWRI, Book 1, Chapter D2; and Book 5, Chapters A1, A3, and A4, which may be accessed from *http://water.usgs.gov/pubs/twri/*.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed from *http://water.usgs.gov*.

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each Water Discipline District Office (See address that is shown on the back of the title page of this report.)

REFERENCES

Coble, R.W., Strickland, A.G., and Bailey, M.C., 1989, Ground-water level data for North Carolina, 1987: U.S. Geological Survey Open-File Report 89-68, 152 p.

Eimers, J.L., Lyke, W.L., and Brockman, A.R., 1990, Simulation of ground-water flow in aquifers in Cretaceous rocks in the central Coastal Plain, North Carolina: U.S. Geological Survey Water-Resources Investigations Report 89-4153, 101 p.

Strickland, A.G., 1995, Water-level conditions in the upper Cape Fear aquifer, 1992-94, in parts of Bladen and Robeson Counties, North Carolina: U.S. Geological Survey Water-Resources Investigations Report 95-4129, 1 sheet.

Strickland, A.G., 1999, Water-level conditions in the upper Cape Fear aquifer, 1994-98, in parts of Bladen and Robeson Counties, North Carolina: U.S. Geological Survey Water-Resources Investigations Report 99-4127, 1 sheet.

Strickland, A.G., Coble, R.W., Edwards, L.A., and Pope, B.F., 1992, Ground-water level data for North Carolina, 1988-90: U.S. Geological Survey Open-File Report 92-57, 167 p.

Walters, D.A., 1997, Estimated water use, by county, in North Carolina, 1995: U.S. Geological Survey Open-File Report 97-559, 102 p.

Winner, M.D., Jr., 1981, An observation-well network concept as applied to North Carolina: U.S. Geological Survey Water-Resources Investigations Report 81-13, 59 p.

Winner, M.D., Jr., and Coble, R.W., 1996, Hydrogeologic framework of the North Carolina Coastal Plain Aquifer System: U.S. Geological Survey Professional Paper 1404-I, 106 p. + 24 pl.

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from *http://water.usgs.gov/glossaries.html*.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also "Annual runoff")

Adenosine triphosphate (ATP) is an organic, phosphate-rich compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

Adjusted discharge is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample. (See also "Biomass" and "Dry weight")

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

Annual runoff is the total quantity of water that is discharged ("runs off") from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

Aroclor is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

Artificial substrate is a device that purposely is placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

Ash mass is the mass or amount of residue present after the residue from a dry-mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2). (See also "Biomass" and "Dry mass")

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas 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.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each

station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

Bedload is material in transport that primarily is supported by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

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 mass per unit area or volume of habitat.

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This also is called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-flowing rivers; however, they are found commonly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm^3/mL). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also "Phytoplankton"and "Periphyton")

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

Cell volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are used frequently in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3\ \pi r^3 \quad \text{cone } 1/3\ \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159….

From cell volume, total algal biomass expressed as biovolume (μm^3/mL) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cells/volume refers to the number of cells of any organism that 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 volume, and generally are reported as cells or units per milliliter (mL) or liter (L).

Cfs-day (See "Cubic foot per second-day")

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

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

Clostridium perfringens *(C. perfringens)* is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and the presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

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

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

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

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

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

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

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [$(ft^3/s)/d$]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

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

Daily mean suspended-sediment concentration is the time-weighted mean concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

Daily record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data usually are downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or Universal Transverse Mercator (UTM) coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

Diatoms *(Bacillariophyta)* are unicellular or colonial algae with a siliceous cell wall. The abundance of diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm^3/mL). The abundance of diatoms in periphyton samples is given in cells per square centimeter

(cells/cm^2) or biovolume per square centimeter (µm^3/cm^2). (See also "Phytoplankton" and "Periphyton")

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

Discharge, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4917 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) can be converted to carbonate concentration by multiplying by 0.60.

Diversity index (H) (Shannon index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = -\sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n},$$

where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

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

Dry mass refers to the mass of residue present after drying in an oven at 105 °C, 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. (See also "Ash mass," "Biomass," and "Wet mass")

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

Enterococcus bacteria commonly are found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis, Streptococcus feacium, Streptococcus avium,* and their variants. (See also "Bacteria")

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that generally are considered pollution sensitive; the index usually decreases with pollution.

Escherichia coli *(E. coli)* are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) value of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an E code will be reported with the value. If the analyte is identified qualitatively as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an E code even though the measured value is greater than the MDL. A value reported with an E code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<). For bacteriological data, concentrations are reported as estimated when results are based on non-ideal colony counts.

Euglenoids (*Euglenophyta*) are a group of algae that usually are free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

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

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 ° C plus or minus 1.0 ° C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Filtered pertains to constituents in a water sample passed through a filter of specified pore diameter, most commonly 0.45 micrometer or less for inorganic analytes and 0.7 micrometer for organic analytes.

Filtered, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that has passed through a filter has been extracted. Complete recovery is not achieved by the extraction procedure and thus the analytical determination represents something less than 95 percent of the total constituent concentration in the sample. To achieve comparability of analytical data, equivalent extraction procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

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

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

Gaging station is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained.

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

Green algae *(Chlorophyta)* are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or floating "moss" in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm^3/mL). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also "Phytoplankton" and "Periphyton")

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat typically are made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. *See NOAA Web site: http://www.csc.noaa.gov/text/glossary.html* (see "High Water")

Hilsenhoff's Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = sum\frac{(n)(a)}{N},$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See "Datum")

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

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

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

Instantaneous discharge is the discharge at a particular instant of time. (See also "Discharge")

International Boundary Commission Survey Datum refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year, on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) generally is equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current

quality-control data and, therefore, may change. The LRL replaces the term 'non-detection value' (NDV).

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_o e^{-\lambda L},$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L}\log_e \frac{I}{I_o}.$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike-sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA Web site: http://www.csc.noaa.gov/text/glossary.html* (see "Low water")

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

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

Mean high or **low tide** is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

Measuring point (MP) is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

Megahertz is a unit of frequency. One megahertz equals one million cycles per second.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Method code is a one-character code that identifies the analytical or field method used to determine a value stored in the National Water Information System (NWIS).

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

Method of Cubatures is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

Methylene blue active substances (MBAS) indicate the presence of detergents (anionic surfactants). The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (UG/G, µg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per kilogram (UG/KG, µg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, µS/cm) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD 29) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations**,** it does not necessarily represent local mean sea level at any particular place. *See NOAA Web site: http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88* (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.

Nonfilterable refers to the portion of the total residue retained by a filter.

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

North American Vertical Datum of 1988 (NAVD 88) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian**,** Mexican, and United States first-order terrestrial leveling networks.

Open or **screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. 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 milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

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

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

Particle-size classification, as used in this report, agrees with the recommendation 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	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, most of the organic matter 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.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

Percent composition or **percent of total** 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, weight, mass, or volume.

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

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

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria,

fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

Phytoplankton is the plant part of the plankton. They usually are microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. 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 commonly are known as algae. (See also "Plankton")

Picocurie (PC, pCi) is one-trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/time)] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [mg O/(m^2/time)] for periphyton and macrophytes or per volume [mg O/(m^3/time)] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

Recoverable is the amount of a given constituent that is in solution after a representative water sample has been extracted or digested. Complete recovery is not achieved by the extraction or digestion and thus the determination represents something less than 95 percent of the constituent present in the sample. To achieve comparability of ana-

lytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also "Bed material")

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

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See "Recurrence interval")

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged ("runs off") from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also "Annual runoff")

Salinity is the total quantity of dissolved salts, measured by weight in parts per thousand. Values in this report are calculated from specific conductance and temperature. Seawater has an average salinity of about 35 parts per thousand (for additional information, refer to: Miller, R.L., Bradford, W.L., and Peters, N.E., 1988, Specific conductance: theoretical considerations and application to analytical quality control: U.S. Geological Survey Water-Supply Paper 2311, 16 p.)

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as "fluvial sediment." Sediment 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 affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also "Annual 7-day minimum" and "Recurrence interval")

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

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

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See "Gage height")

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

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

Substrate is the physical surface upon which an organism lives.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

Surficial bed material is the upper surface (0.1 to 0.2 foot) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Surrogate is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

Suspended is the amount (concentration) of undissolved material in a water-sediment mixture. Most commonly refers to that material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer filter has been extracted or digested. Complete recovery is not achieved by the extraction or digestion procedures and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also "Suspended")

Suspended sediment is sediment carried in suspension by the turbulent components of the fluid or by the Brownian movement (a law of physics). (See also "Sediment")

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 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027. (See also "Sediment," "Sus-

pended sediment," and "Suspended-sediment concentration")

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

Suspended solids, total residue at 105 °C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. 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 directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

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

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial 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:	Arthropeda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	*Hexagenia*
Species:	*Hexagenia limbata*

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table descriptions and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric ton per day.

Total is the amount of a given constituent in a representative whole-water (unfiltered) 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 determined at least 95 percent of the constituent in the sample.)

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

medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also "Bacteria")

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total in bottom material is the 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."

Total length (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

Total recoverable is the amount of a given constituent in a whole-water sample after a 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 for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Total sediment load or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is an expression of the optical properties of a liquid that causes light rays to be scattered and absorbed rather than transmitted in straight lines through water. Turbidity, which can make water appear cloudy or muddy, is caused by the presence of suspended and dissolved matter, such as clay, silt, finely divided organic matter, plankton and other microscopic organisms, organic acids, and dyes (ASTM International, 2003, D1889–00 Standard test method for turbidity of water, *in* ASTM International, Annual Book of ASTM Standards, Water and Environmental Technology, v. 11.01: West Conshohocken, Pennsylvania, 6 p.). The color of water, whether resulting from dissolved compounds or suspended particles, can affect a turbidity measurement. To ensure that USGS turbidity data can be understood and interpreted properly within the context of the instrument used and site conditions encountered, data from each instrument type are stored and reported in the National Water Information System (NWIS) using parameter codes and measurement reporting units that are specific to the instrument type, with specific instruments designated by the method code. The respective measurement units, many of which also are in use internationally, fall into two categories: (1) the designations NTU, NTRU, BU, AU, and NTMU signify the use of a broad spectrum incident light in the wavelength range of 400-680 nanometers (nm), but having different light detection configurations; (2) The designations FNU, FNRU, FBU, FAU, and FNMU generally signify an incident light in the range between 780-900 nm, also with varying light detection configurations. These reporting units are equivalent when measuring a calibration solution (for example, formazin or polymer beads), but their respective instruments may not produce equivalent results for environmental samples. Specific reporting units are as follows:

NTU (Nephelometric Turbidity Units): white or broadband [400-680 nm] light source, 90 degree detection angle, one detector.

NTRU (Nephelometric Turbidity Ratio Units): white or broadband [400-680 nm] light source, 90 degree detection angle, multiple detectors with ratio compensation.

BU (Backscatter Units): white or broadband [400-680 nm] light source, 30 ± 15 degree detection angle (backscatter).

AU (Attenuation Units): white or broadband [400-680 nm] light source, 180 degree detection angle (attenuation).

NTMU (Nephelometric Turbidity Multibeam Units): white or broadband [400-680 nm] light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

FNU (Formazin Nephelometric Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, one detector.

FNRU (Formazin Nephelometric Ratio Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, multiple detectors, ratio compensation.

FBU (Formazin Backscatter Units): near infrared [780-900 nm] or monochrome light source, 30±15 degree detection angle.

FAU (Formazin Attenuation Units): near infrared [780-900 nm] light source, 180 degree detection angle.

FNMU (Formazin Nephelometric Multibeam Units): near infrared [780-900 nm] or monochrome light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

For more information please see http://water.usgs.gov/owq/FieldManual/Chapter6/6.7_contents.html.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See "Water-table aquifer")

Unfiltered pertains to the constituents in an unfiltered, representative water-suspended sediment sample.

Unfiltered, recoverable is the amount of a given constituent in a representative water-suspended sediment sample that has been extracted or digested. Complete recovery is not achieved by the extraction or digestion treatment and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

Vertical datum (See "Datum")

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and, subsequently, analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They often are components of fuels, solvents, hydraulic fluids, paint thinners, and dry-cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human-health concern because many are toxic and are known or suspected human carcinogens.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2002, is called the "2002 water year."

Watershed (See "Drainage basin")

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

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

Wet mass is the mass of living matter plus contained water. (See also "Biomass" and "Dry mass")

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also "Dry weight")

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

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are 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. (See also "Plankton")

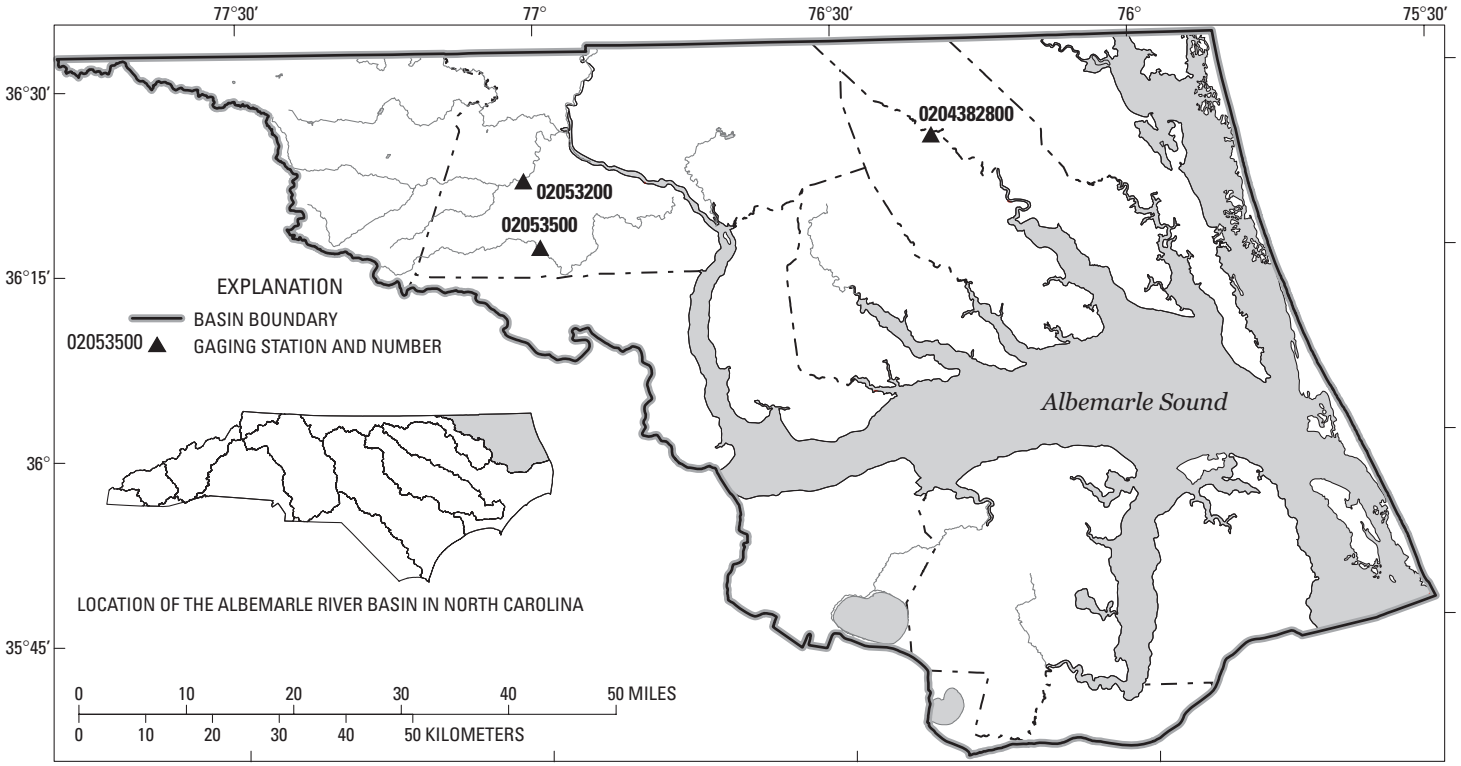


Figure 10. Locations of surface-water stations in the Albemarle River Basin, North Carolina.

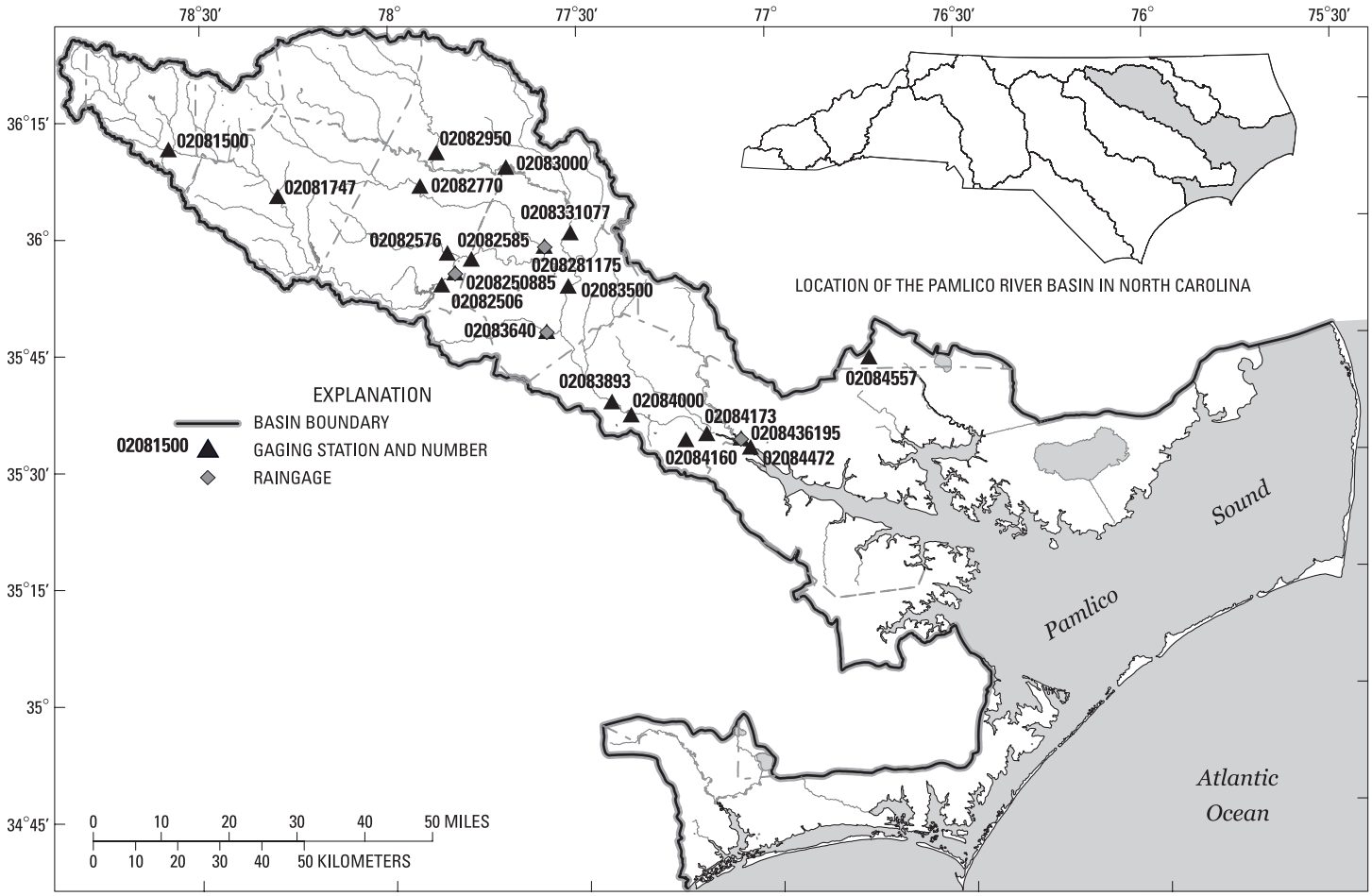


Figure 11. Locations of surface-water stations in the Pamlico River Basin, North Carolina.

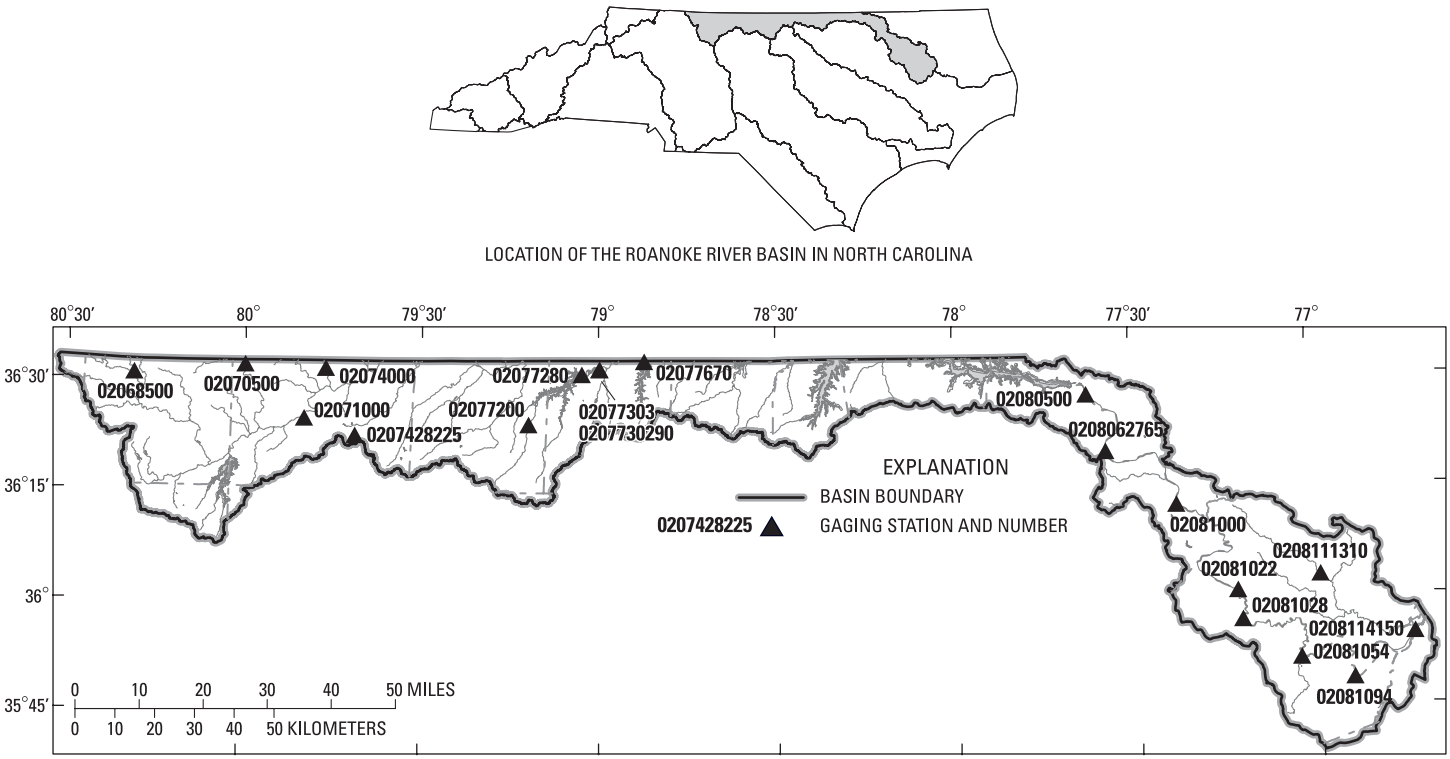


Figure 12. Locations of surface-water stations in the Roanoke River Basin, North Carolina.

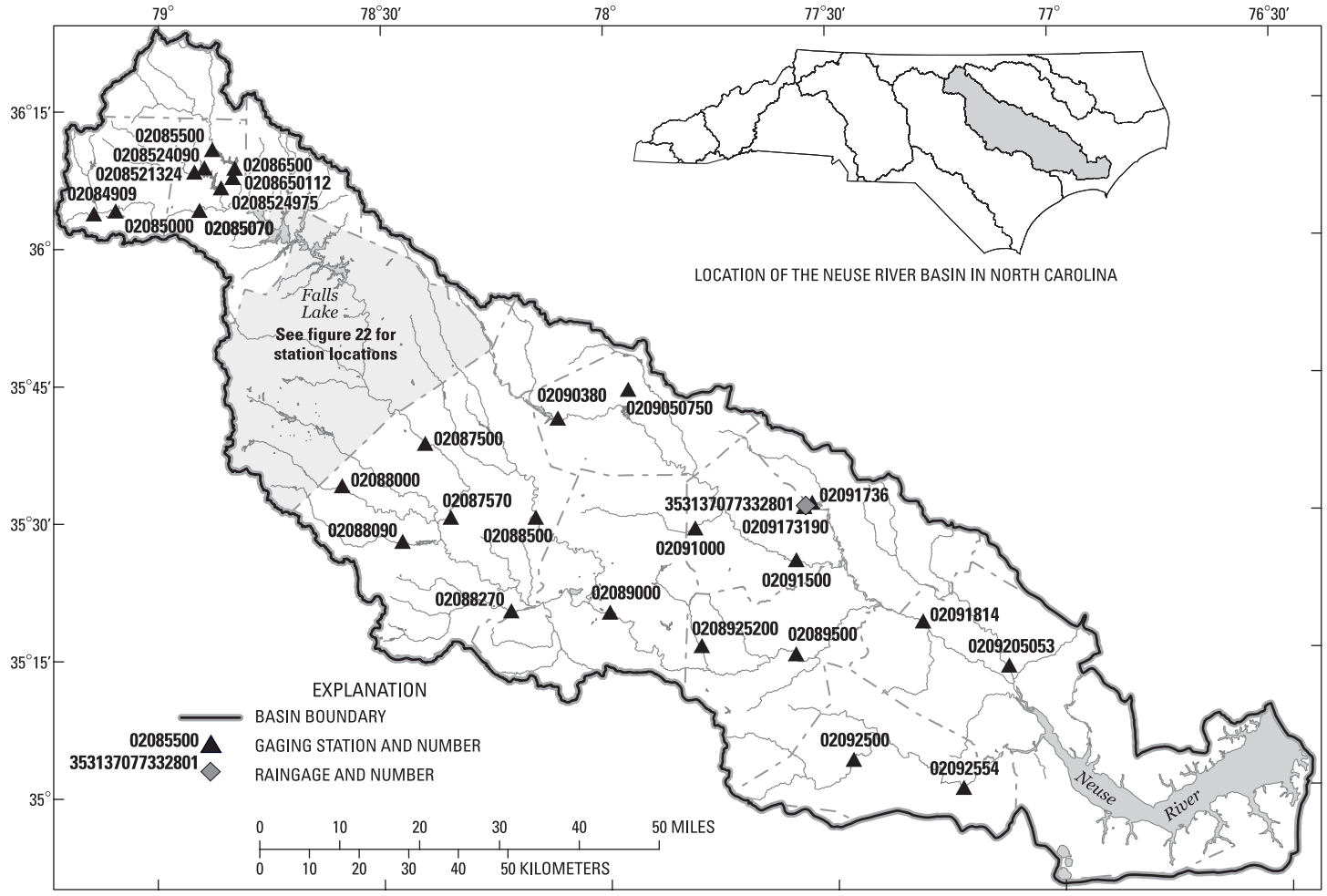


Figure 13. Locations of surface-water stations in the Neuse River Basin, North Carolina.

Figure 14. Locations of surface-water stations in the Cape Fear River Basin, North Carolina.

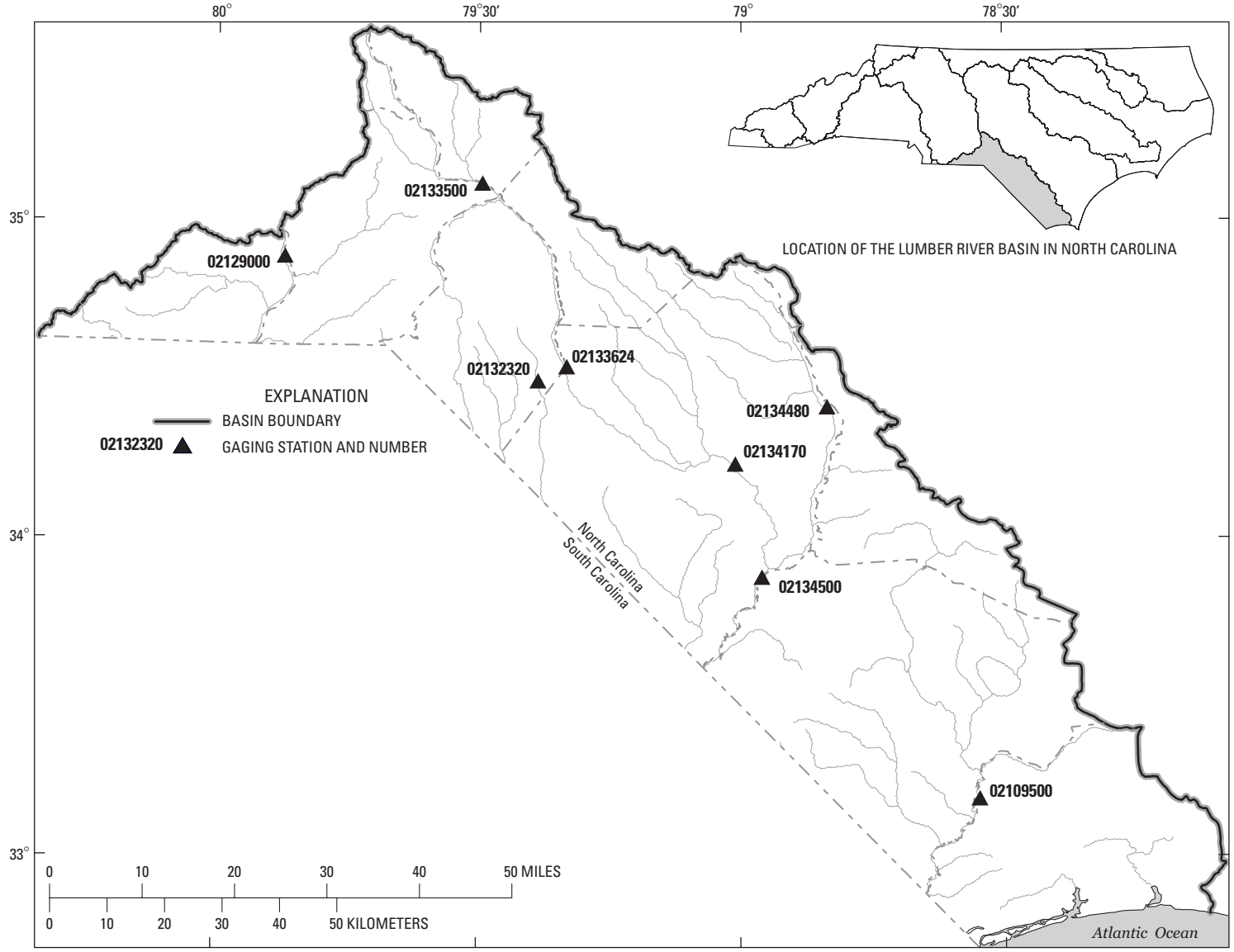
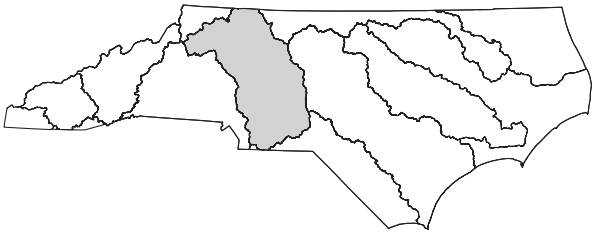


Figure 15. Locations of surface-water stations in the Lumber River Basin, North Carolina.



LOCATION OF THE YADKIN/PEE DEE RIVER BASIN IN NORTH CAROLINA

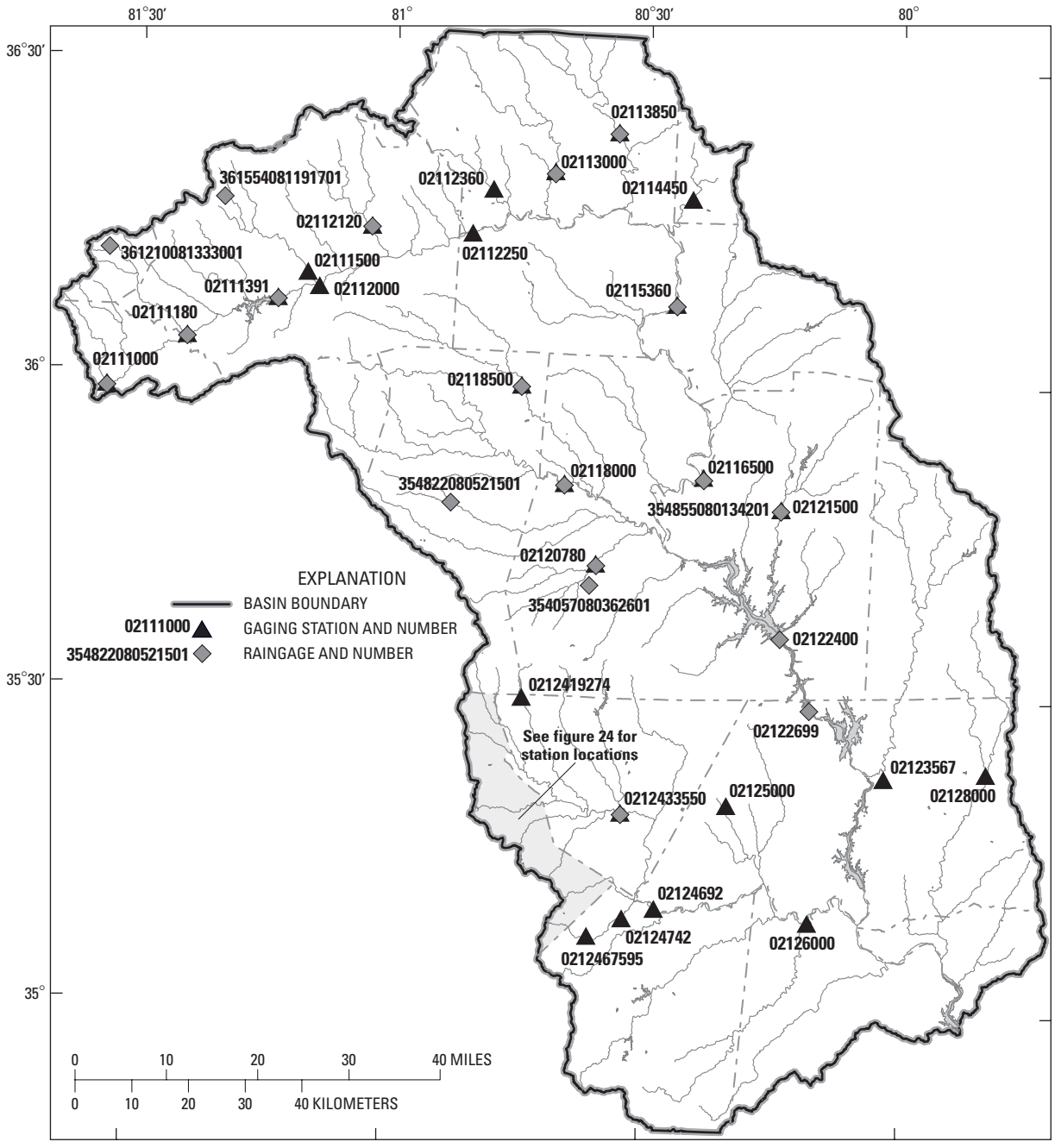


Figure 16. Locations of surface-water stations in the Yadkin/Pee Dee River Basin, North Carolina.

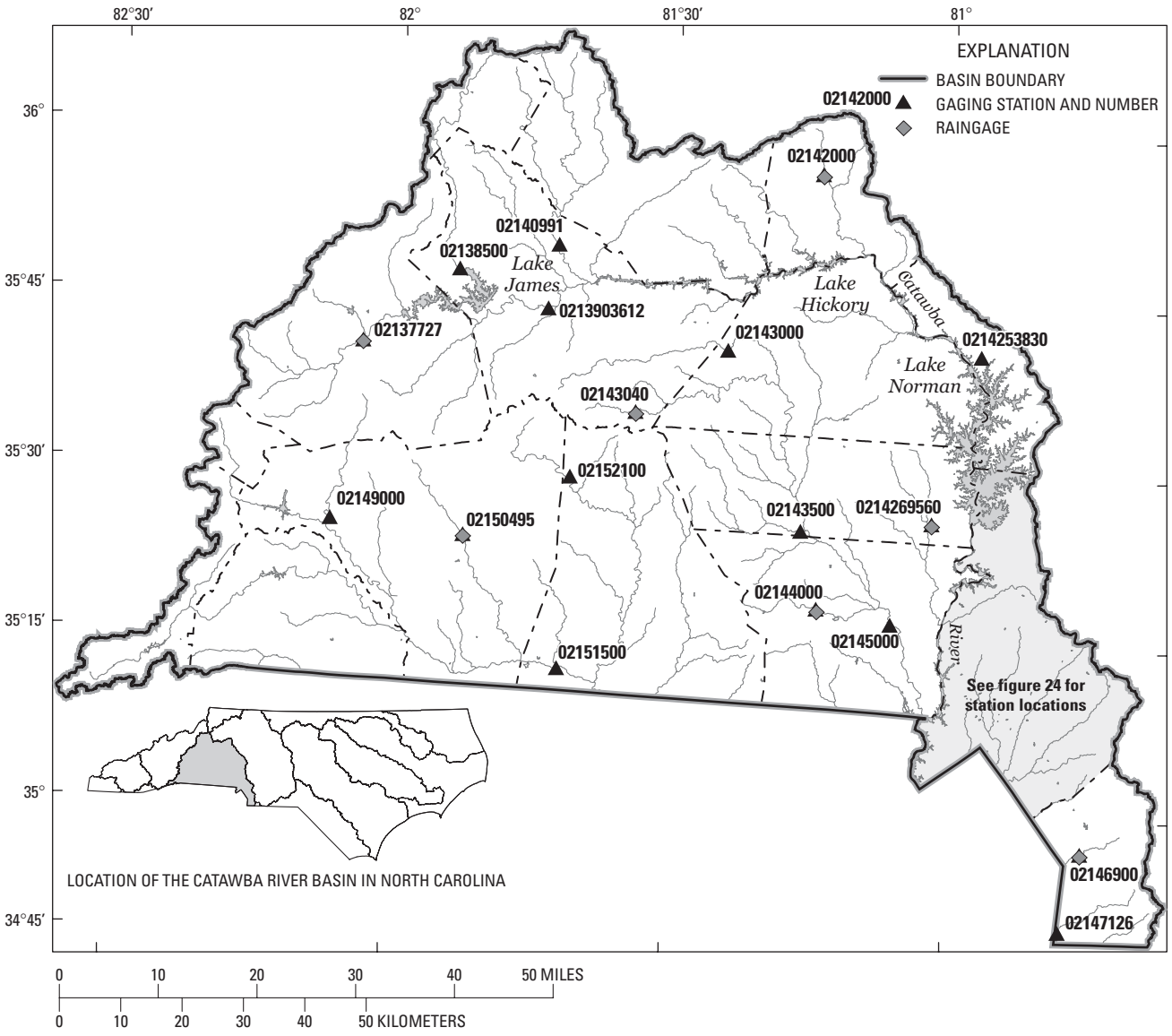


Figure 17. Locations of surface-water stations in the Catawba River Basin, North Carolina.

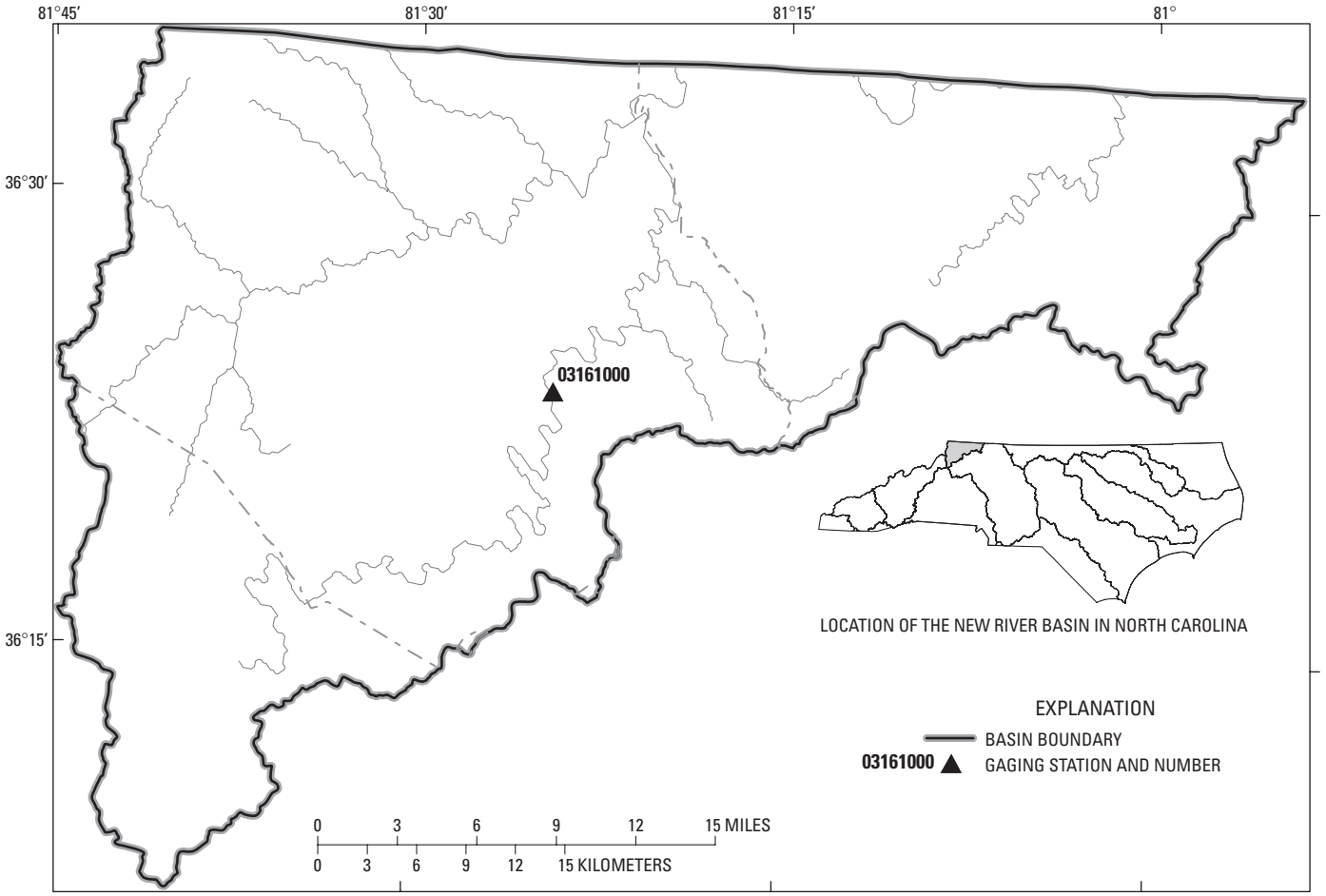


Figure 18. Location of surface-water station in the New River Basin, North Carolina.

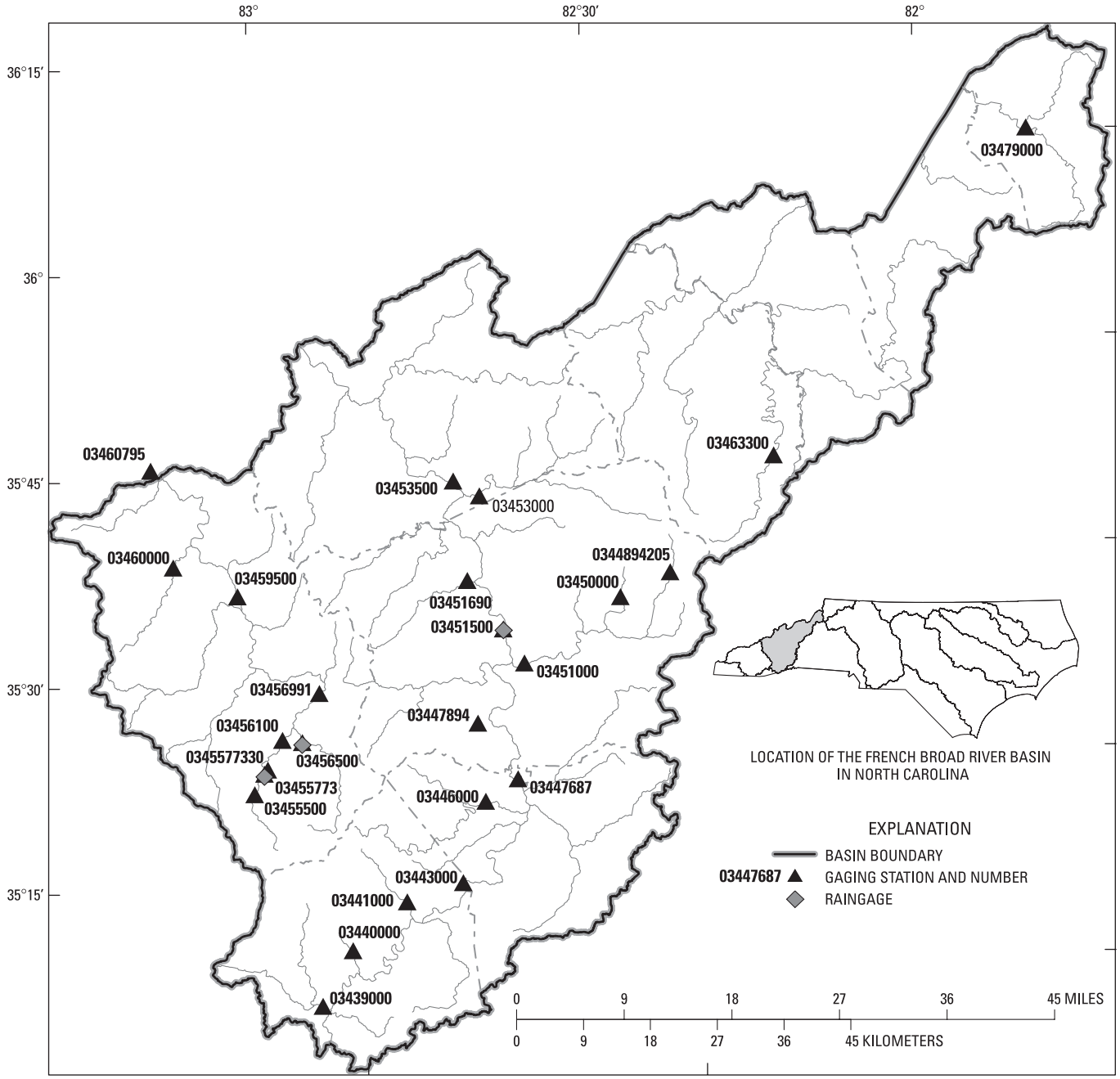


Figure 19. Locations of surface-water stations in the French Broad River Basin, North Carolina.

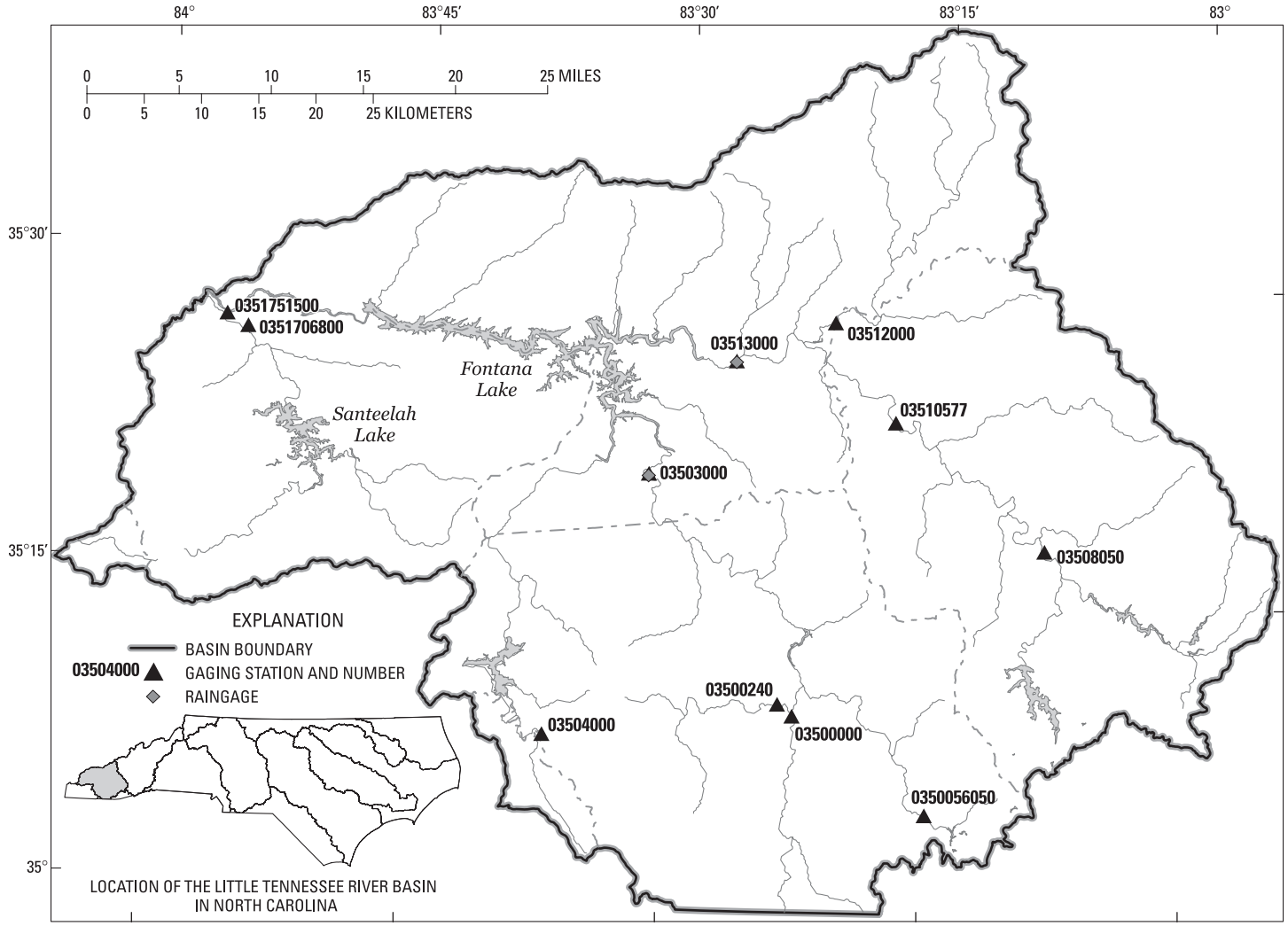


Figure 20. Locations of surface-water stations in the Little Tennessee River Basin, North Carolina.

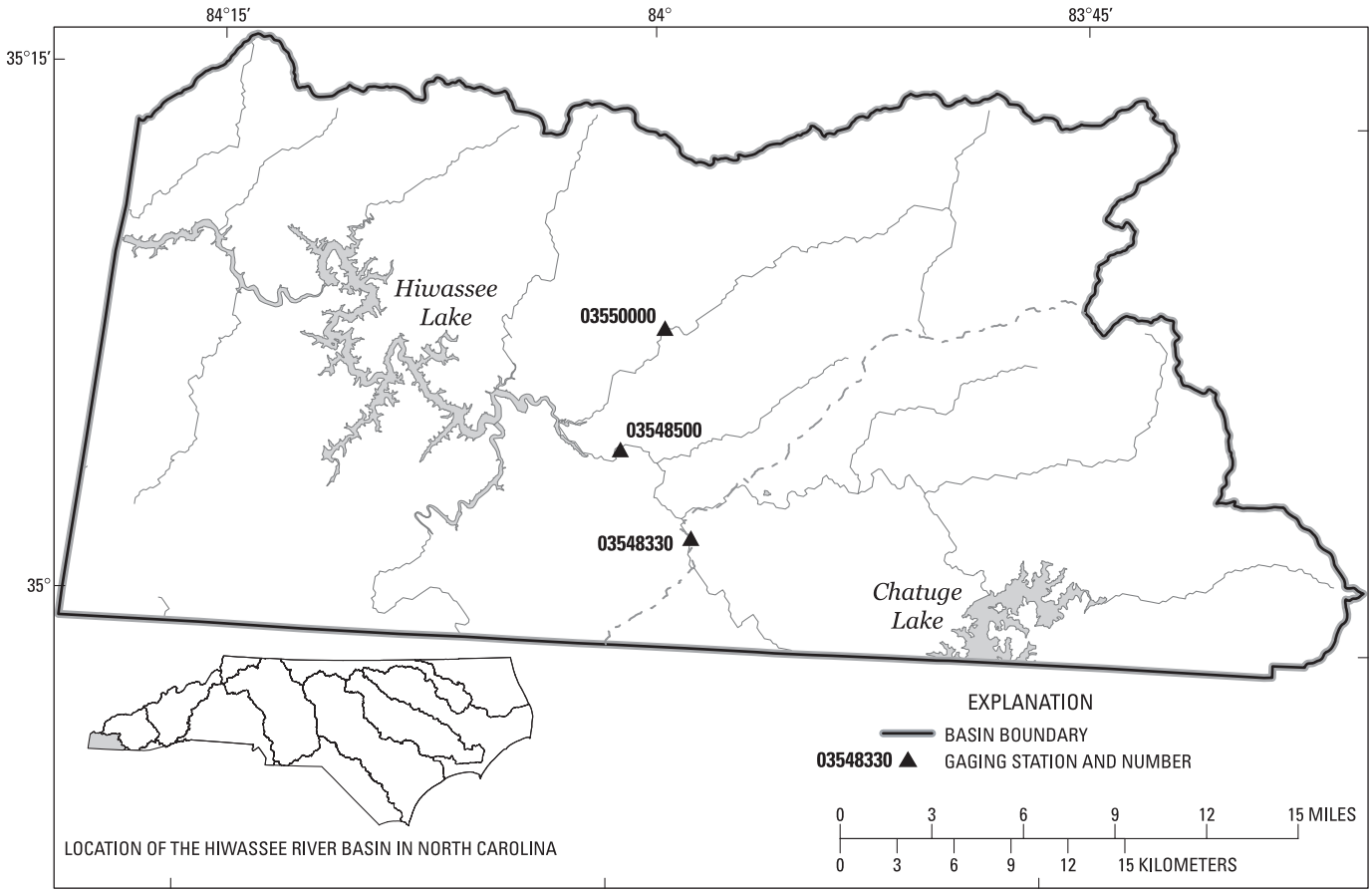


Figure 21. Locations of surface-water stations in the Hiwassee River Basin, North Carolina.

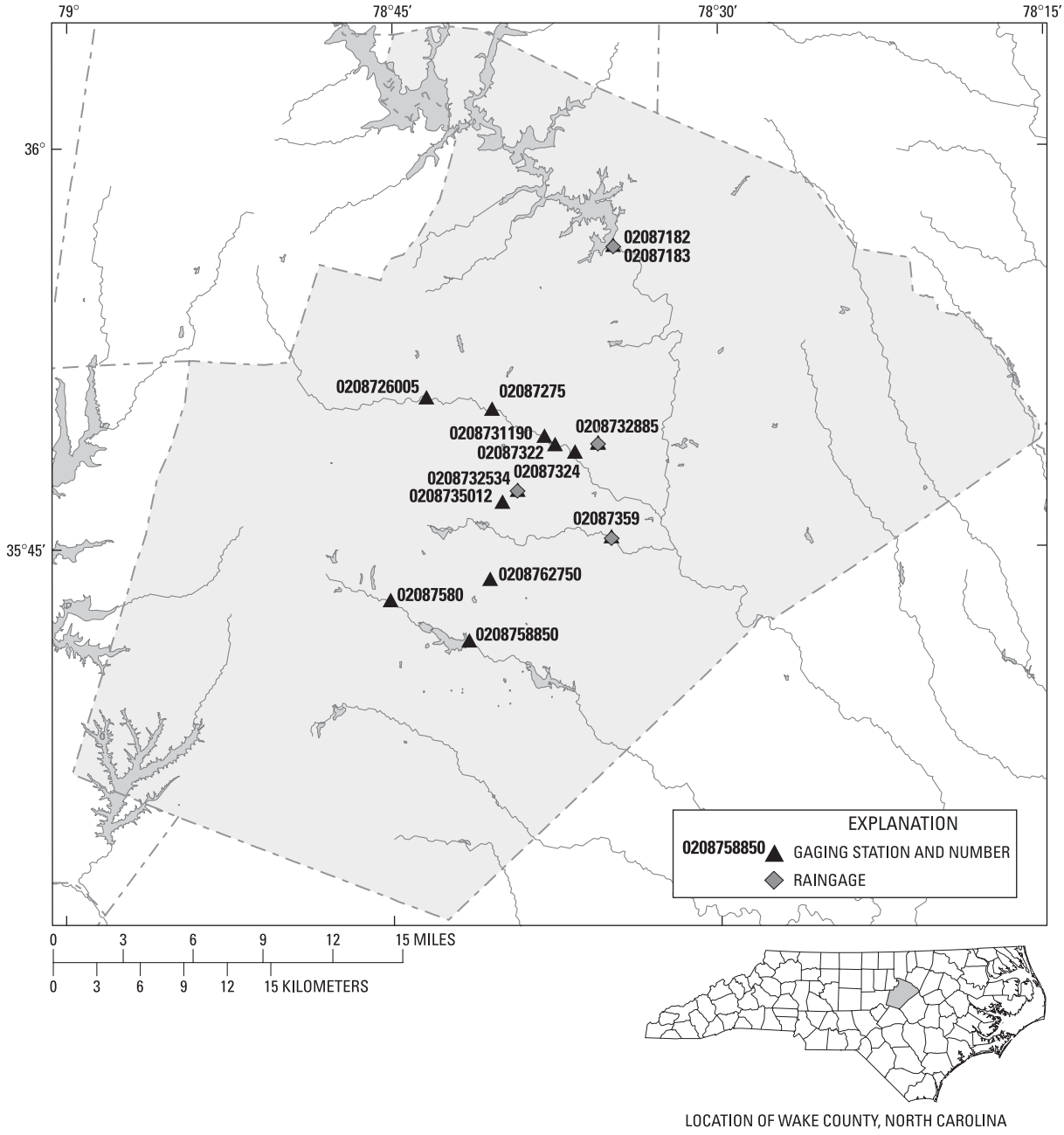


Figure 22. Locations of surface-water stations in Wake County, North Carolina, in the Neuse River Basin.

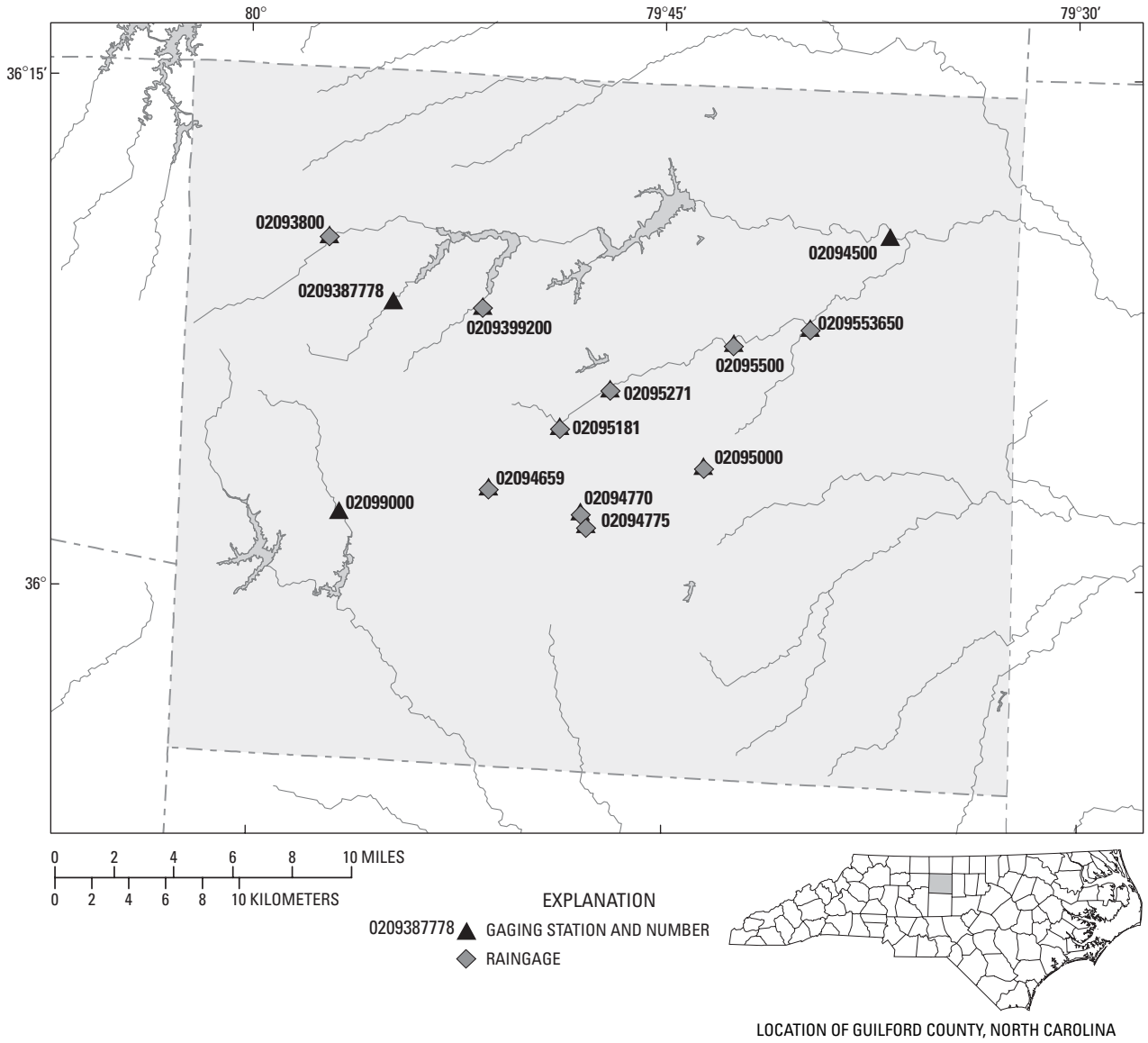


Figure 23. Locations of surface-water stations in Guilford County, North Carolina, in the Cape Fear River Basin.

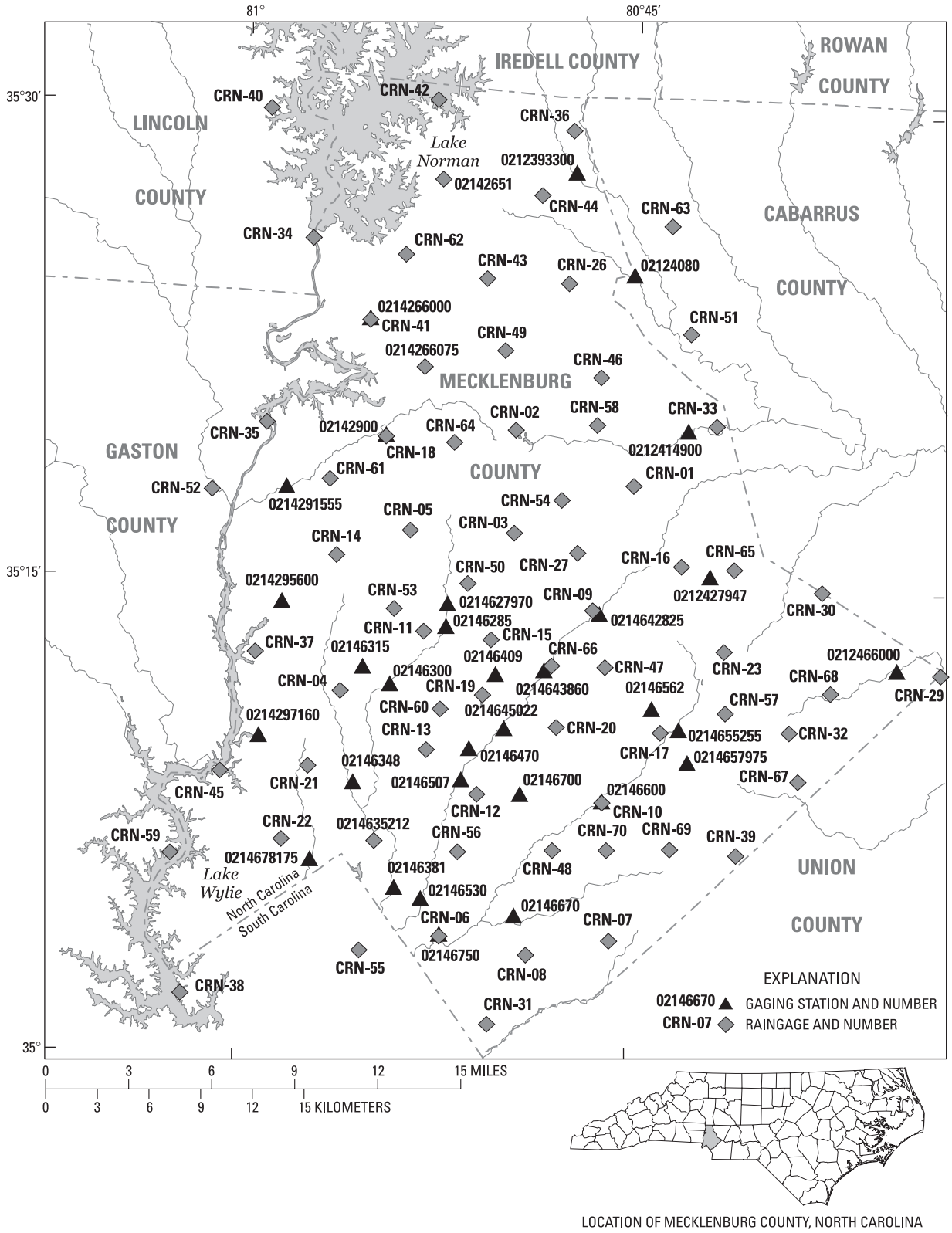
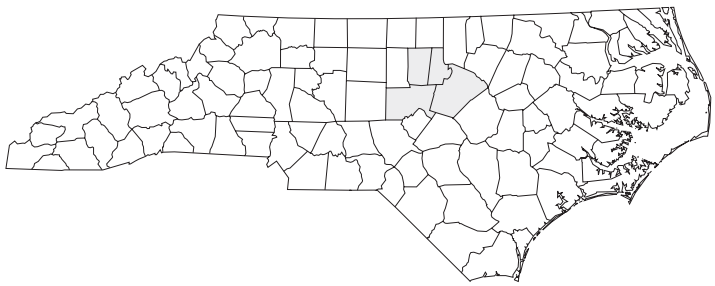


Figure 24. Locations of surface-water stations in and around Mecklenburg County, North Carolina.



LOCATION OF CHATHAM, DURHAM, ORANGE, AND WAKE COUNTIES, NORTH CAROLINA

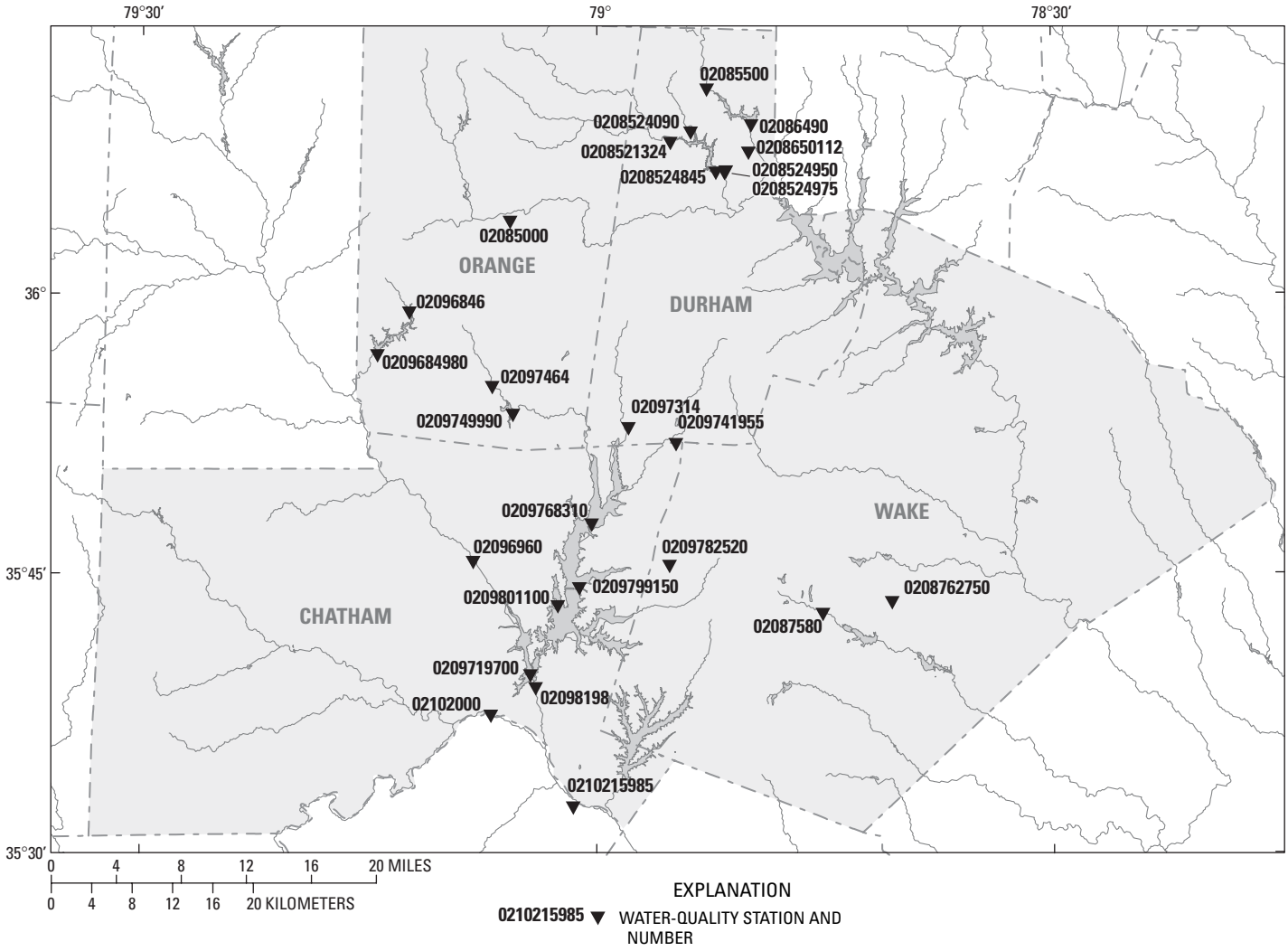


Figure 25. Locations of water-quality stations in Chatham, Durham, Orange, and Wake Counties, North Carolina.

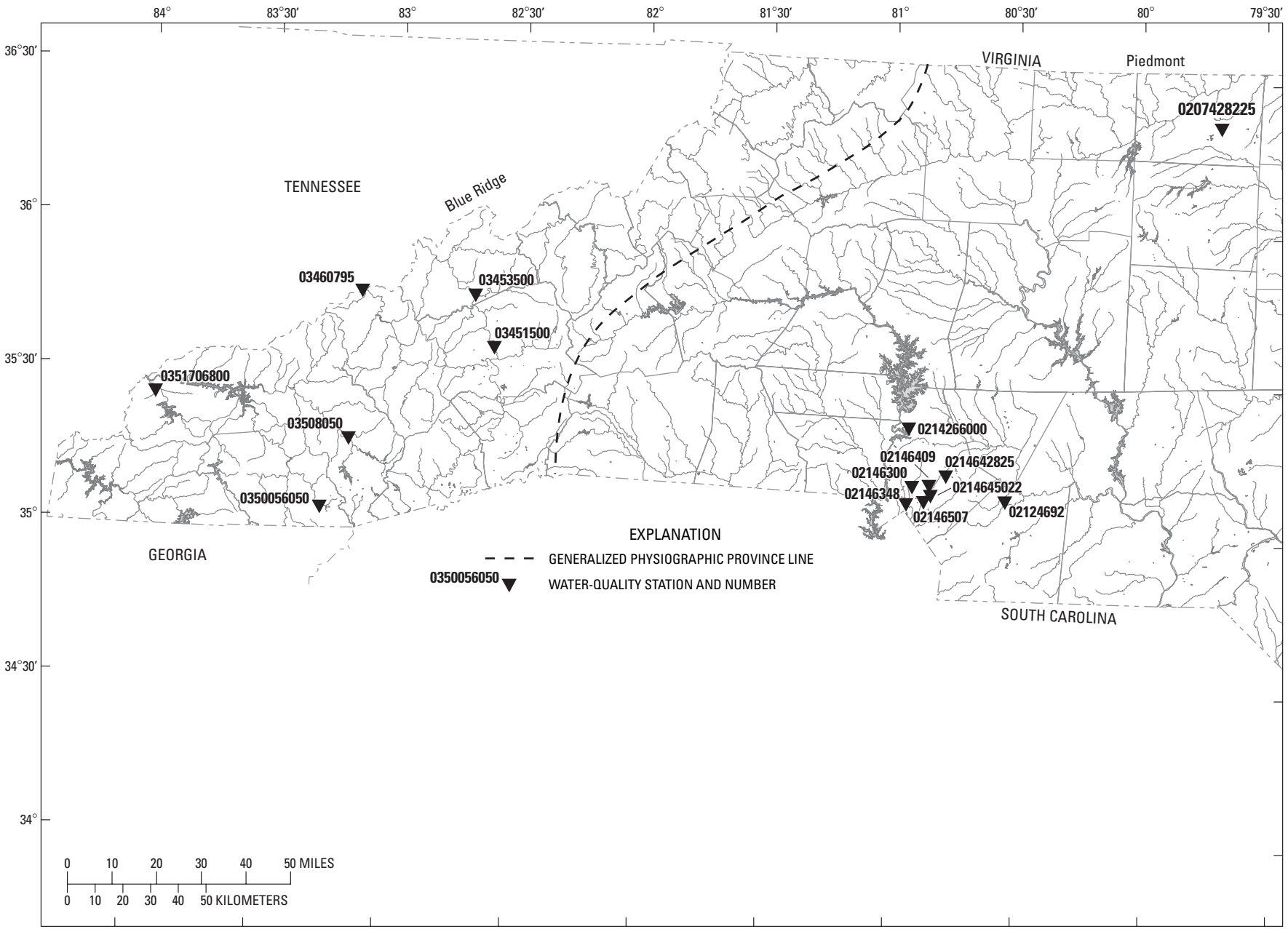


Figure 26. Locations of water-quality stations in western North Carolina.

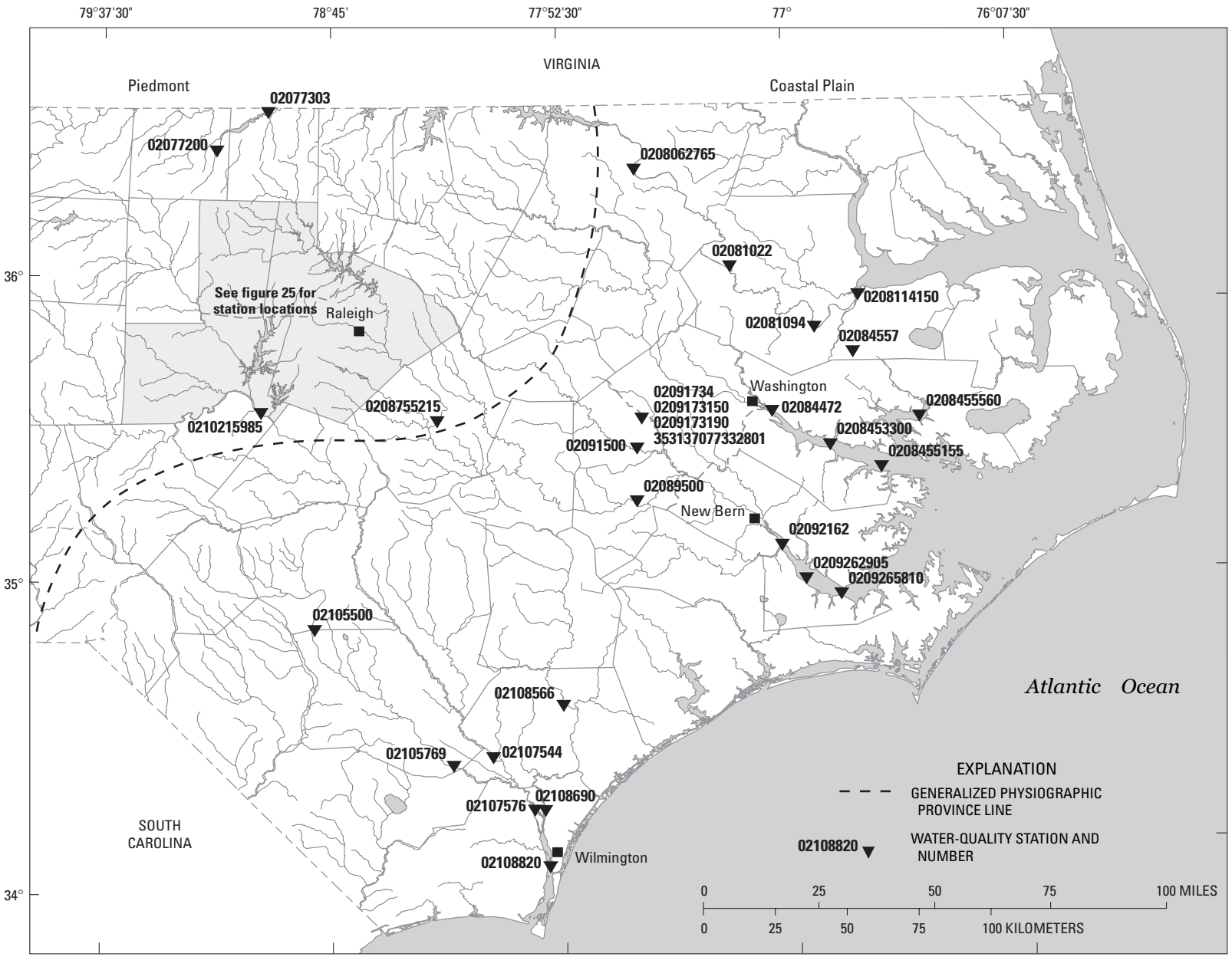


Figure 27. Locations of water-quality stations in eastern North Carolina.

0204382800 PASQUOTANK RIVER NEAR SOUTH MILLS, NC

LOCATION.--Lat 36°25'17", long 76°20'33", Camden County, Hydrologic Unit 03010205, at bridge on US Highway 17, 1 mi below Newland Canal and 2 mi southwest of South Mills.

DRAINAGE AREA.--Approximately 64.0 mi^2.

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

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 4.52 ft below NGVD of 1929. Satellite telemetry at station.

REMARKS.--Records fair except those for period July 6 to Aug. 9, which are poor. This site is strongly affected by astronomical and wind tides. The astronomical tides occur at primary harmonic periods of 12.42 hours and 24.8 hours. Mean daily discharge data for this site may be affected by aliasing due to tides and can contain fluctuations that are not representative of net downstream discharge.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,330 ft^3/s, Sept. 19, 1999, maximum gage height, 9.85 ft, Sept. 6, 1996; minimum discharge, -240 ft^3/s, Sept. 6, 1996.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 702 ft^3/s, Aug. 16, maximum gage height 7.96 ft, Aug. 16; minimum discharge, -152 ft^3/s, July 8.

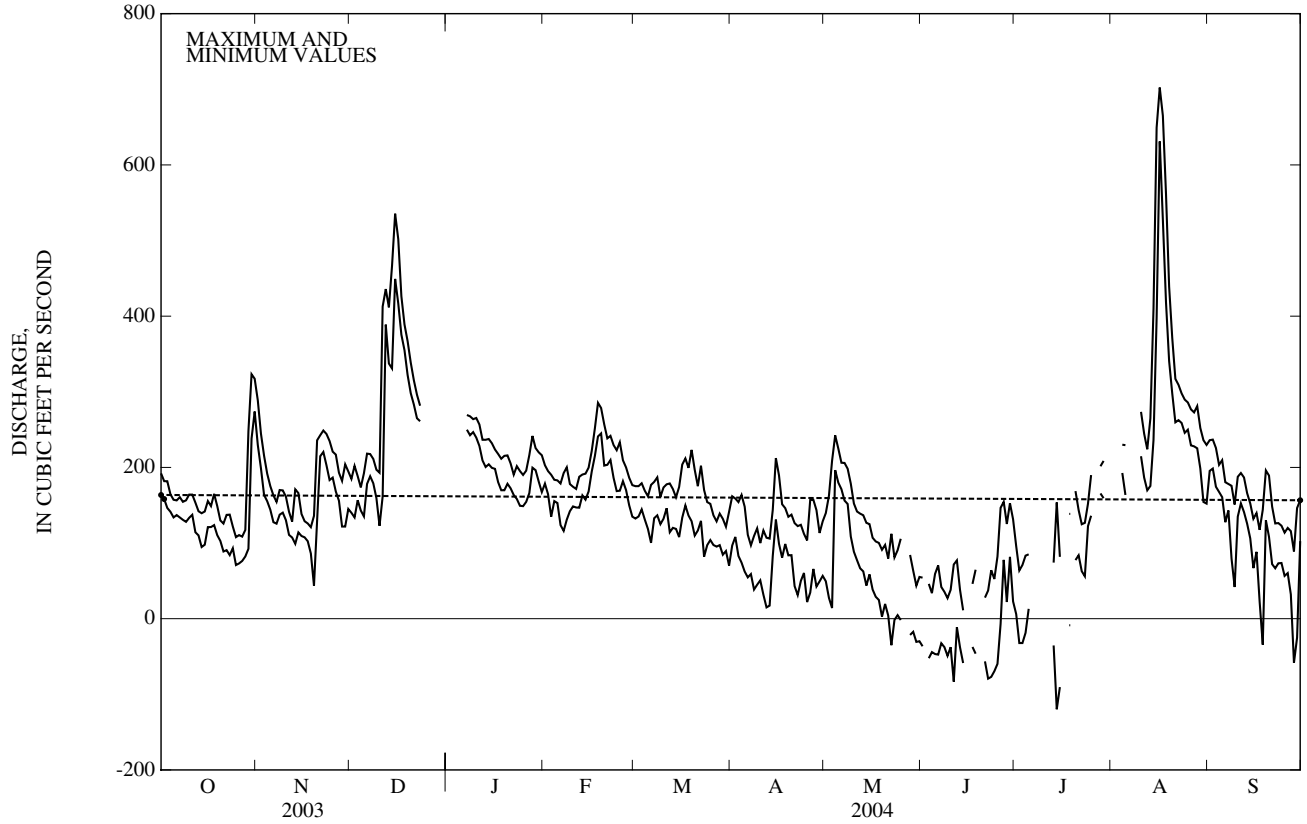
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	192	164	289	230	185	140	---	---	203	179	175	132
2	182	158	245	199	202	134	---	---	195	164	175	135
3	182	146	215	164	188	157	---	---	190	135	179	144
4	164	141	192	155	174	143	---	---	184	155	169	131
5	157	134	175	144	192	135	---	---	183	153	162	119
6	156	137	163	128	218	178	---	---	179	124	177	100
7	161	134	154	126	218	188	269	250	193	116	181	133
8	155	131	170	138	211	179	268	243	200	131	187	137
9	156	128	170	140	197	160	264	247	178	142	161	125
10	164	133	161	130	193	123	265	239	174	148	173	132
11	164	137	141	111	413	162	257	228	172	147	178	146
12	153	114	128	107	436	389	237	209	188	147	179	114
13	142	110	171	99	412	337	237	201	191	163	171	120
14	139	95	166	114	466	331	238	204	192	157	161	119
15	142	98	138	109	536	449	232	199	200	168	174	108
16	156	121	129	108	502	417	224	198	222	195	204	134
17	149	121	126	102	426	376	218	181	252	215	212	150
18	165	124	121	86	389	355	211	170	285	241	199	136
19	149	110	136	44	367	322	215	170	279	245	223	129
20	130	103	236	130	339	298	216	178	257	202	197	110
21	126	89	243	215	315	283	205	172	238	203	175	117
22	137	91	249	220	296	265	190	164	242	210	202	129
23	138	84	244	203	282	261	202	158	230	186	170	82
24	122	93	235	183	---	---	195	149	223	169	154	97
25	108	71	221	187	---	---	190	149	233	169	152	104
26	111	73	217	168	---	---	196	154	209	182	137	97
27	108	76	193	156	---	---	216	166	200	170	129	95
28	117	82	182	122	---	---	242	200	186	150	139	97
29	248	92	204	122	---	---	226	196	177	135	132	85
30	323	238	195	145	---	---	220	181	---	---	122	89
31	317	274	---	---	---	---	216	167	---	---	141	70
MONTH	323	71	289	44	---	---	---	---	285	116	223	70

0204382800 PASQUOTANK RIVER NEAR SOUTH MILLS, NC—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	162	97	140	49	54	-36	96	6.0	---	---	236	195
2	159	108	163	27	---	---	64	-32	---	---	237	198
3	154	83	209	14	46	-52	71	-32	---	---	226	174
4	164	74	242	196	34	-44	83	-19	230	193	203	168
5	148	62	225	180	59	-47	85	13	229	164	210	161
6	111	55	206	171	70	-48	---	---	---	---	180	128
7	97	59	206	156	42	-33	---	---	---	---	178	143
8	109	39	198	152	35	-38	---	---	---	---	176	80
9	119	45	179	109	27	-49	---	---	---	---	151	42
10	100	51	152	88	38	-38	---	---	273	215	188	135
11	117	32	142	77	72	-83	---	---	245	187	193	152
12	107	15	139	67	77	-11	---	---	224	170	187	141
13	106	17	137	63	38	-38	74	-35	265	175	166	126
14	144	83	127	44	11	-59	154	-120	410	236	152	106
15	212	131	125	59	---	---	82	-90	649	397	132	67
16	189	99	107	38	---	---	---	---	702	631	140	88
17	151	81	102	29	46	-37	---	---	665	527	117	22
18	146	99	100	25	65	-46	139	-8.7	561	418	144	-34
19	135	84	91	2.7	---	---	---	---	439	341	196	130
20	138	84	98	19	---	---	169	77	371	298	189	108
21	126	43	80	4.1	28	-56	144	84	317	260	148	72
22	122	31	112	-35	37	-79	125	63	309	263	126	67
23	124	50	81	-1.6	64	-77	127	56	298	259	126	73
24	112	60	91	4.7	52	-69	152	122	290	246	123	74
25	103	22	106	-1.8	82	-60	190	136	286	250	114	57
26	157	34	---	---	147	-6.9	---	---	277	229	120	60
27	157	66	---	---	154	78	---	---	273	228	116	32
28	143	43	84	-22	125	22	202	166	281	225	89	-58
29	113	49	63	-17	153	82	209	159	252	198	146	-25
30	129	57	44	-31	131	23	---	---	236	154	157	103
31	---	---	55	-30	---	---	---	---	230	152	---	---
MONTH	212	15	---	---	---	---	---	---	---	---	237	-58



02053200 POTECASI CREEK NEAR UNION, NC

LOCATION.--Lat 36°22'15", long 77°01'32", Hertford County, Hydrologic Unit 03010204, on right bank at downstream side of bridge on State Highway 11, 2.8 mi north of Union, 3 mi downstream of Cutawhiskie Swamp, and 3.5 mi upstream from Bells Branch.

DRAINAGE AREA.--225 mi^2.

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

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

GAGE.--Water-stage recorder. Datum of gage is 3.53 ft above NGVD of 1929. Prior to Dec. 1, 1958, nonrecording gage at same site and datum. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum discharge for period of record from rating curve extended above 5,800 ft^3/s on basis of discharge-conveyance ratios of peak flow; maximum gage height from outside floodmarks.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	335	683	123	209	205	152	83	145	10	128	429	331
2	254	623	107	193	197	139	109	122	8.4	213	339	436
3	193	541	91	179	205	128	119	128	7.4	122	351	462
4	153	450	81	169	253	117	117	185	8.3	60	380	460
5	124	395	129	160	287	109	138	207	10	191	356	544
6	98	337	211	169	282	104	154	185	22	146	313	517
7	76	287	243	187	308	102	151	184	25	44	300	420
8	61	248	235	194	372	111	138	175	22	100	299	354
9	51	218	238	195	389	119	118	147	26	197	284	320
10	46	191	247	213	423	118	99	110	24	245	253	314
11	43	165	331	211	525	115	89	75	19	186	210	279
12	41	147	474	202	572	120	86	50	26	275	162	227
13	41	133	551	191	546	121	99	37	28	270	149	189
14	41	116	841	181	496	112	131	30	21	219	237	e160
15	44	97	1,560	171	438	111	178	25	16	151	1,190	e170
16	45	78	1,860	161	411	131	228	21	13	70	e2,600	251
17	43	65	1,990	152	413	183	281	18	12	31	e3,200	269
18	39	56	2,010	151	418	218	321	15	11	32	e3,600	252
19	35	59	1,900	156	416	220	336	14	10	58	3,210	250
20	33	143	1,670	161	394	246	320	14	10	58	2,660	235
21	32	199	1,400	157	366	266	283	12	8.2	31	2,090	191
22	29	202	1,120	150	339	260	236	11	7.0	22	1,670	149
23	27	177	760	149	311	234	189	9.9	6.8	25	1,370	122
24	26	173	516	145	284	201	148	8.7	8.4	45	1,060	103
25	25	191	427	136	257	169	108	8.0	15	76	850	84
26	25	194	387	e125	231	142	82	8.0	34	203	714	70
27	24	182	348	e130	206	120	93	22	54	232	533	60
28	26	166	313	136	185	101	128	25	31	224	377	56
29	219	151	283	137	167	86	146	20	19	745	289	55
30	592	135	256	160	---	74	150	14	19	1,170	215	57
31	786	---	231	191	---	67	---	11	---	771	213	---
TOTAL	3,607	6,802	20,933	5,221	9,896	4,496	4,858	2,036.6	531.5	6,340	29,903	7,387
MEAN	116	227	675	168	341	145	162	65.7	17.7	205	965	246
MAX	786	683	2,010	213	572	266	336	207	54	1,170	3,600	544
MIN	24	56	81	125	167	67	82	8.0	6.8	22	149	55
CFSM	0.52	1.01	3.00	0.75	1.52	0.64	0.72	0.29	0.08	0.91	4.29	1.09
IN.	0.60	1.12	3.46	0.86	1.64	0.74	0.80	0.34	0.09	1.05	4.94	1.22

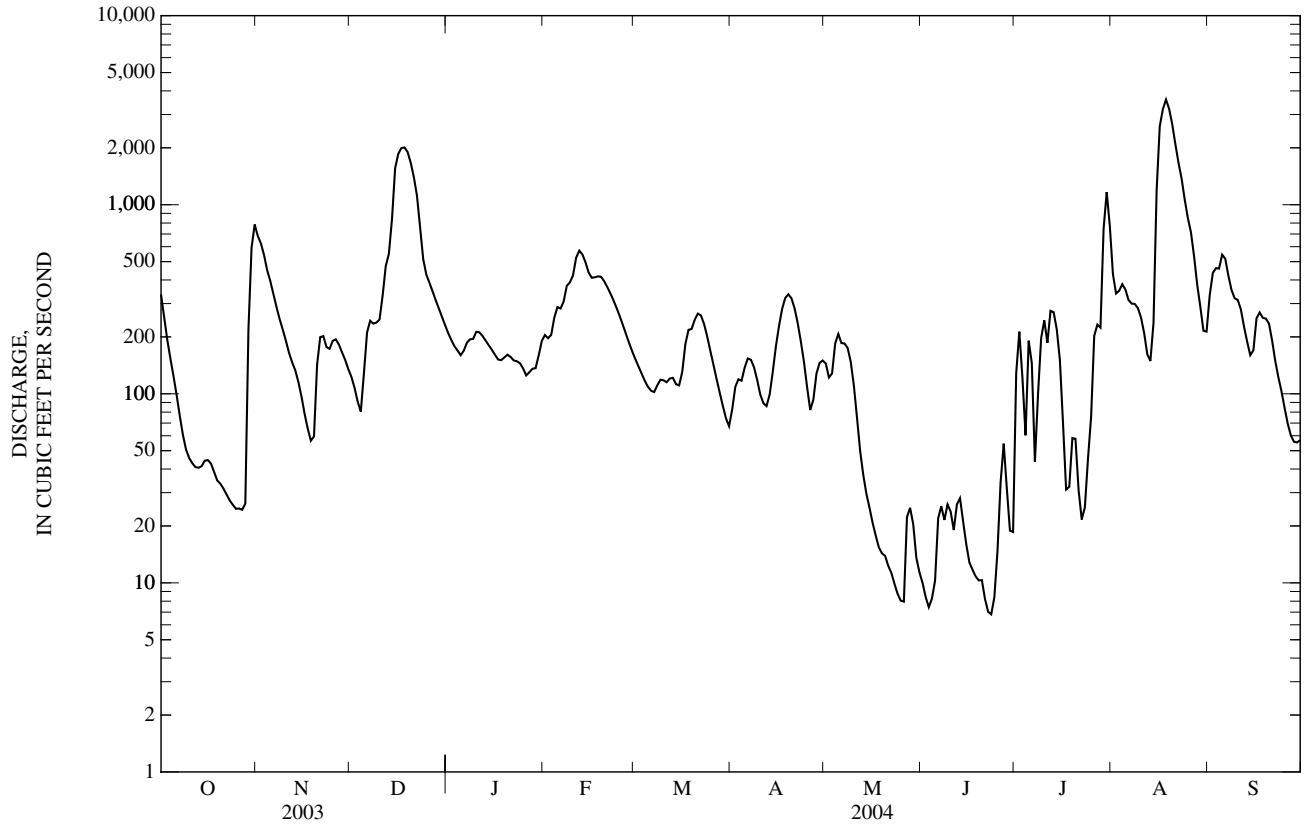
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)

MEAN	126	103	210	391	487	451	305	147	122	105	171	152
MAX	1,108	619	675	957	1,135	1,439	994	925	700	531	1,131	2,515
(WY)	(1960)	(1986)	(2004)	(1987)	(1960)	(1989)	(1983)	(1979)	(1979)	(1975)	(1992)	(1999)
MIN	2.12	4.71	11.3	51.3	54.9	46.7	27.7	5.36	3.98	2.32	2.50	1.65
(WY)	(1995)	(2002)	(2002)	(1981)	(1991)	(1988)	(1995)	(1994)	(2002)	(1983)	(1987)	(1995)

02053200 POTECASI CREEK NEAR UNION, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1959 - 2004	
ANNUAL TOTAL	160,191		102,011.1			
ANNUAL MEAN	439		279		229	
HIGHEST ANNUAL MEAN					458	1979
LOWEST ANNUAL MEAN					56.1	2002
HIGHEST DAILY MEAN	2,850	Sep 22	3,600	Aug 18	15,200	Sep 17, 1999
LOWEST DAILY MEAN	21	Jul 13	6.8	Jun 23	0.30	Jun 30, 1959
ANNUAL SEVEN-DAY MINIMUM	26	Oct 22	8.8	Jun 18	0.51	Jun 25, 1959
MAXIMUM PEAK FLOW			NOT DETERMINED		17000*	Sep 17, 1999
MAXIMUM PEAK STAGE			NOT DETERMINED		28.90*	Sep 17, 1999
INSTANTANEOUS LOW FLOW			6.2	Jun 23	0.20	Jul 1, 1959
ANNUAL RUNOFF (CFSM)	1.95		1.24		1.02	
ANNUAL RUNOFF (INCHES)	26.48		16.87		13.86	
10 PERCENT EXCEEDS	1,150		519		640	
50 PERCENT EXCEEDS	234		161		77	
90 PERCENT EXCEEDS	36		22		5.3	

* See REMARKS.
e Estimated.



02053500 AHOSKIE CREEK AT AHOSKIE, NC

LOCATION.--Lat 36°16'49", long 76°59'58", Hertford County, Hydrologic Unit 03010203, on right bank 10 ft downstream of bridge on State Highways 11 and 42, 0.5 mi upstream from Seaboard Coast Line Railroad bridge, and 0.8 mi southwest of Ahoskie.

DRAINAGE AREA.--63.3 mi^2.

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

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

GAGE.--Water-stage recorder. Datum of gage is 17.46 ft above NGVD of 1929 (Soil Conservation Service bench mark). Prior to Jan. 4, 1963, present site at 21.46 ft. Jan. 20, 1950, to May 24, 1951, nonrecording gage. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Entire basin above station canalized since July 1964. Minimum discharge since canalization also occurred Oct. 9, 1988. Prior to canalization, no flow occurred periodically.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	170	15	32	44	23	26	12	9.0	85	17	536
2	22	98	14	30	36	22	28	14	8.4	41	27	632
3	20	64	13	28	56	21	24	69	7.7	23	129	356
4	18	46	14	27	115	21	22	108	8.6	16	66	100
5	16	36	54	27	76	20	19	68	9.7	12	33	55
6	15	31	59	46	60	20	18	44	9.1	11	86	41
7	14	28	40	40	114	20	16	27	8.2	14	53	45
8	13	26	31	33	99	25	15	20	7.7	42	28	38
9	13	23	26	31	65	26	15	16	7.1	124	21	154
10	12	21	30	31	54	23	14	14	7.5	65	16	112
11	12	20	394	29	46	24	14	13	7.4	44	14	55
12	12	19	238	27	56	23	15	12	11	28	17	39
13	11	17	142	27	109	21	17	12	8.0	20	120	31
14	11	16	514	26	79	19	23	11	7.4	16	463	27
15	12	15	799	25	71	44	37	11	6.8	12	1,310	26
16	12	14	610	24	141	93	37	10	6.6	9.9	1,540	32
17	11	14	385	23	140	112	25	10	6.9	8.2	1,540	28
18	11	13	335	24	144	75	21	9.9	9.4	48	1,220	46
19	11	22	206	29	111	55	18	9.9	12	25	372	53
20	10	93	141	28	83	41	16	10	12	13	144	34
21	10	59	100	25	64	34	15	9.9	8.8	11	87	26
22	9.7	40	77	24	48	29	15	10	7.3	12	166	23
23	9.4	31	63	23	39	26	13	9.9	7.7	106	100	20
24	9.3	26	80	22	35	23	12	9.9	43	82	61	18
25	9.1	23	91	22	32	21	12	9.8	27	35	46	17
26	9.1	20	69	22	29	20	13	9.6	53	66	37	15
27	9.2	18	57	23	27	19	21	22	38	40	32	14
28	11	17	48	25	26	18	19	16	21	28	28	15
29	586	18	42	30	24	17	15	11	15	24	25	17
30	688	17	39	48	---	16	13	9.3	12	22	25	15
31	378	---	35	57	---	17	---	9.2	---	18	124	---
TOTAL	2,008.8	1,055	4,761	908	2,023	968	568	627.4	403.3	1,101.1	7,947	2,620
MEAN	64.8	35.2	154	29.3	69.8	31.2	18.9	20.2	13.4	35.5	256	87.3
MAX	688	170	799	57	144	112	37	108	53	124	1,540	632
MIN	9.1	13	13	22	24	16	12	9.2	6.6	8.2	14	14
CFSM	1.02	0.56	2.43	0.46	1.10	0.49	0.30	0.32	0.21	0.56	4.05	1.38
IN.	1.18	0.62	2.80	0.53	1.19	0.57	0.33	0.37	0.24	0.65	4.67	1.54

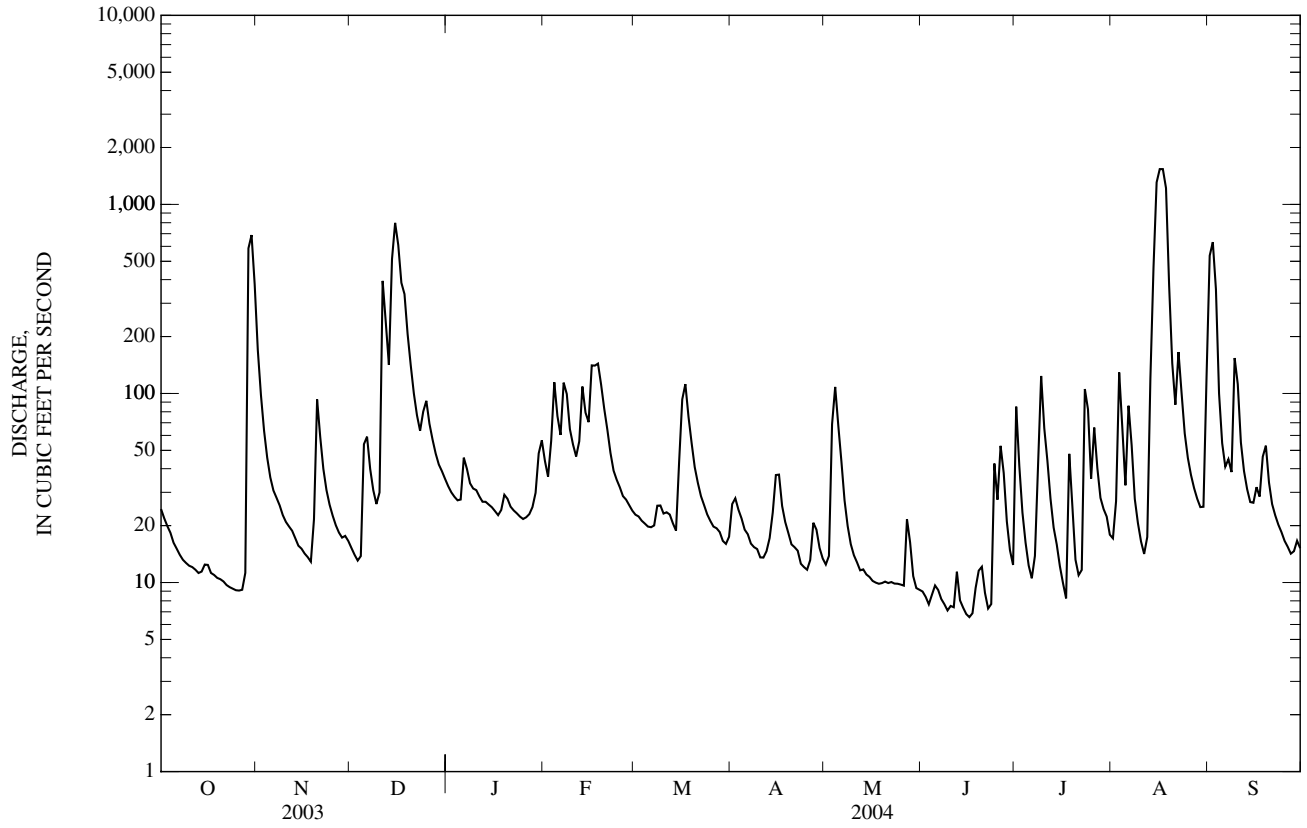
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004,* BY WATER YEAR (WY)

MEAN	40.2	23.6	48.7	97.6	123	121	74.5	43.0	42.7	30.8	49.2	50.6
MAX	297	120	177	260	343	303	243	238	322	126	381	894
(WY)	(1972)	(1986)	(1990)	(1979)	(1998)	(1989)	(1983)	(1979)	(2001)	(1975)	(1992)	(1999)
MIN	2.84	3.21	3.10	7.66	18.9	17.3	8.73	4.21	5.43	3.55	3.59	3.41
(WY)	(2002)	(1982)	(1995)	(1981)	(1968)	(1988)	(1985)	(1986)	(1986)	(1987)	(1983)	(1980)

02053500 AHOSKIE CREEK AT AHOSKIE, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004*	
ANNUAL TOTAL	43,924.0		24,990.6			
ANNUAL MEAN	120		68.3		61.7	
HIGHEST ANNUAL MEAN					114	2003
LOWEST ANNUAL MEAN					14.7	1981
HIGHEST DAILY MEAN	1,500	Jun 9	1,540	Aug 16	7,710	Sep 17, 1999
LOWEST DAILY MEAN	7.1	Sep 11	6.6	Jun 16	0.61	Oct 8, 1988
ANNUAL SEVEN-DAY MINIMUM	8.3	Aug 24	7.7	Jun 11	0.85	Sep 27, 1988
MAXIMUM PEAK FLOW			1,570	Aug 17	8,570	Sep 17, 1999
MAXIMUM PEAK STAGE			11.23	Aug 17	17.32	Sep 17, 1999
INSTANTANEOUS LOW FLOW			5.6	Jun 23	0.45*	Oct 8, 1988
ANNUAL RUNOFF (CFSM)	1.90		1.08		0.975	
ANNUAL RUNOFF (INCHES)	25.81		14.69		13.25	
10 PERCENT EXCEEDS	362		112		133	
50 PERCENT EXCEEDS	26		24		17	
90 PERCENT EXCEEDS	9.7		9.9		4.2	

* Canalized period only (1954-2004). See REMARKS.



02068500 DAN RIVER NEAR FRANCISCO, NC

LOCATION.--Lat 36°30'54", long 80°18'11", Stokes County, Hydrologic Unit 03010103, on left bank 200 ft upstream from bridge on State Highway 704, 700 ft downstream of remains of Georges Mill, 0.2 mi downstream of Elk Creek, 3 mi east of Francisco, and 7.9 mi downstream of Little Dan River.

DRAINAGE AREA.--129 mi^2.

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Since 1938, considerable diurnal fluctuation and regulation by Talbott and Townes Reservoirs (stations 02067800 and 02067820, respectively) and Pinnacles Hydroelectric Plant in Virginia, 28 mi upstream. Minimum discharge for current water year also occurred Sept. 6.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	185	264	231	247	193	152	192	136	151	190	98
2	191	183	256	217	187	190	143	203	118	149	166	95
3	e190	182	254	217	346	185	140	189	112	183	206	95
4	201	181	274	216	251	149	139	176	167	171	117	93
5	182	186	389	229	215	149	136	166	165	174	109	91
6	148	470	e461	230	571	312	134	162	133	146	107	90
7	147	333	e319	214	654	328	138	163	127	135	98	110
8	146	247	e312	210	411	318	148	162	134	133	101	1,210
9	160	226	e261	215	358	138	148	190	170	125	101	601
10	200	218	e525	210	295	137	147	180	187	143	99	261
11	195	216	609	231	284	137	148	158	149	213	110	196
12	199	213	371	230	278	137	199	149	129	299	e194	174
13	186	211	348	230	274	135	419	143	129	234	178	159
14	190	220	354	229	264	136	458	142	134	155	129	152
15	223	211	390	228	e259	138	280	142	129	137	120	159
16	188	213	386	225	e257	182	230	137	651	111	114	159
17	187	208	436	223	222	165	214	246	198	102	138	438
18	197	212	372	245	222	152	204	182	201	121	192	614
19	203	545	345	228	221	149	196	161	155	119	131	281
20	182	437	306	206	220	146	192	171	141	105	128	221
21	193	322	299	208	219	146	189	159	130	107	115	199
22	181	291	276	164	214	142	183	134	136	102	116	186
23	178	278	280	169	212	141	180	131	158	110	110	167
24	178	278	342	159	214	142	185	136	393	102	105	147
25	182	274	333	163	208	142	176	123	199	97	103	143
26	196	274	328	176	198	137	204	121	645	101	98	139
27	272	259	316	179	196	135	225	135	247	407	97	148
28	216	290	271	180	194	134	185	124	196	298	96	5,990
29	199	295	269	219	193	131	178	122	174	140	154	995
30	189	269	246	244	---	138	175	118	164	129	112	598
31	187	---	231	241	---	161	---	140	---	134	105	---
TOTAL	5,851	7,927	10,423	6,566	7,884	5,125	5,845	4,857	5,907	4,833	3,939	14,009
MEAN	189	264	336	212	272	165	195	157	197	156	127	467
MAX	272	545	609	245	654	328	458	246	651	407	206	5,990
MIN	146	181	231	159	187	131	134	118	112	97	96	90
†	+1	+3	0	-40	-17	0	+3	-8	+1	-2	+4	+84

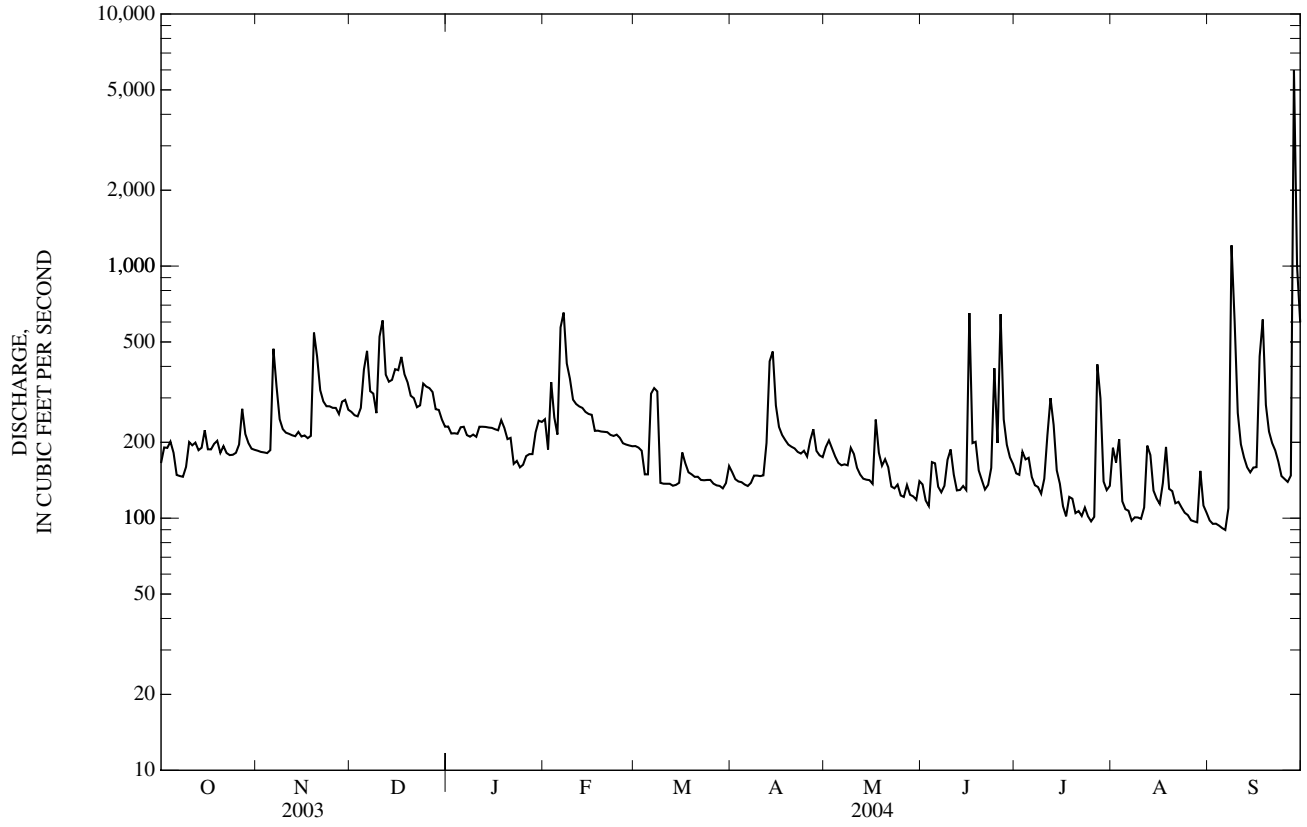
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004,*@ BY WATER YEAR (WY)

MEAN	147	156	178	197	220	257	267	217	202	168	168	153
MAX	543	327	479	424	463	571	677	405	719	425	514	630
(WY)	(1938)	(1980)	(1997)	(1978)	(1960)	(1993)	(1980)	(1949)	(2003)	(2003)	(1940)	(1979)
MIN	49.7	61.3	77.5	76.2	94.9	94.2	119	95.3	77.9	54.8	52.5	50.4
(WY)	(1964)	(1954)	(1998)	(1956)	(1956)	(1981)	(2002)	(2000)	(2002)	(1986)	(1981)	(1968)

02068500 DAN RIVER NEAR FRANCISCO, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004*@	
ANNUAL TOTAL	125,989		83,166			(UNADJUSTED)
ANNUAL MEAN	345		227	‡230	194	
HIGHEST ANNUAL MEAN					314	2003
LOWEST ANNUAL MEAN					93.6	2002
HIGHEST DAILY MEAN	2,000	Aug 7	5,990	Sep 28	6,830	Sep 22, 1979
LOWEST DAILY MEAN	110	Feb 1	90	Sep 6	21	Sep 4, 1999
ANNUAL SEVEN-DAY MINIMUM	119	Jan 28	95	Aug 31	28	Aug 24, 1981
MAXIMUM PEAK FLOW			13,800	Sep 28	21,200	Aug 17, 1985
MAXIMUM PEAK STAGE			14.47	Sep 28	19.50	Aug 17, 1985
INSTANTANEOUS LOW FLOW			88*	Sep 6	7.1	Sep 8, 1932
10 PERCENT EXCEEDS	580		330		320	
50 PERCENT EXCEEDS	271		186		155	
90 PERCENT EXCEEDS	160		118		80	

† Change in contents, equivalent in cubic feet per second, in Talbott and Townes Reservoirs provided by City of Danville, Virginia.
* Regulated period only (1938-2004). See REMARKS.
@ See PERIOD OF RECORD.
‡ Adjusted for change in contents.
e Estimated.



02070500 MAYO RIVER NEAR PRICE, NC

LOCATION.--Lat 36°32'02", long 79°59'29", Rockingham County, Hydrologic Unit 03010103, on right bank 350 ft downstream from Anglins Bridge on Secondary Road 1358, 0.5 mi downstream from confluence of North and South Mayo Rivers, 0.8 mi downstream from Virginia-North Carolina state line, and 4.0 mi west of Price.

DRAINAGE AREA.--242 mi^2.

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

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

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

REMARKS.--No estimated daily discharges. Records good.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	341	297	372	381	330	298	320	306	242	630	280	209
2	335	295	358	381	329	300	284	379	210	384	638	203
3	326	294	351	382	627	302	274	340	200	364	1,260	201
4	327	292	364	381	602	297	270	305	352	342	464	198
5	326	294	549	393	461	295	264	292	542	326	352	194
6	320	695	565	424	807	315	261	284	295	299	327	191
7	315	809	488	375	1,390	315	261	275	260	283	298	222
8	313	481	442	367	638	294	261	267	268	280	283	2,870
9	328	410	415	373	504	286	261	269	451	266	274	1,310
10	360	384	638	370	450	285	257	276	282	268	267	575
11	332	370	1,590	357	412	283	256	258	317	426	271	400
12	325	367	697	362	385	283	439	252	252	312	417	341
13	315	363	561	362	375	277	1,420	250	242	380	565	309
14	314	339	585	355	359	272	1,710	243	246	296	351	292
15	390	345	603	353	349	275	934	240	278	265	325	280
16	323	369	626	343	360	361	567	236	4,300	250	302	270
17	313	357	770	342	342	411	470	257	628	243	331	600
18	312	348	706	364	334	323	416	276	663	285	1,640	709
19	307	519	583	359	346	307	387	258	435	262	432	387
20	302	662	525	339	346	293	366	284	404	261	363	313
21	301	477	485	333	339	294	351	299	333	245	362	287
22	300	426	469	338	326	284	336	246	326	232	393	272
23	292	399	455	334	318	277	327	274	349	269	279	261
24	290	386	451	331	317	275	335	324	797	244	256	250
25	288	407	433	336	314	275	315	244	491	226	241	244
26	293	374	415	357	304	275	329	231	1,920	223	230	237
27	366	365	406	355	301	274	402	258	629	824	223	237
28	366	375	400	361	299	275	318	238	470	556	219	7,860
29	326	450	398	331	298	270	300	230	404	399	252	1,790
30	306	386	405	344	---	271	295	220	443	389	235	794
31	298	---	390	348	---	316	---	233	---	312	223	---
TOTAL	9,950	12,335	16,495	11,131	12,562	9,158	12,986	8,344	17,029	10,341	12,353	22,306
MEAN	321	411	532	359	433	295	433	269	568	334	398	744
MAX	390	809	1,590	424	1,390	411	1,710	379	4,300	824	1,640	7,860
MIN	288	292	351	331	298	270	256	220	200	223	219	191
CFSM	1.33	1.70	2.20	1.48	1.79	1.22	1.79	1.11	2.35	1.38	1.65	3.07
IN.	1.53	1.90	2.54	1.71	1.93	1.41	2.00	1.28	2.62	1.59	1.90	3.43

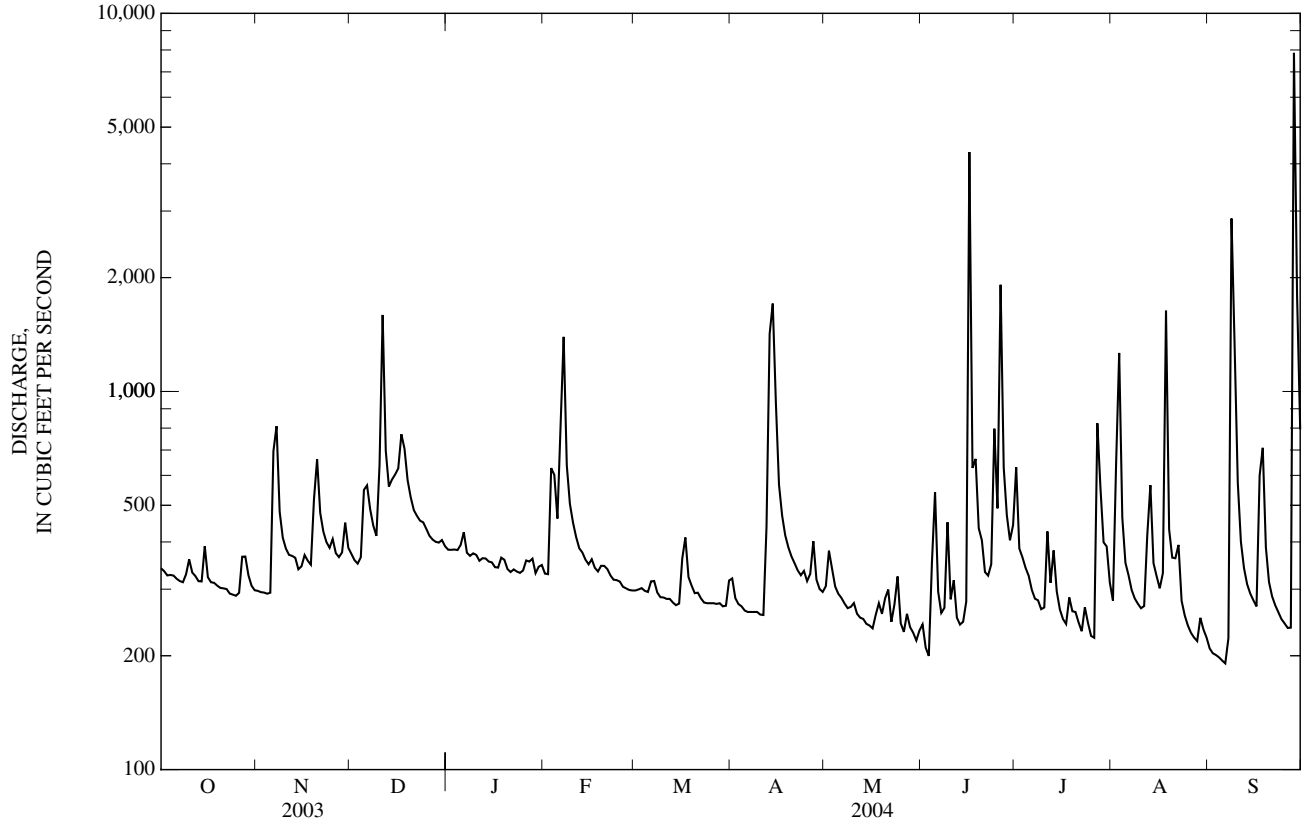
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2004,@ BY WATER YEAR (WY)

MEAN	266	245	292	353	391	426	397	323	302	259	261	255
MAX	1,250	578	661	1,022	900	982	764	659	1,018	799	943	1,002
(WY)	(1938)	(1958)	(1997)	(1936)	(1960)	(1994)	(2003)	(1949)	(2003)	(2003)	(1940)	(1945)
MIN	84.5	95.9	118	112	139	221	164	157	78.6	77.3	47.5	62.0
(WY)	(1932)	(1932)	(1956)	(1956)	(1931)	(1940)	(2002)	(1956)	(2002)	(2002)	(2002)	(1954)

02070500 MAYO RIVER NEAR PRICE, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1929 - 2004[@]	
ANNUAL TOTAL	213,815		154,990			
ANNUAL MEAN	586		423		314	
HIGHEST ANNUAL MEAN					547	2003
LOWEST ANNUAL MEAN					136	2002
HIGHEST DAILY MEAN	8,250	Mar 20	7,860	Sep 28	11,400	Sep 18, 1945
LOWEST DAILY MEAN	150	Jan 29	191	Sep 6	33	Aug 11, 2002
ANNUAL SEVEN-DAY MINIMUM	155	Jan 23	203	Sep 1	33	Aug 10, 2002
MAXIMUM PEAK FLOW			15,300	Sep 28	30,000	Oct 19, 1937
MAXIMUM PEAK STAGE			10.61	Sep 28	14.00	Oct 19, 1937
INSTANTANEOUS LOW FLOW			187	Sep 6	32	Oct 8, 1954
ANNUAL RUNOFF (CFSM)	2.42		1.75		1.30	
ANNUAL RUNOFF (INCHES)	32.87		23.82		17.61	
10 PERCENT EXCEEDS	952		590		500	
50 PERCENT EXCEEDS	415		329		234	
90 PERCENT EXCEEDS	245		246		124	

[@] See PERIOD OF RECORD.



02071000 DAN RIVER NEAR WENTWORTH, NC

LOCATION.--Lat 36°24'45", long 79°49'34", Rockingham County, Hydrologic Unit 03010103, on right bank 600 ft downstream of Settles Bridge on Secondary Road 2150, 3.5 mi northwest of Wentworth, 7.5 mi downstream of Mayo River, and 103.7 mi upstream from mouth.

DRAINAGE AREA.--1,053 mi^2.

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

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

GAGE.--Water-stage recorder. Datum of gage is 512.98 ft above NGVD of 1929. Prior to Aug. 3, 1949, water-stage recorder at site 150 ft upstream at same datum. Satellite telemetry at station.

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

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,050	939	1,110	1,210	1,050	1,040	1,080	975	763	1,360	696	576
2	1,010	929	1,070	1,200	1,010	1,030	985	1,290	721	922	860	551
3	1,000	921	1,040	1,190	1,790	1,060	922	1,310	657	1,040	2,450	541
4	987	913	1,030	1,180	2,510	1,020	894	1,380	791	1,060	1,230	534
5	1,000	910	1,450	1,170	1,610	981	869	1,000	1,510	982	829	523
6	967	1,120	1,880	1,220	2,540	996	855	945	1,000	833	739	517
7	929	3,000	1,580	1,250	9,630	1,190	849	909	821	739	674	563
8	916	1,530	1,360	1,220	2,950	1,120	853	879	777	711	618	4,820
9	941	1,210	1,270	1,200	2,040	1,090	862	848	880	684	596	5,150
10	1,070	1,080	1,400	1,200	1,750	940	850	881	895	657	581	1,850
11	1,060	1,050	5,490	1,180	1,570	921	843	891	836	960	579	1,230
12	1,000	1,030	2,470	1,140	1,490	924	1,060	831	857	888	1,370	1,030
13	979	1,010	1,780	1,130	1,450	903	3,550	833	738	1,070	2,070	856
14	950	962	1,840	1,130	1,380	888	5,850	806	719	884	1,120	798
15	1,040	960	2,120	1,120	1,350	894	3,580	782	755	717	947	807
16	1,110	1,010	2,300	1,120	1,390	1,270	1,920	819	5,920	641	812	1,420
17	945	1,010	2,680	1,100	1,330	1,650	1,520	1,030	1,950	e600	741	1,620
18	933	984	2,970	1,080	1,280	1,250	1,360	1,570	1,360	e700	1,880	2,720
19	935	1,070	1,970	1,100	1,370	1,130	1,270	1,140	1,070	e640	1,230	1,570
20	941	2,060	1,680	1,100	1,430	1,020	1,240	1,080	1,130	614	863	1,050
21	914	1,520	1,450	1,070	1,360	995	1,210	1,130	886	606	772	896
22	921	1,310	1,370	1,040	1,290	964	1,170	986	806	563	888	832
23	905	1,170	1,340	1,020	1,230	928	1,070	860	859	585	734	789
24	887	1,120	1,320	1,010	1,190	916	1,050	903	1,500	610	667	747
25	884	1,140	1,340	999	1,140	914	1,040	858	1,430	547	636	704
26	899	1,120	1,300	994	1,100	909	1,000	760	2,470	528	612	689
27	1,040	1,070	1,280	1,020	1,080	901	1,240	784	1,640	1,270	594	702
28	1,250	1,070	1,270	1,040	1,070	901	1,210	832	1,140	1,520	580	11,100
29	1,150	1,230	1,250	995	1,050	886	1,050	760	984	1,110	582	22,900
30	1,100	1,200	1,240	1,040	---	880	1,010	729	914	943	654	3,890
31	1,030	---	1,230	1,110	---	955	---	715	---	801	616	---
TOTAL	30,743	35,648	52,880	34,578	51,430	31,466	42,262	29,516	36,779	25,785	28,220	71,975
MEAN	992	1,188	1,706	1,115	1,773	1,015	1,409	952	1,226	832	910	2,399
MAX	1,250	3,000	5,490	1,250	9,630	1,650	5,850	1,570	5,920	1,520	2,450	22,900
MIN	884	910	1,030	994	1,010	880	843	715	657	528	579	517
CFSM	0.94	1.13	1.62	1.06	1.68	0.96	1.34	0.90	1.16	0.79	0.86	2.28
IN.	1.09	1.26	1.87	1.22	1.82	1.11	1.49	1.04	1.30	0.91	1.00	2.54

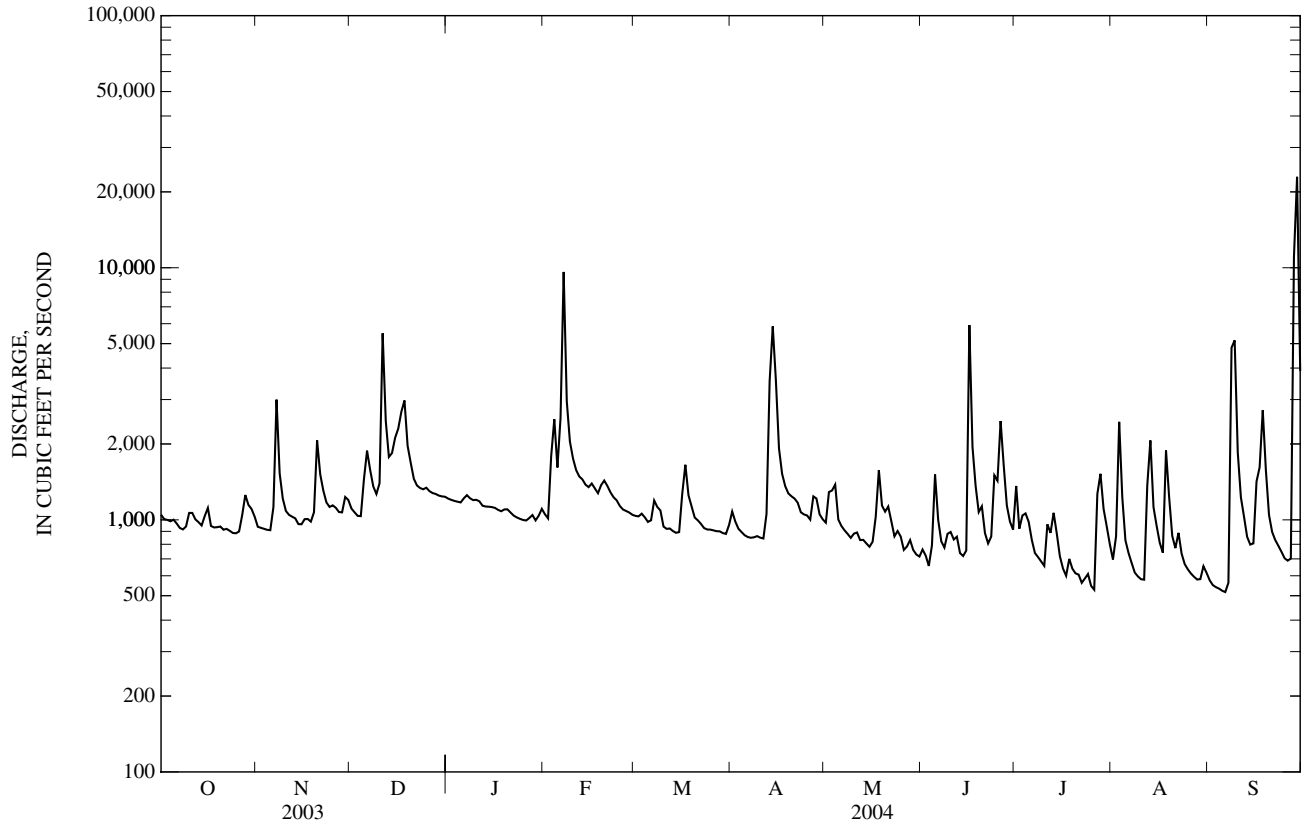
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	874	898	1,128	1,371	1,592	1,857	1,685	1,286	1,097	898	836	876
MAX	3,676	2,963	2,458	3,274	4,308	5,345	4,951	3,149	4,220	2,345	3,067	3,667
(WY)	(1960)	(1958)	(1997)	(1978)	(1960)	(1975)	(1987)	(1972)	(1972)	(1949)	(1940)	(1979)
MIN	219	231	398	392	518	661	520	411	233	202	102	166
(WY)	(2002)	(2002)	(2002)	(1956)	(2002)	(1985)	(2002)	(2002)	(2002)	(2002)	(2002)	(1954)

02071000 DAN RIVER NEAR WENTWORTH, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004	
ANNUAL TOTAL	719,762		471,282			
ANNUAL MEAN	1,972		1,288		1,198	
HIGHEST ANNUAL MEAN					1,985	1960
LOWEST ANNUAL MEAN					373	2002
HIGHEST DAILY MEAN	27,800	Mar 21	22,900	Sep 29	47,800	Jun 22, 1972
LOWEST DAILY MEAN	490	Jan 24	517	Sep 6	63	Aug 12, 2002
ANNUAL SEVEN-DAY MINIMUM	497	Jan 21	544	Sep 1	65	Aug 9, 2002
MAXIMUM PEAK FLOW			27,200	Sep 29	54,200	Jun 22, 1972
MAXIMUM PEAK STAGE			24.42	Sep 29	31.60*	Jun 22, 1972
INSTANTANEOUS LOW FLOW			494	Sep 6	62	Aug 12, 2002
ANNUAL RUNOFF (CFSM)	1.87		1.22		1.14	
ANNUAL RUNOFF (INCHES)	25.43		16.65		15.46	
10 PERCENT EXCEEDS	3,460		1,700		2,020	
50 PERCENT EXCEEDS	1,390		1,030		825	
90 PERCENT EXCEEDS	755		701		397	

* See REMARKS.
e Estimated.



02074000 SMITH RIVER AT EDEN, NC

LOCATION.--Lat 36°31'32", long 79°45'56", Rockingham County, Hydrologic Unit 03010103, on right bank at Eden, 0.3 mi downstream of bridge on State Highway 14, 0.8 mi upstream from bridge on Secondary Road 1714, 1.2 mi south of Virginia-North Carolina State line, 1.3 mi downstream of Stuart Creek, and 3.9 mi upstream from mouth.

DRAINAGE AREA.--538 mi^2.

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

REVISED RECORDS.--WSP 1433: 1946.

GAGE.--Water-stage recorder. Datum of gage is 539.56 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated since August 1950 by Philpott Lake, 40 mi upstream (usable capacity, 6,325,000,000 ft^3). Additional regulation by hydroelectric plant at Martinsville, Virginia, 18 mi upstream. Maximum discharge prior to regulation: 45,600 ft^3/s, Aug. 15, 1940, from rating curve extended above 12,000 ft^3/s on the basis of computation of peak flow over dam 1.5 mi downstream; gage height: 19.28 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,270	567	807	1,290	412	484	625	898	811	688	434	464
2	1,200	438	837	1,290	430	766	613	432	585	706	553	492
3	1,190	594	1,050	1,230	874	787	533	572	680	625	1,080	482
4	1,100	814	1,090	437	1,030	773	464	802	892	337	891	437
5	560	823	1,280	588	770	768	560	782	1,150	409	746	276
6	653	1,200	1,130	960	1,370	749	715	764	563	719	751	279
7	683	1,510	732	879	2,270	488	770	746	491	796	800	561
8	675	933	802	862	953	483	735	739	696	412	280	5,610
9	704	588	789	877	742	600	761	436	755	735	394	3,470
10	706	660	932	809	977	601	679	436	699	599	464	1,850
11	634	750	2,750	447	1,120	599	436	684	890	426	469	1,740
12	429	703	1,150	504	1,120	599	626	587	740	438	1,120	650
13	607	706	1,460	702	1,040	562	2,260	609	391	959	1,200	891
14	681	693	1,530	632	999	431	2,680	609	418	669	726	727
15	791	624	1,600	686	546	464	1,840	544	722	669	425	756
16	706	464	1,520	779	587	781	1,360	366	4,030	627	390	625
17	673	672	1,420	590	914	826	1,200	473	912	646	914	1,300
18	610	743	1,410	432	909	690	1,240	750	884	283	1,760	1,850
19	391	874	844	477	924	657	1,140	668	755	374	736	743
20	582	1,130	643	574	925	599	1,170	813	429	681	520	428
21	732	886	605	557	879	470	1,160	1,110	497	629	555	636
22	693	743	569	569	506	483	1,160	719	1,010	597	394	606
23	687	571	542	662	519	569	1,130	671	957	658	415	552
24	680	797	530	534	786	601	1,080	826	1,060	672	451	555
25	599	1,440	645	416	786	583	480	546	1,060	259	486	497
26	384	1,390	919	425	738	614	520	931	3,220	334	358	335
27	746	1,410	906	627	762	504	978	857	804	1,140	377	352
28	761	1,440	439	683	687	448	913	800	647	988	503	4,350
29	742	1,210	706	786	463	489	868	789	844	826	190	1,810
30	687	540	1,230	796	---	640	940	459	657	1,180	315	1,700
31	661	---	1,310	641	---	657	---	466	---	879	528	---
TOTAL	22,217	25,913	32,177	21,741	25,038	18,765	29,636	20,884	28,249	19,960	19,225	35,024
MEAN	717	864	1,038	701	863	605	988	674	942	644	620	1,167
MAX	1,270	1,510	2,750	1,290	2,270	826	2,680	1,110	4,030	1,180	1,760	5,610
MIN	384	438	439	416	412	431	436	366	391	259	190	276
CFSM	1.33	1.61	1.93	1.30	1.60	1.13	1.84	1.25	1.75	1.20	1.15	2.17
IN.	1.54	1.79	2.22	1.50	1.73	1.30	2.05	1.44	1.95	1.38	1.33	2.42
†	-33	+45	+11	-48	+80	+24	+2	+9	-13	-74	+7	+229

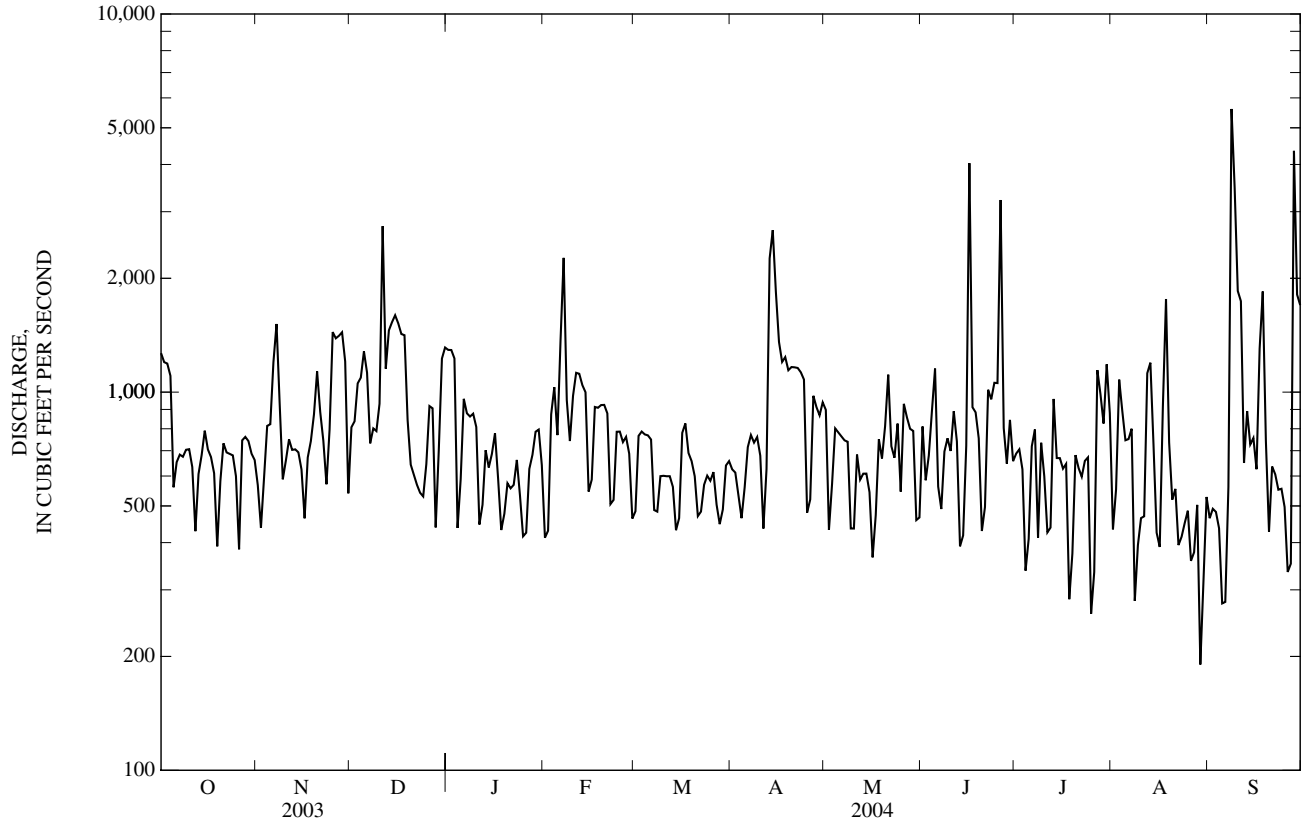
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004,* BY WATER YEAR (WY)

MEAN	500	498	585	678	731	887	885	707	654	512	497	540
MAX	1,572	1,530	1,376	1,453	1,633	2,519	3,016	1,567	2,026	1,374	1,454	2,030
(WY)	(1990)	(1986)	(1997)	(1979)	(1998)	(1993)	(1987)	(1978)	(1972)	(1989)	(1985)	(1996)
MIN	201	211	267	291	249	331	248	266	146	151	126	165
(WY)	(1952)	(1982)	(2001)	(1989)	(2002)	(1967)	(2002)	(1964)	(2002)	(2002)	(2002)	(2002)

02074000 SMITH RIVER AT EDEN, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004*	
ANNUAL TOTAL	397,539		298,829			
ANNUAL MEAN	1,089		816	‡838	639	(UNADJUSTED)
HIGHEST ANNUAL MEAN					1,010	1987
LOWEST ANNUAL MEAN					254	2002
HIGHEST DAILY MEAN	11,400	Mar 20	5,610	Sep 8	16,700	Jun 21, 1972
LOWEST DAILY MEAN	185	Jan 19	190	Aug 29	46	Aug 14, 1967
ANNUAL SEVEN-DAY MINIMUM	348	Jan 26	383	Aug 24	100	Aug 10, 2002
MAXIMUM PEAK FLOW			13,100	Sep 8	24,800	Jun 21, 1972
MAXIMUM PEAK STAGE			11.39	Sep 8	16.24	Jun 21, 1972
INSTANTANEOUS LOW FLOW			184	Aug 29	38	Aug 7, 1967
ANNUAL RUNOFF (CFSM)	2.02		1.52		1.19	
ANNUAL RUNOFF (INCHES)	27.49		20.66		16.13	
10 PERCENT EXCEEDS	1,860		1,230		1,170	
50 PERCENT EXCEEDS	881		698		449	
90 PERCENT EXCEEDS	442		432		220	

† Change in contents, equivalent in cubic feet per second, in Philpott Lake provided by U.S. Army Corps of Engineers.
* Regulated period only (1951-2004). See REMARKS.
‡ Adjusted for change in contents.



0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC

LOCATION.--Lat 36°22'26", long 79°41'01", Rockingham County, Hydrologic Unit 03010103, approximately 0.15 mi below State Road 1998, upstream of unnamed tributary, at Reidsville.

DRAINAGE AREA.--3.75 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2003 to September 2004.

GAGE.--Water-stage recorder. Datum of gage is 660 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minimum discharge for current water year and period of record also occurred Aug. 9, 10.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	25	3.8	3.2	3.4	2.5
2	---	---	---	---	---	---	---	7.5	3.3	14	3.6	2.2
3	---	---	---	---	---	---	---	5.2	14	7.3	4.4	2.5
4	---	---	---	---	---	---	---	5.8	15	4.3	34	e52
5	---	---	---	---	---	---	---	7.6	7.0	3.5	6.7	23
6	---	---	---	---	---	---	---	5.4	4.3	4.5	3.9	8.8
7	---	---	---	---	---	---	---	4.3	28	3.9	3.8	5.3
8	---	---	---	---	---	---	---	3.6	12	3.0	e40	4.4
9	---	---	---	---	---	---	---	3.2	9.3	3.8	9.9	4.0
10	---	---	---	---	---	---	---	3.0	5.8	3.0	e31	3.4
11	---	---	---	---	---	---	---	2.9	5.1	2.6	60	3.2
12	---	---	---	---	---	---	---	2.8	11	4.1	12	3.0
13	---	---	---	---	---	---	---	2.4	6.7	6.2	8.6	4.0
14	---	---	---	---	---	---	---	2.3	5.0	3.8	9.2	3.2
15	---	---	---	---	---	---	---	2.7	e70	2.9	4.9	3.5
16	---	---	---	---	---	---	---	2.7	e106	2.7	4.1	3.1
17	---	---	---	---	---	---	---	2.5	39	2.4	3.9	2.9
18	---	---	---	---	---	---	---	4.4	22	2.4	3.7	50
19	---	---	---	---	---	---	---	8.7	22	2.4	3.0	19
20	---	---	---	---	---	---	---	4.2	12	2.3	2.9	7.2
21	---	---	---	---	---	---	---	4.1	7.7	3.9	2.7	e5.0
22	---	---	---	---	---	---	---	14	6.5	12	2.9	e16
23	---	---	---	---	---	---	---	19	5.2	7.5	25	e80
24	---	---	---	---	---	---	---	7.8	4.5	4.5	7.6	e14
25	---	---	---	---	---	---	---	40	4.1	2.9	3.7	8.1
26	---	---	---	---	---	---	---	e82	3.8	2.7	e3.0	5.5
27	---	---	---	---	---	---	---	22	3.6	2.5	e2.7	4.3
28	---	---	---	---	---	---	---	11	3.5	2.3	2.2	3.8
29	---	---	---	---	---	---	---	7.1	3.5	3.3	2.9	3.2
30	---	---	---	---	---	---	---	5.1	3.2	5.5	e3.3	3.0
31	---	---	---	---	---	---	---	5.2	---	3.0	2.6	---
TOTAL	---	---	---	---	---	---	---	323.5	446.9	132.4	311.6	350.1
MEAN	---	---	---	---	---	---	---	10.4	14.9	4.27	10.1	11.7
MAX	---	---	---	---	---	---	---	82	106	14	60	80
MIN	---	---	---	---	---	---	---	2.3	3.2	2.3	2.2	2.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

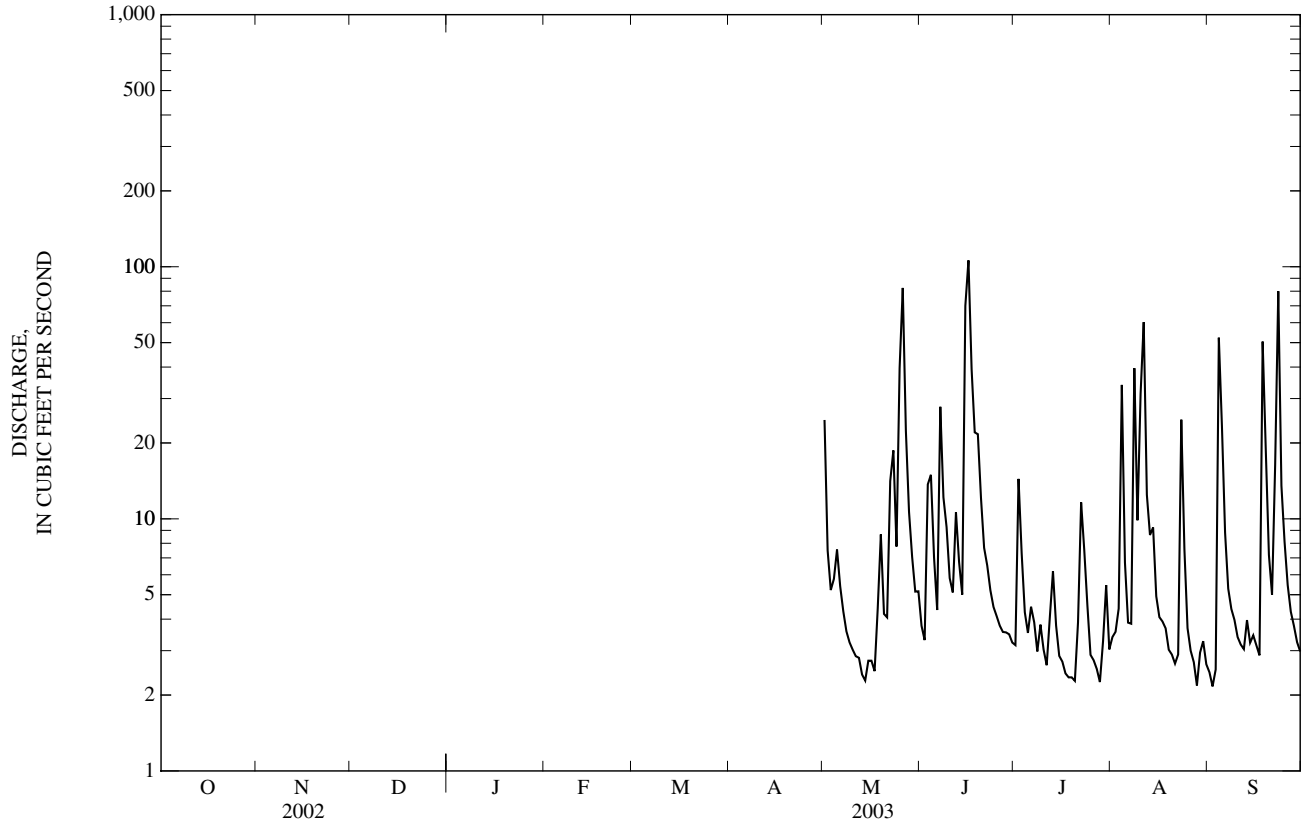
MEAN	---	---	---	---	---	---	---	10.4	14.9	4.27	10.1	11.7
MAX	---	---	---	---	---	---	---	10.4	14.9	4.27	10.1	11.7
(WY)	---	---	---	---	---	---	---	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	---	---	---	---	---	---	---	10.4	14.9	4.27	10.1	11.7
(WY)	---	---	---	---	---	---	---	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS FOR 2003 WATER YEAR

HIGHEST DAILY MEAN	106	Jun 16
LOWEST DAILY MEAN	2.2	Aug 28
ANNUAL SEVEN-DAY MINIMUM	2.6	Aug 28
MAXIMUM PEAK FLOW	NOT DETERMINED	
MAXIMUM PEAK STAGE	8.13	Sep 23
INSTANTANEOUS LOW FLOW	1.8	Jul 28

e Estimated.

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued



0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.3	2.9	2.8	2.6	3.0	2.6	3.2	e1.5	1.7	1.0	e1.4
2	2.9	3.0	2.6	2.9	2.4	3.3	2.2	26	e1.7	1.6	1.6	1.1
3	2.8	2.8	2.6	3.0	20	3.0	2.1	20	e1.5	5.8	3.5	1.0
4	2.7	3.0	5.2	2.9	7.2	2.9	2.1	6.6	7.0	3.7	1.9	1.00
5	2.7	3.1	6.3	e2.8	5.2	2.8	2.0	4.8	2.1	2.2	1.4	0.98
6	2.6	3.9	4.8	e2.8	87	3.0	1.9	3.9	1.7	2.0	1.0	2.2
7	2.5	4.2	3.6	2.7	42	2.8	1.9	3.6	1.6	1.5	0.90	3.5
8	2.5	4.6	3.1	2.7	13	2.8	1.9	3.2	1.5	1.3	0.79	70
9	3.5	2.8	2.9	2.9	6.4	2.6	1.8	3.1	1.4	1.2	e0.73	9.9
10	3.0	2.6	24	2.6	4.8	2.5	1.8	2.9	1.2	1.2	1.1	4.4
11	3.7	2.7	15	2.7	4.2	2.4	1.9	2.7	1.6	1.3	2.7	2.7
12	3.0	2.8	6.3	2.7	4.3	2.4	23	2.4	1.5	1.2	17	2.2
13	2.8	2.6	4.9	2.7	3.8	2.3	24	2.2	1.2	1.4	5.5	1.9
14	2.9	3.4	18	2.5	3.6	2.3	12	2.1	1.3	1.1	11	2.1
15	2.8	3.2	16	2.5	3.9	2.6	6.3	2.0	18	0.95	4.3	2.0
16	2.4	2.8	10	2.5	4.8	4.4	4.6	2.6	30	0.95	3.4	1.8
17	2.4	2.8	19	2.5	e5.8	3.2	3.7	2.2	4.5	18	20	20
18	2.4	2.8	8.9	3.0	e8.0	2.8	3.3	4.2	2.7	7.0	6.0	10
19	2.4	9.7	6.1	2.9	7.3	2.6	3.1	2.9	2.1	3.1	3.3	4.6
20	2.4	4.5	5.1	2.5	6.6	2.6	3.0	3.2	1.9	e2.7	3.1	3.7
21	2.7	3.6	4.9	2.4	4.9	2.5	2.6	2.4	e1.6	2.5	e2.8	2.8
22	2.5	3.2	4.1	2.3	4.0	2.5	2.4	2.1	1.7	2.2	2.0	2.7
23	2.4	3.0	3.9	2.3	3.6	2.3	2.3	2.1	34	2.1	1.6	2.7
24	2.4	3.0	3.8	2.4	3.4	2.2	2.3	2.0	9.0	2.0	1.4	2.7
25	2.4	2.8	3.2	2.2	3.2	2.2	2.1	1.8	4.0	1.9	1.3	2.7
26	2.6	2.8	3.2	3.0	3.0	2.2	4.3	1.8	3.8	2.0	1.3	2.9
27	6.2	2.8	3.2	2.6	3.8	2.2	2.8	1.8	2.9	17	1.2	4.5
28	4.5	4.6	3.1	2.6	3.6	2.2	2.3	1.7	2.5	7.1	1.1	54
29	5.8	3.3	3.1	3.0	3.2	2.0	2.2	1.6	2.0	3.3	1.2	11
30	3.3	2.9	3.1	3.5	---	2.2	2.1	1.9	1.8	1.9	2.0	5.7
31	3.0	---	2.9	2.9	---	2.6	---	1.7	---	1.2	e1.4	---
TOTAL	93.2	102.6	205.8	83.8	275.6	81.4	130.6	124.7	149.3	103.10	107.52	238.18
MEAN	3.01	3.42	6.64	2.70	9.50	2.63	4.35	4.02	4.98	3.33	3.47	7.94
MAX	6.2	9.7	24	3.5	87	4.4	24	26	34	18	20	70
MIN	2.4	2.6	2.6	2.2	2.4	2.0	1.8	1.6	1.2	0.95	0.73	0.98

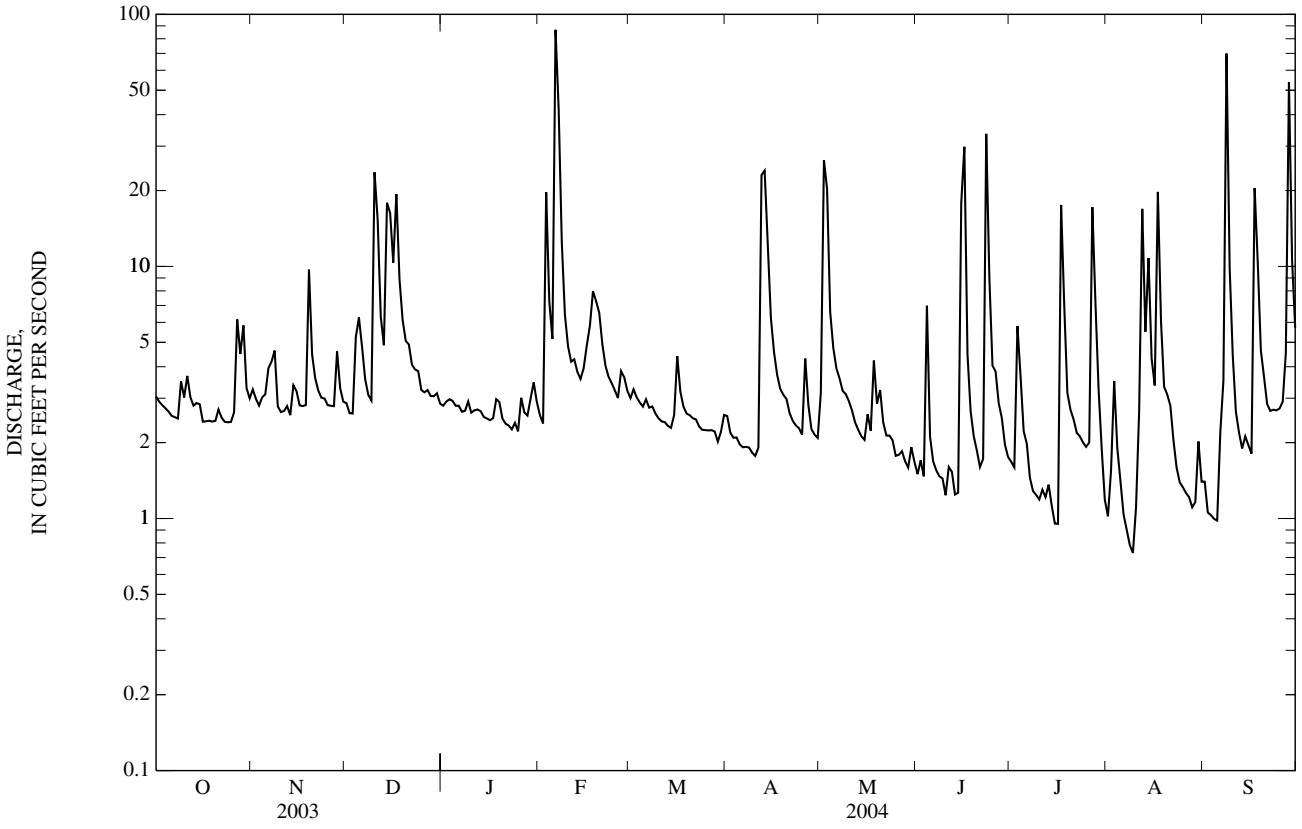
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	3.01	3.42	6.64	2.70	9.50	2.63	4.35	7.23	9.94	3.80	6.76	9.80
MAX	3.01	3.42	6.64	2.70	9.50	2.63	4.35	10.4	14.9	4.27	10.1	11.7
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	3.01	3.42	6.64	2.70	9.50	2.63	4.35	4.02	4.98	3.33	3.47	7.94
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2003 - 2004	
ANNUAL TOTAL			1,695.80			
ANNUAL MEAN			4.63		4.63	
HIGHEST ANNUAL MEAN					4.63	2004
LOWEST ANNUAL MEAN					4.63	2004
HIGHEST DAILY MEAN	106	Jun 16	87	Feb 6	106	Jun 16, 2003
LOWEST DAILY MEAN	2.2	Aug 28	0.73	Aug 9	0.73	Aug 9, 2004
ANNUAL SEVEN-DAY MINIMUM	2.5	Oct 16	1.1	Aug 4	1.1	Aug 4, 2004
MAXIMUM PEAK FLOW			512	Feb 6	NOT DETERMINED	
MAXIMUM PEAK STAGE			5.62	Feb 6	8.13	Sep 23, 2003
INSTANTANEOUS LOW FLOW			0.57*	Aug 8	0.57*	Aug 8, 2004
10 PERCENT EXCEEDS			7.0		7.0	
50 PERCENT EXCEEDS			2.8		2.8	
90 PERCENT EXCEEDS			1.5		1.5	

* See REMARKS.
e Estimated.

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued



0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 2003 to July 2004 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 2003 to June 2004.
pH: June 2003 to June 2004.
WATER TEMPERATURE: June 2003 to July 2004.
DISSOLVED OXYGEN: June 2003 to June 2004.
DISSOLVED OXYGEN, PERCENT SATURATION: June 2003 to June 2004.

INSTRUMENTATION.-- Water-quality monitor with satellite telemetry from June 2003 to July 2004.

REMARKS.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources (DENR), Division of Water Resources as part of the Piedmont/Mountains ground-water study. Dissolved oxygen, percent saturation, is computed using a barometric pressure of 750 mm Hg.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	739, January 28, 2004	26, August 11, 2003
pH, standard units	7.8, December 4, 9, 10, 15, 2003, April 20-22, 2004	6.1, August 23, 2003
WATER TEMPERATURE, °C	26.9, July 10, 14, 2004	0.0, on several days during the period
DISSOLVED OXYGEN, mg/L	13.8, February 28, 2004	3.6, June 15, 2003
DISSOLVED OXYGEN, PERCENT SATURATION, %	114, March 14, 2004	42, June 15, 2003

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	154	136	145	131	128	129
2	---	---	---	---	---	---	152	143	146	130	126	128
3	---	---	---	---	---	---	161	141	146	131	126	128
4	---	---	---	---	---	---	170	64	139	131	38	94
5	---	---	---	---	---	---	181	169	177	---	---	---
6	---	---	---	---	---	---	172	155	161	---	---	---
7	---	---	---	---	---	---	163	149	155	---	---	---
8	---	---	---	---	---	---	149	64	117	---	---	---
9	---	---	---	---	---	---	137	128	133	---	---	---
10	---	---	---	---	---	---	145	27	135	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	128	111	117	---	---	---	---	---	---	---	---	---
13	142	127	137	---	---	---	141	125	136	---	---	---
14	142	129	132	---	---	---	151	140	145	---	---	---
15	142	38	114	---	---	---	154	139	143	---	---	---
16	---	---	---	---	---	---	154	144	149	---	---	---
17	---	---	---	137	134	135	150	139	142	---	---	---
18	---	---	---	135	132	134	151	147	149	---	---	---
19	---	---	---	134	132	133	147	142	144	---	---	---
20	---	---	---	135	131	133	146	142	144	---	---	---
21	---	---	---	135	113	130	144	141	143	---	---	---
22	---	---	---	128	85	121	144	139	142	---	---	---
23	---	---	---	130	102	117	143	54	130	---	---	---
24	---	---	---	143	108	127	111	79	100	---	---	---
25	---	---	---	143	140	141	132	111	120	---	---	---
26	---	---	---	146	138	140	---	---	---	137	132	134
27	---	---	---	147	142	144	---	---	---	137	134	136
28	---	---	---	144	135	140	126	123	124	134	133	134
29	---	---	---	135	127	133	125	116	123	138	134	136
30	---	---	---	130	115	123	126	119	123	136	129	134
31	---	---	---	137	130	135	132	126	131	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	136	122	133	155	141	146	139	132	137	142	138	140
2	134	118	130	155	148	152	138	133	135	146	136	139
3	133	126	131	148	143	144	133	131	132	149	146	147
4	132	116	123	150	141	144	706	118	160	146	144	145
5	135	120	129	147	145	146	328	179	236	---	---	---
6	135	118	130	146	137	143	180	161	173	---	---	---
7	132	119	126	198	134	139	177	161	170	145	142	143
8	132	128	131	220	159	192	161	150	156	149	144	147
9	130	127	129	159	136	144	151	144	148	148	139	142
10	130	126	129	143	130	138	149	100	135	249	142	197
11	132	128	129	136	130	131	144	102	123	173	158	165
12	146	131	143	130	128	130	164	142	149	159	151	156
13	140	137	138	135	130	132	164	143	155	164	149	154
14	144	136	140	210	132	138	603	121	285	150	144	147
15	137	133	135	214	147	174	284	173	212	150	143	145
16	135	133	134	147	137	140	186	154	168	165	142	150
17	135	132	133	137	134	135	184	129	151	167	158	164
18	134	131	133	134	132	133	150	142	145	221	143	161
19	135	133	133	134	111	129	151	142	145	182	158	166
20	134	132	133	166	107	141	158	149	151	168	157	164
21	136	130	132	166	152	159	180	158	169	157	149	154
22	136	135	136	152	142	146	164	147	152	150	146	148
23	136	133	134	142	137	139	148	144	146	146	144	145
24	133	132	132	137	134	135	164	145	152	144	129	141
25	133	130	132	134	131	133	148	142	145	143	137	140
26	133	131	131	133	132	133	144	138	141	143	135	139
27	134	119	130	133	131	132	150	141	149	145	139	141
28	151	120	137	145	120	130	149	143	146	739	145	294
29	153	133	143	127	120	124	143	139	141	452	208	264
30	153	145	149	132	127	128	142	137	139	317	219	273
31	145	143	143	---	---	---	143	140	141	279	212	241
MONTH	153	116	134	220	107	141	706	100	158	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	212	188	200	137	131	134	127	123	125	138	128	134
2	188	174	182	133	130	132	128	124	126	---	---	---
3	253	151	186	133	131	132	127	123	125	---	---	---
4	163	153	156	132	128	130	127	124	126	---	---	---
5	185	163	170	130	124	128	128	125	126	---	---	---
6	---	---	---	128	124	126	127	125	126	---	---	---
7	---	---	---	132	127	129	131	124	127	---	---	---
8	---	---	---	141	128	131	132	127	130	---	---	---
9	---	---	---	144	132	137	133	128	131	---	---	---
10	---	---	---	132	126	129	133	127	130	---	---	---
11	---	---	---	129	125	126	131	127	129	---	---	---
12	---	---	---	126	124	125	140	120	128	---	---	---
13	---	---	---	126	123	124	150	125	135	---	---	---
14	---	---	---	125	124	125	148	128	139	---	---	---
15	---	---	---	126	121	124	152	140	146	---	---	---
16	---	---	---	149	124	134	152	144	148	---	---	---
17	---	---	---	146	130	136	144	138	141	---	---	---
18	---	---	---	131	128	129	146	142	144	---	---	---
19	---	---	---	129	126	128	142	140	141	---	---	---
20	---	---	---	133	127	130	147	141	145	---	---	---
21	---	---	---	134	127	130	147	141	145	---	---	---
22	---	---	---	140	126	130	144	140	142	---	---	---
23	---	---	---	141	135	138	142	139	140	---	---	---
24	---	---	---	135	128	131	141	139	140	---	---	---
25	---	---	---	129	127	128	146	141	143	---	---	---
26	123	117	122	129	125	127	150	142	146	---	---	---
27	445	115	155	128	124	127	145	136	141	134	130	132
28	189	147	166	129	123	126	---	---	---	134	132	132
29	148	136	141	126	123	124	---	---	---	133	131	132
30	---	---	---	129	123	125	137	133	135	133	125	130
31	---	---	---	129	123	127	---	---	---	132	130	131
MONTH	---	---	---	149	121	129	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	132	130	132	---	---	---	---	---	---	---	---	---
2	133	130	132	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	135	107	128	---	---	---	---	---	---	---	---	---
13	138	134	136	---	---	---	---	---	---	---	---	---
14	142	137	139	---	---	---	---	---	---	---	---	---
15	141	96	132	---	---	---	---	---	---	---	---	---
16	140	89	113	---	---	---	---	---	---	---	---	---
17	160	140	154	---	---	---	---	---	---	---	---	---
18	159	152	154	---	---	---	---	---	---	---	---	---
19	154	143	148	---	---	---	---	---	---	---	---	---
20	143	140	142	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	138	136	137	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	6.9	6.9	6.9	7.1	7.0	7.1	7.1	6.8	7.0
2	---	---	---	6.9	6.8	6.9	7.3	7.0	7.1	6.9	6.6	6.8
3	---	---	---	7.1	6.9	7.0	7.3	7.0	7.1	6.8	6.6	6.6
4	---	---	---	7.1	7.0	7.1	7.3	6.6	7.2	6.9	6.2	6.6
5	---	---	---	7.1	7.0	7.1	7.3	7.1	7.3	6.6	6.3	6.5
6	---	---	---	7.2	7.1	7.1	7.1	6.9	7.0	6.7	6.6	6.6
7	---	---	---	7.2	7.1	7.2	7.2	7.0	7.1	6.9	6.7	6.8
8	---	---	---	7.3	7.2	7.2	7.1	6.7	7.0	6.7	6.6	6.7
9	---	---	---	7.3	7.0	7.1	7.0	6.8	6.9	6.8	6.6	6.7
10	---	---	---	7.3	7.1	7.2	6.9	6.3	6.8	6.8	6.7	6.7
11	---	---	---	7.3	7.2	7.2	6.9	6.4	6.8	6.7	6.5	6.5
12	---	---	---	7.3	7.2	7.3	---	---	---	6.8	6.6	6.7
13	---	---	---	7.4	7.2	7.3	7.0	6.9	7.0	6.9	6.7	6.8
14	7.3	7.2	7.3	7.3	7.2	7.3	7.0	6.9	7.0	6.7	6.4	6.6
15	7.3	6.4	7.1	7.4	7.3	7.3	7.0	7.0	7.0	6.6	6.5	6.5
16	7.2	6.7	7.0	7.5	7.2	7.3	7.1	7.0	7.0	6.6	6.6	6.6
17	6.9	6.7	6.8	7.4	7.2	7.3	7.1	7.0	7.0	6.7	6.6	6.7
18	6.7	6.5	6.6	7.5	7.2	7.3	7.2	7.0	7.1	7.0	6.6	6.7
19	6.6	6.5	6.6	7.5	7.2	7.3	7.2	7.0	7.1	6.7	6.3	6.6
20	6.6	6.5	6.6	7.5	7.3	7.4	7.2	7.0	7.1	---	---	---
21	6.7	6.6	6.6	7.5	7.1	7.3	7.3	7.0	7.1	---	---	---
22	6.7	6.6	6.7	7.4	6.9	7.2	7.3	7.0	7.2	---	---	---
23	6.7	6.6	6.6	7.4	7.0	7.2	7.3	6.1	7.1	6.8	6.3	6.6
24	6.7	6.6	6.6	7.3	7.1	7.2	6.7	6.2	6.6	6.9	6.8	6.9
25	6.8	6.7	6.7	7.3	7.2	7.3	6.8	6.7	6.8	7.0	6.7	6.8
26	6.8	6.8	6.8	7.2	6.9	7.1	---	---	---	7.0	6.9	7.0
27	6.8	6.7	6.8	7.1	7.0	7.1	---	---	---	7.1	7.0	7.0
28	6.8	6.7	6.8	7.1	6.9	7.0	6.8	6.6	6.7	7.1	7.0	7.1
29	6.9	6.8	6.8	7.0	6.9	6.9	6.9	6.6	6.8	7.2	7.0	7.1
30	7.0	6.9	6.9	7.2	7.0	7.1	6.7	6.6	6.6	7.1	7.0	7.1
31	---	---	---	7.2	7.0	7.1	6.9	6.6	6.6	---	---	---
MONTH	---	---	---	7.5	6.8	7.2	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	21.4	20.2	20.8	21.9	20.5	21.1	24.9	21.9	23.1
2	---	---	---	20.4	19.3	19.8	23.5	20.9	21.9	24.8	21.6	23.0
3	---	---	---	21.8	19.8	20.5	23.9	21.5	22.4	24.2	21.7	22.9
4	---	---	---	24.1	19.0	21.4	24.8	21.8	23.3	23.3	22.0	22.5
5	---	---	---	25.5	20.8	22.8	24.0	21.9	22.9	23.0	21.2	22.0
6	---	---	---	25.2	21.0	22.6	24.5	20.8	22.4	21.7	19.4	20.3
7	---	---	---	24.4	21.2	22.5	24.1	21.6	22.6	20.6	18.3	19.3
8	---	---	---	26.1	21.3	23.5	22.6	20.7	21.8	21.0	18.7	19.5
9	---	---	---	26.2	22.0	23.5	23.1	21.2	22.1	19.7	17.6	18.7
10	---	---	---	25.8	21.1	23.1	23.1	21.0	21.9	20.1	17.6	18.7
11	---	---	---	25.1	22.1	23.4	24.3	21.7	22.8	20.0	15.9	17.9
12	21.8	19.4	20.7	25.4	20.4	22.6	24.2	22.0	23.0	18.6	16.6	17.6
13	22.9	20.4	21.5	23.6	20.6	21.8	23.8	21.8	22.6	19.4	17.9	18.6
14	23.9	20.2	21.8	22.3	20.5	21.3	24.8	22.1	23.3	20.5	18.8	19.4
15	23.0	20.9	21.8	24.1	20.0	21.8	24.9	21.8	23.3	21.7	18.9	20.0
16	21.8	19.9	21.1	25.4	20.8	22.7	24.7	22.4	23.3	21.1	18.4	19.6
17	20.5	18.8	19.3	25.3	21.4	23.1	24.6	21.7	22.9	19.8	15.8	17.9
18	19.8	18.3	19.0	25.2	20.4	22.5	24.1	20.7	22.2	18.3	17.4	17.8
19	21.2	19.2	20.1	24.5	21.0	22.4	23.4	21.2	22.1	21.2	18.3	19.5
20	21.6	18.8	19.8	25.4	20.4	22.6	23.2	20.8	21.7	---	---	---
21	19.9	16.5	18.2	25.4	21.2	23.0	24.3	20.5	22.3	---	---	---
22	21.0	16.0	18.3	24.7	21.3	22.6	24.5	21.8	22.8	---	---	---
23	22.1	16.9	19.3	23.0	20.9	21.7	24.5	20.9	22.6	21.9	19.9	20.7
24	22.9	17.4	19.9	23.6	19.6	21.3	23.6	21.4	22.4	20.8	17.8	19.3
25	23.5	18.1	20.6	24.1	19.1	21.4	24.0	19.8	21.7	20.9	17.1	18.9
26	24.3	19.2	21.5	24.4	19.4	21.7	---	---	---	21.0	17.4	19.0
27	23.8	20.2	21.8	25.7	20.8	23.0	---	---	---	21.3	17.6	19.2
28	21.5	20.0	20.6	25.8	21.6	23.5	25.6	22.1	23.7	20.0	17.3	18.8
29	23.6	18.9	21.0	24.1	21.6	22.7	25.9	22.4	23.8	17.3	14.3	15.7
30	23.0	19.7	21.4	22.3	20.7	21.3	25.7	22.3	23.6	16.2	12.2	14.2
31	---	---	---	21.4	20.4	20.7	23.5	22.4	22.9	---	---	---
MONTH	---	---	---	26.2	19.0	22.2	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.5	13.0	14.6	15.6	11.2	13.3	8.8	5.1	6.7	6.8	2.9	4.8
2	15.3	12.5	14.0	16.1	12.2	14.0	6.4	4.1	5.3	9.0	5.6	7.1
3	13.4	9.6	11.6	16.1	12.0	13.9	5.0	3.6	4.3	10.4	6.4	8.2
4	14.9	10.1	12.5	17.3	12.3	14.9	4.2	2.7	3.5	12.6	9.3	10.9
5	16.0	12.4	14.1	18.8	15.3	16.9	5.5	3.8	4.8	---	---	---
6	16.8	13.0	14.8	19.7	16.6	17.9	6.9	4.7	5.8	---	---	---
7	17.3	14.3	15.7	18.1	16.1	17.0	5.6	3.3	4.3	4.6	1.6	2.9
8	16.3	14.3	15.4	16.1	12.2	14.8	5.4	2.2	3.8	3.5	1.1	2.5
9	17.6	16.0	16.6	12.2	8.5	10.2	6.7	2.7	4.6	3.4	2.1	3.0
10	17.8	16.0	17.0	10.2	6.6	8.5	7.6	5.1	6.1	2.9	0.5	2.2
11	17.6	16.4	16.9	11.9	7.6	9.8	7.9	5.6	6.9	1.6	0.0	0.5
12	19.1	15.9	17.4	15.5	11.2	13.3	6.5	3.8	5.1	4.3	0.9	2.4
13	18.8	15.6	17.3	15.0	8.1	11.8	5.4	3.1	4.5	6.2	2.5	4.2
14	18.4	16.9	17.7	9.0	6.3	7.6	3.9	0.5	2.7	5.4	2.1	3.8
15	16.9	13.7	15.3	9.5	7.3	8.5	5.8	3.4	4.3	5.6	3.1	4.3
16	15.2	11.2	13.2	11.1	9.3	10.1	7.1	3.7	5.3	3.8	1.3	2.5
17	15.5	11.5	13.5	13.8	10.4	12.0	7.4	5.0	6.7	5.3	1.0	3.2
18	15.2	12.9	14.1	14.1	12.6	13.3	6.3	4.4	5.3	7.0	5.0	5.8
19	15.0	10.7	12.8	15.7	13.1	14.7	6.1	4.7	5.2	5.5	2.0	3.7
20	15.4	11.3	13.3	13.1	10.0	11.4	4.8	2.7	3.8	2.8	0.0	1.4
21	16.5	12.7	14.5	12.2	8.2	10.1	4.3	1.3	2.7	2.8	0.0	1.1
22	15.5	12.7	14.2	12.2	8.2	10.1	5.7	2.4	3.9	4.6	0.0	2.0
23	12.9	9.7	11.5	12.2	8.2	10.1	7.8	3.6	5.6	3.2	0.6	2.0
24	12.0	8.4	10.3	12.8	8.7	10.6	9.7	5.9	8.3	5.7	0.9	3.1
25	12.6	9.2	10.8	10.1	6.4	7.8	5.9	3.1	4.3	3.9	0.0	1.2
26	13.9	11.7	12.7	8.8	4.8	6.8	4.7	1.6	3.1	0.0	0.0	0.0
27	15.2	13.9	14.5	10.3	6.4	8.3	5.3	1.6	3.3	0.8	0.0	0.2
28	14.1	11.7	12.6	13.3	9.2	11.5	5.4	2.1	3.7	2.5	0.0	0.9
29	13.9	11.3	12.3	9.2	5.4	6.7	7.0	2.8	4.9	3.3	0.0	1.4
30	13.9	9.6	11.6	7.6	4.1	5.7	8.2	5.4	7.3	4.9	1.2	2.6
31	15.0	10.6	12.6	---	---	---	6.1	2.9	4.6	3.0	0.0	1.4
MONTH	19.1	8.4	14.0	19.7	4.1	11.4	9.7	0.5	4.9	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	3.1	0.0	1.1	10.7	4.2	7.3	14.4	9.1	11.2	17.8	15.6	16.6
2	3.5	0.0	1.6	12.0	8.7	10.4	12.3	8.9	10.4	20.3	16.2	17.8
3	5.1	1.7	3.3	14.9	8.1	11.3	14.8	6.8	10.3	17.3	12.9	15.3
4	6.0	2.0	3.7	17.1	10.1	13.2	14.6	8.0	10.5	16.9	10.5	13.3
5	5.5	1.9	3.4	16.2	12.3	14.1	15.1	6.3	9.9	19.1	12.0	14.9
6	5.4	3.1	4.0	16.2	12.4	14.6	16.5	5.9	10.6	20.9	13.3	16.7
7	6.1	3.6	4.5	15.4	9.4	12.2	18.7	9.0	13.3	22.4	15.0	18.3
8	5.8	2.4	3.8	12.0	7.7	9.6	19.1	11.5	14.7	20.7	16.4	18.4
9	4.5	2.1	3.4	9.7	5.8	7.8	20.3	11.1	15.1	22.7	16.4	19.1
10	6.9	3.6	5.1	10.2	6.1	7.9	14.8	10.4	12.7	23.0	16.8	19.6
11	7.0	4.2	5.5	11.9	3.7	7.4	13.4	11.3	12.4	23.2	17.0	19.6
12	5.5	4.3	5.0	13.0	5.3	8.7	11.3	9.2	9.9	22.7	17.6	19.8
13	8.1	2.8	5.1	12.3	5.5	8.4	12.7	9.8	10.8	21.9	17.5	19.6
14	6.6	4.6	5.6	13.5	6.2	9.4	11.5	10.0	10.8	22.9	17.3	19.8
15	5.7	0.7	4.1	13.7	9.8	11.5	16.9	7.5	11.6	22.8	17.2	19.7
16	3.7	0.8	1.9	11.8	9.7	11.1	18.7	8.7	13.1	21.4	17.5	19.2
17	---	---	---	11.2	7.8	9.6	20.2	10.3	14.8	20.6	17.5	18.8
18	---	---	---	9.8	6.0	7.8	21.9	12.3	16.5	21.0	17.1	19.1
19	7.5	1.9	4.3	14.5	7.0	10.0	22.7	13.9	17.7	21.8	18.0	19.5
20	9.6	3.4	6.2	14.6	6.2	10.3	22.8	14.7	18.4	22.4	17.7	19.8
21	11.1	7.2	8.6	15.4	8.3	12.1	21.9	14.9	18.1	24.5	18.4	21.1
22	9.6	4.4	6.8	11.4	6.0	8.0	22.6	14.6	18.1	24.8	19.4	21.8
23	7.9	3.9	6.0	12.0	3.2	7.1	23.1	14.8	18.6	24.1	20.3	21.8
24	9.7	6.3	7.8	11.7	4.9	8.1	22.1	16.4	19.1	24.9	19.7	21.9
25	9.3	5.2	7.0	16.8	7.4	11.5	22.0	17.1	19.1	25.0	20.0	22.3
26	5.4	1.8	4.2	18.6	9.8	13.7	18.8	15.6	17.2	24.0	20.5	22.1
27	5.9	1.5	3.5	18.1	12.2	14.9	17.7	13.0	15.1	23.5	19.7	21.3
28	8.9	1.5	4.8	17.8	12.8	15.2	---	---	---	21.5	19.8	20.7
29	9.3	2.6	5.7	18.3	9.8	13.6	---	---	---	23.2	17.7	20.4
30	---	---	---	12.8	10.1	10.9	19.0	12.9	15.8	20.9	19.1	19.9
31	---	---	---	11.0	9.6	10.2	---	---	---	22.6	19.2	20.7
MONTH	---	---	---	18.6	3.2	10.6	---	---	---	25.0	10.5	19.3

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.7	18.0	20.3	22.9	20.0	21.5	---	---	---	---	---	---
2	23.1	16.8	19.8	23.2	20.5	21.9	---	---	---	---	---	---
3	---	---	---	22.6	20.8	21.8	---	---	---	---	---	---
4	---	---	---	25.1	21.2	22.8	---	---	---	---	---	---
5	---	---	---	26.2	21.5	23.6	---	---	---	---	---	---
6	---	---	---	26.3	21.5	23.7	---	---	---	---	---	---
7	---	---	---	26.5	22.1	24.0	---	---	---	---	---	---
8	---	---	---	25.6	20.9	23.2	---	---	---	---	---	---
9	---	---	---	26.1	20.7	23.3	---	---	---	---	---	---
10	---	---	---	26.9	21.7	23.8	---	---	---	---	---	---
11	---	---	---	25.2	21.4	23.3	---	---	---	---	---	---
12	21.9	20.0	20.9	25.7	22.0	23.6	---	---	---	---	---	---
13	20.4	18.8	19.7	26.4	21.9	23.9	---	---	---	---	---	---
14	22.9	19.5	21.0	26.9	22.2	24.3	---	---	---	---	---	---
15	22.8	20.8	21.8	24.9	20.9	22.8	---	---	---	---	---	---
16	23.7	21.7	22.6	---	---	---	---	---	---	---	---	---
17	26.1	22.3	23.8	---	---	---	---	---	---	---	---	---
18	26.2	21.8	23.8	---	---	---	---	---	---	---	---	---
19	25.2	21.6	23.1	---	---	---	---	---	---	---	---	---
20	23.6	19.8	21.5	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	23.9	19.3	21.3	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	21.8	19.8	20.7	---	---	---	---	---	---	---	---	---
28	21.1	19.7	20.4	---	---	---	---	---	---	---	---	---
29	23.3	18.8	20.9	---	---	---	---	---	---	---	---	---
30	23.2	19.5	21.2	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	6.7	5.8	6.3	7.4	6.3	6.9	---	---	---
2	---	---	---	6.9	5.3	6.4	7.2	6.2	6.8	---	---	---
3	---	---	---	6.7	6.2	6.4	7.0	6.2	6.6	---	---	---
4	---	---	---	7.0	5.9	6.6	6.8	6.1	6.5	---	---	---
5	---	---	---	7.3	6.0	6.7	6.7	6.1	6.4	---	---	---
6	---	---	---	7.4	5.6	6.8	6.8	5.7	6.4	---	---	---
7	---	---	---	6.9	6.1	6.6	6.7	5.8	6.3	---	---	---
8	---	---	---	7.0	5.9	6.5	6.8	5.7	6.3	---	---	---
9	---	---	---	7.0	5.1	6.4	6.2	5.6	5.9	---	---	---
10	---	---	---	8.0	6.4	7.2	6.7	5.0	6.1	---	---	---
11	---	---	---	7.6	6.6	7.1	---	---	---	---	---	---
12	7.2	5.9	6.8	7.8	5.3	7.0	---	---	---	---	---	---
13	6.6	5.6	6.2	7.7	6.4	7.4	6.9	6.1	6.6	---	---	---
14	5.9	5.1	5.6	8.2	7.1	7.6	6.3	5.0	5.7	---	---	---
15	7.1	3.6	5.6	7.9	7.2	7.4	5.6	4.6	5.1	---	---	---
16	7.8	4.5	6.2	7.8	6.0	7.1	6.4	5.2	5.7	---	---	---
17	7.5	7.2	7.4	7.5	6.0	6.7	6.8	5.5	6.2	---	---	---
18	7.6	7.0	7.4	7.4	6.0	6.6	6.7	5.6	6.1	---	---	---
19	7.4	6.5	7.0	7.0	6.0	6.4	6.2	5.2	5.8	---	---	---
20	6.7	5.9	6.4	6.8	5.6	6.2	7.0	5.3	6.2	---	---	---
21	6.6	5.9	6.2	6.7	5.5	6.1	6.9	5.4	6.1	---	---	---
22	6.5	5.5	6.0	7.1	5.4	6.1	6.6	5.2	5.8	---	---	---
23	6.3	5.4	5.9	6.7	5.9	6.5	---	---	---	---	---	---
24	6.3	5.3	5.8	6.9	6.1	6.5	---	---	---	---	---	---
25	6.1	5.2	5.7	7.7	6.4	7.0	---	---	---	---	---	---
26	5.9	5.1	5.5	7.7	5.8	7.0	---	---	---	8.3	7.4	8.0
27	6.0	5.2	5.6	7.3	5.7	6.6	---	---	---	8.3	7.2	7.8
28	6.6	5.6	6.1	7.4	5.7	6.5	---	---	---	8.3	7.5	8.0
29	6.7	5.7	6.2	7.1	5.4	6.3	---	---	---	9.0	8.1	8.6
30	6.5	5.7	6.1	7.4	6.5	6.8	---	---	---	8.7	7.4	8.2
31	---	---	---	7.3	6.6	6.9	---	---	---	---	---	---
MONTH	---	---	---	8.2	5.1	6.7	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.0	7.6	8.0	9.8	8.5	9.2	10.9	9.6	10.3	11.3	9.8	10.6
2	9.8	8.8	9.2	9.7	8.3	9.0	11.4	10.2	10.8	10.5	9.3	9.9
3	10.2	8.9	9.6	9.6	8.2	8.9	11.8	11.1	11.4	10.6	9.1	10
4	9.8	8.3	9.2	9.3	7.8	8.6	12.2	11.2	11.7	9.7	8.6	9.2
5	9.3	8.2	8.8	8.6	7.7	8.2	11.3	10.5	10.9	---	---	---
6	9.4	8.0	8.7	8.5	7.2	8.0	11.1	10.4	10.8	---	---	---
7	9.1	7.8	8.4	8.9	7.6	8.3	11.8	10.8	11.3	12.4	10.9	11.7
8	8.9	7.8	8.3	8.5	7.5	7.8	12.3	11.0	11.6	12.5	11.3	11.9
9	8.5	6.8	7.7	9.6	8.5	9.1	12.1	10.5	11.4	11.9	11.2	11.4
10	8.3	7.0	7.7	10.2	8.8	9.6	11.1	10.2	10.7	12.4	11.4	11.9
11	8.1	7.2	7.6	10.3	8.4	9.4	10.9	10.1	10.5	12.9	11.9	12.4
12	8.1	5.9	7.3	8.9	7.3	8.2	11.9	10.9	11.4	12.3	10.7	11.6
13	7.5	6.1	6.8	9.3	7.6	8.4	12.5	11.4	12.1	11.4	9.8	10.7
14	7.9	6.5	7.3	10.7	9.1	10.0	13.6	11.8	12.7	11.5	10.1	10.7
15	7.2	6.2	6.8	10.0	9.0	9.5	12.9	11.3	12.1	10.9	9.8	10.4
16	7.8	6.6	7.3	9.7	8.8	9.3	13.0	11.5	12.2	12.2	10.8	11.6
17	8.0	6.6	7.3	9.4	8.1	8.9	11.6	10.4	11.0	12.0	10.3	11.3
18	7.3	6.6	6.9	9.3	8.2	8.6	11.7	10.8	11.4	10.5	9.7	10.2
19	8.0	6.7	7.4	8.8	7.7	8.2	11.6	10.6	11.1	11.7	10.1	11.1
20	7.8	6.6	7.2	9.9	8.7	9.3	11.6	10.8	11.3	12.7	11.4	12.0
21	7.2	5.8	6.6	10.9	9.5	10.1	12.5	10.9	11.7	12.8	11.0	11.9
22	6.8	5.9	6.4	11.4	10.0	10.7	11.6	10.3	11.1	12.5	10.3	11.5
23	7.8	6.6	7.3	11.4	9.9	10.6	11.1	9.5	10.4	12.1	10.4	11.2
24	8.3	7.2	7.7	11.0	9.5	10.3	9.8	8.9	9.2	11.7	9.7	10.9
25	8.3	7.3	7.8	11.8	10.0	11.1	11.1	9.7	10.5	12.8	10.3	11.4
26	7.5	6.6	7.2	12.2	10.7	11.5	11.6	10.3	11.0	12.3	11.3	12.0
27	7.2	6.0	6.6	11.7	10.1	11.0	11.6	10.0	10.9	12.2	11.6	12.0
28	7.8	7.2	7.6	10.2	8.5	9.6	11.3	9.9	10.6	12.0	11.1	11.6
29	9.1	7.8	8.7	10.6	9.0	10.1	10.9	9.8	10.4	12.4	11.2	11.7
30	10.1	8.7	9.4	11.2	9.8	10.6	10.3	9.3	9.7	12.4	11.1	11.8
31	10.0	8.5	9.4	---	---	---	11.5	10.0	10.7	13.4	11.7	12.5
MONTH	10.2	5.8	7.8	12.2	7.2	9.4	13.6	8.9	11.1	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	13.4	12.0	12.8	12.8	10.5	11.7	11.1	9.5	10.3	8.8	6.8	8.2
2	13.5	11.9	12.7	11.2	8.9	10.4	11.3	9.8	10.5	---	---	---
3	12.4	10.6	11.5	10.5	8.4	9.4	11.8	9.5	10.6	---	---	---
4	11.8	9.7	10.9	9.9	7.7	8.9	11.5	10.0	10.5	---	---	---
5	11.1	8.8	10.4	10.0	8.1	9.1	12.5	10.2	11.2	---	---	---
6	---	---	---	9.8	8.3	8.8	12.5	9.6	11.1	---	---	---
7	---	---	---	10.7	8.7	9.7	11.6	8.4	10.2	---	---	---
8	---	---	---	11.5	9.3	10.5	10.8	8.2	9.4	---	---	---
9	---	---	---	12.6	10.9	11.5	10.6	8.0	9.3	---	---	---
10	---	---	---	12.7	11.1	11.8	10.7	8.4	9.6	---	---	---
11	---	---	---	13.4	10.6	12.1	10.3	8.9	9.5	---	---	---
12	---	---	---	12.9	10.3	11.6	10.0	9.2	9.7	---	---	---
13	---	---	---	13.1	10.8	11.9	9.8	8.6	9.3	---	---	---
14	---	---	---	12.9	10.3	11.6	9.2	8.8	9.0	---	---	---
15	---	---	---	11.9	10.0	10.9	10.3	8.2	9.3	---	---	---
16	---	---	---	10.8	10.1	10.4	10.1	8.0	9.1	---	---	---
17	---	---	---	11.7	10.3	10.9	9.8	7.7	8.8	---	---	---
18	---	---	---	12.2	10.5	11.3	9.6	7.3	8.5	---	---	---
19	---	---	---	11.9	9.5	10.7	9.3	7.1	8.2	---	---	---
20	---	---	---	11.9	9.2	10.5	9.1	6.9	8.0	---	---	---
21	---	---	---	10.6	9.3	9.8	8.9	7.0	7.9	---	---	---
22	---	---	---	11.9	9.5	11.0	9.6	7.5	8.2	---	---	---
23	---	---	---	13.2	10.4	11.7	9.5	7.1	8.3	---	---	---
24	---	---	---	12.4	9.7	11.3	8.8	7.1	7.9	---	---	---
25	---	---	---	11.6	9.0	10.3	8.8	7.0	7.8	---	---	---
26	13.0	11.9	12.6	10.9	8.5	9.7	8.2	7.3	7.7	---	---	---
27	13.5	11.8	13.0	10.3	8.3	9.2	8.8	7.6	8.2	8.0	6.8	7.5
28	13.8	11.4	12.7	10.2	8.5	9.3	---	---	---	7.3	6.6	7.0
29	13.3	11.3	12.3	11.2	8.8	9.9	---	---	---	7.4	6.2	6.8
30	---	---	---	11.3	9.4	10.4	9.9	8.0	9.0	6.7	5.7	6.3
31	---	---	---	11.2	10.0	10.5	---	---	---	6.7	5.4	5.9
MONTH	---	---	---	13.4	7.7	10.5	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.4	5.0	5.7	---	---	---	---	---	---	---	---	---
2	5.9	4.3	5.3	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	7.7	6.7	7.1	---	---	---	---	---	---	---	---	---
13	7.5	6.6	7.1	---	---	---	---	---	---	---	---	---
14	7.3	5.9	6.6	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	8.0	7.2	7.6	---	---	---	---	---	---	---	---	---
20	8.2	7.3	7.7	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	7.8	6.7	7.4	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	77	67	71	85	72	79	---	---	---
2	---	---	---	76	59	72	85	72	78	---	---	---
3	---	---	---	77	70	72	83	72	77	---	---	---
4	---	---	---	81	70	75	79	71	77	---	---	---
5	---	---	---	87	70	79	78	72	76	---	---	---
6	---	---	---	89	67	80	80	68	75	---	---	---
7	---	---	---	80	73	78	79	69	74	---	---	---
8	---	---	---	84	71	78	77	65	73	---	---	---
9	---	---	---	84	62	76	71	64	68	---	---	---
10	---	---	---	97	77	85	78	58	71	---	---	---
11	---	---	---	92	79	85	---	---	---	---	---	---
12	83	67	77	91	61	83	---	---	---	---	---	---
13	76	64	71	92	74	86	81	72	78	---	---	---
14	67	60	64	95	81	88	74	60	67	---	---	---
15	83	42	65	92	82	86	68	56	61	---	---	---
16	89	51	71	92	72	84	78	62	68	---	---	---
17	83	80	82	90	72	80	81	65	73	---	---	---
18	83	77	81	87	71	78	78	66	72	---	---	---
19	82	73	78	85	70	75	74	60	67	---	---	---
20	74	66	71	80	67	73	82	61	71	---	---	---
21	69	64	67	80	65	72	82	64	72	---	---	---
22	67	62	65	83	64	72	80	61	69	---	---	---
23	68	62	65	78	68	75	---	---	---	---	---	---
24	69	62	65	79	71	74	---	---	---	---	---	---
25	67	61	64	88	73	80	---	---	---	---	---	---
26	67	60	63	89	69	80	---	---	---	91	83	87
27	69	60	65	87	71	78	---	---	---	91	81	86
28	75	64	69	89	69	78	---	---	---	91	83	87
29	76	66	71	84	64	75	---	---	---	92	83	87
30	76	66	70	85	74	78	---	---	---	85	75	81
31	---	---	---	84	75	79	---	---	---	---	---	---
MONTH	---	---	---	97	59	78	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	94	74	80	93	85	89	90	83	86	88	81	84
2	98	87	91	94	85	89	91	84	87	87	80	83
3	95	85	90	93	84	88	92	87	89	91	81	86
4	92	83	87	92	82	86	92	86	89	90	81	85
5	93	83	87	92	83	86	88	84	86	---	---	---
6	95	82	87	92	79	86	91	84	87	---	---	---
7	94	80	86	95	79	87	91	86	89	92	85	88
8	91	80	84	81	76	78	93	87	90	91	86	89
9	90	70	81	86	80	82	93	86	89	89	84	86
10	88	75	81	87	79	83	90	84	88	91	86	88
11	86	75	80	90	78	84	90	86	88	90	85	88
12	87	64	77	85	74	79	96	88	91	89	83	86
13	80	65	72	85	76	79	97	89	94	87	80	84
14	85	68	78	92	78	85	99	91	95	87	80	83
15	74	63	69	87	80	82	102	91	94	84	78	81
16	75	66	70	89	80	84	101	93	97	90	81	86
17	76	67	71	89	79	84	97	87	92	89	82	86
18	73	65	68	91	80	83	94	89	91	85	80	83
19	75	67	71	90	78	82	92	85	89	90	81	85
20	75	66	70	92	83	87	90	85	87	90	84	87
21	69	59	66	98	85	91	91	84	88	89	82	85
22	67	60	63	103	89	96	88	82	85	88	80	84
23	72	63	68	102	92	96	86	81	84	88	78	82
24	74	66	70	100	90	94	82	77	79	88	78	82
25	75	69	72	100	89	95	86	79	82	89	79	82
26	71	65	69	100	92	96	86	81	83	85	79	84
27	71	60	66	100	92	95	86	80	83	85	82	84
28	74	70	73	94	78	89	85	79	82	86	80	83
29	86	73	83	88	79	84	88	80	82	89	81	84
30	92	83	87	90	83	86	84	79	82	92	84	88
31	96	85	90	---	---	---	88	82	84	95	81	90
MONTH	98	59	77	103	74	87	102	77	87	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	95	88	92	105	94	98	104	88	95	93	71	85
2	97	83	92	103	82	95	104	89	95	---	---	---
3	92	81	87	95	82	87	107	90	96	---	---	---
4	89	76	84	94	77	86	106	90	96	---	---	---
5	84	65	79	100	82	90	112	91	100	---	---	---
6	---	---	---	99	82	88	112	93	101	---	---	---
7	---	---	---	104	83	91	113	85	99	---	---	---
8	---	---	---	104	84	93	110	84	94	---	---	---
9	---	---	---	108	93	98	109	83	94	---	---	---
10	---	---	---	110	94	101	104	83	92	---	---	---
11	---	---	---	113	94	102	100	85	90	---	---	---
12	---	---	---	112	94	101	89	85	87	---	---	---
13	---	---	---	113	96	103	89	81	85	---	---	---
14	---	---	---	114	95	103	85	80	82	---	---	---
15	---	---	---	113	94	101	92	80	86	---	---	---
16	---	---	---	100	93	96	94	82	87	---	---	---
17	---	---	---	105	92	97	97	81	88	---	---	---
18	---	---	---	105	92	97	101	80	88	---	---	---
19	---	---	---	108	89	96	101	78	87	---	---	---
20	---	---	---	107	88	95	101	77	86	---	---	---
21	---	---	---	103	86	93	99	77	85	---	---	---
22	---	---	---	106	87	94	112	79	89	---	---	---
23	---	---	---	107	92	98	106	79	90	---	---	---
24	---	---	---	112	89	97	100	79	86	---	---	---
25	---	---	---	106	88	96	98	78	85	---	---	---
26	102	95	98	108	87	95	87	77	81	---	---	---
27	103	91	99	105	85	93	90	78	83	93	79	86
28	106	96	100	105	86	95	---	---	---	84	74	79
29	106	95	99	109	88	97	---	---	---	85	71	77
30	---	---	---	105	89	96	103	84	92	74	64	71
31	---	---	---	103	90	95	---	---	---	78	61	67
MONTH	---	---	---	114	77	96	---	---	---	---	---	---

0207428225 WOLF ISLAND CREEK BELOW SR 1998 AT REIDSVILLE, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	75	56	64	---	---	---	---	---	---	---	---	---
2	70	48	59	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	88	76	81	---	---	---	---	---	---	---	---	---
13	84	74	79	---	---	---	---	---	---	---	---	---
14	86	68	75	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	98	86	90	---	---	---	---	---	---	---	---	---
20	95	84	89	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	92	78	84	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

02077200 HYCO CREEK NEAR LEASBURG, NC

LOCATION.--Lat 36°23'52", long 79°11'48", Caswell County, Hydrologic Unit 03010104, on right bank 10 ft upstream from bridge on U.S. Highway 158, 1.5 mi upstream from Kilgore Creek, and 2.5 mi west of Leasburg.

DRAINAGE AREA.--45.9 mi^2.

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 400.08 ft above NGVD of 1929. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum gage height for period of record from floodmark. Periods of no flow occur most years.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	15	25	e19	44	76	16	7.8	2.0	2.9	46
2	15	14	13	24	e22	39	74	21	6.2	1.7	1.9	23
3	13	13	12	23	109	39	50	54	5.5	3.2	2.0	13
4	12	13	17	23	151	35	39	47	37	5.0	2.6	9.6
5	12	13	24	24	82	31	31	32	49	3.1	1.6	7.7
6	12	14	27	25	95	31	27	24	16	2.0	2.7	7.5
7	11	17	20	21	230	30	24	20	8.4	1.5	2.5	36
8	10	16	16	19	113	29	23	17	5.7	1.1	1.4	269
9	13	13	14	21	74	27	21	16	4.4	0.77	0.97	361
10	16	12	37	21	63	26	18	15	3.6	0.97	0.63	81
11	16	12	237	e20	55	24	18	13	3.4	1.4	0.59	44
12	15	12	106	19	50	23	50	12	3.9	0.84	1.3	28
13	13	12	65	21	52	21	134	11	3.0	0.65	1.6	20
14	12	12	200	19	46	19	121	11	3.0	0.68	6.2	15
15	17	11	223	19	42	20	88	10	2.7	0.59	19	16
16	16	12	116	17	45	26	67	9.6	6.0	0.34	7.5	16
17	12	12	92	16	43	38	56	11	6.7	0.19	4.5	19
18	11	12	100	20	40	30	48	9.9	3.7	0.52	21	49
19	10	18	75	22	45	27	43	9.6	2.7	0.69	12	46
20	10	41	61	18	43	22	39	9.6	4.9	0.62	5.6	24
21	10	22	51	e16	40	22	35	9.6	3.9	0.31	4.2	16
22	9.9	15	47	e16	34	20	31	8.6	2.6	0.25	4.1	12
23	10	13	42	16	30	19	29	8.0	2.2	0.31	3.7	11
24	9.2	12	43	15	29	18	27	7.6	4.7	0.38	3.4	9.6
25	8.7	11	45	15	28	17	23	7.4	4.6	1.1	3.1	8.5
26	9.2	10	37	e15	25	16	23	7.4	4.0	0.99	2.7	8.1
27	12	9.7	33	e15	30	17	30	9.0	3.9	1.3	2.3	7.9
28	14	12	31	e14	37	17	22	6.9	3.5	5.3	2.3	18
29	38	30	30	e14	47	15	18	6.3	3.3	5.7	2.2	43
30	38	21	30	e15	---	15	17	6.9	2.5	12	123	21
31	22	---	27	e17	---	18	---	10	---	6.0	209	---
TOTAL	443.0	450.7	1,886	585	1,719	775	1,302	456.4	218.8	61.50	458.49	1,285.9
MEAN	14.3	15.0	60.8	18.9	59.3	25.0	43.4	14.7	7.29	1.98	14.8	42.9
MAX	38	41	237	25	230	44	134	54	49	12	209	361
MIN	8.7	9.7	12	14	19	15	17	6.3	2.2	0.19	0.59	7.5
CFSM	0.31	0.33	1.33	0.41	1.29	0.54	0.95	0.32	0.16	0.04	0.32	0.93
IN.	0.36	0.37	1.53	0.47	1.39	0.63	1.06	0.37	0.18	0.05	0.37	1.04

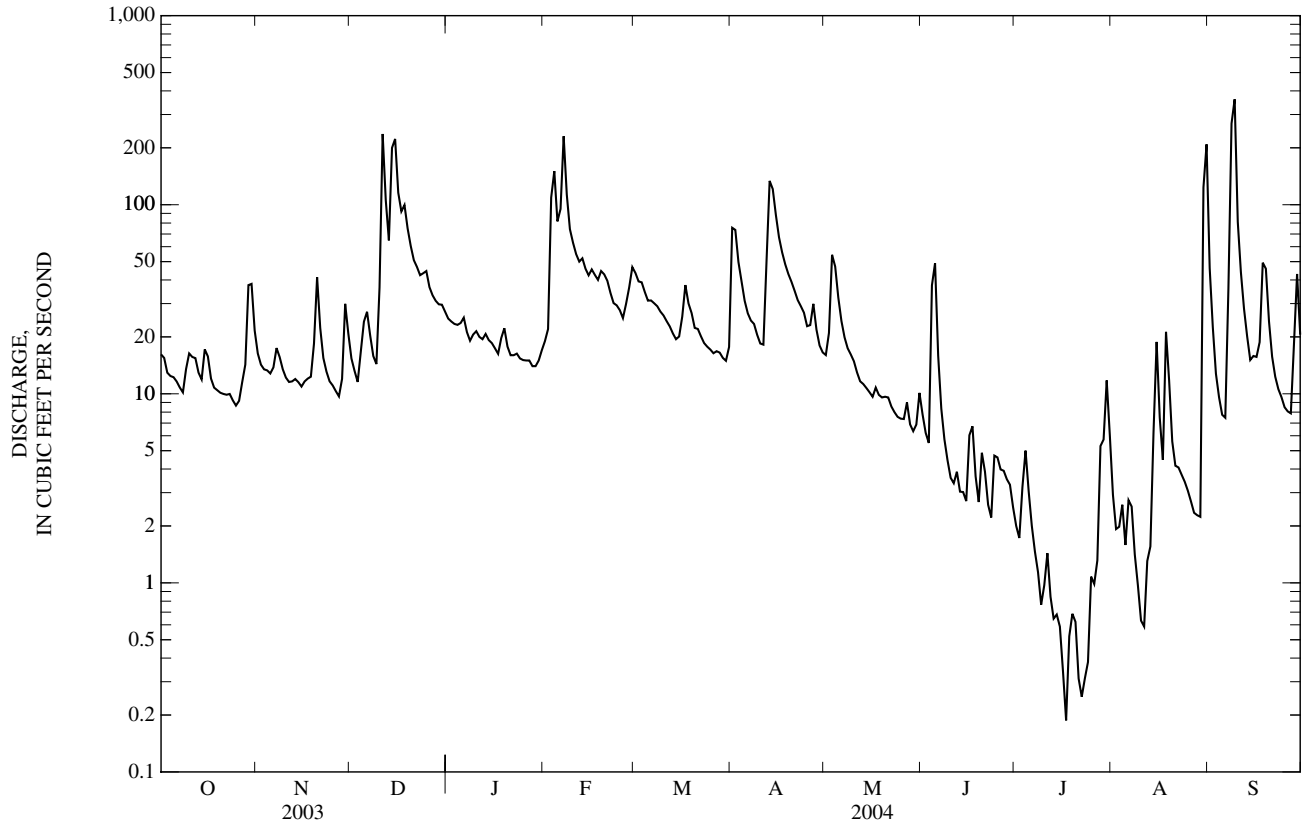
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	25.5	27.9	46.3	78.4	87.2	94.8	63.3	34.0	26.8	22.6	21.8	26.1
MAX	131	137	144	278	244	266	194	184	233	274	264	193
(WY)	(1996)	(1973)	(1973)	(1978)	(1979)	(1975)	(2003)	(1978)	(1995)	(1975)	(1995)	(1996)
MIN	0.00	0.10	2.33	6.15	13.2	23.1	8.45	2.55	0.14	0.00	0.00	0.00
(WY)	(1969)	(2002)	(2002)	(1981)	(2002)	(1976)	(2002)	(2002)	(2002)	(2002)	(2002)	(1968)

02077200 HYCO CREEK NEAR LEASBURG, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	33,755.2		9,641.79			
ANNUAL MEAN	92.5		26.3		46.1	
HIGHEST ANNUAL MEAN					113	2003
LOWEST ANNUAL MEAN					8.68	2002
HIGHEST DAILY MEAN	2,540	Mar 20	361	Sep 9	7,400	Aug 28, 1995
LOWEST DAILY MEAN	6.8	Aug 29	0.19	Jul 17	0.00	Jul 9, 1966
ANNUAL SEVEN-DAY MINIMUM	8.9	Aug 24	0.41	Jul 17	0.00	Jul 9, 1966
MAXIMUM PEAK FLOW			571	Sep 9	NOT DETERMINED	
MAXIMUM PEAK STAGE			31.38	Sep 9	48.53*	Aug 27, 1995
INSTANTANEOUS LOW FLOW			0.15	Jul 17	0.00*	Jul 8, 1966
ANNUAL RUNOFF (CFSM)	2.01		0.574		1.00	
ANNUAL RUNOFF (INCHES)	27.36		7.81		13.64	
10 PERCENT EXCEEDS	186		50		88	
50 PERCENT EXCEEDS	37		16		15	
90 PERCENT EXCEEDS	11		2.3		0.78	

* See REMARKS.
e Estimated.



02077200 HYCO CREEK NEAR LEASBURG, NC—Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May 1964 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 31.3°C, July 17, 1996; minimum recorded, 0.0°C, many days during winter months in most years.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 28.5°C, June 18; minimum recorded, 0.0°C, several days in January and February.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.4	14.3	15.4	15.1	12.4	13.9	7.5	5.4	6.6	5.6	3.2	4.6
2	16.0	14.5	15.3	15.7	13.2	14.6	6.9	5.0	5.8	7.2	5.0	6.1
3	14.6	11.7	13.1	15.8	13.3	14.7	5.1	3.8	4.2	8.9	6.0	7.4
4	15.1	11.9	13.4	17.0	13.9	15.5	4.2	3.3	3.7	11.2	8.8	9.9
5	16.1	13.8	15.0	18.4	16.4	17.4	4.6	3.5	4.0	12.8	11.1	12.0
6	16.9	14.4	15.6	19.6	17.6	18.6	5.7	4.4	4.9	12.2	7.4	9.8
7	18.1	16.1	17.0	19.3	18.2	18.8	4.7	3.0	4.0	7.4	3.4	4.8
8	17.5	16.2	16.8	18.2	14.9	16.8	4.0	2.1	3.3	3.4	1.6	2.5
9	18.2	17.1	17.6	14.9	10.8	12.6	5.0	2.4	3.8	3.0	2.2	2.6
10	18.1	17.1	17.7	10.8	8.7	9.9	8.7	4.7	5.7	2.5	1.0	2.0
11	17.9	17.4	17.6	11.0	8.6	10	8.7	7.8	8.1	1.0	0.0	0.2
12	19.7	17.3	18.4	14.8	11.0	12.7	7.8	5.6	6.3	2.7	0.1	1.4
13	19.5	17.5	18.6	14.8	10.4	13.1	---	---	---	4.3	1.6	3.0
14	19.2	18.5	18.9	10.4	7.8	8.6	---	---	---	4.0	2.1	3.3
15	18.7	16.1	17.2	---	---	---	5.5	4.1	4.7	4.8	3.2	3.9
16	16.1	13.5	14.9	---	---	---	6.4	4.5	5.2	3.9	2.1	2.8
17	16.0	13.3	14.7	13.0	10.2	11.4	7.6	6.4	7.0	3.8	1.1	2.4
18	16.4	14.8	15.5	14.3	12.7	13.5	---	---	---	5.2	3.8	4.5
19	15.2	12.6	14.1	15.8	14.3	15.2	5.4	4.7	5.0	5.0	3.1	3.9
20	15.5	12.9	14.3	14.8	12.1	13.3	4.7	3.2	4.2	3.1	0.8	1.8
21	16.4	13.9	15.2	12.2	9.7	11.2	3.3	2.0	2.8	1.5	0.0	1.0
22	16.4	14.8	15.7	11.5	9.4	10.7	4.2	2.3	3.2	3.2	0.2	1.7
23	14.8	12.0	12.9	11.5	9.3	10.6	6.5	3.4	4.6	3.0	1.4	2.2
24	12.2	9.8	11.1	12.2	9.6	11.0	8.9	6.5	7.8	4.0	1.4	2.7
25	12.4	10.3	11.4	11.4	8.1	9.5	7.5	4.6	6.0	3.7	0.1	1.5
26	14.3	12.4	13.4	8.1	6.3	7.4	4.6	2.9	3.7	0.1	0.0	0.1
27	15.7	14.3	15.0	9.5	6.9	8.1	4.2	1.9	3.1	0.2	0.1	0.1
28	15.2	12.7	13.9	12.4	9.5	11.1	4.4	2.1	3.3	0.3	0.0	0.1
29	14.2	12.2	13.1	10.7	7.1	8.5	5.7	2.6	4.1	0.5	0.0	0.2
30	13.8	11.3	12.6	7.3	5.2	6.4	7.9	5.7	6.8	2.0	0.1	0.9
31	14.5	11.4	13.1	---	---	---	6.4	4.2	5.3	1.9	0.0	1.0
MONTH	19.7	9.8	15.1	---	---	---	---	---	---	12.8	0.0	3.2

02077200 HYCO CREEK NEAR LEASBURG, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.5	0.0	0.8	9.4	5.5	7.3	13.4	10.8	12.2	19.5	18.2	18.9
2	2.5	0.0	1.1	11.5	8.8	10.3	12.7	10.9	11.8	21.6	19.0	20.1
3	3.4	1.2	2.5	14.3	10.5	12.3	12.2	9.3	10.8	20.4	15.6	17.9
4	3.9	1.8	2.8	16.8	12.5	14.6	13.4	10.2	11.6	16.6	13.1	14.9
5	3.9	2.5	3.2	16.9	14.4	15.7	14.3	9.4	11.5	19.0	14.4	16.4
6	3.9	3.4	3.5	17.0	15.3	16.2	14.8	8.5	11.8	20.9	15.9	18.4
7	5.8	3.9	4.7	16.0	12.6	14.5	17.5	11.0	14.2	22.9	18.0	20.5
8	5.5	3.6	4.4	14.1	10.7	12.1	18.7	14.1	16.5	22.0	19.6	20.9
9	4.3	2.9	3.5	10.7	8.3	9.7	19.6	14.8	17.3	23.3	19.2	21.2
10	5.4	3.5	4.3	10.7	8.0	9.4	17.9	14.1	15.6	24.1	20.4	22.3
11	6.1	4.7	5.4	11.0	6.0	8.7	15.9	14.2	15.0	24.1	20.4	22.3
12	5.5	4.7	5.2	12.1	7.2	9.8	14.2	11.0	12.1	23.8	20.7	22.3
13	6.4	3.5	4.9	11.6	7.5	9.7	12.3	10.7	11.3	24.1	20.8	22.4
14	6.0	5.2	5.6	12.5	7.7	10.2	12.4	11.2	11.8	24.6	21.0	22.7
15	5.7	3.5	4.9	13.3	11.2	12.3	14.1	9.6	11.8	24.3	21.1	22.6
16	4.1	2.2	3.1	13.1	11.2	12.4	16.5	11.7	14.2	23.2	20.9	22.1
17	2.6	1.9	2.2	11.2	9.5	10.6	18.7	13.7	16.1	23.0	21.3	22.2
18	4.3	0.6	2.4	9.5	7.6	8.6	21.0	15.7	18.2	23.7	20.6	22.2
19	6.2	2.4	4.2	12.9	8.0	10.3	22.5	17.5	19.9	23.5	21.4	22.4
20	8.3	4.4	6.3	13.9	8.3	11.4	23.1	18.2	20.7	23.8	20.7	22.2
21	11.2	7.8	9.3	15.7	12.3	13.8	22.8	18.8	21.0	25.8	21.7	23.5
22	9.8	7.0	8.4	12.3	8.8	10.3	23.1	18.6	20.9	26.5	22.7	24.5
23	8.1	5.7	7.1	10.6	5.5	8.3	23.4	18.8	21.2	26.4	24.0	25.1
24	8.9	6.8	7.8	11.3	6.7	9.2	23.1	20.1	21.7	26.7	23.5	25.0
25	9.0	6.4	7.8	15.2	9.5	12.3	23.2	20.0	21.6	26.9	23.5	25.1
26	7.3	4.5	5.5	17.4	12.0	14.8	22.5	19.2	20.7	26.2	24.1	25.1
27	4.9	1.8	3.4	18.3	14.4	16.5	19.2	16.8	18.0	25.2	22.9	24.0
28	6.5	2.0	4.2	18.0	16.0	17.0	18.0	13.5	16.0	24.2	23.0	23.6
29	7.4	3.5	5.5	17.7	13.1	15.5	19.0	14.2	16.7	24.5	21.2	22.8
30	---	---	---	15.8	12.4	13.4	19.6	16.1	17.9	23.1	21.8	22.3
31	---	---	---	12.5	11.7	12.2	---	---	---	24.3	21.9	22.9
MONTH	11.2	0.0	4.6	18.3	5.5	11.9	23.4	8.5	16.0	26.9	13.1	21.9
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.8	21.3	22.6	25.5	23.0	24.1	27.6	24.9	26.1	24.5	23.3	23.9
2	24.2	20.2	22.2	25.8	23.4	24.6	26.5	25.3	25.9	24.1	22.5	23.4
3	24.5	20.9	22.5	25.0	23.5	24.3	27.0	24.9	25.7	23.2	21.3	22.3
4	23.1	18.8	20.9	26.6	23.6	24.9	27.7	24.2	25.8	23.0	21.3	22.2
5	21.3	19.3	20.2	28.1	24.4	26.0	26.2	24.0	25.3	23.6	21.1	22.3
6	21.9	19.8	20.8	28.2	24.5	26.3	24.3	21.9	23.1	23.4	22.7	23.0
7	22.9	20.2	21.5	28.4	25.0	26.6	22.5	19.1	20.9	23.2	22.7	22.9
8	22.8	21.4	22.1	27.2	24.0	25.6	22.8	19.1	20.9	23.4	22.6	22.9
9	25.3	21.4	23.1	27.4	23.5	25.4	23.3	19.7	21.5	23.5	23.2	23.3
10	26.1	22.9	24.4	27.4	24.2	25.5	24.1	20.9	22.4	23.2	21.5	22.3
11	27.1	23.6	25.2	27.2	23.9	25.4	24.3	21.8	22.9	23.0	21.5	22.2
12	25.6	22.6	23.7	26.9	24.5	25.7	23.1	22.1	22.6	22.8	21.1	21.9
13	22.6	21.2	22.0	27.8	24.8	26.1	23.6	22.0	22.7	22.6	20.5	21.7
14	24.3	21.9	22.9	28.2	24.9	26.4	22.9	20.4	21.4	22.3	21.2	21.8
15	24.6	23.3	23.9	26.9	24.0	25.3	20.4	20.0	20.2	21.9	20.8	21.3
16	25.8	23.7	24.6	25.2	21.8	23.5	22.9	20.1	21.3	21.8	20.6	21.2
17	27.8	24.8	26.2	24.0	21.8	23.0	23.6	21.0	22.3	23.3	21.7	22.4
18	28.5	25.3	26.8	24.0	22.3	22.9	23.6	21.5	22.5	22.8	20.6	21.5
19	27.4	25.1	26.3	25.0	21.7	23.2	25.6	22.6	23.9	20.6	18.6	19.4
20	25.8	23.4	24.5	25.7	22.6	24.1	26.2	23.5	24.9	18.7	16.6	17.7
21	23.7	21.4	22.3	26.0	22.5	24.2	26.5	24.4	25.2	18.4	15.5	17.1
22	25.2	21.6	23.2	25.3	23.0	24.2	25.4	23.4	24.3	19.5	16.4	18.0
23	25.5	23.3	24.4	26.5	23.8	24.9	24.7	21.7	23.2	20.6	17.9	19.2
24	25.5	23.4	24.4	25.3	23.9	24.5	24.7	21.5	23.0	20.9	18.6	19.7
25	25.2	23.9	24.6	24.4	23.1	23.4	23.9	21.1	22.5	20.1	17.6	19.0
26	25.2	23.4	24.2	24.9	22.8	23.7	24.3	21.1	22.6	20.2	17.5	18.9
27	24.2	22.2	23.0	25.7	23.6	24.6	24.7	21.3	22.9	19.6	18.9	19.2
28	23.2	22.2	22.7	25.7	23.8	24.7	24.9	21.9	23.4	21.1	19.6	20.4
29	25.0	21.5	23.2	25.5	24.1	24.8	24.0	22.4	23.2	21.2	19.5	20.4
30	24.9	22.4	23.7	26.4	23.7	24.9	23.4	22.3	22.9	21.0	19.4	20.2
31	---	---	---	26.7	24.0	25.4	24.0	22.5	23.1	---	---	---
MONTH	28.5	18.8	23.4	28.4	21.7	24.8	27.7	19.1	23.2	24.5	15.5	21.1

02077280 HYCO LAKE AT DAM NEAR ROXBORO, NC

LOCATION.--Lat 36°30'42", long 79°02'49", Person County, Hydrologic Unit 03010104, at spillway, off dam on Hyco River, 4.5 mi above Ghents Creek and 8 mi northwest of Roxboro.

DRAINAGE AREA.--189 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 399.79 ft above NGVD of 1929. Satellite telemetry at station.

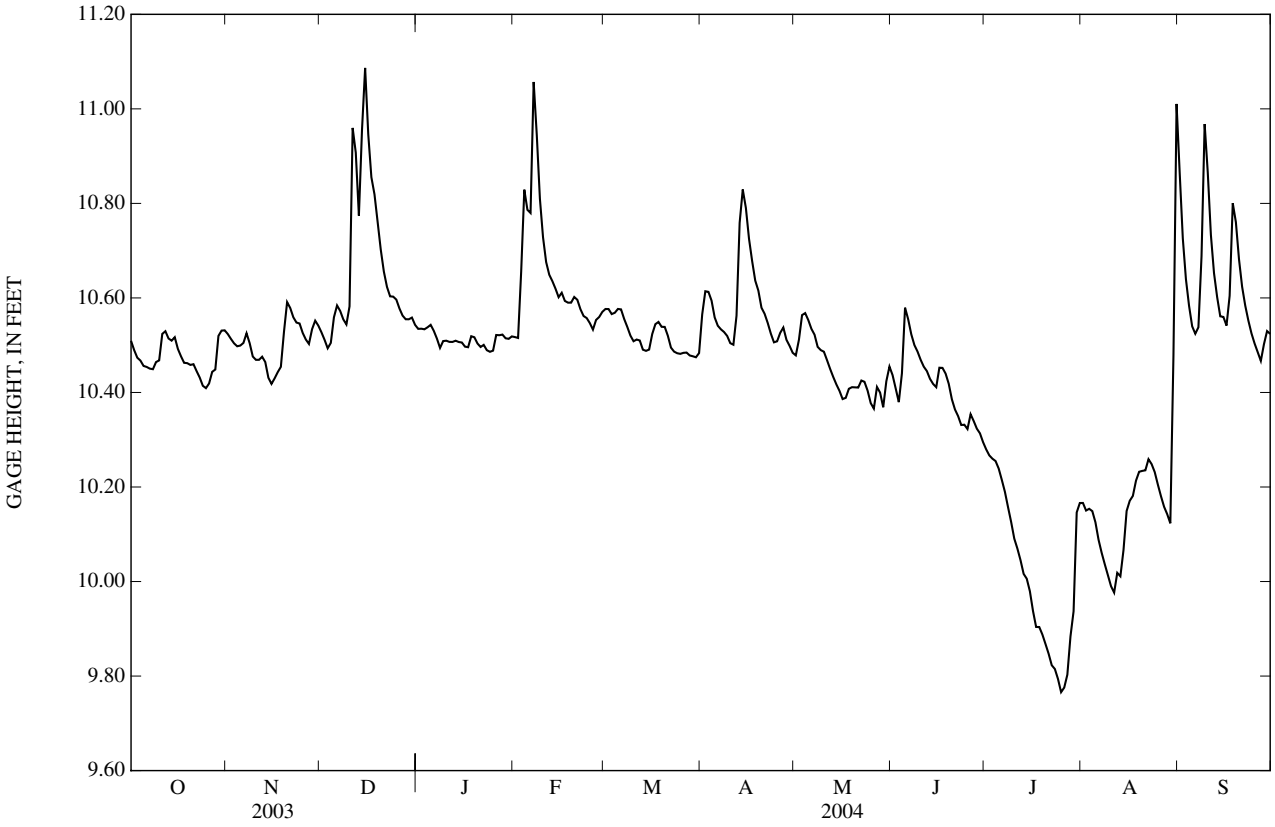
EXTREMES FOR PERIOD OF RECORD.--Maximum, 13.68 ft, Sept. 6, 1996; minimum, 7.54, Jan. 2,6, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum, 11.13 ft, Dec. 15; minimum, 9.75 ft, July 23.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.51	10.52	10.53	10.53	10.52	10.58	10.57	10.48	10.44	10.28	10.17	10.86
2	10.49	10.51	10.51	10.53	10.52	10.58	10.61	10.51	10.41	10.27	10.15	10.73
3	10.47	10.50	10.49	10.53	10.66	10.57	10.61	10.56	10.38	10.26	10.15	10.64
4	10.47	10.50	10.50	10.54	10.83	10.57	10.59	10.57	10.44	10.25	10.15	10.58
5	10.46	10.50	10.56	10.54	10.79	10.58	10.56	10.55	10.58	10.24	10.13	10.54
6	10.45	10.50	10.58	10.53	10.78	10.58	10.54	10.53	10.55	10.22	10.09	10.52
7	10.45	10.53	10.57	10.51	11.06	10.56	10.53	10.52	10.52	10.19	10.06	10.54
8	10.45	10.50	10.55	10.49	10.94	10.54	10.53	10.50	10.50	10.16	10.04	10.69
9	10.46	10.48	10.54	10.51	10.81	10.52	10.52	10.49	10.49	10.13	10.01	10.97
10	10.47	10.47	10.58	10.51	10.73	10.51	10.50	10.49	10.47	10.09	9.99	10.87
11	10.52	10.47	10.96	10.51	10.68	10.51	10.50	10.47	10.45	10.07	9.98	10.73
12	10.53	10.48	10.91	10.51	10.65	10.51	10.56	10.45	10.45	10.05	10.02	10.65
13	10.51	10.46	10.77	10.51	10.64	10.49	10.76	10.43	10.43	10.02	10.01	10.60
14	10.51	10.43	10.96	10.51	10.62	10.49	10.83	10.42	10.42	10.01	10.07	10.56
15	10.52	10.42	11.09	10.51	10.60	10.49	10.79	10.40	10.41	9.98	10.15	10.56
16	10.49	10.43	10.95	10.50	10.61	10.52	10.73	10.39	10.45	9.94	10.17	10.54
17	10.48	10.44	10.86	10.50	10.59	10.54	10.68	10.39	10.45	9.90	10.18	10.60
18	10.46	10.45	10.82	10.52	10.59	10.55	10.64	10.41	10.44	9.90	10.21	10.80
19	10.46	10.53	10.76	10.52	10.59	10.54	10.62	10.41	10.42	9.89	10.23	10.76
20	10.46	10.59	10.70	10.50	10.60	10.54	10.58	10.41	10.39	9.87	10.23	10.68
21	10.46	10.58	10.66	10.50	10.60	10.52	10.57	10.41	10.36	9.85	10.24	10.62
22	10.45	10.56	10.62	10.50	10.58	10.49	10.55	10.43	10.35	9.82	10.26	10.58
23	10.43	10.55	10.60	10.49	10.56	10.49	10.52	10.42	10.33	9.81	10.25	10.55
24	10.41	10.55	10.60	10.49	10.56	10.48	10.51	10.40	10.33	9.79	10.23	10.53
25	10.41	10.53	10.60	10.49	10.55	10.48	10.51	10.38	10.32	9.77	10.21	10.50
26	10.42	10.51	10.58	10.52	10.53	10.48	10.53	10.37	10.35	9.78	10.18	10.49
27	10.44	10.50	10.56	10.52	10.55	10.48	10.54	10.41	10.34	9.80	10.16	10.47
28	10.45	10.53	10.55	10.52	10.56	10.48	10.51	10.40	10.32	9.88	10.14	10.50
29	10.52	10.55	10.55	10.51	10.57	10.48	10.50	10.37	10.31	9.94	10.12	10.53
30	10.53	10.54	10.56	10.51	---	10.47	10.48	10.42	10.29	10.15	10.48	10.52
31	10.53	---	10.54	10.52	---	10.48	---	10.45	---	10.17	11.01	---
MEAN	10.47	10.50	10.66	10.51	10.65	10.52	10.58	10.45	10.41	10.02	10.18	10.62
MAX	10.53	10.59	11.09	10.54	11.06	10.58	10.83	10.57	10.58	10.28	11.01	10.97
MIN	10.41	10.42	10.49	10.49	10.52	10.47	10.48	10.37	10.29	9.77	9.98	10.47

02077280 HYCO LAKE AT DAM NEAR ROXBORO, NC—Continued



0207730290 AFTERBAY RESERVIOR AT DAM NEAR McGEHEES MILL, NC

LOCATION.--Lat 36°31'21", long 78°59'51", Person County, Hydrologic Unit 03010104, on Afterbay Reservoir dam on Hyco River, 1.2 mi upstream from Ghent Creek, and 1.8 mi northeast of McGehees Mill.

DRAINAGE AREA.--202 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Satellite telemetry at station.

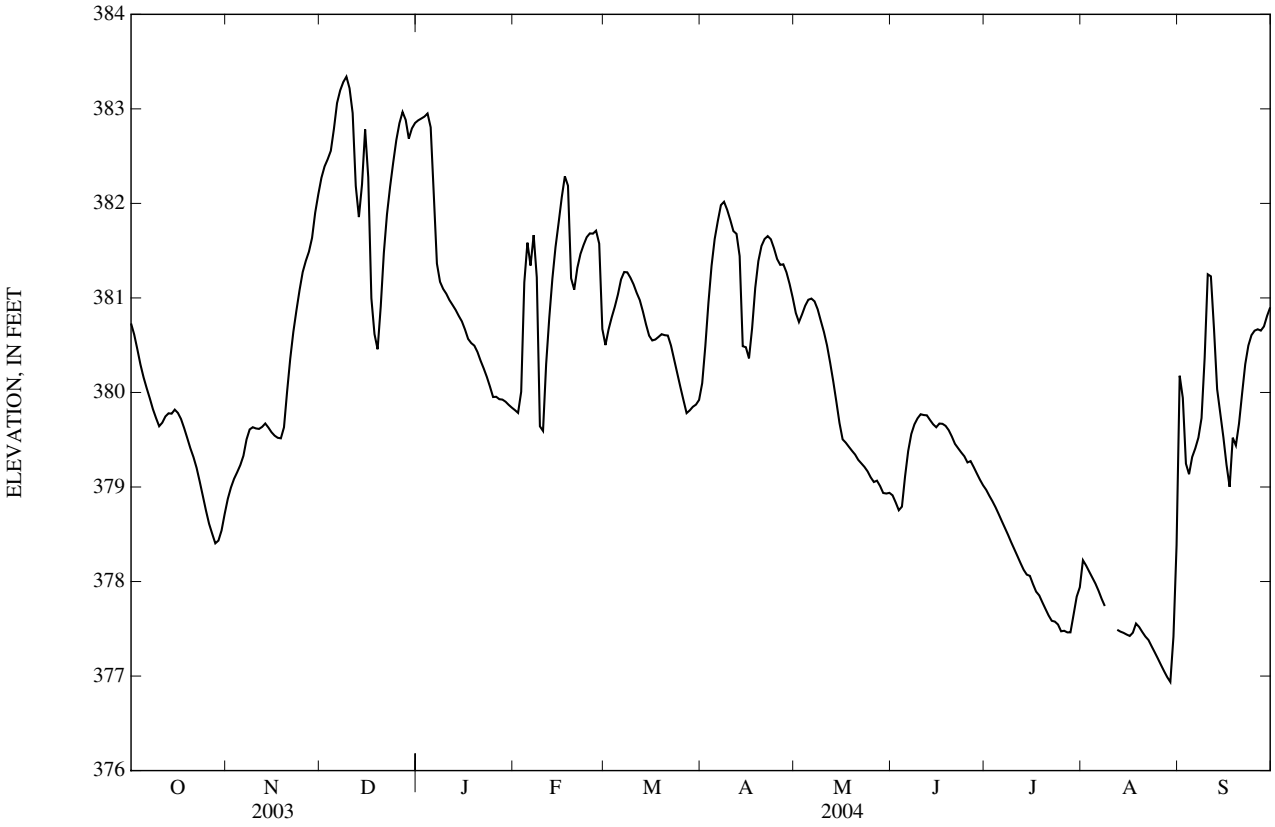
EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 391.11 ft, Sept. 7, 1996; minimum elevation not determined.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 383.39 ft, Dec. 10; minimum elevation, 376.91, Aug. 29.

ELEVATION, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	380.73	378.87	382.27	382.88	379.81	380.50	380.10	380.84	378.91	378.97	378.23	380.18
2	380.61	378.99	382.39	382.90	379.78	380.67	380.49	380.74	378.84	378.91	378.17	379.94
3	380.46	379.09	382.47	382.92	380.01	380.79	380.95	380.83	378.75	378.85	378.11	379.25
4	380.30	379.16	382.56	382.95	381.16	380.91	381.34	380.92	378.79	378.79	378.04	379.14
5	380.16	379.23	382.79	382.80	381.58	381.04	381.62	380.98	379.11	378.71	377.98	379.32
6	380.05	379.33	383.06	382.09	381.34	381.20	381.81	380.99	379.38	378.64	377.90	379.41
7	379.94	379.50	383.19	381.36	381.67	381.27	381.98	380.96	379.56	378.57	377.82	379.52
8	379.82	379.61	383.28	381.17	381.22	381.27	382.02	380.88	379.66	378.49	377.74	379.73
9	379.73	379.63	383.34	381.10	379.64	381.21	381.93	380.76	379.73	378.42	---	380.37
10	379.64	379.62	383.22	381.04	379.59	381.14	381.83	380.64	379.77	378.34	---	381.25
11	379.68	379.61	382.96	380.98	380.30	381.05	381.71	380.50	379.76	378.27	---	381.23
12	379.75	379.64	382.18	380.93	380.79	380.98	381.68	380.31	379.76	378.20	377.49	380.67
13	379.78	379.67	381.86	380.87	381.20	380.86	381.44	380.12	379.71	378.12	377.47	380.04
14	379.78	379.63	382.20	380.81	381.54	380.72	380.49	379.90	379.66	378.07	377.46	379.78
15	379.82	379.58	382.78	380.75	381.80	380.60	380.48	379.68	379.63	378.06	377.44	379.53
16	379.78	379.54	382.28	380.67	382.06	380.55	380.36	379.50	379.67	377.97	377.42	379.23
17	379.72	379.52	381.00	380.57	382.29	380.56	380.68	379.47	379.67	377.89	377.46	379.00
18	379.62	379.51	380.62	380.52	382.19	380.59	381.11	379.43	379.65	377.85	377.56	379.52
19	379.52	379.63	380.46	380.50	381.21	380.62	381.39	379.38	379.60	377.78	377.52	379.44
20	379.41	380.01	380.91	380.43	381.09	380.61	381.55	379.34	379.53	377.71	377.47	379.67
21	379.32	380.36	381.48	380.34	381.32	380.60	381.62	379.29	379.46	377.64	377.42	379.99
22	379.20	380.64	381.88	380.25	381.46	380.50	381.65	379.25	379.41	377.58	377.38	380.30
23	379.06	380.87	382.18	380.16	381.56	380.35	381.62	379.21	379.37	377.58	377.32	380.50
24	378.91	381.08	382.43	380.06	381.64	380.21	381.53	379.17	379.32	377.55	377.25	380.61
25	378.75	381.27	382.67	379.95	381.68	380.06	381.41	379.10	379.26	377.47	377.19	380.65
26	378.61	381.39	382.85	379.95	381.68	379.92	381.35	379.05	379.27	377.48	377.12	380.67
27	378.51	381.49	382.97	379.93	381.71	379.78	381.36	379.07	379.21	377.46	377.05	380.65
28	378.40	381.64	382.88	379.92	381.57	379.81	381.27	379.01	379.14	377.46	376.99	380.70
29	378.43	381.90	382.69	379.90	380.67	379.85	381.15	378.94	379.08	377.65	376.94	380.81
30	378.54	382.10	382.79	379.87	---	379.87	381.00	378.93	379.02	377.84	377.42	380.90
31	378.72	---	382.85	379.84	---	379.92	---	378.94	---	377.94	378.38	---
MEAN	379.51	380.07	382.37	380.92	381.16	380.58	381.30	379.88	379.39	378.07	---	380.07
MAX	380.73	382.10	383.34	382.95	382.29	381.27	382.02	380.99	379.77	378.97	---	381.25
MIN	378.40	378.87	380.46	379.84	379.59	379.78	380.10	378.93	378.75	377.46	---	379.00

0207730290 AFTERBAY RESERVIOR AT DAM NEAR McGEHEES MILL, NC—Continued



02077303 HYCO RIVER BELOW AFTERBAY DAM NEAR MCGEHEES MILL, NC

LOCATION.--Lat 36°31'21", long 78°59'51", Person County, Hydrologic Unit 03010104, on left bank 200 ft downstream from Afterbay Reservoir dam of Carolina Power and Light Company, 1.2 mi upstream from Ghent Creek, and 1.8 mi east-northeast of McGehees Mill.

DRAINAGE AREA.--202 mi^2.

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 342.98 ft above NGVD of 1929 (levels by Carolina Power and Light Company). From August 1964 to September 1973, records published as "Hyco River at McGehees Mill, NC" at site 2.8 mi upstream, at datum 349.78 ft. Water-temperature recorder operated at site 600 ft downstream on right bank from June 1974 to Sept. 1995. Satellite telemetry at station.

REMARKS.--Records poor. Flow regulated by Roxboro Steam-Electric Generating Plant Afterbay Reservoir.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	19	19	78	74	80	23	88	17	17	e22	231
2	71	20	19	78	74	81	23	86	18	18	e22	278
3	71	21	20	78	74	81	23	79	17	17	18	211
4	70	21	19	80	130	81	25	76	16	20	18	19
5	55	20	19	176	342	82	25	77	17	19	16	18
6	46	20	41	216	367	82	24	76	18	18	16	18
7	46	21	78	150	853	85	25	76	18	19	16	18
8	46	21	78	78	940	87	70	74	18	19	15	115
9	45	22	76	78	766	88	91	75	18	19	15	247
10	45	22	288	78	79	88	91	75	18	18	15	249
11	45	21	945	79	80	88	90	74	17	18	15	238
12	46	20	856	77	81	87	88	73	17	18	14	238
13	46	19	324	77	81	87	582	73	16	18	15	146
14	47	19	541	77	82	87	481	73	16	18	14	108
15	46	18	1,030	76	82	86	271	72	17	17	14	106
16	46	18	957	77	84	86	222	42	17	17	15	106
17	45	18	818	77	84	e85	88	18	17	17	16	107
18	45	18	380	77	235	e85	90	18	18	16	16	215
19	45	18	294	76	249	e85	92	18	18	16	16	208
20	44	18	74	76	82	86	92	18	17	17	16	95
21	44	19	75	76	82	86	93	18	18	17	16	18
22	43	19	76	76	83	83	93	18	18	17	16	e22
23	43	19	76	76	83	83	93	18	18	17	16	e20
24	43	20	76	75	83	84	91	18	17	17	17	e21
25	43	20	77	75	83	86	92	18	17	15	17	e15
26	42	20	77	75	83	86	91	18	17	16	16	e18
27	42	20	78	75	83	87	91	17	16	16	16	e14
28	42	19	166	74	195	e44	88	17	16	16	16	19
29	42	19	78	74	220	22	89	17	16	e19	16	19
30	26	19	78	74	---	22	89	16	17	e24	555	19
31	19	---	79	74	---	22	---	17	---	e22	691	---
TOTAL	1,451	588	7,812	2,683	5,834	2,402	3,426	1,453	515	552	1,716	3,156
MEAN	46.8	19.6	252	86.5	201	77.5	114	46.9	17.2	17.8	55.4	105
MAX	72	22	1,030	216	940	88	582	88	18	24	691	278
MIN	19	18	19	74	74	22	23	16	16	15	14	14

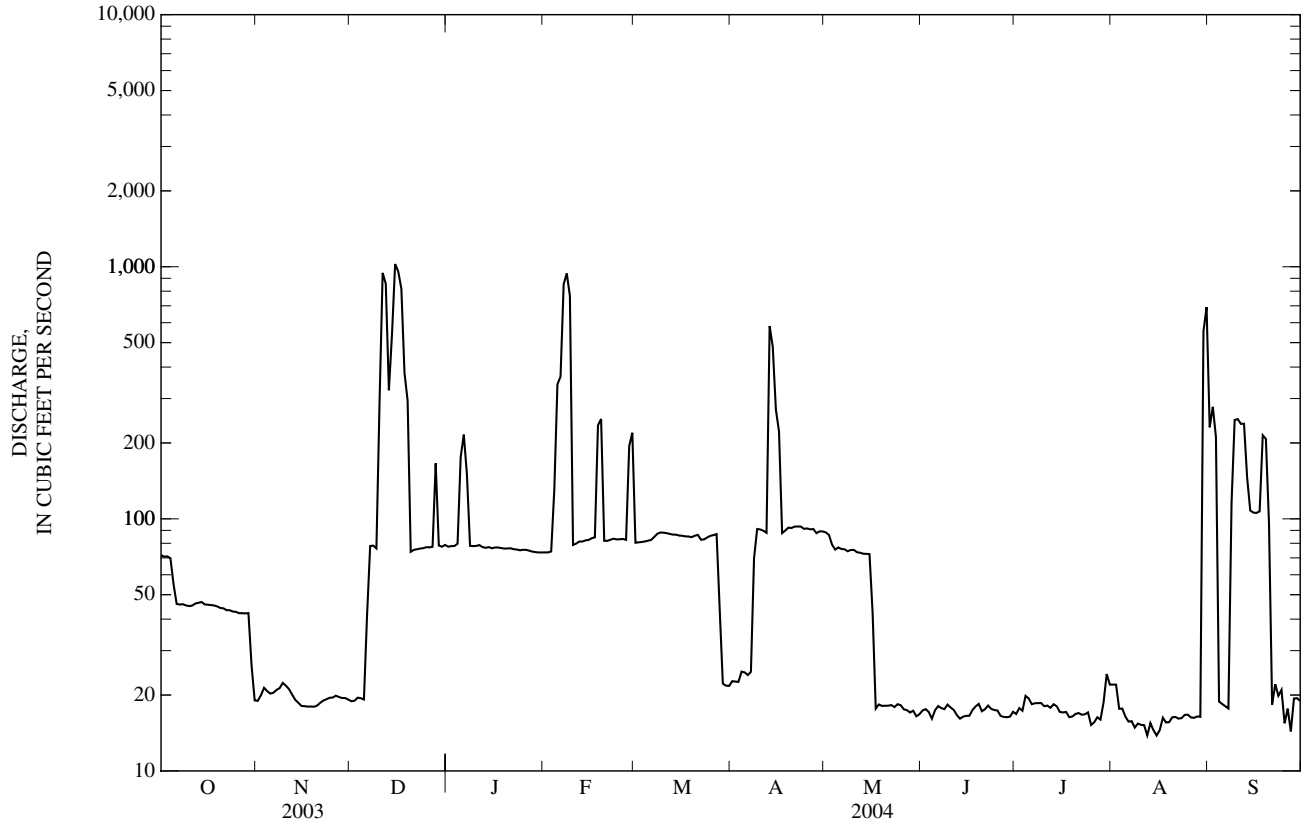
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY)

MEAN	56.5	64.8	121	334	311	408	248	125	87.9	92.7	70.4	124
MAX	351	398	432	1,201	926	1,165	712	864	528	1,058	294	675
(WY)	(1996)	(2003)	(2003)	(1978)	(1979)	(1993)	(2003)	(1978)	(2003)	(1975)	(1982)	(1974)
MIN	3.47	2.40	2.19	2.76	4.38	6.02	5.21	4.22	3.96	6.14	1.08	1.55
(WY)	(1999)	(1998)	(1998)	(2001)	(2002)	(2002)	(2002)	(2002)	(1974)	(2002)	(1999)	(1977)

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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1974 - 2004	
ANNUAL TOTAL	124,241		31,588			
ANNUAL MEAN	340		86.3		170	
HIGHEST ANNUAL MEAN					394	2003
LOWEST ANNUAL MEAN					5.11	2002
HIGHEST DAILY MEAN	5,410	Mar 21	1,030	Dec 15	9,280	Jul 14, 1975
LOWEST DAILY MEAN	18	Nov 15	14	Aug 12	0.27	Nov 2, 1997
ANNUAL SEVEN-DAY MINIMUM	18	Nov 14	15	Aug 9	0.45	Aug 3, 1999
MAXIMUM PEAK FLOW			1,710	Aug 30	11,300	Jul 14, 1975
MAXIMUM PEAK STAGE			12.10	Aug 30	24.40	Jul 14, 1975
INSTANTANEOUS LOW FLOW			6.8	Sep 8	0.00	Jun 26, 1980
10 PERCENT EXCEEDS	907		169		384	
50 PERCENT EXCEEDS	72		45		32	
90 PERCENT EXCEEDS	24		16		9.2	

e Estimated.



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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1981 to September 1983.
WATER TEMPERATURE: June 1974 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 197 microsiemens, Dec. 6, 1981; minimum, 89 microsiemens, May 16, 1983.
WATER TEMPERATURE: Maximum recorded, 33.5°C, July 20, 21, 22, 1977; minimum recorded, 1.0°C, Jan. 6, 2002.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 26.0°C, Sept. 3; minimum recorded, 3.9°C, Jan. 31, Feb. 1.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.3	21.8	22.0	17.7	14.8	15.9	13.3	12.5	12.9	8.9	8.4	8.6
2	21.8	21.0	21.5	17.7	15.1	16.0	12.7	11.9	12.3	9.2	8.7	8.9
3	21.0	20.3	20.7	17.5	15.3	16.1	12.1	11.5	11.9	9.5	9.0	9.3
4	21.1	20.0	20.6	17.3	15.5	16.4	11.9	10.0	11.2	10.3	9.5	10
5	20.6	19.6	20.3	17.6	16.4	17.0	11.6	9.5	10.7	10.7	10.1	10.5
6	20.6	19.6	20.0	18.6	16.8	17.5	12.0	9.9	11.1	10.6	9.9	10.3
7	20.5	19.8	20.1	17.4	16.6	17.1	9.9	9.4	9.6	9.9	8.9	9.4
8	20.3	19.7	20.1	16.7	15.4	16.3	9.4	9.1	9.2	8.9	8.6	8.8
9	20.4	20.0	20.2	15.4	14.5	15.0	9.3	8.9	9.1	8.7	8.3	8.6
10	20.1	19.7	20.0	15.3	14.0	14.7	9.3	9.0	9.1	8.3	7.5	8.0
11	19.8	19.1	19.6	15.4	14.1	14.9	9.3	9.1	9.2	7.6	7.3	7.5
12	20.4	19.7	20.0	16.5	15.3	16.0	9.1	8.9	9.0	7.8	7.3	7.6
13	20.3	19.7	19.9	16.3	13.9	15.1	9.1	8.8	9.0	7.9	7.3	7.6
14	20.1	19.6	19.9	14.1	13.4	13.7	8.8	8.5	8.7	7.7	7.2	7.4
15	19.7	18.7	19.2	14.2	13.6	13.9	9.3	8.6	8.9	7.5	7.2	7.4
16	19.3	18.4	18.8	14.8	14.2	14.5	10.1	9.3	9.6	7.2	6.9	7.0
17	19.3	18.4	18.8	15.5	14.5	15.0	10.6	10.1	10.3	7.1	6.7	6.9
18	18.9	18.1	18.6	15.4	14.7	15.2	10.3	10.0	10.1	7.4	7.0	7.2
19	18.9	17.8	18.4	16.4	14.8	15.6	10.0	9.6	9.8	7.2	6.7	6.9
20	18.8	17.9	18.3	14.8	13.9	14.4	9.6	8.9	9.3	6.7	6.3	6.4
21	19.1	18.3	18.7	15.0	13.5	14.2	9.1	8.7	8.9	6.4	6.0	6.2
22	18.6	17.7	18.2	15.0	13.5	14.3	9.0	8.7	8.9	6.6	6.0	6.3
23	17.8	16.9	17.4	15.1	13.6	14.3	9.3	8.7	9.0	6.3	5.9	6.0
24	17.2	16.4	17.0	15.2	13.7	14.5	9.4	9.1	9.3	6.3	5.8	6.1
25	16.9	16.3	16.7	14.2	13.1	13.6	9.1	8.7	8.9	6.1	5.2	5.6
26	17.3	16.8	17.1	14.0	12.6	13.3	8.8	8.5	8.7	5.2	4.7	4.9
27	17.5	16.8	17.2	14.4	13.0	13.8	8.6	8.3	8.5	4.7	4.5	4.6
28	16.8	15.4	16.4	15.2	12.9	14.4	8.6	8.2	8.4	4.5	4.1	4.3
29	16.8	14.7	16.0	12.9	12.1	12.5	8.8	8.1	8.5	4.5	4.0	4.3
30	17.3	14.4	15.8	13.2	12.1	12.7	9.0	8.7	8.9	4.8	4.2	4.5
31	17.4	14.8	15.8	---	---	---	8.7	8.4	8.6	4.4	3.9	4.1
MONTH	22.3	14.4	18.8	18.6	12.1	14.9	13.3	8.1	9.6	10.7	3.9	7.1

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

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.2	3.9	4.1	9.2	8.1	8.7	13.6	12.4	13.0	17.4	16.9	17.2
2	4.5	4.0	4.3	9.6	9.0	9.4	13.2	12.5	12.9	18.8	17.2	18.1
3	4.8	4.2	4.6	9.9	9.4	9.6	13.4	12.3	12.9	18.6	16.8	17.4
4	4.6	4.4	4.5	10.8	9.7	10.2	13.4	12.5	12.9	17.9	17.3	17.6
5	4.5	4.3	4.4	12.4	10.5	11.4	13.3	12.3	12.7	18.2	17.3	17.8
6	4.4	4.3	4.4	13.5	12.4	13.1	13.5	12.1	12.9	18.2	17.5	17.9
7	5.3	4.4	4.8	13.1	12.2	12.5	14.4	12.7	13.6	18.8	17.7	18.2
8	6.7	5.3	6.0	13.0	12.5	12.8	13.7	13.1	13.3	18.4	17.9	18.1
9	7.5	6.7	7.1	12.5	11.9	12.2	13.7	12.9	13.2	19.1	18.2	18.6
10	8.2	7.5	7.8	12.1	11.5	11.9	13.0	12.9	13.0	19.7	18.5	19.2
11	8.2	7.9	8.1	12.2	11.2	11.7	13.2	12.8	13.0	20.2	18.6	19.5
12	8.2	8.0	8.1	12.3	11.6	12.0	12.8	12.6	12.7	20.0	18.6	19.4
13	8.5	7.9	8.2	12.0	11.5	11.8	13.9	12.8	13.3	20.4	19.2	19.8
14	8.4	8.3	8.3	11.8	11.4	11.6	13.8	13.6	13.7	20.9	19.1	20.0
15	8.3	7.8	8.1	12.2	11.8	12.1	14.6	13.5	14.0	21.3	19.7	20.6
16	7.8	7.4	7.6	12.0	11.8	11.9	14.7	13.9	14.2	20.4	18.1	19.6
17	7.4	7.3	7.4	11.8	11.4	11.5	15.3	13.8	14.4	18.8	17.6	18.2
18	7.6	7.1	7.3	11.6	11.3	11.5	15.2	14.5	14.9	19.6	17.5	18.6
19	7.9	7.2	7.6	12.0	11.4	11.7	17.1	14.6	15.8	20.0	17.9	18.8
20	8.2	7.4	7.8	12.3	11.4	11.9	16.5	15.0	15.4	19.8	18.1	18.9
21	8.8	8.1	8.5	12.6	12.2	12.4	16.7	15.0	15.6	20.4	18.2	19.3
22	8.9	8.3	8.6	12.2	11.8	12.0	17.4	15.5	16.4	20.5	18.4	19.5
23	8.7	8.2	8.4	12.1	11.5	11.8	16.6	15.9	16.3	20.6	18.9	19.7
24	8.9	8.4	8.6	12.1	11.6	11.8	16.0	15.6	15.8	21.1	19.1	20.1
25	8.8	8.4	8.5	12.6	11.9	12.3	17.1	16.0	16.5	21.0	19.2	20.1
26	8.4	8.1	8.2	13.3	12.5	12.9	18.2	16.5	17.3	21.3	19.2	20.3
27	8.1	7.8	7.9	14.2	13.3	13.7	18.7	16.5	17.4	20.8	19.9	20.4
28	8.2	7.6	7.9	13.7	12.9	13.4	17.5	16.2	16.7	20.7	19.5	20.1
29	8.6	7.7	8.2	13.9	12.5	13.2	17.6	16.2	17.0	20.5	19.3	19.9
30	---	---	---	12.9	12.4	12.7	17.8	16.9	17.3	20.0	19.1	19.6
31	---	---	---	13.1	12.6	12.8	---	---	---	20.9	19.5	20.2
MONTH	8.9	3.9	7.1	14.2	8.1	11.9	18.7	12.1	14.6	21.3	16.8	19.1
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.1	19.5	20.4	22.2	20.9	21.6	22.0	20.5	21.2	25.5	21.3	23.9
2	21.6	19.3	20.6	22.7	21.1	21.9	21.5	20.7	21.2	25.9	25.5	25.8
3	21.2	19.8	20.5	22.3	21.3	21.9	22.0	20.7	21.3	26.0	22.7	25.5
4	20.3	19.1	19.6	22.8	21.2	22.0	22.5	20.7	21.6	22.7	21.1	21.8
5	20.0	19.0	19.5	23.5	21.7	22.7	21.9	21.1	21.4	22.0	20.7	21.4
6	20.2	18.9	19.7	23.3	21.4	22.6	21.4	20.4	20.9	21.8	21.2	21.5
7	20.7	19.3	20.1	23.4	21.9	22.8	21.5	20.0	20.8	21.6	21.2	21.4
8	20.6	19.6	20.1	23.3	21.8	22.7	21.5	20.2	20.9	24.8	21.1	22.9
9	21.5	19.7	20.7	23.4	21.9	22.8	21.8	20.3	21.1	25.6	24.8	25.3
10	21.9	20.3	21.2	23.6	22.1	23.0	22.2	21.2	21.6	25.5	25.3	25.4
11	21.6	20.2	20.9	23.7	22.2	23.0	23.3	21.3	22.2	25.7	25.5	25.6
12	21.0	19.9	20.3	23.8	22.6	23.3	23.0	22.3	22.6	25.9	25.6	25.7
13	20.4	19.4	19.9	24.4	22.9	23.7	22.9	22.0	22.5	25.8	25.3	25.6
14	21.1	19.8	20.4	24.3	23.0	23.7	22.0	21.0	21.4	25.3	25.1	25.2
15	21.5	20.3	20.9	24.0	22.7	23.5	21.1	20.6	20.9	25.1	24.7	24.9
16	21.7	20.9	21.3	23.6	22.3	23.1	22.5	21.0	21.6	24.9	24.8	24.9
17	22.3	20.5	21.4	23.2	22.4	22.9	22.3	21.0	21.5	24.9	24.3	24.7
18	22.4	20.4	21.4	22.8	22.2	22.5	21.6	20.7	21.2	24.6	23.9	24.3
19	22.0	20.3	21.2	23.4	22.1	22.8	22.3	20.8	21.5	24.5	23.6	24.1
20	21.2	20.0	20.7	23.2	22.5	22.7	22.5	21.2	21.9	23.6	20.6	23.2
21	20.9	19.5	20.3	23.8	23.1	23.5	22.7	21.6	22.1	20.6	18.8	19.6
22	21.9	19.9	20.9	23.8	23.0	23.4	22.4	21.5	22.0	20.5	18.7	19.5
23	21.9	20.8	21.4	24.2	23.2	23.7	22.3	21.3	21.8	20.6	19.1	19.8
24	22.0	20.4	21.1	23.5	23.1	23.4	22.3	20.8	21.7	20.4	19.1	19.7
25	21.6	20.6	21.1	23.3	22.6	22.8	22.0	21.1	21.6	20.1	18.7	19.4
26	22.0	20.7	21.3	23.4	21.6	22.6	22.1	21.0	21.7	20.2	18.7	19.4
27	21.0	20.1	20.6	23.5	22.5	23.1	22.4	21.1	21.8	20.3	19.2	19.8
28	21.1	20.2	20.6	23.6	22.7	23.1	23.0	21.5	22.3	20.4	19.8	20.2
29	21.9	20.3	21.2	23.8	22.5	23.1	22.8	21.8	22.4	20.4	19.3	19.9
30	22.0	20.7	21.4	23.8	21.1	23.2	25.3	21.8	22.9	20.0	19.5	19.7
31	---	---	---	21.8	20.3	21.1	25.4	21.9	24.6	---	---	---
MONTH	22.4	18.9	20.7	24.4	20.3	22.8	25.4	20.0	21.7	26.0	18.7	22.7

02077670 MAYO CREEK NEAR BETHEL HILL, NC

LOCATION.--Lat 36°32'27", long 78°52'19" Person County, Hydrologic Unit 03010104, on right bank 0.1 mi upstream from Virginia state line, 0.3 mi downstream of Mayo Steam Electric Generating Plant dam, 2.9 mi northeast of Bethel Hill, and 4.8 mi downstream of Spoonwater Creek.

DRAINAGE AREA.--53.5 mi^2.

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

REVISED RECORDS.--WDR NC-81-1: Drainage area. WDR NC-02-1A: 2001.

GAGE.--Water-stage recorder. Datum of gage is 338.84 ft above NGVD of 1929 (levels by Carolina Power & Light Company). Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Mayo Steam Electric Generating Plant. Minimum discharge for period of record, no flow, occurred periodically in 1977, 1980, 1981, and 1982 as a result of regulation. Minimum discharge for current water year also occurred several days in July.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 4, 1974, reached a stage of 11.11 ft, from floodmarks; discharge, 4,300 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	30	30	42	19	28	36	24	5.4	2.7	35	467
2	59	29	27	40	18	28	46	28	4.0	2.7	40	340
3	53	27	24	38	36	27	45	49	3.1	2.7	40	249
4	47	26	24	37	54	27	42	52	17	2.7	39	188
5	41	26	31	37	55	27	38	49	35	2.8	33	147
6	38	29	32	34	59	29	34	44	33	e2.8	26	121
7	36	40	31	31	79	27	32	39	30	e2.8	21	103
8	34	39	29	27	81	25	30	34	27	e2.7	17	97
9	35	34	27	27	76	23	28	32	25	e2.7	14	85
10	34	31	37	26	71	21	26	29	21	e2.7	12	74
11	42	29	108	24	67	20	24	25	19	e2.8	9.3	65
12	42	28	111	23	64	19	34	22	16	e2.7	9.7	58
13	39	25	103	21	61	16	56	19	14	e2.7	8.8	52
14	38	20	157	20	58	16	67	16	13	e2.7	25	44
15	40	18	188	19	56	15	72	14	12	e2.8	47	45
16	35	17	172	17	56	19	70	13	14	e2.7	49	41
17	32	17	163	17	53	22	67	15	13	e2.7	52	41
18	28	17	156	19	50	23	63	14	11	e2.7	63	53
19	26	26	138	19	48	22	60	14	7.9	e2.7	58	47
20	24	36	120	18	46	22	55	12	5.6	e2.7	53	40
21	23	35	106	17	42	21	52	11	4.3	e2.7	47	35
22	20	34	94	16	39	19	47	e10	3.5	e2.8	44	31
23	18	32	84	14	36	17	41	e8.4	3.1	2.6	37	27
24	15	31	78	14	34	16	37	e7.5	3.0	2.6	31	24
25	14	28	72	14	32	15	37	4.9	2.8	2.6	25	20
26	14	26	66	19	29	15	36	4.5	3.3	2.7	21	17
27	16	24	61	19	30	14	36	8.2	2.9	2.7	18	16
28	17	28	58	19	30	13	31	6.9	2.8	2.7	15	19
29	31	35	55	18	29	12	28	4.9	2.7	4.1	12	19
30	32	33	52	18	---	12	25	6.4	2.7	26	262	17
31	31	---	47	19	---	12	---	7.0	---	28	600	---
TOTAL	1,021	850	2,481	723	1,408	622	1,295	623.7	357.1	134.0	1,763.8	2,582
MEAN	32.9	28.3	80.0	23.3	48.6	20.1	43.2	20.1	11.9	4.32	56.9	86.1
MAX	67	40	188	42	81	29	72	52	35	28	600	467
MIN	14	17	24	14	18	12	24	4.5	2.7	2.6	8.8	16

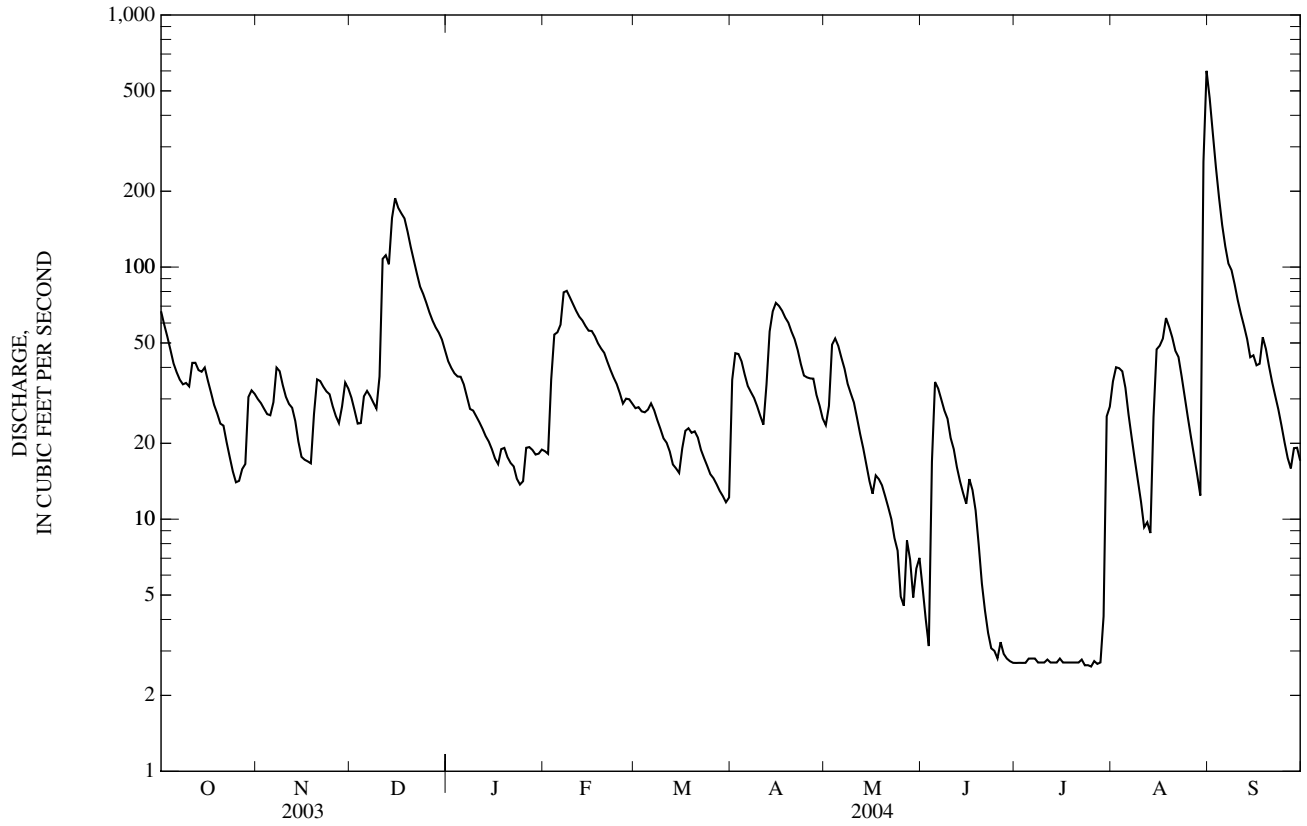
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

MEAN	12.1	16.3	25.1	60.1	68.8	98.6	76.2	41.9	24.8	18.7	14.6	29.5
MAX	62.2	76.0	86.8	254	301	260	267	210	162	118	68.4	350
(WY)	(1990)	(1980)	(2003)	(1978)	(1998)	(1998)	(2003)	(1978)	(2003)	(1995)	(2003)	(1996)
MIN	0.01	0.01	0.02	0.00	0.28	0.14	0.20	0.12	0.07	0.24	0.04	0.00
(WY)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1980)

02077670 MAYO CREEK NEAR BETHEL HILL, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1977 - 2004	
ANNUAL TOTAL	40,613		13,860.6			
ANNUAL MEAN	111		37.9		40.5	
HIGHEST ANNUAL MEAN					111	2003
LOWEST ANNUAL MEAN					0.11	1981
HIGHEST DAILY MEAN	945	Apr 11	600	Aug 31	2,260	Sep 7, 1996
LOWEST DAILY MEAN	11	Aug 30	2.6	Jul 23	0.00	Jul 31, 1977
ANNUAL SEVEN-DAY MINIMUM	14	Jan 23	2.7	Jul 19	0.00	Jul 31, 1977
MAXIMUM PEAK FLOW			669	Aug 30	3,950	Apr 26, 1978
MAXIMUM PEAK STAGE			6.57	Aug 30	10.83	Apr 26, 1978
INSTANTANEOUS LOW FLOW			2.6*	Jul 1	0.00*	Jul 31, 1977
10 PERCENT EXCEEDS	239		67		103	
50 PERCENT EXCEEDS	67		27		8.8	
90 PERCENT EXCEEDS	21		3.2		1.5	

* See REMARKS.
e Estimated.



02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC

LOCATION.--Lat 36°27'36", long 77°38'01", Halifax County, Hydrologic Unit 03010107, on right bank 1.2 mi downstream of bridge on State Highway 48 at Roanoke Rapids, 2.5 mi upstream from Chockoyotte Creek, 2.8 mi downstream of Roanoke Rapids dam, and 133.6 mi upstream from mouth in Albemarle Sound.

DRAINAGE AREA.--8,384 mi^2.

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

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

GAGE.--Water-stage recorder. Datum of gage is 43.84 ft above NGVD 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 upstream at different datum. Aug. 6, 1941, to Mar. 1, 1973, auxiliary water-stage recorder, 3.6 mi downstream of base gage. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated since August 1950 by Philpott Lake on Smith River, usable capacity, 6,325,000,000 ft^3; since September 1950 by John H. Kerr Reservoir, usable capacity, 101,247,000,000 ft^3; since June 1955 by Roanoke Rapids Lake (station 02080100); since September 1962 by Leesville Lake; since October 1962 by Lake Gaston (station 02079964); and since September 1963 by Smith Mountain Lake. Prior to regulation, maximum discharge: 261,000 ft^3/s, Aug. 18, 1940; gage height: 39.0 ft, from floodmarks; minimum discharge: about 250 ft^3/s, Dec. 16, 1955. Minimum discharge for current water year also occurred Mar. 28.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20,100	7,660	8,230	20,500	2,420	8,690	2,870	8,110	6,020	6,970	5,820	18,100
2	20,000	8,080	8,680	19,800	4,420	8,460	3,820	8,150	6,090	6,250	6,380	9,250
3	18,600	7,970	8,470	14,800	3,840	8,530	3,820	8,120	6,060	6,460	6,870	10,600
4	14,600	e8,380	8,380	14,500	3,790	8,570	3,860	8,090	6,120	6,480	6,510	9,880
5	14,700	e8,350	8,190	11,800	10,900	8,570	3,820	8,060	6,200	6,370	6,370	8,420
6	14,700	8,200	8,350	9,970	10,000	2,350	4,290	8,030	6,220	6,650	6,790	8,400
7	14,800	8,130	8,430	9,950	9,370	2,120	4,290	8,000	6,070	6,540	8,200	5,710
8	11,100	8,180	8,250	10,300	8,130	2,920	4,300	7,990	5,490	6,450	10,300	5,620
9	12,000	8,280	8,240	7,940	8,470	2,970	4,280	8,030	6,040	6,540	10,500	12,200
10	12,000	8,100	8,250	8,050	15,100	2,990	4,350	7,990	8,150	4,310	10,300	15,500
11	12,000	7,980	12,300	7,910	17,800	2,980	4,370	8,030	8,180	4,170	10,200	12,100
12	12,000	8,130	16,100	7,960	17,500	4,990	4,460	8,200	8,220	4,740	10,300	12,000
13	12,000	8,390	20,500	7,910	20,200	3,790	4,660	8,090	8,100	4,670	11,300	12,200
14	9,770	8,200	20,600	7,950	16,500	3,880	4,630	7,910	7,980	3,300	10,700	12,100
15	9,610	8,210	20,500	7,810	8,770	3,010	12,100	7,410	8,030	2,870	4,040	8,390
16	9,620	8,160	20,500	7,810	18,200	2,230	14,900	6,970	8,710	2,750	10,800	9,860
17	9,600	8,200	20,400	7,860	18,200	6,030	14,800	6,280	8,840	2,830	19,700	10,500
18	9,510	8,290	20,500	7,850	18,400	8,190	14,800	6,000	8,630	2,890	14,700	9,920
19	8,150	8,190	20,300	7,740	17,800	2,760	14,800	5,990	5,900	3,550	14,600	8,380
20	7,370	8,340	20,400	4,500	18,400	3,890	14,700	5,980	5,920	5,930	14,500	8,520
21	8,010	8,230	20,300	4,050	20,200	2,460	14,800	5,980	5,960	5,060	12,500	12,100
22	6,240	8,090	20,100	3,780	20,100	4,340	14,700	6,880	8,500	6,120	11,700	12,000
23	8,370	8,040	20,400	3,810	19,000	2,330	14,800	8,040	4,110	5,560	8,170	11,900
24	8,190	8,250	20,400	2,220	18,200	6,120	14,800	8,000	9,250	4,580	8,130	12,100
25	7,650	8,220	20,400	2,210	18,200	2,780	10,600	7,980	8,890	4,500	5,380	8,770
26	6,830	8,040	20,500	3,950	18,300	2,320	10,000	8,020	8,860	3,570	5,410	6,730
27	8,420	8,270	20,500	4,110	18,200	2,230	10,000	8,120	9,060	4,600	5,340	8,940
28	7,150	8,150	20,500	13,500	9,230	2,130	8,050	8,090	9,410	4,630	4,040	8,430
29	7,690	8,170	20,500	9,990	8,600	2,190	8,060	7,010	9,010	5,320	3,900	8,330
30	8,160	8,280	20,400	5,340	---	2,070	8,070	6,030	8,510	5,850	8,460	12,500
31	7,690	---	20,400	2,390	---	2,080	---	6,070	---	4,410	16,700	---
TOTAL	336,630	245,160	499,970	258,260	398,240	128,970	257,800	231,650	222,530	154,920	288,610	309,450
MEAN	10,860	8,172	16,130	8,331	13,730	4,160	8,593	7,473	7,418	4,997	9,310	10,320
MAX	20,100	8,390	20,600	20,500	20,200	8,690	14,900	8,200	9,410	6,970	19,700	18,100
MIN	6,240	7,660	8,190	2,210	2,420	2,070	2,870	5,980	4,110	2,750	3,900	5,620
†	+224	-114	+119	-101	-59	+39	+319	+35	-337	+113	+171	+941

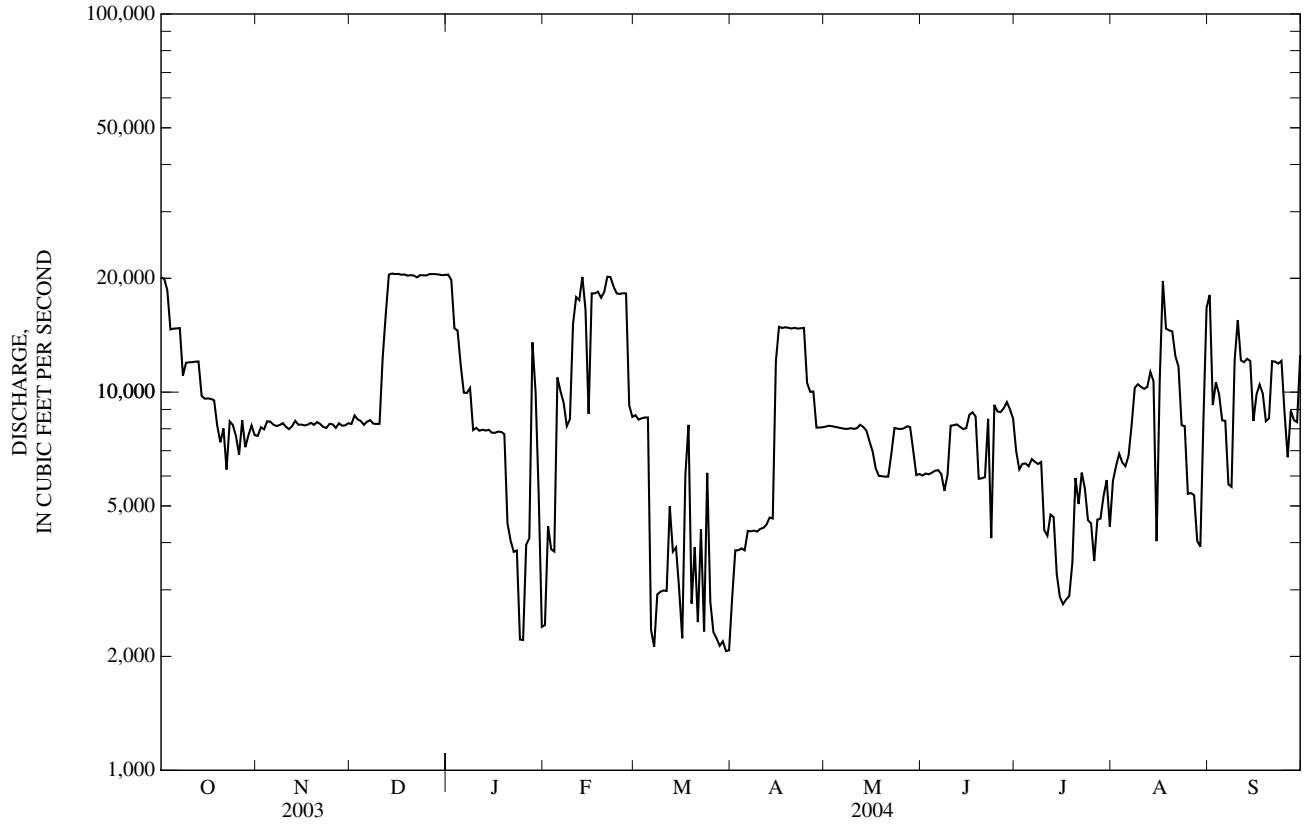
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004,* BY WATER YEAR (WY)

MEAN	5,665	6,266	7,465	9,556	10,460	10,780	11,470	10,360	7,756	6,213	5,416	5,564
MAX	20,360	17,690	18,380	17,850	26,800	27,350	32,660	31,750	23,040	22,870	15,180	25,970
(WY)	(1980)	(1986)	(1973)	(1991)	(1998)	(1998)	(1993)	(1978)	(2003)	(2003)	(2003)	(1996)
MIN	2,031	1,987	2,046	2,037	2,014	1,910	1,951	2,446	2,365	2,581	2,519	2,186
(WY)	(1971)	(1987)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1977)	(1970)	(1993)	(1968)

02080500 ROANOKE RIVER AT ROANOKE RAPIDS, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004*	
ANNUAL TOTAL	5,986,260		3,332,190			
ANNUAL MEAN	16,400		9,104	‡9216	7,947	(UNADJUSTED)
HIGHEST ANNUAL MEAN					15,330	2003
LOWEST ANNUAL MEAN					2,361	2002
HIGHEST DAILY MEAN	34,500	Apr 25	20,600	Dec 14	36,000	Sep 11, 1996
LOWEST DAILY MEAN	2,150	Feb 16	2,070	Mar 30	818	Nov 15, 1970
ANNUAL SEVEN-DAY MINIMUM	2,840	Feb 7	2,260	Mar 25	989	Nov 5, 1986
MAXIMUM PEAK FLOW			21,000	Sep 24	37,700	Apr 16, 1993
MAXIMUM PEAK STAGE			8.54	Sep 24	11.87	Apr 16, 1993
INSTANTANEOUS LOW FLOW			1,440	Jun 23	760	Nov 23, 1970
10 PERCENT EXCEEDS	24,500		18,200		18,900	
50 PERCENT EXCEEDS	16,700		8,160		5,980	
90 PERCENT EXCEEDS	7,620		3,820		2,020	

† Change in contents, equivalent in cubic feet per second, in Leesville and Smith Mountain Lakes, provided by Appalachian Power Co.; Philpott and Kerr Reservoirs, provided by U.S. Army Corps of Engineers; and Lake Gaston and Roanoke Rapids Lake, provided by North Carolina Power Company.
* Regulated period only (1964-2004). See REMARKS.
‡ Adjusted for change in contents.
e Estimated.



0208062765 ROANOKE RIVER AT HALIFAX, NC

LOCATION.--Lat 36°19'52", long 77°34'49", Halifax County, Hydrologic Unit 03010107, approximately 0.5 mi east of Halifax on private dirt road and 119 river mi from mouth.

DRAINAGE AREA.--8,450 mi^2.

ELEVATION RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Satellite telemetry at station.

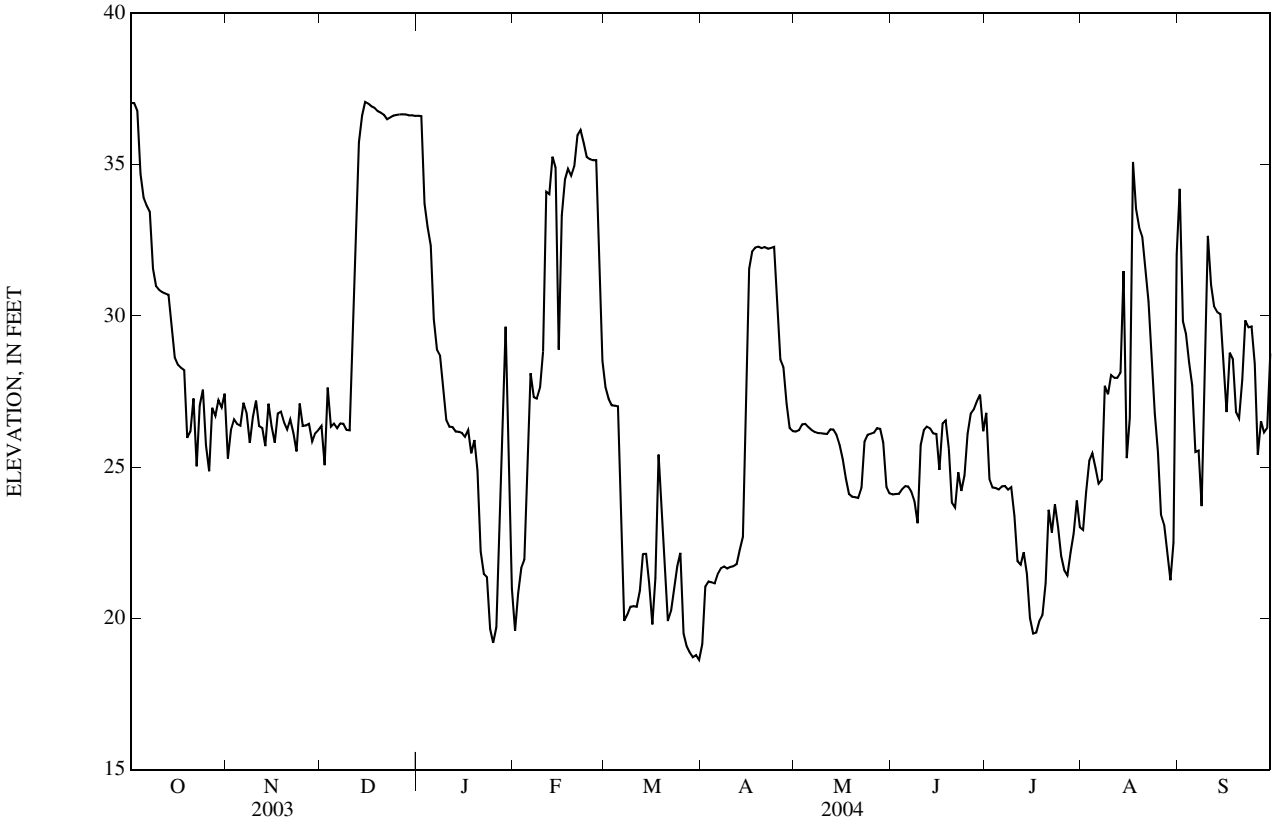
EXTREMES FOR PERIOD OF RECORD.--Maximum recorded elevation, 47.24 ft, Mar. 31, 1998; minimum recorded elevation, 16.43 ft, Dec. 8, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 37.11 ft, Dec. 15; minimum recorded elevation, 18.60 ft, Mar. 31.

ELEVATION, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.04	25.29	26.36	36.62	19.59	27.65	19.15	26.18	24.10	26.80	22.92	34.20
2	37.04	26.22	25.06	36.60	20.82	27.25	21.06	26.22	24.11	24.60	24.18	29.82
3	36.79	26.58	27.63	33.71	21.67	27.04	21.22	26.42	24.12	24.33	25.21	29.41
4	34.69	26.43	26.34	32.95	21.94	27.03	21.20	26.43	24.27	24.31	25.46	28.44
5	33.92	26.37	26.44	32.32	25.45	27.01	21.16	26.32	24.37	24.26	24.97	27.70
6	33.64	27.13	26.29	29.89	28.10	23.80	21.48	26.23	24.36	24.37	24.45	25.50
7	33.44	26.80	26.44	28.88	27.31	19.92	21.66	26.17	24.18	24.38	24.58	25.55
8	31.56	25.80	26.43	28.69	27.27	20.13	21.72	26.13	23.88	24.25	27.69	23.71
9	30.99	26.64	26.23	27.63	27.63	20.38	21.65	26.12	23.15	24.33	27.41	26.96
10	30.86	27.20	26.22	26.57	28.82	20.40	21.70	26.11	25.73	23.38	28.04	32.65
11	30.78	26.36	28.45	26.34	34.10	20.39	21.73	26.10	26.22	21.90	27.95	31.02
12	30.74	26.29	32.15	26.32	34.02	20.92	21.80	26.25	26.34	21.78	27.95	30.31
13	30.70	25.69	35.73	26.17	35.26	22.13	22.26	26.25	26.28	22.18	28.13	30.12
14	29.57	27.10	36.62	26.17	34.90	22.13	22.70	26.07	26.12	21.47	31.48	30.06
15	28.63	26.36	37.08	26.13	28.88	21.16	26.60	25.75	26.10	20.01	25.30	28.24
16	28.39	25.81	37.02	26.00	33.33	19.80	31.56	25.26	24.91	19.50	26.63	26.82
17	28.29	26.77	36.93	26.22	34.51	21.34	32.13	24.64	26.45	19.53	35.09	28.78
18	28.21	26.83	36.88	25.45	34.87	25.42	32.26	24.11	26.54	19.92	33.54	28.58
19	25.97	26.49	36.77	25.89	34.63	23.85	32.29	24.02	25.60	20.11	32.92	26.83
20	26.18	26.24	36.72	24.88	34.94	21.67	32.23	24.01	23.82	21.17	32.62	26.61
21	27.27	26.57	36.65	22.21	35.97	19.92	32.27	23.98	23.66	23.59	31.57	27.89
22	25.03	26.12	36.50	21.47	36.15	20.25	32.22	24.31	24.83	22.84	30.47	29.85
23	27.04	25.52	36.56	21.37	35.72	20.99	32.24	25.84	24.21	23.78	28.49	29.62
24	27.56	27.10	36.62	19.66	35.25	21.73	32.28	26.07	24.73	23.00	26.80	29.65
25	25.72	26.37	36.64	19.19	35.18	22.17	30.46	26.10	26.09	22.06	25.49	28.42
26	24.86	26.38	36.66	19.71	35.15	19.50	28.57	26.14	26.77	21.58	23.43	25.41
27	26.96	26.43	36.66	22.75	35.15	19.09	28.31	26.29	26.91	21.42	23.09	26.52
28	26.70	25.84	36.66	25.50	31.58	18.87	27.10	26.26	27.18	22.18	22.24	26.15
29	27.22	26.12	36.63	29.64	28.51	18.72	26.29	25.81	27.40	22.80	21.26	26.30
30	26.98	26.23	36.63	26.18	---	18.79	26.19	24.35	26.19	23.90	22.51	28.76
31	27.43	---	36.61	20.99	---	18.63	---	24.13	---	23.01	32.02	---
MEAN	29.68	26.37	32.92	26.52	30.92	21.87	26.12	25.62	25.29	22.67	27.22	28.33
MAX	37.04	27.20	37.08	36.62	36.15	27.65	32.29	26.43	27.40	26.80	35.09	34.20
MIN	24.86	25.29	25.06	19.19	19.59	18.63	19.15	23.98	23.15	19.50	21.26	23.71

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued



0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1998 to current year.
pH: March 1998 to current year.
WATER TEMPERATURE: March 1998 to current year.
DISSOLVED OXYGEN: March 1998 to current year.
DISSOLVED OXYGEN, PERCENT SATURATION: March 1998 to current year.

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

REMARKS.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources (DENR), Division of Water Resources, to define water-quality characteristics in the Roanoke River Basin below Roanoke Rapids Dam. Dissolved oxygen, percent saturation, is computed using a barometric pressure of 760 mm Hg beginning October 1, 2000.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	213, November 2, 2000	53, September 19, 2003
pH, standard units	8.7, March 12, 2004	6.1, September 16, 1999
WATER TEMPERATURE, °C	30.9, July 22, 1998	2.2, January 25, 28, 2003
DISSOLVED OXYGEN, mg/L	16.1, January 13, 1999	3.8, August 21, 22, 2003
DISSOLVED OXYGEN, PERCENT SATURATION, %	132, January 13, 14, 1999	47, June 27, 2001, August 21, 2003

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	126, January 28	87, October 29
pH, standard units	8.7, March 12	6.9, November 5, January 7, June 28, 29, 30, September 9
WATER TEMPERATURE, °C	29.6, July 13	2.3, January 26
DISSOLVED OXYGEN, mg/L	12.8, February 18	5.0, July 3, 4, August 30, 31
DISSOLVED OXYGEN, PERCENT SATURATION,%	114, June 20	59, July 3

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	90	89	90	108	89	93	109	95	98	103	102	102
2	91	90	91	107	88	91	114	95	100	103	102	103
3	91	90	91	107	88	91	106	95	98	111	102	103
4	93	91	92	109	89	91	111	96	99	114	104	105
5	94	92	94	114	89	92	109	96	99	111	103	105
6	95	93	94	106	90	94	112	95	99	113	102	105
7	94	93	94	103	91	94	111	95	98	111	100	103
8	96	93	95	107	92	96	109	95	98	112	101	103
9	96	95	95	106	91	95	110	95	99	112	101	103
10	96	95	95	102	91	93	110	95	99	112	101	105
11	95	95	95	104	91	94	104	91	95	114	101	104
12	95	94	95	104	91	94	102	93	95	114	101	104
13	95	94	94	107	91	96	95	94	95	114	101	104
14	96	94	95	103	90	92	95	92	94	114	101	104
15	94	93	94	105	91	94	94	93	93	113	101	104
16	93	93	93	107	91	95	95	94	94	113	101	104
17	94	93	94	104	91	94	95	93	94	114	100	103
18	94	94	94	105	91	94	94	93	94	114	101	105
19	112	92	96	107	91	94	94	93	94	115	101	105
20	107	91	95	101	91	92	94	92	93	114	101	105
21	104	91	94	105	92	95	94	93	93	121	101	107
22	110	91	94	110	93	96	94	93	94	122	101	109
23	103	89	91	112	93	98	94	94	94	122	103	109
24	102	88	92	105	93	95	96	94	94	125	102	115
25	107	89	94	107	93	97	97	96	96	124	122	123
26	111	89	93	107	94	97	98	97	97	123	121	122
27	109	90	92	110	94	97	100	97	98	123	102	109
28	102	89	93	109	95	100	100	99	100	126	101	106
29	102	87	91	111	95	98	102	100	100	110	100	102
30	102	89	92	110	95	98	102	101	102	115	100	103
31	101	89	92	---	---	---	102	102	102	120	101	112
MONTH	112	87	93	114	88	95	114	91	97	126	100	106
		FEBRUARY			MARCH			APRIL			MAY	
1	121	119	120	114	104	106	111	106	109	106	103	105
2	120	103	116	114	104	106	108	104	105	106	105	106
3	117	102	110	115	104	107	106	104	105	107	104	105
4	117	102	109	114	104	106	106	104	105	106	104	105
5	119	100	105	114	104	106	106	104	105	106	105	105
6	111	97	102	113	104	106	106	103	104	107	105	106
7	111	95	100	122	113	120	108	103	106	107	105	106
8	112	98	102	123	110	121	109	105	107	107	106	107
9	108	98	100	122	108	115	108	106	107	108	106	107
10	111	96	101	120	108	114	107	105	107	---	---	---
11	99	96	97	120	105	113	108	105	107	---	---	---
12	98	96	97	120	106	113	108	106	107	108	107	108
13	98	95	96	118	103	107	107	103	105	---	---	---
14	98	95	96	120	103	106	104	102	103	109	107	108
15	112	95	98	111	105	108	105	98	101	109	107	108
16	98	95	96	110	102	107	99	98	98	109	108	109
17	98	95	96	112	103	109	98	98	98	109	108	108
18	98	95	96	109	100	102	100	98	99	110	108	109
19	98	95	96	108	100	103	100	99	100	110	108	109
20	98	96	96	108	99	102	100	99	100	111	109	110
21	97	96	97	111	99	107	100	100	100	111	109	110
22	98	97	97	111	105	108	101	100	100	111	109	110
23	99	97	98	110	101	104	101	100	101	109	107	109
24	100	98	99	112	100	107	102	100	101	109	108	108
25	102	99	100	108	101	104	104	101	103	109	108	108
26	103	101	102	111	104	108	104	103	104	109	108	109
27	104	101	102	111	109	110	104	103	103	109	105	108
28	110	102	104	112	109	110	105	103	104	109	107	108
29	113	104	106	113	109	111	104	103	104	109	106	108
30	---	---	---	112	110	111	103	102	103	111	108	110
31	---	---	---	113	110	112	---	---	---	111	109	111
MONTH	121	95	101	123	99	109	111	98	103	---	---	---

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	110	107	109	111	103	105	113	105	111	106	104	105
2	109	107	108	113	104	107	112	100	107	120	105	107
3	109	107	109	112	104	107	107	100	103	114	106	108
4	110	106	108	112	104	107	110	104	106	114	107	109
5	108	106	107	113	104	107	116	106	109	118	107	109
6	107	105	106	114	104	107	116	105	109	123	107	111
7	108	106	107	113	104	107	115	106	110	124	107	111
8	107	106	106	114	104	107	112	106	108	123	107	112
9	109	106	108	114	104	108	115	106	108	118	91	102
10	107	105	105	114	105	108	116	107	109	112	104	106
11	106	104	105	115	108	112	116	104	109	120	104	106
12	106	104	104	116	109	113	118	108	110	121	104	106
13	105	104	105	115	107	111	119	109	111	119	104	106
14	105	104	104	117	107	112	110	103	108	120	103	105
15	105	104	105	121	115	118	107	102	105	117	103	106
16	112	102	105	122	118	120	107	100	103	119	103	105
17	110	101	103	121	117	119	105	100	103	118	103	105
18	110	101	103	119	108	113	112	103	105	117	102	104
19	111	101	104	116	113	114	114	105	107	117	102	105
20	111	101	104	117	108	113	115	108	109	118	102	105
21	110	101	104	114	106	108	117	109	110	121	102	104
22	111	101	104	114	104	107	123	109	111	115	102	103
23	107	101	103	115	106	109	123	110	112	115	102	104
24	114	102	106	115	105	109	123	110	113	116	102	104
25	109	101	103	113	103	107	123	110	113	114	102	105
26	110	101	103	112	103	107	123	111	115	123	103	106
27	109	101	102	112	107	109	122	111	114	116	101	105
28	110	101	103	108	101	104	120	109	114	105	101	102
29	111	102	104	107	101	104	121	113	117	115	102	104
30	109	103	105	104	100	103	119	107	114	114	102	103
31	---	---	---	112	102	107	107	103	104	---	---	---
MONTH	114	101	105	122	100	109	123	100	109	124	91	106

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.1	7.1	7.1	7.4	7.0	7.1	7.7	7.4	7.5	7.6	7.5	7.6
2	7.1	7.0	7.0	7.4	7.0	7.1	7.6	7.3	7.4	7.6	7.6	7.6
3	7.1	7.1	7.1	7.4	7.0	7.1	7.6	7.4	7.5	7.6	7.4	7.5
4	7.2	7.1	7.1	7.2	7.0	7.1	7.6	7.3	7.4	7.6	7.4	7.5
5	7.2	7.1	7.2	7.3	6.9	7.0	7.4	7.3	7.3	7.6	7.4	7.5
6	7.2	7.2	7.2	7.3	7.0	7.1	7.5	7.2	7.3	7.5	7.4	7.5
7	7.2	7.2	7.2	7.4	7.2	7.2	7.5	7.3	7.4	7.4	6.9	7.2
8	7.2	7.0	7.1	7.4	7.2	7.2	7.6	7.3	7.4	7.3	7.1	7.2
9	7.1	7.0	7.1	7.5	7.2	7.3	7.6	7.3	7.4	7.3	7.1	7.2
10	7.1	7.0	7.1	7.5	7.2	7.2	7.5	7.2	7.3	7.5	7.1	7.2
11	7.1	7.0	7.1	7.5	7.2	7.3	7.3	7.0	7.2	7.5	7.2	7.3
12	7.1	7.0	7.1	7.5	7.2	7.3	7.5	7.2	7.3	7.6	7.2	7.3
13	7.2	7.1	7.1	7.5	7.2	7.3	7.4	7.3	7.3	7.6	7.2	7.3
14	7.1	7.0	7.1	7.6	7.3	7.3	7.3	7.2	7.3	7.6	7.2	7.4
15	7.2	7.1	7.1	7.5	7.3	7.3	7.4	7.3	7.3	7.6	7.2	7.4
16	7.2	7.1	7.1	7.4	7.2	7.3	7.4	7.2	7.3	7.6	7.2	7.4
17	7.2	7.2	7.2	7.5	7.2	7.3	7.5	7.2	7.4	7.6	7.3	7.4
18	7.2	7.1	7.2	7.4	7.2	7.3	7.5	7.5	7.5	7.5	7.2	7.3
19	7.3	7.0	7.1	7.4	7.2	7.3	7.5	7.5	7.5	7.7	7.3	7.5
20	7.3	7.0	7.1	7.5	7.2	7.3	7.5	7.5	7.5	7.6	7.4	7.4
21	7.3	7.1	7.1	7.6	7.3	7.4	7.5	7.5	7.5	7.6	7.4	7.5
22	7.4	7.0	7.1	7.4	7.2	7.3	7.5	7.5	7.5	7.7	7.4	7.5
23	7.3	7.1	7.2	7.5	7.3	7.4	7.5	7.5	7.5	7.7	7.5	7.5
24	7.3	7.1	7.2	7.6	7.3	7.4	7.5	7.4	7.4	7.7	7.4	7.5
25	7.2	7.1	7.2	7.6	7.3	7.4	7.5	7.4	7.5	7.8	7.5	7.6
26	7.3	7.0	7.1	7.6	7.3	7.4	7.6	7.5	7.5	7.7	7.4	7.6
27	7.3	7.0	7.2	7.6	7.3	7.4	7.6	7.5	7.5	7.7	7.6	7.6
28	7.2	7.1	7.1	7.5	7.3	7.4	7.6	7.5	7.5	7.8	7.6	7.7
29	7.2	7.0	7.1	7.6	7.3	7.4	7.6	7.5	7.5	7.9	7.6	7.7
30	7.3	7.0	7.1	7.6	7.3	7.4	7.6	7.5	7.5	7.8	7.6	7.7
31	7.3	7.1	7.1	---	---	---	7.6	7.5	7.6	7.7	7.6	7.6
MONTH	7.4	7.0	7.1	7.6	6.9	7.3	7.7	7.0	7.4	7.9	6.9	7.5
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	7.6	7.7	8.3	7.9	8.1	7.8	7.4	7.5	7.5	7.3	7.4
2	8.0	7.6	7.7	8.3	7.9	8.0	8.0	7.4	7.6	7.4	7.2	7.3
3	8.0	7.6	7.7	8.4	7.9	8.0	8.0	7.5	7.7	7.4	7.3	7.3
4	7.8	7.6	7.7	8.3	7.9	8.0	8.3	7.5	7.7	7.6	7.2	7.4
5	8.0	7.7	7.9	8.3	7.9	8.1	8.4	7.5	7.8	7.6	7.3	7.4
6	7.9	7.7	7.8	8.2	7.7	7.9	8.4	7.5	7.8	7.8	7.4	7.5
7	7.9	7.4	7.6	7.8	7.7	7.7	8.5	7.5	7.8	7.9	7.4	7.5
8	8.0	7.6	7.7	8.0	7.7	7.9	8.4	7.3	7.7	7.8	7.3	7.5
9	7.9	7.7	7.8	8.2	7.8	7.9	8.4	7.4	7.7	7.9	7.3	7.5
10	8.2	7.7	8.0	8.1	7.8	7.9	8.5	7.4	7.7	7.9	7.4	7.6
11	8.2	8.1	8.1	8.1	7.8	8.0	7.9	7.4	7.6	7.9	7.4	7.6
12	8.1	8.0	8.1	8.7	7.8	8.1	7.8	7.4	7.5	7.8	7.4	7.6
13	8.2	8.0	8.1	8.5	7.8	7.9	7.5	7.3	7.4	7.7	7.4	7.5
14	8.2	8.0	8.1	8.5	7.8	7.9	7.5	7.3	7.3	7.6	7.3	7.5
15	8.2	7.8	7.9	8.3	7.7	7.9	7.6	7.3	7.5	7.6	7.3	7.4
16	8.2	8.0	8.1	7.8	7.4	7.6	7.6	7.4	7.5	7.6	7.3	7.4
17	8.1	8.0	8.0	8.2	7.4	7.6	7.6	7.4	7.5	7.4	7.2	7.3
18	8.1	7.9	8.0	8.0	7.7	7.9	7.7	7.5	7.5	7.4	7.2	7.3
19	8.2	7.9	8.0	7.9	7.6	7.8	7.7	7.4	7.5	7.4	7.2	7.3
20	8.2	8.0	8.1	8.2	7.6	7.8	7.7	7.5	7.6	7.4	7.2	7.2
21	8.2	8.0	8.1	8.1	7.5	7.7	7.6	7.4	7.5	7.4	7.1	7.2
22	8.2	8.0	8.1	8.1	7.6	7.7	7.6	7.4	7.5	7.4	7.1	7.2
23	8.2	8.0	8.1	8.1	7.5	7.7	7.6	7.4	7.5	7.4	7.1	7.2
24	8.2	8.0	8.1	8.4	7.6	7.8	7.6	7.4	7.4	7.5	7.2	7.3
25	8.2	8.0	8.1	8.4	7.6	7.7	7.5	7.3	7.4	7.5	7.2	7.3
26	8.1	8.0	8.1	8.2	7.4	7.7	7.5	7.3	7.4	7.5	7.2	7.3
27	8.1	8.0	8.0	8.1	7.4	7.6	7.6	7.3	7.4	7.4	7.2	7.3
28	8.2	7.9	8.0	8.0	7.3	7.6	7.6	7.3	7.4	7.4	7.2	7.3
29	8.3	7.9	8.0	8.0	7.4	7.6	7.6	7.3	7.4	7.5	7.2	7.3
30	---	---	---	8.1	7.4	7.6	7.6	7.3	7.4	7.5	7.2	7.2
31	---	---	---	8.1	7.4	7.6	---	---	---	7.4	7.2	7.2
MONTH	8.3	7.4	8.0	8.7	7.3	7.8	8.5	7.3	7.5	7.9	7.1	7.4

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.5	7.1	7.3	7.6	7.0	7.1	7.6	7.2	7.3	7.2	7.2	7.2
2	7.5	7.1	7.2	7.4	7.0	7.1	7.4	7.1	7.2	7.4	7.1	7.1
3	7.5	7.1	7.2	7.4	7.0	7.0	7.3	7.1	7.1	7.4	7.1	7.2
4	7.5	7.1	7.2	7.5	7.0	7.0	7.6	7.1	7.2	7.4	7.2	7.2
5	7.3	7.0	7.1	7.6	7.0	7.1	7.5	7.2	7.2	7.5	7.2	7.2
6	7.3	7.1	7.2	7.6	7.1	7.2	7.7	7.2	7.3	7.6	7.1	7.2
7	7.3	7.0	7.1	7.5	7.1	7.1	7.6	7.1	7.2	7.6	7.2	7.2
8	7.3	7.1	7.1	7.6	7.1	7.1	7.6	7.2	7.3	7.6	7.2	7.3
9	7.4	7.0	7.2	7.6	7.0	7.1	7.6	7.2	7.3	7.3	6.9	7.1
10	7.4	7.0	7.2	7.5	7.0	7.1	7.6	7.2	7.3	7.3	7.2	7.2
11	7.4	7.1	7.2	7.5	7.0	7.1	7.6	7.2	7.3	7.3	7.1	7.2
12	7.4	7.0	7.1	7.6	7.0	7.2	7.5	7.2	7.2	7.3	7.1	7.2
13	7.3	7.0	7.1	7.6	7.0	7.1	7.3	7.1	7.2	7.3	7.2	7.2
14	7.2	7.1	7.1	7.4	7.1	7.1	7.2	7.1	7.2	7.2	7.1	7.2
15	7.2	7.0	7.1	7.6	7.3	7.4	7.1	7.0	7.0	7.4	7.1	7.2
16	7.2	7.0	7.0	7.9	7.3	7.5	7.2	7.0	7.0	7.5	7.1	7.2
17	7.3	7.0	7.0	8.2	7.3	7.6	7.2	7.1	7.1	7.4	7.1	7.2
18	7.6	7.1	7.1	8.0	7.2	7.4	7.2	7.1	7.1	7.3	7.1	7.2
19	7.7	7.1	7.2	7.8	7.2	7.4	7.2	7.0	7.1	7.6	7.2	7.2
20	7.8	7.1	7.2	7.8	7.2	7.3	7.2	7.1	7.2	7.6	7.2	7.3
21	7.7	7.1	7.2	7.8	7.2	7.3	7.3	7.1	7.2	7.4	7.2	7.3
22	7.4	7.0	7.1	7.7	7.2	7.2	7.4	7.2	7.2	7.4	7.2	7.3
23	7.3	7.0	7.1	7.4	7.2	7.2	7.6	7.1	7.2	7.4	7.2	7.3
24	7.4	7.0	7.1	7.4	7.1	7.2	7.7	7.2	7.3	7.4	7.2	7.3
25	7.4	7.0	7.1	7.6	7.2	7.3	7.7	7.1	7.3	7.5	7.2	7.3
26	7.3	7.0	7.1	7.6	7.1	7.2	7.7	7.1	7.2	7.6	7.2	7.3
27	7.3	7.0	7.1	7.7	7.2	7.3	7.7	7.1	7.2	7.3	7.2	7.2
28	7.3	6.9	7.0	7.4	7.1	7.2	7.8	7.1	7.3	---	---	---
29	7.5	6.9	7.0	7.4	7.1	7.2	7.7	7.2	7.3	7.6	7.2	7.2
30	7.4	6.9	7.0	7.6	7.1	7.3	7.7	7.1	7.2	7.3	7.2	7.3
31	---	---	---	7.6	7.2	7.3	7.4	7.1	7.2	---	---	---
MONTH	7.8	6.9	7.1	8.2	7.0	7.2	7.8	7.0	7.2	---	---	---

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.8	22.4	22.6	18.4	16.9	17.4	12.4	11.6	12.0	7.8	7.4	7.6
2	22.7	22.2	22.4	18.9	17.4	17.7	11.9	10.5	11.2	7.7	7.4	7.6
3	22.2	21.4	21.7	18.9	17.3	17.7	11.0	10.2	10.8	8.1	7.5	7.8
4	21.6	20.8	21.2	18.6	17.7	17.9	10.6	9.9	10.4	8.5	7.9	8.2
5	21.6	21.0	21.3	19.1	17.7	18.1	10.4	9.9	10.2	9.2	8.3	8.7
6	21.7	21.1	21.3	18.9	17.8	18.3	10.2	9.6	10.0	9.3	8.8	9.0
7	21.7	21.1	21.4	18.9	18.4	18.6	9.9	9.0	9.6	8.8	7.3	8.1
8	21.4	21.0	21.2	18.4	17.5	17.8	9.7	8.8	9.4	7.6	6.6	7.2
9	21.5	21.0	21.2	17.6	16.4	17.2	9.7	8.7	9.2	7.0	6.4	6.7
10	21.3	20.8	21.0	16.9	15.9	16.7	9.9	9.0	9.4	6.4	5.5	6.0
11	21.0	20.6	20.8	16.5	15.2	15.8	10.0	9.7	9.9	5.8	4.7	5.5
12	20.9	20.4	20.6	16.9	15.6	16.0	9.8	9.1	9.5	6.2	5.0	5.5
13	21.1	20.6	20.8	16.6	15.1	15.9	9.3	8.9	9.2	6.2	5.2	5.7
14	20.9	20.5	20.7	15.3	14.3	15.0	8.9	8.4	8.6	6.1	5.2	5.7
15	20.7	20.3	20.5	14.6	13.9	14.4	8.4	8.1	8.3	6.2	5.6	5.9
16	20.4	19.5	19.9	14.3	13.8	13.9	8.3	8.0	8.1	6.1	5.2	5.8
17	20.3	19.2	19.7	14.9	13.8	14.2	8.5	8.2	8.4	6.0	5.0	5.6
18	20.0	19.3	19.6	15.2	14.5	14.7	8.3	8.0	8.2	6.1	5.6	5.7
19	20.0	18.7	19.2	15.3	14.7	15.0	8.0	7.7	7.8	6.0	5.7	5.8
20	20.3	19.0	19.3	15.4	14.7	15.2	7.7	7.4	7.7	5.7	4.8	5.3
21	20.0	19.0	19.3	15.5	14.2	14.9	7.4	7.1	7.3	5.4	4.5	5.2
22	19.8	18.9	19.4	15.2	14.5	14.9	7.3	6.9	7.1	5.5	4.5	5.2
23	19.1	17.9	18.7	15.0	14.4	14.6	7.8	7.1	7.4	5.6	4.8	5.3
24	18.8	17.4	18.3	15.4	14.1	14.6	8.3	7.7	8.0	5.2	4.8	5.0
25	18.3	17.1	17.8	15.2	13.8	14.4	8.2	7.6	8.0	5.1	2.7	4.1
26	18.5	17.9	18.0	14.3	13.2	13.9	7.6	7.2	7.4	3.5	2.3	2.6
27	18.9	17.9	18.2	14.1	13.2	13.8	7.4	7.0	7.2	3.9	3.5	3.8
28	18.1	17.4	17.8	14.4	13.8	14.0	7.4	7.0	7.2	3.8	2.8	3.5
29	17.8	16.9	17.5	14.3	12.2	13.2	7.6	7.2	7.4	3.8	2.8	3.1
30	17.7	16.6	17.3	12.6	11.7	12.4	7.9	7.5	7.7	3.7	3.0	3.3
31	17.6	16.6	17.1	---	---	---	8.1	7.7	7.8	3.6	2.5	3.3
MONTH	22.8	16.6	19.9	19.1	11.7	15.6	12.4	6.9	8.7	9.3	2.3	5.7
		FEBRUARY			MARCH			APRIL			MAY	
1	3.2	2.6	3.1	7.5	5.8	6.3	12.7	12.3	12.5	18.7	17.6	18.1
2	4.5	3.1	3.5	7.6	6.4	6.8	12.9	12.0	12.3	19.1	17.8	18.4
3	4.5	3.6	4.0	8.9	7.1	7.7	12.6	11.6	12.1	19.1	18.2	18.7
4	4.4	3.5	3.9	9.7	7.7	8.3	12.8	11.7	12.3	18.8	17.6	18.1
5	4.5	3.4	4.1	10.4	8.7	9.3	12.9	10.9	11.8	18.6	17.0	17.7
6	4.9	4.0	4.3	10.4	9.3	9.7	12.9	10.8	11.8	19.6	17.9	18.6
7	5.4	4.9	5.1	10.8	10.4	10.6	13.8	11.4	12.5	21.1	17.6	18.8
8	5.1	4.4	4.6	11.0	9.8	10.4	14.0	12.6	13.4	21.1	19.6	20.0
9	4.9	3.9	4.3	10.3	9.3	9.8	14.5	12.6	13.5	20.9	18.1	19.3
10	4.9	4.5	4.7	10.2	8.8	9.4	14.7	13.2	13.7	22.2	20.0	20.9
11	4.8	4.4	4.6	9.8	8.6	9.1	13.6	12.4	13.1	22.1	20.6	21.2
12	4.6	4.3	4.4	10.9	9.7	10.1	13.6	12.8	13.1	22.2	20.9	21.5
13	4.6	4.1	4.3	10.6	8.9	9.5	13.4	12.6	12.9	22.7	21.0	21.8
14	4.7	4.2	4.4	10.6	8.9	9.6	13.6	13.0	13.2	22.9	22.0	22.4
15	5.0	4.4	4.8	11.0	9.8	10.1	13.6	12.5	13.0	23.7	22.0	22.6
16	4.9	4.4	4.5	10.6	10.1	10.5	13.5	12.2	12.8	23.7	22.8	23.2
17	4.4	4.2	4.3	10.4	9.3	9.8	14.3	12.7	13.3	23.6	22.3	22.9
18	4.6	4.2	4.4	9.9	9.2	9.6	15.1	13.9	14.4	23.6	21.7	22.6
19	5.1	4.2	4.6	10.4	9.5	10	15.9	14.0	14.9	24.3	22.8	23.6
20	5.5	4.7	5.1	11.1	9.3	10.3	16.5	15.4	15.9	24.3	23.4	23.8
21	5.9	5.2	5.5	11.8	10.7	11.4	16.9	15.6	16.2	24.2	22.1	23.1
22	6.1	5.5	5.7	11.4	9.6	10.2	17.3	16.1	16.7	24.2	22.2	23.1
23	6.0	5.6	5.8	10.2	9.2	9.7	17.6	16.4	16.9	25.8	22.1	23.8
24	5.8	5.6	5.7	11.7	9.3	10.5	17.6	17.3	17.4	26.2	24.8	25.5
25	6.0	5.5	5.7	11.8	10.0	10.8	18.3	16.9	17.4	26.1	25.2	25.7
26	5.5	5.2	5.3	12.7	11.5	12.4	18.2	17.2	17.7	26.4	25.0	25.6
27	5.3	4.9	5.1	13.6	12.6	13.3	18.4	17.7	18.0	26.2	25.4	25.9
28	6.1	4.8	5.1	14.6	13.6	14.4	18.1	17.0	17.5	26.1	25.3	25.6
29	6.8	4.9	5.5	14.5	11.7	13.2	18.5	16.9	17.6	25.8	24.8	25.2
30	---	---	---	12.4	11.7	12.0	18.9	17.2	18.0	25.6	23.8	24.2
31	---	---	---	12.8	11.9	12.6	---	---	---	25.1	23.9	24.4
MONTH	6.8	2.6	4.7	14.6	5.8	10.2	18.9	10.8	14.5	26.4	17.0	22.1

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.4	24.3	24.8	26.8	23.9	24.6	28.6	26.8	27.5	26.6	25.8	26.2
2	25.4	24.1	24.8	26.0	24.2	24.8	27.7	26.7	27.1	27.1	25.8	26.2
3	25.5	24.1	24.8	25.8	23.8	24.5	27.9	26.3	26.8	26.8	25.7	26.1
4	25.5	22.8	23.5	26.4	24.2	24.8	29.2	26.9	27.6	26.9	25.8	26.2
5	23.7	22.7	23.1	27.1	24.7	25.6	28.2	27.6	27.9	26.9	25.7	26.1
6	23.7	22.9	23.3	27.1	26.0	26.4	28.1	27.0	27.4	27.1	25.9	26.2
7	23.7	22.4	22.9	27.1	26.0	26.3	27.8	26.2	26.7	27.0	26.0	26.2
8	23.6	22.1	22.8	28.2	26.1	26.7	27.6	26.1	26.6	27.2	25.9	26.3
9	24.3	22.4	23.3	28.7	26.3	27.0	27.4	26.2	26.6	26.4	25.1	25.8
10	25.5	22.9	24.3	28.4	27.0	27.5	27.5	26.0	26.5	26.6	25.8	26.2
11	25.4	23.9	24.6	28.3	26.5	27.3	27.6	26.4	26.7	26.5	25.7	26.0
12	25.4	23.1	24.4	28.6	26.4	27.3	27.2	26.2	26.5	26.6	25.7	26.1
13	24.5	22.9	23.7	29.6	26.8	27.8	26.6	26.0	26.2	26.4	25.5	25.9
14	24.4	23.6	23.9	29.4	28.2	28.6	26.2	24.8	25.7	26.0	25.4	25.7
15	24.3	23.1	23.8	29.3	28.5	28.9	24.8	23.9	24.3	26.0	25.2	25.6
16	24.7	23.3	23.9	29.3	28.5	29.0	25.3	23.6	24.1	26.1	25.3	25.5
17	25.2	23.3	24.0	29.5	28.3	28.8	25.2	24.1	24.6	26.2	25.3	25.5
18	26.7	24.4	25.1	29.1	27.0	27.8	25.6	24.6	25.0	25.4	24.7	25.1
19	27.4	25.1	25.7	29.3	27.9	28.4	26.0	25.0	25.4	25.0	23.7	24.5
20	26.7	25.1	25.6	29.3	27.4	28.2	26.2	25.6	25.9	24.3	23.2	23.8
21	26.8	24.5	25.1	29.5	27.2	27.9	26.8	25.9	26.2	24.1	22.9	23.5
22	26.2	24.6	25.1	29.2	27.4	27.9	26.8	26.1	26.4	24.3	23.2	23.6
23	26.5	25.5	26.0	28.1	27.4	27.7	27.5	25.7	26.2	24.5	23.7	23.9
24	26.4	24.5	25.2	27.6	27.2	27.4	27.7	25.9	26.4	24.4	23.6	23.8
25	26.2	24.8	25.2	28.7	27.0	27.6	27.6	25.9	26.4	24.7	23.5	23.8
26	26.0	24.8	25.1	28.6	27.0	27.7	27.6	25.6	26.2	24.8	23.5	23.9
27	25.4	24.8	25.1	28.9	27.1	27.9	28.0	25.7	26.4	24.0	23.4	23.6
28	25.8	24.6	24.9	28.1	26.7	27.2	28.2	26.0	26.7	24.0	23.6	23.7
29	26.4	24.2	24.9	27.7	26.6	27.0	28.1	26.3	27.0	24.4	23.4	23.6
30	25.3	24.1	24.4	28.7	26.4	27.2	27.8	25.5	26.2	23.8	23.1	23.4
31	---	---	---	28.5	26.7	27.4	27.1	25.8	26.4	---	---	---
MONTH	27.4	22.1	24.4	29.6	23.8	27.2	29.2	23.6	26.3	27.2	22.9	25.1

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.6	6.3	6.5	9.2	7.6	8.0	10.5	9.6	9.8	11.6	11.2	11.3
2	6.5	6.2	6.3	9.1	7.6	7.9	11.0	9.8	10.1	11.6	11.3	11.4
3	6.8	6.4	6.6	8.8	7.3	7.7	10.8	10.0	10.2	11.6	11.2	11.4
4	7.2	6.6	6.9	8.5	7.2	7.5	10.5	10.0	10.2	11.6	11.1	11.3
5	7.3	6.9	7.1	8.5	7.1	7.4	10.4	9.9	10.1	11.6	11.2	11.4
6	7.3	7.0	7.1	8.0	7.1	7.5	10.8	9.9	10.1	11.7	10.9	11.3
7	7.3	7.0	7.1	8.4	7.6	7.8	10.8	9.9	10.2	11.7	10.8	11.1
8	7.2	6.8	7.0	8.7	7.4	7.7	11.2	10.2	10.4	11.7	10.9	11.2
9	7.2	6.6	6.8	9.3	7.8	8.2	11.2	10.0	10.3	11.8	10.9	11.1
10	6.9	6.6	6.8	9.4	8.1	8.4	10.8	10.1	10.3	12.2	11.0	11.3
11	7.2	6.7	6.9	9.4	8.2	8.5	10.7	9.8	10.1	12.0	11.2	11.5
12	7.2	6.6	6.9	9.5	8.2	8.5	11.0	10.1	10.4	12.0	11.2	11.4
13	7.2	6.8	7.0	9.6	8.1	8.4	10.8	10.4	10.6	12.0	11.1	11.4
14	7.1	6.7	6.9	9.8	8.4	8.7	10.8	10.4	10.6	12.1	11.2	11.4
15	7.5	6.7	7.0	9.4	8.8	9.0	11.0	10.6	10.8	11.7	11.1	11.3
16	7.9	7.2	7.4	9.8	8.9	9.1	11.2	10.6	10.9	11.9	11.0	11.3
17	7.9	7.4	7.6	9.8	9.0	9.1	11.0	10.3	10.5	11.8	11.1	11.4
18	7.9	7.3	7.6	9.4	8.7	8.9	10.6	10.3	10.4	11.9	11.0	11.3
19	8.2	7.2	7.4	9.3	8.6	8.7	10.7	10.5	10.6	11.8	10.9	11.2
20	8.4	7.1	7.3	9.5	8.4	8.7	10.6	10.4	10.5	11.6	11.0	11.3
21	8.3	7.1	7.4	9.8	8.7	8.9	11.0	10.5	10.7	12.0	11.2	11.5
22	8.5	7.0	7.4	9.4	8.8	9.0	11.0	10.8	10.9	12.0	11.3	11.5
23	8.4	7.3	7.6	9.7	8.9	9.1	10.9	10.6	10.8	11.8	11.3	11.5
24	8.4	7.5	7.9	9.9	8.8	9.1	10.8	10.5	10.6	12.0	11.3	11.6
25	8.2	7.6	7.9	10.0	8.8	9.1	10.9	10.6	10.8	11.9	11.4	11.7
26	8.4	7.5	7.7	10.0	8.9	9.1	11.2	10.8	11.0	12.2	11.7	11.9
27	8.3	7.4	7.6	9.6	8.9	9.1	11.4	10.9	11.1	12.0	11.2	11.5
28	8.1	7.3	7.6	9.6	8.1	8.9	11.3	11.0	11.2	12.2	11.4	11.9
29	8.5	7.4	7.7	10.1	8.8	9.3	11.3	11.1	11.1	12.6	11.7	12.0
30	8.7	7.5	7.8	10.3	9.5	9.7	11.4	11.0	11.2	12.2	11.7	11.9
31	8.5	7.7	7.9	---	---	---	11.5	11.2	11.3	12.2	11.6	11.9
MONTH	8.7	6.2	7.2	10.3	7.1	8.6	11.5	9.6	10.6	12.6	10.8	11.5
		FEBRUARY			MARCH			APRIL			MAY	
1	12.4	11.8	12.1	10.6	10.0	10.3	10.6	9.3	9.8	9.4	8.1	8.6
2	12.4	11.8	12.1	10.5	10.0	10.3	10.8	9.4	9.9	8.8	7.8	8.3
3	12.3	11.5	11.8	10.7	9.9	10.3	10.9	9.4	10.1	8.7	7.6	8.1
4	12.0	11.4	11.7	10.7	10.0	10.4	11.0	9.6	10.1	9.0	7.8	8.3
5	12.7	11.8	12.1	10.8	9.9	10.4	11.2	9.6	10.2	9.0	7.9	8.3
6	12.2	11.5	11.9	10.5	9.7	10.3	11.2	9.6	10.3	9.4	8.0	8.6
7	12.0	10.9	11.3	10.0	9.6	9.8	11.2	9.5	10.1	9.4	8.2	8.7
8	12.2	11.2	11.6	10.6	9.8	10.1	10.9	9.1	9.8	9.3	8.0	8.6
9	12.0	11.3	11.6	11.0	10.2	10.5	11.0	9.3	9.9	9.3	7.9	8.6
10	12.0	11.0	11.5	11.4	10.6	10.9	11.0	9.0	9.7	9.1	8.0	8.5
11	12.1	11.2	11.7	11.5	10.7	11.1	10.4	9.1	9.7	9.1	7.8	8.4
12	12.1	11.4	11.7	11.6	10.4	11.0	10.3	9.0	9.4	8.9	7.9	8.3
13	12.3	11.6	11.9	11.5	10.9	11.1	9.6	8.9	9.2	8.7	7.8	8.2
14	12.3	11.6	12.0	11.5	10.9	11.2	9.8	8.9	9.2	8.6	7.6	8.0
15	12.5	11.6	12.0	11.5	10.5	10.9	10.2	9.0	9.6	8.4	7.5	7.9
16	12.4	11.7	12.0	11.0	9.8	10.3	10.2	9.3	9.7	8.3	7.3	7.6
17	12.3	11.8	12.0	11.4	9.9	10.4	10.2	9.5	9.8	7.8	6.9	7.2
18	12.8	11.6	12.0	11.5	10.8	11.2	10.0	9.2	9.6	7.8	6.7	7.1
19	12.0	11.5	11.8	11.2	10.6	11.0	10.0	9.2	9.5	7.7	6.7	7.1
20	12.1	11.5	11.7	11.3	10.5	11.0	9.9	9.0	9.5	7.6	6.6	7.0
21	11.8	11.3	11.6	11.2	9.8	10.4	9.8	8.9	9.4	7.8	6.6	7.0
22	11.6	11.0	11.3	11.4	10.1	10.5	9.7	9.0	9.3	7.7	6.5	7.0
23	11.2	10.7	11.0	11.3	10.3	10.8	9.8	8.8	9.2	7.6	6.4	6.9
24	10.9	10.5	10.7	11.5	10.3	10.8	9.5	8.7	9.1	7.6	6.4	6.9
25	10.7	10.2	10.4	11.5	10.3	10.6	9.3	8.5	8.9	7.6	6.5	6.9
26	10.5	10.0	10.3	11.1	9.6	10.3	9.3	8.3	8.7	7.5	6.3	6.8
27	10.5	10.0	10.2	10.8	9.2	10	9.4	8.3	8.7	7.4	6.3	6.7
28	10.6	9.9	10.2	10.6	8.8	9.6	9.6	8.4	8.8	7.4	6.3	6.8
29	10.6	10.0	10.2	10.5	9.4	9.9	9.6	8.3	8.8	7.5	6.5	6.8
30	---	---	---	11.0	9.6	10.2	9.5	8.0	8.9	7.5	6.3	6.6
31	---	---	---	11.0	9.3	10	---	---	---	7.2	6.3	6.6
MONTH	12.8	9.9	11.5	11.6	8.8	10.5	11.2	8.0	9.5	9.4	6.3	7.6

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	6.4	6.9	8.4	5.3	5.9	8.0	5.9	6.7	5.8	5.3	5.5
2	8.0	6.5	7.1	7.9	5.2	5.8	7.3	5.5	6.1	7.3	5.1	5.4
3	8.0	6.4	7.1	8.0	5.0	5.7	7.2	5.2	5.9	6.6	5.1	5.6
4	8.0	6.5	6.9	8.1	5.0	5.6	7.9	5.7	6.2	6.9	5.4	5.9
5	7.6	6.4	6.7	8.2	5.1	5.8	7.7	5.4	6.1	7.5	5.6	5.9
6	7.9	6.8	7.3	8.1	5.3	5.8	8.3	5.6	6.2	7.6	5.5	5.9
7	7.8	6.5	7.0	7.9	5.1	5.7	8.4	5.7	6.3	7.7	5.7	6.0
8	7.9	6.8	7.2	8.0	5.4	5.8	8.4	6.0	6.6	7.6	5.7	6.1
9	8.3	6.6	7.3	8.0	5.3	5.8	8.3	6.3	6.6	6.8	5.4	5.9
10	8.0	6.6	7.1	7.8	5.3	5.9	8.4	6.1	6.5	6.4	5.8	6.1
11	---	---	---	7.9	5.5	6.4	8.4	6.2	6.6	6.9	5.7	6.0
12	---	---	---	8.0	5.8	6.6	8.1	5.9	6.3	7.0	5.6	6.0
13	7.6	6.5	6.9	8.0	5.3	6.2	7.6	5.6	6.0	6.6	5.8	6.1
14	7.5	6.6	6.9	7.4	5.3	6.0	6.2	5.7	5.9	6.7	5.8	6.0
15	---	---	---	7.6	6.0	6.6	7.0	6.1	6.6	7.3	5.9	6.1
16	---	---	---	7.5	5.9	6.6	7.8	5.9	6.8	7.8	6.0	6.2
17	---	---	---	7.7	5.9	6.7	6.4	5.8	6.1	7.1	5.8	6.1
18	8.3	6.2	6.7	7.7	5.6	6.3	6.7	5.7	6.0	6.9	6.0	6.2
19	8.6	6.1	6.7	7.7	5.8	6.7	6.6	5.5	5.8	8.0	6.2	6.5
20	9.1	6.4	7.0	7.7	5.5	6.2	7.6	5.7	6.0	8.1	6.3	6.6
21	---	---	---	8.0	5.4	5.9	7.4	5.7	6.1	7.4	6.5	6.8
22	---	---	---	7.9	5.5	6.0	7.4	5.8	6.2	8.0	6.7	7.1
23	---	---	---	6.7	5.4	5.8	8.1	5.7	6.2	7.9	6.6	7.0
24	---	---	---	6.9	5.2	5.7	8.2	5.9	6.3	7.6	6.4	6.9
25	---	---	---	7.7	5.8	6.3	8.3	5.8	6.3	8.2	6.5	6.8
26	---	---	---	7.4	5.5	6.1	8.3	5.5	6.2	7.9	6.5	6.8
27	---	---	---	8.0	5.9	6.6	8.2	5.5	6.2	7.4	6.3	6.6
28	---	---	---	7.2	5.6	6.1	8.0	5.5	6.1	---	---	---
29	7.9	5.6	6.0	7.4	5.5	6.1	7.8	5.7	6.4	8.3	6.3	6.7
30	7.8	5.4	5.9	8.0	5.6	6.5	7.5	5.0	6.2	7.3	6.5	6.7
31	---	---	---	7.8	5.5	6.3	6.9	5.0	5.9	---	---	---
MONTH	---	---	---	8.4	5.0	6.1	8.4	5.0	6.2	---	---	---

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	77	73	75	98	79	84	98	89	92	98	93	95
2	75	71	73	98	79	83	100	89	92	97	94	96
3	78	73	75	95	77	81	97	90	92	98	94	96
4	82	74	78	91	76	80	94	89	91	99	95	96
5	83	78	80	92	76	79	92	88	90	101	96	98
6	83	79	81	86	75	80	95	88	90	101	94	98
7	83	79	80	90	81	83	95	87	90	99	91	94
8	82	76	79	91	78	81	99	89	91	97	90	93
9	82	74	77	97	81	85	99	87	90	96	90	91
10	78	74	76	97	83	86	95	89	90	98	89	91
11	81	75	77	96	83	86	95	87	89	96	89	91
12	81	74	77	98	83	87	97	89	92	97	88	91
13	81	76	78	96	82	85	94	91	92	97	88	91
14	80	75	77	97	83	87	93	89	91	98	89	91
15	84	74	78	92	86	88	94	90	92	95	88	91
16	87	79	82	96	86	88	95	90	92	96	88	90
17	88	81	84	97	87	89	94	88	90	95	88	91
18	87	80	83	94	86	88	90	88	88	96	88	90
19	90	78	81	93	85	87	90	88	89	95	87	89
20	93	77	79	95	84	87	89	87	88	93	87	89
21	92	77	80	98	86	89	91	88	89	94	88	91
22	93	76	80	94	87	90	91	89	90	95	88	91
23	90	78	82	96	87	89	91	89	90	94	88	91
24	90	80	84	99	86	89	92	89	90	94	88	91
25	86	80	83	98	86	89	92	90	91	94	86	89
26	90	80	82	98	86	89	94	90	91	92	86	88
27	90	78	81	94	86	88	95	90	92	91	85	87
28	85	77	80	94	79	87	94	91	93	92	87	90
29	89	77	81	96	84	89	95	92	93	96	87	90
30	92	78	82	97	88	91	96	92	94	92	87	89
31	89	80	82	---	---	---	97	94	95	92	86	90
MONTH	93	71	80	99	75	86	100	87	91	101	85	92
		FEBRUARY			MARCH			APRIL			MAY	
1	93	88	90	88	80	83	100	87	92	101	85	91
2	96	88	91	87	82	84	102	87	93	95	82	89
3	95	88	90	91	83	86	103	87	94	94	81	87
4	92	86	90	93	85	88	104	89	95	97	82	88
5	96	89	93	96	87	91	105	87	95	96	82	87
6	94	89	92	93	87	91	106	87	95	103	85	92
7	95	85	89	90	87	88	106	87	95	106	86	94
8	96	87	90	94	87	91	106	87	94	104	88	95
9	94	87	90	97	89	93	108	88	95	104	84	93
10	94	86	90	99	92	95	108	86	93	105	88	96
11	94	87	91	101	92	97	100	86	92	104	87	95
12	93	88	90	105	92	98	99	86	90	102	89	95
13	96	89	92	103	96	98	91	84	87	101	88	94
14	96	89	92	104	94	98	93	85	88	100	87	92
15	98	91	94	104	93	97	98	85	92	99	86	91
16	97	90	93	99	88	93	98	87	92	98	85	89
17	95	91	92	101	89	92	100	90	94	92	80	85
18	99	89	93	102	94	98	99	90	94	92	77	83
19	94	89	92	99	95	97	101	89	94	92	78	84
20	96	90	92	103	92	99	102	91	96	91	78	83
21	95	90	92	103	89	95	101	90	96	93	76	82
22	93	87	90	101	90	94	101	92	96	92	75	82
23	90	85	88	100	91	95	103	90	95	94	74	82
24	87	84	86	106	90	97	99	91	95	94	78	84
25	86	81	83	106	93	95	98	89	93	94	79	84
26	83	79	81	104	90	96	99	86	91	93	77	83
27	83	78	80	104	88	95	100	88	93	92	77	83
28	86	77	80	104	86	94	102	87	93	92	77	83
29	86	78	81	102	88	95	102	86	93	92	79	84
30	---	---	---	103	89	95	102	83	94	92	75	79
31	---	---	---	104	87	94	---	---	---	88	75	80
MONTH	99	77	89	106	80	94	108	83	93	106	74	87

0208062765 ROANOKE RIVER AT HALIFAX, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	95	78	83	105	63	71	104	74	86	72	66	68
2	98	78	86	98	62	70	93	69	77	92	63	68
3	98	77	85	99	59	69	92	65	74	83	63	69
4	98	76	82	101	60	68	103	72	79	87	67	73
5	90	74	79	103	62	71	99	69	78	94	69	73
6	94	79	85	102	66	73	107	71	79	96	68	73
7	92	75	81	100	63	71	107	71	79	97	70	75
8	93	78	83	103	67	73	107	74	83	96	70	76
9	99	76	86	104	66	73	105	78	83	85	66	73
10	98	77	86	101	67	75	107	75	82	80	71	76
11	---	---	---	101	69	81	107	78	83	86	70	74
12	---	---	---	104	72	83	102	73	79	87	69	74
13	91	76	82	105	67	79	95	69	75	82	71	75
14	90	78	82	97	68	78	77	70	72	83	71	74
15	---	---	---	99	78	86	83	74	79	90	72	75
16	---	---	---	98	77	87	95	71	81	96	73	76
17	---	---	---	101	77	87	78	69	73	88	71	74
18	104	76	82	101	71	81	82	69	73	84	73	76
19	109	76	83	101	75	86	81	67	72	97	75	78
20	114	79	85	101	70	80	94	70	74	97	75	79
21	---	---	---	105	69	76	93	70	76	88	76	80
22	---	---	---	103	70	77	93	72	77	96	79	84
23	---	---	---	86	69	74	103	70	76	95	78	83
24	---	---	---	88	66	72	105	73	79	91	76	82
25	---	---	---	100	73	81	106	72	78	99	77	81
26	---	---	---	96	69	78	106	68	77	96	77	81
27	---	---	---	104	76	85	105	68	77	88	74	79
28	---	---	---	92	70	77	103	68	76	---	---	---
29	98	67	72	94	69	77	100	71	81	100	75	80
30	95	64	71	104	70	82	96	62	77	86	76	79
31	---	---	---	101	69	80	87	62	73	---	---	---
MONTH	---	---	---	105	59	77	107	62	78	---	---	---

02081000 ROANOKE RIVER NEAR SCOTLAND NECK, NC

LOCATION.--Lat 36°12'33", long 77°23'02", Halifax County, Hydrologic Unit 03010107, on right bank 50 ft upstream from bridge on U.S. 258, 3 mi downstream from Bridgers Creek, and 5.8 mi north of Scotland Neck.

DRAINAGE AREA.--8,671 mi^2.

PERIOD OF RECORD.--March 1974 to current year. Daily mean discharges, October 1940 to September 1956.

GAGE.--Water-stage recorder. Datum of gage is 5.77 ft above NGVD of 1929. Satellite telemetry at station.

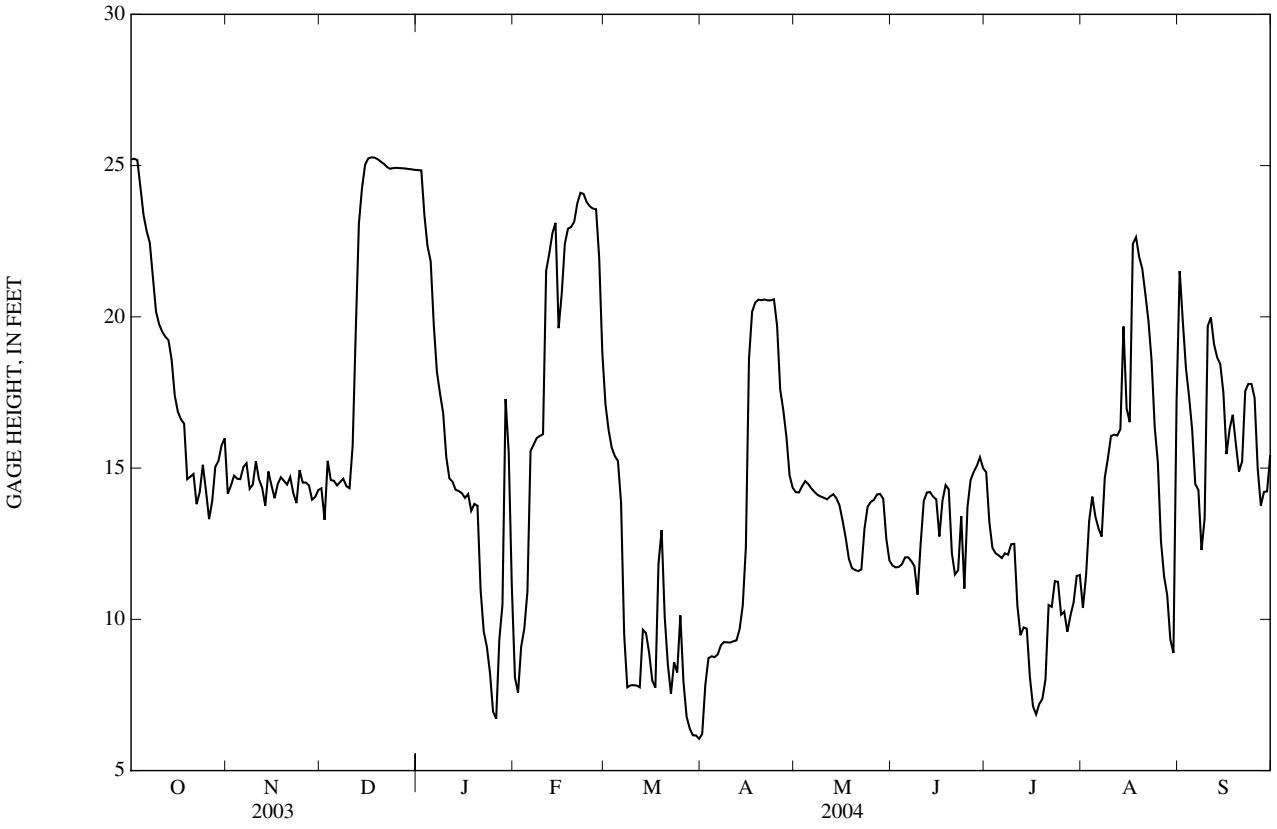
EXTREMES FOR PERIOD OF RECORD.--Maximum recorded gage height, 41.98 ft, Aug. 19, 1940; minimum not determined

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 25.29 ft, Dec. 17; minimum recorded gage height, 6.02 ft, Mar. 31.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.20	14.15	14.33	24.85	8.08	17.12	6.21	14.20	11.78	14.86	10.38	21.51
2	25.23	14.42	13.29	24.84	7.58	16.27	7.83	14.19	11.72	13.22	11.46	19.85
3	25.18	14.75	15.24	23.34	9.10	15.68	8.71	14.40	11.73	12.36	13.27	18.31
4	24.28	14.65	14.60	22.33	9.69	15.40	8.78	14.57	11.82	12.18	14.06	17.37
5	23.36	14.63	14.58	21.83	10.91	15.24	8.75	14.47	12.05	12.12	13.39	16.26
6	22.83	15.04	14.43	19.73	15.57	13.86	8.84	14.32	12.05	12.03	13.01	14.47
7	22.45	15.16	14.54	18.18	15.78	9.50	9.15	14.21	11.93	12.18	12.74	14.28
8	21.30	14.31	14.65	17.46	16.00	7.75	9.25	14.11	11.76	12.14	14.68	12.29
9	20.17	14.45	14.40	16.82	16.06	7.82	9.24	14.06	10.82	12.48	15.33	13.34
10	19.75	15.22	14.33	15.37	16.12	7.82	9.23	14.02	12.50	12.49	16.06	19.70
11	19.50	14.62	15.74	14.66	21.52	7.81	9.28	13.97	13.91	10.45	16.10	19.98
12	19.34	14.35	19.53	14.55	22.09	7.76	9.31	14.06	14.19	9.48	16.08	19.10
13	19.23	13.76	23.08	14.28	22.76	9.66	9.68	14.14	14.21	9.73	16.29	18.66
14	18.58	14.89	24.26	14.24	23.11	9.54	10.46	14.00	14.06	9.69	19.68	18.44
15	17.40	14.42	25.03	14.17	19.63	8.89	12.39	13.77	13.97	8.10	16.97	17.49
16	16.86	14.00	25.24	14.01	20.77	7.98	18.62	13.25	12.74	7.13	16.52	15.46
17	16.61	14.48	25.27	14.15	22.42	7.75	20.17	12.69	13.92	6.86	22.41	16.30
18	16.47	14.70	25.26	13.59	22.92	11.83	20.47	12.00	14.44	7.20	22.63	16.76
19	14.63	14.58	25.21	13.82	22.97	12.95	20.57	11.69	14.30	7.37	21.98	15.79
20	14.71	14.46	25.13	13.75	23.15	10.07	20.55	11.63	12.18	8.01	21.59	14.88
21	14.80	14.70	25.06	10.98	23.76	8.51	20.57	11.59	11.48	10.47	20.75	15.22
22	13.81	14.17	24.96	9.60	24.10	7.54	20.55	11.65	11.62	10.41	19.85	17.55
23	14.21	13.84	24.89	9.09	24.06	8.58	20.55	12.99	13.41	11.26	18.54	17.78
24	15.11	14.93	24.92	8.24	23.79	8.24	20.58	13.72	11.02	11.24	16.34	17.78
25	14.26	14.52	24.93	6.95	23.65	10.13	19.70	13.88	13.71	10.16	15.19	17.32
26	13.31	14.52	24.92	6.72	23.58	7.94	17.59	13.95	14.61	10.26	12.58	14.98
27	13.90	14.43	24.91	9.32	23.56	6.78	16.90	14.13	14.88	9.59	11.42	13.76
28	15.05	13.95	24.90	10.49	21.93	6.39	16.02	14.15	15.07	10.13	10.80	14.21
29	15.23	14.04	24.89	17.28	18.81	6.17	14.76	13.99	15.36	10.56	9.33	14.23
30	15.75	14.28	24.87	15.52	---	6.16	14.35	12.66	15.00	11.43	8.89	15.42
31	15.98	---	24.86	11.09	---	6.05	---	11.94	---	11.47	17.20	---
MEAN	18.21	14.48	21.04	14.88	19.09	9.78	13.97	13.50	13.07	10.55	15.66	16.62
MAX	25.23	15.22	25.27	24.85	24.10	17.12	20.58	14.57	15.36	14.86	22.63	21.51
MIN	13.31	13.76	13.29	6.72	7.58	6.05	6.21	11.59	10.82	6.86	8.89	12.29

02081000 ROANOKE RIVER NEAR SCOTLAND NECK, NC—Continued



02081022 ROANOKE RIVER NEAR OAK CITY, NC

LOCATION.--Lat 36°00'49", long 77°12'55", Martin County, Hydrologic Unit 03010107, on right bank at bridge on State Highway 11-42, and 5.2 mi northeast of Oak City.

DRAINAGE AREA.--8,810 mi^2.

ELEVATION RECORDS

PERIOD OF RECORD.--July 1987 to current year. Occasional measurements, water years 1968, 1969, 1972, 1975, 1978, 1980, 1983, 1986.

GAGE.--Water stage recorder. Datum of gage is at NGVD of 1929. Satellite telemetry at station.

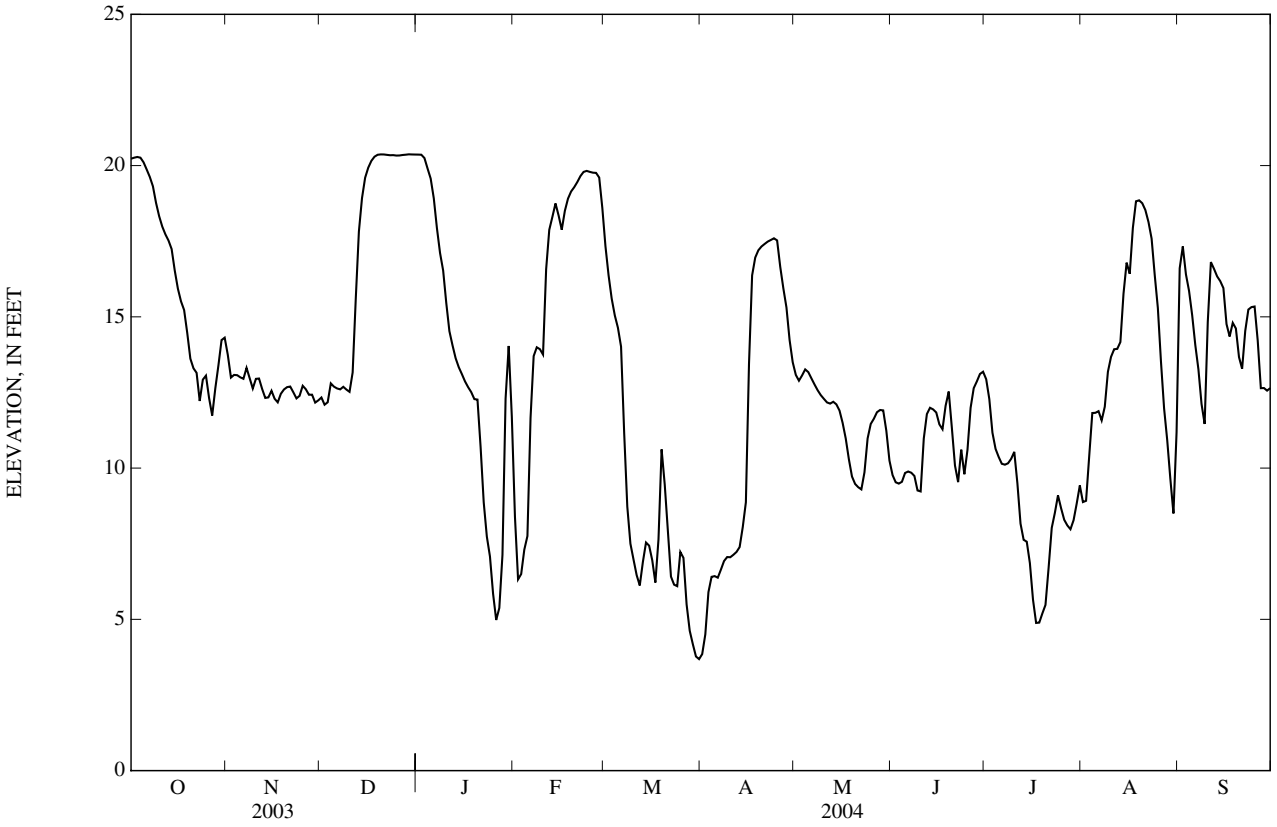
EXTREMES FOR PERIOD OF RECORD.--Maximum recorded elevation, 22.07 ft, Sept. 19, 1999; minimum recorded elevation, 2.31 ft, Nov. 5, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 20.40 ft, Dec. 19, 21; minimum recorded elevation, 3.64 ft, Mar. 31.

ELEVATION, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.23	13.74	12.33	20.36	8.39	17.33	3.85	13.08	9.77	12.94	8.88	16.61
2	20.26	12.99	12.10	20.36	6.32	16.37	4.50	12.89	9.53	12.28	8.92	17.33
3	20.28	13.08	12.18	20.25	6.50	15.60	5.90	13.06	9.49	11.17	10.38	16.41
4	20.26	13.07	12.80	19.90	7.30	15.05	6.40	13.26	9.55	10.64	11.82	15.86
5	20.11	13.00	12.69	19.57	7.75	14.64	6.43	13.17	9.84	10.37	11.83	15.06
6	19.87	12.95	12.63	18.92	11.66	14.01	6.38	12.97	9.89	10.14	11.88	14.07
7	19.63	13.31	12.60	17.93	13.70	11.16	6.65	12.76	9.85	10.11	11.58	13.27
8	19.32	12.97	12.69	17.11	13.99	8.73	6.93	12.57	9.74	10.16	12.03	12.12
9	18.77	12.63	12.60	16.53	13.93	7.50	7.06	12.41	9.26	10.31	13.18	11.46
10	18.33	12.95	12.52	15.46	13.75	6.98	7.05	12.29	9.23	10.54	13.68	14.83
11	17.98	12.96	13.16	14.53	16.57	6.46	7.13	12.17	10.97	9.50	13.93	16.81
12	17.73	12.62	15.60	14.06	17.88	6.12	7.23	12.13	11.79	8.16	13.94	16.59
13	17.52	12.32	17.82	13.63	18.30	6.90	7.39	12.19	11.99	7.63	14.17	16.34
14	17.24	12.34	18.93	13.33	18.75	7.54	8.05	12.11	11.94	7.57	15.76	16.18
15	16.53	12.56	19.60	13.11	18.35	7.44	8.87	11.90	11.84	6.86	16.79	15.95
16	15.93	12.29	19.93	12.87	17.88	6.95	13.44	11.49	11.45	5.65	16.42	14.76
17	15.51	12.17	20.16	12.68	18.50	6.22	16.37	10.98	11.28	4.88	17.94	14.35
18	15.22	12.46	20.29	12.51	18.91	7.65	16.96	10.29	12.06	4.89	18.82	14.80
19	14.47	12.60	20.36	12.28	19.14	10.62	17.20	9.72	12.53	5.20	18.85	14.62
20	13.62	12.68	20.37	12.26	19.29	9.46	17.32	9.48	11.32	5.48	18.76	13.67
21	13.30	12.70	20.37	10.70	19.46	7.93	17.41	9.37	10.09	6.71	18.53	13.28
22	13.15	12.50	20.35	8.87	19.65	6.41	17.49	9.30	9.54	8.02	18.13	14.53
23	12.22	12.30	20.34	7.74	19.79	6.15	17.54	9.86	10.61	8.52	17.58	15.24
24	12.92	12.39	20.35	7.08	19.82	6.10	17.60	10.98	9.80	9.10	16.38	15.32
25	13.06	12.72	20.33	5.85	19.79	7.23	17.53	11.46	10.60	8.67	15.29	15.34
26	12.32	12.61	20.33	4.98	19.77	7.03	16.66	11.63	11.99	8.29	13.52	14.21
27	11.74	12.43	20.35	5.38	19.76	5.50	15.94	11.85	12.64	8.10	11.97	12.64
28	12.64	12.43	20.36	7.13	19.60	4.62	15.31	11.92	12.86	7.98	10.93	12.65
29	13.40	12.17	20.37	12.30	18.60	4.18	14.24	11.91	13.11	8.28	9.65	12.56
30	14.23	12.24	20.37	14.04	---	3.77	13.50	11.23	13.19	8.83	8.50	12.64
31	14.31	---	20.36	11.70	---	3.69	---	10.25	---	9.43	11.19	---
MEAN	16.20	12.67	17.27	13.34	15.97	8.56	11.48	11.63	10.93	8.59	13.91	14.65
MAX	20.28	13.74	20.37	20.36	19.82	17.33	17.60	13.26	13.19	12.94	18.85	17.33
MIN	11.74	12.17	12.10	4.98	6.32	3.69	3.85	9.30	9.23	4.88	8.50	11.46

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued



02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to 1973, 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1998 to current year.
pH: March 1998 to current year.
WATER TEMPERATURE: March 1998 to current year.
DISSOLVED OXYGEN: March 1998 to current year.
DISSOLVED OXYGEN, PERCENT SATURATION: March 1998 to current year.

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

REMARKS.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources (DENR), Division of Water Resources, to define water-quality characteristics in the Roanoke River Basin below Roanoke Rapids Dam. Partial record site from October 1967 to September 1973. Dissolved oxygen, percent saturation, is computed using a barometric pressure of 760 mm Hg beginning October 1, 2000.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	5160, March 29, 2003	52, September 17, 1999
pH, standard units	8.1, July 1, 2, 2002	6.1, September 17, 1999, September 20, 21, 2003
WATER TEMPERATURE, °C	31.0, August 1, 2002	2.0, January 28, 2004
DISSOLVED OXYGEN, mg/L	15.5, January 6, 7, 1999	2.4, September 24, 2003
DISSOLVED OXYGEN, PERCENT SATURATION,%	123, January 6, 7, 1999	28, September 24, 2003

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	124, July 18, 19	78, August 17
pH, standard units	7.9, February 26, 27, 28	6.5, August 16, 17, 31, September 3, 4, 10
WATER TEMPERATURE, °C	29.9, July 15	2.0, January 28
DISSOLVED OXYGEN, mg/L	13.1, February 14, 15	4.4, October 9
DISSOLVED OXYGEN, PERCENT SATURATION,%	106, March 7	49, October 9

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	88	87	87	90	88	89	92	86	88	102	101	101
2	89	87	88	91	88	90	91	86	88	102	101	102
3	90	88	89	93	90	91	91	86	88	103	100	102
4	91	89	90	93	89	91	92	85	87	103	98	100
5	92	89	91	93	89	91	90	86	88	106	100	102
6	93	90	91	---	---	---	92	88	89	103	98	101
7	94	87	93	105	89	94	92	88	89	103	99	101
8	94	86	93	101	91	94	92	87	89	106	101	103
9	95	93	94	99	92	95	91	87	89	107	101	103
10	95	92	95	101	91	95	91	87	89	107	101	103
11	95	94	94	99	90	93	91	88	89	108	102	105
12	94	93	94	97	90	93	91	85	88	109	102	105
13	93	92	93	98	90	93	86	85	85	111	102	105
14	93	87	91	96	89	92	89	85	88	110	102	105
15	90	89	89	96	87	90	94	88	93	110	101	105
16	94	90	92	94	87	89	92	91	92	110	102	105
17	95	93	94	95	87	90	92	91	92	108	100	104
18	94	93	94	95	87	90	94	92	93	108	100	103
19	94	92	93	94	87	89	94	93	94	108	100	103
20	94	93	94	93	86	88	94	93	94	109	100	103
21	97	91	94	93	85	87	94	93	94	108	100	104
22	95	91	93	90	85	87	95	93	94	111	102	105
23	94	91	93	91	85	88	95	94	94	119	103	111
24	96	89	92	93	85	88	95	94	95	119	102	111
25	91	89	90	93	84	87	96	95	95	120	103	111
26	92	89	91	89	84	86	97	95	96	119	105	109
27	95	92	93	91	85	88	98	96	97	121	110	119
28	95	89	92	91	85	88	99	97	98	121	110	118
29	92	88	90	92	85	88	100	99	100	118	96	104
30	92	88	90	92	86	88	101	100	100	100	96	97
31	90	88	89	---	---	---	102	100	101	102	95	99
MONTH	97	86	92	---	---	---	102	85	92	121	95	105
		FEBRUARY			MARCH			APRIL			MAY	
1	107	96	101	83	80	82	115	113	114	103	102	102
2	112	98	101	84	81	83	113	112	113	105	102	104
3	116	112	115	---	---	---	113	108	110	105	103	104
4	114	101	110	---	---	---	108	104	106	106	103	105
5	110	100	105	---	---	---	106	104	105	104	102	103
6	110	95	102	---	---	---	106	104	105	104	102	103
7	100	92	94	---	---	---	107	104	106	105	103	104
8	97	87	91	---	---	---	107	104	106	106	104	105
9	98	88	91	---	---	---	111	106	109	106	104	105
10	96	90	92	---	---	---	111	108	110	107	105	106
11	98	90	93	122	110	117	112	109	111	107	105	106
12	92	90	91	123	111	118	112	109	111	107	105	106
13	93	90	92	122	110	117	113	110	111	107	105	106
14	93	91	92	120	109	114	111	110	111	107	106	107
15	92	90	91	117	105	110	110	103	107	107	105	106
16	98	88	89	115	104	107	104	96	102	108	106	107
17	99	90	92	111	107	109	97	92	95	108	106	107
18	92	90	91	111	107	109	92	91	92	108	107	107
19	92	90	91	110	100	104	92	89	91	109	108	108
20	92	90	91	106	100	103	91	89	90	110	109	109
21	93	88	91	107	101	102	95	91	93	110	109	109
22	92	91	92	108	102	105	96	95	96	111	109	110
23	93	92	92	112	102	106	98	95	97	111	109	110
24	93	91	92	112	107	110	98	96	97	110	108	109
25	94	92	93	111	103	108	99	97	97	108	106	107
26	95	92	93	112	102	106	101	97	99	108	107	108
27	92	87	89	108	104	106	101	97	100	108	106	107
28	87	79	82	113	106	110	102	99	99	108	107	107
29	80	79	80	115	113	113	102	99	100	108	107	107
30	---	---	---	114	113	114	103	100	101	108	107	107
31	---	---	---	115	113	114	---	---	---	111	108	108
MONTH	116	79	94	---	---	---	115	89	103	111	102	106

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	111	110	111	109	102	104	110	108	109	112	98	102
2	111	109	110	108	103	105	112	107	109	98	96	96
3	110	109	110	109	103	105	110	103	106	97	93	94
4	110	109	110	111	103	106	107	95	99	99	93	95
5	111	109	110	110	103	107	101	98	100	97	93	94
6	110	108	109	110	103	107	103	97	101	97	93	95
7	110	108	109	111	103	107	110	101	105	98	93	95
8	110	108	109	113	105	109	112	104	108	102	94	97
9	110	108	109	113	103	108	113	104	107	102	94	97
10	111	109	109	110	101	105	106	100	103	100	86	93
11	111	105	108	109	102	106	104	95	99	88	85	86
12	107	104	106	112	103	108	101	95	97	89	84	86
13	106	105	106	114	109	112	101	96	98	90	86	87
14	107	105	106	116	111	114	101	94	97	92	88	89
15	107	106	106	117	109	113	95	86	90	92	89	90
16	107	106	107	119	110	114	86	79	82	93	90	91
17	108	106	107	122	118	119	88	78	81	95	90	92
18	113	100	107	124	119	121	91	87	89	94	89	91
19	110	101	105	124	119	121	96	90	92	93	89	91
20	110	103	105	120	113	116	98	93	95	94	90	91
21	112	103	107	120	114	118	101	97	99	96	90	92
22	112	104	108	118	108	114	102	100	101	99	91	95
23	112	103	106	116	107	110	104	101	102	100	94	96
24	111	102	106	117	107	111	106	103	104	100	96	97
25	113	103	107	115	106	110	109	104	107	101	97	98
26	111	102	105	116	106	110	111	107	109	102	98	99
27	108	101	104	109	102	105	114	108	110	104	100	102
28	108	101	103	109	100	104	115	109	112	107	100	103
29	108	102	104	112	105	109	117	111	114	104	99	101
30	109	101	104	111	104	108	119	113	115	102	101	102
31	---	---	---	113	106	110	119	111	116	---	---	---
MONTH	113	100	107	124	100	110	119	78	102	112	84	95

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.4	7.3	7.3	7.0	6.8	6.9	7.0	6.9	6.9	6.7	6.6	6.6
2	7.5	7.4	7.4	6.9	6.8	6.8	7.0	6.9	6.9	6.7	6.6	6.6
3	7.6	7.4	7.5	6.9	6.8	6.8	7.0	6.8	6.9	6.6	6.5	6.5
4	7.6	7.4	7.5	6.9	6.7	6.8	6.9	6.7	6.8	6.6	6.5	6.6
5	7.5	7.4	7.4	6.8	6.7	6.7	7.0	6.7	6.8	6.7	6.6	6.6
6	7.4	7.3	7.4	6.9	6.7	6.8	7.0	6.8	6.9	6.8	6.7	6.7
7	7.4	7.3	7.4	6.9	6.7	6.8	7.0	6.8	6.9	6.8	6.7	6.7
8	7.4	7.3	7.4	7.1	6.9	7.0	7.1	6.9	7.0	6.8	6.7	6.7
9	7.4	7.3	7.3	7.0	6.8	6.9	7.1	7.0	7.0	6.8	6.7	6.7
10	7.4	7.2	7.3	6.9	6.8	6.8	7.2	7.0	7.1	6.8	6.5	6.7
11	7.3	7.2	7.2	6.8	6.8	6.8	7.2	7.1	7.1	6.8	6.7	6.7
12	7.3	7.2	7.2	6.8	6.8	6.8	7.2	7.1	7.1	6.8	6.6	6.7
13	7.3	7.2	7.2	6.9	6.8	6.8	7.2	7.0	7.1	6.7	6.7	6.7
14	7.3	7.2	7.2	6.9	6.8	6.9	7.1	7.0	7.1	6.8	6.7	6.7
15	7.3	7.2	7.2	6.9	6.8	6.9	7.1	6.7	6.9	6.8	6.7	6.8
16	7.3	7.1	7.2	6.9	6.9	6.9	6.8	6.5	6.6	6.8	6.8	6.8
17	7.2	7.1	7.1	6.9	6.9	6.9	6.8	6.5	6.6	6.8	6.8	6.8
18	7.1	7.0	7.1	6.9	6.9	6.9	6.9	6.8	6.9	6.9	6.8	6.9
19	7.1	7.0	7.1	7.0	6.9	6.9	6.9	6.8	6.9	6.9	6.8	6.8
20	7.1	7.0	7.1	6.9	6.8	6.9	6.9	6.8	6.9	6.8	6.8	6.8
21	7.2	7.1	7.1	7.0	6.9	6.9	6.9	6.8	6.9	6.9	6.8	6.8
22	7.2	7.0	7.1	7.1	6.9	7.0	6.9	6.8	6.9	7.0	6.8	6.9
23	7.1	7.0	7.0	7.1	7.0	7.0	6.9	6.8	6.9	7.0	6.9	7.0
24	7.1	7.0	7.0	7.1	7.0	7.0	6.8	6.8	6.8	7.0	6.9	6.9
25	7.1	7.0	7.0	7.0	6.9	7.0	6.9	6.8	6.9	7.0	6.9	7.0
26	7.1	7.0	7.0	7.0	6.9	6.9	6.9	6.9	6.9	7.0	6.9	7.0
27	7.0	7.0	7.0	6.9	6.8	6.9	7.0	6.9	6.9	7.0	6.9	7.0
28	7.0	6.9	7.0	6.9	6.8	6.8	7.0	6.9	6.9	7.1	6.9	7.0
29	7.0	6.9	6.9	7.0	6.8	6.9	7.0	6.9	6.9	7.0	7.0	7.0
30	7.0	6.9	6.9	6.9	6.8	6.9	7.0	6.9	6.9	7.0	7.0	7.0
31	---	---	---	7.0	6.9	6.9	7.0	6.5	6.8	---	---	---
MONTH	7.6	6.9	7.2	7.1	6.7	6.9	7.2	6.5	6.9	7.1	6.5	6.8

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.8	22.2	22.3	17.1	16.5	16.8	12.2	11.7	12.0	7.8	7.4	7.6
2	22.4	22.0	22.1	17.4	16.6	17.0	11.9	11.3	11.7	7.8	7.5	7.6
3	22.1	21.5	21.7	17.8	17.1	17.6	11.3	10.3	10.8	7.7	7.4	7.6
4	21.6	20.8	21.2	18.4	17.8	18.0	10.3	10.0	10.2	8.4	7.7	8.0
5	20.8	20.2	20.5	18.6	18.0	18.3	10.2	9.8	10.0	9.2	8.4	8.7
6	20.7	20.5	20.6	---	---	---	9.9	9.6	9.8	9.3	9.1	9.2
7	21.0	20.7	20.9	19.2	18.6	18.8	9.6	9.2	9.4	9.2	8.1	8.7
8	21.1	20.8	21.0	18.8	18.1	18.5	9.2	8.8	9.0	8.1	7.0	7.7
9	20.9	20.7	20.8	18.1	16.6	17.4	9.0	8.6	8.9	7.2	6.4	6.9
10	21.1	20.9	21.0	16.6	16.3	16.5	9.3	8.6	9.1	6.4	5.9	6.2
11	21.0	20.7	20.8	16.4	15.9	16.3	9.9	9.2	9.6	5.9	5.1	5.4
12	20.8	20.6	20.7	16.6	15.9	16.2	9.7	9.5	9.6	5.3	4.8	5.0
13	20.8	20.6	20.8	16.3	15.5	16.0	9.6	9.1	9.3	5.7	4.7	5.3
14	20.8	20.6	20.7	15.5	14.5	15.1	9.2	8.8	9.0	6.0	5.2	5.6
15	20.6	20.1	20.4	14.5	14.2	14.4	8.8	8.2	8.5	6.0	5.3	5.6
16	20.1	19.8	20.0	14.5	14.0	14.3	8.2	7.9	8.1	5.8	5.2	5.5
17	19.8	19.6	19.7	14.6	14.1	14.4	8.2	8.1	8.2	5.7	5.2	5.4
18	19.7	19.2	19.5	14.8	14.4	14.6	8.2	8.0	8.0	5.8	5.2	5.7
19	19.3	19.0	19.2	15.5	14.6	15.2	8.0	7.7	7.9	6.1	5.5	5.8
20	19.3	18.8	19.0	15.3	14.8	15.1	7.7	7.2	7.4	5.7	5.3	5.5
21	19.4	18.7	19.2	14.9	14.6	14.8	7.2	7.0	7.1	5.3	4.9	5.1
22	19.7	19.0	19.3	14.9	14.5	14.8	7.0	6.8	6.9	5.0	4.5	4.7
23	19.1	18.5	18.8	15.1	14.4	14.8	7.3	6.7	6.9	5.0	4.6	4.8
24	18.5	17.7	18.1	15.0	14.4	14.7	7.9	7.3	7.5	5.0	4.8	4.9
25	17.9	17.4	17.7	14.7	14.0	14.5	7.9	7.8	7.9	5.0	3.6	4.5
26	18.1	17.4	17.8	14.4	13.5	14.0	7.9	7.5	7.7	3.6	3.1	3.4
27	18.4	17.5	18.0	13.7	13.4	13.6	7.5	7.1	7.2	3.1	2.4	2.8
28	18.4	17.9	18.2	14.3	13.3	14.0	7.2	6.8	7.0	3.3	2.0	2.5
29	17.9	17.1	17.5	13.9	13.1	13.6	7.3	6.8	7.0	3.6	3.2	3.4
30	17.1	16.7	16.8	13.1	12.0	12.7	7.6	7.2	7.4	3.5	3.0	3.2
31	16.9	16.4	16.7	---	---	---	7.6	7.4	7.5	3.7	3.1	3.3
MONTH	22.8	16.4	19.7	---	---	---	12.2	6.7	8.6	9.3	2.0	5.7
		FEBRUARY			MARCH			APRIL			MAY	
1	3.2	2.8	3.0	6.7	5.8	6.2	13.7	12.5	13.0	18.9	18.1	18.5
2	3.6	2.8	3.2	7.7	6.4	7.1	13.0	12.3	12.7	19.2	18.3	18.7
3	4.0	3.1	3.6	8.3	7.2	7.8	12.9	12.3	12.6	18.8	18.0	18.5
4	4.7	3.7	4.1	9.1	8.0	8.6	13.0	12.3	12.7	18.5	18.0	18.2
5	4.7	4.1	4.4	10.1	8.9	9.5	12.8	12.1	12.6	18.4	18.1	18.3
6	4.9	4.1	4.5	10.9	9.7	10.3	13.1	12.1	12.7	18.9	18.4	18.6
7	5.5	4.9	5.3	11.1	10.4	10.7	13.8	12.2	13.0	19.7	18.5	19.1
8	5.7	5.3	5.5	11.2	10.7	10.9	14.7	12.9	13.7	20.4	19.5	19.9
9	5.5	4.8	5.1	11.5	10.5	10.9	15.4	13.8	14.6	21.5	19.5	20.6
10	5.0	4.7	4.8	11.0	9.5	10.5	15.2	14.5	14.9	21.0	20.1	20.5
11	5.2	4.7	5.1	9.9	9.3	9.6	15.2	14.3	14.7	21.9	20.2	21.2
12	5.0	4.6	4.7	10.5	9.3	9.9	15.1	13.8	14.3	22.8	21.6	22.1
13	4.7	4.4	4.6	10.7	9.9	10.2	13.9	13.1	13.5	22.7	21.6	22.2
14	4.6	4.5	4.5	11.0	10.1	10.6	13.8	13.2	13.6	23.0	22.3	22.6
15	4.9	4.4	4.6	11.0	10.1	10.4	14.0	13.0	13.5	23.6	22.7	23.1
16	5.0	4.7	4.8	11.0	10.5	10.7	13.9	13.4	13.6	23.9	23.0	23.5
17	4.8	4.4	4.5	11.2	10.2	10.8	14.0	13.1	13.5	24.4	23.2	23.8
18	4.6	4.2	4.4	10.6	10.0	10.3	14.8	13.5	14.1	24.4	23.5	23.9
19	4.9	4.4	4.6	10.5	9.6	10.1	15.7	14.8	15.1	24.5	23.4	23.8
20	5.4	4.6	5.0	11.1	10.1	10.6	16.4	15.2	15.7	24.5	23.1	23.8
21	6.0	5.3	5.6	11.6	11.0	11.3	16.9	16.4	16.6	25.5	24.2	24.8
22	6.1	5.7	5.9	11.7	10.7	11.2	17.4	16.5	16.9	25.5	24.4	25.0
23	6.3	5.8	6.0	11.7	10.5	11.0	17.9	17.0	17.4	25.5	23.9	24.6
24	6.3	6.0	6.1	10.8	10.3	10.6	17.9	17.4	17.7	24.7	23.9	24.2
25	6.2	5.9	6.0	12.1	10.5	11.2	17.8	17.5	17.7	26.6	24.0	25.8
26	6.0	5.5	5.7	13.2	11.1	12.1	18.1	17.6	17.8	26.9	26.1	26.5
27	5.6	5.1	5.3	13.8	12.7	13.3	18.6	18.0	18.4	26.5	26.0	26.3
28	5.3	5.0	5.1	15.6	13.7	14.6	18.5	17.8	18.1	26.9	26.0	26.4
29	5.8	5.2	5.5	15.0	13.9	14.5	18.5	17.8	18.2	26.5	26.0	26.2
30	---	---	---	14.4	13.5	14.0	18.5	17.7	18.1	26.0	25.0	25.5
31	---	---	---	14.2	13.6	13.9	---	---	---	25.4	24.6	24.9
MONTH	6.3	2.8	4.9	15.6	5.8	10.8	18.6	12.1	15.0	26.9	18.0	22.6

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.1	24.2	24.7	25.7	24.7	25.1	29.1	27.8	28.4	26.8	25.7	26.2
2	25.9	24.7	25.2	25.4	24.9	25.2	28.9	27.8	28.2	26.8	25.8	26.1
3	26.3	25.1	25.6	26.8	25.3	26.0	27.8	27.0	27.4	26.1	25.6	25.8
4	25.7	24.8	25.4	26.2	25.6	25.9	27.3	26.9	27.1	26.2	25.8	26.0
5	24.8	23.5	24.5	26.4	25.7	26.1	28.0	27.3	27.6	26.3	25.9	26.1
6	23.5	22.9	23.1	27.0	26.2	26.7	27.8	27.1	27.5	26.4	26.0	26.2
7	24.0	23.0	23.4	28.2	26.9	27.6	27.1	26.5	26.8	26.2	25.9	26.1
8	24.6	23.4	23.9	28.0	27.1	27.5	26.7	26.2	26.5	26.3	25.9	26.1
9	24.8	23.6	24.1	27.7	27.0	27.4	26.8	26.3	26.6	26.8	26.1	26.3
10	25.6	23.9	24.6	28.1	27.3	27.8	27.0	26.5	26.8	26.3	25.7	26.0
11	25.5	24.2	24.7	28.9	27.8	28.3	27.0	26.5	26.8	26.2	25.9	26.0
12	25.8	24.9	25.5	29.1	28.1	28.5	27.1	26.7	26.9	26.0	25.4	25.7
13	25.1	24.0	24.6	29.1	28.0	28.6	26.9	26.3	26.5	25.8	25.5	25.7
14	24.6	23.9	24.4	29.6	28.2	28.8	26.5	25.4	25.9	25.9	25.3	25.6
15	24.9	23.9	24.4	29.9	28.4	29.1	25.6	24.0	24.8	25.6	25.2	25.4
16	25.1	24.4	24.8	29.6	28.7	29.2	24.0	23.1	23.4	25.5	25.3	25.4
17	24.9	24.3	24.6	29.6	28.4	29.0	24.7	22.9	23.5	25.6	25.1	25.5
18	25.3	24.2	24.8	29.6	28.8	29.1	25.0	24.2	24.6	25.8	24.9	25.4
19	26.3	25.3	25.8	29.5	28.8	29.1	25.5	24.6	25.0	25.0	24.1	24.5
20	26.5	26.2	26.3	28.9	28.5	28.7	26.0	25.2	25.6	24.1	23.6	23.8
21	26.9	25.9	26.3	29.6	28.7	29.0	26.3	25.9	26.1	23.6	22.9	23.3
22	26.5	25.8	26.1	29.1	28.1	28.6	26.4	26.1	26.2	23.6	22.9	23.3
23	26.8	25.5	26.1	28.7	28.0	28.3	26.4	25.9	26.2	23.8	23.3	23.6
24	26.4	25.9	26.2	28.1	27.2	27.7	26.1	25.8	25.9	24.1	23.7	23.9
25	27.1	25.9	26.5	27.8	27.2	27.4	26.4	25.7	26.1	24.0	23.5	23.7
26	25.9	25.4	25.6	28.3	27.2	27.7	26.7	26.0	26.4	23.8	23.6	23.7
27	25.6	24.8	25.2	28.7	27.6	28.1	27.3	26.3	26.6	24.2	23.7	24.0
28	25.5	24.9	25.2	28.7	28.0	28.3	27.7	26.4	26.9	24.3	23.7	23.9
29	25.7	25.2	25.4	28.6	27.4	28.0	28.0	26.9	27.3	23.8	23.5	23.6
30	25.9	25.4	25.6	28.0	27.0	27.5	27.6	26.7	27.0	23.8	23.6	23.7
31	---	---	---	28.1	27.5	27.9	27.0	25.6	26.2	---	---	---
MONTH	27.1	22.9	25.1	29.9	24.7	27.8	29.1	22.9	26.3	26.8	22.9	25.0

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.7	5.2	5.5	7.6	7.1	7.4	9.2	8.7	9.0	11.2	10.8	11.0
2	5.7	5.4	5.6	7.5	7.0	7.3	9.4	9.1	9.2	11.3	10.9	11.1
3	6.0	5.5	5.7	7.7	7.0	7.3	9.8	9.2	9.5	11.3	10.5	10.9
4	6.0	5.2	5.8	7.4	6.9	7.1	10.2	9.7	9.9	10.7	10.2	10.4
5	5.2	4.7	4.8	7.5	6.9	7.2	10.2	9.8	10	10.7	10.2	10.5
6	5.0	4.7	4.9	---	---	---	9.9	9.8	9.8	10.7	9.9	10.2
7	5.2	5.0	5.1	7.5	7.2	7.3	10.0	9.7	9.9	10.5	10.1	10.3
8	5.3	4.7	5.2	7.4	7.2	7.3	10.3	9.9	10.1	10.9	10.2	10.6
9	4.8	4.4	4.6	7.7	7.2	7.4	10.4	10.1	10.2	11.3	10.7	11.0
10	5.3	4.8	5.1	7.9	7.5	7.7	10.5	10.1	10.3	11.3	10.9	11.1
11	5.5	5.2	5.4	8.0	7.4	7.7	10.3	9.9	10.1	11.7	11.2	11.5
12	5.8	5.4	5.5	7.6	7.4	7.5	10.0	9.5	9.8	12.0	11.5	11.8
13	5.8	5.6	5.7	7.8	7.4	7.6	10.3	9.8	10	11.9	11.5	11.8
14	5.9	5.5	5.7	8.0	7.7	7.8	10.4	10.2	10.3	11.8	11.5	11.6
15	5.8	5.4	5.5	8.2	7.8	8.0	10.3	10.0	10.1	11.9	11.5	11.7
16	5.9	5.4	5.6	8.3	8.0	8.1	10.4	10.2	10.3	11.9	11.5	11.7
17	6.2	5.7	6.0	8.3	8.1	8.2	10.4	10.2	10.3	11.9	11.4	11.6
18	6.4	6.0	6.2	8.5	8.2	8.3	10.4	10.2	10.3	11.9	11.5	11.6
19	6.6	6.2	6.4	8.4	8.0	8.2	10.6	10.2	10.3	11.7	11.4	11.5
20	6.5	6.2	6.3	8.2	7.9	8.0	10.7	10.3	10.5	12.0	11.4	11.7
21	6.4	6.2	6.3	8.0	7.8	7.9	10.8	10.5	10.6	12.1	11.6	11.8
22	6.8	6.2	6.3	8.2	7.9	8.0	11.0	10.6	10.8	11.8	11.5	11.7
23	6.7	6.2	6.4	8.3	8.0	8.1	11.1	10.8	10.9	11.8	11.6	11.7
24	6.8	6.4	6.6	8.2	7.8	8.1	11.0	10.7	10.8	12.0	11.6	11.8
25	7.0	6.6	6.7	8.3	8.0	8.2	10.9	10.6	10.7	12.0	11.6	11.8
26	6.9	6.6	6.7	8.3	8.0	8.1	11.0	10.6	10.8	12.3	11.6	11.9
27	7.2	6.6	6.7	8.4	8.1	8.2	11.2	10.8	11.0	12.3	11.8	12.0
28	7.2	6.6	6.8	8.4	8.2	8.2	11.2	10.9	11.1	12.7	12.1	12.5
29	7.5	6.8	7.0	8.5	8.2	8.3	11.2	10.9	11.0	12.7	12.3	12.4
30	7.2	6.7	6.9	8.7	8.4	8.6	11.1	10.8	10.9	12.8	12.5	12.7
31	7.3	6.7	7.1	---	---	---	11.2	10.8	10.9	12.9	12.4	12.6
MONTH	7.5	4.4	5.9	---	---	---	11.2	8.7	10.3	12.9	9.9	11.5
		FEBRUARY			MARCH			APRIL			MAY	
1	12.7	12.3	12.6	---	---	---	9.4	8.7	9.1	---	---	---
2	12.8	12.4	12.6	---	---	---	9.4	8.9	9.1	---	---	---
3	12.6	12.2	12.5	---	---	---	9.5	8.8	9.1	---	---	---
4	12.9	12.3	12.5	---	---	---	9.7	9.1	9.3	---	---	---
5	12.9	12.2	12.5	---	---	---	9.8	9.2	9.5	7.2	6.9	7.1
6	13.0	12.2	12.6	---	---	---	9.9	9.4	9.6	7.6	7.0	7.2
7	12.9	12.2	12.5	---	---	---	10.0	9.5	9.7	7.5	7.0	7.2
8	12.5	11.5	12.0	11.3	10.9	11.1	9.9	9.4	9.6	7.7	7.2	7.4
9	12.4	11.6	12.1	11.1	10.2	10.5	9.5	8.9	9.2	7.6	7.0	7.3
10	12.7	11.9	12.4	10.4	10.1	10.2	9.3	8.7	9.0	7.5	7.0	7.2
11	12.9	12.3	12.6	10.7	10.4	10.6	9.4	8.7	9.1	7.6	7.0	7.3
12	13.0	12.8	12.9	10.8	10.5	10.6	9.3	8.7	9.0	7.2	6.7	7.0
13	13.0	12.8	12.9	10.8	10.5	10.7	9.4	8.9	9.1	7.0	6.7	6.8
14	13.1	12.8	13.0	10.9	10.2	10.5	9.1	8.8	8.9	6.9	6.4	6.7
15	13.1	12.6	12.8	10.7	10.3	10.6	8.9	8.6	8.8	6.7	6.2	6.5
16	12.8	12.3	12.5	10.3	9.9	10.1	9.6	8.6	9.1	6.6	6.2	6.3
17	13.0	12.8	12.9	9.9	9.4	9.6	9.7	9.2	9.4	6.6	6.1	6.3
18	13.0	12.7	12.9	9.5	9.1	9.3	9.8	9.3	9.5	6.5	6.0	6.2
19	13.0	12.8	12.9	10.1	9.3	9.9	9.6	9.1	9.4	6.5	6.0	6.2
20	12.9	12.6	12.7	10.3	9.8	10.1	---	---	---	6.6	6.1	6.3
21	12.7	12.5	12.6	10.2	10.0	10.1	---	---	---	6.6	5.9	6.2
22	12.7	12.4	12.5	10.2	9.8	10.0	---	---	---	6.5	5.9	6.2
23	12.6	12.4	12.5	10.1	9.7	9.9	---	---	---	6.8	6.0	6.3
24	12.6	12.3	12.5	10.4	9.8	10.1	---	---	---	6.8	6.1	6.4
25	---	---	---	10.5	10.1	10.4	---	---	---	6.6	5.8	6.2
26	---	---	---	10.8	10.0	10.4	---	---	---	6.5	5.8	6.1
27	---	---	---	10.2	9.5	10.0	---	---	---	6.6	6.0	6.2
28	---	---	---	9.6	8.6	9.2	---	---	---	6.5	5.7	6.1
29	---	---	---	9.0	8.6	8.8	---	---	---	6.7	5.9	6.2
30	---	---	---	9.1	8.5	8.8	---	---	---	6.6	5.9	6.3
31	---	---	---	9.0	8.5	8.7	---	---	---	6.9	6.2	6.5
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.7	6.3	6.5	6.9	6.1	6.3	5.6	4.9	5.2	5.8	4.9	5.2
2	6.8	6.1	6.6	7.0	6.1	6.4	6.0	5.0	5.6	5.8	5.0	5.3
3	7.1	6.4	6.7	7.1	6.0	6.4	6.2	5.4	5.8	5.1	4.6	4.8
4	7.2	6.6	6.8	7.0	5.8	6.3	5.8	4.8	5.3	5.5	4.8	5.1
5	7.2	6.5	6.9	7.1	5.8	6.3	5.5	5.0	5.2	5.5	5.0	5.2
6	6.9	6.6	6.8	7.1	6.0	6.4	5.9	5.1	5.4	5.6	5.0	5.3
7	7.2	6.6	6.9	7.2	5.9	6.3	5.8	5.1	5.4	5.7	5.1	5.3
8	7.2	6.6	6.9	6.8	5.8	6.1	6.1	5.3	5.6	5.7	5.0	5.2
9	7.2	6.6	6.9	6.6	5.7	6.0	6.4	5.5	5.8	5.9	5.0	5.4
10	7.1	6.7	6.9	6.3	5.3	5.7	6.5	5.7	5.9	5.6	4.6	5.1
11	7.2	6.4	6.8	6.2	5.4	5.7	6.4	5.7	5.9	5.4	5.0	5.2
12	7.0	6.4	6.6	6.2	5.5	5.8	6.5	5.8	6.0	7.1	5.0	5.7
13	7.2	6.5	6.8	6.3	5.7	6.0	6.5	5.7	6.0	6.7	5.5	5.9
14	7.2	6.6	6.8	6.4	5.8	6.0	6.4	5.7	6.0	6.3	5.4	5.9
15	7.0	6.6	6.8	6.3	5.7	5.9	6.1	5.5	5.7	6.3	6.0	6.1
16	7.1	6.4	6.7	6.0	5.7	5.8	5.5	5.2	5.3	6.2	5.5	6.0
17	6.9	6.4	6.6	6.0	5.8	5.9	6.2	5.4	5.7	6.6	5.9	6.2
18	6.7	6.3	6.4	6.0	5.7	5.8	5.8	5.5	5.7	6.7	6.0	6.3
19	6.7	6.2	6.4	6.0	5.7	5.9	5.8	5.4	5.6	6.9	6.1	6.4
20	6.6	6.1	6.4	5.7	5.3	5.5	5.6	5.2	5.5	6.6	6.2	6.4
21	6.9	6.2	6.5	6.0	5.5	5.7	5.7	5.5	5.6	7.3	6.3	6.7
22	7.1	6.3	6.6	6.1	5.3	5.7	5.7	5.4	5.5	7.6	6.6	7.0
23	7.0	6.2	6.4	6.1	5.5	5.7	5.8	5.4	5.6	7.2	6.7	7.0
24	6.7	6.2	6.4	6.2	5.5	5.7	5.6	5.4	5.5	7.3	6.6	7.0
25	6.9	6.2	6.4	5.8	5.3	5.6	6.1	5.4	5.7	7.2	6.4	6.8
26	7.0	6.2	6.6	5.8	5.3	5.5	6.3	5.6	5.9	7.0	6.5	6.8
27	6.8	6.2	6.4	5.5	5.0	5.3	6.3	5.6	5.8	7.2	6.3	6.6
28	7.0	6.2	6.5	5.4	4.8	5.0	6.4	5.4	5.7	6.8	6.2	6.5
29	6.8	6.1	6.3	5.7	5.0	5.3	6.2	5.4	5.6	6.8	6.2	6.4
30	6.9	6.1	6.4	5.5	5.0	5.2	6.0	5.4	5.6	6.8	6.2	6.4
31	---	---	---	5.5	4.9	5.2	6.1	5.4	5.8	---	---	---
MONTH	7.2	6.1	6.6	7.2	4.8	5.8	6.5	4.8	5.6	7.6	4.6	6.0

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	66	61	63	79	73	77	86	81	84	94	90	92
2	66	62	64	78	73	76	87	84	85	95	91	93
3	68	63	65	81	73	77	88	83	86	95	88	92
4	68	58	65	78	73	75	91	87	88	91	86	88
5	58	52	54	80	74	76	90	87	89	92	87	90
6	56	52	54	---	---	---	88	86	87	93	86	89
7	58	56	57	81	77	78	88	85	87	90	87	88
8	60	53	58	80	77	78	89	86	88	92	86	89
9	54	49	52	81	76	78	90	87	88	94	88	90
10	60	54	57	81	77	79	92	88	89	92	88	90
11	62	58	60	82	75	79	91	87	89	93	89	91
12	65	60	62	78	75	76	88	84	86	95	90	93
13	65	63	64	80	75	77	90	85	87	95	91	93
14	66	61	64	80	77	78	90	88	89	95	91	93
15	64	60	61	80	77	78	89	85	87	96	92	93
16	65	60	62	82	78	80	88	87	87	95	91	93
17	68	63	66	82	79	81	88	87	88	95	90	92
18	70	66	68	84	81	82	88	86	87	95	91	93
19	72	67	69	84	80	81	89	86	87	94	91	93
20	71	67	68	82	78	80	89	86	87	96	91	93
21	70	67	69	79	77	78	89	87	88	95	91	93
22	74	67	69	81	78	79	91	87	89	93	89	91
23	72	67	69	83	78	80	92	88	90	93	90	91
24	72	68	70	82	77	80	92	89	91	94	91	92
25	73	69	71	82	78	81	92	89	90	94	88	91
26	73	69	71	81	77	79	92	89	90	92	88	90
27	76	70	71	81	78	79	93	89	91	91	87	89
28	77	70	72	82	79	80	93	90	91	94	89	92
29	79	72	73	82	79	80	93	90	91	96	92	94
30	74	69	71	83	80	81	93	90	91	96	93	95
31	76	69	73	---	---	---	94	90	91	98	93	95
MONTH	79	49	65	---	---	---	94	81	88	98	86	92
		FEBRUARY			MARCH			APRIL			MAY	
1	95	91	94	---	---	---	90	83	87	---	---	---
2	97	92	94	---	---	---	89	84	86	---	---	---
3	96	91	94	---	---	---	90	83	86	---	---	---
4	100	94	96	---	---	---	92	85	88	---	---	---
5	100	94	97	---	---	---	93	86	90	77	73	75
6	101	94	98	---	---	---	94	88	91	82	75	78
7	102	97	99	---	---	---	97	89	92	82	75	78
8	99	91	95	103	99	101	97	89	93	86	79	81
9	97	92	95	100	93	95	95	86	90	86	79	82
10	99	93	97	93	90	92	93	86	89	84	77	80
11	101	97	99	94	91	93	94	86	89	87	78	82
12	101	99	100	95	93	94	93	85	88	84	77	81
13	101	99	100	97	94	95	91	85	88	81	76	79
14	102	99	101	99	91	95	88	84	86	80	74	77
15	102	99	100	96	94	95	86	82	84	79	73	76
16	100	96	97	94	89	91	93	83	87	78	73	75
17	101	99	100	90	84	87	94	88	91	79	72	75
18	101	98	99	85	81	83	95	90	93	78	71	73
19	101	99	100	91	82	88	96	91	93	78	71	74
20	101	98	100	94	87	91	---	---	---	79	71	75
21	102	99	100	94	92	93	---	---	---	81	72	75
22	102	99	101	93	89	91	---	---	---	80	71	75
23	102	99	101	91	88	90	---	---	---	83	72	77
24	102	99	101	94	88	91	---	---	---	82	73	76
25	---	---	---	97	93	95	---	---	---	82	72	76
26	---	---	---	102	92	97	---	---	---	81	72	76
27	---	---	---	99	92	96	---	---	---	82	74	78
28	---	---	---	94	85	91	---	---	---	81	71	77
29	---	---	---	89	84	87	---	---	---	83	73	77
30	---	---	---	89	82	86	---	---	---	81	73	77
31	---	---	---	88	82	85	---	---	---	84	75	79
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

02081022 ROANOKE RIVER NEAR OAK CITY, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	82	75	79	85	74	77	73	63	68	73	60	65
2	84	74	80	85	74	78	78	64	72	73	62	65
3	88	78	83	89	74	79	79	68	73	63	56	60
4	88	80	84	87	71	77	73	61	67	68	59	63
5	87	78	82	88	71	78	70	63	66	68	62	64
6	81	77	79	89	74	80	75	65	69	70	62	66
7	86	77	81	91	76	81	73	64	68	71	63	65
8	87	79	82	86	74	78	76	66	70	71	62	65
9	87	78	82	83	73	76	80	68	72	74	62	67
10	87	80	83	81	68	73	82	71	74	70	57	63
11	87	78	82	80	69	73	80	71	74	67	62	64
12	86	78	81	81	71	75	82	73	76	87	61	70
13	87	78	82	82	73	77	82	71	75	83	68	72
14	87	79	82	84	75	78	80	70	74	77	66	73
15	84	79	82	83	74	77	75	66	68	77	73	75
16	86	77	82	79	74	76	66	61	63	76	67	73
17	83	77	80	78	75	76	75	63	67	81	72	76
18	82	75	78	78	74	77	70	66	69	82	73	77
19	82	76	79	78	74	77	70	65	68	84	73	77
20	82	76	79	74	69	71	69	63	67	79	74	76
21	87	77	81	79	72	75	71	68	69	86	74	79
22	89	78	81	79	68	73	71	67	69	89	77	83
23	88	77	79	79	71	74	72	67	70	85	79	83
24	83	77	80	80	70	73	69	67	68	87	79	83
25	87	77	80	74	67	71	76	66	71	86	76	81
26	86	76	81	75	67	70	79	70	73	83	77	80
27	83	75	78	71	65	68	79	70	73	86	75	79
28	85	76	79	70	62	65	81	67	72	82	74	77
29	83	74	77	73	63	68	79	68	72	80	73	76
30	85	75	78	71	63	66	75	68	71	81	73	76
31	---	---	---	71	63	66	76	66	72	---	---	---
MONTH	89	74	81	91	62	74	82	61	70	89	56	72

02081028 ROANOKE RIVER AT HAMILTON, NC

LOCATION.--Lat 35°56'51", long 77°12'09", Martin County, Hydrologic Unit 03010107, on downstream side of public boat ramp, 0.5 mi east of Hamilton.

DRAINAGE AREA.--8,890 mi^2.

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

GAGE.--Water stage recorder. Datum of gage is NGVD of 1929. Satellite telemetry at station.

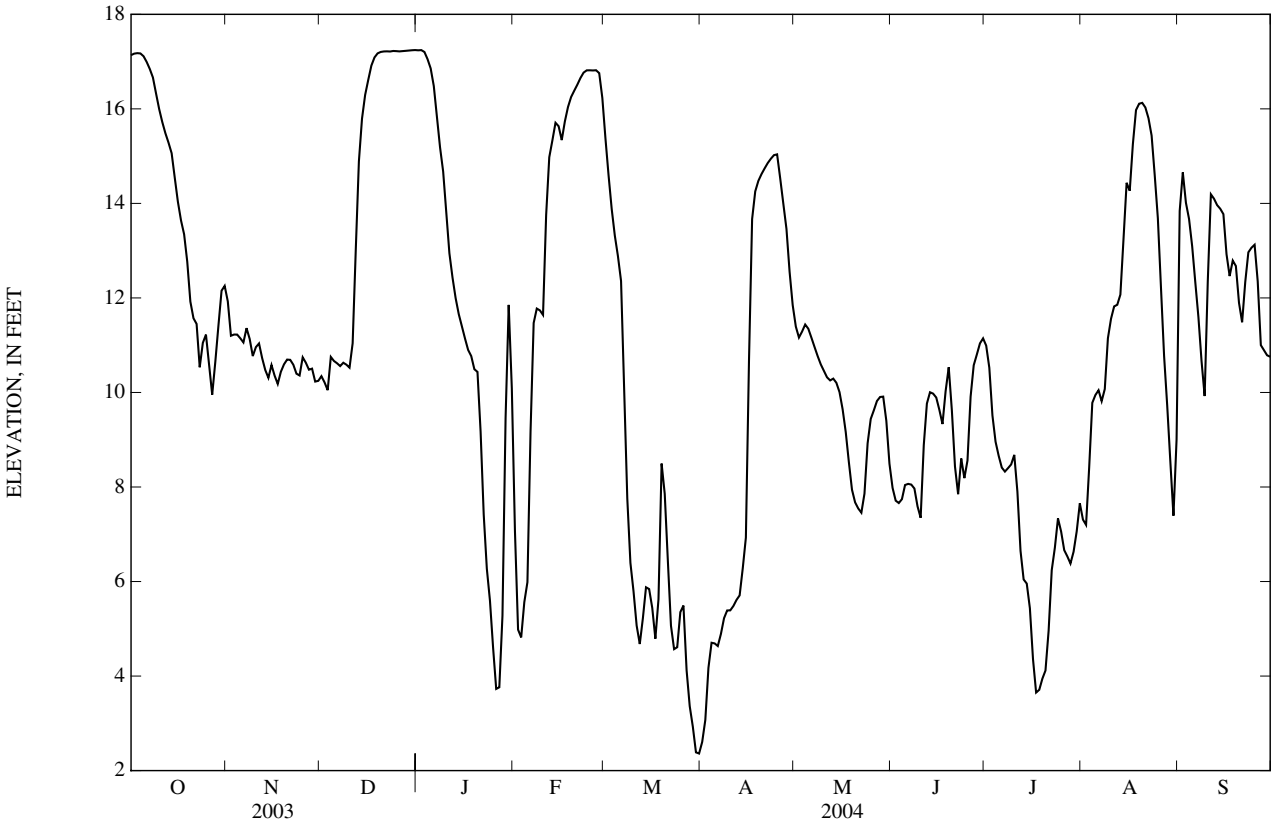
EXTREMES FOR PERIOD OF RECORD.--Maximum recorded elevation, 18.17 ft, Sept. 19, 1999; minimum recorded elevation 1.33 ft, Jan. 4, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 17.28 ft, Dec. 31; minimum recorded elevation, 2.24 ft, Mar. 31.

ELEVATION, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.14	11.93	10.34	17.24	7.07	15.37	2.61	11.39	7.98	10.99	7.31	13.84
2	17.17	11.20	10.21	17.24	4.98	14.59	3.07	11.16	7.71	10.52	7.20	14.65
3	17.18	11.23	10.05	17.20	4.82	13.88	4.17	11.29	7.66	9.51	8.42	14.01
4	17.17	11.22	10.75	17.05	5.56	13.32	4.70	11.44	7.74	8.96	9.78	13.67
5	17.11	11.15	10.67	16.86	5.99	12.88	4.69	11.35	8.04	8.66	9.95	13.09
6	16.99	11.06	10.62	16.48	9.18	12.36	4.64	11.16	8.07	8.41	10.05	12.33
7	16.84	11.36	10.56	15.83	11.47	10.04	4.89	10.96	8.05	8.33	9.82	11.60
8	16.66	11.13	10.63	15.19	11.78	7.75	5.22	10.77	7.97	8.40	10.07	10.67
9	16.33	10.77	10.59	14.67	11.74	6.40	5.39	10.59	7.59	8.48	11.15	9.92
10	16.00	10.96	10.52	13.81	11.64	5.79	5.39	10.46	7.35	8.68	11.56	12.35
11	15.72	11.04	11.04	12.95	13.75	5.07	5.48	10.32	8.89	7.90	11.82	14.19
12	15.48	10.73	13.02	12.43	14.98	4.68	5.61	10.26	9.77	6.65	11.86	14.10
13	15.28	10.48	14.89	12.00	15.33	5.23	5.71	10.29	10.00	6.04	12.07	13.96
14	15.06	10.31	15.79	11.66	15.71	5.88	6.28	10.20	9.98	5.96	13.25	13.89
15	14.54	10.58	16.29	11.40	15.63	5.84	6.93	10.01	9.89	5.44	14.44	13.77
16	14.04	10.36	16.61	11.14	15.34	5.44	10.68	9.64	9.63	4.36	14.27	12.93
17	13.64	10.18	16.92	10.90	15.73	4.79	13.67	9.16	9.33	3.65	15.25	12.46
18	13.35	10.44	17.09	10.77	16.04	5.63	14.25	8.53	10.03	3.71	15.97	12.79
19	12.77	10.59	17.17	10.49	16.25	8.50	14.48	7.94	10.53	3.95	16.11	12.68
20	11.92	10.70	17.20	10.43	16.38	7.86	14.62	7.68	9.62	4.12	16.13	11.90
21	11.57	10.69	17.21	9.17	16.51	6.44	14.74	7.55	8.44	4.96	16.03	11.49
22	11.45	10.59	17.22	7.42	16.65	5.07	14.85	7.46	7.85	6.24	15.80	12.33
23	10.53	10.40	17.21	6.27	16.77	4.57	14.94	7.86	8.60	6.72	15.43	12.97
24	11.05	10.36	17.22	5.60	16.81	4.61	15.02	8.92	8.19	7.34	14.60	13.06
25	11.22	10.74	17.22	4.60	16.82	5.35	15.04	9.44	8.56	7.06	13.69	13.12
26	10.59	10.63	17.22	3.73	16.81	5.49	14.53	9.62	9.91	6.66	12.22	12.35
27	9.95	10.48	17.22	3.76	16.82	4.12	13.99	9.82	10.58	6.53	10.77	11.00
28	10.65	10.50	17.23	5.28	16.76	3.36	13.46	9.90	10.80	6.38	9.72	10.89
29	11.42	10.23	17.23	9.46	16.23	2.93	12.56	9.91	11.04	6.63	8.54	10.79
30	12.15	10.25	17.24	11.85	---	2.39	11.85	9.40	11.14	7.06	7.39	10.76
31	12.25	---	17.24	10.09	---	2.36	---	8.49	---	7.66	9.00	---
MEAN	13.97	10.74	14.53	11.39	13.43	7.03	9.45	9.77	9.03	6.97	11.92	12.59
MAX	17.18	11.93	17.24	17.24	16.82	15.37	15.04	11.44	11.14	10.99	16.13	14.65
MIN	9.95	10.18	10.05	3.73	4.82	2.36	2.61	7.46	7.35	3.65	7.20	9.92

02081028 ROANOKE RIVER AT HAMILTON, NC—Continued



02081054 ROANOKE RIVER AT WILLIAMSTON, NC

LOCATION.--Lat 35°51'35", long 77°02'25", Martin County, Hydrologic Unit 03010107, on right bank 175 ft upstream of U.S. Highway 17 bridge, .75 mi above Sweetwater Creek, and 1 mi northeast of Williamston.

DRAINAGE AREA.--9,070 mi^2.

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

GAGE.--Water stage recorder. Datum of gage is 2.86 ft above NGVD of 1929. Satellite telemetry at station.

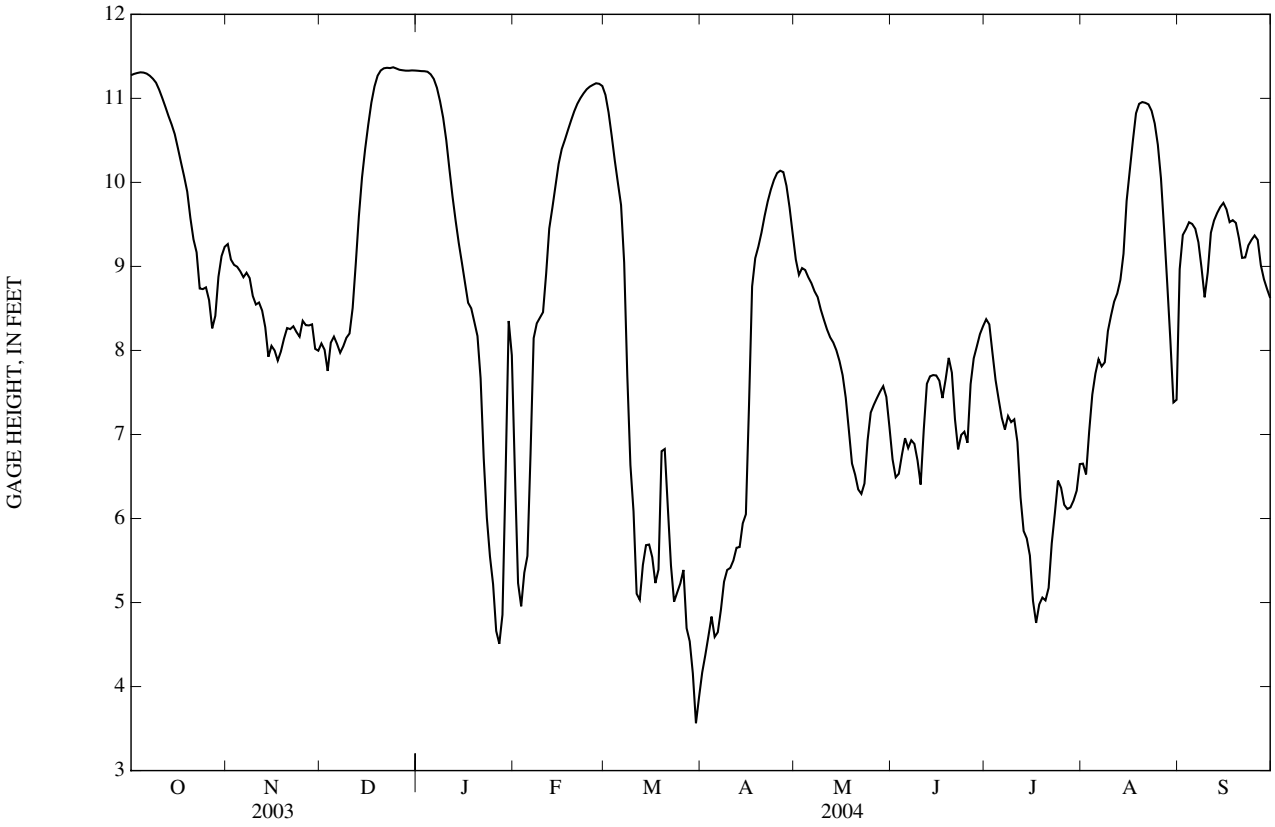
EXTREMES FOR PERIOD OF RECORD.--Maximum recorded gage height, 11.91 ft, Apr. 27, 2003; minimum recorded gage height, -0.35 ft, Jan. 4, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 11.39 ft, Dec. 24; minimum recorded gage height, 3.48 ft, Mar. 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.28	9.27	8.08	11.33	6.53	11.04	4.17	9.08	6.70	8.37	6.65	8.97
2	11.29	9.08	8.01	11.32	5.23	10.83	4.38	8.90	6.49	8.31	6.52	9.37
3	11.30	9.02	7.76	11.32	4.96	10.55	4.60	8.98	6.53	7.97	7.04	9.44
4	11.31	9.00	8.09	11.32	5.35	10.26	4.83	8.96	6.76	7.65	7.47	9.53
5	11.31	8.94	8.16	11.29	5.55	9.99	4.59	8.87	6.96	7.42	7.73	9.51
6	11.29	8.87	8.08	11.23	6.77	9.73	4.65	8.80	6.84	7.20	7.89	9.45
7	11.27	8.92	7.97	11.13	8.15	9.04	4.91	8.70	6.93	7.06	7.81	9.29
8	11.23	8.86	8.05	10.97	8.32	7.70	5.25	8.63	6.89	7.22	7.86	8.98
9	11.19	8.65	8.15	10.77	8.39	6.64	5.39	8.49	6.69	7.15	8.23	8.63
10	11.10	8.55	8.20	10.50	8.46	6.08	5.41	8.36	6.40	7.18	8.42	8.93
11	11.00	8.57	8.51	10.16	8.91	5.10	5.50	8.25	7.06	6.91	8.58	9.40
12	10.90	8.47	9.03	9.83	9.45	5.03	5.65	8.16	7.60	6.25	8.68	9.55
13	10.79	8.28	9.60	9.54	9.70	5.45	5.66	8.09	7.69	5.85	8.84	9.63
14	10.69	7.93	10.06	9.28	9.96	5.68	5.94	8.00	7.71	5.76	9.15	9.71
15	10.57	8.05	10.40	9.05	10.22	5.69	6.05	7.87	7.70	5.56	9.78	9.76
16	10.41	8.00	10.69	8.81	10.40	5.54	7.34	7.71	7.64	5.02	10.14	9.68
17	10.24	7.88	10.95	8.57	10.51	5.23	8.76	7.44	7.43	4.76	10.49	9.53
18	10.07	7.99	11.14	8.50	10.62	5.39	9.10	7.05	7.65	4.98	10.82	9.55
19	9.89	8.14	11.27	8.34	10.74	6.80	9.24	6.65	7.91	5.06	10.93	9.52
20	9.58	8.27	11.33	8.17	10.85	6.83	9.40	6.52	7.73	5.03	10.96	9.33
21	9.32	8.25	11.36	7.67	10.94	6.13	9.60	6.35	7.18	5.17	10.95	9.10
22	9.17	8.29	11.36	6.72	11.00	5.44	9.77	6.29	6.82	5.70	10.93	9.11
23	8.74	8.22	11.36	6.01	11.06	5.01	9.92	6.42	6.99	6.06	10.85	9.25
24	8.73	8.16	11.37	5.55	11.11	5.12	10.03	6.93	7.03	6.45	10.70	9.32
25	8.75	8.35	11.36	5.22	11.14	5.23	10.11	7.26	6.90	6.36	10.45	9.37
26	8.60	8.30	11.34	4.66	11.16	5.39	10.14	7.35	7.60	6.16	10.05	9.32
27	8.26	8.30	11.33	4.51	11.18	4.69	10.12	7.43	7.91	6.11	9.44	9.01
28	8.41	8.31	11.33	4.85	11.17	4.54	9.96	7.51	8.05	6.13	8.80	8.85
29	8.88	8.02	11.33	6.51	11.15	4.16	9.70	7.57	8.20	6.21	8.13	8.73
30	9.12	8.00	11.33	8.35	---	3.56	9.39	7.45	8.29	6.33	7.38	8.62
31	9.23	---	11.33	7.94	---	3.88	---	7.09	---	6.65	7.41	---
MEAN	10.13	8.43	9.95	8.69	9.28	6.51	7.32	7.78	7.28	6.39	9.00	9.28
MAX	11.31	9.27	11.37	11.33	11.18	11.04	10.14	9.08	8.29	8.37	10.96	9.76
MIN	8.26	7.88	7.76	4.51	4.96	3.56	4.17	6.29	6.40	4.76	6.52	8.62

02081054 ROANOKE RIVER AT WILLIAMSTON, NC—Continued



02081094 ROANOKE RIVER AT JAMESVILLE, NC

LOCATION.--Lat 35°48'47", long 76°53'34", Martin County, Hydrologic Unit 03010107, at private pier on right bank, 50 ft downstream of boat ramp at end of Water Street, approximately 19.2 mi upstream from mouth, and 0.5 mi northeast of Jamesville.

DRAINAGE AREA.--9,250 mi^2.

TIDAL-ELEVATION RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Satellite telemetry at station.

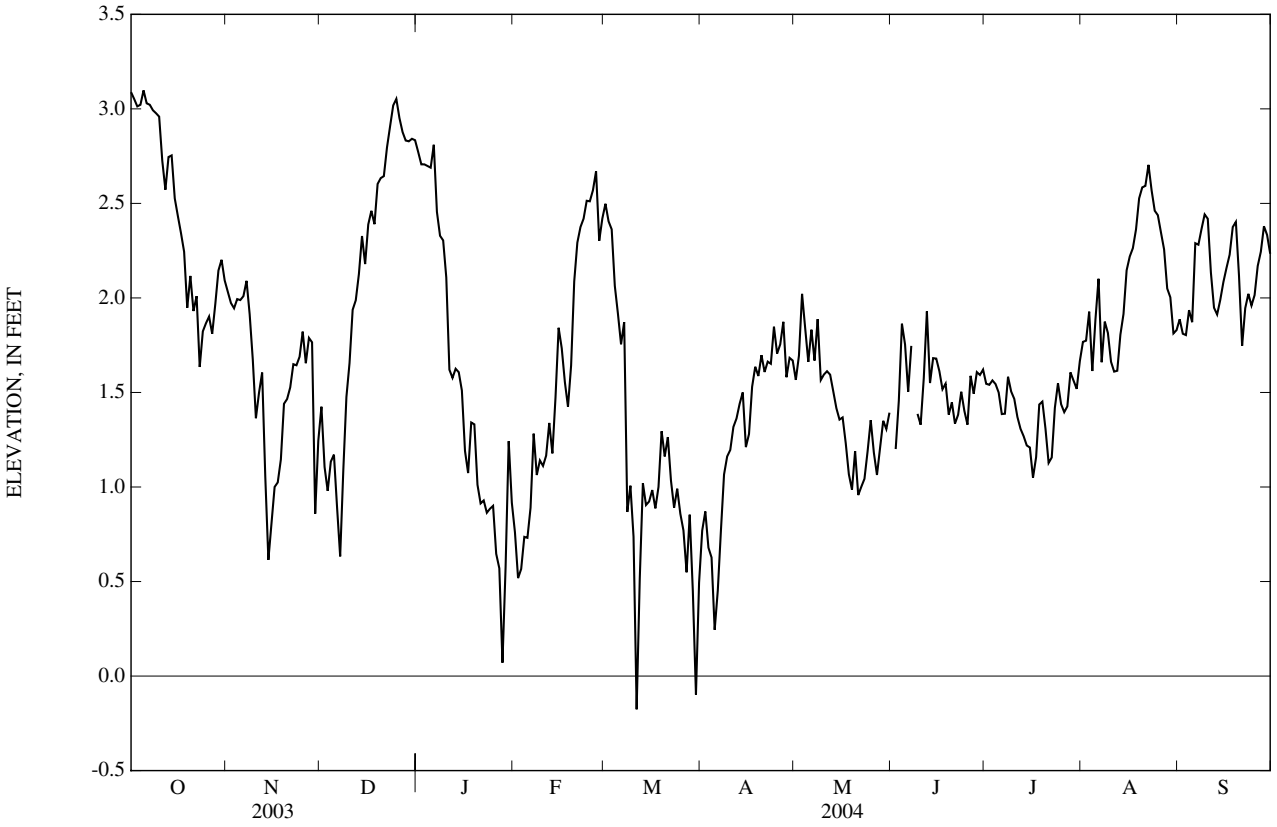
EXTREMES FOR PERIOD OF RECORD.--Maximum recorded elevation, 5.87 ft, Sept. 18, 19, 1999; minimum recorded elevation, -1.14 ft, Sept. 1, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 3.13 ft, Oct. 5; minimum recorded elevation, -0.47 ft, Jan. 28.

ELEVATION, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.09	2.03	1.42	2.77	0.76	2.50	0.77	1.57	---	1.55	1.77	1.89
2	3.05	1.97	1.11	2.71	0.52	2.41	0.87	1.69	1.20	1.54	1.77	1.81
3	3.01	1.95	0.98	2.71	0.57	2.36	0.68	2.02	1.46	1.56	1.93	1.80
4	3.02	1.99	1.13	2.70	0.74	2.06	0.63	1.84	1.86	1.54	1.61	1.94
5	3.10	1.99	1.17	2.69	0.73	1.92	0.24	1.66	1.75	1.50	1.88	1.87
6	3.03	2.01	0.89	2.81	0.89	1.75	0.45	1.83	1.50	1.39	2.10	2.29
7	3.02	2.09	0.63	2.46	1.28	1.87	0.77	1.67	1.75	1.39	1.66	2.28
8	2.99	1.91	1.09	2.33	1.06	0.87	1.07	1.89	---	1.58	1.87	2.36
9	2.98	1.67	1.48	2.30	1.14	1.01	1.16	1.57	1.39	1.51	1.81	2.44
10	2.96	1.36	1.66	2.11	1.11	0.74	1.20	1.59	1.33	1.47	1.66	2.42
11	2.73	1.50	1.94	1.62	1.17	-0.18	1.32	1.61	1.58	1.37	1.61	2.13
12	2.57	1.61	1.99	1.58	1.34	0.52	1.36	1.59	1.93	1.31	1.61	1.95
13	2.75	1.06	2.13	1.63	1.18	1.02	1.44	1.51	1.55	1.27	1.81	1.91
14	2.75	0.61	2.33	1.61	1.47	0.90	1.50	1.42	1.68	1.22	1.92	1.99
15	2.53	0.81	2.18	1.51	1.84	0.92	1.21	1.36	1.68	1.21	2.15	2.08
16	2.43	1.00	2.39	1.19	1.73	0.98	1.28	1.37	1.61	1.05	2.22	2.16
17	2.34	1.02	2.46	1.07	1.56	0.89	1.53	1.23	1.52	1.16	2.26	2.23
18	2.24	1.15	2.39	1.34	1.42	1.00	1.64	1.07	1.55	1.44	2.36	2.37
19	1.95	1.44	2.60	1.33	1.64	1.29	1.59	0.99	1.38	1.45	2.53	2.40
20	2.12	1.47	2.63	1.01	2.09	1.16	1.70	1.19	1.45	1.31	2.58	2.12
21	1.93	1.53	2.64	0.91	2.29	1.26	1.61	0.96	1.34	1.13	2.59	1.75
22	2.01	1.65	2.80	0.93	2.37	1.03	1.66	1.00	1.38	1.16	2.70	1.95
23	1.63	1.64	2.91	0.86	2.42	0.89	1.65	1.04	1.50	1.42	2.57	2.02
24	1.82	1.69	3.02	0.88	2.51	0.99	1.85	1.19	1.40	1.55	2.46	1.96
25	1.87	1.82	3.05	0.90	2.51	0.86	1.71	1.35	1.33	1.44	2.44	2.01
26	1.90	1.65	2.95	0.65	2.57	0.77	1.75	1.18	1.59	1.40	2.35	2.17
27	1.81	1.79	2.88	0.57	2.67	0.55	1.87	1.06	1.49	1.43	2.26	2.24
28	1.97	1.77	2.83	0.07	2.30	0.85	1.58	1.21	1.61	1.61	2.05	2.38
29	2.14	0.86	2.83	0.58	2.42	0.45	1.68	1.35	1.59	1.56	2.00	2.33
30	2.20	1.24	2.84	1.24	---	-0.10	1.67	1.31	1.62	1.52	1.81	2.23
31	2.09	---	2.83	0.92	---	0.49	---	1.39	---	1.67	1.83	---
MEAN	2.45	1.54	2.13	1.55	1.60	1.10	1.31	1.41	---	1.41	2.07	2.12
MAX	3.10	2.09	3.05	2.81	2.67	2.50	1.87	2.02	---	1.67	2.70	2.44
MIN	1.63	0.61	0.63	0.07	0.52	-0.18	0.24	0.96	---	1.05	1.61	1.75

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued



02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955 to 1967, 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to September 1967, March 1998 to current year
pH: March 1998 to current year.
WATER TEMPERATURE: October 1955 to September 1967, March 1998 to current year.
DISSOLVED OXYGEN: March 1998 to current year.
DISSOLVED OXYGEN, PERCENT SATURATION: March 1998 to current year.

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

REMARKS.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources (DENR), Division of Water Resources, to define water-quality characteristics in the Roanoke River Basin below Roanoke Rapids Dam. Dissolved oxygen, percent saturation, is computed using a barometric pressure of 760 mm Hg beginning October 1, 2000. Dissolved oxygen, minimum extremes are reported only as <1.0 mg/L. Dissolved oxygen, percent saturation, minimum extremes are reported only as <10%.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	182, April 11, 1999	36, September 19-21, 1999
pH, standard units	7.7, June 14, 15, 16, 17, 2002	5.6, May 3, 1998, September 18, 19, 1999
WATER TEMPERATURE, °C	31.4, August 3, 2002	2.2, January 5, 6, 2001, January 28, 29, 2003
DISSOLVED OXYGEN, mg/L	14.3, January 8, 1999	<1.0, September 21-30, 2003
DISSOLVED OXYGEN, PERCENT SATURATION,%	112, January 8, 1999	<10, September 21-30, 2003

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	122, July 22	74, August 18
pH, standard units	7.5, February 13, 14, April 19, 20	6.5, on several days during the year
WATER TEMPERATURE, °C	29.7, July 15, 22	2.5, January 30
DISSOLVED OXYGEN, mg/L	12.9, January 31, February 1	1.0, October 1
DISSOLVED OXYGEN, PERCENT SATURATION,%	105, March 4	11, October 1

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	91	90	91	93	89	91	104	97	100	95	93	94
2	91	90	90	94	89	92	104	98	101	96	94	95
3	91	89	89	95	91	93	103	99	100	97	95	96
4	89	88	89	98	92	94	103	98	100	97	96	97
5	89	87	88	100	92	95	105	98	101	98	97	97
6	89	88	89	100	93	95	104	96	99	97	95	96
7	90	89	90	101	93	96	103	98	100	96	95	95
8	91	90	90	101	94	97	103	98	100	96	95	95
9	92	90	91	102	94	96	103	98	100	97	95	96
10	93	91	92	99	93	95	107	97	99	97	95	96
11	94	92	93	99	94	97	101	97	99	98	95	96
12	94	93	93	99	94	97	100	95	97	99	96	97
13	95	94	94	98	95	97	99	93	96	100	97	99
14	95	94	94	100	95	97	94	88	90	102	98	100
15	95	94	94	99	96	97	89	87	88	103	98	100
16	95	94	95	100	95	97	90	88	89	103	99	101
17	96	94	95	98	93	95	89	88	89	103	99	101
18	95	94	95	100	94	97	89	88	89	103	99	101
19	95	94	95	100	95	98	89	89	89	103	99	101
20	96	95	96	99	94	97	90	88	89	103	99	101
21	97	96	97	98	93	96	89	88	89	105	99	101
22	102	97	98	99	93	96	89	88	89	105	100	102
23	103	96	98	97	93	94	89	88	89	105	100	103
24	101	96	99	100	94	96	89	87	88	104	102	103
25	100	96	98	101	95	97	89	88	88	107	103	105
26	104	95	99	102	95	98	90	88	89	113	104	109
27	100	96	98	101	95	97	90	88	89	114	104	108
28	102	96	98	101	96	98	91	89	90	115	105	109
29	103	93	97	101	97	98	92	90	91	117	107	112
30	99	90	93	103	97	99	93	92	92	118	103	112
31	96	89	91	---	---	---	94	91	93	111	97	102
MONTH	104	87	94	103	89	96	107	87	94	118	93	101
		FEBRUARY			MARCH			APRIL			MAY	
1	100	97	98	97	96	96	111	105	109	106	104	105
2	101	99	100	98	96	97	115	111	114	107	98	106
3	103	100	102	100	97	99	116	113	114	107	102	104
4	108	100	104	102	99	100	117	114	115	105	97	103
5	114	102	107	103	101	102	116	113	114	105	99	103
6	115	106	113	105	102	103	114	108	111	105	102	104
7	107	103	105	105	103	104	109	106	108	105	101	104
8	108	95	100	105	102	103	109	107	108	106	103	105
9	100	93	96	105	102	104	109	108	109	107	101	105
10	99	91	94	104	103	103	110	108	109	107	104	106
11	99	93	96	105	102	103	111	107	109	106	105	105
12	100	94	97	114	105	111	112	110	111	106	104	105
13	100	95	96	115	112	114	111	109	110	106	105	106
14	96	95	96	115	109	112	111	109	110	106	105	106
15	96	95	95	116	110	113	111	109	110	107	105	106
16	95	93	94	115	110	113	111	108	110	107	106	106
17	94	91	93	114	105	110	109	102	104	107	105	106
18	97	91	94	111	104	107	103	98	100	108	106	107
19	95	93	94	110	104	106	99	98	98	108	107	107
20	95	94	94	108	106	107	100	98	99	109	107	108
21	95	94	94	107	100	104	101	99	100	110	108	109
22	95	94	94	103	100	101	102	100	101	111	109	110
23	95	94	94	103	100	101	103	101	102	110	108	109
24	95	94	94	104	100	102	103	101	102	110	108	109
25	95	94	95	106	102	105	103	101	102	111	110	110
26	95	94	94	110	102	107	102	101	102	111	108	109
27	94	93	94	110	108	109	101	100	100	108	107	108
28	95	94	95	109	105	106	103	101	102	108	107	107
29	96	95	96	110	105	109	104	102	103	109	107	107
30	---	---	---	108	103	105	104	103	104	109	108	108
31	---	---	---	107	105	106	---	---	---	109	107	108
MONTH	115	91	97	116	96	105	117	98	106	111	97	106

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	109	107	108	107	103	105	110	105	108	115	106	110
2	110	108	109	107	102	104	111	107	110	115	104	108
3	112	110	111	106	103	104	110	107	109	105	104	104
4	112	107	110	107	102	105	110	107	108	106	102	104
5	108	101	105	107	102	105	109	105	107	110	102	105
6	106	102	104	110	103	107	107	98	100	108	101	105
7	109	106	107	110	105	108	100	97	98	106	101	103
8	---	---	---	109	104	107	100	98	99	108	104	105
9	107	106	107	110	104	107	105	99	102	109	104	106
10	108	106	107	111	104	108	110	103	106	111	105	108
11	109	107	107	111	104	108	108	104	106	113	99	108
12	109	107	108	108	102	106	110	104	106	106	96	102
13	109	104	106	109	102	106	108	104	105	104	99	102
14	106	104	105	108	105	106	107	100	104	107	99	103
15	107	105	106	113	108	111	104	99	102	108	101	104
16	106	105	106	114	112	114	100	87	96	108	103	105
17	106	105	106	117	113	115	87	78	83	109	104	106
18	107	105	106	116	112	113	78	74	76	109	103	105
19	109	105	106	117	113	115	85	78	83	110	103	106
20	109	101	104	117	105	114	84	82	83	108	103	105
21	107	103	104	120	113	118	86	84	85	108	102	104
22	108	104	106	122	116	120	88	85	86	110	102	104
23	111	104	107	119	115	117	91	87	89	111	103	106
24	112	106	108	119	111	116	93	91	92	110	103	105
25	111	104	108	114	103	110	96	93	94	108	103	104
26	109	103	106	115	108	111	98	92	95	108	103	105
27	111	103	108	112	106	109	100	97	98	108	103	105
28	108	103	105	113	107	109	102	100	100	107	104	105
29	107	102	104	114	105	109	106	100	103	110	105	107
30	107	102	104	107	101	104	108	103	105	114	107	109
31	---	---	---	111	107	109	110	104	106	---	---	---
MONTH	---	---	---	122	101	110	111	74	98	115	96	105

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.2	7.0	7.0	6.9	6.9	6.9	7.0	7.0	7.0	6.9	6.6	6.7
2	7.3	7.2	7.3	6.9	6.8	6.9	7.1	7.0	7.0	6.9	6.8	6.8
3	7.3	7.3	7.3	6.9	6.8	6.8	7.1	7.0	7.0	6.9	6.9	6.9
4	7.4	7.3	7.3	6.8	6.7	6.8	7.1	7.0	7.0	6.9	6.8	6.9
5	7.4	7.1	7.2	6.8	6.7	6.8	7.1	7.0	7.1	6.8	6.8	6.8
6	7.3	7.2	7.2	6.8	6.8	6.8	7.0	6.9	6.9	6.8	6.8	6.8
7	7.3	7.1	7.2	6.8	6.8	6.8	6.9	6.9	6.9	6.8	6.7	6.7
8	---	---	---	6.8	6.8	6.8	6.9	6.9	6.9	6.7	6.7	6.7
9	7.2	7.1	7.1	7.0	6.8	6.9	7.0	6.9	6.9	6.8	6.7	6.8
10	7.2	7.1	7.1	7.1	7.0	7.0	7.1	7.0	7.0	6.8	6.7	6.8
11	7.2	7.1	7.2	7.1	7.0	7.1	7.1	7.0	7.1	6.9	6.8	6.9
12	7.2	7.2	7.2	7.0	7.0	7.0	7.1	7.1	7.1	6.9	6.8	6.9
13	7.2	7.2	7.2	7.0	7.0	7.0	7.1	7.1	7.1	6.9	6.9	6.9
14	7.2	7.2	7.2	7.0	7.0	7.0	7.1	7.0	7.1	6.9	6.9	6.9
15	7.2	7.2	7.2	7.1	7.0	7.0	7.1	7.0	7.0	6.9	6.9	6.9
16	7.2	7.2	7.2	7.1	7.1	7.1	7.0	6.7	6.9	6.9	6.8	6.9
17	7.2	7.1	7.2	7.1	7.1	7.1	6.7	6.6	6.7	6.9	6.8	6.8
18	7.1	7.1	7.1	7.1	7.1	7.1	6.6	6.5	6.6	6.8	6.8	6.8
19	7.1	7.1	7.1	7.1	7.0	7.1	6.6	6.6	6.6	6.9	6.8	6.8
20	7.1	7.0	7.0	7.1	7.0	7.0	6.6	6.6	6.6	6.9	6.8	6.9
21	7.0	7.0	7.0	7.1	7.0	7.1	6.6	6.6	6.6	6.8	6.8	6.8
22	7.0	6.9	7.0	7.1	7.1	7.1	6.6	6.6	6.6	6.9	6.8	6.8
23	7.0	6.9	7.0	7.1	7.1	7.1	6.6	6.6	6.6	7.0	6.9	6.9
24	7.0	7.0	7.0	7.1	7.1	7.1	6.6	6.6	6.6	7.0	7.0	7.0
25	7.0	7.0	7.0	7.1	7.1	7.1	6.6	6.6	6.6	7.0	7.0	7.0
26	7.0	7.0	7.0	7.1	7.1	7.1	6.6	6.6	6.6	7.1	7.0	7.0
27	7.1	7.0	7.0	7.1	7.0	7.0	6.6	6.6	6.6	7.1	7.0	7.1
28	7.1	6.9	7.0	7.1	7.0	7.0	6.6	6.6	6.6	7.0	6.9	6.9
29	6.9	6.9	6.9	7.0	7.0	7.0	6.6	6.6	6.6	7.0	6.9	6.9
30	6.9	6.8	6.9	7.0	6.9	6.9	6.6	6.6	6.6	7.0	6.9	7.0
31	---	---	---	7.0	7.0	7.0	6.6	6.5	6.6	---	---	---
MONTH	---	---	---	7.1	6.7	7.0	7.1	6.5	6.8	7.1	6.6	6.9

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.9	20.3	20.5	16.7	16.3	16.5	12.5	12.1	12.4	7.5	6.9	7.2
2	20.4	19.6	20.0	16.8	16.4	16.6	12.1	11.1	11.7	7.9	7.2	7.5
3	19.6	18.4	18.9	17.0	16.6	16.8	11.2	10.4	10.9	8.5	7.6	8.1
4	19.0	18.2	18.6	17.9	17.0	17.5	10.6	10.1	10.4	9.7	8.5	9.1
5	19.4	18.7	19.0	18.7	17.9	18.3	10.2	9.6	10	11.2	9.7	10.3
6	19.6	18.8	19.2	19.0	18.6	18.8	9.7	9.3	9.5	11.2	9.7	10.6
7	19.9	19.2	19.5	19.2	19.0	19.0	9.3	8.9	9.1	9.7	7.4	8.3
8	19.9	19.6	19.8	19.1	18.2	18.6	9.0	8.6	8.8	7.4	6.6	6.8
9	20.6	19.9	20.2	18.2	16.8	17.3	8.7	8.4	8.6	6.6	5.8	6.2
10	20.5	20.3	20.4	16.8	16.3	16.5	9.1	8.5	8.7	5.9	4.8	5.4
11	20.4	20.0	20.2	16.3	16.0	16.1	9.3	9.0	9.2	4.8	3.8	4.2
12	20.5	19.8	20.1	16.3	16.0	16.1	9.2	9.0	9.1	4.4	3.7	4.0
13	20.7	20.0	20.3	16.4	15.6	16.1	9.2	9.0	9.1	4.8	4.1	4.4
14	20.6	20.1	20.2	15.6	14.4	15.1	9.1	8.6	8.9	5.0	4.6	4.8
15	20.2	19.5	19.9	14.4	14.2	14.3	8.6	8.0	8.2	5.3	5.0	5.2
16	19.5	18.8	19.1	14.3	14.1	14.2	8.3	7.7	8.0	5.3	5.0	5.2
17	19.0	18.3	18.7	14.5	14.1	14.3	8.5	8.0	8.3	5.1	4.8	4.9
18	18.9	18.4	18.7	14.8	14.4	14.7	8.1	7.3	7.6	5.6	4.9	5.2
19	18.4	17.7	18.1	15.1	14.7	14.9	7.4	6.7	7.1	5.8	5.5	5.7
20	18.3	17.8	18.1	15.0	14.7	14.8	6.7	5.9	6.2	5.6	5.2	5.4
21	18.4	17.9	18.2	14.9	14.6	14.7	5.9	5.2	5.5	5.2	4.9	5.1
22	18.6	18.4	18.5	14.7	14.6	14.6	5.8	5.0	5.4	5.0	4.7	4.8
23	18.4	17.6	18.0	14.7	14.4	14.6	7.0	5.6	6.1	4.9	4.6	4.7
24	17.7	17.2	17.5	14.7	14.5	14.6	8.2	7.0	7.7	4.9	4.5	4.7
25	17.3	17.1	17.2	14.7	14.2	14.5	8.2	7.3	7.8	4.7	4.1	4.3
26	17.3	17.2	17.2	14.2	13.8	14.0	7.3	6.5	6.8	4.1	3.7	3.8
27	17.6	17.3	17.4	13.8	13.5	13.7	6.8	6.2	6.5	3.7	3.5	3.6
28	17.8	17.5	17.7	14.1	13.6	13.8	6.8	6.2	6.5	3.6	3.2	3.4
29	17.6	17.4	17.5	13.8	12.8	13.3	7.2	6.3	6.7	3.2	2.8	3.0
30	17.4	16.9	17.1	12.9	12.4	12.7	8.1	7.2	7.7	3.8	2.5	3.1
31	17.2	16.5	16.7	---	---	---	7.8	7.1	7.4	3.8	3.3	3.5
MONTH	20.9	16.5	18.8	19.2	12.4	15.6	12.5	5.0	8.3	11.2	2.5	5.6
		FEBRUARY			MARCH			APRIL			MAY	
1	3.3	3.0	3.2	7.8	6.4	7.1	14.4	13.8	14.0	18.8	18.5	18.6
2	3.5	2.9	3.2	9.2	7.8	8.4	14.4	14.2	14.3	19.2	18.7	18.9
3	3.6	3.4	3.5	10.5	9.0	9.7	14.3	13.9	14.1	19.4	18.6	19.0
4	4.0	3.4	3.7	11.4	9.9	10.6	14.0	13.4	13.8	18.6	17.8	18.2
5	4.3	3.8	4.1	12.3	11.1	11.7	13.4	12.8	13.1	18.3	17.4	17.9
6	5.4	4.2	4.7	12.7	12.2	12.4	13.4	12.6	13.0	19.0	18.1	18.5
7	6.2	5.4	5.8	13.1	12.3	12.7	13.8	12.8	13.3	19.8	18.7	19.2
8	5.8	5.3	5.6	12.9	12.3	12.6	14.4	13.3	13.8	20.1	19.6	19.8
9	5.6	5.3	5.5	12.3	11.7	11.8	15.1	14.0	14.5	20.8	20.0	20.4
10	5.9	5.6	5.7	11.8	10.6	11.2	15.2	14.4	14.8	21.0	20.8	20.9
11	5.7	5.4	5.5	10.6	10.1	10.4	15.8	14.8	15.3	22.1	21.0	21.7
12	5.5	5.0	5.2	11.0	10.3	10.6	15.6	15.3	15.4	21.8	21.4	21.6
13	5.2	4.9	5.1	10.9	10.5	10.7	15.8	15.3	15.5	22.7	21.7	22.4
14	5.1	5.0	5.1	10.6	10.4	10.5	15.5	14.8	15.1	23.1	22.7	22.9
15	5.1	5.0	5.1	10.9	10.6	10.8	14.8	14.2	14.4	23.5	22.8	23.2
16	5.1	4.2	4.6	11.4	10.8	11.1	14.5	14.0	14.2	23.8	23.3	23.5
17	4.5	4.4	4.4	11.2	10.7	11.1	14.8	14.0	14.4	24.2	23.7	23.9
18	5.0	4.2	4.6	11.0	10.4	10.7	14.9	14.3	14.6	24.5	23.8	24.1
19	5.4	4.4	4.9	11.5	10.6	11.0	15.3	14.4	14.9	24.9	23.9	24.4
20	6.5	5.1	5.7	11.3	10.7	11.0	16.4	15.2	15.8	25.0	24.2	24.6
21	7.7	6.4	6.9	11.5	10.8	11.2	16.9	16.2	16.6	25.3	24.3	24.7
22	7.8	6.9	7.3	11.4	10.9	11.1	18.1	16.8	17.5	25.5	24.4	24.9
23	7.7	6.8	7.3	11.4	10.8	11.1	18.4	17.6	18.0	26.1	25.1	25.5
24	7.6	7.2	7.3	11.5	10.8	11.2	18.6	18.3	18.5	26.0	25.3	25.6
25	7.6	6.7	7.1	12.0	11.3	11.6	18.6	18.1	18.3	25.9	25.0	25.4
26	7.1	5.7	6.3	12.7	11.8	12.3	19.1	18.0	18.5	25.8	25.2	25.3
27	5.7	5.2	5.4	13.1	12.1	12.6	18.9	18.4	18.7	27.1	25.8	26.7
28	6.0	4.6	5.3	13.7	13.1	13.3	18.6	17.7	18.2	27.2	26.8	27.0
29	6.9	5.3	6.0	13.7	13.2	13.5	18.5	17.4	18.0	26.8	26.4	26.6
30	---	---	---	14.0	13.5	13.8	18.8	18.0	18.4	26.4	26.0	26.3
31	---	---	---	14.3	13.8	13.9	---	---	---	26.0	25.7	25.9
MONTH	7.8	2.9	5.3	14.3	6.4	11.3	19.1	12.6	15.6	27.2	17.4	22.8

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.0	25.4	25.7	26.2	25.4	25.8	28.5	27.9	28.2	26.8	26.3	26.4
2	26.0	25.1	25.5	26.2	25.6	25.9	28.4	28.2	28.3	26.3	25.5	25.9
3	25.9	25.0	25.5	25.9	25.2	25.6	28.6	28.0	28.2	26.2	26.0	26.1
4	25.8	25.5	25.6	26.2	25.6	25.9	28.7	27.7	28.2	26.2	25.8	25.9
5	25.6	24.9	25.1	27.3	26.1	26.7	28.1	27.6	27.9	26.2	25.5	25.8
6	25.3	24.5	24.9	27.3	26.7	27.0	27.6	26.8	27.2	26.0	25.6	25.8
7	25.0	24.4	24.8	27.8	26.9	27.3	26.8	26.4	26.6	25.7	25.4	25.5
8	---	---	---	27.9	27.1	27.5	26.7	26.4	26.6	25.8	25.5	25.6
9	25.0	23.8	24.3	28.7	27.6	28.2	26.6	26.1	26.3	25.9	25.6	25.8
10	25.8	24.6	25.1	28.6	28.1	28.4	26.8	26.1	26.4	26.0	25.7	25.9
11	25.9	25.0	25.5	28.3	28.1	28.2	27.1	26.3	26.7	26.0	25.4	25.9
12	26.0	25.1	25.5	28.8	28.0	28.4	27.0	26.6	26.8	25.8	25.2	25.4
13	25.3	24.6	25.0	29.3	28.3	28.7	26.7	26.4	26.5	25.5	25.1	25.3
14	25.5	25.0	25.3	29.5	28.8	29.2	26.6	25.4	26.2	25.2	25.0	25.1
15	25.4	24.9	25.1	29.7	29.2	29.4	25.5	24.7	25.2	25.5	24.9	25.1
16	25.3	24.8	25.0	29.6	29.0	29.3	24.7	24.2	24.5	25.3	24.9	25.1
17	25.4	24.8	25.1	29.5	28.8	29.2	24.2	23.6	23.9	25.4	24.9	25.1
18	25.9	25.2	25.5	29.4	29.0	29.1	23.7	23.1	23.4	25.3	24.2	24.8
19	26.1	25.4	25.7	29.3	28.9	29.1	24.6	23.7	24.1	24.2	23.6	23.9
20	26.1	25.3	25.7	29.2	28.7	29.0	25.1	24.5	24.8	23.6	22.8	23.2
21	26.3	25.6	25.9	29.6	28.8	29.2	25.6	24.9	25.2	22.8	22.1	22.5
22	26.6	26.1	26.3	29.7	29.0	29.4	25.4	25.1	25.2	22.9	22.3	22.6
23	27.3	26.2	26.7	29.4	28.7	28.9	25.1	24.5	24.8	23.5	22.6	23.0
24	27.0	26.6	26.8	28.7	28.2	28.5	24.9	24.4	24.6	23.7	23.0	23.4
25	27.1	26.4	26.8	28.2	27.8	28.0	24.9	24.3	24.6	23.8	23.2	23.4
26	26.6	26.4	26.5	28.1	27.6	27.8	25.2	24.4	24.8	23.9	23.4	23.6
27	26.6	25.7	26.3	28.2	27.5	27.9	25.6	24.9	25.2	23.7	23.4	23.5
28	25.7	25.3	25.5	28.2	27.9	28.0	26.0	25.3	25.6	23.6	23.4	23.5
29	25.7	24.9	25.3	28.4	28.1	28.2	26.5	25.6	26.0	23.8	23.5	23.6
30	26.1	25.5	25.8	28.7	28.2	28.4	26.3	25.9	26.0	23.7	23.4	23.6
31	---	---	---	28.7	28.4	28.6	26.4	25.8	26.0	---	---	---
MONTH	---	---	---	29.7	25.2	28.1	28.7	23.1	25.9	26.8	22.1	24.7

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1.6	1.0	1.3	6.0	5.8	5.9	---	---	---	10.6	10.0	10.3
2	2.3	1.5	1.8	6.1	5.8	6.0	---	---	---	10.6	9.9	10.3
3	3.8	2.2	2.8	6.0	5.8	6.0	---	---	---	10.6	9.8	10.1
4	3.8	2.8	3.4	6.2	5.9	6.1	---	---	---	10.2	9.5	9.8
5	4.4	3.1	3.6	6.1	5.7	5.9	---	---	---	9.6	8.9	9.2
6	3.7	2.9	3.2	5.8	5.5	5.7	---	---	---	9.1	8.3	8.8
7	3.0	2.9	3.0	5.8	5.5	5.6	---	---	---	9.7	8.8	9.2
8	3.0	2.8	2.9	5.7	5.4	5.6	---	---	---	10.0	9.4	9.7
9	2.8	2.5	2.6	6.1	5.5	5.7	---	---	---	10.0	9.5	9.8
10	2.7	2.4	2.5	6.2	5.7	6.0	---	---	---	10.5	9.8	10.1
11	2.7	2.4	2.5	6.9	6.0	6.6	---	---	---	11.0	10.4	10.8
12	3.0	2.6	2.8	---	---	---	---	---	---	11.2	10.9	11.0
13	3.1	2.9	3.0	---	---	---	---	---	---	11.3	11.0	11.1
14	3.1	3.0	3.1	---	---	---	---	---	---	11.3	11.0	11.1
15	3.4	3.0	3.2	---	---	---	---	---	---	11.2	10.9	11.0
16	3.4	3.3	3.4	---	---	---	---	---	---	11.2	10.9	11.1
17	3.6	3.3	3.4	---	---	---	9.6	9.1	9.3	11.6	11.1	11.5
18	4.0	3.5	3.7	---	---	---	9.4	9.0	9.2	11.6	11.3	11.5
19	4.4	3.9	4.1	---	---	---	9.4	9.0	9.3	11.5	11.1	11.3
20	4.5	4.2	4.3	---	---	---	9.9	9.2	9.5	11.6	11.2	11.4
21	4.6	4.2	4.3	---	---	---	10.5	9.7	10.0	11.6	11.3	11.4
22	4.7	4.3	4.4	---	---	---	10.8	10.2	10.5	11.6	11.4	11.5
23	4.8	4.5	4.7	---	---	---	10.8	10.4	10.5	11.7	11.3	11.5
24	5.1	4.6	4.8	---	---	---	10.5	9.9	10.2	11.6	11.3	11.5
25	5.5	5.1	5.3	---	---	---	10.2	9.2	9.9	11.6	11.4	11.5
26	5.7	5.5	5.6	---	---	---	10.6	9.9	10.2	11.7	11.3	11.5
27	5.5	5.0	5.3	---	---	---	10.7	10.2	10.4	11.5	11.3	11.4
28	5.5	5.0	5.3	---	---	---	10.7	10.3	10.5	11.8	11.3	11.5
29	6.1	5.5	5.8	---	---	---	11.0	10.3	10.6	12.4	11.6	12.0
30	5.9	5.3	5.6	---	---	---	10.6	9.9	10.2	12.8	12.3	12.6
31	6.0	5.7	5.8	---	---	---	10.5	9.6	10.1	12.9	12.4	12.7
MONTH	6.1	1.0	3.8	---	---	---	---	---	---	12.9	8.3	10.9
		FEBRUARY			MARCH			APRIL			MAY	
1	12.9	12.6	12.8	12.2	11.4	11.8	8.1	7.5	7.8	6.3	5.9	6.1
2	12.7	12.5	12.6	11.8	10.7	11.4	7.6	7.3	7.4	6.5	6.0	6.3
3	12.6	12.4	12.5	11.6	10.6	11.1	7.6	7.3	7.5	6.6	6.0	6.3
4	12.4	12.2	12.3	11.4	10.3	10.9	8.2	7.4	7.8	6.2	5.8	6.0
5	12.3	12.1	12.2	11.0	10.0	10.5	8.4	8.1	8.3	6.3	5.7	6.0
6	12.4	12.1	12.3	10.6	9.6	10.0	8.7	8.2	8.4	6.4	5.8	6.1
7	12.4	12.0	12.2	10.1	9.2	9.6	8.8	8.5	8.6	6.4	5.9	6.1
8	12.7	12.1	12.4	9.6	8.8	9.3	8.7	8.5	8.6	6.6	6.2	6.4
9	12.6	12.0	12.3	9.6	8.9	9.2	8.8	8.4	8.6	6.4	6.1	6.2
10	12.1	11.6	11.9	9.6	8.9	9.1	9.0	8.4	8.6	6.4	6.2	6.3
11	12.3	11.8	12.0	9.2	8.9	9.0	8.8	8.3	8.5	6.4	6.0	6.1
12	12.5	12.0	12.3	9.0	8.6	8.8	8.4	7.9	8.2	6.3	5.9	6.1
13	12.6	12.2	12.4	9.2	8.6	8.8	8.2	7.8	8.0	6.3	6.0	6.2
14	12.6	12.2	12.4	9.5	9.0	9.2	8.3	7.8	8.1	6.2	5.9	6.0
15	12.6	12.1	12.3	9.6	9.2	9.4	8.5	7.8	8.2	6.2	6.0	6.1
16	12.4	11.8	12.2	9.5	9.2	9.4	8.7	8.0	8.4	6.2	5.8	6.0
17	12.3	11.8	12.0	9.4	9.2	9.2	8.6	8.1	8.4	6.0	5.7	5.8
18	12.4	11.7	12.0	9.3	9.1	9.2	9.1	8.4	8.7	5.9	5.6	5.7
19	12.4	11.9	12.2	9.5	9.1	9.3	9.0	8.5	8.7	5.8	5.5	5.6
20	12.1	11.6	11.9	9.5	9.3	9.4	8.9	8.4	8.7	5.7	5.4	5.5
21	11.8	11.1	11.4	10.0	9.5	9.8	8.6	8.0	8.4	5.8	5.5	5.7
22	11.5	10.8	11.2	10.0	9.7	9.9	8.4	7.7	8.0	6.0	5.7	5.8
23	11.7	10.8	11.2	10.0	9.7	9.8	8.0	7.4	7.7	5.8	5.5	5.7
24	11.5	10.5	11.0	9.9	9.5	9.7	7.8	7.0	7.5	5.8	5.5	5.7
25	11.5	10.3	10.9	9.8	9.2	9.5	7.4	6.9	7.2	6.0	5.7	5.9
26	11.4	10.9	11.2	9.6	9.2	9.3	7.4	6.9	7.1	6.2	5.8	6.0
27	11.8	10.9	11.3	9.6	9.3	9.4	7.1	5.1	5.8	5.9	5.6	5.8
28	12.3	11.3	11.8	9.5	8.9	9.2	5.7	5.0	5.3	6.0	5.7	5.9
29	12.4	11.7	12.0	9.1	8.6	8.8	6.2	5.4	5.8	6.0	5.9	5.9
30	---	---	---	9.1	8.4	8.6	6.4	5.8	6.0	6.1	5.9	6.0
31	---	---	---	8.4	8.1	8.3	---	---	---	6.1	5.8	5.9
MONTH	12.9	10.3	12.0	12.2	8.1	9.6	9.1	5.0	7.8	6.6	5.4	6.0

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.0	5.3	5.8	6.0	5.5	5.7	5.3	4.5	4.9	5.1	3.7	4.3
2	6.0	5.4	5.7	5.7	5.3	5.6	5.3	4.9	5.1	5.2	4.9	5.0
3	5.9	5.6	5.7	5.6	5.0	5.3	5.4	4.7	5.1	5.4	5.1	5.2
4	6.3	5.7	5.9	5.3	4.7	5.0	5.3	4.7	5.0	5.3	4.7	5.0
5	6.2	5.2	5.6	5.2	4.6	4.9	5.4	5.1	5.2	5.1	4.5	4.8
6	5.9	5.4	5.7	5.2	4.6	5.0	5.3	4.7	4.9	5.1	4.6	4.8
7	6.2	5.7	5.9	5.3	4.8	5.1	5.0	4.7	4.8	4.9	4.2	4.4
8	---	---	---	5.3	4.8	5.1	5.1	4.8	5.0	4.3	4.0	4.2
9	6.2	5.7	5.9	5.3	4.8	5.0	5.4	4.9	5.1	4.2	3.8	4.0
10	6.1	5.8	6.0	5.4	4.9	5.2	5.7	5.1	5.4	4.3	3.8	4.0
11	6.3	5.8	6.0	5.4	4.9	5.2	5.7	5.3	5.5	5.1	4.2	4.7
12	6.6	6.1	6.3	5.1	4.6	4.9	5.7	5.3	5.5	5.2	4.6	5.0
13	6.5	5.9	6.2	5.0	4.5	4.7	5.5	5.3	5.4	5.4	5.0	5.2
14	6.4	6.0	6.2	4.9	4.5	4.7	5.6	5.2	5.3	5.3	5.0	5.2
15	6.5	6.2	6.3	5.1	4.7	4.9	5.4	4.9	5.2	5.2	5.0	5.1
16	6.5	6.1	6.3	5.2	4.9	5.1	5.2	4.5	4.9	5.3	4.9	5.1
17	6.5	5.7	6.2	5.3	4.9	5.1	4.5	4.0	4.3	5.1	4.8	4.9
18	6.3	5.9	6.2	5.3	4.9	5.1	4.1	3.8	4.0	5.0	4.5	4.8
19	6.5	6.0	6.2	5.0	4.7	4.9	4.0	3.7	3.9	5.3	4.9	5.1
20	6.2	5.7	6.0	5.0	4.6	4.8	3.8	3.6	3.7	5.5	5.2	5.3
21	5.9	5.4	5.7	5.2	4.7	4.9	3.6	3.4	3.5	5.4	5.1	5.3
22	5.6	5.3	5.5	5.2	4.8	5.0	3.5	3.3	3.5	5.7	5.3	5.4
23	5.7	5.3	5.5	5.2	4.8	5.1	3.7	3.4	3.6	6.2	5.6	5.9
24	5.9	5.5	5.7	5.3	4.9	5.1	3.8	3.6	3.7	6.3	5.9	6.1
25	5.8	5.4	5.6	5.4	5.0	5.2	3.8	3.6	3.7	6.3	6.0	6.2
26	5.9	5.4	5.7	5.3	4.9	5.1	3.7	3.5	3.6	6.1	5.9	6.0
27	6.2	5.6	5.8	5.1	4.8	4.9	3.6	3.3	3.4	6.0	5.4	5.7
28	6.2	5.7	5.9	5.0	4.6	4.8	3.5	3.3	3.4	5.4	4.8	5.1
29	6.0	5.4	5.7	4.9	4.3	4.7	3.7	3.3	3.5	5.2	4.9	5.0
30	5.8	5.4	5.6	4.5	4.2	4.4	3.6	3.4	3.5	5.3	4.9	5.2
31	---	---	---	5.1	4.3	4.7	3.8	3.4	3.5	---	---	---
MONTH	---	---	---	6.0	4.2	5.0	5.7	3.3	4.4	6.3	3.7	5.1

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18	11	14	62	59	61	---	---	---	89	82	85
2	25	17	20	63	60	61	---	---	---	89	82	86
3	41	24	30	62	60	62	---	---	---	91	82	86
4	41	30	36	65	61	64	---	---	---	90	82	85
5	48	33	39	65	61	63	---	---	---	86	80	82
6	40	31	34	62	59	61	---	---	---	83	75	79
7	33	31	33	63	59	61	---	---	---	82	75	78
8	33	31	32	61	58	60	---	---	---	82	77	80
9	31	28	29	64	57	60	---	---	---	80	77	79
10	30	27	28	64	58	62	---	---	---	83	77	80
11	30	27	28	70	61	67	---	---	---	85	80	83
12	33	29	31	---	---	---	---	---	---	87	83	84
13	35	32	33	---	---	---	---	---	---	88	84	86
14	34	33	34	---	---	---	---	---	---	88	85	87
15	38	33	35	---	---	---	---	---	---	89	86	87
16	37	36	37	---	---	---	---	---	---	89	86	87
17	39	35	37	---	---	---	81	77	79	91	87	90
18	43	38	40	---	---	---	79	75	78	92	90	91
19	47	41	44	---	---	---	78	74	77	92	88	90
20	48	45	46	---	---	---	80	74	77	92	89	90
21	49	45	46	---	---	---	84	77	80	91	89	90
22	50	46	47	---	---	---	86	80	84	91	89	90
23	51	47	49	---	---	---	88	83	85	91	88	90
24	53	48	50	---	---	---	88	83	86	91	88	90
25	57	53	56	---	---	---	86	78	84	90	88	89
26	59	57	58	---	---	---	87	82	84	90	86	87
27	58	52	55	---	---	---	88	83	85	87	85	86
28	58	52	56	---	---	---	88	83	86	89	85	87
29	64	58	61	---	---	---	91	84	87	92	87	89
30	61	55	58	---	---	---	88	83	86	96	91	94
31	62	59	60	---	---	---	88	80	84	98	94	96
MONTH	64	11	41	---	---	---	---	---	---	98	75	87
		FEBRUARY			MARCH			APRIL			MAY	
1	97	94	96	103	93	98	79	74	76	68	63	66
2	96	93	95	103	90	97	75	71	73	71	65	68
3	95	93	94	104	92	98	74	71	73	72	64	68
4	95	92	94	105	91	98	79	72	75	66	62	64
5	95	93	94	103	91	97	80	77	79	67	60	64
6	98	93	96	99	90	94	83	77	80	68	62	66
7	100	96	98	96	86	91	85	80	83	70	64	67
8	102	96	99	91	83	87	85	81	83	72	68	70
9	100	96	98	90	82	86	88	82	85	71	67	69
10	97	93	95	89	80	84	89	82	85	72	69	71
11	98	94	95	83	79	81	88	83	85	72	69	70
12	99	95	97	80	77	79	84	79	82	72	67	69
13	99	95	97	83	77	80	83	78	80	73	68	72
14	99	96	98	86	81	83	83	77	80	72	69	70
15	99	95	97	87	83	85	83	77	80	72	70	71
16	97	91	94	87	84	85	85	78	82	73	69	71
17	95	91	93	85	83	84	85	79	82	71	68	69
18	97	90	93	85	82	83	90	82	86	70	67	69
19	98	93	95	87	82	85	90	83	87	70	66	68
20	98	92	95	86	84	85	91	86	88	69	65	67
21	96	91	94	92	86	89	88	82	86	71	66	69
22	97	89	93	92	88	90	87	81	84	74	68	71
23	98	89	93	92	88	90	84	79	81	72	67	69
24	96	87	91	90	87	88	84	75	80	72	67	70
25	96	85	91	91	84	87	79	74	76	74	70	72
26	94	88	90	89	86	87	79	73	76	76	71	73
27	94	86	90	91	87	89	77	55	63	74	71	73
28	99	89	94	91	86	88	61	54	57	75	72	74
29	102	93	97	88	82	85	66	57	62	75	74	74
30	---	---	---	88	82	83	69	61	65	76	73	74
31	---	---	---	82	79	81	---	---	---	75	71	73
MONTH	102	85	95	105	77	88	91	54	78	76	60	70

02081094 ROANOKE RIVER AT JAMESVILLE, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	74	65	71	74	67	70	69	58	63	63	46	54
2	74	66	70	71	66	69	68	63	66	65	60	62
3	73	68	70	69	62	65	70	60	65	67	63	65
4	77	70	73	65	58	62	69	60	64	65	58	62
5	76	63	69	65	58	62	69	65	67	63	55	59
6	72	65	69	66	58	62	67	59	62	63	57	59
7	75	69	72	68	60	64	63	59	60	60	51	54
8	---	---	---	67	61	65	64	60	62	53	49	51
9	75	68	71	68	61	65	67	61	64	52	47	50
10	75	70	73	70	63	67	72	63	67	53	47	49
11	78	70	74	69	63	67	72	66	69	63	52	58
12	81	74	77	65	60	63	72	66	69	64	56	61
13	79	72	75	65	58	61	69	66	67	66	61	64
14	78	73	76	64	59	62	69	65	66	64	61	63
15	79	75	77	67	62	65	66	59	63	64	61	62
16	79	74	77	69	64	66	63	54	59	64	60	62
17	79	70	76	70	64	67	54	47	51	62	58	59
18	78	72	76	69	64	66	48	45	47	60	54	58
19	80	74	76	66	62	64	48	45	46	63	58	60
20	76	70	73	65	60	62	46	43	45	65	61	62
21	73	67	70	69	61	65	44	42	43	63	59	61
22	70	66	68	69	63	66	43	40	42	67	61	63
23	72	66	69	68	63	66	45	41	43	73	65	69
24	74	69	72	68	63	66	46	43	45	75	69	72
25	73	68	71	69	64	66	46	43	45	75	71	73
26	74	67	71	68	62	65	45	42	44	73	70	71
27	76	69	72	65	61	63	44	40	42	71	64	68
28	76	70	72	64	59	61	43	40	42	64	57	60
29	73	66	70	63	55	61	46	41	43	62	58	60
30	72	66	69	58	54	56	45	42	43	63	58	61
31	---	---	---	66	56	61	47	42	44	---	---	---
MONTH	---	---	---	74	54	64	72	40	55	75	46	61

0208111310 CASHIE RIVER AT SECONDARY ROAD 1257 NEAR WINDSOR, NC

LOCATION.--Lat 36°02'52", long 76°59'03", Bertie County, Hydrologic Unit 03010107, at downstream side of bridge on Secondary Road 1257, 2.0 mi upstream from State Highway 13 near Windsor.

DRAINAGE AREA.--108 mi^2.

PERIOD OF RECORD.--1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 15 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges and those below 5 ft^3/s, which are poor. Maximum discharge for period of record, from rating curve extended above 5,500 ft^3/s on basis of logarithmic plotting. Maximum gage height for period of record, from flood mark. Periods of no flow occur periodically.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	809	53	130	100	98	49	34	4.9	70	118	43
2	111	635	48	116	102	88	56	40	5.0	69	106	33
3	87	437	44	104	109	81	66	156	3.9	63	110	23
4	69	305	42	95	127	74	66	508	3.3	44	98	16
5	58	223	53	90	147	68	59	561	5.0	51	90	15
6	50	170	66	86	148	64	54	432	4.2	75	349	30
7	42	132	82	80	155	60	50	328	3.7	62	551	48
8	35	106	83	75	157	69	48	248	2.7	46	358	49
9	30	87	87	72	149	76	44	182	1.9	23	247	47
10	26	74	93	71	144	78	38	128	1.1	10	223	48
11	24	65	273	68	136	79	34	90	0.77	4.6	187	53
12	23	61	646	67	134	81	44	67	1.0	2.2	140	e75
13	23	57	571	68	147	78	60	60	0.71	42	187	133
14	22	52	569	67	173	73	75	44	0.62	80	370	e150
15	24	48	958	66	190	78	90	31	0.43	58	1,550	e120
16	22	44	1,140	64	254	127	98	23	0.34	29	4,110	e90
17	20	40	1,100	61	355	206	96	16	0.32	13	3,670	69
18	18	37	904	61	422	240	83	11	0.31	10	2,340	67
19	15	40	759	63	446	252	72	8.0	1.2	10	1,340	68
20	13	68	645	62	402	235	65	6.2	3.4	6.3	838	65
21	10	117	500	61	336	200	58	4.8	4.3	5.1	547	60
22	11	128	377	58	272	160	50	3.4	2.6	3.7	364	53
23	11	129	296	57	217	127	42	2.3	2.0	5.0	245	45
24	9.0	133	261	55	177	102	37	1.7	5.1	8.0	181	37
25	8.0	118	261	55	149	86	30	1.5	5.8	6.1	e143	30
26	11	101	270	58	129	77	24	1.2	33	8.4	e112	24
27	13	85	244	62	121	70	39	7.5	63	42	91	e20
28	16	73	217	66	115	64	51	9.0	64	163	77	e15
29	173	65	192	73	108	56	52	6.6	57	192	65	e10
30	596	58	170	83	---	48	42	3.7	60	159	56	e8.0
31	756	---	149	92	---	43	---	3.2	---	135	50	---
TOTAL	2,464.0	4,497	11,153	2,286	5,621	3,238	1,672	3,018.1	341.60	1,495.4	18,913	1,544.0
MEAN	79.5	150	360	73.7	194	104	55.7	97.4	11.4	48.2	610	51.5
MAX	756	809	1,140	130	446	252	98	561	64	192	4,110	150
MIN	8.0	37	42	55	100	43	24	1.2	0.31	2.2	50	8.0
CFSM	0.74	1.39	3.33	0.68	1.79	0.97	0.52	0.90	0.11	0.45	5.65	0.48
IN.	0.85	1.55	3.84	0.79	1.94	1.12	0.58	1.04	0.12	0.52	6.51	0.53

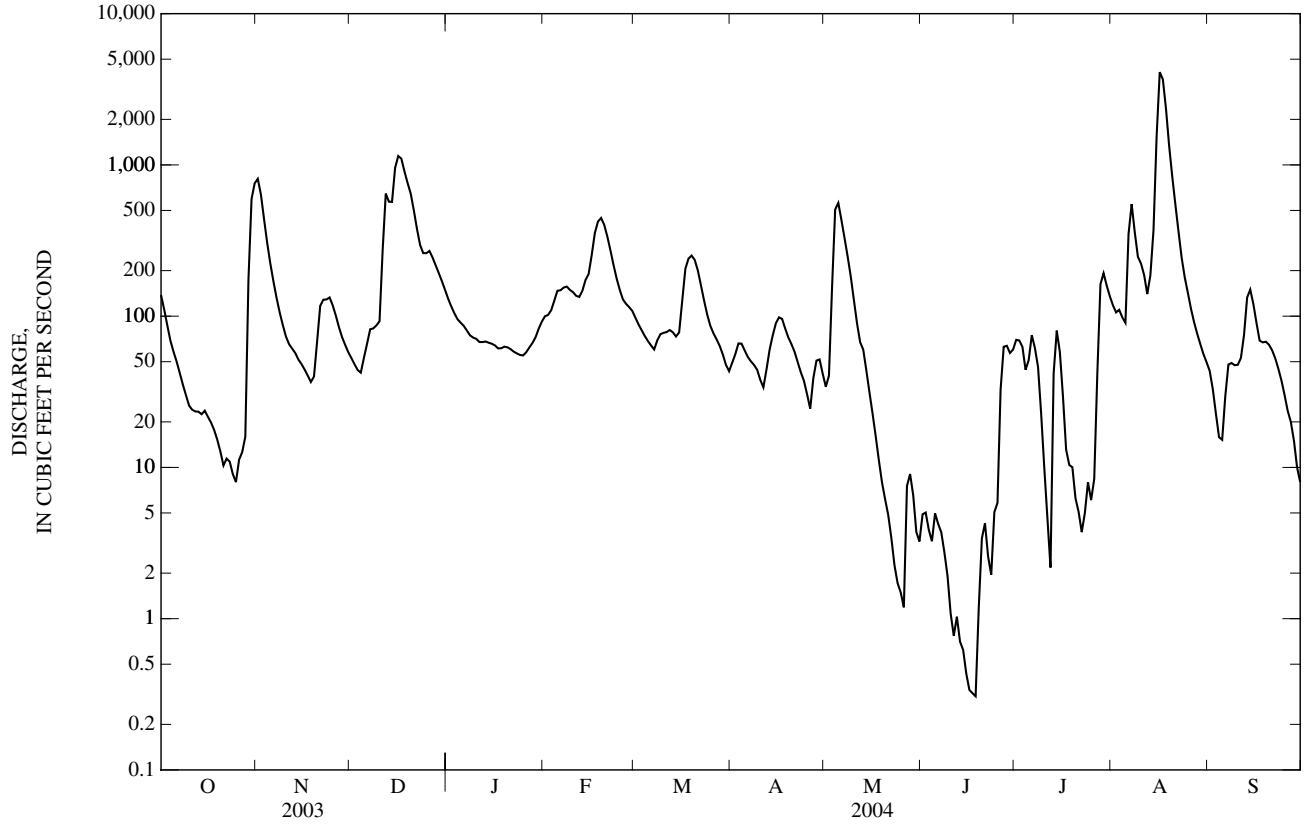
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	69.2	51.2	100	172	208	224	137	61.6	72.0	30.3	109	173
MAX	614	195	360	509	651	663	367	321	487	102	610	1,838
(WY)	(2000)	(2003)	(2004)	(1993)	(1998)	(1989)	(2003)	(1989)	(2001)	(1991)	(2004)	(1999)
MIN	0.00	0.07	0.41	26.6	49.5	54.2	5.25	1.07	0.01	0.00	0.01	0.00
(WY)	(1995)	(2002)	(2002)	(2001)	(2002)	(2002)	(1995)	(1994)	(1994)	(1994)	(1993)	(1994)

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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	85,038.86		56,243.10			
ANNUAL MEAN	233		154		118	
HIGHEST ANNUAL MEAN					220	2003
LOWEST ANNUAL MEAN					20.9	2002
HIGHEST DAILY MEAN	3,300	Sep 20	4,110	Aug 16	14,500	Sep 17, 1999
LOWEST DAILY MEAN	0.33	Jul 11	0.31	Jun 18	0.00	Jul 30, 1987
ANNUAL SEVEN-DAY MINIMUM	0.87	Jul 8	0.53	Jun 12	0.00	Oct 8, 1987
MAXIMUM PEAK FLOW			4,400	Aug 16	15700*	Sep 16, 1999
MAXIMUM PEAK STAGE			12.24	Aug 16	18.52*	Sep 16, 1999
INSTANTANEOUS LOW FLOW			0.05	Jun 18	0.00	Jul 29, 1987
ANNUAL RUNOFF (CFSM)	2.16		1.42		1.10	
ANNUAL RUNOFF (INCHES)	29.29		19.37		14.90	
10 PERCENT EXCEEDS	650		330		286	
50 PERCENT EXCEEDS	83		66		34	
90 PERCENT EXCEEDS	12		5.1		0.07	

* See REMARKS.
e Estimated.



0208114150 ROANOKE RIVER AT NC 45 NEAR WESTOVER, NC

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

DRAINAGE AREA.--9,660 mi^2.

ELEVATION RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is at NGVD of 1929. Satellite telemetry at water-quality station.

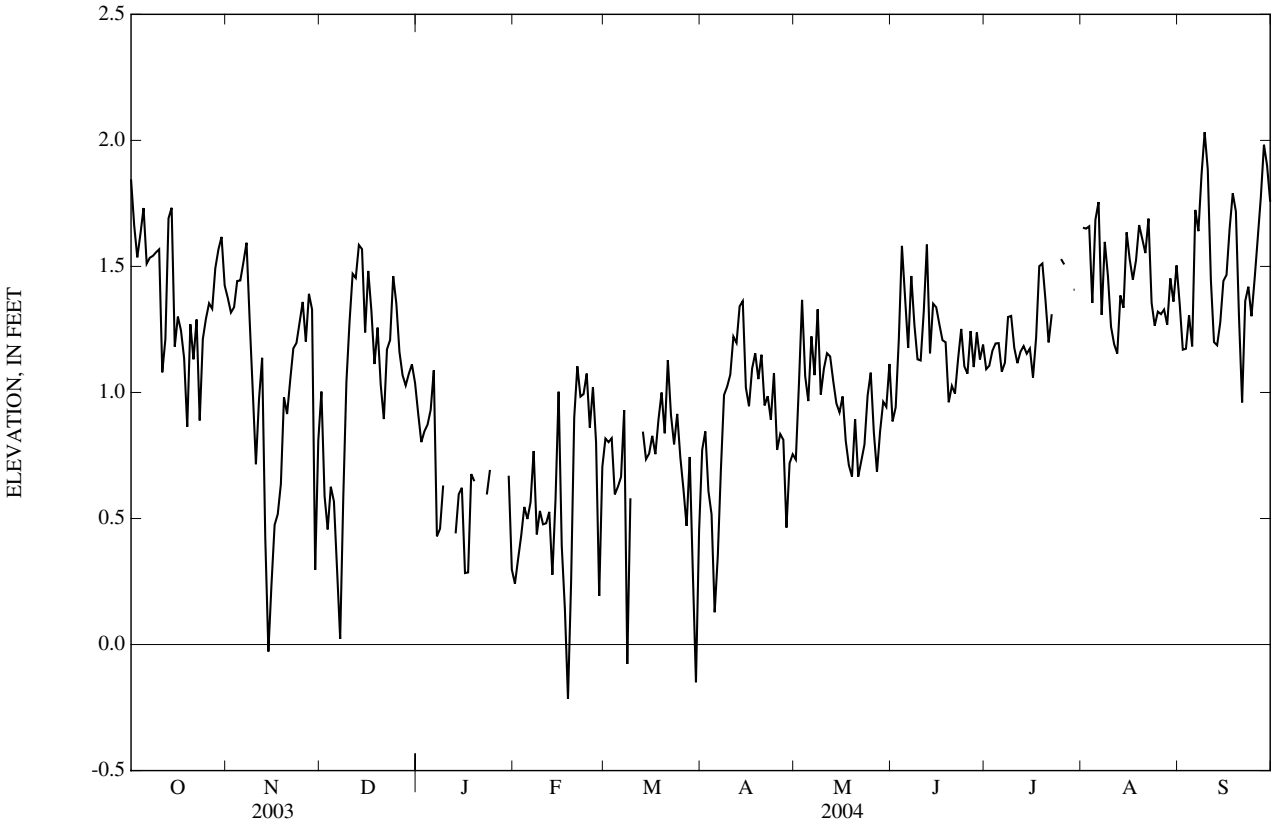
EXTREMES FOR PERIOD OF RECORD.--Maximum recorded elevation, 4.68 ft, Sept. 16, 1999; minimum recorded elevation, -1.20 ft, Sept. 1, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 2.22 ft, June 4; minimum recorded elevation, undetermined.

ELEVATION, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.85	1.37	1.00	0.92	0.24	0.82	0.77	0.73	0.89	1.09	1.65	1.35
2	1.66	1.32	0.59	0.80	0.34	0.80	0.85	1.03	0.94	1.11	1.65	1.17
3	1.54	1.34	0.46	0.85	0.43	0.82	0.61	1.37	1.21	1.17	1.66	1.17
4	1.63	1.44	0.63	0.87	0.55	0.60	0.52	1.06	1.58	1.19	1.35	1.31
5	1.73	1.44	0.57	0.93	0.50	0.63	0.13	0.97	1.38	1.20	1.69	1.18
6	1.51	1.52	0.30	1.09	0.56	0.66	0.35	1.22	1.18	1.08	1.76	1.72
7	1.53	1.59	0.02	0.43	0.77	0.93	0.70	1.07	1.46	1.12	1.31	1.64
8	1.54	1.29	0.58	0.46	0.44	-0.08	0.99	1.33	1.27	1.30	1.60	1.86
9	1.56	1.00	1.04	0.63	0.53	0.58	1.02	0.99	1.13	1.30	1.46	2.03
10	1.57	0.72	1.28	---	0.48	---	1.07	1.09	1.13	1.18	1.26	1.88
11	1.08	0.97	1.47	---	0.48	---	1.22	1.16	1.32	1.12	1.19	1.44
12	1.21	1.14	1.45	---	0.53	---	1.20	1.14	1.59	1.16	1.15	1.20
13	1.69	0.42	1.59	0.44	0.28	0.84	1.34	1.04	1.16	1.18	1.38	1.19
14	1.73	-0.03	1.57	0.60	0.57	0.74	1.36	0.96	1.35	1.15	1.34	1.28
15	1.18	0.24	1.24	0.62	1.00	0.76	1.02	0.92	1.34	1.17	1.64	1.44
16	1.30	0.47	1.48	0.28	0.39	0.83	0.95	0.98	1.27	1.06	1.53	1.47
17	1.25	0.52	1.33	0.29	0.14	0.76	1.09	0.81	1.21	1.22	1.45	1.65
18	1.14	0.64	1.11	0.68	-0.22	0.89	1.16	0.71	1.20	1.50	1.52	1.79
19	0.86	0.98	1.26	0.65	0.25	1.00	1.05	0.67	0.96	1.51	1.66	1.72
20	1.27	0.91	1.03	---	0.90	0.84	1.15	0.89	1.03	1.37	1.61	1.30
21	1.13	1.05	0.89	---	1.10	1.13	0.95	0.67	1.00	1.20	1.55	0.96
22	1.29	1.17	1.17	---	0.98	0.91	0.99	0.73	1.13	1.31	1.69	1.36
23	0.89	1.20	1.21	0.60	0.99	0.79	0.89	0.79	1.25	---	1.36	1.42
24	1.21	1.28	1.46	0.69	1.07	0.92	1.08	0.99	1.10	---	1.26	1.30
25	1.29	1.36	1.35	---	0.86	0.74	0.77	1.08	1.07	1.53	1.32	1.45
26	1.35	1.20	1.16	---	1.02	0.62	0.83	0.84	1.24	1.51	1.31	1.61
27	1.33	1.39	1.07	---	0.80	0.47	0.81	0.69	1.10	---	1.33	1.78
28	1.49	1.33	1.03	---	0.19	0.74	0.46	0.85	1.24	---	1.27	1.98
29	1.57	0.30	1.07	---	0.70	0.29	0.72	0.96	1.13	1.41	1.45	1.90
30	1.62	0.81	1.11	0.67	---	-0.15	0.75	0.94	1.19	---	1.36	1.76
31	1.42	---	1.04	0.30	---	0.45	---	1.11	---	---	1.50	---
TOTAL	43.42	30.38	32.56	---	16.87	---	26.80	29.79	36.05	---	45.26	45.31
MEAN	1.40	1.01	1.05	---	0.58	---	0.89	0.96	1.20	---	1.46	1.51
MAX	1.85	1.59	1.59	---	1.10	---	1.36	1.37	1.59	---	1.76	2.03
MIN	0.86	-0.03	0.02	---	-0.22	---	0.13	0.67	0.89	---	1.15	0.96

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



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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (TOP): May 2000 to current year.
SPECIFIC CONDUCTANCE (BOTTOM): November 1997 to current year
pH (TOP): May 2000 to current year.
pH (BOTTOM): November 1997 to current year.
WATER TEMPERATURE (TOP): May 2000 to current year.
WATER TEMPERATURE (BOTTOM): November 1997 to current year.
DISSOLVED OXYGEN (TOP): May 2000 to current year.
DISSOLVED OXYGEN (BOTTOM): November 1997 to current year.
DISSOLVED OXYGEN, PERCENT SATURATION (TOP): May 2000 to current year.
DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM): November 1997 to current year.

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

REMARKS.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources (DENR), Division of Water Resources to define water-quality characteristics in the Roanoke River Basin below Roanoke Rapids Dam. Top constituents were monitored at approximately 18 ft above the streambed and bottom constituents, 2 ft above the streambed. Dissolved oxygen, percent saturation is computed using a barometric pressure of 760 mm Hg beginning October 1, 2000. Dissolved oxygen, minimum extremes are reported only as <1.0 mg/L. Dissolved oxygen, percent saturation, minimum extremes are reported only as <10%.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE (TOP), microsiemens	9,880, February 2, 2002	73, June 20, 21, 2001
SPECIFIC CONDUCTANCE (BOTTOM), microsiemens	11,700 February 2, 2002	48, September 21, 1999
pH (TOP), standard units	8.0, August 19, 2002	6.0, June 19, 21, 22, 2001
pH (BOTTOM), standard units	7.7, June 17, 2000	5.8, March 4, 1998, September 18-22, 1999
WATER TEMPERATURE (TOP), °C	31.6, August 4, 2002	2.5, January 24, 2003
WATER TEMPERATURE (BOTTOM), °C	31.0, July 30, 1998, August 2, 1999	2.5, January 24, 2003
DISSOLVED OXYGEN (TOP), mg/L	12.6, February 22, 2003	<1.0, on many days during the period
DISSOLVED OXYGEN (BOTTOM), mg/L	14.0, January 6, 7, 2001, January 11, 2002	<1.0, on many days during period
DISSOLVED OXYGEN, PERCENT SATURATION (TOP),%	115, May 11, 2003	<10, on many days during the period
DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM),%	115, November 30, 1999	< 10, on many days during period

EXTREMES FOR CURRENT WATER YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE (TOP), microsiemens	254, April 1	92, August 18
SPECIFIC CONDUCTANCE (BOTTOM), microsiemens	248, April 1	90, August 18
pH (TOP), standard units	7.6, February 14, 15, 16, March 23	6.4, October 1, 2, 3, August 19
pH (BOTTOM), standard units	7.5, January 25, February 2	6.4, October 1, 2, 3
WATER TEMPERATURE (TOP), C	31.4, July 16	2.9, January 31
WATER TEMPERATURE (BOTTOM), C	30.0, July 14, 17	2.8, January 31
DISSOLVED OXYGEN (TOP), mg/L	12.9, February 2	<1.0, October 1, 2
DISSOLVED OXYGEN (BOTTOM), mg/L	12.4, February 14, 16	<1.0, October 1, 2
DISSOLVED OXYGEN, PERCENT SATURATION (TOP),%	104, July 26	<10, October 1, 2
DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM),%	99, March 5	<10, October 1, 2

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

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	111	102	106	114	109	111	139	121	125	105	103	104
2	103	101	102	115	108	111	128	119	124	107	103	105
3	107	100	102	115	109	112	137	123	128	107	105	106
4	109	106	107	119	110	114	130	104	125	109	106	107
5	111	106	108	119	114	116	139	115	124	110	107	108
6	108	106	107	123	113	118	131	123	126	112	107	109
7	110	101	105	118	108	112	132	119	125	110	107	108
8	104	102	103	115	106	110	134	122	127	112	109	110
9	105	102	104	116	105	111	132	122	127	113	110	111
10	113	101	104	124	108	114	132	116	126	114	110	112
11	112	107	109	124	118	121	144	108	118	116	112	114
12	116	110	112	125	107	116	125	109	115	117	108	114
13	119	115	116	115	106	109	133	117	121	112	108	110
14	119	113	116	157	107	120	144	101	113	114	110	112
15	123	109	113	129	117	121	107	93	100	121	111	113
16	117	106	113	125	120	122	97	93	95	126	111	117
17	115	107	110	125	121	123	97	93	96	131	120	126
18	119	113	115	136	120	122	105	93	96	131	125	129
19	116	113	114	127	118	122	105	95	97	138	123	127
20	120	113	116	120	108	111	96	94	95	137	120	125
21	119	108	116	124	108	114	95	94	95	132	121	126
22	113	108	110	129	117	122	100	94	97	136	128	131
23	116	109	112	130	118	122	100	98	99	155	126	137
24	116	110	113	130	115	121	100	98	99	147	125	137
25	117	110	113	156	116	122	99	97	98	205	114	148
26	115	109	112	129	119	123	99	97	98	165	133	147
27	122	109	115	133	118	125	101	98	99	185	133	157
28	146	119	125	134	114	123	102	99	101	186	145	162
29	125	115	121	135	114	119	103	100	102	187	131	152
30	121	111	117	135	119	124	103	101	102	151	134	141
31	121	109	113	---	---	---	104	102	103	174	129	136
MONTH	146	100	111	157	105	118	144	93	110	205	103	124
		FEBRUARY			MARCH			APRIL			MAY	
1	139	125	132	113	111	112	254	186	212	132	128	130
2	143	126	134	114	111	112	236	184	197	133	127	130
3	161	138	148	117	111	114	249	182	217	136	128	132
4	169	139	149	121	115	117	223	176	192	132	124	127
5	166	137	149	129	118	122	227	163	193	133	126	129
6	158	140	147	142	121	128	234	161	196	135	128	132
7	155	140	146	137	128	132	211	180	192	133	121	127
8	147	127	134	141	122	129	195	162	181	130	121	125
9	135	123	130	145	113	135	176	151	161	128	120	124
10	130	118	124	157	131	139	175	115	151	132	122	127
11	128	117	122	154	128	140	178	140	155	133	125	128
12	128	112	118	181	146	156	193	141	161	133	126	129
13	119	112	116	233	141	163	164	138	149	136	126	130
14	120	114	117	189	146	157	190	135	160	134	128	131
15	124	114	117	166	155	159	166	134	148	137	129	132
16	121	108	112	165	151	157	172	138	148	140	129	134
17	110	102	107	176	141	159	145	133	137	140	120	133
18	106	100	102	143	135	138	137	124	130	128	118	122
19	105	95	102	153	123	133	130	119	124	127	120	124
20	117	94	101	187	130	142	128	120	124	139	120	127
21	117	111	114	160	136	143	127	118	123	136	123	127
22	116	110	112	179	138	158	129	121	125	163	136	149
23	115	101	107	170	144	154	129	122	125	153	112	138
24	104	102	103	162	143	155	133	123	127	155	125	139
25	103	101	102	143	127	133	129	121	125	148	134	139
26	111	102	105	152	125	142	129	122	126	143	132	137
27	112	105	107	161	142	148	130	121	124	140	128	134
28	109	105	107	182	139	161	127	121	123	147	127	132
29	113	108	110	225	118	173	130	124	127	147	129	134
30	---	---	---	159	134	143	132	126	128	140	128	133
31	---	---	---	187	129	150	---	---	---	144	132	136
MONTH	169	94	120	233	111	142	254	115	153	163	112	131

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

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	154	134	139	138	128	131	151	128	140	159	130	137
2	162	133	141	136	126	130	157	132	141	143	132	138
3	156	129	146	136	127	130	184	118	134	138	123	130
4	162	118	142	139	127	132	148	118	130	132	121	126
5	207	118	129	142	128	135	147	120	135	129	121	125
6	127	118	124	146	121	135	174	118	135	150	103	126
7	149	123	137	154	118	135	132	122	127	126	118	123
8	164	136	147	151	122	135	144	126	132	136	121	130
9	154	139	146	150	123	135	135	124	130	142	129	132
10	154	140	147	157	135	144	136	111	129	147	122	132
11	164	129	141	155	140	146	140	130	136	131	126	128
12	171	122	140	159	140	150	143	132	137	133	117	127
13	140	126	132	165	138	155	154	128	135	129	117	123
14	139	131	135	163	135	144	171	114	129	132	122	127
15	142	127	132	176	128	145	148	115	125	135	125	129
16	139	129	134	180	148	161	129	115	120	130	118	124
17	146	131	136	184	162	172	122	100	108	137	123	128
18	147	132	138	207	176	191	105	92	97	145	125	133
19	143	129	134	202	165	187	101	93	96	146	126	131
20	142	129	134	181	149	171	101	99	100	130	114	123
21	138	114	129	187	138	163	102	99	100	126	105	120
22	148	134	140	172	132	150	108	100	103	131	114	126
23	135	121	127	185	143	150	107	102	104	133	121	127
24	187	132	142	184	148	163	110	106	107	135	125	128
25	164	141	155	166	150	155	112	106	110	135	123	129
26	199	142	155	164	142	155	113	110	112	141	124	131
27	164	139	145	161	147	152	118	112	115	142	124	129
28	153	136	144	186	147	159	127	114	118	142	124	132
29	146	128	134	169	132	149	128	117	122	138	124	130
30	142	128	133	152	132	144	137	119	128	138	125	130
31	---	---	---	147	123	134	174	121	133	---	---	---
MONTH	207	114	139	207	118	150	184	92	122	159	103	128

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

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	111	102	106	113	108	111	133	119	123	106	104	104
2	103	101	101	114	107	111	126	118	123	107	104	106
3	107	100	102	114	108	111	131	123	126	108	106	107
4	109	107	108	118	109	113	129	108	124	110	107	108
5	112	107	108	119	113	116	137	114	122	110	108	109
6	109	107	108	122	113	118	129	122	125	112	108	109
7	111	102	105	118	107	111	130	118	123	111	107	109
8	105	103	104	115	106	111	132	122	126	112	109	111
9	106	103	105	116	106	112	131	121	126	113	111	112
10	113	101	104	124	107	115	131	116	124	114	111	112
11	111	107	109	123	118	120	141	107	117	117	112	114
12	115	110	111	125	105	115	124	108	115	118	108	114
13	117	114	115	113	105	108	131	116	120	112	108	110
14	118	112	114	139	106	118	141	106	113	114	109	112
15	121	108	112	126	117	120	107	94	101	121	110	112
16	115	105	112	122	118	120	97	94	95	126	111	117
17	114	105	109	125	118	121	98	94	96	131	120	126
18	118	112	114	134	117	120	107	94	97	131	124	128
19	114	111	113	125	116	120	106	96	98	138	122	127
20	118	112	115	118	106	110	97	95	96	137	119	125
21	118	107	114	121	105	112	96	95	96	132	121	126
22	112	107	109	127	115	120	101	95	97	135	128	131
23	115	109	112	128	115	119	101	99	100	154	125	137
24	117	108	112	128	113	118	101	99	100	147	125	136
25	117	109	112	154	114	120	100	98	99	213	129	151
26	114	108	111	127	117	122	100	98	99	165	134	148
27	122	109	114	131	116	123	102	99	100	184	134	157
28	146	117	125	132	112	121	103	100	101	186	145	163
29	125	115	120	132	113	117	104	101	102	185	131	152
30	120	111	116	132	117	123	104	102	103	152	133	141
31	120	109	112	---	---	---	104	103	104	176	129	136
MONTH	146	100	111	154	105	117	141	94	109	213	104	124
		FEBRUARY			MARCH			APRIL			MAY	
1	139	126	132	113	111	112	248	184	205	130	127	128
2	144	127	134	115	111	112	237	184	194	133	126	129
3	161	138	149	117	113	114	244	181	215	136	127	131
4	173	139	150	120	115	117	222	176	190	131	123	127
5	168	137	150	128	118	122	226	163	194	131	125	128
6	161	139	148	141	120	127	236	162	198	135	127	131
7	155	140	146	136	127	132	227	179	192	133	121	126
8	148	127	134	140	123	129	197	162	182	131	121	126
9	135	122	129	145	114	136	190	152	162	128	120	124
10	130	118	124	156	132	139	177	116	152	134	123	128
11	128	117	122	152	129	139	181	139	157	131	126	129
12	127	112	118	181	146	158	194	136	162	132	127	130
13	120	113	116	234	139	163	165	139	151	137	126	130
14	120	114	117	186	146	157	186	136	160	135	128	131
15	124	114	118	166	154	159	165	135	148	138	129	132
16	121	108	112	165	150	156	172	137	149	141	130	134
17	110	102	107	175	143	159	146	133	138	143	121	134
18	106	100	102	144	136	138	138	124	131	129	119	123
19	106	95	102	153	122	132	131	119	124	127	120	125
20	117	94	101	187	130	141	129	122	125	139	121	129
21	117	111	114	160	136	142	126	120	123	137	124	128
22	116	111	113	177	138	157	129	121	125	166	137	150
23	115	102	108	178	143	155	129	121	125	154	113	142
24	104	102	103	161	142	155	134	123	126	156	133	142
25	103	101	102	142	126	134	127	121	124	146	136	140
26	112	102	106	153	126	142	127	120	124	146	133	138
27	113	106	108	158	141	147	131	120	124	146	129	135
28	110	106	108	180	151	161	128	120	123	145	128	133
29	113	109	111	224	116	175	129	124	126	147	130	136
30	---	---	---	160	134	144	131	125	127	144	130	135
31	---	---	---	184	120	151	---	---	---	146	132	137
MONTH	173	94	120	234	111	142	248	116	153	166	113	132

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

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	155	134	140	132	123	126	153	129	140	158	129	136
2	164	134	145	133	123	127	158	132	143	142	128	136
3	157	137	148	133	122	127	190	118	135	135	124	129
4	161	114	141	137	122	128	149	119	132	133	122	127
5	220	116	128	139	126	132	147	121	135	129	122	125
6	127	117	122	146	116	133	163	117	134	154	103	127
7	148	126	136	149	114	132	131	120	126	128	117	123
8	165	134	147	149	118	130	141	124	129	137	122	130
9	155	137	145	152	119	134	131	123	127	143	129	133
10	152	139	145	159	136	145	134	106	127	149	122	132
11	162	128	141	158	141	148	139	127	134	133	126	129
12	169	127	138	159	141	152	139	129	135	134	118	128
13	139	124	129	163	152	157	151	125	132	131	118	124
14	139	130	133	162	136	148	174	112	127	133	124	128
15	141	126	131	182	130	148	148	112	122	137	126	130
16	138	129	133	184	150	162	128	113	118	131	119	126
17	141	129	135	178	163	170	120	98	106	138	124	129
18	142	130	137	206	165	186	102	90	94	146	127	135
19	143	126	132	206	169	187	98	91	94	145	126	133
20	142	127	133	183	146	174	100	97	98	132	116	124
21	140	114	129	191	136	165	101	97	98	129	107	122
22	147	132	140	181	134	152	106	98	101	134	121	129
23	134	120	126	176	142	149	104	100	102	134	123	129
24	190	130	141	180	147	164	108	104	105	136	123	129
25	163	141	153	166	150	156	109	103	107	136	121	130
26	201	139	153	166	142	156	112	108	109	143	126	132
27	163	136	142	163	148	154	116	110	113	145	124	131
28	149	133	141	188	149	160	128	112	116	146	125	135
29	143	124	130	167	132	149	130	115	119	140	123	132
30	138	123	129	152	134	144	135	117	127	139	126	130
31	---	---	---	144	123	134	175	121	132	---	---	---
MONTH	220	114	137	206	114	149	190	90	120	158	103	129

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

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

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

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	7.0	7.0	7.1	7.0	7.0	7.0	6.8	6.9	6.6	6.6	6.6
2	7.0	7.0	7.0	7.1	7.0	7.0	7.0	6.8	6.9	6.8	6.6	6.7
3	7.1	7.0	7.0	7.0	7.0	7.0	7.1	6.9	6.9	7.1	6.8	6.9
4	7.2	7.0	7.0	7.0	7.0	7.0	6.9	6.8	6.8	7.1	7.0	7.1
5	7.2	6.8	6.9	7.0	6.9	7.0	7.0	6.8	6.9	7.1	7.0	7.1
6	6.9	6.8	6.8	7.0	6.9	7.0	7.0	6.9	7.0	7.1	7.0	7.0
7	7.0	6.8	6.9	7.1	6.9	7.0	6.9	6.7	6.8	7.0	6.9	6.9
8	7.0	6.9	6.9	7.1	7.0	7.0	6.8	6.7	6.8	7.0	6.9	6.9
9	7.0	6.9	7.0	7.2	7.0	7.1	6.8	6.8	6.8	7.0	6.9	7.0
10	7.0	6.9	7.0	7.4	7.2	7.2	6.8	6.8	6.8	6.9	6.8	6.9
11	7.0	6.9	7.0	7.3	7.2	7.2	7.0	6.8	6.9	6.9	6.8	6.8
12	7.2	6.9	7.1	7.4	7.2	7.3	7.0	6.9	7.0	6.9	6.9	6.9
13	7.1	7.0	7.1	7.4	7.2	7.3	7.0	6.9	7.0	7.0	6.9	7.0
14	7.1	7.1	7.1	7.3	7.2	7.2	7.0	6.9	7.0	7.0	7.0	7.0
15	7.2	7.1	7.1	7.3	7.1	7.2	6.9	6.8	6.9	7.0	7.0	7.0
16	7.2	7.1	7.1	7.4	7.0	7.2	6.9	6.8	6.8	7.0	6.9	7.0
17	7.2	7.1	7.1	7.3	7.0	7.2	6.8	6.6	6.7	7.0	6.9	7.0
18	7.2	7.1	7.1	7.3	7.1	7.2	6.6	6.5	6.5	7.0	7.0	7.0
19	7.1	7.0	7.1	7.3	7.1	7.1	6.5	6.4	6.5	7.0	7.0	7.0
20	7.1	7.0	7.1	7.3	7.0	7.1	6.5	6.5	6.5	7.0	6.9	6.9
21	7.1	7.0	7.0	7.3	6.9	7.1	6.5	6.5	6.5	7.0	6.9	6.9
22	7.1	7.0	7.0	7.1	6.9	7.0	6.5	6.5	6.5	6.9	6.9	6.9
23	7.0	7.0	7.0	7.1	6.9	7.0	6.5	6.5	6.5	7.0	6.9	6.9
24	7.1	7.0	7.0	7.1	7.0	7.1	6.6	6.5	6.5	7.1	6.9	7.0
25	7.0	7.0	7.0	7.1	7.0	7.1	6.6	6.5	6.6	7.1	7.0	7.1
26	7.1	7.0	7.0	7.2	7.0	7.1	6.6	6.5	6.6	7.2	7.1	7.1
27	7.1	6.9	7.0	7.1	7.0	7.1	6.6	6.6	6.6	7.1	7.0	7.1
28	7.1	7.0	7.1	7.1	7.0	7.1	6.6	6.5	6.5	7.1	7.0	7.0
29	7.1	7.0	7.1	7.1	7.0	7.0	6.6	6.5	6.5	7.0	6.9	6.9
30	7.0	7.0	7.0	7.0	6.9	7.0	6.6	6.6	6.6	6.9	6.8	6.9
31	---	---	---	7.0	6.8	6.9	6.7	6.6	6.6	---	---	---
MONTH	7.2	6.8	7.0	7.4	6.8	7.1	7.1	6.4	6.7	7.2	6.6	7.0

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

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

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

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	7.0	7.0	7.0	6.9	6.9	6.9	6.8	6.8	6.7	6.6	6.6
2	7.1	7.0	7.0	7.0	7.0	7.0	7.0	6.9	6.9	6.9	6.7	6.8
3	7.0	7.0	7.0	7.0	7.0	7.0	7.1	6.8	6.9	7.1	6.8	7.0
4	7.3	7.0	7.1	7.0	6.9	7.0	6.9	6.8	6.8	7.2	7.1	7.1
5	7.3	6.9	7.1	7.0	6.9	6.9	7.0	6.8	6.9	7.1	7.0	7.1
6	7.0	6.9	7.0	6.9	6.9	6.9	7.1	6.9	7.0	7.1	7.0	7.0
7	7.0	6.9	7.0	7.0	6.9	6.9	7.0	6.8	6.9	7.0	6.9	7.0
8	7.1	7.0	7.0	7.0	6.9	7.0	6.8	6.8	6.8	7.0	6.9	6.9
9	7.1	7.0	7.1	7.1	7.0	7.0	6.8	6.8	6.8	7.0	6.9	7.0
10	7.1	7.0	7.1	7.1	7.0	7.1	6.9	6.8	6.8	6.9	6.8	6.9
11	7.1	7.0	7.1	7.2	7.0	7.1	7.0	6.9	6.9	6.8	6.8	6.8
12	7.2	7.0	7.1	7.2	7.1	7.1	7.0	7.0	7.0	6.9	6.8	6.9
13	7.1	7.0	7.1	7.2	7.0	7.1	7.0	7.0	7.0	7.0	6.9	6.9
14	7.1	7.1	7.1	7.1	7.0	7.0	7.1	7.0	7.0	7.0	6.9	6.9
15	7.2	7.1	7.1	7.1	7.0	7.0	7.0	6.8	6.9	7.0	6.9	6.9
16	7.2	7.1	7.1	7.1	7.0	7.0	6.9	6.8	6.8	7.0	6.9	6.9
17	7.2	7.1	7.1	7.1	6.9	7.0	6.8	6.6	6.7	7.0	6.9	6.9
18	7.1	7.1	7.1	7.2	6.9	7.0	6.6	6.5	6.6	7.0	6.9	7.0
19	7.1	7.0	7.1	7.1	7.0	7.0	6.6	6.5	6.5	7.0	6.9	7.0
20	7.1	7.0	7.1	7.2	6.9	7.0	6.6	6.5	6.6	6.9	6.9	6.9
21	7.1	7.0	7.0	7.2	6.9	7.0	6.5	6.5	6.5	6.9	6.8	6.9
22	7.0	7.0	7.0	7.1	6.9	7.0	6.6	6.5	6.5	6.9	6.8	6.9
23	7.0	6.9	6.9	7.1	6.9	6.9	6.6	6.5	6.5	6.9	6.9	6.9
24	7.1	6.9	7.0	7.0	6.9	7.0	6.6	6.6	6.6	7.0	6.9	7.0
25	7.1	7.0	7.0	7.0	6.9	7.0	6.6	6.6	6.6	7.0	7.0	7.0
26	7.1	7.0	7.0	7.0	6.9	7.0	6.6	6.6	6.6	7.1	7.0	7.0
27	7.0	6.9	7.0	7.0	6.9	7.0	6.6	6.6	6.6	7.1	7.0	7.0
28	7.0	7.0	7.0	7.0	6.9	7.0	6.6	6.6	6.6	7.0	7.0	7.0
29	7.0	7.0	7.0	7.0	6.9	6.9	6.6	6.6	6.6	7.0	6.9	6.9
30	7.0	6.9	7.0	6.9	6.9	6.9	6.7	6.6	6.6	6.9	6.8	6.9
31	---	---	---	6.9	6.8	6.8	6.7	6.6	6.6	---	---	---
MONTH	7.3	6.9	7.0	7.2	6.8	7.0	7.1	6.5	6.7	7.2	6.6	6.9

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

TEMPERATURE, WATER, DEGREES CELSIUS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.2	20.5	20.8	17.2	16.8	17.0	12.8	12.3	12.5	7.5	7.2	7.4
2	20.5	19.8	20.2	17.2	16.7	16.9	12.4	11.7	12.1	7.7	7.2	7.5
3	19.8	18.7	19.2	17.4	16.9	17.1	11.7	10.7	11.2	8.4	7.7	8.1
4	18.8	18.5	18.7	17.8	17.4	17.6	10.8	10.2	10.5	9.6	8.4	9.1
5	19.4	18.7	19.0	18.6	17.8	18.2	10.5	10.2	10.3	11.0	9.6	10.4
6	19.6	19.1	19.3	19.4	18.6	19.0	10.2	9.4	9.9	11.4	10.6	11.1
7	19.9	19.3	19.6	19.4	19.1	19.3	9.4	9.1	9.3	10.6	7.8	9.2
8	19.9	19.6	19.8	19.2	18.1	18.7	9.2	8.9	9.1	7.8	6.6	7.2
9	20.5	19.8	20.1	18.1	17.0	17.4	9.1	8.8	8.9	6.6	6.1	6.5
10	20.7	20.3	20.5	17.0	16.4	16.6	9.8	8.8	9.0	6.1	5.0	5.6
11	20.5	20.2	20.4	16.9	16.2	16.5	9.7	9.3	9.5	5.0	4.1	4.6
12	20.6	20.1	20.3	17.0	16.4	16.6	9.4	9.2	9.3	4.3	3.9	4.1
13	21.0	20.3	20.6	16.6	15.4	16.3	9.2	8.8	9.1	4.8	4.2	4.5
14	20.6	20.4	20.5	15.6	14.8	15.2	9.2	8.7	9.0	5.0	4.5	4.8
15	20.4	19.8	20.1	14.9	14.3	14.6	8.9	8.4	8.6	5.3	4.9	5.1
16	19.8	19.2	19.5	14.9	14.3	14.6	8.5	8.1	8.3	5.3	5.0	5.2
17	19.3	18.8	19.0	15.2	14.6	14.8	8.5	8.2	8.4	5.3	5.1	5.2
18	18.9	18.6	18.7	15.2	14.6	14.9	8.3	7.7	8.1	5.6	5.2	5.4
19	18.7	18.2	18.4	15.7	14.9	15.3	7.7	6.9	7.3	5.9	5.6	5.8
20	18.7	18.0	18.3	15.4	15.0	15.2	7.0	6.0	6.6	5.7	5.3	5.6
21	18.6	18.1	18.4	15.4	14.8	15.0	6.0	5.4	5.8	5.5	5.1	5.3
22	18.6	18.4	18.5	15.2	14.8	15.0	5.5	5.3	5.4	5.7	5.0	5.3
23	18.4	18.1	18.2	15.4	14.8	15.0	6.4	5.4	5.9	5.5	5.1	5.3
24	18.1	17.4	17.6	15.3	14.7	15.0	8.1	6.4	7.4	5.6	4.9	5.2
25	17.5	17.3	17.4	15.0	14.4	14.8	8.3	7.8	8.2	5.2	3.8	4.6
26	17.7	17.2	17.5	14.5	14.1	14.3	7.8	6.7	7.2	4.3	3.9	4.1
27	17.9	17.6	17.7	14.2	13.9	14.1	6.7	6.4	6.6	4.2	3.7	3.9
28	17.8	17.5	17.7	14.8	14.0	14.3	6.7	6.4	6.6	4.3	3.7	4.0
29	17.9	17.4	17.6	14.2	12.8	13.5	6.9	6.5	6.7	4.3	3.4	3.8
30	17.7	17.3	17.5	12.9	12.4	12.7	8.0	6.9	7.6	3.8	3.3	3.6
31	17.5	17.0	17.2	---	---	---	8.0	7.4	7.8	3.8	2.9	3.4
MONTH	21.2	17.0	19.0	19.4	12.4	15.8	12.8	5.3	8.5	11.4	2.9	5.8
		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	3.4	3.8	7.4	6.1	7.0	14.2	13.5	13.7	19.3	18.8	19.0
2	3.8	3.2	3.5	8.9	7.4	8.4	14.4	13.5	13.9	19.7	19.1	19.4
3	4.2	3.6	4.0	10.2	8.9	9.8	14.8	13.8	14.3	19.7	19.2	19.4
4	4.7	3.9	4.2	11.4	10.0	10.8	15.0	13.7	14.4	19.3	18.6	18.9
5	4.5	4.2	4.3	12.8	11.1	11.9	14.5	13.8	14.1	19.2	18.1	18.6
6	6.0	4.3	5.0	13.3	12.4	12.9	15.3	13.6	14.2	19.5	18.3	18.7
7	7.0	5.8	6.4	13.4	12.8	13.1	16.0	13.3	14.3	20.4	19.1	19.7
8	6.6	6.0	6.3	13.2	12.6	12.9	15.5	14.1	14.8	21.1	20.1	20.5
9	6.0	5.7	5.8	12.8	12.3	12.5	16.5	14.8	15.4	21.3	20.4	20.8
10	6.2	5.8	5.9	12.4	11.0	11.7	16.3	15.3	15.7	22.2	21.0	21.5
11	6.4	6.1	6.2	11.8	10.5	11.1	16.2	15.5	15.8	22.5	21.8	22.0
12	6.2	5.4	5.8	12.0	10.8	11.4	16.1	15.6	15.8	23.2	21.9	22.6
13	5.8	5.2	5.5	11.8	11.0	11.3	16.8	15.6	16.1	22.9	22.5	22.7
14	5.7	5.4	5.5	11.6	11.1	11.3	16.5	15.9	16.3	23.9	22.5	23.2
15	5.5	5.2	5.4	11.5	11.3	11.3	16.0	15.5	15.7	24.3	23.4	23.8
16	5.2	4.6	4.9	11.6	11.2	11.3	16.0	15.2	15.5	24.6	23.6	24.0
17	4.7	4.4	4.5	11.4	11.1	11.3	16.1	14.8	15.4	24.6	23.9	24.2
18	5.0	4.4	4.7	12.0	10.9	11.3	16.5	15.2	15.8	25.4	23.9	24.6
19	5.3	4.6	5.0	12.0	11.3	11.6	16.6	15.7	16.0	25.9	24.3	24.9
20	6.1	5.1	5.6	12.3	11.1	11.7	16.9	15.8	16.2	26.0	24.8	25.0
21	7.3	6.1	6.8	12.5	11.8	12.1	17.6	16.5	17.1	27.2	25.1	25.7
22	7.9	7.2	7.6	12.1	11.1	11.5	18.3	17.4	17.8	27.3	25.7	26.0
23	7.9	7.4	7.6	12.5	10.9	11.3	19.5	18.1	18.7	27.1	25.7	26.2
24	7.8	7.4	7.6	12.5	10.9	11.7	19.3	18.8	19.0	27.0	25.7	26.2
25	7.5	7.1	7.3	13.0	11.4	12.3	19.0	18.6	18.8	26.8	26.2	26.5
26	7.3	6.1	6.8	13.5	12.2	12.9	19.5	18.7	19.0	27.2	26.1	26.6
27	6.1	5.3	5.7	14.4	13.0	13.6	19.6	19.0	19.2	27.1	26.0	26.4
28	5.4	5.2	5.3	14.7	13.7	14.1	19.2	18.4	18.8	28.1	26.3	27.2
29	6.3	5.3	6.0	14.2	13.0	13.5	19.3	18.2	18.7	27.9	27.0	27.4
30	---	---	---	13.7	12.9	13.2	19.2	18.2	18.7	27.2	26.2	26.6
31	---	---	---	13.5	13.0	13.2	---	---	---	26.9	25.9	26.4
MONTH	7.9	3.2	5.6	14.7	6.1	11.7	19.6	13.3	16.3	28.1	18.1	23.4

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

TEMPERATURE, WATER, DEGREES CELSIUS, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.4	26.2	26.6	26.7	25.8	26.3	30.9	28.9	29.3	26.6	26.4	26.5
2	27.5	26.0	26.6	27.1	26.4	26.7	29.3	28.8	29.0	26.9	26.1	26.5
3	28.2	26.2	26.5	27.0	26.4	26.6	28.8	28.0	28.3	26.6	25.7	26.1
4	26.8	25.6	26.3	26.8	26.2	26.5	28.8	27.6	28.1	26.8	26.3	26.4
5	25.8	24.9	25.3	27.4	26.4	26.8	29.0	28.4	28.7	26.5	26.0	26.2
6	25.9	24.9	25.2	28.5	27.1	27.7	28.8	27.3	28.0	26.6	25.9	26.1
7	26.3	25.2	25.5	29.0	27.7	28.3	27.3	26.4	26.8	26.0	25.7	25.9
8	26.0	25.1	25.5	28.8	27.9	28.3	27.3	26.3	26.8	26.1	25.7	25.8
9	26.2	25.2	25.6	28.9	28.0	28.4	27.3	26.6	27.0	26.5	25.9	26.1
10	26.7	25.2	25.8	30.2	28.5	28.9	27.2	26.5	26.9	26.4	26.0	26.2
11	26.8	25.8	26.2	29.4	29.0	29.2	27.3	26.6	26.9	26.1	25.6	25.8
12	26.9	26.0	26.3	29.7	28.7	29.2	27.4	26.8	27.1	26.0	25.5	25.7
13	26.0	25.1	25.6	30.3	28.7	29.2	27.2	26.7	27.0	25.9	25.2	25.5
14	25.8	25.0	25.4	30.7	29.1	29.6	26.7	25.9	26.4	25.4	25.0	25.2
15	26.5	25.3	25.9	30.6	29.3	29.9	25.9	25.2	25.5	25.6	24.9	25.2
16	26.4	25.6	26.0	31.4	29.4	29.9	25.4	24.9	25.1	25.9	25.3	25.5
17	26.2	25.6	25.8	30.7	29.2	29.9	25.1	24.6	24.8	25.8	25.2	25.5
18	27.0	25.6	26.2	30.4	29.6	29.9	24.6	24.1	24.3	25.5	24.5	25.1
19	27.1	26.2	26.6	30.2	29.4	29.6	25.1	23.9	24.5	24.5	23.6	23.9
20	26.9	26.1	26.5	30.2	29.1	29.5	25.6	24.8	25.2	23.6	22.8	23.1
21	26.8	25.5	26.0	30.5	29.2	29.6	26.1	25.3	25.7	23.4	22.4	22.8
22	27.8	26.3	26.8	30.3	29.5	29.8	26.0	25.7	25.8	23.2	22.4	22.8
23	28.3	26.8	27.3	29.7	28.9	29.1	25.7	25.1	25.3	23.4	22.8	23.1
24	27.8	27.2	27.4	29.1	28.7	28.9	25.3	24.8	25.1	23.6	23.1	23.3
25	28.4	27.4	27.8	29.0	28.4	28.7	25.4	24.8	25.1	23.9	23.1	23.5
26	27.9	27.1	27.3	30.3	28.4	28.7	25.6	24.8	25.1	24.4	23.5	23.7
27	27.3	26.3	26.7	29.3	28.4	28.8	26.2	25.2	25.6	24.1	23.8	23.9
28	26.9	26.1	26.5	28.9	28.4	28.6	26.8	25.6	26.0	24.1	23.8	23.9
29	26.4	25.7	25.9	28.8	28.1	28.4	26.8	26.1	26.4	24.0	23.5	23.7
30	26.3	25.7	26.0	29.8	28.2	28.6	26.5	26.2	26.4	24.0	23.8	23.9
31	---	---	---	29.9	28.6	29.1	26.6	25.9	26.2	---	---	---
MONTH	28.4	24.9	26.2	31.4	25.8	28.7	30.9	23.9	26.4	26.9	22.4	24.9

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

TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.2	20.5	20.8	17.2	16.8	17.0	12.9	12.2	12.5	7.5	7.2	7.4
2	20.5	19.7	20.2	17.1	16.7	16.9	12.4	11.7	12.1	7.6	7.2	7.4
3	19.7	18.6	19.2	17.4	16.9	17.0	11.8	10.8	11.2	8.3	7.6	8.0
4	18.8	18.5	18.6	17.7	17.3	17.5	10.8	10.2	10.6	9.5	8.3	9.0
5	19.3	18.7	19.0	18.6	17.7	18.2	10.6	10.2	10.4	10.9	9.5	10.3
6	19.5	19.1	19.2	19.3	18.6	18.9	10.3	9.4	9.9	11.3	10.5	11.1
7	19.8	19.3	19.5	19.4	19.1	19.3	9.5	9.2	9.3	10.5	7.7	9.1
8	19.9	19.6	19.8	19.2	17.8	18.6	9.3	8.9	9.1	7.7	6.6	7.1
9	20.4	19.8	20.1	17.9	16.7	17.2	9.1	8.8	9.0	6.6	6.0	6.4
10	20.6	20.3	20.5	16.8	16.2	16.4	9.7	8.8	9.0	6.0	4.9	5.5
11	20.5	20.1	20.3	16.7	16.1	16.4	9.7	9.3	9.6	4.9	4.0	4.5
12	20.4	20.0	20.2	16.9	16.3	16.6	9.5	9.2	9.3	4.2	3.8	4.0
13	20.9	20.3	20.5	16.6	15.3	16.3	9.3	8.8	9.1	4.7	4.1	4.4
14	20.6	20.4	20.5	15.4	14.7	15.2	9.3	8.8	9.1	4.9	4.5	4.7
15	20.4	19.8	20.0	14.8	14.4	14.6	9.0	8.5	8.7	5.2	4.8	5.0
16	19.8	19.2	19.5	14.9	14.4	14.6	8.5	8.2	8.3	5.2	5.0	5.1
17	19.2	18.7	19.0	15.1	14.7	14.9	8.5	8.1	8.3	5.2	5.0	5.1
18	18.9	18.6	18.7	15.1	14.7	14.9	8.2	7.6	8.0	5.5	5.2	5.3
19	18.6	18.1	18.4	15.7	15.0	15.3	7.6	6.9	7.3	5.8	5.5	5.7
20	18.6	18.0	18.3	15.4	15.1	15.3	6.9	6.0	6.5	5.7	5.3	5.5
21	18.6	18.1	18.4	15.1	14.7	14.9	6.0	5.3	5.7	5.4	5.0	5.2
22	18.6	18.4	18.5	15.2	14.8	15.0	5.4	5.3	5.3	5.6	5.0	5.2
23	18.4	17.9	18.1	15.2	14.9	15.0	6.3	5.3	5.8	5.4	5.0	5.2
24	18.0	17.3	17.6	15.3	14.8	15.1	8.0	6.3	7.3	5.5	4.8	5.1
25	17.5	17.2	17.3	15.1	14.4	14.8	8.3	7.7	8.1	5.2	3.9	4.5
26	17.6	17.2	17.4	14.5	14.0	14.3	7.7	6.6	7.2	4.3	3.8	4.0
27	17.8	17.5	17.6	14.2	13.9	14.1	6.6	6.4	6.5	4.1	3.6	3.9
28	17.8	17.5	17.7	14.7	14.0	14.3	6.6	6.4	6.5	4.2	3.6	3.9
29	17.8	17.2	17.5	14.3	12.7	13.6	6.8	6.4	6.7	4.2	3.3	3.7
30	17.6	17.1	17.4	12.9	12.4	12.6	7.9	6.8	7.5	3.7	3.2	3.5
31	17.4	16.9	17.2	---	---	---	7.9	7.4	7.7	3.8	2.8	3.3
MONTH	21.2	16.9	18.9	19.4	12.4	15.8	12.9	5.3	8.4	11.3	2.8	5.7
		FEBRUARY			MARCH			APRIL			MAY	
1	3.9	3.4	3.7	7.4	6.2	7.0	13.9	13.3	13.6	19.3	18.7	19.0
2	3.7	3.2	3.4	8.9	7.4	8.4	14.0	13.4	13.6	19.6	19.0	19.3
3	4.1	3.5	3.8	10.2	8.9	9.8	14.5	13.7	14.0	19.6	19.1	19.4
4	4.4	3.9	4.1	11.3	10.1	10.8	15.1	13.7	14.3	19.1	18.5	18.8
5	4.4	4.0	4.2	12.5	11.2	11.9	14.3	13.7	14.1	18.8	18.1	18.5
6	5.7	4.2	4.8	13.3	12.4	12.9	14.1	13.5	13.8	19.4	18.2	18.6
7	6.8	5.7	6.3	13.4	12.9	13.1	14.5	13.3	13.7	20.3	19.1	19.6
8	6.5	5.9	6.2	13.2	12.6	12.9	15.3	14.1	14.7	20.7	20.1	20.4
9	5.9	5.6	5.8	12.8	12.1	12.5	15.4	14.7	15.1	21.1	20.4	20.7
10	6.0	5.7	5.9	12.4	11.0	11.7	15.8	15.2	15.4	22.0	20.9	21.4
11	6.3	6.0	6.1	11.5	10.4	11.0	16.0	15.4	15.6	22.1	21.7	21.9
12	6.1	5.3	5.7	11.8	10.7	11.3	16.0	15.5	15.7	23.0	21.9	22.5
13	5.8	5.1	5.5	11.7	10.9	11.2	16.5	15.6	16.0	22.8	22.4	22.6
14	5.8	5.4	5.5	11.4	11.0	11.2	16.4	15.8	16.2	23.8	22.5	23.1
15	5.5	5.3	5.4	11.3	11.2	11.3	15.9	15.2	15.6	24.0	23.3	23.7
16	5.3	4.7	5.0	11.5	11.1	11.3	15.6	15.0	15.3	24.4	23.5	23.9
17	4.7	4.5	4.6	11.4	11.1	11.3	15.8	14.7	15.3	24.4	23.8	24.1
18	5.0	4.5	4.7	11.7	10.8	11.1	16.2	15.2	15.6	25.2	23.8	24.5
19	5.3	4.7	5.0	11.9	11.3	11.6	16.3	15.6	15.9	25.3	24.2	24.7
20	6.1	5.1	5.6	12.0	11.1	11.6	16.6	15.8	16.1	25.3	24.7	24.9
21	7.3	6.1	6.8	12.3	11.8	11.9	17.5	16.4	17.0	25.7	25.1	25.3
22	7.9	7.3	7.6	12.0	11.1	11.5	18.0	17.3	17.7	26.3	25.6	25.8
23	7.9	7.4	7.7	11.3	10.8	11.0	19.1	18.0	18.6	26.3	25.7	25.9
24	7.8	7.4	7.6	12.3	10.8	11.5	19.0	18.8	18.9	26.6	25.6	26.0
25	7.5	7.2	7.3	12.8	11.3	12.0	19.0	18.5	18.7	26.6	26.1	26.3
26	7.3	6.2	6.9	13.3	12.2	12.8	19.2	18.6	18.9	26.9	26.0	26.5
27	6.2	5.3	5.7	13.5	12.9	13.2	19.4	19.0	19.1	26.6	25.9	26.3
28	5.4	5.2	5.3	14.5	13.5	14.0	19.0	18.2	18.7	27.6	26.2	26.9
29	6.3	5.4	6.0	14.1	13.0	13.5	19.1	18.1	18.6	27.6	26.9	27.3
30	---	---	---	13.4	12.8	13.0	19.1	18.2	18.6	27.2	26.1	26.5
31	---	---	---	13.4	12.9	13.2	---	---	---	26.8	25.8	26.3
MONTH	7.9	3.2	5.6	14.5	6.2	11.7	19.4	13.3	16.1	27.6	18.1	23.2

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

TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.9	26.1	26.4	26.8	25.8	26.2	29.5	28.9	29.1	26.6	26.4	26.5
2	26.6	25.9	26.2	26.9	26.4	26.6	29.4	28.8	29.1	26.8	26.0	26.4
3	26.6	26.1	26.3	26.9	26.4	26.6	28.8	28.0	28.4	26.5	25.6	26.0
4	26.6	25.6	26.2	26.8	26.2	26.5	28.6	27.6	27.9	26.5	26.3	26.4
5	25.6	24.9	25.2	27.1	26.4	26.7	29.0	28.4	28.7	26.3	26.0	26.1
6	25.4	24.9	25.2	28.4	27.1	27.6	28.8	27.2	28.0	26.4	25.9	26.1
7	25.7	25.2	25.4	28.8	27.7	28.2	27.2	26.3	26.7	26.0	25.7	25.9
8	25.8	25.1	25.4	28.7	27.8	28.2	27.1	26.2	26.7	26.0	25.7	25.8
9	25.7	25.1	25.4	28.9	28.0	28.3	27.1	26.5	26.8	26.2	25.9	26.0
10	26.0	25.1	25.5	29.4	28.5	28.8	27.1	26.4	26.8	26.3	26.0	26.2
11	26.4	25.6	26.0	29.4	29.0	29.2	27.2	26.5	26.9	26.1	25.6	25.8
12	26.6	26.0	26.3	29.6	28.7	29.1	27.3	26.7	27.1	25.9	25.4	25.6
13	26.0	25.0	25.5	29.3	28.6	28.9	27.1	26.7	26.9	25.7	25.2	25.4
14	25.7	24.9	25.4	30.0	29.1	29.4	26.7	25.9	26.4	25.5	25.0	25.3
15	26.4	25.3	25.8	29.9	29.3	29.7	25.9	25.2	25.5	25.4	25.0	25.2
16	26.2	25.6	25.9	29.9	29.3	29.6	25.3	24.9	25.0	25.7	25.3	25.5
17	26.0	25.6	25.8	30.0	29.2	29.5	25.1	24.5	24.7	25.8	25.3	25.5
18	26.6	25.6	26.0	29.9	29.2	29.5	24.6	24.1	24.3	25.6	24.5	25.1
19	26.8	26.2	26.5	29.8	29.3	29.5	25.0	23.9	24.4	24.5	23.6	23.9
20	26.7	26.0	26.4	29.8	29.0	29.3	25.6	24.8	25.2	23.6	22.7	23.1
21	26.4	25.5	25.9	29.9	29.2	29.5	26.0	25.3	25.7	23.0	22.3	22.7
22	27.2	26.2	26.6	29.9	29.4	29.6	26.0	25.6	25.8	23.2	22.3	22.7
23	27.6	26.8	27.1	29.7	28.9	29.1	25.6	25.0	25.3	23.4	22.7	23.0
24	27.6	27.2	27.4	29.1	28.5	28.9	25.2	24.8	25.0	23.6	23.1	23.3
25	28.1	27.4	27.7	29.0	28.4	28.6	25.3	24.8	25.0	23.8	23.0	23.4
26	27.9	27.1	27.4	28.8	28.4	28.5	25.4	24.8	25.0	24.0	23.4	23.7
27	27.3	26.3	26.7	29.2	28.4	28.7	26.0	25.2	25.5	24.0	23.8	23.9
28	26.8	26.1	26.5	29.0	28.4	28.6	26.4	25.6	25.9	24.1	23.8	23.9
29	26.3	25.6	25.9	28.7	28.1	28.4	26.7	26.1	26.3	23.9	23.4	23.7
30	26.3	25.8	26.0	28.8	28.2	28.4	26.5	26.2	26.4	24.0	23.7	23.9
31	---	---	---	29.3	28.6	28.9	26.4	25.9	26.1	---	---	---
MONTH	28.1	24.9	26.1	30.0	25.8	28.5	29.5	23.9	26.3	26.8	22.3	24.9

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

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	0.3	0.2	0.3	5.9	5.7	5.8	8.6	8.3	8.5	9.9	9.7	9.8
2	1.7	0.2	0.6	5.8	5.6	5.7	8.8	8.4	8.6	10.1	9.8	10
3	2.7	1.7	2.4	5.7	5.3	5.5	9.0	8.8	8.9	10.2	9.8	10
4	3.2	2.3	2.9	5.4	5.2	5.3	9.3	8.9	9.1	10.1	9.6	9.8
5	3.3	2.6	3.1	5.5	5.3	5.4	9.4	9.1	9.2	9.9	9.4	9.6
6	3.0	2.6	2.8	5.5	5.1	5.3	9.6	9.2	9.4	9.6	8.8	9.2
7	3.2	2.7	2.9	5.6	5.2	5.4	9.6	9.4	9.5	9.7	9.0	9.3
8	3.0	2.6	2.9	5.8	5.3	5.6	9.6	9.4	9.5	10.0	9.6	9.9
9	3.3	2.6	3.0	6.3	5.7	6.1	9.6	9.4	9.5	10.3	9.9	10.2
10	3.2	2.9	3.0	6.3	5.8	6.1	9.7	9.4	9.5	10.7	10.3	10.5
11	3.0	2.4	2.6	6.2	5.8	6.0	9.8	9.4	9.5	11.1	10.6	10.9
12	3.0	2.4	2.7	7.0	6.1	6.6	9.5	9.0	9.3	11.3	10.9	11.1
13	3.3	2.9	3.1	7.3	6.9	7.1	9.3	8.8	9.1	11.3	11.1	11.2
14	3.2	2.8	3.0	7.2	7.0	7.1	9.5	8.8	9.2	11.4	11.0	11.2
15	3.5	3.1	3.3	7.2	7.0	7.1	9.0	8.8	8.9	11.2	10.9	11.0
16	3.8	3.4	3.6	7.5	7.0	7.2	9.0	8.7	8.8	11.2	10.9	11.0
17	3.9	3.6	3.7	7.6	7.4	7.5	9.0	8.8	8.9	11.1	10.8	11.0
18	4.4	3.7	4.1	7.9	7.5	7.8	8.8	8.6	8.7	11.2	11.0	11.1
19	4.4	4.0	4.2	8.1	7.6	7.8	8.8	8.6	8.7	11.2	11.0	11.1
20	4.9	4.4	4.7	8.2	7.8	8.0	9.0	8.7	8.9	11.2	11.0	11.1
21	5.1	4.7	4.8	7.9	7.5	7.7	9.5	9.0	9.2	11.3	11.1	11.2
22	4.9	4.6	4.7	7.6	7.4	7.5	9.8	9.5	9.6	11.6	11.2	11.3
23	5.0	4.6	4.8	7.7	7.5	7.6	9.8	9.6	9.7	11.5	11.2	11.4
24	5.2	4.8	5.0	7.7	7.5	7.6	9.8	9.3	9.6	11.7	11.3	11.5
25	5.3	4.8	5.0	8.1	7.6	7.9	9.4	9.1	9.2	12.0	11.3	11.6
26	5.9	5.2	5.5	7.9	7.7	7.8	9.6	9.2	9.3	11.7	11.5	11.6
27	6.1	5.8	6.0	8.0	7.7	7.8	9.8	9.6	9.7	11.6	11.3	11.5
28	6.0	5.6	5.8	8.4	7.9	8.1	9.9	9.7	9.8	11.7	11.3	11.5
29	6.2	5.6	6.0	8.7	8.3	8.5	10.0	9.8	9.9	11.8	11.3	11.6
30	6.2	5.7	6.0	8.7	8.4	8.5	10.0	9.7	9.9	12.0	11.4	11.7
31	5.9	5.5	5.7	---	---	---	9.8	9.6	9.7	12.6	11.9	12.4
MONTH	6.2	0.2	3.8	8.7	5.1	6.9	10.0	8.3	9.3	12.6	8.8	10.8
		FEBRUARY			MARCH			APRIL			MAY	
1	12.7	12.3	12.5	11.8	11.2	11.6	8.9	8.4	8.6	---	---	---
2	12.9	12.5	12.7	11.6	10.7	11.2	9.4	8.4	8.8	---	---	---
3	12.8	12.4	12.6	11.2	10.6	10.9	8.7	8.1	8.3	---	---	---
4	12.6	12.3	12.4	11.0	10.3	10.7	8.2	7.4	7.8	---	---	---
5	12.6	12.3	12.4	10.8	10.1	10.5	8.1	7.4	7.7	---	---	---
6	12.6	12.2	12.3	10.4	9.6	10.1	8.3	7.6	7.9	---	---	---
7	12.3	12.0	12.1	10.3	9.4	9.8	8.2	7.8	8.0	---	---	---
8	12.2	12.0	12.1	9.8	9.1	9.5	8.1	7.7	7.9	6.3	5.8	6.0
9	12.4	12.1	12.3	9.5	8.8	9.0	8.8	7.7	8.1	6.2	5.9	6.1
10	12.4	11.8	12.2	9.3	8.9	9.1	8.9	8.1	8.4	6.3	5.9	6.1
11	11.9	11.5	11.7	9.3	8.7	9.1	8.6	8.0	8.4	6.5	6.2	6.3
12	12.1	11.8	11.9	9.1	8.4	8.7	8.7	7.8	8.1	6.4	6.1	6.2
13	12.3	11.9	12.1	9.6	8.5	9.0	8.2	7.7	7.9	6.3	5.9	6.1
14	12.4	12.1	12.2	9.0	8.4	8.8	7.8	7.2	7.5	6.4	5.9	6.2
15	12.4	11.9	12.1	8.9	8.4	8.6	8.1	7.6	7.9	6.3	6.0	6.1
16	12.3	11.9	12.1	8.9	8.5	8.7	8.0	7.5	7.8	6.2	5.9	6.0
17	12.2	11.9	12.0	8.9	8.6	8.7	8.7	7.9	8.4	6.0	5.7	5.8
18	12.1	11.7	11.9	9.3	8.7	9.0	---	---	---	5.9	5.5	5.7
19	12.2	11.8	12.0	9.7	8.8	9.2	---	---	---	6.1	5.5	5.7
20	12.1	11.6	11.9	9.6	8.9	9.2	---	---	---	6.1	5.3	5.5
21	11.7	11.2	11.5	9.4	8.8	9.1	---	---	---	5.8	5.2	5.4
22	11.3	10.7	11.0	9.4	8.7	9.0	---	---	---	5.7	5.1	5.3
23	11.2	10.7	10.9	10.3	9.2	9.6	---	---	---	5.9	5.2	5.5
24	11.4	10.7	11.0	10.2	9.5	9.8	---	---	---	5.6	5.3	5.5
25	10.9	10.5	10.7	10.4	9.5	10	---	---	---	5.6	5.1	5.3
26	11.2	10.7	11.0	10.0	9.4	9.7	---	---	---	5.8	5.4	5.6
27	11.2	10.8	11.0	9.8	9.1	9.4	---	---	---	5.9	5.5	5.7
28	11.6	11.0	11.4	9.9	8.8	9.2	---	---	---	5.9	5.5	5.6
29	11.8	11.5	11.7	9.5	8.6	9.0	---	---	---	6.0	5.4	5.7
30	---	---	---	9.8	8.8	9.2	---	---	---	5.8	5.4	5.6
31	---	---	---	9.7	8.6	9.0	---	---	---	6.0	5.5	5.8
MONTH	12.9	10.5	11.9	11.8	8.4	9.5	---	---	---	---	---	---

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

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.0	5.5	5.7	5.7	5.3	5.5	5.3	4.0	4.5	---	---	---
2	6.3	5.5	5.8	5.8	5.5	5.6	5.1	4.3	4.7	---	---	---
3	7.0	5.5	5.8	5.7	5.4	5.5	5.9	4.6	5.1	---	---	---
4	6.1	5.5	5.8	5.6	5.3	5.4	5.3	4.4	4.9	5.4	5.0	5.2
5	5.9	5.3	5.6	5.5	5.1	5.3	5.7	5.0	5.3	5.3	5.0	5.2
6	5.4	4.8	5.2	5.3	5.0	5.1	6.0	5.2	5.6	5.4	4.8	5.0
7	5.7	4.9	5.2	5.5	4.9	5.1	5.5	4.8	5.1	4.9	4.4	4.6
8	5.6	5.0	5.3	5.5	5.0	5.2	5.0	4.7	4.9	4.5	4.1	4.3
9	5.7	5.3	5.5	5.5	5.0	5.2	5.2	4.9	5.1	4.7	4.3	4.6
10	5.9	5.4	5.6	6.6	5.1	5.4	5.5	5.1	5.3	4.3	3.6	4.0
11	5.8	5.3	5.6	6.0	5.1	5.5	6.0	5.5	5.7	4.0	3.2	3.5
12	6.0	5.4	5.7	6.3	5.3	5.7	6.2	5.7	5.9	4.7	4.0	4.4
13	6.0	5.7	5.9	6.6	5.3	5.7	6.3	5.9	6.1	5.1	4.6	4.8
14	5.9	5.5	5.8	6.3	5.1	5.5	---	---	---	5.1	4.8	5.0
15	5.8	5.4	5.6	6.3	5.1	5.4	---	---	---	5.0	4.7	4.9
16	5.9	5.5	5.7	7.0	4.8	5.4	---	---	---	5.0	4.6	4.8
17	5.9	5.4	5.7	6.6	4.9	5.6	---	---	---	5.0	4.5	4.7
18	6.0	5.6	5.8	5.9	4.5	5.2	---	---	---	5.1	4.6	4.8
19	6.0	5.5	5.7	6.4	4.5	5.2	---	---	---	5.1	4.7	4.9
20	5.9	5.5	5.6	6.6	3.9	5.0	---	---	---	4.9	4.4	4.7
21	6.1	5.3	5.5	7.0	4.4	5.3	---	---	---	4.9	4.5	4.7
22	5.6	5.2	5.3	6.0	4.0	4.9	---	---	---	4.8	4.4	4.6
23	5.6	5.0	5.2	5.7	3.2	4.6	---	---	---	5.1	4.6	4.8
24	5.3	4.9	5.1	5.3	4.0	4.7	---	---	---	5.5	5.0	5.2
25	5.6	4.9	5.2	5.5	4.5	4.9	---	---	---	5.5	5.2	5.3
26	5.5	5.0	5.3	7.8	4.6	5.0	---	---	---	5.8	5.2	5.4
27	5.3	4.8	5.1	5.7	4.7	5.2	---	---	---	5.5	5.0	5.2
28	5.2	4.9	5.0	5.4	4.7	5.0	---	---	---	5.2	4.8	5.0
29	5.4	5.0	5.2	5.4	4.6	5.0	---	---	---	4.9	4.2	4.5
30	5.6	5.1	5.5	5.7	4.5	5.0	---	---	---	4.4	4.0	4.2
31	---	---	---	5.3	4.5	4.9	---	---	---	---	---	---
MONTH	7.0	4.8	5.5	7.8	3.2	5.2	---	---	---	---	---	---

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

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	0.4	0.3	0.4	6.2	6.0	6.1	8.6	8.4	8.5	10.0	9.8	9.9
2	1.4	0.3	0.7	6.1	5.9	6.0	8.8	8.5	8.7	10.2	9.9	10.0
3	2.1	1.4	1.9	6.0	5.7	5.8	9.0	8.8	8.9	10.3	9.9	10.1
4	3.0	2.1	2.7	5.8	5.6	5.7	9.4	9.0	9.2	10.1	9.7	9.9
5	3.2	2.8	3.0	5.8	5.5	5.7	9.4	9.2	9.3	9.9	9.3	9.6
6	3.0	2.7	2.9	5.6	5.1	5.4	9.7	9.3	9.5	9.5	8.7	9.1
7	3.1	2.8	3.0	5.8	5.1	5.5	9.7	9.5	9.6	9.6	8.9	9.3
8	3.0	2.7	2.9	6.2	5.6	5.9	9.7	9.4	9.5	10.0	9.6	9.9
9	3.2	2.7	2.9	6.5	6.0	6.3	9.6	9.4	9.5	10.3	10.0	10.2
10	3.2	3.0	3.0	6.5	5.8	6.2	9.6	9.4	9.5	10.7	10.2	10.5
11	3.0	2.5	2.7	6.1	5.8	5.9	9.7	9.4	9.5	11.1	10.7	10.9
12	3.0	2.5	2.7	7.0	6.1	6.5	9.5	9.1	9.3	11.4	11.0	11.2
13	3.4	3.0	3.2	7.3	6.9	7.1	9.2	8.8	9.1	11.4	11.2	11.3
14	3.4	3.0	3.2	7.3	7.0	7.2	9.4	8.9	9.2	---	---	---
15	3.6	3.2	3.5	7.2	7.0	7.1	9.1	8.8	9.0	---	---	---
16	3.8	3.5	3.7	7.5	7.0	7.2	9.1	8.8	8.9	---	---	---
17	4.0	3.7	3.8	7.6	7.5	7.6	9.1	8.9	9.0	---	---	---
18	4.5	3.8	4.2	7.8	7.6	7.7	8.9	8.7	8.8	---	---	---
19	4.7	4.1	4.4	8.1	7.5	7.8	9.0	8.8	8.9	---	---	---
20	5.2	4.7	4.9	8.1	7.8	8.0	9.1	8.8	8.9	---	---	---
21	5.2	5.0	5.1	7.8	7.4	7.6	9.7	9.1	9.3	---	---	---
22	5.1	4.8	4.9	7.6	7.4	7.5	10.1	9.6	9.9	---	---	---
23	5.3	4.8	5.1	7.7	7.6	7.6	10.1	9.9	10.0	---	---	---
24	5.4	5.0	5.2	7.6	7.5	7.6	10.1	9.7	9.9	---	---	---
25	5.5	5.0	5.2	8.2	7.6	7.9	9.7	9.3	9.5	---	---	---
26	6.0	5.5	5.8	7.9	7.8	7.9	9.8	9.4	9.6	---	---	---
27	6.3	6.0	6.2	8.0	7.8	7.8	10.0	9.8	9.9	---	---	---
28	6.2	5.8	6.0	8.4	8.0	8.2	10.1	9.9	10.0	---	---	---
29	6.6	5.8	6.2	8.6	8.2	8.4	10.2	10.0	10.1	---	---	---
30	6.4	5.9	6.2	8.6	8.3	8.5	10.2	9.8	10.0	---	---	---
31	6.3	5.8	6.0	---	---	---	9.9	9.7	9.8	---	---	---
MONTH	6.6	0.3	3.9	8.6	5.1	7.0	10.2	8.4	9.4	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	11.8	11.2	11.5	8.2	7.5	7.8	6.0	5.6	5.8
2	---	---	---	11.5	10.7	11.2	8.1	7.5	7.8	6.0	5.7	5.8
3	---	---	---	11.1	10.5	10.8	8.0	7.2	7.6	6.0	5.7	5.8
4	---	---	---	10.8	10.3	10.6	7.8	6.7	7.3	5.8	5.2	5.5
5	---	---	---	10.6	10.0	10.3	7.5	6.7	7.1	5.6	5.2	5.4
6	---	---	---	10.2	9.5	9.9	7.5	7.0	7.3	5.8	5.4	5.6
7	---	---	---	9.9	9.2	9.5	7.8	7.1	7.4	---	---	---
8	---	---	---	9.6	9.0	9.3	8.1	6.7	7.7	---	---	---
9	---	---	---	9.2	8.6	8.8	8.2	7.6	7.8	---	---	---
10	---	---	---	9.0	8.7	8.8	8.3	7.4	7.7	---	---	---
11	---	---	---	9.3	8.8	9.0	7.7	7.3	7.5	---	---	---
12	---	---	---	9.1	8.5	8.8	7.7	7.2	7.5	---	---	---
13	---	---	---	9.4	8.7	9.0	7.5	7.1	7.3	---	---	---
14	12.4	12.1	12.2	9.0	8.4	8.7	7.2	6.8	7.0	---	---	---
15	12.3	12.0	12.1	8.7	8.2	8.4	7.5	6.8	7.2	---	---	---
16	12.4	11.9	12.1	8.7	8.4	8.5	7.6	7.1	7.3	---	---	---
17	12.2	11.8	12.0	8.6	8.4	8.5	7.8	7.6	7.7	---	---	---
18	12.1	11.7	11.9	8.9	8.3	8.5	7.8	7.5	7.6	---	---	---
19	12.1	11.9	12.0	9.3	8.3	8.7	8.1	7.7	8.0	---	---	---
20	12.0	11.7	11.9	9.0	8.2	8.6	8.2	7.8	8.0	---	---	---
21	11.7	11.2	11.4	8.8	8.2	8.5	8.0	7.7	7.8	---	---	---
22	11.3	10.8	11.0	8.9	8.1	8.5	7.8	7.4	7.6	---	---	---
23	11.1	10.7	10.9	9.3	8.6	8.9	7.4	6.9	7.2	---	---	---
24	11.2	10.7	10.9	9.5	8.9	9.1	7.2	6.8	7.1	---	---	---
25	10.9	10.4	10.6	9.6	8.9	9.2	6.9	6.5	6.7	---	---	---
26	11.0	10.4	10.8	9.3	8.6	9.0	6.8	6.5	6.7	---	---	---
27	11.3	10.4	10.9	8.8	8.2	8.5	6.8	5.2	6.1	---	---	---
28	11.7	11.1	11.4	8.9	8.0	8.4	5.4	5.0	5.1	---	---	---
29	11.8	11.5	11.6	8.8	7.8	8.2	5.8	5.2	5.4	---	---	---
30	---	---	---	8.8	8.2	8.4	5.9	5.6	5.8	---	---	---
31	---	---	---	8.9	8.0	8.4	---	---	---	---	---	---
MONTH	---	---	---	11.8	7.8	9.1	8.3	5.0	7.2	---	---	---

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

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	5.4	4.9	5.2	5.3	4.6	4.9	4.0	3.4	3.6
2	---	---	---	5.4	5.2	5.3	5.4	4.9	5.2	5.3	3.9	4.5
3	---	---	---	5.3	5.0	5.1	6.0	5.1	5.4	5.3	4.7	5.0
4	---	---	---	5.2	4.8	5.0	5.2	4.5	4.8	5.4	5.0	5.1
5	6.1	5.3	5.7	5.0	4.6	4.8	5.1	4.7	4.9	5.6	4.8	5.1
6	5.6	4.8	5.3	4.7	4.4	4.6	5.6	4.9	5.4	5.3	4.7	4.9
7	5.6	5.0	5.2	5.2	4.4	4.7	5.3	4.5	4.8	4.9	4.3	4.6
8	5.6	5.2	5.4	5.3	4.6	4.9	4.7	4.4	4.5	4.6	4.0	4.3
9	5.9	5.6	5.7	5.1	4.7	4.9	4.9	4.6	4.8	4.8	4.1	4.5
10	5.9	5.6	5.8	5.1	4.5	4.8	5.2	4.8	5.0	4.3	3.4	3.9
11	6.0	5.3	5.8	5.4	4.7	5.0	5.6	5.1	5.3	4.0	3.0	3.4
12	6.2	5.6	5.9	5.6	4.7	5.1	5.7	5.3	5.5	4.7	3.9	4.3
13	6.3	6.0	6.1	5.4	4.4	4.8	5.7	5.4	5.5	5.1	4.5	4.7
14	6.3	5.9	6.1	5.2	4.3	4.7	6.2	5.3	5.6	5.1	4.8	4.9
15	6.2	5.8	6.0	5.1	4.3	4.7	5.6	4.8	5.3	5.1	4.6	4.9
16	6.3	6.0	6.2	4.8	4.1	4.4	5.4	5.0	5.1	5.1	4.7	4.9
17	6.3	5.9	6.1	4.9	3.8	4.4	5.1	4.1	4.5	5.3	4.6	4.9
18	6.3	6.0	6.1	4.8	3.3	4.2	4.2	3.8	3.9	5.3	4.7	5.0
19	6.2	5.8	6.1	5.2	4.2	4.7	3.9	3.7	3.8	5.5	4.8	5.1
20	6.2	6.0	6.1	5.9	4.3	4.8	3.8	3.5	3.6	5.3	4.6	5.0
21	6.1	5.7	5.9	5.7	4.3	5.0	3.7	3.4	3.5	5.3	4.8	5.0
22	5.8	5.4	5.6	5.8	4.2	5.0	3.7	3.3	3.5	5.2	4.8	5.0
23	5.7	5.2	5.4	5.8	5.0	5.2	3.4	3.2	3.3	5.8	5.0	5.3
24	5.6	5.1	5.3	5.2	4.7	5.0	3.7	3.3	3.5	6.4	5.6	6.0
25	5.7	5.1	5.4	5.3	4.9	5.1	4.1	3.6	3.8	6.4	6.0	6.2
26	5.7	5.3	5.5	5.4	4.8	5.1	4.0	3.6	3.8	6.5	6.0	6.2
27	5.5	5.2	5.4	5.7	5.2	5.3	3.9	3.6	3.7	6.4	5.7	6.0
28	5.5	5.1	5.3	5.5	5.0	5.2	3.7	3.3	3.5	6.0	5.5	5.8
29	5.6	5.3	5.4	5.6	4.8	5.2	3.6	3.2	3.4	5.8	4.6	5.1
30	5.4	5.0	5.2	5.4	5.0	5.1	4.3	3.3	3.8	4.9	4.2	4.6
31	---	---	---	5.2	4.7	5.1	4.3	3.5	3.9	---	---	---
MONTH	---	---	---	5.9	3.3	4.9	6.2	3.2	4.4	6.5	3.0	4.9

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

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	3	2	3	61	59	60	81	78	80	83	81	82
2	19	2	7	60	58	59	82	78	80	85	82	83
3	29	19	26	59	55	57	82	80	81	86	84	85
4	34	25	31	57	54	56	83	80	82	87	84	86
5	36	28	33	59	56	58	84	81	83	88	85	86
6	33	28	31	60	56	58	85	82	83	88	80	84
7	35	30	32	61	57	59	84	82	83	83	80	81
8	33	28	32	62	58	60	84	81	82	83	81	82
9	37	29	33	65	60	64	83	81	82	84	81	83
10	36	32	34	65	60	63	85	81	82	84	83	84
11	33	27	29	64	59	62	86	82	84	85	83	84
12	33	27	30	72	63	68	83	78	81	87	83	85
13	37	32	35	74	71	73	81	76	79	88	85	87
14	36	31	34	72	69	71	82	76	79	89	86	87
15	39	34	37	71	69	70	77	75	76	89	85	87
16	42	37	39	74	69	71	77	74	75	89	86	87
17	42	39	40	76	73	74	77	75	76	88	85	87
18	47	40	44	79	74	77	75	72	74	89	87	88
19	47	43	45	82	76	79	73	71	73	90	88	89
20	53	47	50	82	78	80	73	72	72	89	87	88
21	55	50	52	79	74	76	75	72	74	90	87	89
22	52	49	50	76	73	75	78	75	76	93	88	90
23	53	49	51	77	74	76	79	77	78	91	88	90
24	55	50	53	77	74	76	81	79	80	93	88	90
25	55	50	52	80	75	78	80	77	78	91	88	90
26	62	54	58	78	75	77	79	76	77	89	88	89
27	64	61	63	78	75	76	80	78	79	89	87	88
28	63	59	61	83	77	80	81	79	80	89	86	88
29	66	59	63	83	81	82	82	80	81	89	87	88
30	65	60	63	83	79	80	84	82	83	90	87	89
31	62	57	60	---	---	---	83	80	82	96	89	94
MONTH	66	2	41	83	54	70	86	71	79	96	80	87
		FEBRUARY			MARCH			APRIL			MAY	
1	96	93	95	98	92	95	86	81	83	---	---	---
2	98	94	96	99	93	96	92	81	85	---	---	---
3	98	95	96	99	93	96	86	79	82	---	---	---
4	98	94	96	101	94	97	80	73	77	---	---	---
5	98	95	96	102	93	97	80	72	75	---	---	---
6	100	94	97	100	92	96	83	73	77	---	---	---
7	101	97	99	99	89	93	83	75	78	---	---	---
8	100	97	98	93	86	90	81	75	78	71	64	66
9	100	97	98	90	82	85	90	77	82	69	66	68
10	100	95	98	86	82	84	91	82	85	72	66	70
11	96	93	95	86	79	83	88	80	84	75	71	73
12	96	95	96	85	76	80	89	79	82	74	70	72
13	98	94	96	89	77	82	83	79	80	73	68	71
14	98	96	97	83	77	80	79	74	77	76	68	73
15	99	94	96	81	77	79	82	76	79	76	71	73
16	97	92	95	82	78	80	81	75	78	75	70	72
17	95	92	93	81	79	80	88	79	84	72	68	70
18	95	90	92	86	79	82	---	---	---	72	65	68
19	96	92	94	90	81	85	---	---	---	75	66	69
20	97	93	95	90	81	85	---	---	---	75	64	67
21	96	92	94	88	82	85	---	---	---	73	63	66
22	95	90	92	86	80	83	---	---	---	72	63	66
23	94	89	92	96	83	88	---	---	---	74	64	68
24	96	89	92	96	86	91	---	---	---	71	66	68
25	91	87	89	99	87	93	---	---	---	70	63	66
26	93	87	90	96	89	92	---	---	---	73	67	70
27	90	87	88	96	87	91	---	---	---	74	69	72
28	92	87	90	98	86	89	---	---	---	76	69	71
29	96	91	94	90	83	86	---	---	---	77	68	72
30	---	---	---	95	84	88	---	---	---	73	67	70
31	---	---	---	93	82	86	---	---	---	75	68	72
MONTH	101	87	94	102	76	88	---	---	---	---	---	---

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

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	76	68	71	71	65	68	71	52	59	---	---	---
2	80	68	72	73	69	70	66	56	62	---	---	---
3	90	68	73	71	68	69	76	59	66	---	---	---
4	77	68	73	70	66	68	69	56	62	68	62	65
5	72	65	68	69	64	66	74	65	69	66	62	64
6	66	58	63	69	63	65	77	68	72	67	59	62
7	70	60	63	72	62	66	70	60	64	61	54	57
8	69	61	64	72	64	67	63	58	61	56	50	53
9	71	65	67	72	64	68	66	61	64	59	53	57
10	74	66	69	88	66	70	70	64	67	53	45	50
11	72	65	69	79	67	72	76	69	72	49	39	43
12	75	67	71	83	69	75	78	72	75	58	49	54
13	74	69	72	88	69	74	80	74	77	63	56	58
14	73	67	71	85	67	73	---	---	---	62	58	61
15	72	66	69	84	67	72	---	---	---	61	57	60
16	73	68	70	95	63	72	---	---	---	61	56	59
17	73	66	70	89	64	74	---	---	---	61	55	57
18	76	69	72	79	59	69	---	---	---	62	55	58
19	76	68	71	85	59	68	---	---	---	61	56	58
20	74	68	70	88	51	66	---	---	---	58	52	55
21	77	66	68	93	58	69	---	---	---	58	52	55
22	72	65	66	80	53	65	---	---	---	56	51	54
23	72	63	66	75	42	60	---	---	---	60	54	56
24	68	62	65	69	52	62	---	---	---	65	59	61
25	72	62	67	72	58	64	---	---	---	65	61	63
26	70	63	67	104	59	65	---	---	---	69	62	64
27	67	60	64	75	61	67	---	---	---	65	59	62
28	65	61	63	70	61	65	---	---	---	62	57	59
29	67	62	64	70	59	65	---	---	---	58	50	53
30	70	63	68	75	58	64	---	---	---	52	48	50
31	---	---	---	69	58	63	---	---	---	---	---	---
MONTH	90	58	68	104	42	68	---	---	---	---	---	---

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

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5	3	4	65	62	63	82	79	80	84	82	83
2	15	3	7	63	61	62	82	79	81	85	83	84
3	23	15	21	62	59	60	82	80	81	87	84	85
4	32	23	29	61	59	60	84	81	83	87	85	86
5	35	30	33	62	59	60	85	82	83	88	84	86
6	33	29	31	60	55	58	86	83	84	87	79	83
7	34	31	33	63	55	60	85	83	84	82	79	80
8	33	30	32	66	61	63	84	81	83	83	80	82
9	36	30	33	68	63	66	83	81	82	84	82	83
10	36	33	34	67	60	64	84	81	82	84	82	83
11	33	28	30	63	59	61	85	82	84	85	83	84
12	33	28	30	72	62	67	83	79	81	88	84	86
13	38	33	35	74	71	72	80	76	79	89	86	87
14	38	33	36	73	69	71	82	77	80	---	---	---
15	40	35	39	71	69	70	79	75	77	---	---	---
16	42	38	40	74	69	71	78	75	76	---	---	---
17	43	40	41	76	74	75	78	76	77	---	---	---
18	48	41	45	77	75	76	76	74	75	---	---	---
19	50	44	47	81	75	78	75	72	74	---	---	---
20	56	50	52	81	78	80	74	72	73	---	---	---
21	56	53	54	78	73	76	77	73	75	---	---	---
22	55	51	53	76	73	75	80	76	78	---	---	---
23	56	51	54	77	75	76	81	79	80	---	---	---
24	57	52	54	76	74	75	83	81	82	---	---	---
25	57	52	54	80	76	78	82	78	80	---	---	---
26	63	57	61	78	76	77	80	79	79	---	---	---
27	66	63	65	78	76	76	82	80	81	---	---	---
28	65	61	63	83	78	80	82	81	82	---	---	---
29	69	61	66	83	80	81	83	81	82	---	---	---
30	67	62	65	81	79	80	85	82	84	---	---	---
31	66	60	62	---	---	---	84	81	82	---	---	---
MONTH	69	3	42	83	55	70	86	72	80	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	98	93	95	79	72	75	65	60	62
2	---	---	---	98	93	95	79	72	75	65	62	63
3	---	---	---	97	93	95	78	70	74	65	62	63
4	---	---	---	98	93	96	76	66	71	63	56	59
5	---	---	---	99	93	96	73	65	69	60	55	57
6	---	---	---	97	91	94	73	68	70	63	58	60
7	---	---	---	95	87	91	75	68	72	---	---	---
8	---	---	---	92	85	88	81	66	76	---	---	---
9	---	---	---	87	80	83	81	75	78	---	---	---
10	---	---	---	83	80	82	84	74	78	---	---	---
11	---	---	---	85	79	82	78	73	75	---	---	---
12	---	---	---	84	77	80	78	72	76	---	---	---
13	---	---	---	86	79	82	76	71	74	---	---	---
14	98	96	97	82	77	79	74	70	72	---	---	---
15	98	95	96	79	75	77	76	68	72	---	---	---
16	98	93	95	80	77	78	77	71	73	---	---	---
17	95	91	93	79	77	78	79	75	77	---	---	---
18	94	91	92	82	75	77	78	75	77	---	---	---
19	96	93	94	86	76	80	83	78	81	---	---	---
20	97	93	95	83	75	79	83	79	82	---	---	---
21	96	92	94	82	76	79	83	80	81	---	---	---
22	94	90	92	81	75	78	82	78	79	---	---	---
23	93	89	92	85	78	81	79	74	77	---	---	---
24	94	89	91	89	81	84	78	73	76	---	---	---
25	91	86	88	91	81	86	75	70	72	---	---	---
26	91	84	89	88	81	85	74	70	72	---	---	---
27	90	84	87	85	78	82	74	56	66	---	---	---
28	93	88	90	88	77	81	58	53	55	---	---	---
29	96	91	93	84	76	79	62	55	58	---	---	---
30	---	---	---	84	78	80	64	60	62	---	---	---
31	---	---	---	85	76	80	---	---	---	---	---	---
MONTH	---	---	---	99	75	84	84	53	73	---	---	---

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

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	68	60	64	70	60	64	50	42	46
2	---	---	---	68	65	67	70	64	67	66	49	56
3	---	---	---	66	62	64	77	66	69	66	58	62
4	---	---	---	65	60	63	67	58	61	67	62	64
5	75	65	69	62	58	60	67	61	64	70	60	63
6	68	58	64	61	56	58	72	64	69	66	58	61
7	69	61	63	67	56	60	67	56	60	60	53	57
8	69	63	67	69	59	64	59	55	57	57	49	52
9	73	68	70	66	60	63	62	58	60	59	51	56
10	73	69	71	66	58	62	65	60	62	53	42	48
11	74	65	71	71	61	65	71	64	66	49	37	41
12	77	70	74	74	61	66	72	66	69	58	48	53
13	78	73	75	71	57	62	72	68	70	62	55	58
14	77	72	75	69	56	61	77	66	69	62	58	60
15	77	71	74	67	57	61	69	58	65	62	56	59
16	78	74	76	63	54	58	66	61	63	63	58	60
17	78	72	76	65	50	58	62	49	55	65	56	60
18	79	74	76	64	43	55	51	45	47	65	57	60
19	78	72	76	69	55	61	47	44	45	65	57	61
20	78	74	76	78	56	64	46	43	44	62	54	59
21	76	71	73	75	56	66	46	42	44	62	56	59
22	72	68	70	77	55	65	46	41	43	61	56	59
23	73	66	69	77	65	68	42	39	40	68	58	62
24	71	65	67	68	61	65	45	40	43	76	66	71
25	73	65	69	69	63	66	50	44	47	76	70	73
26	73	67	70	70	62	66	49	44	47	77	71	73
27	70	65	67	75	67	69	48	44	46	76	68	72
28	69	64	66	72	65	68	46	41	43	72	65	69
29	69	65	67	73	62	67	45	40	42	69	55	61
30	67	62	65	70	64	66	54	41	47	58	50	55
31	---	---	---	68	61	66	53	44	48	---	---	---
MONTH	---	---	---	78	43	63	77	39	55	77	37	60

02081500 TAR RIVER NEAR TAR RIVER, NC

LOCATION.--Lat 36°11'39", long 78°34'59", Granville County, Hydrologic Unit 03020101, on right bank 90 ft upstream from bridge on State Highway 96, 1.2 mi upstream from Fishing Creek, 2.5 mi east of town of Tar River, and 8 mi south of Oxford.

DRAINAGE AREA.--167 mi^2.

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

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

GAGE.--Water-stage recorder and concrete control with sharp-crested weir. Datum of gage is 286.34 ft above NAVD of 1988. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges which are poor. Occasional intermittent diversion for irrigation. Maximum discharge for period of record from rating curve extended above 11,500 ft^3/s, by logarithmic plotting.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	110	92	76	163	105	483	35	22	13	271	554
2	35	76	72	72	122	100	489	42	19	12	284	177
3	33	61	60	70	406	133	214	180	17	20	2,010	105
4	31	52	55	69	836	126	161	214	17	17	354	73
5	30	47	203	71	329	113	123	114	27	13	133	58
6	28	46	257	94	237	106	92	72	39	11	90	50
7	26	81	168	87	988	101	76	52	32	9.7	73	57
8	26	107	120	75	476	87	67	42	25	9.0	48	105
9	30	83	92	72	252	75	63	36	21	8.5	35	184
10	31	63	111	74	202	70	57	33	18	8.0	28	96
11	37	54	1,610	69	182	66	52	30	17	8.3	23	60
12	50	49	618	64	179	64	65	27	18	66	22	45
13	48	46	257	68	230	59	333	26	19	45	124	38
14	39	41	1,310	71	202	57	399	24	21	32	883	34
15	52	37	1,440	70	177	57	331	22	19	21	1,130	34
16	e65	36	426	64	179	80	223	21	17	15	531	41
17	e53	37	440	59	184	153	149	21	22	12	226	48
18	42	37	560	70	179	173	111	21	21	11	130	441
19	35	158	309	108	181	141	86	19	17	10	91	339
20	e31	745	218	100	177	115	73	19	15	20	63	141
21	30	266	171	78	162	97	66	20	14	29	61	78
22	28	161	145	68	146	80	57	20	13	16	120	56
23	25	115	131	63	128	68	51	19	12	102	52	45
24	24	87	136	60	117	60	47	18	30	103	37	37
25	24	73	156	58	112	56	45	17	17	55	30	32
26	24	64	134	66	101	54	42	16	16	96	26	29
27	e62	60	110	69	102	53	44	23	17	171	24	27
28	e104	59	99	66	114	53	44	52	16	125	22	33
29	e291	100	91	64	115	52	42	33	16	372	20	149
30	e537	128	87	84	---	50	38	25	14	1,860	346	76
31	167	---	83	179	---	53	---	24	---	317	2,940	---
TOTAL	2,077	3,079	9,761	2,358	6,978	2,657	4,123	1,317	588	3,607.5	10,227	3,242
MEAN	67.0	103	315	76.1	241	85.7	137	42.5	19.6	116	330	108
MAX	537	745	1,610	179	988	173	489	214	39	1,860	2,940	554
MIN	24	36	55	58	101	50	38	16	12	8.0	20	27
CFSM	0.40	0.61	1.89	0.46	1.44	0.51	0.82	0.25	0.12	0.70	1.98	0.65
IN.	0.46	0.69	2.17	0.53	1.55	0.59	0.92	0.29	0.13	0.80	2.28	0.72

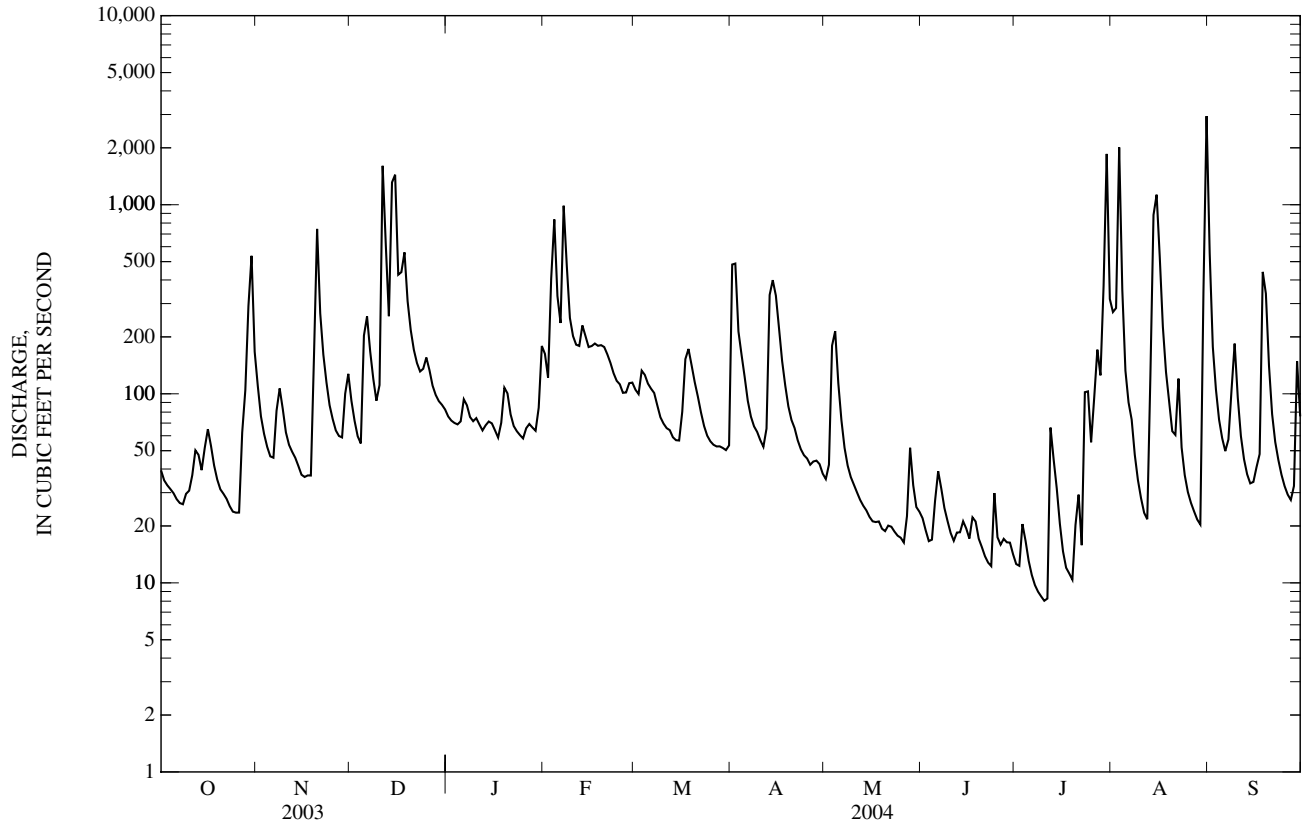
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	70.5	110	150	252	317	338	220	122	78.5	80.7	79.2	85.2
MAX	565	599	558	819	798	1,047	739	475	488	677	542	939
(WY)	(1972)	(1973)	(1973)	(1978)	(1960)	(1998)	(2003)	(1978)	(1982)	(1975)	(1955)	(1999)
MIN	0.41	0.28	4.39	7.04	44.4	61.0	33.1	12.1	2.36	0.92	1.39	0.28
(WY)	(1971)	(1942)	(1942)	(1942)	(2002)	(1981)	(1995)	(2002)	(2002)	(1966)	(1976)	(1968)

02081500 TAR RIVER NEAR TAR RIVER, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004	
ANNUAL TOTAL	118,464		50,014.5			
ANNUAL MEAN	325		137		158	
HIGHEST ANNUAL MEAN					384	2003
LOWEST ANNUAL MEAN					26.6	2002
HIGHEST DAILY MEAN	5,820	Mar 21	2,940	Aug 31	10,800	Sep 7, 1996
LOWEST DAILY MEAN	19	Aug 30	8.0	Jul 10	0.02	Aug 13, 1977
ANNUAL SEVEN-DAY MINIMUM	22	Sep 11	9.6	Jul 5	0.07	Aug 8, 1977
MAXIMUM PEAK FLOW			4,180	Aug 31	19900*	Sep 6, 1996
MAXIMUM PEAK STAGE			10.37	Aug 31	24.06	Sep 6, 1996
INSTANTANEOUS LOW FLOW			7.4	Jul 10	0.00	Aug 14, 1977
ANNUAL RUNOFF (CFSM)	1.94		0.818		0.945	
ANNUAL RUNOFF (INCHES)	26.39		11.14		12.83	
10 PERCENT EXCEEDS	790		268		327	
50 PERCENT EXCEEDS	136		64		45	
90 PERCENT EXCEEDS	33		19		3.5	

* See REMARKS.
e Estimated.



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

LOCATION.--Lat 36°05'35", long 78°17'46", Franklin County, Hydrologic Unit 03020101, on left bank 0.1 mi downstream of bridge on U.S. Highway 401 (Bickett Boulevard) at Louisburg, and 0.2 mi upstream from Fox Creek.

DRAINAGE AREA.--427 mi^2.

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 175.75 ft above NAVD OF 1988. Prior to Nov. 21, 1973, nonrecording gage at bridge 0.4 mi upstream at 178.53 ft; Nov. 22, 1973, to June 24, 1980, at site 0.1 mi upstream at same datum. National Weather Service telephone telemetry at station. Satellite telemetry at station.

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

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	336	267	232	438	244	333	143	119	60	522	3,600
2	124	231	208	224	338	232	1,070	197	82	51	461	1,310
3	114	195	180	222	427	277	597	554	66	68	1,080	407
4	107	179	166	220	1,570	309	397	616	123	114	1,750	248
5	104	173	481	224	1,010	262	274	379	200	83	363	204
6	101	169	844	261	660	240	219	224	169	54	200	189
7	97	254	581	277	1,650	235	205	192	125	44	176	e218
8	98	303	417	226	1,830	222	198	172	100	41	142	e272
9	125	252	309	219	795	210	195	155	90	37	105	e326
10	134	207	306	222	597	202	187	139	88	36	85	399
11	151	181	1,740	215	521	197	182	125	76	150	74	218
12	171	170	e1,950	210	497	196	209	113	76	84	71	186
13	158	164	e967	215	604	194	573	106	78	156	156	170
14	137	149	e2,540	216	587	190	1,060	102	72	106	e1,410	154
15	152	138	3,580	215	503	199	799	95	69	75	3,190	176
16	193	135	3,370	207	492	288	631	92	78	52	3,710	174
17	168	135	996	201	494	379	443	85	80	41	1,590	180
18	141	138	1,240	212	485	401	326	81	80	149	569	618
19	124	194	917	265	466	356	250	79	86	100	374	1,050
20	112	1,010	658	264	471	268	219	86	63	73	233	529
21	105	897	539	225	432	228	205	100	52	148	196	271
22	100	493	466	211	374	213	193	85	46	101	340	202
23	93	343	424	206	313	201	183	80	44	69	261	181
24	86	257	421	201	279	195	177	94	80	129	182	166
25	84	217	450	198	261	191	173	75	94	129	153	147
26	86	193	417	197	244	188	175	71	79	92	128	135
27	95	178	350	222	261	187	188	126	86	172	113	128
28	116	176	303	220	294	186	182	189	93	180	104	154
29	375	238	279	210	273	182	163	133	72	381	97	183
30	1,000	327	269	236	---	179	149	99	66	2,270	420	227
31	559	---	254	353	---	181	---	112	---	2,570	2,120	---
TOTAL	5,343	8,032	25,889	7,026	17,166	7,232	10,155	4,899	2,632	7,815	20,375	12,422
MEAN	172	268	835	227	592	233	338	158	87.7	252	657	414
MAX	1,000	1,010	3,580	353	1,830	401	1,070	616	200	2,570	3,710	3,600
MIN	84	135	166	197	244	179	149	71	44	36	71	128
CFSM	0.40	0.63	1.96	0.53	1.39	0.55	0.79	0.37	0.21	0.59	1.54	0.97
IN.	0.47	0.70	2.26	0.61	1.50	0.63	0.88	0.43	0.23	0.68	1.78	1.08

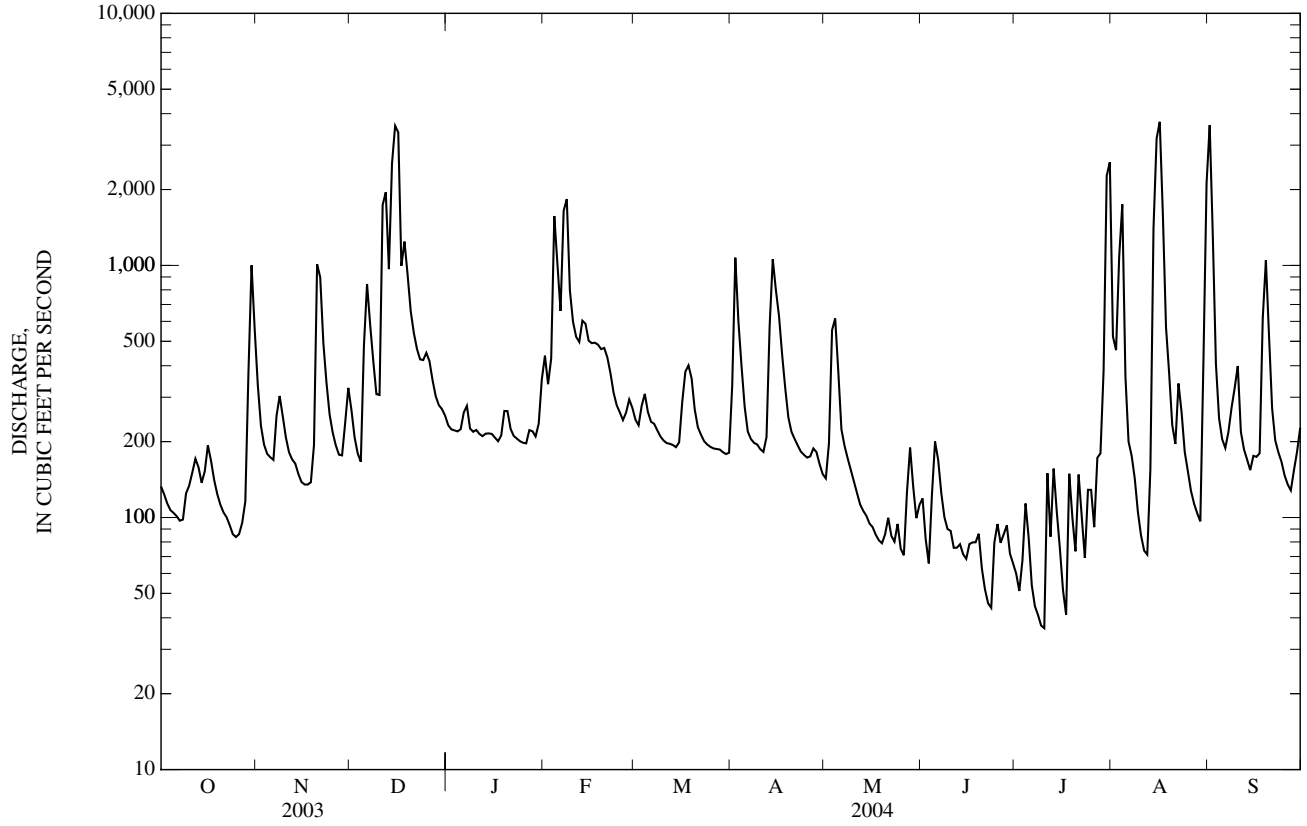
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	193	282	413	768	775	966	629	367	246	232	184	310
MAX	809	1,192	1,108	1,845	1,956	2,726	1,557	984	1,451	1,692	657	2,949
(WY)	(2003)	(1986)	(1984)	(1978)	(1998)	(1998)	(1993)	(1989)	(1982)	(1975)	(2004)	(1999)
MIN	28.5	34.9	64.5	78.0	175	214	127	54.2	14.1	29.8	26.8	19.7
(WY)	(1987)	(1999)	(2002)	(1981)	(2002)	(1988)	(1995)	(2002)	(2002)	(2002)	(1988)	(1980)

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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	245,817		128,986			
ANNUAL MEAN	673		352		446	
HIGHEST ANNUAL MEAN					765	2003
LOWEST ANNUAL MEAN					124	2002
HIGHEST DAILY MEAN	7,090	Apr 11	3,710	Aug 16	22,400	Sep 17, 1999
LOWEST DAILY MEAN	62	Aug 30	36	Jul 10	2.1	Aug 14, 2002
ANNUAL SEVEN-DAY MINIMUM	76	Aug 25	58	Jul 4	2.7	Aug 11, 2002
MAXIMUM PEAK FLOW			4,180	Dec 16	23,700	Sep 17, 1999
MAXIMUM PEAK STAGE			16.81	Dec 16	26.05	Sep 17, 1999
INSTANTANEOUS LOW FLOW			32	Jul 10	1.7	Aug 15, 2002
ANNUAL RUNOFF (CFSM)	1.58		0.825		1.04	
ANNUAL RUNOFF (INCHES)	21.42		11.24		14.19	
10 PERCENT EXCEEDS	1,740		622		901	
50 PERCENT EXCEEDS	331		198		179	
90 PERCENT EXCEEDS	117		81		38	

e Estimated.



02081747 TAR RIVER AT US HIGHWAY 401 AT LOUISBURG, NC—Continued

PRECIPITATION RECORDS

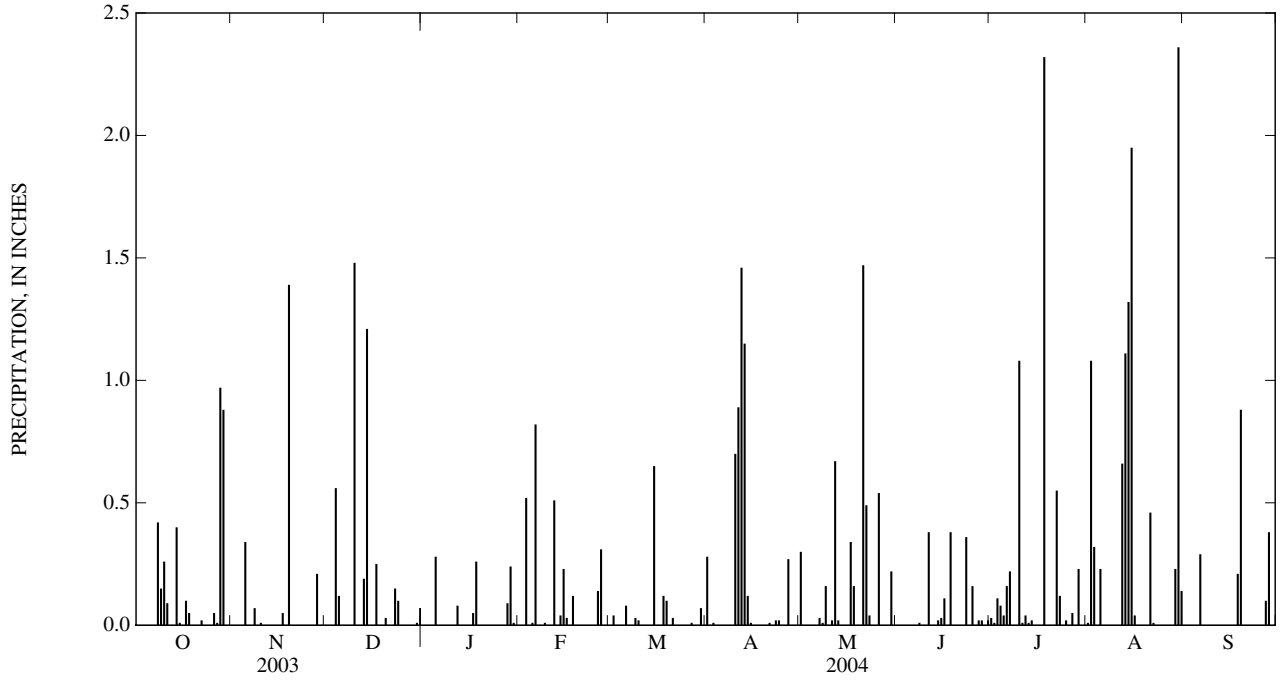
PERIOD OF RECORD.--October 2003 to September 2004.

GAGE.--Tipping-bucket raingage and data collection platform.

REMARKS.--Precipitation collected during freezing periods may not be accurately reflected in the daily record; consequently, winter record is poor.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.30	0.00	0.03	0.01	0.00
2	0.00	0.00	0.00	0.00	0.00	0.04	0.00	---	0.00	0.01	1.08	0.00
3	0.00	0.00	0.00	0.00	0.52	0.00	0.01	---	0.00	0.11	0.32	0.00
4	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.00	---	0.08	0.00	0.00
5	0.00	0.34	0.12	0.28	0.01	0.00	0.00	0.00	0.00	0.04	0.23	0.00
6	0.00	---	0.00	0.00	0.82	0.08	0.00	0.00	0.00	0.16	---	0.29
7	0.00	0.00	0.00	0.00	0.00	---	0.00	0.03	0.00	0.22	0.00	---
8	0.42	0.07	0.00	0.00	0.00	---	0.00	0.01	0.01	0.00	0.00	---
9	0.15	0.00	0.00	0.00	0.01	0.03	0.00	0.16	0.00	0.00	0.00	---
10	0.26	0.01	1.48	0.00	0.00	0.02	0.70	0.00	0.00	1.08	0.00	0.00
11	0.09	0.00	0.00	0.00	0.00	0.00	0.89	0.02	0.38	0.01	0.00	0.00
12	0.00	0.00	0.00	0.08	0.51	0.00	1.46	0.67	0.00	0.04	0.66	0.00
13	0.00	0.00	0.19	0.00	0.00	0.00	1.15	0.02	0.00	0.01	1.11	0.00
14	0.40	0.00	1.21	0.00	0.04	0.00	0.12	0.00	0.02	0.02	1.32	0.00
15	0.01	0.00	0.00	0.00	0.23	0.65	0.01	0.00	0.03	0.00	1.95	0.00
16	0.00	0.00	0.00	0.00	0.03	---	0.00	---	0.11	0.00	0.04	---
17	0.10	0.05	0.25	0.05	0.00	0.00	0.00	0.34	0.00	0.00	0.00	---
18	0.05	0.00	0.00	0.26	0.12	0.12	0.00	0.16	0.38	2.32	0.00	0.21
19	0.00	1.39	0.00	0.00	0.00	0.10	0.00	---	0.00	0.00	0.00	0.88
20	0.00	0.00	0.03	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.03	0.01	1.47	0.00	0.00	0.46	0.00
22	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.55	0.01	0.00
23	0.00	0.00	0.15	0.00	0.00	0.00	0.02	0.04	0.36	0.12	0.00	0.00
24	0.00	0.00	0.10	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.02	0.00	0.00
26	0.05	0.00	0.00	0.00	0.14	0.00	---	0.54	---	0.00	0.00	0.00
27	0.01	0.00	0.00	0.00	0.31	0.01	0.27	0.00	0.02	0.05	0.00	0.10
28	0.97	0.21	0.00	0.09	0.00	0.00	0.00	0.00	0.02	---	0.00	0.38
29	0.88	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.00
30	0.00	0.00	0.01	0.01	---	0.07	0.00	0.22	0.02	0.00	2.36	0.00
31	0.00	---	0.00	0.00	---	---	---	0.00	---	0.00	0.14	---
TOTAL	3.41	---	4.10	1.01	2.74	---	---	---	---	---	---	---



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

LOCATION.--Lat 35°54'02", long 77°51'56", Nash County, Hydrologic Unit 03020101, near center of span on downstream side of bridge on Secondary Road 1544, 1.8 mi downstream of Tar River Reservoir, 2.8 mi downstream of Sapony Creek, 2.9 mi upstream from Grape Branch, and 5.0 mi southwest of Rocky Mount.

DRAINAGE AREA.--777 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 84.85 ft above NAVD of 1988 (levels by North Carolina State Highway Commission). Satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. The city of Rocky Mount diverted an average of 4.0 ft^3/s for municipal water supply, most of which was returned downstream of station as treated effluent. Minimum discharge for period of record also occurred Oct. 29, 30, 1993. Maximum gage height for period of record from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	318	1,180	476	522	642	1,000	471	408	183	197	2,430	4,020
2	283	724	477	505	718	913	547	457	179	e247	1,060	3,820
3	e250	527	429	486	735	783	1,290	904	170	e275	1,070	2,540
4	238	432	395	481	1,060	722	1,030	1,670	180	e238	1,700	975
5	216	392	456	483	2,030	705	711	1,610	225	198	2,160	621
6	212	376	657	503	1,760	661	571	1,060	254	222	1,050	517
7	207	357	1,140	562	1,770	624	409	695	283	e186	563	529
8	205	355	949	561	2,490	669	244	541	253	e145	432	584
9	227	410	696	532	2,740	617	376	467	223	e138	360	1,870
10	233	422	644	517	1,660	557	401	388	207	e133	286	1,860
11	252	400	1,430	508	1,180	526	441	331	190	e147	235	1,380
12	267	377	2,400	482	1,070	477	477	302	185	e174	208	855
13	283	353	3,190	465	1,180	446	774	282	171	e210	599	590
14	305	327	2,830	461	1,270	437	1,580	264	160	e227	726	473
15	321	312	3,070	466	1,250	463	2,030	250	152	e212	1,600	440
16	290	303	3,850	453	1,240	770	1,580	238	147	e167	4,280	410
17	284	291	4,040	434	1,180	1,270	1,170	230	144	e123	5,030	438
18	294	286	2,500	442	1,180	1,340	846	224	143	e121	3,960	661
19	294	348	1,940	469	1,090	1,200	666	220	144	e140	1,610	1,210
20	274	621	1,590	509	1,000	1,010	559	215	139	e167	852	1,610
21	263	1,450	1,190	527	912	804	504	207	135	186	579	1,110
22	236	1,530	953	501	816	674	464	207	127	162	484	706
23	224	964	806	454	732	584	428	506	e115	201	503	525
24	212	679	814	426	652	530	390	308	e122	177	507	427
25	208	544	808	418	590	494	374	231	139	156	406	372
26	207	480	786	466	564	469	366	206	204	164	348	340
27	215	429	738	461	657	455	403	187	199	166	310	316
28	226	416	661	483	800	439	411	178	203	156	273	368
29	712	406	604	499	973	428	426	195	240	224	248	383
30	1,120	416	573	514	---	423	415	219	204	633	756	436
31	1,620	---	544	564	---	420	---	206	---	2,070	3,320	---
TOTAL	10,496	16,107	41,636	15,154	33,941	20,910	20,354	13,406	5,420	7,962	37,945	30,386
MEAN	339	537	1,343	489	1,170	675	678	432	181	257	1,224	1,013
MAX	1,620	1,530	4,040	564	2,740	1,340	2,030	1,670	283	2,070	5,030	4,020
MIN	205	286	395	418	564	420	244	178	115	121	208	316
CFSM	0.44	0.69	1.73	0.63	1.51	0.87	0.87	0.56	0.23	0.33	1.58	1.30
IN.	0.50	0.77	1.99	0.73	1.62	1.00	0.97	0.64	0.26	0.38	1.82	1.45

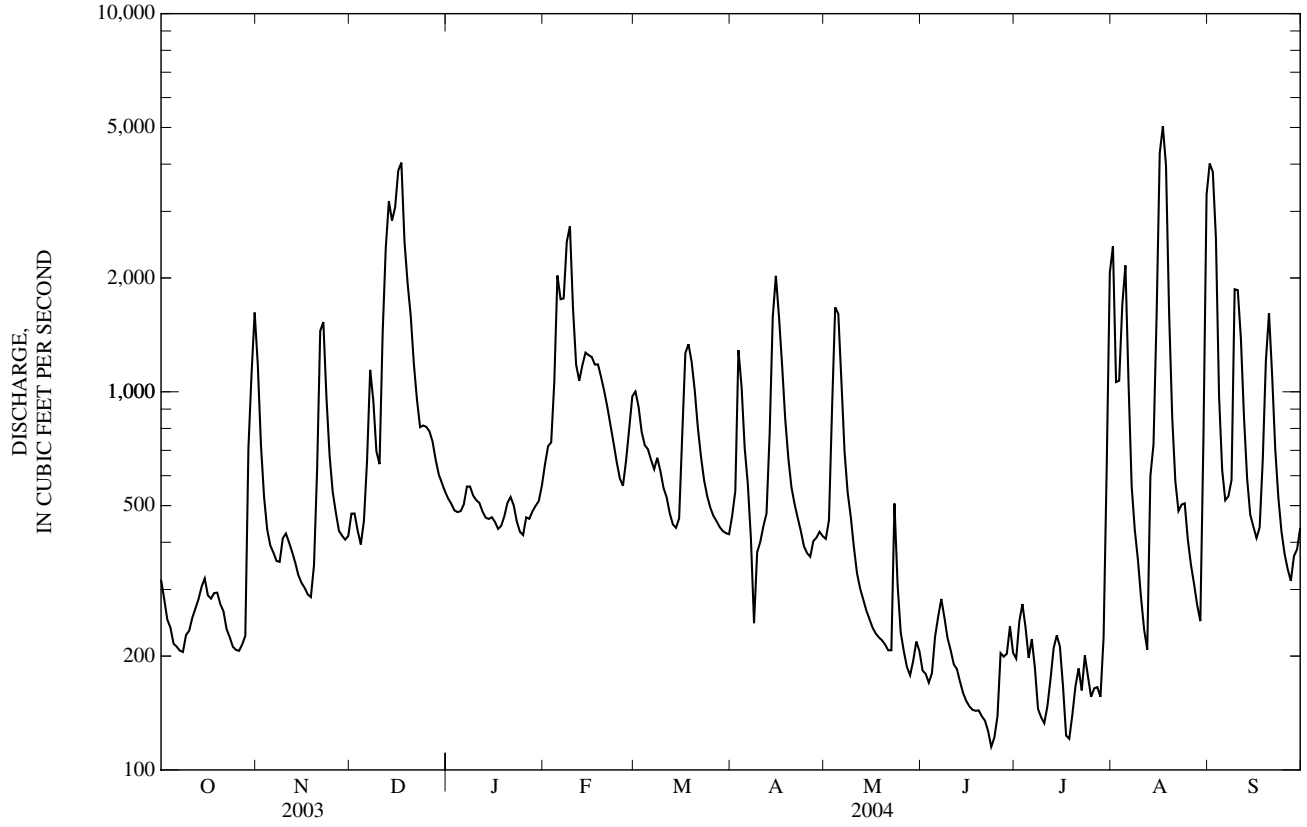
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	395	537	755	1,297	1,393	1,704	1,151	701	515	453	413	585
MAX	2,157	1,876	2,406	2,794	3,002	3,829	2,864	2,123	2,064	2,321	1,224	6,436
(WY)	(2000)	(1973)	(1973)	(1978)	(1998)	(1998)	(1987)	(1989)	(1982)	(1975)	(2004)	(1999)
MIN	60.2	66.2	109	186	456	358	284	128	72.7	53.9	77.9	75.4
(WY)	(1994)	(1981)	(1992)	(1981)	(1991)	(1981)	(1981)	(2002)	(2002)	(2002)	(1988)	(1993)

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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1972 - 2004	
ANNUAL TOTAL	460,957		253,717			
ANNUAL MEAN	1,263		693		823	
HIGHEST ANNUAL MEAN					1,471	1973
LOWEST ANNUAL MEAN					211	1981
HIGHEST DAILY MEAN	9,800	Apr 13	5,030	Aug 17	25,000	Sep 17, 1999
LOWEST DAILY MEAN	111	Sep 19	115	Jun 23	29	Oct 28, 1993
ANNUAL SEVEN-DAY MINIMUM	218	Oct 22	132	Jun 19	36	Oct 27, 1993
MAXIMUM PEAK FLOW			5,150	Aug 17	29,300	Sep 16, 1999
MAXIMUM PEAK STAGE			13.74	Aug 17	32.89*	Sep 16, 1999
INSTANTANEOUS LOW FLOW			NOT DETERMINED		28*	Oct 28, 1993
ANNUAL RUNOFF (CFSM)	1.63		0.892		1.06	
ANNUAL RUNOFF (INCHES)	22.07		12.15		14.39	
10 PERCENT EXCEEDS	3,140		1,580		1,970	
50 PERCENT EXCEEDS	704		464		386	
90 PERCENT EXCEEDS	265		186		97	

* See REMARKS.
e Estimated.



0208250885 TAR RIVER AT US HIGHWAY 301 BYPASS AT ROCKY MOUNT, NC

LOCATION.--Lat 35°55'34", long 77°49'50", Nash County, Hydrologic Unit 03020101, at bridge on US Highway 301 bypass, approximately 2 mi southwest of Rocky Mount.

DRAINAGE AREA.--787 mi^2.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--May 2003 to current year.

GAGE.--Water-stage recorder. Datum of gage is 75.00 ft above NAVD of 1988. Satellite telemetry at station.

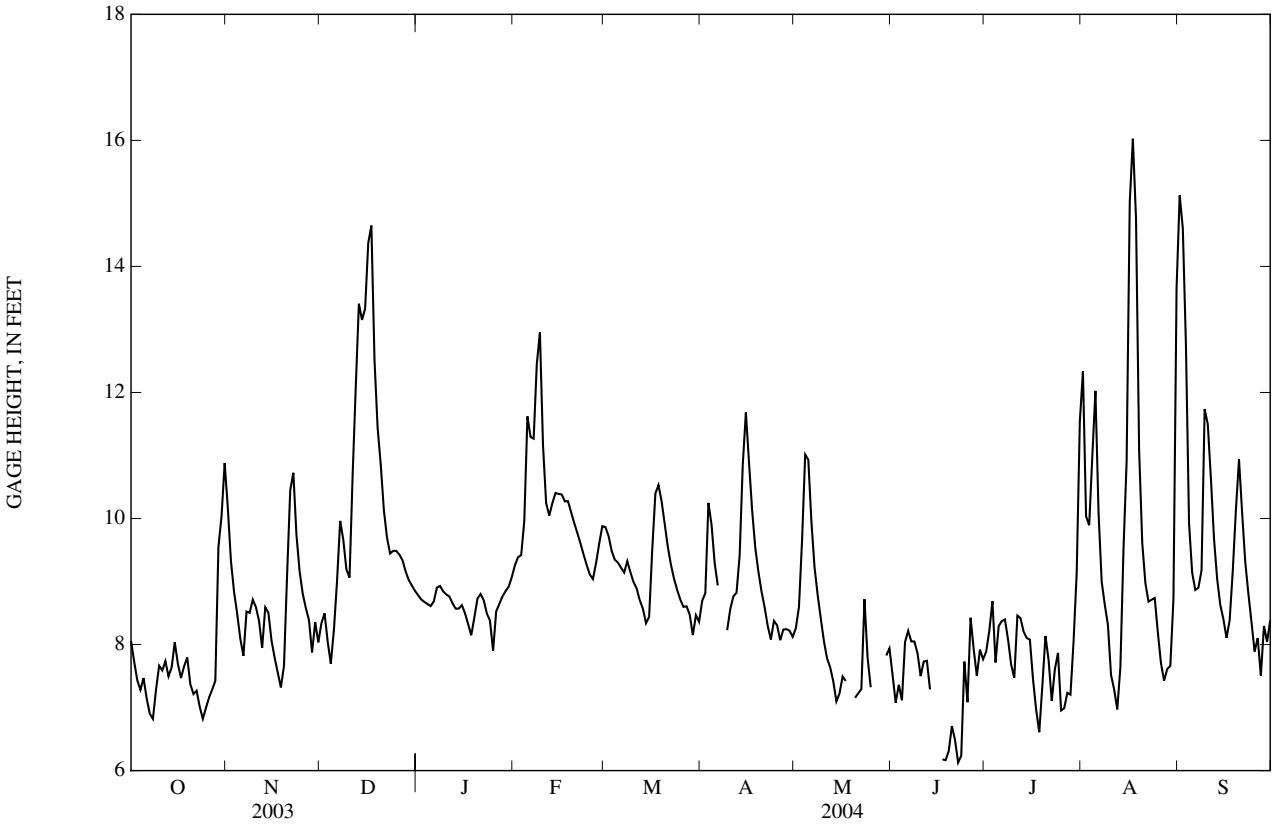
EXTREMES FOR PERIOD OF RECORD.--Maximum, 16.16 ft, Aug. 17, 2004; minimum, not determined.

EXTREMES FOR CURRENT YEAR.--Maximum, 16.16 ft, Aug. 17; minimum, not determined.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.06	10.17	8.34	8.78	9.26	9.86	8.69	8.26	7.52	7.89	12.33	15.13
2	7.73	9.32	8.49	8.71	9.39	9.72	8.82	8.59	7.08	8.22	10.04	14.61
3	7.43	8.84	8.05	8.68	9.42	9.49	10.25	9.66	7.36	8.69	9.89	12.76
4	7.28	8.49	7.70	8.64	9.96	9.35	9.90	11.01	7.12	7.72	10.98	9.92
5	7.47	8.09	8.24	8.61	11.62	9.30	9.29	10.93	8.04	8.29	12.02	9.14
6	7.15	7.82	9.01	8.68	11.29	9.22	8.94	9.95	8.22	8.37	10.09	8.87
7	6.90	8.52	9.96	8.90	11.27	9.14	---	9.22	8.05	8.40	9.00	8.90
8	6.82	8.50	9.66	8.93	12.45	9.32	---	8.79	8.05	8.08	8.63	9.18
9	7.29	8.71	9.19	8.84	12.95	9.15	8.23	8.41	7.86	7.68	8.31	11.74
10	7.66	8.59	9.06	8.80	11.16	8.99	8.56	8.06	7.50	7.47	7.52	11.50
11	7.59	8.38	10.70	8.76	10.24	8.89	8.76	7.78	7.73	8.46	7.29	10.64
12	7.74	7.95	12.09	8.66	10.05	8.70	8.82	7.64	7.74	8.42	6.97	9.68
13	7.50	8.59	13.41	8.57	10.25	8.57	9.41	7.42	7.29	8.20	7.64	9.05
14	7.64	8.50	13.15	8.57	10.41	8.34	10.85	7.10	---	8.10	9.52	8.63
15	8.04	8.07	13.33	8.63	10.39	8.44	11.68	7.22	---	8.08	10.91	8.40
16	7.69	7.79	14.37	8.50	10.38	9.51	10.89	7.49	---	7.45	15.01	8.11
17	7.47	7.56	14.65	8.32	10.27	10.40	10.13	7.42	6.18	6.97	16.03	8.38
18	7.66	7.32	12.52	8.15	10.28	10.53	9.54	---	6.17	6.61	14.76	9.17
19	7.79	7.66	11.44	8.43	10.10	10.27	9.16	---	6.31	7.36	11.08	10.13
20	7.37	9.11	10.86	8.73	9.93	9.91	8.85	7.16	6.71	8.14	9.61	10.94
21	7.21	10.45	10.14	8.80	9.77	9.55	8.59	7.23	6.49	7.75	8.98	10.10
22	7.27	10.73	9.70	8.70	9.61	9.26	8.30	7.29	6.13	7.10	8.68	9.31
23	7.01	9.74	9.44	8.49	9.43	9.04	8.08	8.72	6.23	7.61	8.71	8.81
24	6.82	9.16	9.49	8.38	9.26	8.86	8.38	7.79	7.73	7.87	8.74	8.36
25	7.00	8.81	9.49	7.90	9.11	8.71	8.31	7.32	7.09	6.95	8.19	7.89
26	7.16	8.58	9.42	8.53	9.04	8.60	8.07	---	8.42	6.99	7.70	8.10
27	7.29	8.39	9.34	8.64	9.29	8.61	8.24	---	7.92	7.23	7.43	7.51
28	7.42	7.88	9.16	8.76	9.60	8.47	8.24	---	7.50	7.20	7.61	8.30
29	9.55	8.35	9.02	8.85	9.88	8.15	8.22	---	7.92	8.06	7.66	8.04
30	10.04	8.04	8.93	8.92	---	8.47	8.12	7.83	7.77	9.14	8.72	8.38
31	10.88	---	8.85	9.07	---	8.36	---	7.94	---	11.54	13.66	---
MEAN	7.68	8.60	10.23	8.64	10.21	9.13	---	---	---	7.94	9.80	9.66
MAX	10.88	10.73	14.65	9.07	12.95	10.53	---	---	---	11.54	16.03	15.13
MIN	6.82	7.32	7.70	7.90	9.04	8.15	---	---	---	6.61	6.97	7.51

0208250885 TAR RIVER AT US HIGHWAY 301 BYPASS AT ROCKY MOUNT, NC—Continued



0208250885 TAR RIVER AT US HIGHWAY 301 BYPASS AT ROCKY MOUNT, NC—Continued

PRECIPITATION RECORDS

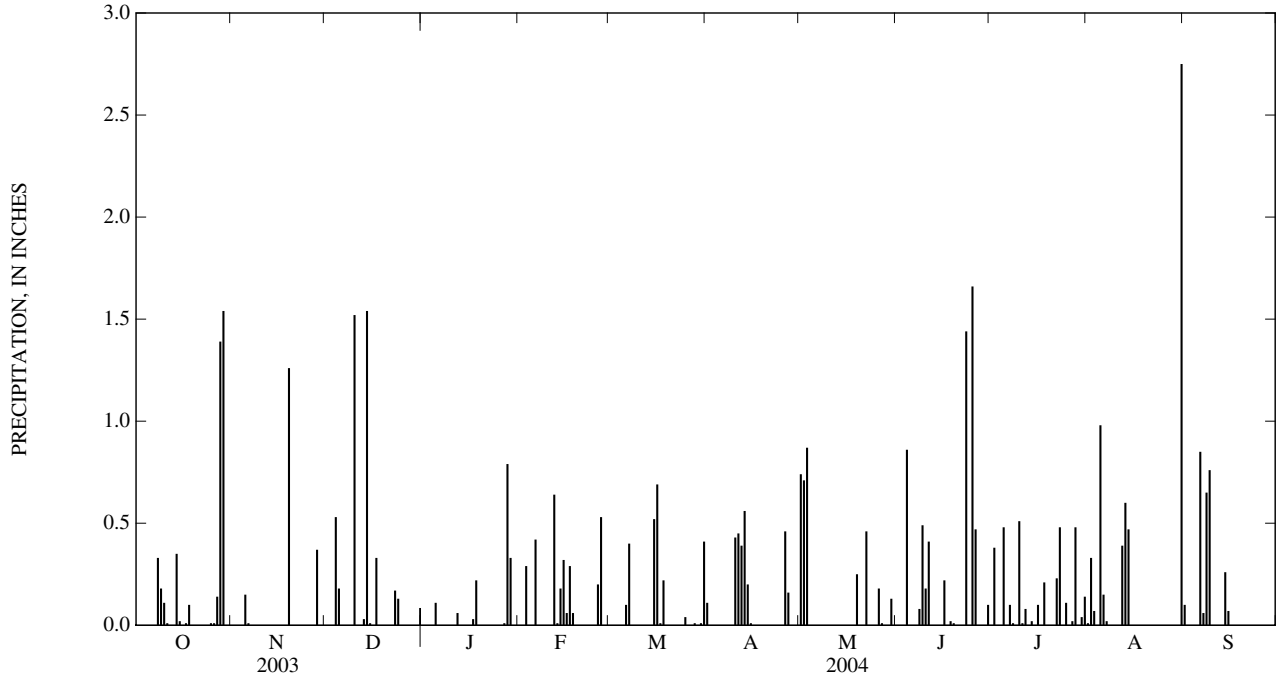
PERIOD OF RECORD.--September 2003 to current year.

GAGE.--Tipping-bucket raingage and data collection platform.

REMARKS.--Precipitation collected during freezing periods may not be accurately reflected in the daily record; consequently, winter record is poor.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.74	0.00	0.00	0.01	0.10
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.38	0.33	0.00
3	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.87	0.00	0.00	0.07	0.00
4	0.00	0.00	0.53	0.00	0.00	0.00	---	0.00	0.86	0.00	0.00	0.00
5	0.00	0.15	0.18	0.11	0.00	0.00	---	0.00	0.00	0.48	0.98	0.00
6	0.00	0.01	0.00	0.00	0.42	0.10	0.00	0.00	0.00	0.00	0.15	0.85
7	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.10	0.02	0.06
8	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	0.00	0.65
9	0.18	0.00	0.00	0.00	0.00	0.00	---	0.00	0.49	0.00	0.00	0.76
10	0.11	0.00	1.52	0.00	0.00	0.00	0.43	0.00	0.18	0.51	0.00	0.00
11	0.01	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.41	0.01	0.00	0.00
12	0.00	0.00	0.00	0.06	0.64	0.00	0.39	0.00	0.00	0.08	0.39	0.00
13	0.00	0.00	0.03	0.00	0.01	0.00	0.56	0.00	0.00	0.00	0.60	0.00
14	0.35	0.00	1.54	0.00	0.18	0.00	0.20	0.00	0.00	0.02	0.47	0.26
15	0.02	0.00	0.01	0.00	0.32	0.52	0.01	0.00	0.00	0.00	---	0.07
16	0.00	0.00	0.00	0.00	0.06	0.69	0.00	0.00	0.22	0.10	---	0.00
17	0.01	0.00	0.33	0.03	0.29	0.01	0.00	0.00	0.00	0.00	---	---
18	0.10	0.00	0.00	0.22	0.06	0.22	0.00	0.00	0.02	0.21	---	---
19	0.00	1.26	0.00	0.00	0.00	0.00	0.00	0.25	0.01	0.00	---	---
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.23	---	---
23	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	1.44	0.48	---	---
24	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---
25	0.01	0.00	0.00	0.00	0.00	0.04	0.00	0.00	1.66	0.11	---	---
26	0.01	0.00	0.00	0.00	0.20	0.00	0.46	0.18	0.47	0.00	---	---
27	0.14	0.00	0.00	0.01	0.53	0.00	0.16	0.01	0.00	0.02	---	---
28	1.39	0.37	0.00	0.79	0.00	0.01	0.00	0.00	---	0.48	---	---
29	1.54	0.00	0.00	0.33	0.00	0.00	0.00	0.00	---	0.00	---	---
30	0.00	0.00	0.00	0.00	---	0.01	0.00	0.13	0.10	0.04	---	0.00
31	0.00	---	0.00	0.00	---	0.41	---	0.00	---	0.14	2.75	---
TOTAL	4.20	1.79	4.44	1.55	3.00	2.41	---	3.35	---	3.40	---	---



02082576 STONY CREEK AT WINSTEAD AVENUE AT ROCKY MOUNT, NC

LOCATION.--Lat 35°58'06", long 77°50'59", Nash County, Hydrologic Unit 03020101, at bridge on Winstead Avenue, 2.2 mi above mouth and 3.3 mi northwest of Rocky Mount.

DRAINAGE AREA.--112 mi^2.

PERIOD OF RECORD.--July 2003 to current year.

GAGE.--Water-stage recorder. Datum of gage is 90.00 ft, above North American Vertical Datum of 1988. Satellite telemetry at station.

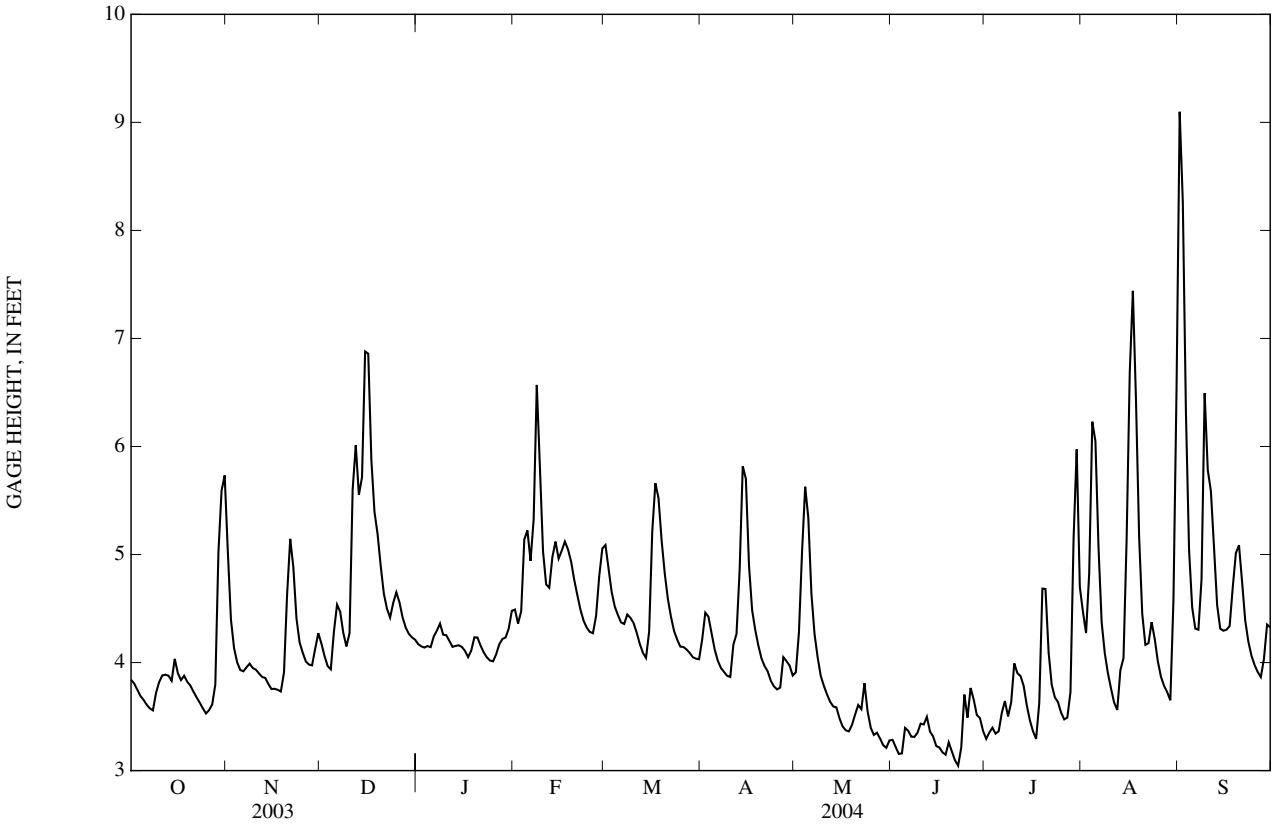
EXTEMES FOR PERIOD OF RECORD.--Maximum, 9.66 ft, Sept. 1, 2004; minimum 3.01 ft, June 23, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum, 9.66 ft, Sept. 1; minimum, 3.01 ft, June 23.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.84	5.03	4.18	4.17	4.49	5.09	4.22	3.91	3.28	3.29	4.47	9.10
2	3.81	4.40	4.06	4.15	4.36	4.87	4.46	4.28	3.22	3.35	4.27	8.26
3	3.75	4.13	3.97	4.14	4.47	4.65	4.42	5.03	3.15	3.40	4.82	6.31
4	3.69	4.00	3.94	4.15	5.14	4.52	4.27	5.63	3.16	3.34	6.23	5.04
5	3.65	3.93	4.29	4.14	5.22	4.44	4.12	5.34	3.40	3.36	6.05	4.51
6	3.61	3.92	4.54	4.24	4.94	4.37	4.02	4.64	3.37	3.53	5.06	4.31
7	3.58	3.96	4.47	4.30	5.33	4.36	3.95	4.26	3.31	3.64	4.37	4.30
8	3.56	3.99	4.27	4.36	6.57	4.45	3.91	4.05	3.31	3.50	4.09	4.77
9	3.72	3.95	4.15	4.26	5.81	4.41	3.88	3.87	3.35	3.63	3.90	6.49
10	3.82	3.93	4.27	4.25	5.03	4.37	3.87	3.78	3.43	3.99	3.76	5.78
11	3.88	3.90	5.60	4.20	4.72	4.28	4.17	3.70	3.43	3.90	3.63	5.59
12	3.89	3.87	6.01	4.15	4.69	4.17	4.27	3.64	3.50	3.88	3.56	5.07
13	3.88	3.86	5.55	4.15	4.98	4.09	4.86	3.59	3.36	3.79	3.93	4.53
14	3.83	3.80	5.72	4.16	5.12	4.04	5.82	3.59	3.32	3.61	4.04	4.31
15	4.03	3.75	6.88	4.14	4.96	4.28	5.70	3.48	3.23	3.47	5.14	4.29
16	3.90	3.76	6.86	4.11	5.04	5.21	4.90	3.41	3.21	3.36	6.68	4.30
17	3.84	3.75	5.87	4.05	5.12	5.66	4.49	3.37	3.17	3.29	7.44	4.34
18	3.88	3.73	5.39	4.11	5.05	5.52	4.30	3.36	3.15	3.63	6.42	4.70
19	3.82	3.91	5.19	4.23	4.94	5.13	4.16	3.42	3.26	4.68	5.16	5.01
20	3.79	4.63	4.89	4.23	4.77	4.83	4.04	3.52	3.18	4.68	4.45	5.09
21	3.73	5.15	4.64	4.16	4.62	4.59	3.97	3.61	3.10	4.09	4.16	4.74
22	3.68	4.88	4.50	4.09	4.49	4.42	3.92	3.57	3.04	3.79	4.18	4.39
23	3.63	4.41	4.42	4.05	4.39	4.29	3.83	3.81	3.21	3.68	4.37	4.19
24	3.58	4.19	4.55	4.02	4.32	4.21	3.78	3.55	3.70	3.63	4.22	4.06
25	3.53	4.09	4.65	4.01	4.28	4.15	3.75	3.40	3.49	3.54	4.01	3.98
26	3.56	4.01	4.56	4.08	4.27	4.14	3.77	3.33	3.76	3.47	3.87	3.91
27	3.61	3.98	4.42	4.17	4.43	4.12	4.05	3.35	3.66	3.49	3.78	3.87
28	3.80	3.97	4.32	4.22	4.80	4.09	4.01	3.30	3.51	3.73	3.73	4.04
29	5.02	4.13	4.27	4.23	5.06	4.05	3.97	3.24	3.49	5.15	3.65	4.35
30	5.59	4.27	4.23	4.31	---	4.04	3.88	3.21	3.37	5.97	4.58	4.33
31	5.73	---	4.21	4.48	---	4.03	---	3.28	---	4.70	6.56	---
MEAN	3.91	4.11	4.80	4.18	4.88	4.48	4.23	3.79	3.34	3.82	4.66	4.93
MAX	5.73	5.15	6.88	4.48	6.57	5.66	5.82	5.63	3.76	5.97	7.44	9.10
MIN	3.53	3.73	3.94	4.01	4.27	4.03	3.75	3.21	3.04	3.29	3.56	3.87

02082576 STONY CREEK AT WINSTEAD AVENUE AT ROCKY MOUNT, NC—Continued



02082585 TAR RIVER AT NC 97 AT ROCKY MOUNT, NC

LOCATION.--Lat 35°57'17", long 77°47'14", Edgecombe County, Hydrologic Unit 03020101, on left bank 20 ft downstream of bridge on State Highway 97, 0.5 mi upstream from Cowlick Branch, and 1.0 mi north-northeast of Rocky Mount.

DRAINAGE AREA.--925 mi^2.

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 52.81 ft above NGVD of 1929. City of Rocky Mount telephone telemetry at station. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Prior to October 1996, some regulation at low flow caused by mill above station. The city of Rocky Mount diverted an average of 18.5 ft^3/s for municipal water supply, most of which was returned downstream of station as treated effluent. Minimum discharge for current water year and period of record, result of regulation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	425	1,510	587	686	876	1,290	689	518	207	222	2,450	6,050
2	343	997	599	657	936	1,210	738	697	187	349	1,360	5,560
3	314	702	579	636	979	1,070	1,370	1,280	139	604	1,200	3,670
4	225	571	500	629	1,270	982	1,250	1,930	183	319	1,860	1,390
5	238	521	587	629	2,070	943	948	1,900	239	255	2,790	875
6	225	477	808	652	1,970	890	764	1,340	277	264	1,480	762
7	217	403	1,260	739	1,980	828	664	968	383	267	800	730
8	201	458	1,140	761	2,760	942	269	745	291	221	534	984
9	202	501	890	720	3,170	863	451	657	292	169	474	2,910
10	300	525	864	693	1,940	771	525	488	283	157	323	2,310
11	258	564	1,920	680	1,390	727	635	448	230	200	237	1,750
12	353	397	2,590	640	1,310	651	728	359	224	324	208	1,220
13	340	418	3,440	611	1,410	605	1,120	355	200	248	392	822
14	342	406	3,700	607	1,500	596	1,880	296	187	252	1,200	624
15	444	417	3,780	611	1,490	641	2,340	263	169	255	2,120	584
16	376	349	4,540	594	1,500	1,180	1,810	214	161	221	4,930	524
17	341	358	4,660	582	1,450	1,630	1,380	253	147	166	6,120	557
18	325	337	3,190	585	1,440	1,700	1,100	228	113	148	5,300	900
19	365	400	2,130	595	1,350	1,510	903	206	101	201	2,210	1,330
20	357	855	1,800	659	1,240	1,290	754	199	116	456	1,110	1,750
21	255	1,540	1,390	682	1,160	1,100	677	201	146	310	759	1,340
22	255	1,740	1,180	645	1,070	944	626	197	137	212	628	928
23	246	1,190	1,050	595	969	810	551	599	110	239	622	667
24	201	874	1,090	555	867	726	494	461	181	236	642	536
25	179	688	1,100	580	780	668	495	298	177	199	537	452
26	183	604	1,050	523	747	638	496	220	395	164	362	410
27	203	556	993	605	916	618	558	186	339	176	372	338
28	265	549	887	645	1,100	619	563	178	248	189	247	395
29	1,330	511	805	676	1,270	560	576	165	342	422	237	501
30	1,460	552	756	709	---	576	557	199	239	1,010	885	513
31	1,910	---	715	788	---	569	---	230	---	1,920	3,540	---
TOTAL	12,678	19,970	50,580	19,969	40,910	28,147	25,911	16,278	6,443	10,375	45,929	41,382
MEAN	409	666	1,632	644	1,411	908	864	525	215	335	1,482	1,379
MAX	1,910	1,740	4,660	788	3,170	1,700	2,340	1,930	395	1,920	6,120	6,050
MIN	179	337	500	523	747	560	269	165	101	148	208	338

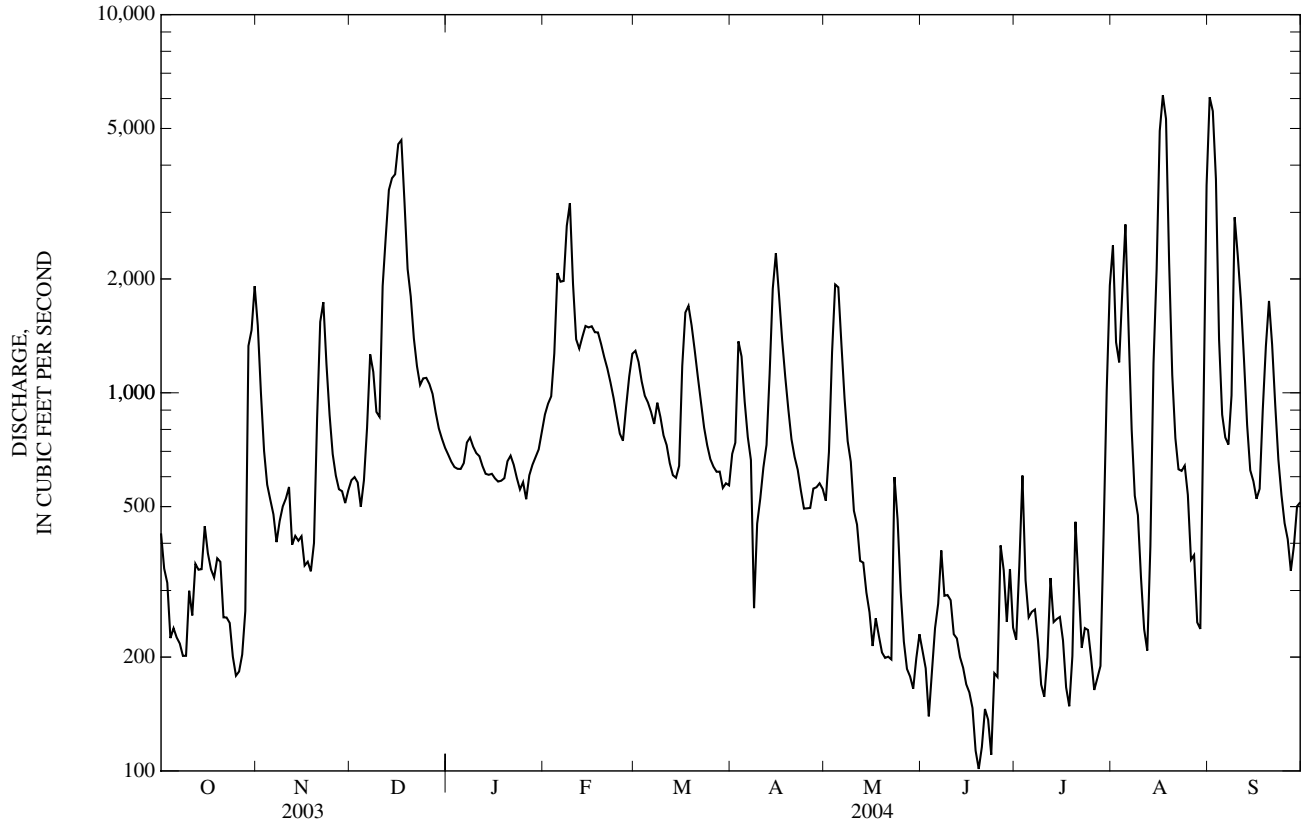
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

MEAN	489	603	829	1,494	1,610	2,055	1,371	831	606	416	475	747
MAX	2,918	1,905	2,318	3,230	3,920	4,507	3,447	2,725	2,238	1,368	1,482	8,135
(WY)	(2000)	(1980)	(2003)	(1978)	(1998)	(1998)	(1987)	(1989)	(1982)	(2000)	(2004)	(1999)
MIN	70.4	74.5	125	254	546	477	332	148	67.3	54.1	79.7	70.6
(WY)	(1981)	(1981)	(1992)	(1981)	(1977)	(1981)	(1995)	(2002)	(2002)	(1986)	(1987)	(1993)

02082585 TAR RIVER AT NC 97 AT ROCKY MOUNT, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1977 - 2004	
ANNUAL TOTAL	558,237		318,572			
ANNUAL MEAN	1,529		870		974	
HIGHEST ANNUAL MEAN					1,764	2003
LOWEST ANNUAL MEAN					262	1981
HIGHEST DAILY MEAN	10,600	Apr 13	6,120	Aug 17	31,500	Sep 17, 1999
LOWEST DAILY MEAN	179	Oct 25	101	Jun 19	6.6	Oct 3, 1983
ANNUAL SEVEN-DAY MINIMUM	217	Oct 21	124	Jun 17	31	Oct 18, 1993
MAXIMUM PEAK FLOW			6,280	Aug 17	34,100	Sep 17, 1999
MAXIMUM PEAK STAGE			16.54	Aug 17	31.66	Sep 17, 1999
INSTANTANEOUS LOW FLOW			54	Jun 3	5.7*	Sep 23, 1988
10 PERCENT EXCEEDS	3,550		1,800		2,310	
50 PERCENT EXCEEDS	931		609		477	
90 PERCENT EXCEEDS	317		201		99	

* See REMARKS.



02082585 TAR RIVER AT NC 97 AT ROCKY MOUNT, NC—Continued

PRECIPITATION RECORDS

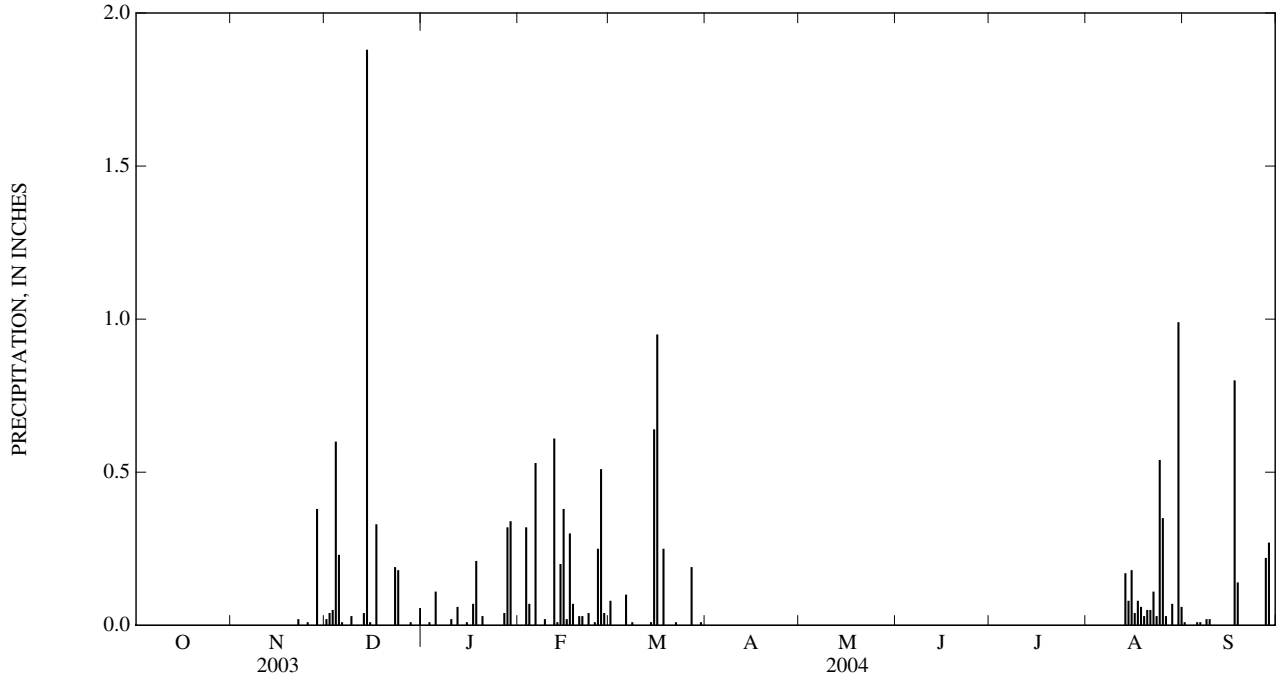
PERIOD OF RECORD.--November 2003 to September 2004.

GAGE.--Tipping-bucket raingage and data collection platform.

REMARKS.--Precipitation collected during freezing periods may not be accurately reflected in the daily record; consequently, winter record is poor.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	0.02	0.00	0.00	0.08	---	---	---	---	---	0.01
2	---	---	0.04	0.00	0.00	0.00	---	---	---	---	---	0.00
3	---	---	0.05	0.01	0.32	0.00	---	---	---	---	---	0.00
4	---	---	0.60	0.00	0.07	0.00	---	---	---	---	---	0.00
5	---	---	0.23	0.11	0.00	0.00	---	---	---	---	---	0.01
6	---	---	0.01	0.00	0.53	0.10	---	---	---	---	---	0.01
7	---	---	0.00	0.00	0.00	---	---	---	---	---	---	0.00
8	---	---	0.00	0.00	0.00	0.01	---	---	---	---	---	0.02
9	---	---	0.03	0.00	0.02	0.00	---	---	---	---	---	0.02
10	---	---	---	0.02	0.00	0.00	---	---	---	---	---	0.00
11	---	---	---	0.00	0.00	0.00	---	---	---	---	---	0.00
12	---	---	---	0.06	0.61	0.00	---	---	---	---	---	0.00
13	---	---	0.04	0.00	0.01	0.00	---	---	---	---	0.17	0.00
14	---	---	1.88	0.00	0.20	0.01	---	---	---	---	0.08	0.00
15	---	---	0.01	0.01	0.38	0.64	---	---	---	---	0.18	0.00
16	---	---	0.00	0.00	0.02	0.95	---	---	---	---	0.04	0.00
17	---	---	0.33	0.07	0.30	0.00	---	---	---	---	0.08	0.80
18	---	---	0.00	0.21	0.07	0.25	---	---	---	---	0.06	0.14
19	---	---	0.00	0.00	0.00	0.00	---	---	---	---	0.03	0.00
20	---	---	0.00	0.03	0.03	0.00	---	---	---	---	0.05	0.00
21	---	0.00	0.00	0.00	0.03	0.00	---	---	---	---	0.05	0.00
22	---	0.02	0.00	0.00	0.00	0.01	---	---	---	---	0.11	0.00
23	---	0.00	0.19	0.00	0.04	0.00	---	---	---	---	0.03	0.00
24	---	0.00	0.18	0.00	0.00	0.00	---	---	---	---	0.54	0.00
25	---	0.01	0.00	0.00	0.01	0.00	---	---	---	---	0.35	0.00
26	---	0.00	0.00	0.00	0.25	0.00	---	---	---	---	0.03	0.00
27	---	0.00	0.00	0.04	0.51	0.19	---	---	---	---	0.00	0.22
28	---	0.38	0.01	0.32	0.04	0.00	---	---	---	---	0.07	0.27
29	---	0.00	0.00	0.34	0.00	0.00	---	---	---	---	0.00	0.00
30	---	0.00	0.00	0.00	---	0.01	---	---	---	---	0.99	0.00
31	---	---	0.00	0.00	---	---	---	---	---	---	0.06	---
TOTAL	---	---	---	1.22	3.44	---	---	---	---	---	---	1.50



02082770 SWIFT CREEK AT HILLIARDSTON, NC

LOCATION.--Lat 36°06'44", long 77°55'12", Nash County, Hydrologic Unit 03020101, near left bank at downstream side of bridge on Secondary Road 1310, 0.7 mi northeast of Hilliardston, and 2.8 mi downstream of Gideon Swamp.

DRAINAGE AREA.--166 mi^2.

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

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

GAGE.--Water-stage recorder. Datum of gage is 129.41 ft above NAVD of 1988. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge for period of record, on basis of slope-conveyance of peak flow; maximum gage height for period of record, 21.30 ft, from flood marks.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	222	60	149	183	171	152	102	82	46	152	1,350
2	80	154	64	138	166	152	169	141	73	41	155	1,360
3	75	90	49	133	256	145	176	348	65	35	429	899
4	70	61	40	132	403	149	171	483	61	37	343	328
5	69	44	101	134	317	151	134	289	64	43	213	198
6	66	38	181	200	329	151	110	205	104	43	143	160
7	63	44	209	187	578	146	100	156	133	41	96	163
8	62	57	207	156	544	147	98	127	125	41	74	167
9	67	52	133	149	545	133	96	110	88	61	64	487
10	84	55	116	145	371	117	93	99	70	35	59	463
11	94	49	516	135	272	106	95	90	60	234	56	250
12	104	42	470	124	261	102	104	83	54	165	53	184
13	102	37	499	129	341	97	233	79	48	128	62	150
14	94	33	914	127	298	96	332	77	44	73	84	126
15	98	31	940	116	270	116	310	75	43	57	514	120
16	105	27	725	110	284	252	259	73	43	62	1,160	125
17	90	27	793	107	269	312	195	69	49	48	1,320	123
18	83	29	586	117	262	243	164	69	52	93	1,220	256
19	85	54	374	153	244	220	142	68	49	85	670	339
20	80	390	314	150	221	187	132	66	46	63	245	312
21	77	336	265	134	204	161	115	64	46	45	168	275
22	71	238	228	120	188	141	108	63	44	75	174	194
23	69	184	207	111	174	122	101	62	37	104	219	143
24	66	112	216	105	162	112	96	63	32	75	165	113
25	64	81	229	104	153	106	93	60	32	59	121	98
26	63	61	206	116	143	103	93	57	40	48	98	89
27	67	49	192	125	148	102	130	76	47	44	84	84
28	77	48	179	129	187	102	145	99	53	87	76	115
29	380	60	167	132	190	98	119	89	49	58	69	188
30	451	62	177	152	---	95	103	87	50	103	339	182
31	260	---	167	199	---	109	---	86	---	84	1,130	---
TOTAL	3,306	2,767	9,524	4,218	7,963	4,444	4,368	3,615	1,783	2,213	9,755	9,041
MEAN	107	92.2	307	136	275	143	146	117	59.4	71.4	315	301
MAX	451	390	940	200	578	312	332	483	133	234	1,320	1,360
MIN	62	27	40	104	143	95	93	57	32	35	53	84
CFSM	0.64	0.56	1.85	0.82	1.65	0.86	0.88	0.70	0.36	0.43	1.90	1.82
IN.	0.74	0.62	2.13	0.95	1.78	1.00	0.98	0.81	0.40	0.50	2.19	2.03

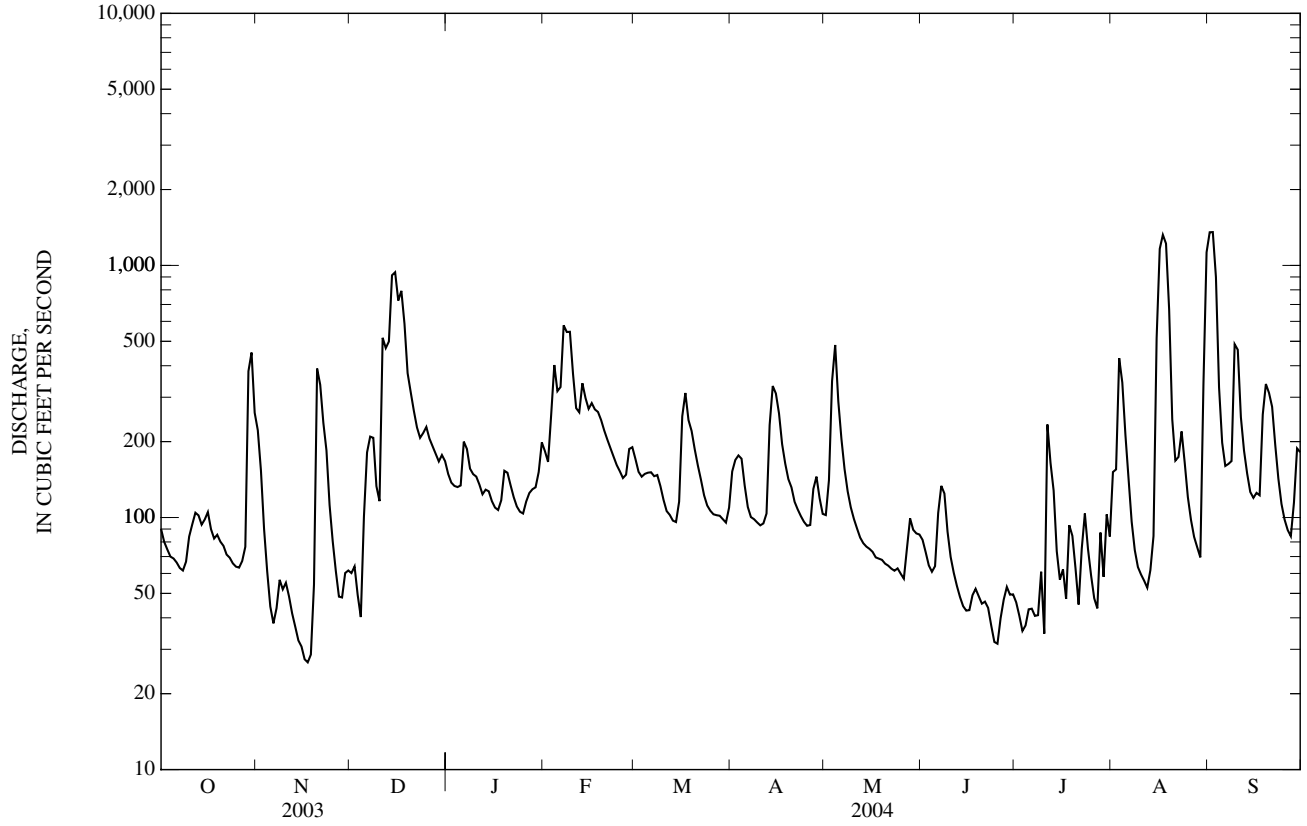
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004, BY WATER YEAR (WY)

MEAN	93.6	116	156	238	281	304	226	148	123	102	99.1	141
MAX	420	436	401	500	605	718	774	466	468	488	326	2,180
(WY)	(1972)	(1986)	(2003)	(1987)	(1998)	(1998)	(1987)	(1984)	(1979)	(2000)	(1986)	(1999)
MIN	9.65	27.8	37.3	59.5	92.6	77.6	72.9	46.2	6.98	12.0	10.2	4.90
(WY)	(1971)	(1982)	(1966)	(1981)	(1968)	(1988)	(1981)	(2002)	(2002)	(2002)	(1993)	(1968)

02082770 SWIFT CREEK AT HILLIARDSTON, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1963 - 2004	
ANNUAL TOTAL	103,070		62,997			
ANNUAL MEAN	282		172		168	
HIGHEST ANNUAL MEAN					308	2003
LOWEST ANNUAL MEAN					51.0	1981
HIGHEST DAILY MEAN	1,990	Apr 12	1,360	Sep 2	22,000	Sep 17, 1999
LOWEST DAILY MEAN	27	Nov 16	27	Nov 16	0.60	Sep 25, 1968
ANNUAL SEVEN-DAY MINIMUM	32	Nov 12	32	Nov 12	1.1	Sep 21, 1968
MAXIMUM PEAK FLOW			1,420	Sep 2	23000*	Sep 17, 1999
MAXIMUM PEAK STAGE			10.08	Sep 2	21.30*	Sep 17, 1999
INSTANTANEOUS LOW FLOW			25	Nov 17	0.60	Sep 25, 1968
ANNUAL RUNOFF (CFSM)	1.70		1.04		1.01	
ANNUAL RUNOFF (INCHES)	23.10		14.12		13.77	
10 PERCENT EXCEEDS	610		333		353	
50 PERCENT EXCEEDS	184		114		93	
90 PERCENT EXCEEDS	60		48		24	

* See REMARKS.



0208281175 SWIFT CREEK AT NC 97 NEAR LEGGETT, NC

LOCATION.--Lat 35°58'49", long 77°35'40", Edgecombe County, Hydrologic Unit 03020101, at bridge on NC 97, approximately 1 mi west of Highway 42 and approximately 0.5 mi north of U.S. Highway 64.

DRAINAGE AREA.--263 mi^2.

PERIOD OF RECORD.--January 2003 to current year.

GAGE.--Water-stage recorder. Datum of gage is 35.00 ft above NAVD of 1988. Satellite telemetry at station.

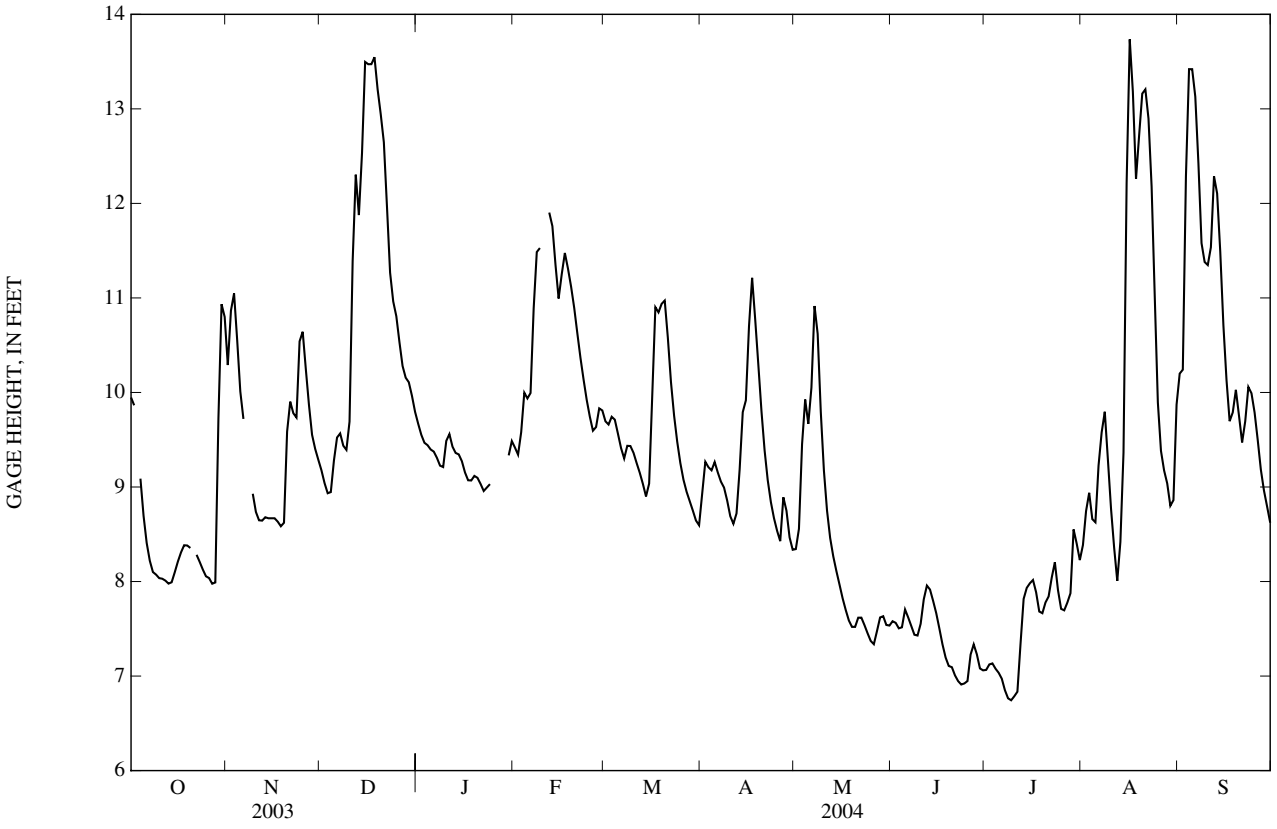
EXTREMES FOR PERIOD OF RECORD.--Maximum, 14.49 ft, Apr. 11, 12, 2003; minimum, 6.74 ft, July 8, 9, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum, 13.93 ft, Aug. 16; minimum, 6.74 ft, July 8, 9.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.95	10.29	9.18	9.67	9.42	9.69	8.93	8.34	7.58	7.07	8.39	10.20
2	9.86	10.87	9.04	9.55	9.34	9.66	9.27	8.56	7.56	7.12	8.75	10.24
3	---	11.05	8.93	9.47	9.58	9.74	9.21	9.45	7.50	7.13	8.94	12.29
4	9.09	10.55	8.95	9.44	10.0	9.71	9.18	9.93	7.52	7.08	8.66	13.42
5	8.70	10.01	9.28	9.40	9.94	9.56	9.26	9.67	7.70	7.03	8.63	13.42
6	8.41	9.72	9.52	9.37	9.99	9.41	9.15	10.05	7.62	6.97	9.23	13.13
7	8.22	---	9.57	9.31	10.89	9.30	9.06	10.91	7.53	6.85	9.58	12.43
8	8.10	---	9.44	9.23	11.49	9.44	8.99	10.62	7.44	6.76	9.80	11.58
9	8.07	8.93	9.39	9.21	11.53	9.43	8.86	9.79	7.43	6.74	9.29	11.38
10	8.04	8.74	9.69	9.49	---	9.36	8.69	9.17	7.55	6.79	8.77	11.35
11	8.03	8.65	11.39	9.56	---	9.25	8.61	8.75	7.81	6.83	8.36	11.54
12	8.01	8.64	12.30	9.43	11.90	9.15	8.72	8.46	7.96	7.34	8.01	12.29
13	7.98	8.68	11.88	9.36	11.76	9.03	9.19	8.27	7.92	7.82	8.42	12.10
14	7.99	8.67	12.53	9.34	11.35	8.90	9.79	8.11	7.79	7.93	9.36	11.49
15	8.10	8.67	13.50	9.27	10.99	9.04	9.92	7.97	7.66	7.98	12.22	10.71
16	8.21	8.67	13.47	9.15	11.25	9.97	10.70	7.82	7.50	8.02	13.74	10.13
17	8.31	8.63	13.47	9.07	11.48	10.90	11.21	7.70	7.34	7.89	13.18	9.70
18	8.38	8.58	13.55	9.07	11.31	10.85	10.77	7.59	7.20	7.68	12.26	9.79
19	8.38	8.62	13.21	9.12	11.12	10.94	10.29	7.52	7.11	7.66	12.72	10.03
20	8.36	9.59	12.94	9.10	10.89	10.97	9.80	7.52	7.09	7.78	13.16	9.75
21	---	9.90	12.65	9.03	10.63	10.58	9.39	7.62	7.01	7.84	13.21	9.47
22	8.28	9.78	11.97	8.96	10.37	10.11	9.07	7.62	6.95	8.04	12.90	9.70
23	8.21	9.74	11.27	8.99	10.14	9.76	8.84	7.54	6.91	8.20	12.18	10.06
24	8.13	10.54	10.96	9.03	9.92	9.48	8.67	7.45	6.92	7.91	11.02	9.99
25	8.06	10.64	10.81	---	9.74	9.25	8.54	7.37	6.95	7.71	9.89	9.79
26	8.04	10.25	10.53	---	9.60	9.08	8.43	7.34	7.23	7.70	9.38	9.50
27	7.98	9.87	10.28	---	9.63	8.95	8.89	7.48	7.34	7.78	9.18	9.18
28	7.99	9.55	10.16	---	9.83	8.85	8.75	7.62	7.23	7.88	9.04	8.96
29	9.73	9.40	10.11	---	9.81	8.75	8.47	7.63	7.08	8.55	8.80	8.79
30	10.93	9.29	9.97	9.33	---	8.65	8.34	7.54	7.06	8.40	8.86	8.62
31	10.80	---	9.79	9.49	---	8.60	---	7.53	---	8.23	9.87	---
MEAN	---	---	10.96	---	---	9.56	9.23	8.35	7.38	7.57	10.19	10.70
MAX	---	---	13.55	---	---	10.97	11.21	10.91	7.96	8.55	13.74	13.42
MIN	---	---	8.93	---	---	8.60	8.34	7.34	6.91	6.74	8.01	8.62

0208281175 SWIFT CREEK AT NC 97 NEAR LEGGETT, NC—Continued



0208281175 SWIFT CREEK AT NC 97 NEAR LEGGETT, NC—Continued

PRECIPITATION RECORDS

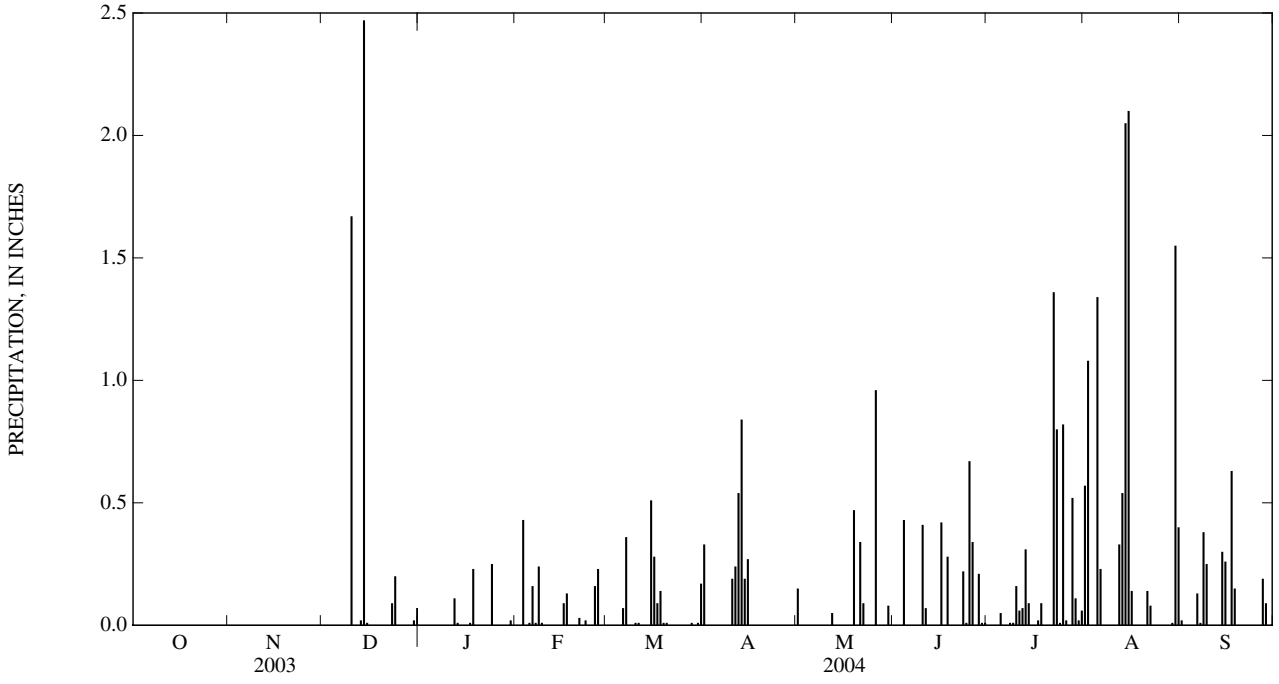
PERIOD OF RECORD.--November 2003 to September 2004.

GAGE.--Tipping-bucket raingage and data collection platform.

REMARKS.--Precipitation collected during freezing periods may not be accurately reflected in the daily record; consequently, winter record is poor.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	0.00	0.00	0.00	0.33	0.15	0.00	0.00	0.57	0.02
2	---	---	---	0.00	0.00	0.00	0.00	---	0.00	0.00	1.08	0.00
3	---	---	---	0.00	0.43	0.00	0.00	---	0.00	0.00	0.00	0.00
4	---	---	---	0.00	0.00	0.00	0.00	---	0.43	0.00	0.00	0.00
5	---	---	---	---	0.01	0.00	0.00	---	0.00	0.05	1.34	0.00
6	---	---	---	---	0.16	0.07	0.00	---	0.00	0.00	0.23	0.13
7	---	---	---	0.00	0.01	0.36	0.00	---	0.00	0.00	0.00	0.01
8	---	---	---	0.00	0.24	0.00	0.00	---	0.00	0.01	0.00	0.38
9	---	---	0.00	0.00	0.01	0.00	0.00	---	0.00	0.01	0.00	0.25
10	---	---	1.67	0.00	0.00	0.01	0.19	---	0.41	0.16	0.00	0.00
11	---	---	0.00	0.00	0.00	0.01	0.24	---	0.07	0.06	0.00	0.00
12	---	---	0.00	0.11	---	0.00	0.54	0.05	0.00	0.07	0.33	0.00
13	---	---	0.02	0.01	---	0.00	0.84	0.00	0.00	0.31	0.54	0.00
14	---	---	2.47	0.00	---	0.00	0.19	0.00	0.00	0.09	2.05	0.30
15	---	---	0.01	0.00	---	0.51	0.27	0.00	0.00	0.00	2.10	0.26
16	---	---	0.00	0.00	0.09	0.28	0.00	0.00	0.42	0.00	0.14	0.00
17	---	---	0.00	0.01	0.13	0.09	0.00	0.00	0.00	0.02	0.00	0.63
18	---	---	0.00	0.23	0.00	0.14	0.00	0.00	0.28	0.09	0.00	0.15
19	---	---	0.00	0.00	0.00	0.01	0.00	0.47	0.00	0.00	0.00	0.00
20	---	---	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	0.00	0.00	0.03	0.00	0.00	0.34	0.00	0.00	0.14	0.00
22	---	---	0.00	0.00	0.00	0.00	0.00	0.09	0.00	1.36	0.08	0.00
23	---	---	0.09	0.00	0.02	0.00	0.00	0.00	0.22	0.80	0.00	0.00
24	---	---	0.20	0.25	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00
25	---	---	0.00	---	0.00	0.00	0.00	0.00	0.67	0.82	0.00	0.00
26	---	0.00	0.00	---	0.16	0.00	---	0.96	0.34	0.02	0.00	0.00
27	---	0.00	0.00	---	0.23	0.00	---	0.00	0.00	0.00	0.00	0.19
28	---	---	0.00	---	0.00	0.01	0.00	0.00	0.21	0.52	0.00	0.09
29	---	0.00	0.00	---	0.00	0.00	0.00	0.00	0.01	0.11	0.01	0.00
30	---	---	0.02	0.02	---	0.01	0.00	0.08	0.01	0.02	1.55	0.00
31	---	---	0.00	0.00	---	0.17	---	0.00	---	0.06	0.40	---
TOTAL	---	---	---	---	---	1.68	---	---	3.08	4.59	10.56	2.41



02082950 LITTLE FISHING CREEK NEAR WHITE OAK, NC

LOCATION.--Lat 36°11'00", long 77°52'34", Halifax County, Hydrologic Unit 03020102, on right bank 8 ft downstream of bridge on Secondary Road 1338, 1.1 mi west of White Oak, 1.8 mi upstream from Powells Creek, 4.3 mi upstream from mouth, and 12 mi west of Enfield.

DRAINAGE AREA.--177 mi^2.

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

REVISED RECORDS.--WSP 1723: 1960(M). WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 115.44 ft above NAVD of 1988. Feb. 14, 1962, to Apr. 23, 1979, auxiliary nonrecording gage 3.6 mi downstream. Satellite telemetry at station.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge for period of record, from rating curve extended above 6,900 ft^3/s on basis of slope-conveyance study of peak flow. Maximum gage height for period of record, from flood marks. Minimum discharge for current water year also occurred June 24.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1959 reached a stage of 19.3 ft, from flood marks; discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	178	112	146	188	136	149	79	37	35	120	1,450
2	83	130	100	141	159	133	227	133	33	29	77	409
3	78	107	91	140	244	144	178	503	28	26	595	164
4	73	94	88	139	452	158	141	701	26	134	431	109
5	70	88	198	142	338	144	119	382	35	59	426	86
6	66	86	424	181	259	138	104	197	52	37	168	79
7	63	104	302	179	625	136	96	146	46	28	82	166
8	62	178	199	149	916	135	94	113	40	28	49	178
9	68	131	160	140	606	136	92	94	37	34	37	557
10	84	111	159	144	301	125	88	83	34	22	29	962
11	91	99	694	135	250	121	85	75	31	19	26	431
12	93	92	813	126	245	114	94	66	26	17	23	180
13	86	91	487	134	363	108	287	62	23	16	29	123
14	77	86	802	137	311	103	538	57	22	16	201	99
15	83	78	1,360	133	256	106	496	52	21	19	886	97
16	103	76	1,180	128	264	180	379	49	21	18	1,500	110
17	87	78	512	120	259	287	240	45	23	16	1,500	118
18	75	79	390	131	250	228	177	43	26	25	910	309
19	72	97	323	186	235	177	148	42	25	18	229	421
20	70	456	265	168	217	151	129	41	22	17	150	309
21	67	510	221	140	200	134	116	38	18	16	111	189
22	65	275	198	128	183	125	104	38	16	15	173	133
23	62	178	187	126	166	113	94	35	15	16	140	105
24	58	142	201	123	158	106	88	33	33	15	91	88
25	54	124	224	120	153	103	82	30	80	19	69	78
26	54	111	200	119	146	100	80	29	54	21	58	70
27	65	101	179	131	143	100	128	33	74	30	50	66
28	84	101	167	133	152	100	139	45	79	92	45	80
29	348	115	159	137	144	98	101	40	55	78	41	134
30	480	127	156	156	---	95	84	32	44	190	224	143
31	282	---	153	210	---	96	---	32	---	149	655	---
TOTAL	3,194	4,223	10,704	4,422	8,183	4,130	4,877	3,348	1,076	1,254	9,125	7,443
MEAN	103	141	345	143	282	133	163	108	35.9	40.5	294	248
MAX	480	510	1,360	210	916	287	538	701	80	190	1,500	1,450
MIN	54	76	88	119	143	95	80	29	15	15	23	66
CFSM	0.58	0.80	1.95	0.81	1.59	0.75	0.92	0.61	0.20	0.23	1.66	1.40
IN.	0.67	0.89	2.25	0.93	1.72	0.87	1.02	0.70	0.23	0.26	1.92	1.56

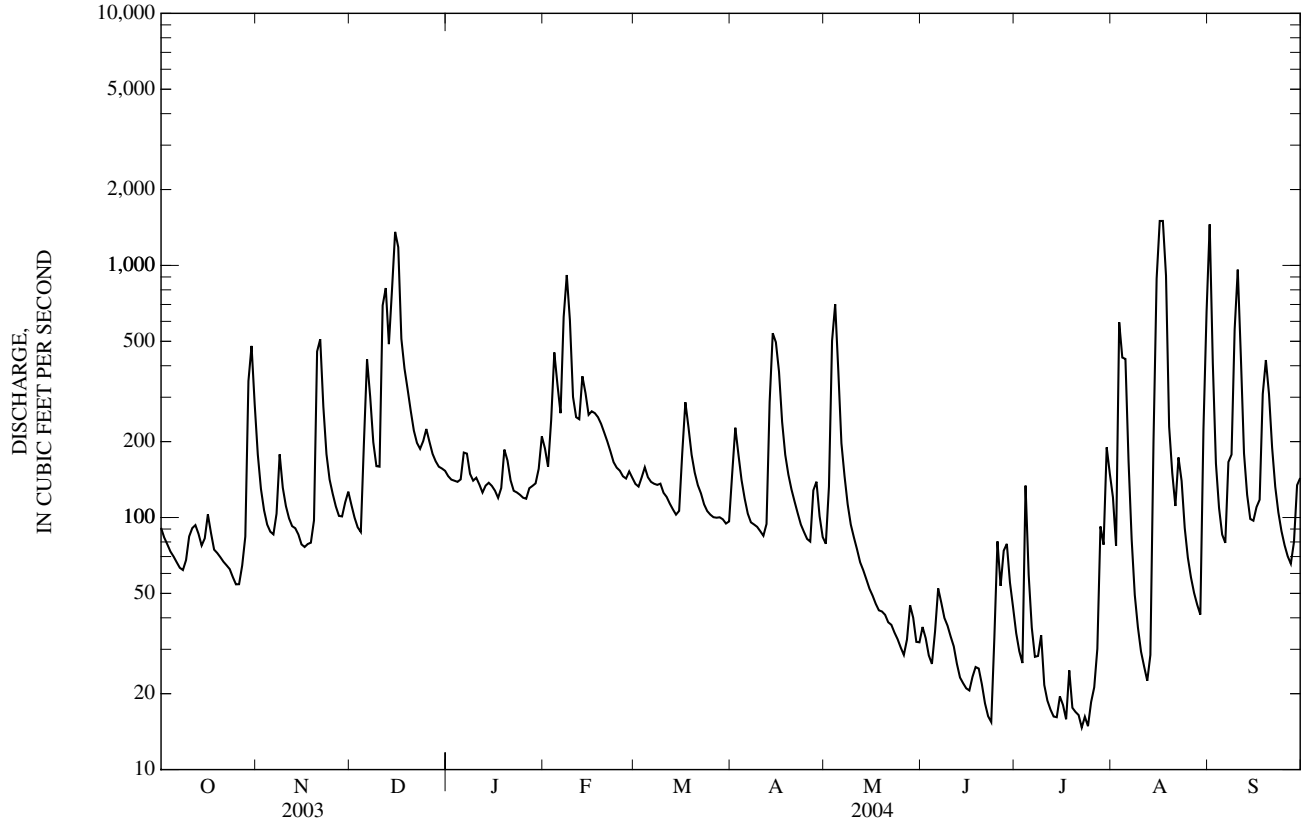
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

MEAN	102	119	159	250	324	335	234	138	99.7	87.4	84.9	112
MAX	982	860	482	570	742	873	720	550	300	602	330	1,947
(WY)	(1973)	(1986)	(1973)	(1962)	(1984)	(1998)	(1987)	(1984)	(1965)	(1975)	(1967)	(1999)
MIN	3.78	10.2	23.6	37.6	83.4	83.0	56.8	34.2	5.24	2.42	4.21	2.34
(WY)	(1971)	(1999)	(2002)	(1981)	(1991)	(1981)	(1967)	(2002)	(2002)	(2002)	(1993)	(1980)

02082950 LITTLE FISHING CREEK NEAR WHITE OAK, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	108,838		61,979			
ANNUAL MEAN	298		169		169	
HIGHEST ANNUAL MEAN					327	1973
LOWEST ANNUAL MEAN					47.2	1981
HIGHEST DAILY MEAN	3,640	Sep 20	1,500	Aug 16	20,000	Sep 17, 1999
LOWEST DAILY MEAN	38	Aug 31	15	Jun 23	0.51	Aug 15, 2002
ANNUAL SEVEN-DAY MINIMUM	46	Sep 11	17	Jul 19	0.55	Aug 9, 2002
MAXIMUM PEAK FLOW			1,760	Sep 1	31,000*	Sep 16, 1999
MAXIMUM PEAK STAGE			12.71	Sep 1	30.80*	Sep 16, 1999
INSTANTANEOUS LOW FLOW			14*	Jul 22	0.50	Aug 14, 2002
ANNUAL RUNOFF (CFSM)	1.68		0.957		0.958	
ANNUAL RUNOFF (INCHES)	22.87		13.03		13.01	
10 PERCENT EXCEEDS	682		368		357	
50 PERCENT EXCEEDS	160		112		80	
90 PERCENT EXCEEDS	63		29		15	

* See REMARKS.



02083000 FISHING CREEK NEAR ENFIELD, NC

LOCATION.--Lat 36°09'02", long 77°41'35", Edgecombe County, Hydrologic Unit 03020102, on right bank 15 ft downstream of bridge on U.S. Highway 301, 2,000 ft downstream of Seaboard Coast Line Railroad bridge, 2 mi southwest of Enfield, 4.8 mi downstream of Rocky Creek, and 40 mi upstream from mouth.

DRAINAGE AREA.--526 mi^2.

PERIOD OF RECORD.--October 1923 to current year. Figures of daily discharge below 250 ft^3/s, Oct 1, 1923, to July 3, 1924; below 350 ft^3/s, May 30, 1925, to May 31, 1926; below 150 ft^3/s, June 1 to Nov. 16, 1926; and below 100 ft^3/s, Nov. 17, 1926, to Sept. 30, 1928; published in WSP 622, 642, and 662 are unreliable and should not be used. Gage-height records collected at site 2,000 ft upstream at different datum July 1, 1910, to Apr. 30, 1914, and at present site and datum since May 1, 1914, are contained in reports of National Weather Service, NOAA, U.S. Department of Commerce.

REVISED RECORDS.--WSP 872: 1935(M). WSP 1333: 1928(M), 1932-33, 1935. WDR NC-81-1: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 73.23 ft above NAVD of 1988. Prior to Oct. 28, 1932, nonrecording gage and Oct. 29, 1932, to Sept. 30, 1992, at same site at datum 76.26 ft. National Weather Service telephone telemetry at station. Satellite telemetry at station.

REMARKS.--Records fair, except those for estimated daily discharges, which are poor. Slight diurnal fluctuation and some regulation at low flow caused by upstream mills.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Apr. 19, 1910, reached a stage of 20.1 ft, at datum 76.26 ft (from floodmarks of Seaboard Coast Line Railroad Co.) at site 2,000 ft upstream. Flood of July 24, 1919, reached a stage of 19.6 ft at datum 76.26 ft; discharge, 20,300 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e315	650	411	422	548	429	360	274	122	174	434	2,600
2	e292	466	379	409	490	410	467	312	129	154	337	3,260
3	e260	375	354	402	498	404	540	598	118	114	882	2,060
4	242	333	332	400	934	426	460	1,480	105	111	2,170	726
5	229	311	381	403	1,040	431	391	1,490	109	209	1,290	410
6	220	304	685	485	794	412	351	810	121	144	660	350
7	212	304	905	514	1,390	402	325	479	183	104	378	367
8	207	354	690	484	1,890	403	315	381	173	88	252	443
9	213	438	526	431	1,960	395	308	328	152	95	182	1,390
10	232	382	458	418	1,370	381	299	283	132	99	145	2,100
11	271	348	1,240	409	792	362	307	245	131	87	123	1,690
12	293	327	1,770	391	662	351	315	226	110	85	112	700
13	305	314	1,660	383	829	342	429	208	99	88	121	434
14	285	298	1,650	393	891	330	1,220	191	92	144	208	358
15	264	282	2,700	394	754	342	1,340	180	90	168	1,200	346
16	269	270	2,850	384	725	504	1,110	172	84	137	2,590	366
17	296	266	2,620	372	738	749	767	164	81	105	3,060	388
18	268	268	1,920	370	716	749	552	153	80	320	3,140	555
19	242	287	1,190	413	674	598	451	148	82	346	2,560	983
20	232	606	822	473	620	493	402	151	86	202	931	1,040
21	221	1,120	669	433	572	434	370	144	86	126	433	731
22	211	1,000	579	392	527	395	346	136	82	92	421	494
23	202	641	530	372	489	370	323	132	75	80	581	382
24	195	480	538	365	457	350	301	126	66	78	467	327
25	191	417	589	361	440	338	283	122	63	76	331	278
26	196	382	588	368	427	332	272	112	88	76	262	244
27	191	357	528	373	426	328	303	130	118	79	219	225
28	207	346	483	395	448	327	377	137	160	102	191	231
29	487	370	456	397	452	323	365	151	169	607	175	318
30	1,140	391	444	421	---	317	310	140	137	497	330	395
31	1,000	---	433	504	---	313	---	126	---	519	1,690	---
TOTAL	9,388	12,687	29,380	12,731	22,553	12,740	13,959	9,729	3,323	5,306	25,875	24,191
MEAN	303	423	948	411	778	411	465	314	111	171	835	806
MAX	1,140	1,120	2,850	514	1,960	749	1,340	1,490	183	607	3,140	3,260
MIN	191	266	332	361	426	313	272	112	63	76	112	225
CFSM	0.58	0.80	1.80	0.78	1.48	0.78	0.88	0.60	0.21	0.33	1.59	1.53
IN.	0.66	0.90	2.08	0.90	1.60	0.90	0.99	0.69	0.24	0.38	1.83	1.71

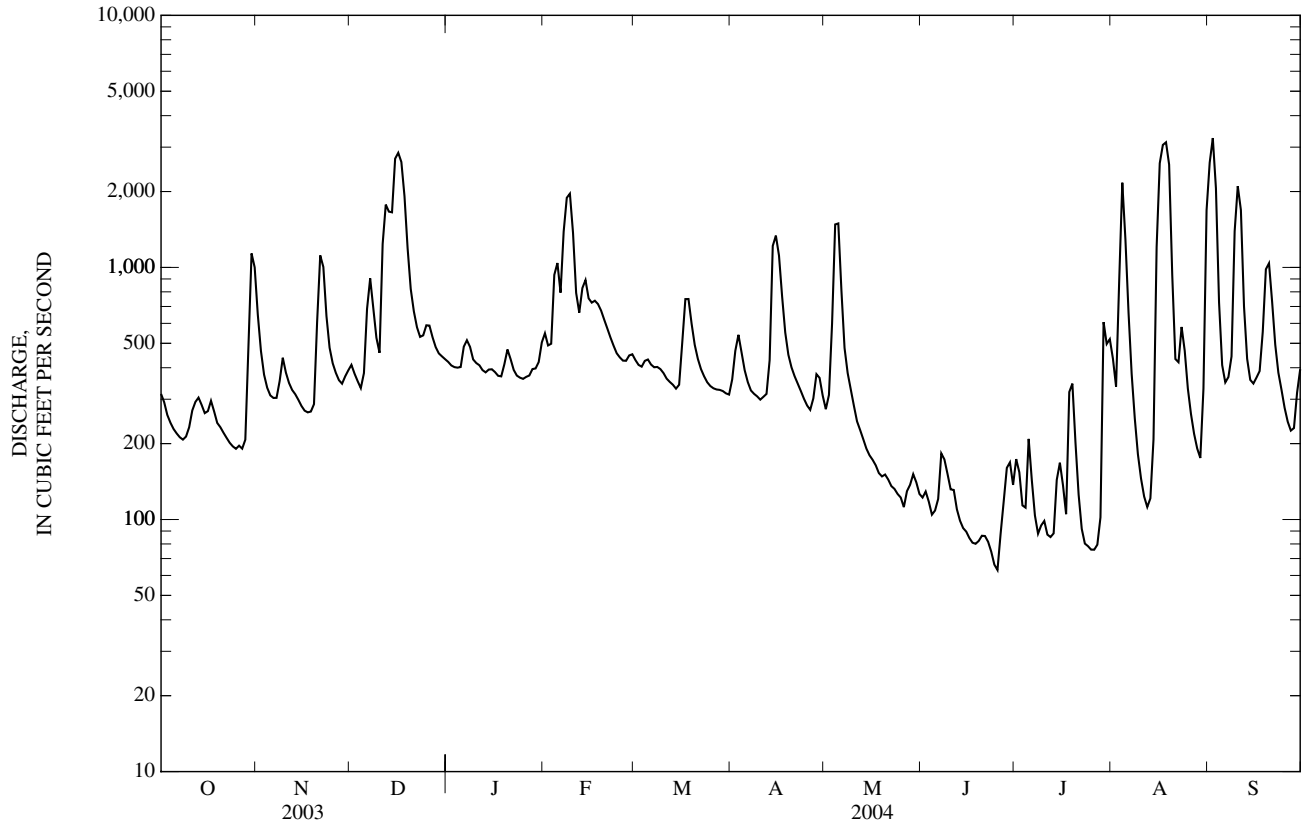
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2004, BY WATER YEAR (WY)

MEAN	269	331	484	709	861	893	696	432	316	298	328	339
MAX	2,035	1,948	1,391	2,303	2,145	2,158	2,049	2,174	1,255	1,483	1,828	5,122
(WY)	(1930)	(1986)	(1935)	(1936)	(1960)	(1989)	(1987)	(1958)	(1938)	(1975)	(1940)	(1999)
MIN	14.0	26.0	46.0	60.4	198	248	170	103	27.0	38.0	26.8	14.2
(WY)	(1934)	(1934)	(1934)	(1934)	(1934)	(1981)	(1967)	(2002)	(2002)	(2002)	(1993)	(1980)

02083000 FISHING CREEK NEAR ENFIELD, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1927 - 2004	
ANNUAL TOTAL	290,894		181,862			
ANNUAL MEAN	797		497		495	
HIGHEST ANNUAL MEAN					871	1984
LOWEST ANNUAL MEAN					148	1981
HIGHEST DAILY MEAN	4,880	Sep 21	3,260	Sep 2	29,200	Sep 18, 1999
LOWEST DAILY MEAN	90	Aug 31	63	Jun 25	6.9	Oct 5, 1968
ANNUAL SEVEN-DAY MINIMUM	101	Sep 11	77	Jun 19	8.1	Sep 30, 1968
MAXIMUM PEAK FLOW			3,400	Sep 2	30,100	Sep 18, 1999
MAXIMUM PEAK STAGE			15.71	Sep 2	21.65	Sep 18, 1999
INSTANTANEOUS LOW FLOW			60	Jun 25		
ANNUAL RUNOFF (CFSM)	1.52		0.945		0.941	
ANNUAL RUNOFF (INCHES)	20.57		12.86		12.78	
10 PERCENT EXCEEDS	2,100		1,010		1,090	
50 PERCENT EXCEEDS	479		366		273	
90 PERCENT EXCEEDS	188		117		68	

e Estimated.



0208331077 FISHING CREEK AT NC 97 NEAR LEGGETT, NC

LOCATION.--Lat 36°00'30", long 77°31'33", Edgecombe County, Hydrologic Unit 03020102, at bridge on NC 97, approximately 2 mi northeast of Leggett.

DRAINAGE AREA.--758 mi^2.

PERIOD OF RECORD.--January 2003 to current year.

GAGE.--Water-stage recorder. Datum of gage is 30.00 ft above NAVD of 1988. Satellite telemetry at station.

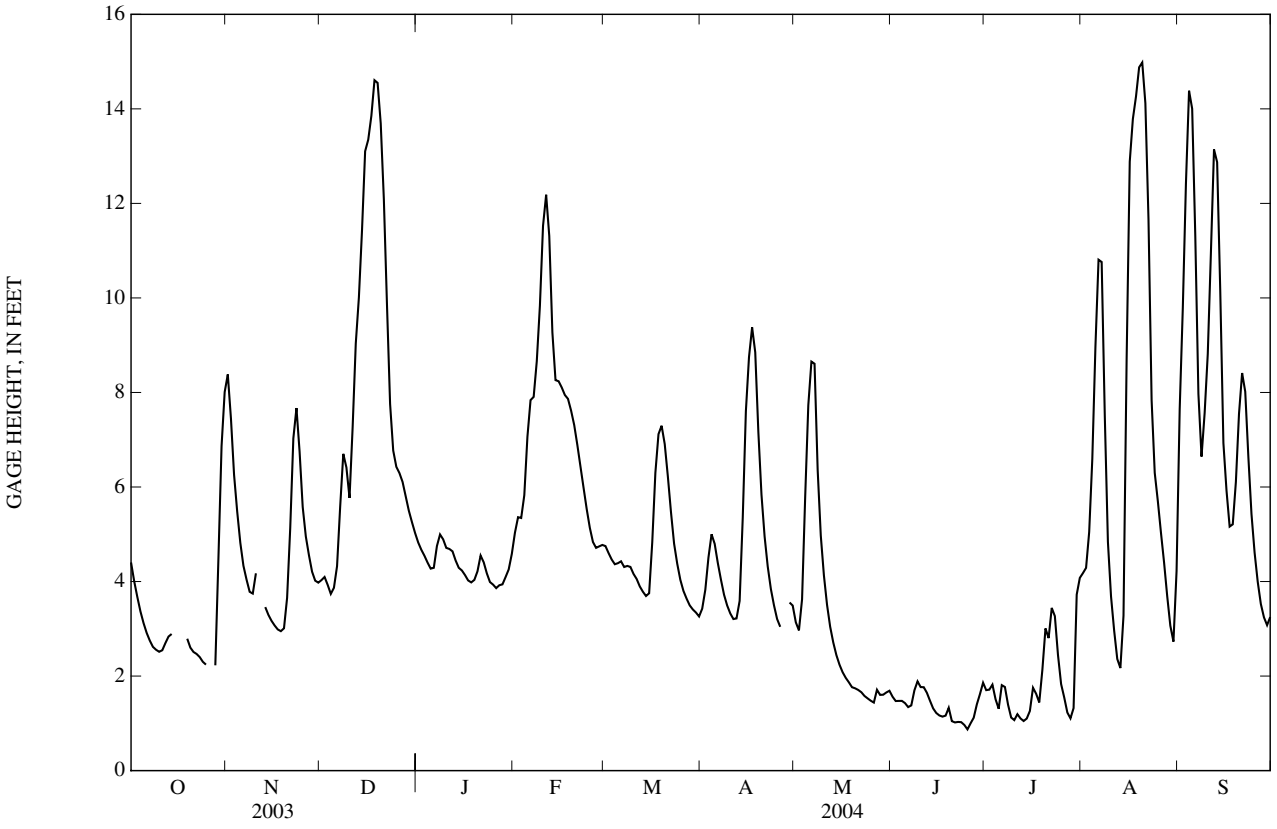
EXTREMES FOR PERIOD OF RECORD.--Maximum, 18.98 ft, Sept. 23; minimum, not determined.

EXTREMES FOR CURRENT YEAR.--Maximum, 15.15 ft, Aug. 20; minimum, 0.85, June 25.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.40	8.38	4.03	4.83	5.03	4.75	3.43	3.14	1.56	1.70	4.18	7.65
2	4.01	7.45	4.10	4.67	5.36	4.60	3.83	2.97	1.47	1.71	4.29	9.79
3	3.68	6.26	3.93	4.55	5.34	4.47	4.50	3.62	1.47	1.82	5.05	12.42
4	3.37	5.48	3.74	4.40	5.83	4.37	5.00	5.79	1.47	1.51	6.59	14.38
5	3.12	4.82	3.87	4.27	7.06	4.39	4.80	7.73	1.43	1.31	8.97	14.00
6	2.91	4.33	4.33	4.29	7.84	4.43	4.39	8.65	1.34	1.81	10.81	11.31
7	2.75	4.04	5.58	4.75	7.91	4.31	4.04	8.61	1.38	1.77	10.76	7.97
8	2.62	3.78	6.70	5.00	8.66	4.33	3.72	6.36	1.70	1.40	7.51	6.64
9	2.56	3.74	6.41	4.89	9.84	4.31	3.49	4.97	1.89	1.12	4.84	7.57
10	2.51	4.17	5.77	4.71	11.52	4.16	3.32	4.13	1.77	1.07	3.69	8.82
11	2.55	---	7.27	4.69	12.18	4.05	3.21	3.51	1.76	1.19	2.96	10.95
12	2.70	---	9.03	4.64	11.31	3.90	3.22	3.05	1.65	1.10	2.36	13.14
13	2.84	3.46	10.01	4.44	9.27	3.78	3.59	2.71	1.48	1.05	2.17	12.87
14	2.89	3.30	11.43	4.29	8.26	3.69	5.36	2.44	1.32	1.10	3.28	10.15
15	---	3.17	13.10	4.23	8.24	3.75	7.60	2.24	1.22	1.26	8.70	6.93
16	---	3.07	13.35	4.14	8.10	4.83	8.75	2.08	1.17	1.75	12.88	5.92
17	---	2.99	13.85	4.02	7.95	6.30	9.38	1.96	1.14	1.63	13.79	5.16
18	---	2.95	14.61	3.98	7.86	7.12	8.85	1.87	1.16	1.44	14.26	5.21
19	2.79	3.01	14.55	4.03	7.61	7.30	7.16	1.76	1.33	2.13	14.88	6.11
20	2.60	3.66	13.69	4.22	7.31	6.91	5.84	1.74	1.05	3.01	14.98	7.55
21	2.51	5.13	12.09	4.55	6.89	6.22	4.95	1.71	1.02	2.80	14.12	8.41
22	2.47	7.03	9.86	4.41	6.43	5.47	4.32	1.66	1.03	3.44	11.66	8.02
23	2.40	7.67	7.76	4.17	5.98	4.80	3.84	1.58	1.02	3.27	7.84	6.64
24	2.30	6.75	6.77	3.99	5.53	4.38	3.50	1.53	0.97	2.45	6.30	5.43
25	2.24	5.58	6.43	3.93	5.14	4.04	3.21	1.48	0.87	1.83	5.70	4.61
26	---	4.95	6.29	3.86	4.84	3.80	3.04	1.44	1.00	1.55	5.03	4.00
27	---	4.56	6.11	3.92	4.71	3.64	---	1.71	1.12	1.23	4.40	3.53
28	2.23	4.21	5.80	3.94	4.74	3.50	---	1.60	1.40	1.10	3.69	3.24
29	4.50	4.02	5.50	4.09	4.77	3.41	3.56	1.61	1.62	1.32	3.07	3.08
30	6.86	3.98	5.26	4.26	---	3.34	3.49	1.65	1.86	3.72	2.73	3.25
31	8.01	---	5.03	4.59	---	3.26	---	1.69	---	4.08	4.22	---
MEAN	---	---	7.94	4.35	7.29	4.57	---	3.13	1.36	1.86	7.28	7.83
MAX	---	---	14.61	5.00	12.18	7.30	---	8.65	1.89	4.08	14.98	14.38
MIN	---	---	3.74	3.86	4.71	3.26	---	1.44	0.87	1.05	2.17	3.08

0208331077 FISHING CREEK AT NC 97 NEAR LEGGETT, NC—Continued



02083500 TAR RIVER AT TARBORO, NC

LOCATION.--Lat 35°53'40", long 77°31'59", Edgecombe County, Hydrologic Unit 03020103, on right bank 50 ft downstream of bridge on U.S. Highway 64 in Tarboro, 6.5 mi downstream of Fishing Creek, and 49.2 mi upstream from Pamlico River at Washington.

DRAINAGE AREA.--2,183 mi^2.

PERIOD OF RECORD.--July 1896 to December 1900, October 1931 to current year. Gage-height records at various datums collected at same site since 1905 are contained in reports of National Weather Service, NOAA, U.S. Department of Commerce.

REVISED RECORDS.--WSP 1273: 1899-1900, 1933. WSP 1503: 1932. WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 9.32 ft above NAVD of 1988. July 1896 to December 1900, nonrecording gage at Seaboard Coast Line Railroad bridge 600 ft downstream at different datum; Oct. 1 to Dec. 8, 1931, nonrecording gage at site 100 ft upstream at present datum. National Weather Service telephone telemetry at station. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some diurnal fluctuation at low flow caused by mills upstream from station. Maximum gage height for period of record, from floodmarks. Town of Tarboro diverted 4.0 ft^3/s for municipal water supply. Minimum discharge for period of record also occurred Oct. 22, 1933, and Oct. 6, 1968. Minimum discharge for current water year also occurred on June 23.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 27, 1919, reached a stage of 34.0 ft, present datum, from flood marks; discharge, 52,800 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,650	4,660	1,430	1,990	1,980	2,580	1,310	e1,570	503	615	2,640	4,890
2	1,500	4,200	1,450	1,890	2,100	2,570	1,570	e1,740	479	589	3,180	6,070
3	1,330	3,230	1,420	1,800	2,210	2,430	1,700	e2,130	454	656	2,490	7,290
4	1,170	2,520	1,370	1,730	2,480	2,240	2,310	e3,460	434	832	2,370	8,180
5	992	2,050	1,430	1,700	3,010	2,100	2,340	4,270	492	611	3,640	7,980
6	887	1,790	1,650	1,690	3,970	2,040	1,950	4,520	494	516	4,630	6,260
7	816	1,610	1,970	1,720	4,300	1,960	1,680	4,040	507	538	4,550	4,970
8	762	1,400	2,600	1,850	4,520	1,930	1,480	3,000	574	511	3,230	3,440
9	739	1,330	2,600	1,890	5,170	2,010	1,110	2,240	572	457	2,020	3,510
10	e804	1,340	2,300	1,850	5,870	1,920	1,060	1,710	561	396	1,470	4,910
11	e770	1,390	3,390	1,810	5,930	1,780	1,130	1,320	736	373	1,060	5,680
12	e853	1,330	4,790	1,760	5,500	1,670	1,260	1,090	710	407	767	5,440
13	e858	1,180	5,650	1,700	5,000	1,540	1,520	897	576	523	691	5,550
14	866	1,090	7,020	1,640	4,420	1,430	2,680	790	512	493	1,450	4,760
15	897	1,050	8,000	1,600	4,180	1,400	3,940	691	471	492	4,520	3,320
16	965	1,030	9,050	1,580	4,190	1,760	e3,520	621	442	519	7,000	2,540
17	907	959	9,610	1,530	4,250	3,030	e3,250	564	438	522	9,400	2,120
18	875	936	10,000	1,500	4,230	3,720	e3,000	553	420	464	10,300	2,090
19	874	941	10,200	1,530	4,100	3,950	e2,620	529	430	431	11,100	2,510
20	869	1,290	9,400	1,540	3,800	3,760	e2,340	506	438	570	10,800	3,110
21	844	1,970	7,750	1,620	3,460	3,290	e2,020	499	369	737	8,610	3,740
22	745	3,090	6,080	1,650	3,120	2,740	1,720	519	365	738	6,800	3,480
23	712	3,470	4,390	1,570	2,800	2,290	1,490	537	382	788	4,680	2,820
24	680	3,020	3,520	1,490	2,520	e1,990	1,280	698	405	702	2,920	2,250
25	634	2,450	3,170	1,430	2,280	e1,820	1,110	676	434	575	2,340	1,850
26	587	2,040	3,000	1,450	2,080	1,590	1,050	536	582	529	1,880	1,560
27	581	1,780	2,830	1,420	2,040	1,470	1,100	524	716	456	1,530	1,330
28	610	1,600	2,630	1,500	2,270	1,390	e1,220	498	620	442	1,310	1,210
29	1,950	1,500	2,430	1,580	2,460	1,340	e1,340	481	581	478	1,020	1,140
30	4,060	1,420	2,260	1,690	---	1,260	e1,460	472	617	792	903	1,200
31	4,390	---	2,120	1,840	---	1,210	---	470	---	1,720	2,260	---
TOTAL	35,177	57,666	135,510	51,540	104,240	66,210	55,560	42,151	15,314	18,472	121,561	115,200
MEAN	1,135	1,922	4,371	1,663	3,594	2,136	1,852	1,360	510	596	3,921	3,840
MAX	4,390	4,660	10,200	1,990	5,930	3,950	3,940	4,520	736	1,720	11,100	8,180
MIN	581	936	1,370	1,420	1,980	1,210	1,050	470	365	373	691	1,140
CFSM	0.52	0.88	2.00	0.76	1.65	0.98	0.85	0.62	0.23	0.27	1.80	1.76
IN.	0.60	0.98	2.31	0.88	1.78	1.13	0.95	0.72	0.26	0.31	2.07	1.96

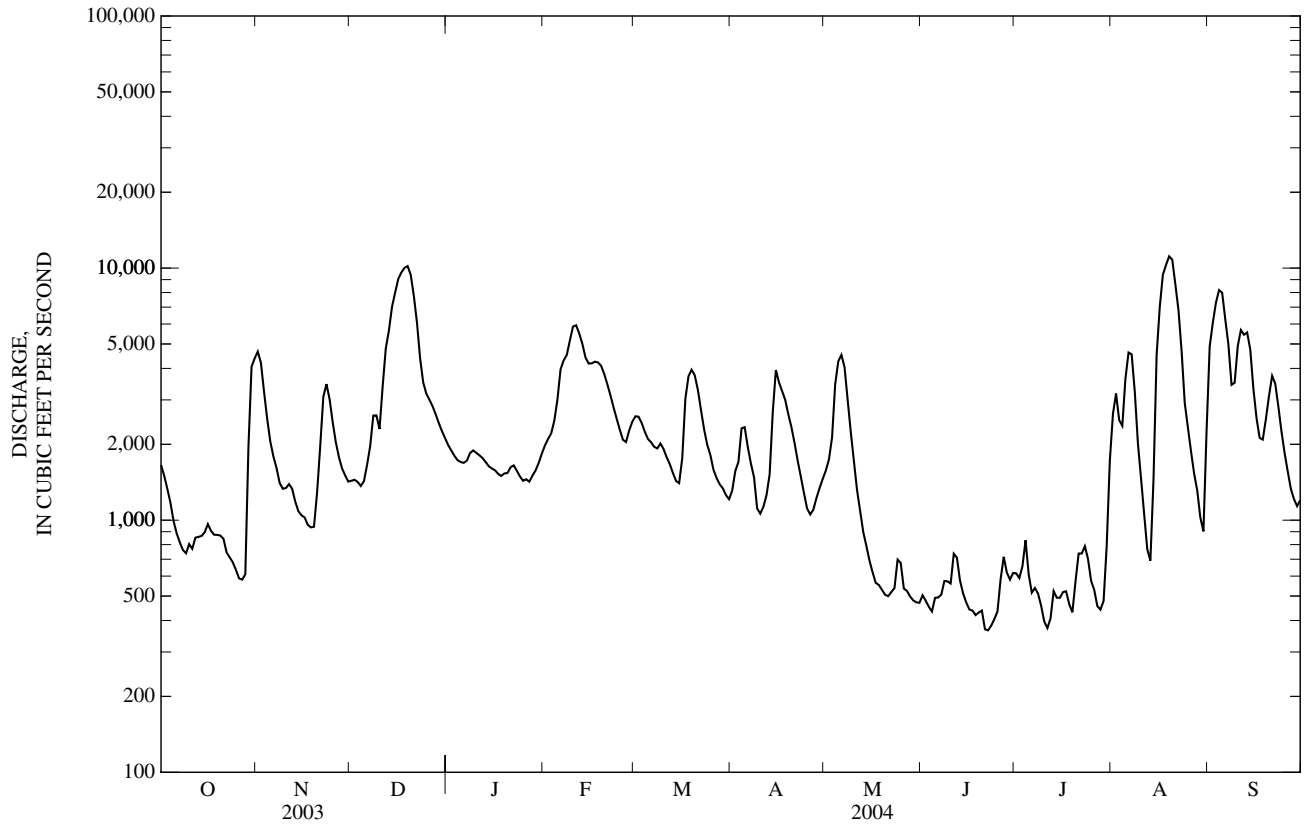
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 2004,@ BY WATER YEAR (WY)

MEAN	1,147	1,289	2,039	3,278	4,265	4,404	3,240	1,838	1,350	1,283	1,460	1,643
MAX	8,896	5,049	6,195	10,020	12,920	11,050	8,553	8,411	4,873	6,291	8,260	26,760
(WY)	(2000)	(1948)	(1949)	(1936)	(1899)	(1989)	(1987)	(1958)	(1979)	(1975)	(1940)	(1999)
MIN	56.7	115	191	253	497	1,116	688	344	146	165	180	63.8
(WY)	(1934)	(1934)	(1934)	(1934)	(1934)	(1981)	(1995)	(2002)	(2002)	(2002)	(1993)	(1968)

02083500 TAR RIVER AT TARBORO, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1896 - 2004[@]	
ANNUAL TOTAL	1,414,731		818,601			
ANNUAL MEAN	3,876		2,237		2,269	
HIGHEST ANNUAL MEAN					4,199	2003
LOWEST ANNUAL MEAN					594	1981
HIGHEST DAILY MEAN	20,800	Apr 15	11,100	Aug 19	70,500	Sep 19, 1999
LOWEST DAILY MEAN	520	Sep 16	365	Jun 22	36	Oct 17, 1933
ANNUAL SEVEN-DAY MINIMUM	641	Sep 10	401	Jun 18	40	Sep 26, 1932
MAXIMUM PEAK FLOW			11,400	Aug 19	70600*	Sep 19, 1999
MAXIMUM PEAK STAGE			20.28	Aug 19	41.51*	Sep 19, 1999
INSTANTANEOUS LOW FLOW			348*	Jun 21	36	Oct 17, 1933
ANNUAL RUNOFF (CFSM)	1.78		1.02		1.04	
ANNUAL RUNOFF (INCHES)	24.11		13.95		14.12	
10 PERCENT EXCEEDS	9,120		4,670		5,670	
50 PERCENT EXCEEDS	2,520		1,620		1,240	
90 PERCENT EXCEEDS	849		512		285	

[@] See PERIOD OF RECORD.
* See REMARKS.
e Estimated.



02083640 TOWN CREEK AT US 258 NEAR PINETOPS, NC

LOCATION.--Lat 35°47'53", long 77°35'29", Edgecombe County, Hydrologic Unit 03020103, at bridge on US Highway 258, 0.2 mi downstream from Bynums Mill Creek and 2.8 mi east of Pinetops.

DRAINAGE AREA.--190 mi^2.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--July 2003 to current year.

GAGE.--Water-stage recorder. Datum of gage is 20.00 ft, above North American Vertical Datum of 1988. Satellite telemetry at station.

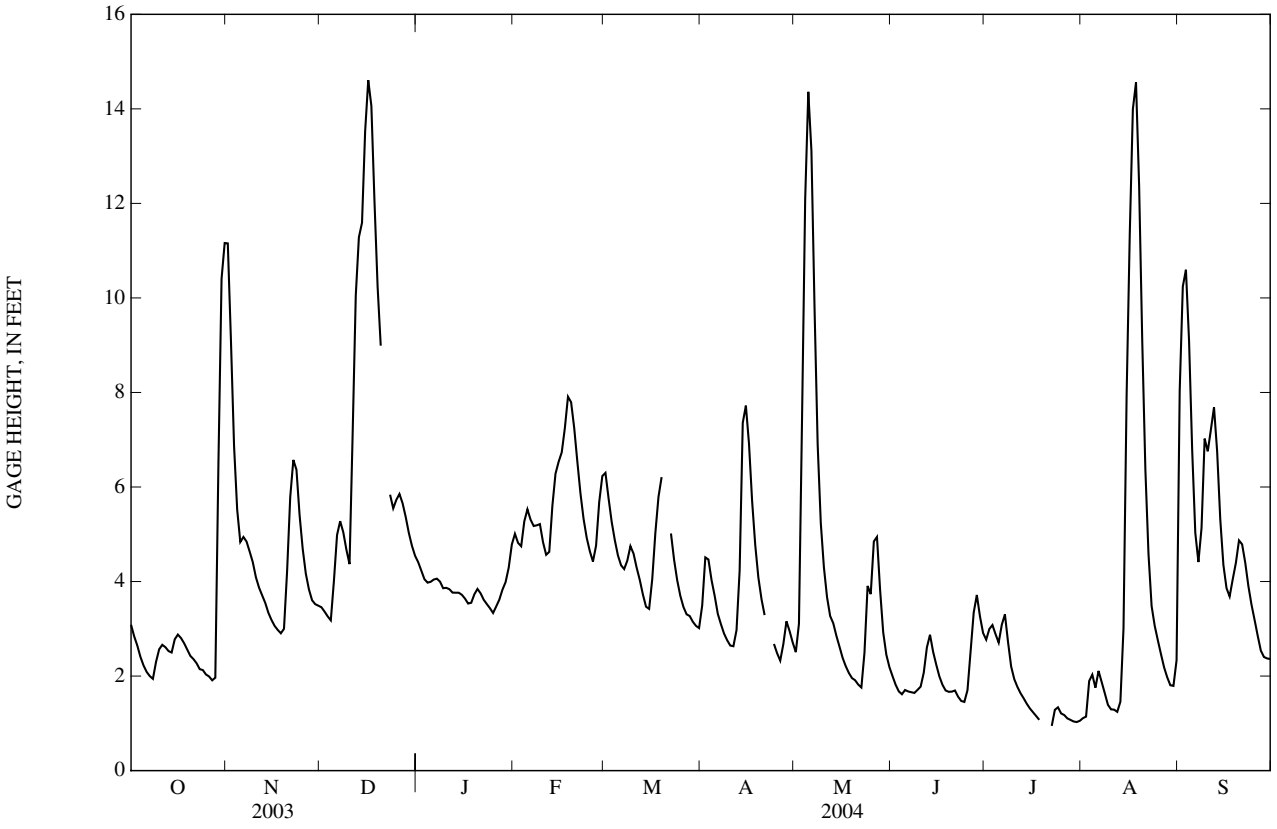
EXTEMES FOR PERIOD OF RECORD.--Maximum, 15.92 ft, Sept. 20, 2003; minimum, not determined.

EXTREMES FOR CURRENT YEAR.--Maximum, 14.88 ft, Aug. 18; minimum, not determined.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.09	11.15	3.46	4.41	5.01	6.30	3.49	2.51	2.00	2.77	1.11	8.03
2	2.84	9.10	3.36	4.23	4.82	5.76	4.51	3.11	1.81	3.00	1.14	10.24
3	2.65	6.87	3.26	4.05	4.75	5.26	4.47	7.48	1.68	3.08	1.90	10.60
4	2.40	5.52	3.18	3.98	5.27	4.88	4.03	12.09	1.62	2.89	2.03	9.09
5	2.22	4.84	4.02	3.99	5.53	4.55	3.70	14.36	1.71	2.71	1.75	6.79
6	2.09	4.94	4.99	4.04	5.31	4.34	3.32	13.11	1.67	3.09	2.11	5.03
7	2.00	4.85	5.28	4.06	5.18	4.26	3.10	9.78	1.66	3.30	1.87	4.41
8	1.94	4.63	5.04	4.00	5.19	4.44	2.90	6.90	1.64	2.72	1.64	5.13
9	2.30	4.41	4.67	3.86	5.21	4.75	2.76	5.24	1.71	2.20	1.39	7.02
10	2.57	4.09	4.37	3.87	4.83	4.59	2.65	4.30	1.78	1.93	1.30	6.76
11	2.66	3.87	7.13	3.84	4.57	4.29	2.63	3.67	2.07	1.77	1.29	7.21
12	2.61	3.71	10.05	3.77	4.63	4.03	2.97	3.27	2.61	1.64	1.24	7.69
13	2.53	3.55	11.28	3.76	5.60	3.73	4.23	3.12	2.87	1.53	1.46	6.76
14	2.50	3.34	11.59	3.76	6.28	3.47	7.36	2.85	2.51	1.41	3.01	5.32
15	2.78	3.19	13.52	3.72	6.53	3.42	7.72	2.62	2.24	1.32	7.95	4.35
16	2.88	3.06	14.61	3.64	6.73	4.05	6.91	2.39	1.99	1.24	11.33	3.86
17	2.80	2.98	14.06	3.53	7.25	5.03	5.70	2.21	1.82	1.16	13.99	3.68
18	2.69	2.90	12.04	3.55	7.91	5.79	4.77	2.07	1.70	1.07	14.56	4.05
19	2.56	3.00	10.24	3.73	7.79	6.21	4.09	1.96	1.67	---	12.37	4.39
20	2.43	4.22	8.99	3.84	7.25	---	3.63	1.91	1.67	---	9.08	4.87
21	2.36	5.79	---	3.75	6.54	---	3.29	1.82	1.70	---	6.37	4.79
22	2.27	6.57	---	3.61	5.86	5.02	---	1.76	1.56	0.95	4.58	4.40
23	2.15	6.37	5.84	3.52	5.32	4.46	---	2.49	1.47	1.29	3.48	3.91
24	2.13	5.41	5.55	3.44	4.93	4.03	2.68	3.91	1.45	1.34	3.06	3.51
25	2.03	4.69	5.73	3.33	4.64	3.70	2.48	3.73	1.70	1.21	2.76	3.19
26	1.99	4.17	5.85	3.47	4.42	3.46	2.33	4.85	2.52	1.18	2.46	2.85
27	1.91	3.83	5.66	3.62	4.76	3.31	2.68	4.94	3.35	1.10	2.18	2.54
28	1.97	3.60	5.37	3.83	5.68	3.27	3.16	3.82	3.72	1.07	1.97	2.40
29	6.51	3.52	5.03	3.99	6.23	3.15	2.95	2.92	3.26	1.04	1.81	2.37
30	10.40	3.49	4.76	4.29	---	3.06	2.71	2.45	2.91	1.03	1.79	2.36
31	11.16	---	4.54	4.78	---	3.01	---	2.19	---	1.05	2.34	---
MEAN	3.08	4.72	---	3.85	5.66	---	---	4.51	2.07	---	4.04	5.25
MAX	11.16	11.15	---	4.78	7.91	---	---	14.36	3.72	---	14.56	10.60
MIN	1.91	2.90	---	3.33	4.42	---	---	1.76	1.45	---	1.11	2.36

02083640 TOWN CREEK AT US 258 NEAR PINETOPS, NC—Continued



02083640 TOWN CREEK AT US 258 NEAR PINETOPS, NC—Continued

PRECIPITATION RECORDS

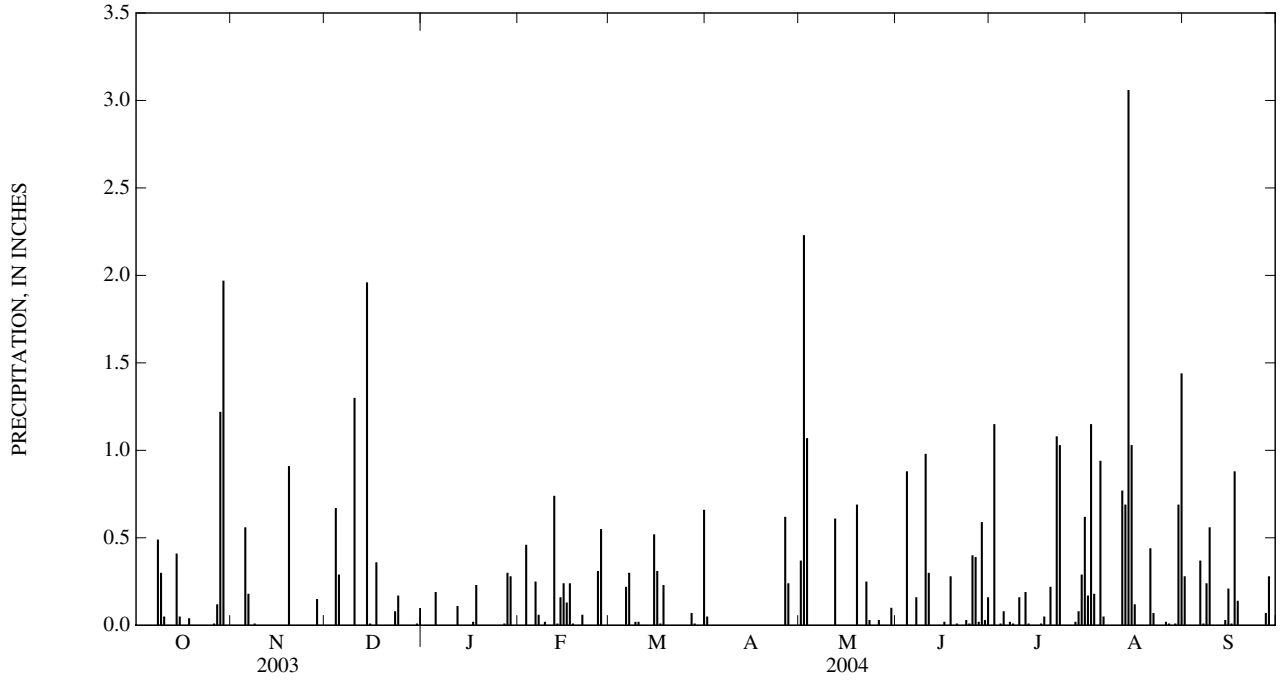
PERIOD OF RECORD.--July 2003 to current year.

GAGE.--Tipping-bucket raingage and data collection platform.

REMARKS.--Precipitation collected during freezing periods may not be accurately reflected in the daily record; consequently, winter record is poor.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.37	0.00	0.00	0.17	0.28
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.23	0.00	1.15	1.15	0.00
3	---	0.00	0.00	0.00	0.46	0.00	0.00	1.07	0.00	0.00	0.18	0.00
4	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.88	0.01	0.00	0.00
5	0.00	0.56	0.29	0.19	0.00	0.00	0.00	0.00	0.00	0.08	0.94	0.00
6	0.00	0.18	0.00	0.00	0.25	0.22	0.00	0.00	0.00	0.00	0.05	0.37
7	0.00	0.00	0.00	0.00	0.06	0.30	0.00	0.00	0.16	0.02	0.00	0.01
8	0.49	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.24
9	0.30	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.56
10	0.05	0.00	1.30	0.00	0.00	0.02	---	0.00	0.98	0.16	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	---	0.00	0.30	0.00	0.00	0.00
12	0.00	0.00	0.00	0.11	0.74	0.00	---	0.61	0.00	0.19	0.77	0.00
13	0.00	0.00	0.00	0.00	0.01	0.00	---	0.00	0.00	0.01	0.69	0.00
14	0.41	0.00	1.96	0.00	0.16	0.00	---	0.00	0.00	0.00	3.06	0.03
15	0.05	0.00	0.01	0.00	0.24	0.52	---	0.00	0.00	0.00	1.03	0.21
16	0.00	0.00	0.00	0.00	0.13	0.31	---	0.00	0.02	0.00	0.12	0.01
17	0.00	0.00	0.36	0.02	0.24	0.01	---	0.00	0.00	0.01	0.00	0.88
18	0.04	0.00	0.00	0.23	0.01	0.23	---	0.00	0.28	0.05	0.00	0.14
19	0.00	0.91	0.00	0.00	0.00	0.00	---	0.69	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	---	---	0.00	0.01	0.22	0.00	0.00
21	0.00	0.00	---	0.00	0.06	---	---	0.00	0.00	0.00	0.44	0.00
22	0.00	0.00	---	0.00	0.00	0.00	---	0.25	0.00	1.08	0.07	0.00
23	0.00	0.00	0.08	0.00	0.00	0.00	---	0.03	0.03	1.03	0.00	0.00
24	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00
26	0.01	0.00	0.00	0.00	0.31	0.00	0.62	0.03	0.39	0.00	0.02	0.00
27	0.12	0.00	0.00	0.01	0.55	0.07	0.24	0.00	0.02	0.00	0.01	0.07
28	1.22	0.15	0.00	0.30	0.00	0.01	0.00	0.00	0.59	0.02	0.00	0.28
29	1.97	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.03	0.08	0.01	0.00
30	0.00	0.00	0.01	0.00	---	0.00	0.00	0.10	0.16	0.29	0.69	0.00
31	0.00	---	0.00	0.00	---	0.66	---	0.00	---	0.62	1.44	---
TOTAL	---	1.81	---	1.14	3.24	---	---	5.38	4.26	5.03	10.84	3.08



02083893 TAR RIVER AT US 264 BYPASS NEAR ROCK SPRINGS, NC

LOCATION.--Lat 35°38'43", long 77°25'22", Pitt County, Hydrologic Unit 03020103, at bridge on US 264 Bypass and 1.7 mi northeast of Rock Spring.

DRAINAGE AREA.--2,621 mi^2.

PERIOD OF RECORD.--June 2003 to current year.

GAGE.--Water stage recorder. Datum of gage is at NAVD of 1988 (levels by North Carolina Geodetic Survey). Satellite telemetry at station.

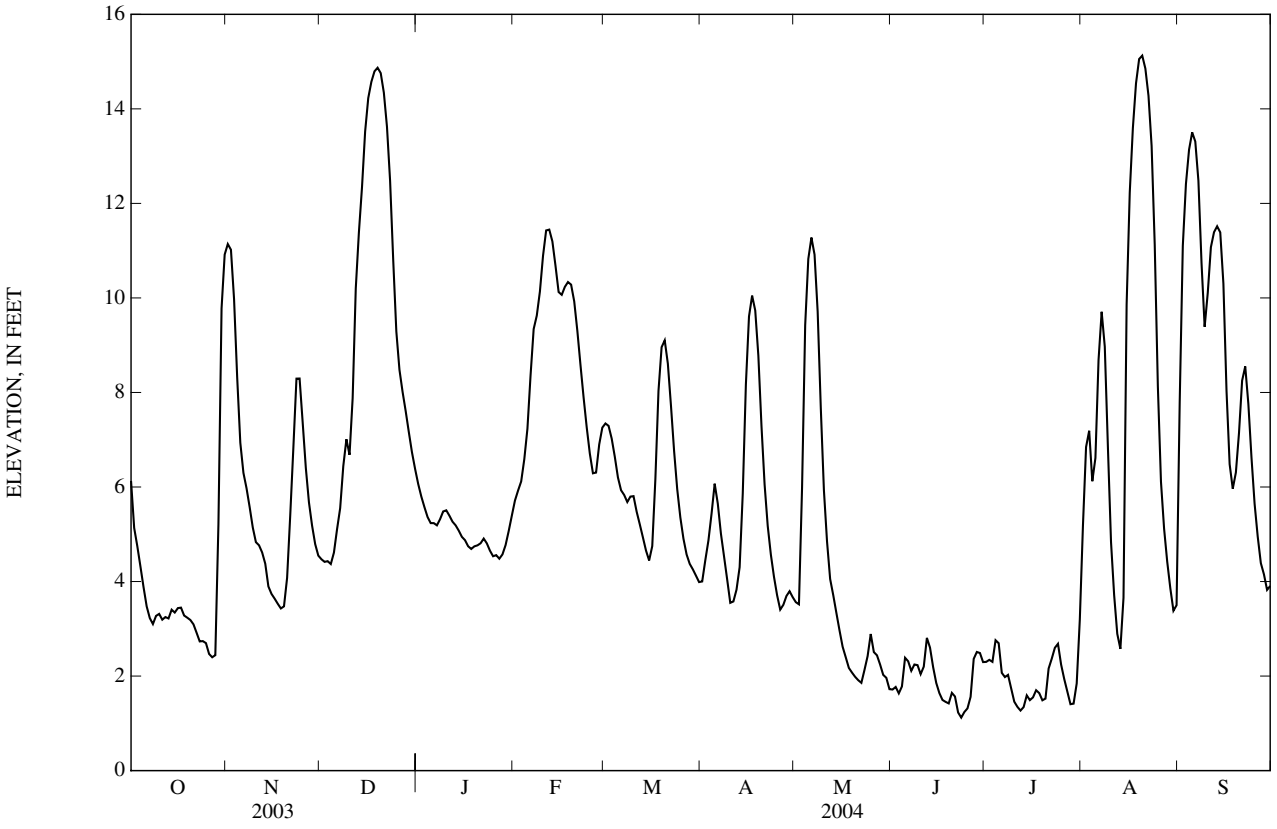
EXTREMES FOR PERIOD OF RECORD.--Maximum recorded elevation, 15.16 ft, Aug. 20, 2004; minimum recorded elevation, 1.08 ft, June 23, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 15.16 ft, Aug. 20; minimum recorded elevation, 1.08 ft, June 23.

ELEVATION, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.13	11.14	4.47	6.06	5.71	7.34	4.00	3.56	1.71	2.30	5.18	7.78
2	5.13	11.02	4.42	5.80	5.92	7.29	4.45	3.52	1.77	2.34	6.85	11.10
3	4.75	9.97	4.43	5.57	6.12	7.02	4.87	5.99	1.63	2.30	7.19	12.41
4	4.32	8.32	4.37	5.37	6.59	6.64	5.44	9.42	1.78	2.76	6.12	13.14
5	3.88	6.94	4.61	5.24	7.23	6.20	6.07	10.83	2.39	2.69	6.61	13.50
6	3.47	6.30	5.11	5.24	8.36	5.93	5.65	11.28	2.31	2.07	8.69	13.31
7	3.23	5.97	5.55	5.19	9.34	5.83	5.01	10.92	2.11	1.98	9.71	12.48
8	3.10	5.57	6.44	5.32	9.63	5.68	4.53	9.71	2.24	2.02	8.97	10.74
9	3.27	5.14	7.01	5.48	10.14	5.80	4.05	7.68	2.23	1.74	6.84	9.39
10	3.32	4.83	6.68	5.51	10.89	5.81	3.55	5.93	2.04	1.46	4.83	10.11
11	3.19	4.77	7.88	5.39	11.43	5.48	3.58	4.85	2.20	1.35	3.71	11.07
12	3.25	4.61	10.20	5.27	11.45	5.21	3.83	4.05	2.81	1.27	2.89	11.39
13	3.22	4.38	11.38	5.19	11.20	4.94	4.30	3.71	2.60	1.34	2.58	11.52
14	3.40	3.90	12.35	5.08	10.68	4.65	5.86	3.34	2.19	1.59	3.66	11.39
15	3.34	3.74	13.52	4.95	10.12	4.45	8.17	2.97	1.85	1.49	9.86	10.30
16	3.44	3.64	14.23	4.87	10.07	4.75	9.61	2.62	1.64	1.55	12.23	8.03
17	3.45	3.53	14.57	4.75	10.23	6.17	10.05	2.40	1.49	1.70	13.59	6.48
18	3.28	3.43	14.79	4.69	10.34	8.04	9.74	2.17	1.45	1.64	14.54	5.96
19	3.24	3.47	14.87	4.74	10.28	8.96	8.78	2.07	1.42	1.49	15.05	6.31
20	3.19	4.08	14.76	4.77	9.93	9.10	7.29	1.98	1.64	1.52	15.13	7.14
21	3.09	5.40	14.34	4.81	9.30	8.61	6.05	1.91	1.57	2.16	14.85	8.25
22	2.92	6.82	13.62	4.91	8.58	7.72	5.18	1.86	1.23	2.37	14.28	8.55
23	2.73	8.29	12.48	4.81	7.90	6.76	4.57	2.13	1.12	2.60	13.22	7.76
24	2.74	8.29	10.80	4.65	7.26	5.96	4.10	2.42	1.24	2.68	11.12	6.63
25	2.70	7.36	9.29	4.53	6.71	5.36	3.71	2.89	1.32	2.24	8.13	5.65
26	2.47	6.40	8.48	4.56	6.29	4.91	3.41	2.51	1.56	1.94	6.11	4.95
27	2.40	5.68	8.01	4.48	6.31	4.57	3.51	2.44	2.36	1.67	5.12	4.39
28	2.44	5.19	7.60	4.57	6.90	4.37	3.69	2.24	2.51	1.41	4.42	4.15
29	5.22	4.79	7.16	4.77	7.26	4.26	3.79	2.03	2.49	1.42	3.86	3.82
30	9.78	4.55	6.74	5.07	---	4.12	3.67	1.96	2.30	1.84	3.38	3.91
31	10.92	---	6.38	5.39	---	3.99	---	1.72	---	3.20	3.50	---
MEAN	3.90	5.92	9.24	5.07	8.70	6.00	5.35	4.29	1.91	1.94	8.14	8.72
MAX	10.92	11.14	14.87	6.06	11.45	9.10	10.05	11.28	2.81	3.20	15.13	13.50
MIN	2.40	3.43	4.37	4.48	5.71	3.99	3.41	1.72	1.12	1.27	2.58	3.82

02083893 TAR RIVER AT US 264 BYPASS NEAR ROCK SPRINGS, NC—Continued



02084000 TAR RIVER AT GREENVILLE, NC.

LOCATION.--Lat 35°37'00", long 77°22'22", Pitt County, Hydrologic Unit 03020103, on right bank approximately 1500 ft downstream from railroad bridge, and 21 mi upstream from Pamlico River at Washington.

DRAINAGE AREA.--2,660 mi^2 (revised).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to current year. Gage height records collected at site 800 ft upstream from 1905 to 1935 and at site 200 ft upstream from 1935 to 1984, are in reports of the National Weather Service. Unpublished records of gage height for the period October 1984 to September 1990 are available in files of USGS District Office, Raleigh, NC.

REVISED RECORDS.--WDR NC-99-1(m).

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 3.54 ft below NAVD of 1988. Satellite telemetry at station.

REMARKS.--Records fair. This site is affected by both astronomical and wind tides.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 22, 1940 reached a stage of 22.07 ft at site 200 ft upstream at present datum; discharge 36,500 ft^3/s. Maximum observed stage during period 1905-39 (National Weather Service Records) 24.5 ft July 28, 1919.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,620	5,520	1,700	2,530	2,250	e3,100	1,740	1,570	692	899	2,220	3,680
2	2,050	5,460	1,660	2,420	2,350	e3,150	1,930	1,560	638	975	3,040	5,640
3	1,800	4,650	1,590	2,310	2,500	e2,950	2,110	2,730	568	923	3,200	7,290
4	1,600	3,680	1,560	2,180	2,750	2,830	2,420	4,490	582	1,100	2,640	8,440
5	1,380	2,920	1,690	e2,190	3,100	2,610	2,760	5,340	1,030	1,160	2,890	8,980
6	1,110	2,580	2,010	2,070	3,620	2,530	2,480	5,820	824	796	3,970	8,830
7	1,010	2,400	2,100	1,910	4,170	2,410	2,210	5,550	774	727	4,560	7,820
8	913	2,160	e2,400	1,820	4,310	2,460	1,970	4,740	813	779	4,150	5,720
9	885	1,910	2,770	1,890	4,600	2,390	1,660	3,560	937	671	3,050	4,420
10	1,110	1,790	2,600	1,850	5,100	2,400	1,360	2,720	841	529	2,070	4,790
11	e1,070	1,790	3,190	1,760	5,650	2,240	1,450	2,190	941	436	1,570	5,410
12	e950	1,820	4,450	1,780	5,850	2,130	1,500	1,780	1,100	442	1,180	5,760
13	958	1,910	5,270	1,830	5,550	1,950	1,730	1,610	969	503	1,010	5,870
14	896	1,630	6,490	e1,750	5,030	1,820	2,580	1,440	840	646	1,460	5,790
15	1,070	1,490	8,240	e1,700	4,670	1,770	3,720	1,260	722	574	4,520	4,890
16	855	e1,410	9,930	e1,650	4,610	1,900	4,510	1,080	648	535	6,650	3,500
17	916	1,370	10,900	1,560	4,660	2,500	4,790	957	621	575	8,610	2,650
18	940	1,190	11,700	1,700	4,730	3,440	4,700	867	584	563	10,400	2,490
19	936	1,180	12,000	1,710	4,650	3,990	4,220	870	555	479	11,600	2,560
20	949	1,630	11,700	1,740	4,440	4,020	3,460	816	459	470	11,900	2,880
21	934	2,150	10,700	1,740	4,060	3,830	2,840	784	466	771	11,800	3,460
22	922	2,820	9,280	1,800	3,610	3,390	2,420	800	458	880	10,700	3,670
23	809	3,560	7,630	1,820	3,200	2,870	2,150	942	413	1,030	8,990	3,260
24	710	3,540	5,490	1,750	2,870	2,520	1,870	1,090	428	1,200	6,460	2,650
25	716	3,020	4,110	e1,660	2,590	2,270	1,620	1,300	467	901	3,830	2,160
26	704	2,510	3,650	e1,700	2,350	2,100	1,560	1,080	663	708	2,690	1,820
27	667	2,160	3,430	e1,700	2,310	2,020	1,630	1,010	924	631	e2,500	1,540
28	704	1,920	3,210	1,900	2,660	1,880	1,690	950	1,070	519	2,020	1,480
29	2,000	2,000	3,000	1,850	2,920	1,740	1,650	679	901	424	1,670	1,420
30	4,330	1,690	2,850	2,010	---	1,680	1,640	694	909	588	1,500	1,270
31	5,150	---	2,670	2,140	---	1,550	---	697	---	1,230	1,560	---
TOTAL	41,664	73,860	159,970	58,420	111,160	78,440	72,370	60,976	21,837	22,664	144,410	130,140
MEAN	1,344	2,462	5,160	1,885	3,833	2,530	2,412	1,967	728	731	4,658	4,338
MAX	5,150	5,520	12,000	2,530	5,850	4,020	4,790	5,820	1,100	1,230	11,900	8,980
MIN	667	1,180	1,560	1,560	2,250	1,550	1,360	679	413	424	1,010	1,270
CFSM	0.51	0.93	1.94	0.71	1.44	0.95	0.91	0.74	0.27	0.27	1.75	1.63
IN.	0.58	1.03	2.24	0.82	1.55	1.10	1.01	0.85	0.31	0.32	2.02	1.82

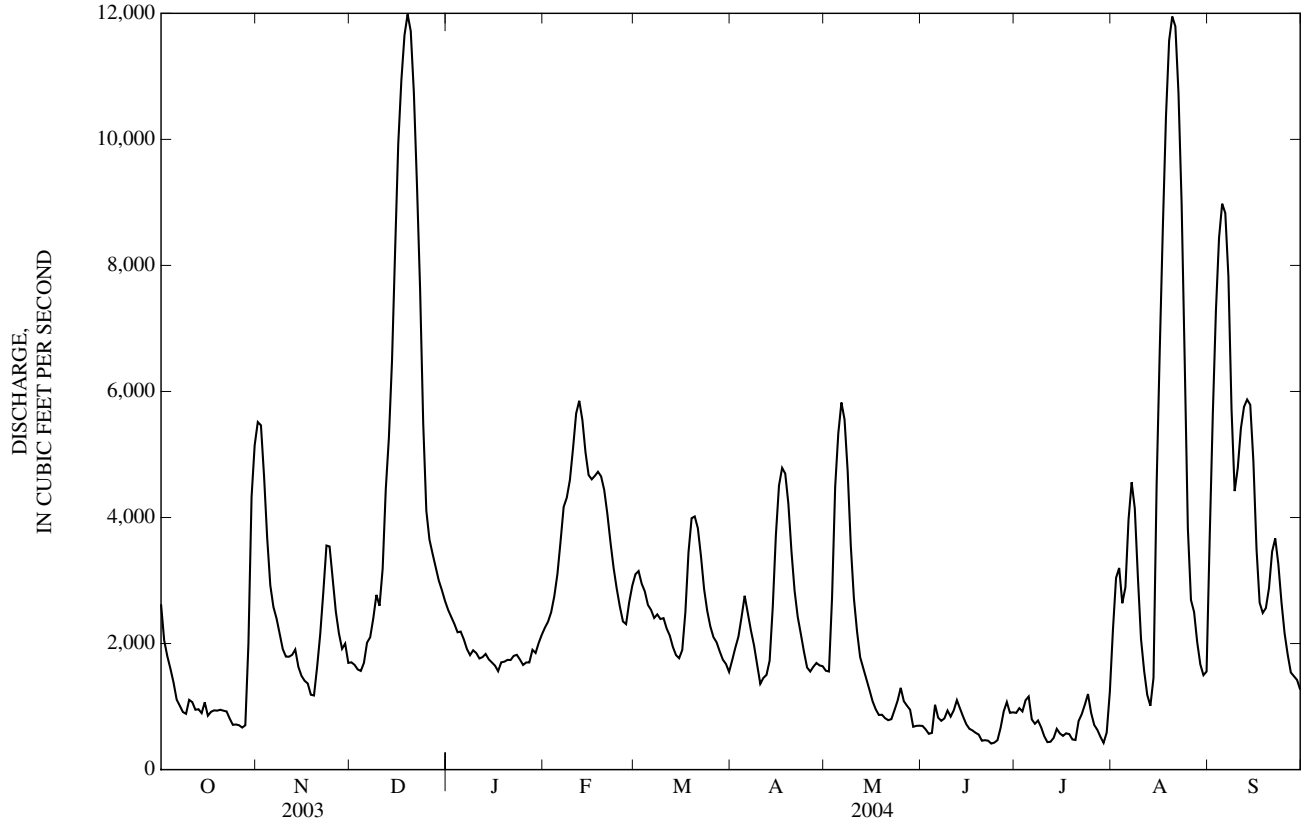
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)

MEAN	2,580	1,689	2,387	3,409	5,221	5,050	3,790	1,931	1,561	948	2,095	5,917
MAX	11,690	5,031	5,521	6,167	13,280	12,020	8,873	4,968	4,141	1,998	4,658	29,850
(WY)	(2000)	(2003)	(2003)	(1999)	(1998)	(1998)	(2003)	(2003)	(2003)	(2003)	(2004)	(1999)
MIN	282	265	455	1,133	1,898	1,857	1,643	528	190	265	287	450
(WY)	(2002)	(2002)	(2002)	(2001)	(2001)	(2002)	(1999)	(2002)	(2002)	(2002)	(1999)	(2001)

02084000 TAR RIVER AT GREENVILLE, NC.—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1997 - 2004	
ANNUAL TOTAL	1,708,516		975,911			
ANNUAL MEAN	4,681		2,666		3,098	
HIGHEST ANNUAL MEAN					5,052	2003
LOWEST ANNUAL MEAN					1,288	2002
HIGHEST DAILY MEAN	19,800	Apr 17	12,000	Dec 19	72,300	Sep 21, 1999
LOWEST DAILY MEAN	616	Sep 17	413	Jun 23	24	Aug 25, 2002
ANNUAL SEVEN-DAY MINIMUM	725	Sep 11	464	Jun 19	84	Aug 19, 2002
MAXIMUM PEAK FLOW			12,600	Aug 20	73,000	Sep 21, 1999
MAXIMUM PEAK STAGE			14.51	Aug 20	29.72	Sep 21, 1999
INSTANTANEOUS LOW FLOW			-466	Aug 14	-851	Aug 22, 1999
ANNUAL RUNOFF (CFSM)	1.76		1.00		1.16	
ANNUAL RUNOFF (INCHES)	23.89		13.65		15.82	
10 PERCENT EXCEEDS	11,400		5,470		7,180	
50 PERCENT EXCEEDS	2,950		1,920		1,630	
90 PERCENT EXCEEDS	974		704		305	

e Estimated.



02084000 TAR RIVER AT GREENVILLE, NC—Continued

PRECIPITATION RECORDS

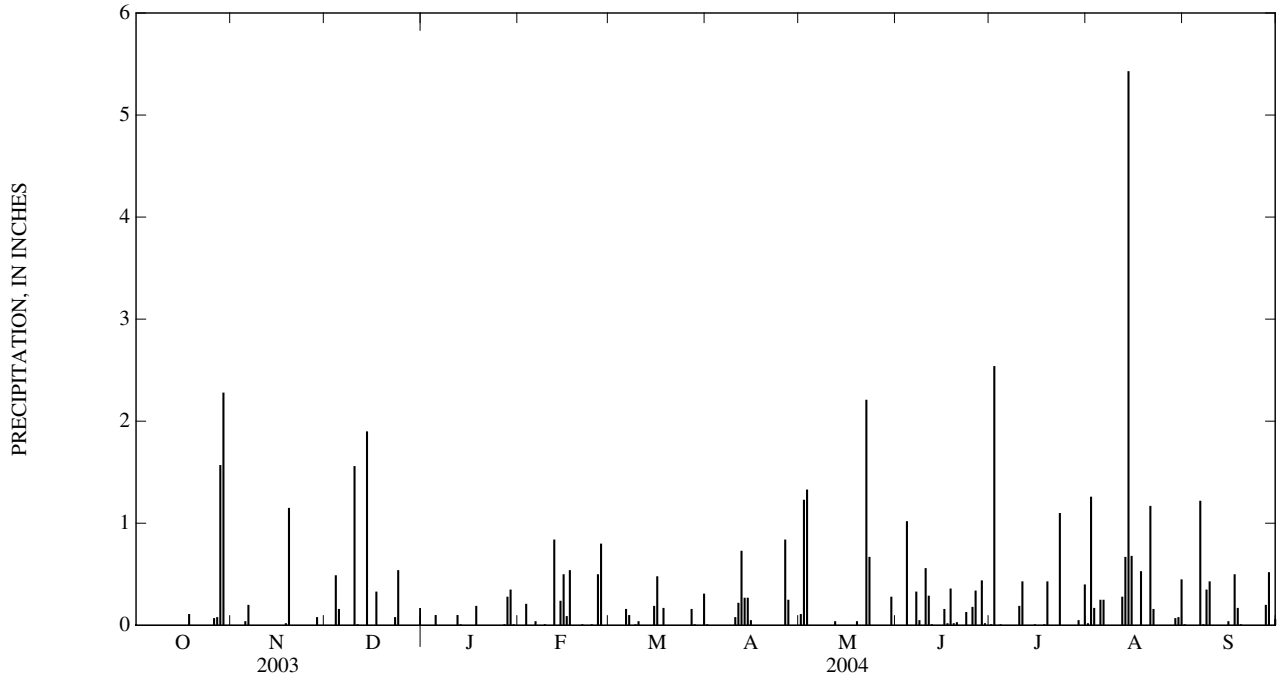
PERIOD OF RECORD.--October 2003 to September 2004.

GAGE.--Tipping-bucket raingage and data collection platform.

REMARKS.--Precipitation collected during freezing periods may not be accurately reflected in the daily record; consequently, winter record is poor.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	0.00	0.00	0.00	0.00	0.00	0.01	0.11	0.00	0.01	0.02	0.01
2	---	0.00	0.00	0.00	0.00	0.00	0.00	1.23	0.00	2.54	1.26	0.00
3	---	0.00	0.00	0.00	0.21	0.00	0.00	1.33	0.00	0.00	0.17	0.00
4	---	0.00	0.49	0.00	0.00	0.00	0.00	0.00	1.02	0.01	0.00	0.00
5	---	0.04	0.16	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
6	---	0.20	0.00	0.00	0.04	0.16	0.00	0.00	0.00	0.00	0.25	1.22
7	---	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.33	0.00	0.00	0.01
8	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.35
9	---	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.43
10	---	0.00	1.56	0.00	0.00	0.04	0.08	0.00	0.56	0.19	0.00	0.00
11	---	0.00	0.01	0.00	0.00	0.00	0.22	0.00	0.29	0.43	0.00	0.00
12	---	0.00	0.00	0.10	0.84	0.00	0.73	0.04	0.01	0.00	0.28	0.00
13	---	0.00	0.00	0.01	0.00	0.00	0.27	0.00	0.00	0.00	0.67	0.00
14	---	0.00	1.90	0.00	0.24	0.00	0.27	0.00	0.00	0.00	5.43	0.00
15	---	0.00	0.00	0.00	0.50	0.19	0.05	0.00	0.00	0.01	0.68	0.04
16	---	0.00	0.00	0.00	0.09	0.48	0.00	0.00	0.16	0.00	0.00	0.00
17	0.00	0.00	0.33	0.00	0.54	0.00	0.00	0.00	0.02	0.00	0.00	0.50
18	0.11	0.02	0.00	0.19	0.00	0.17	0.00	0.00	0.36	0.01	0.53	0.17
19	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.43	0.00	0.01
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.17	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.21	0.00	0.00	0.16	0.00
23	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.67	0.13	1.10	0.00	0.00
24	0.00	0.00	0.54	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
26	0.07	0.00	0.00	0.00	0.50	0.00	0.84	0.00	0.34	0.00	0.00	0.00
27	0.08	0.00	0.00	0.01	0.80	0.16	0.25	0.00	0.00	0.00	0.00	0.20
28	1.57	0.08	0.00	0.28	0.00	0.01	0.00	0.00	0.44	0.00	0.00	0.52
29	2.28	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.02	0.05	0.07	0.00
30	0.00	0.00	0.00	0.01	---	0.00	0.00	0.28	0.00	0.00	0.08	0.06
31	0.00	---	0.00	0.00	---	0.31	---	0.00	---	0.40	0.45	---
TOTAL	---	1.49	5.07	1.05	3.79	1.63	2.72	5.91	3.96	5.18	11.47	3.52



02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC

LOCATION.--Lat 35°33'42", long 77°13'51", Pitt County, Hydrologic Unit 03020103, on left bank at downstream side of bridge on Secondary Road 1760, 0.6 mi upstream from Juniper Branch, and 2.8 mi east-southeast of Simpson.

DRAINAGE AREA.--45 mi^2.

PERIOD OF RECORD.--October 1975 to March 1987. May 1992 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1.1 ft below NAVD of 1988. Satellite telemetry at station.

REMARKS.--Records poor. Maximum gage height for period of record from flood mark. No flow occurs at times during most years.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	257	28	42	50	102	33	24	4.8	36	21	e9.8
2	70	164	27	42	46	79	35	25	3.4	106	30	e7.0
3	41	108	27	40	46	66	32	180	3.6	266	96	e5.2
4	24	76	29	40	48	56	28	424	11	79	76	e4.1
5	16	61	46	38	46	49	24	210	214	32	e38	e3.9
6	15	62	60	40	46	45	21	116	47	17	e24	e6.9
7	e14	96	49	42	49	42	18	73	18	9.9	e16	38
8	e13	151	42	38	48	39	17	50	13	7.3	e12	38
9	e35	104	37	38	44	35	16	35	72	6.1	e9.6	18
10	e72	72	38	41	42	33	14	25	35	5.4	e8.8	18
11	e120	57	450	38	40	31	14	18	28	24	e8.1	12
12	e64	49	314	38	47	29	20	14	39	305	e12	6.8
13	e40	43	148	39	89	e27	34	10	24	95	37	4.0
14	e46	37	423	38	83	e26	63	9.2	16	32	197	2.6
15	e87	33	603	38	101	e30	54	8.5	11	17	642	2.4
16	e73	32	304	36	177	e50	43	6.9	8.8	9.9	433	3.2
17	e55	31	203	35	178	122	35	5.5	7.4	7.2	251	5.4
18	e45	31	179	36	179	75	28	3.9	8.8	5.7	e190	12
19	e37	34	135	39	133	58	23	3.4	151	4.7	e145	35
20	e30	68	105	40	94	49	20	3.3	85	3.8	e102	27
21	e25	103	84	38	76	42	17	2.9	52	3.8	e68	14
22	e22	67	70	36	64	37	14	5.8	24	4.3	e51	7.7
23	e20	52	63	35	55	31	12	72	15	23	e40	4.6
24	e18	44	69	34	51	26	11	356	12	33	e31	3.0
25	e27	38	85	35	51	23	11	68	15	20	e22	2.6
26	e20	34	76	40	51	22	11	20	23	27	e16	2.4
27	e18	35	64	43	164	22	29	12	32	24	e11	2.0
28	46	33	57	52	289	23	39	7.7	36	13	e8.6	2.2
29	781	31	52	57	152	22	38	5.8	55	10	e7.2	2.8
30	750	29	48	57	---	21	29	5.1	58	9.6	e6.1	2.9
31	400	---	46	55	---	22	---	5.1	---	10	e6.9	---
TOTAL	3,147	2,032	3,961	1,260	2,539	1,334	783	1,805.1	1,122.8	1,246.7	2,616.3	303.5
MEAN	102	67.7	128	40.6	87.6	43.0	26.1	58.2	37.4	40.2	84.4	10.1
MAX	781	257	603	57	289	122	63	424	214	305	642	38
MIN	13	29	27	34	40	21	11	2.9	3.4	3.8	6.1	2.0
CFSM	2.26	1.51	2.84	0.90	1.95	0.96	0.58	1.29	0.83	0.89	1.88	0.22
IN.	2.60	1.68	3.27	1.04	2.10	1.10	0.65	1.49	0.93	1.03	2.16	0.25

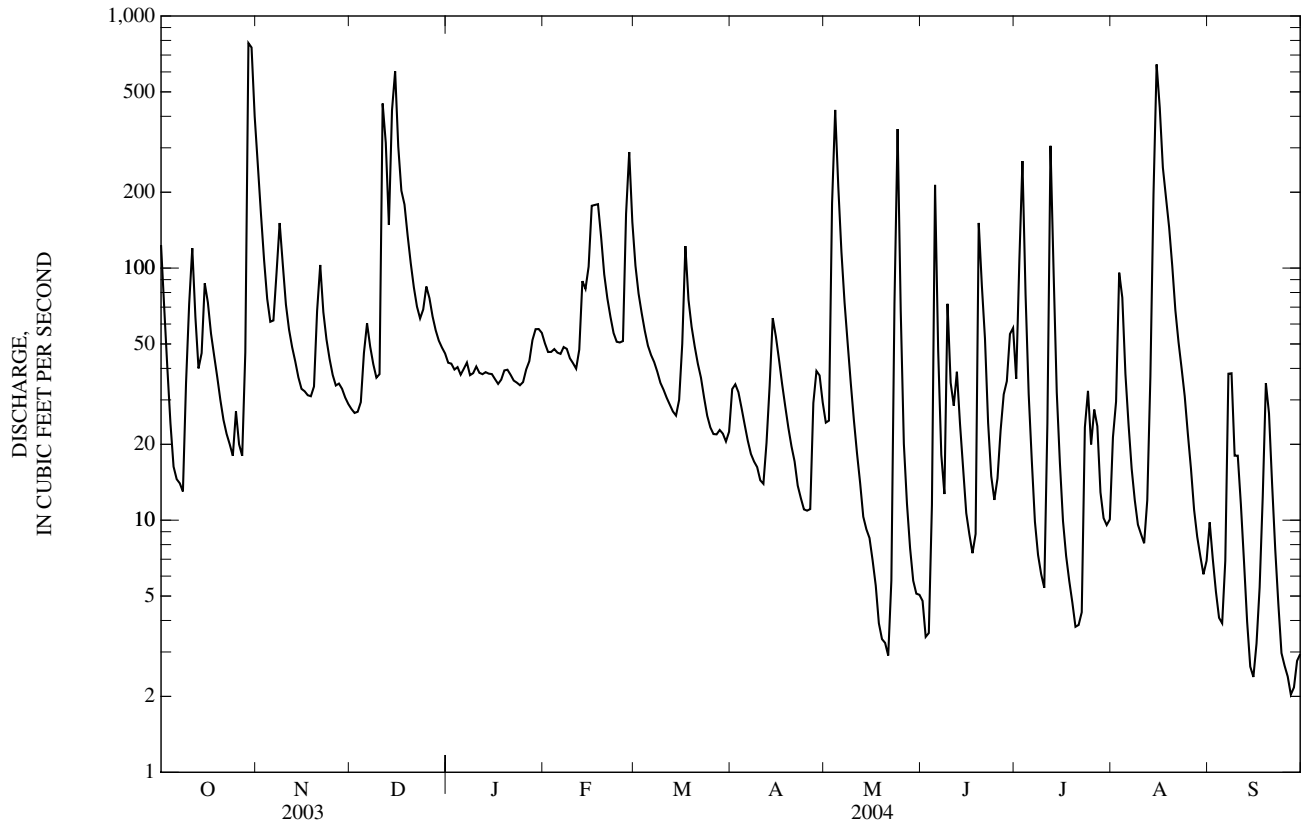
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2004,[@] BY WATER YEAR (WY)

MEAN	33.8	32.7	49.5	92.2	85.1	93.0	54.1	34.5	32.0	20.6	41.9	92.7
MAX	274	219	128	244	245	201	144	149	192	120	238	1,188
(WY)	(2000)	(1978)	(2004)	(1978)	(1998)	(1980)	(1978)	(2003)	(1995)	(1996)	(1992)	(1999)
MIN	0.27	1.23	4.41	6.85	19.7	18.0	4.49	0.65	0.00	0.89	0.00	0.02
(WY)	(1977)	(1982)	(2002)	(2003)	(1977)	(1981)	(1981)	(1985)	(1985)	(1998)	(1976)	(2002)

02084160 CHICOD CREEK AT SECONDARY ROAD 1760 NEAR SIMPSON, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1976 - 2004[@]	
ANNUAL TOTAL	31,456.6		21,574.0			
ANNUAL MEAN	86.2		58.9		54.6	
HIGHEST ANNUAL MEAN					129	1999
LOWEST ANNUAL MEAN					20.4	2001
HIGHEST DAILY MEAN	1,160	Sep 19	781	Oct 29	4,560	Sep 18, 1999
LOWEST DAILY MEAN	1.1	Jun 29	0.54	Sep 5	0.00	Jul 19, 1976
ANNUAL SEVEN-DAY MINIMUM	1.8	Jun 25	0.80	Aug 30	0.00	Jul 19, 1976
MAXIMUM PEAK FLOW			1,230	Oct 29	NOT DETERMINED	
MAXIMUM PEAK STAGE			11.27	Oct 29	21.46*	Sep 18, 1999
INSTANTANEOUS LOW FLOW			NOT DETERMINED		0.00*	Jul 19, 1976
ANNUAL RUNOFF (CFSM)	1.92		1.31		1.21	
ANNUAL RUNOFF (INCHES)	26.00		17.83		16.48	
10 PERCENT EXCEEDS	208		121		124	
50 PERCENT EXCEEDS	31		35		12	
90 PERCENT EXCEEDS	5.2		4.7		0.47	

[@] See PERIOD OF RECORD.
* See REMARKS.
e Estimated.



02084173 TAR RIVER AT SECONDARY ROAD 1565 NEAR GRIMESLAND, NC

LOCATION.--Lat 35°34'26", long 77°10'33", Pitt County, Hydrologic Unit 03020103, at bridge on Secondary Road 1565, approximately 1.1 mi northeast of Grimesland.

DRAINAGE AREA.--2,858 mi^2.

PERIOD OF RECORD.--May 2003 to current year.

GAGE.--Water stage recorder. Elevation of gage is at NAVD of 1988 (levels by North Carolina Geodetic Survey). Satellite telemetry at station.

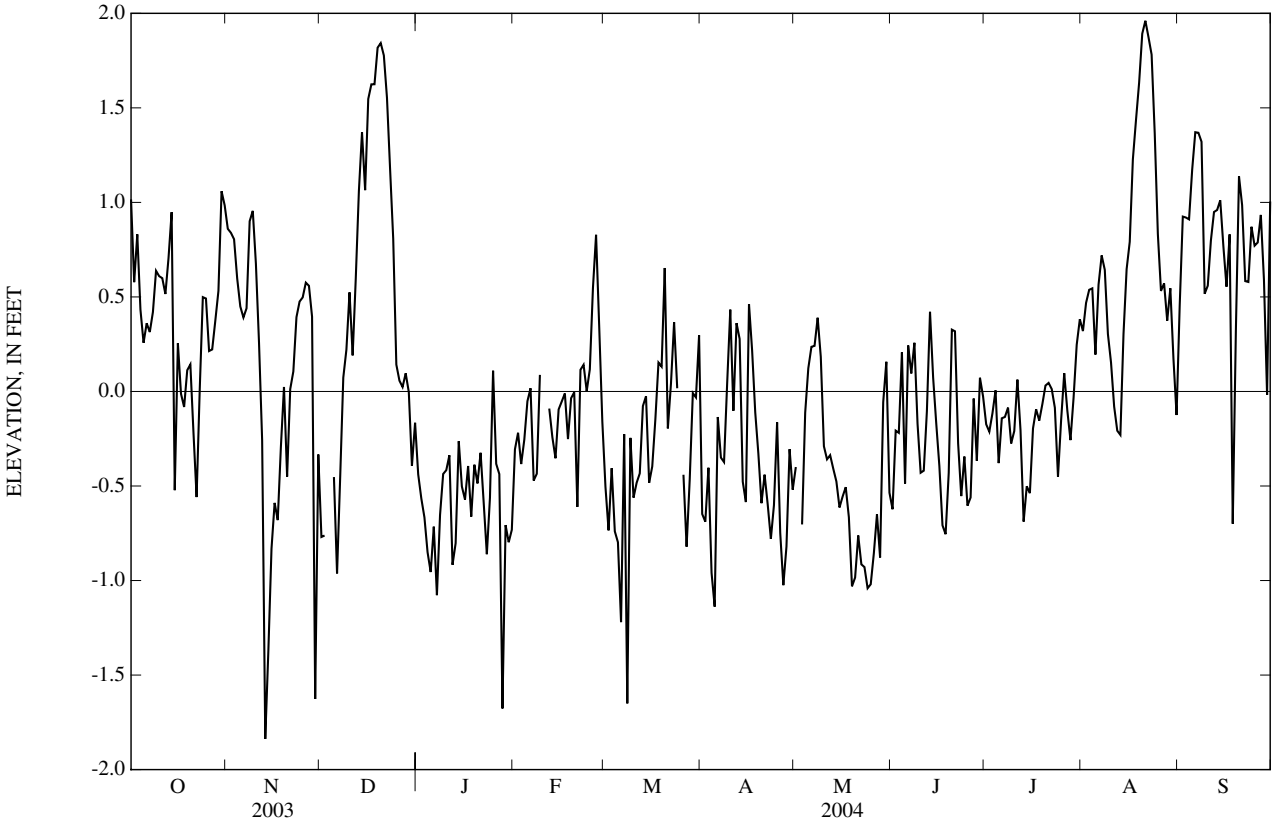
EXTREMES FOR PERIOD OF RECORD.--Maximum recorded elevation, 4.15 ft, Sept. 18, 2003; minimum recorded elevation, -3.03 ft, Nov. 13, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 2.04 ft, Aug. 20; minimum recorded elevation, -3.03 ft, Nov. 13.

ELEVATION, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.02	0.86	-0.77	-0.44	-0.31	-0.50	-0.65	-0.40	-0.62	-0.17	0.32	0.45
2	0.58	0.84	-0.76	-0.57	-0.22	-0.73	-0.69	---	-0.21	-0.21	0.47	0.92
3	0.83	0.81	---	-0.67	-0.38	-0.41	-0.40	-0.70	-0.22	-0.12	0.54	0.92
4	0.43	0.60	---	-0.85	-0.25	-0.74	-0.96	-0.11	0.21	0.01	0.55	0.91
5	0.26	0.45	-0.45	-0.96	-0.05	-0.80	-1.14	0.12	-0.49	-0.38	0.20	1.17
6	0.36	0.39	-0.96	-0.72	0.02	-1.22	-0.14	0.24	0.24	-0.14	0.57	1.37
7	0.31	0.44	-0.45	-1.08	-0.47	-0.23	-0.35	0.24	0.10	-0.13	0.72	1.37
8	0.42	0.90	0.07	-0.65	-0.44	-1.65	-0.37	0.39	0.26	-0.09	0.64	1.32
9	0.64	0.96	0.22	-0.44	0.09	-0.25	0.04	0.18	-0.17	-0.28	0.30	0.52
10	0.61	0.68	0.52	-0.42	---	-0.56	0.43	-0.29	-0.43	-0.21	0.15	0.56
11	0.60	0.26	0.19	-0.34	---	-0.48	-0.10	-0.36	-0.42	0.06	-0.08	0.80
12	0.52	-0.26	0.60	-0.92	-0.09	-0.43	0.36	-0.34	-0.10	-0.21	-0.21	0.95
13	0.71	-1.84	1.06	-0.80	-0.24	-0.08	0.28	-0.41	0.42	-0.69	-0.23	0.96
14	0.95	-1.37	1.37	-0.26	-0.35	-0.03	-0.48	-0.48	0.07	-0.50	0.30	1.01
15	-0.52	-0.83	1.06	-0.50	-0.10	-0.48	-0.58	-0.61	-0.17	-0.54	0.65	0.77
16	0.26	-0.59	1.55	-0.57	-0.05	-0.40	0.46	-0.56	-0.39	-0.20	0.79	0.55
17	-0.01	-0.68	1.62	-0.39	-0.01	-0.15	0.22	-0.51	-0.71	-0.09	1.23	0.83
18	-0.08	-0.30	1.62	-0.66	-0.25	0.15	-0.11	-0.66	-0.75	-0.15	1.44	-0.70
19	0.11	0.02	1.82	-0.39	-0.04	0.13	-0.33	-1.03	-0.43	-0.07	1.63	0.32
20	0.14	-0.45	1.84	-0.49	0.00	0.65	-0.59	-0.98	0.33	0.03	1.89	1.14
21	-0.22	0.01	1.78	-0.32	-0.61	-0.20	-0.44	-0.76	0.32	0.05	1.96	0.99
22	-0.56	0.11	1.55	-0.59	0.11	0.04	-0.60	-0.91	-0.27	0.01	1.87	0.58
23	0.01	0.39	1.18	-0.86	0.14	0.37	-0.78	-0.93	-0.55	-0.09	1.78	0.58
24	0.50	0.48	0.81	-0.56	0.00	0.02	-0.60	-1.04	-0.34	-0.45	1.37	0.87
25	0.49	0.50	0.14	0.11	0.12	---	-0.16	-1.02	-0.60	-0.15	0.83	0.77
26	0.21	0.58	0.06	-0.38	0.55	-0.44	-0.75	-0.86	-0.56	0.10	0.53	0.79
27	0.22	0.56	0.02	-0.44	0.83	-0.82	-1.02	-0.65	-0.04	-0.10	0.57	0.93
28	0.37	0.40	0.10	-1.68	0.34	-0.47	-0.82	-0.88	-0.37	-0.26	0.37	0.59
29	0.53	-1.63	0.00	-0.71	-0.16	-0.01	-0.31	-0.06	0.07	-0.03	0.55	-0.02
30	1.06	-0.33	-0.39	-0.80	---	-0.03	-0.52	0.16	-0.03	0.25	0.17	1.00
31	0.98	---	-0.17	-0.73	---	0.30	---	-0.54	---	0.38	-0.12	---
MEAN	0.38	0.07	---	-0.62	---	---	-0.37	---	-0.20	-0.14	0.70	0.77
MAX	1.06	0.96	---	0.11	---	---	0.46	---	0.42	0.38	1.96	1.37
MIN	-0.56	-1.84	---	-1.68	---	---	-1.14	---	-0.75	-0.69	-0.23	-0.70

02084173 TAR RIVER AT SECONDARY ROAD 1565 NEAR GRIMESLAND, NC—Continued



0208436195 TRANTERS CREEK AT SECONDARY ROAD 1567 NEAR WASHINGTON, NC

LOCATION.--Lat 35°33'47", long 77°05'10", Beaufort County, Hydrologic Unit 03020103, on Secondary Road 1567, 2 mi northwest of Washington.

DRAINAGE AREA.--246 mi^2.

ELEVATION RECORDS

PERIOD OF RECORD.--June 2003 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level, NAVD 1988 (levels by North Carolina Geodetic Survey).

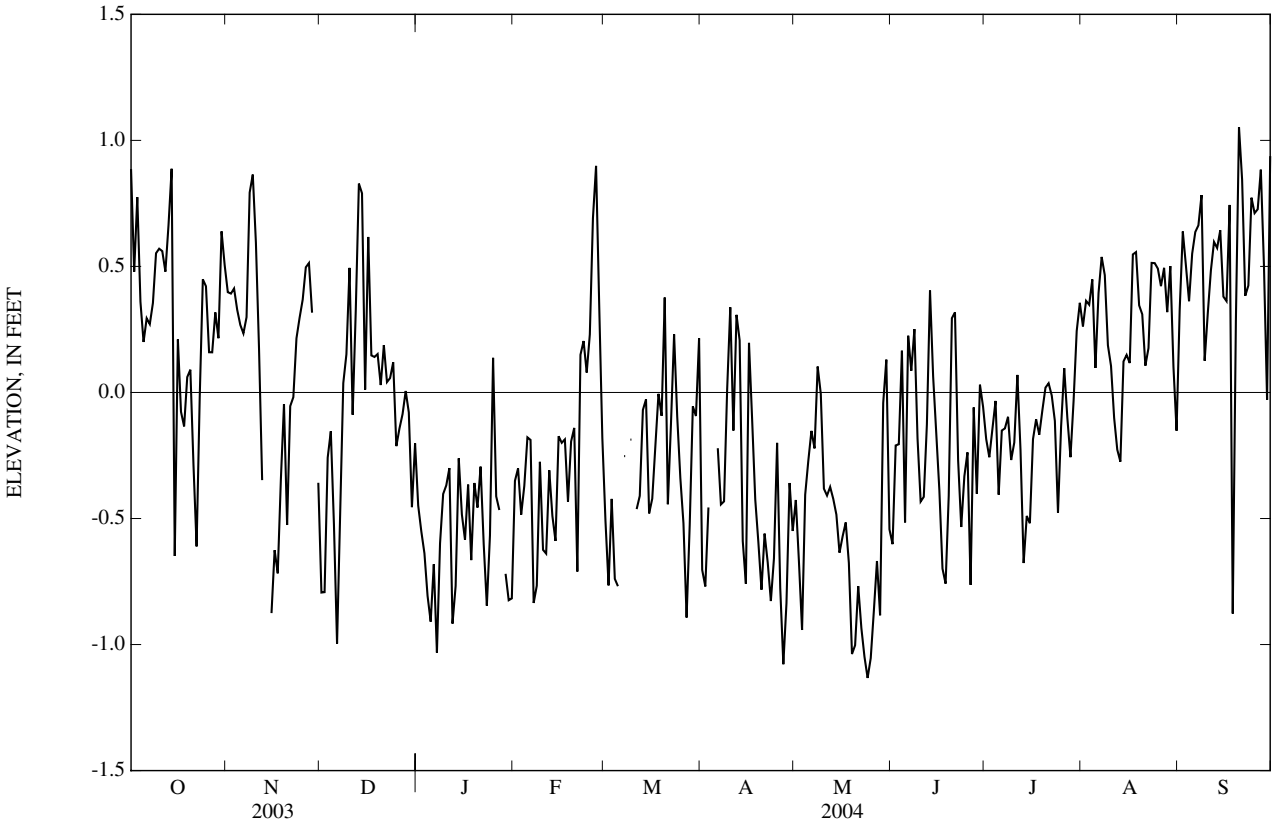
EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 4.97 ft, Sept. 18, 2003; minimum elevation recorded, not determined.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 1.50 ft, Aug. 14; minimum elevation recorded, not determined.

ELEVATION, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.89	0.40	-0.79	-0.45	-0.35	-0.51	-0.70	-0.43	-0.60	-0.18	0.26	0.33
2	0.48	0.39	-0.79	-0.55	-0.30	-0.77	-0.77	-0.67	-0.21	-0.26	0.36	0.64
3	0.77	0.41	-0.26	-0.64	-0.48	-0.42	-0.46	-0.94	-0.21	-0.14	0.35	0.50
4	0.36	0.33	-0.15	-0.81	-0.37	-0.74	---	-0.41	0.17	-0.03	0.45	0.36
5	0.20	0.27	-0.52	-0.91	-0.18	-0.77	---	-0.27	-0.52	-0.41	0.10	0.55
6	0.29	0.23	-1.00	-0.68	-0.19	---	-0.22	-0.15	0.23	-0.15	0.39	0.64
7	0.27	0.30	-0.48	-1.03	-0.84	-0.25	-0.44	-0.22	0.09	-0.14	0.54	0.66
8	0.36	0.79	0.04	-0.60	-0.77	---	-0.43	0.10	0.25	-0.10	0.47	0.78
9	0.55	0.86	0.15	-0.40	-0.28	-0.19	0.01	-0.01	-0.18	-0.27	0.19	0.13
10	0.57	0.59	0.49	-0.37	-0.62	---	0.34	-0.38	-0.43	-0.20	0.10	0.31
11	0.56	0.17	-0.09	-0.30	-0.64	-0.46	-0.15	-0.41	-0.41	0.07	-0.10	0.48
12	0.48	-0.35	0.33	-0.92	-0.31	-0.41	0.31	-0.37	-0.13	-0.23	-0.23	0.60
13	0.66	---	0.83	-0.77	-0.49	-0.07	0.21	-0.42	0.40	-0.68	-0.27	0.57
14	0.89	---	0.79	-0.26	-0.59	-0.03	-0.59	-0.48	0.06	-0.49	0.12	0.64
15	-0.65	-0.88	0.01	-0.48	-0.17	-0.48	-0.76	-0.64	-0.16	-0.52	0.15	0.38
16	0.21	-0.63	0.62	-0.58	-0.20	-0.42	0.20	-0.57	-0.39	-0.19	0.12	0.36
17	-0.08	-0.72	0.15	-0.37	-0.19	-0.21	-0.11	-0.52	-0.70	-0.11	0.55	0.74
18	-0.13	-0.35	0.14	-0.67	-0.43	-0.01	-0.42	-0.68	-0.76	-0.17	0.56	-0.88
19	0.06	-0.05	0.15	-0.36	-0.19	-0.09	-0.59	-1.04	-0.41	-0.07	0.35	0.28
20	0.09	-0.53	0.03	-0.46	-0.14	0.38	-0.78	-1.00	0.29	0.02	0.31	1.05
21	-0.29	-0.05	0.19	-0.29	-0.71	-0.44	-0.56	-0.77	0.32	0.04	0.11	0.84
22	-0.61	-0.02	0.04	-0.60	0.15	-0.12	-0.67	-0.93	-0.27	-0.01	0.18	0.38
23	-0.02	0.21	0.06	-0.85	0.20	0.23	-0.83	-1.05	-0.53	-0.11	0.51	0.42
24	0.45	0.30	0.12	-0.57	0.08	-0.09	-0.66	-1.13	-0.33	-0.48	0.51	0.77
25	0.42	0.37	-0.21	0.14	0.23	-0.34	-0.20	-1.05	-0.24	-0.13	0.49	0.71
26	0.16	0.50	-0.14	-0.41	0.69	-0.52	-0.77	-0.87	-0.76	0.10	0.42	0.73
27	0.16	0.51	-0.09	-0.47	0.90	-0.89	-1.08	-0.67	-0.06	-0.10	0.49	0.88
28	0.32	0.32	0.01	---	0.35	-0.53	-0.84	-0.88	-0.40	-0.26	0.32	0.50
29	0.22	---	-0.08	-0.72	-0.18	-0.06	-0.36	-0.04	0.03	-0.03	0.50	-0.03
30	0.64	-0.36	-0.46	-0.82	---	-0.09	-0.55	0.13	-0.06	0.24	0.10	0.94
31	0.51	---	-0.20	-0.82	---	0.21	---	-0.54	---	0.36	-0.15	---
MEAN	0.28	---	-0.04	---	-0.21	---	---	-0.56	-0.20	-0.15	0.27	0.51
MAX	0.89	---	0.83	---	0.90	---	---	0.13	0.40	0.36	0.56	1.05
MIN	-0.65	---	-1.00	---	-0.84	---	---	-1.13	-0.76	-0.68	-0.27	-0.88

0208436195 TRANTERS CREEK AT SECONDARY ROAD 1567 NEAR WASHINGTON, NC—Continued



0208436195 TRANTERS CREEK AT SECONDARY ROAD 1567 NEAR WASHINGTON, NC—Continued

PRECIPITATION RECORDS

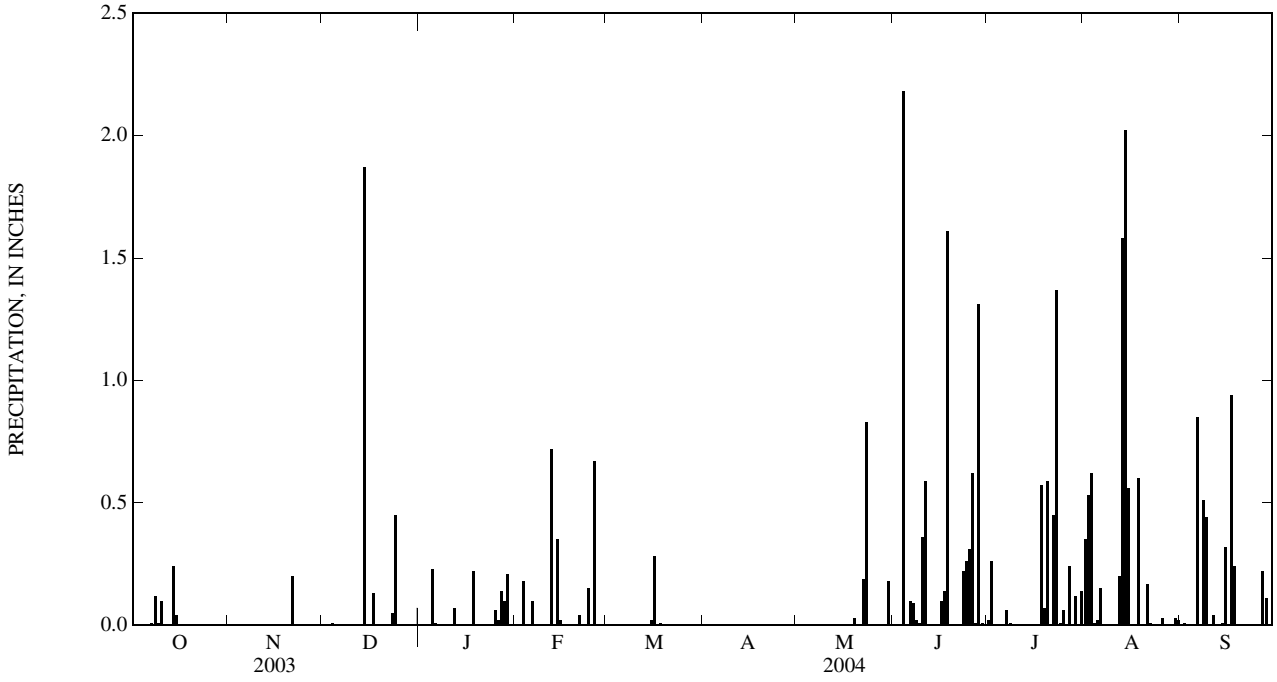
PERIOD OF RECORD.--July 2003 to current year.

GAGE.--Tipping-bucket raingage and data collection platform.

REMARKS.--Precipitation collected during freezing periods may not be accurately reflected in the daily record; consequently, winter record is poor.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.35	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.53	0.01
3	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.62	0.00
4	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	2.18	0.00	0.01	0.00
5	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
6	0.00	0.00	0.00	0.01	0.10	0.00	0.00	0.00	0.10	0.00	0.15	0.85
7	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06	0.00	0.00
8	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.51
9	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.44
10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.04
12	0.00	0.00	0.00	0.07	0.72	0.00	0.00	0.00	0.00	0.00	0.20	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58	0.00
14	0.24	0.00	1.87	0.00	0.35	0.00	0.00	0.00	0.00	0.00	2.02	0.01
15	0.04	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.56	0.32
16	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.10	0.00	0.00	0.00
17	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.94
18	0.00	0.00	0.00	0.22	0.00	0.01	0.00	0.00	1.61	0.57	0.60	0.24
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.07	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00
21	0.00	0.20	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.17	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.45	0.01	0.00
23	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.83	0.22	1.37	0.00	0.00
24	0.00	0.00	0.45	0.00	0.15	0.00	0.00	0.00	0.26	0.01	0.00	0.00
25	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.31	0.06	0.00	0.00
26	0.00	0.00	0.00	0.02	0.67	0.00	0.00	0.00	0.62	0.00	0.03	0.00
27	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.01	0.24	0.00	0.22
28	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	1.31	0.00	0.00	0.11
29	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.01	0.12	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.18	0.00	0.00	0.03	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.14	0.02	---
TOTAL	0.52	0.20	2.51	1.06	2.23	0.31	0.00	1.23	7.94	3.97	6.90	3.69



02084472 PAMLICO RIVER AT WASHINGTON, NC

LOCATION.--Lat 35°32'36", long 77°03'43", Beaufort County, Hydrologic Unit 03020104, at bridge on US Highway 17 at Washington, and 0.7 mi downstream of Kennedy Creek.

DRAINAGE AREA.--3,200 mi^2.

PERIOD OF RECORD.--October 1999 to current year. Daily mean elevations published March 1988 to May 1993.
REVISED RECORDS.--WRD NC-00-1B: Drainage area.

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is at NGVD of 1929. Satellite telemetry at station.

REMARKS.--Records fair except those for negative daily discharges, which are poor. This site is strongly affected by both astronomical and wind tides. The astronomical tides occur at primary harmonic periods of 12.42 hours and 24.8 hours. Mean daily discharge data for this site may be affected by aliasing due to tides and can contain fluctuations that are not representative of net downstream discharge.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 83,000 ft^3/s, Sept. 21, 1999, maximum gage height, 8.14 ft, Sept. 16, 1999; minimum discharge, -90,800 ft^3/s, Sept. 4, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,400 ft^3/s, Dec. 17, Aug. 21, maximum gage height 2.82 ft, Aug. 14; minimum discharge, -21,900 ft^3/s, Aug. 14.

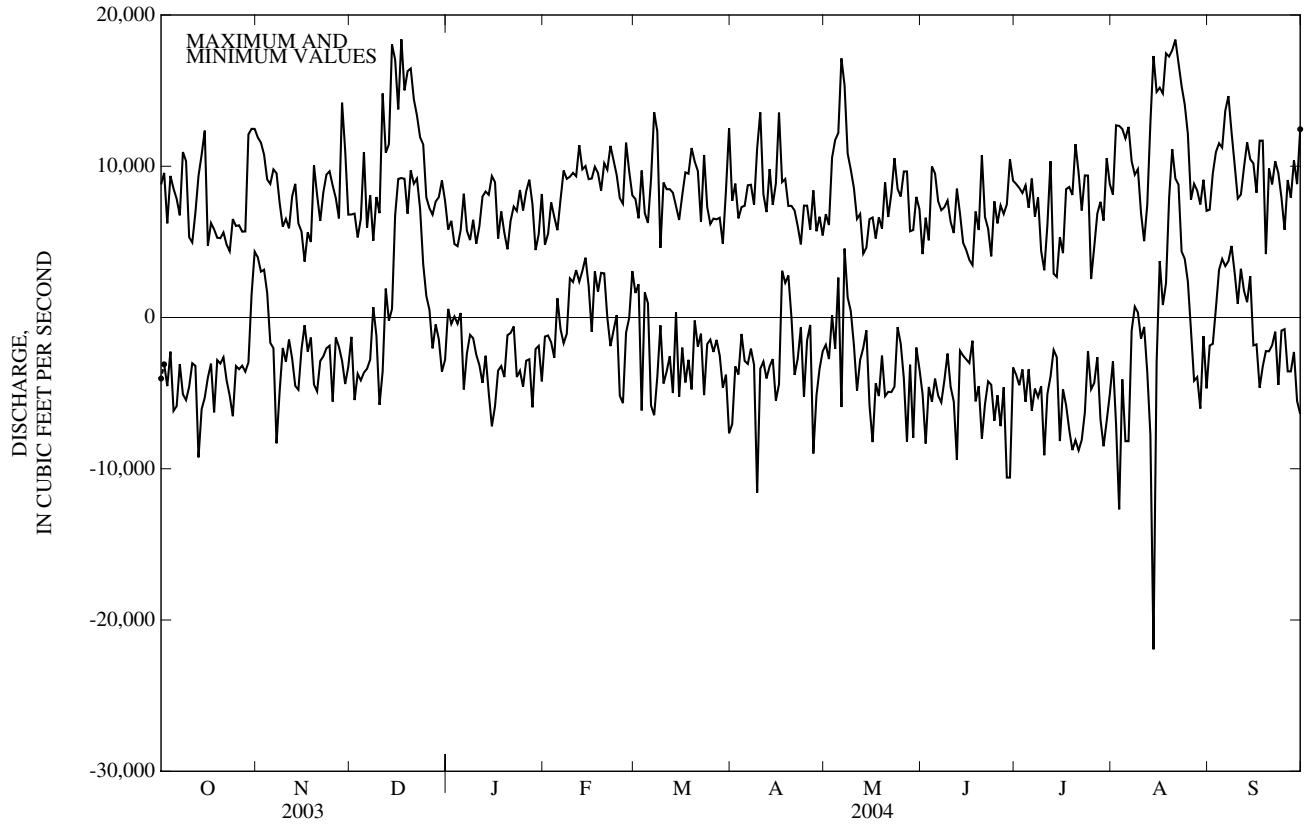
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8,790	-4,040	11,900	3,980	6,810	-1,280	5,820	569	4,810	-1,260	7,830	1,620
2	9,560	-3,100	11,600	3,030	6,870	-5,460	6,390	-422	5,530	-1,190	6,560	2,200
3	6,230	-4,540	10,800	3,160	5,300	-3,730	4,860	67	7,600	-1,650	9,720	-6,140
4	9,360	-2,260	9,130	1,630	6,520	-4,160	4,710	-412	6,640	-2,660	6,890	1,660
5	8,510	-6,170	8,830	-1,680	10,900	-3,650	5,790	297	5,770	1,270	6,260	949
6	7,840	-5,860	9,790	-2,030	5,930	-3,390	8,180	-4,760	7,800	-776	9,160	-5,820
7	6,750	-3,080	9,540	-8,320	8,090	-2,790	5,730	-2,370	9,720	-1,700	13,600	-6,460
8	10,900	-5,080	7,570	-4,860	5,080	679	5,120	-1,150	9,170	-1,070	12,300	-3,950
9	10,300	-5,460	6,010	-2,010	7,970	-1,200	6,460	-1,370	9,310	2,580	4,610	-520
10	5,310	-4,580	6,520	-2,930	6,900	-5,770	4,880	-2,460	9,560	2,350	8,920	-4,360
11	4,960	-3,020	5,900	-1,460	14,800	-3,560	6,040	-3,150	9,340	3,130	8,480	-3,570
12	6,930	-3,200	8,000	-2,710	10,900	1,910	8,000	-4,320	11,400	2,370	8,480	-2,570
13	9,370	-9,250	8,840	-4,520	11,400	-212	8,330	-2,530	9,790	3,080	8,250	-5,000
14	10,800	-6,060	6,230	-4,780	18,000	570	8,110	-5,000	10,000	3,950	7,360	340
15	12,400	-5,290	5,680	-2,100	17,100	6,760	9,350	-7,190	9,150	2,100	6,450	-5,230
16	4,750	-3,970	3,700	-506	13,800	9,160	8,950	-5,870	9,190	-941	8,080	-1,990
17	6,250	-3,050	5,630	-2,250	18,400	9,220	5,220	-3,510	9,970	3,050	9,590	-4,290
18	5,830	-6,270	5,000	-1,330	15,000	9,170	7,010	-3,210	9,550	1,700	9,500	-2,800
19	5,270	-2,820	10,100	-4,440	16,300	6,870	5,590	-3,940	8,390	2,950	11,200	-4,750
20	5,250	-3,040	8,100	-4,890	16,500	9,720	4,510	-1,170	10,200	2,920	10,300	-202
21	5,620	-2,630	6,390	-2,880	14,400	8,840	6,390	-1,020	9,760	-16	9,690	-1,930
22	4,820	-4,150	8,270	-2,560	13,300	9,190	7,340	-595	11,300	-1,890	6,340	-1,070
23	4,380	-5,180	9,450	-2,030	11,900	7,190	7,040	-3,940	10,400	-844	10,700	-5,130
24	6,510	-6,530	9,660	-1,870	11,400	3,530	8,430	-3,520	9,410	160	7,310	-1,750
25	6,050	-3,210	8,720	-5,560	7,940	1,430	7,080	-4,580	7,890	-5,180	6,180	-1,460
26	6,100	-3,420	7,890	-1,320	7,230	505	8,350	-2,860	7,520	-5,660	6,540	-2,280
27	5,680	-3,190	6,550	-1,940	6,800	-2,040	9,110	-2,760	11,600	-1,000	6,490	-1,480
28	5,690	-3,580	14,200	-2,860	7,670	-462	7,490	-5,940	9,650	-17	6,600	-2,510
29	12,100	-2,970	11,000	-4,400	7,950	-1,440	4,460	-2,090	8,080	3,070	4,880	-4,640
30	12,500	1,490	6,800	-3,250	9,060	-3,580	5,510	-1,870	---	---	8,390	-3,780
31	12,500	4,350	---	---	7,710	-2,790	8,170	-4,220	---	---	12,500	-7,660
MONTH	12,500	-9,250	14,200	-8,320	18,400	-5,770	9,350	-7,190	11,600	-5,660	13,600	-7,660

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7,710	-7,040	6,830	-1,800	4,190	-5,060	8,820	-3,790	8,130	-2,890	7,130	-1,860
2	8,850	-3,230	6,120	-2,750	6,600	-8,330	8,560	-4,480	12,700	-7,080	9,530	-1,740
3	6,550	-3,770	10,600	145	5,100	-4,590	8,230	-3,430	12,700	-12,700	10,900	638
4	7,310	-1,090	11,700	-2,080	9,980	-5,570	8,730	-5,580	12,500	-4,090	11,500	3,150
5	7,380	-2,870	12,200	2,640	9,520	-4,040	7,260	-3,430	11,800	-8,180	11,200	3,870
6	8,740	-3,070	17,100	-5,920	7,680	-5,160	9,180	-6,160	12,600	-8,180	13,700	3,400
7	8,780	-2,060	15,400	4,560	7,090	-5,620	6,660	-4,700	10,300	-860	14,600	3,730
8	7,450	-3,130	10,800	1,330	7,300	-4,140	7,940	-5,270	9,440	717	12,300	4,730
9	11,200	-11,600	9,780	421	7,730	-2,390	4,410	-4,550	9,810	333	10,100	2,960
10	13,600	-3,390	8,560	-1,820	6,320	-4,590	3,120	-9,110	6,910	-1,400	7,870	900
11	8,160	-2,910	6,520	-4,830	5,590	-5,560	6,120	-5,060	5,050	-622	8,130	3,220
12	6,970	-4,030	6,840	-2,810	8,520	-9,400	10,300	-3,900	7,460	-3,610	9,940	1,760
13	9,810	-3,220	4,220	-2,010	6,860	-2,200	2,890	-2,150	12,800	-7,760	11,600	1,010
14	7,440	-2,750	4,620	-851	4,940	-2,530	2,680	-2,610	17,300	-21,900	10,500	2,740
15	8,870	-5,490	6,500	-5,810	4,450	-2,770	5,320	-8,170	14,900	-2,940	10,200	-1,850
16	13,500	-4,410	6,610	-8,240	3,810	-3,010	4,250	-4,750	15,200	3,730	8,250	-1,780
17	8,950	3,090	5,220	-4,350	3,460	-1,540	8,490	-5,810	14,800	826	11,700	-4,640
18	9,160	2,290	6,630	-5,200	7,010	-5,540	8,630	-7,440	17,500	2,270	11,700	-3,240
19	7,370	2,770	5,880	-2,520	5,790	-4,540	8,100	-8,760	17,300	7,920	4,190	-2,220
20	7,380	-15	8,940	-5,200	10,700	-8,010	11,500	-8,120	17,700	11,100	9,850	-2,240
21	7,070	-3,790	6,650	-4,910	6,650	-5,740	9,550	-8,790	18,400	9,190	8,800	-1,840
22	6,040	-2,720	8,200	-4,930	5,870	-4,220	7,080	-8,090	16,800	8,780	10,300	-939
23	4,840	-658	10,500	-4,580	4,040	-4,450	9,390	-6,270	15,300	4,360	9,540	-4,460
24	7,400	-5,250	8,500	-637	7,680	-6,830	9,380	-2,230	14,100	3,880	7,910	-865
25	7,400	-1,500	8,000	-1,730	6,220	-5,140	2,540	-4,750	12,100	2,380	5,800	-770
26	5,820	-494	9,660	-4,030	7,410	-7,180	4,660	-4,330	7,780	-837	9,090	-3,560
27	8,400	-8,990	9,660	-8,220	6,850	-4,620	6,880	-2,630	8,840	-4,180	7,910	-3,560
28	5,700	-5,160	5,700	-3,120	7,480	-10,600	7,650	-6,730	8,390	-3,940	10,400	-2,280
29	6,660	-3,380	5,790	-7,950	10,500	-10,600	6,410	-8,510	7,470	-6,020	8,820	-5,520
30	5,420	-2,230	7,980	-1,990	9,040	-3,310	10,500	-6,840	9,110	-1,230	12,400	-6,370
31	---	---	7,160	-3,410	---	---	8,820	-5,070	7,050	-4,680	---	---
MONTH	13,600	-11,600	17,100	-8,240	10,700	-10,600	11,500	-9,110	18,400	-21,900	14,600	-6,370
YEAR	18,400	-21,900										



02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to 1967, 1999 to current year.

PERIOD OF DAILY RECORD.--
SALINITY (TOP AND BOTTOM): April 1999 to current year.
pH (TOP AND BOTTOM): April 1999 to current year.
WATER TEMPERATURE (TOP AND BOTTOM): April 1999 to current year.
DISSOLVED OXYGEN (TOP AND BOTTOM): April 1999 to current year.
DISSOLVED OXYGEN, PERCENT SATURATION (TOP AND BOTTOM): April 1999 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry from April 1999 to current year.

REMARKS.--Station operated in cooperation with the North Carolina Department of Environment and Natural Resources. Top constituents were monitored at 8 ft above the streambed and bottom constituents, 2 ft above the streambed. Salinity and dissolved oxygen, percent saturation are computed. The salinity is computed from specific conductance using the conversion from U.S. Geological Survey Water-Supply Paper 2311. The dissolved oxygen percent saturation is computed using a barometric pressure of 760 mm of Hg beginning October 1, 2000. Salinity, minimum extremes are reported as <0.1 ppt. Dissolved oxygen, minimum extremes are reported as <1.0 mg/L. Dissolved oxygen, percent saturation, minimum extremes are reported as <10%. Daily records of salinity and water temperature for October 1961 to September 1967 are available in the files of the USGS District Office, Raleigh, NC.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	14.4, January 3, 2002	<0.1, on many days during the period
SALINITY (BOTTOM), ppt	15.1, October 24, 2002	<0.1, on many days during the period
pH (TOP), standard units	9.1, July 19, 20, 1999	5.4, August 19, 2001
pH (BOTTOM), standard units	8.8, July 2, 3, 4, 1999	5.3, September 11, 12, 13, 1999
WATER TEMPERATURE (TOP), °C	34.1, July 31, 1999	0.4, January 24, 2003
WATER TEMPERATURE (BOTTOM), °C	32.6, July 31, 1999	0.5, January 24, 2003
DISSOLVED OXYGEN (TOP), mg/L	15.3, November 22, 2001	<1.0 on many days during the period
DISSOLVED OXYGEN (BOTTOM), mg/L	13.1, February 4, 2004	<1.0, on many days during the period

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	9.8, July 16	<0.1, on many days during the year
SALINITY (BOTTOM), ppt	11.5, July 16, 17	<0.1, on many days during the year
pH (TOP), standard units	8.7, July 30	6.1, August 18
pH (BOTTOM), standard units	8.6, July 30	5.9, August 19
WATER TEMPERATURE (TOP), °C	32.5, July 14	2.0, January 29
WATER TEMPERATURE (BOTTOM), °C	30.5, July 12	1.9, January 29
DISSOLVED OXYGEN (TOP), mg/L	13.4, February 3	<1.0, on several days during the year
DISSOLVED OXYGEN (BOTTOM), mg/L	13.1, February 4	<1.0, on many days during the year
DISSOLVED OXYGEN, PERCENT SATURATION (TOP),%	149, July 7	<10, July 11, 16, 17, 25
DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM),%	130, July 30	<10, on many days during the year

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	0.04	0.03	0.04	0.04	0.03	0.04	0.05	0.05	0.05	0.04	0.04	0.04
2	0.04	0.04	0.04	0.04	0.03	0.04	0.05	0.05	0.05	0.04	0.04	0.04
3	0.04	0.04	0.04	0.04	0.03	0.04	0.05	0.05	0.05	0.04	0.04	0.04
4	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.04	0.04
5	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.08	0.04	0.05
6	0.05	0.04	0.04	0.04	0.04	0.04	0.06	0.05	0.05	0.31	0.04	0.09
7	0.05	0.04	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.71	0.04	0.20
8	0.05	0.04	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.23	0.05	0.11
9	0.05	0.05	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.71	0.05	0.11
10	---	---	---	0.05	0.04	0.05	0.05	0.04	0.05	5.5	0.05	0.61
11	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	5.3	0.15	0.78
12	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	1.4	0.07	0.39
13	0.10	0.05	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.43	0.05	0.15
14	0.06	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.04	1.2	0.04	0.27
15	0.06	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.55	0.04	0.14
16	0.06	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.17	0.04	0.05
17	0.06	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.05	0.04	0.04
18	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.05	0.04	0.04
19	0.05	0.05	0.05	0.06	0.05	0.05	0.03	0.03	0.03	0.08	0.04	0.05
20	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.05	0.04	0.04
21	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.06	0.04	0.05
22	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.09	0.04	0.05
23	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.45	0.04	0.10
24	0.06	0.05	0.05	0.05	0.04	0.05	0.03	0.03	0.03	---	---	---
25	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.61	0.04	0.12
26	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	0.07	0.04	0.04
27	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.04	1.3	0.04	0.13
28	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.07	0.04	0.05
29	0.05	0.04	0.05	0.05	0.04	0.05	0.04	0.04	0.04	0.07	0.05	0.05
30	0.04	0.03	0.04	0.05	0.05	0.05	0.08	0.04	0.04	0.08	0.04	0.05
31	0.04	0.03	0.04	---	---	---	0.04	0.04	0.04	0.10	0.04	0.05
MONTH	---	---	---	0.06	0.03	0.05	0.08	0.03	0.04	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	0.05	0.04	0.05	0.04	0.04	0.04	0.05	0.04	0.05	0.05	0.05	0.05
2	0.05	0.04	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
3	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.04	0.05
4	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.04	0.04
5	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.05	0.04	0.04	0.04
6	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.05	0.04	0.04	0.04
7	0.05	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
8	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
9	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04
10	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.05	0.04	0.04	0.04
11	0.04	0.03	0.03	0.05	0.04	0.05	0.05	0.04	0.05	0.04	0.04	0.04
12	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.04
13	0.04	0.03	0.03	0.05	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.04
14	0.04	0.03	0.03	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.04	0.04
15	0.04	0.03	0.04	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
16	0.04	0.03	0.04	0.05	0.04	0.04	---	---	---	0.05	0.05	0.05
17	0.04	0.04	0.04	0.05	0.04	0.05	---	---	---	0.05	0.05	0.05
18	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
19	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
20	0.04	0.04	0.04	0.05	0.04	0.04	---	---	---	0.05	0.05	0.05
21	0.04	0.04	0.04	0.04	0.04	0.04	---	---	---	0.05	0.05	0.05
22	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06	0.05	0.05
23	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
24	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.05
25	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
26	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04
27	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.05	0.21	0.04	0.06
28	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.05	0.05	0.55	0.04	0.13
29	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.05	0.05	0.61	0.19	0.44
30	---	---	---	0.05	0.04	0.04	0.05	0.05	0.05	0.61	0.08	0.29
31	---	---	---	0.05	0.04	0.04	---	---	---	0.20	0.06	0.08
MONTH	0.05	0.03	0.04	0.05	0.04	0.04	---	---	---	0.61	0.04	0.07

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	0.42	0.06	0.09	0.06	0.05	0.05	0.30	0.07	0.14	0.04	0.04	0.04
2	0.52	0.08	0.23	0.06	0.05	0.05	0.13	0.05	0.08	0.04	0.03	0.04
3	0.43	0.05	0.23	0.05	0.05	0.05	0.39	0.04	0.08	0.03	0.03	0.03
4	0.42	0.05	0.21	0.05	0.05	0.05	0.19	0.04	0.07	0.03	0.03	0.03
5	0.07	0.05	0.06	0.05	0.04	0.05	0.31	0.04	0.06	0.03	0.03	0.03
6	0.12	0.05	0.07	0.81	0.05	0.15	1.7	0.04	0.27	---	---	---
7	0.06	0.06	0.06	0.70	0.05	0.18	0.22	0.03	0.04	---	---	---
8	0.06	0.05	0.06	1.0	0.05	0.44	0.04	0.03	0.03	0.03	0.03	0.03
9	0.05	0.05	0.05	0.93	0.05	0.32	0.03	0.03	0.03	0.04	0.03	0.03
10	0.05	0.05	0.05	5.8	0.13	1.7	0.04	0.03	0.03	0.03	0.03	0.03
11	0.05	0.05	0.05	5.7	1.0	3.6	0.04	0.03	0.04	0.03	0.03	0.03
12	0.09	0.05	0.06	3.5	1.2	2.0	0.10	0.04	0.04	0.03	0.03	0.03
13	0.07	0.05	0.06	2.6	0.36	1.1	0.08	0.04	0.05	0.03	0.03	0.03
14	0.06	0.05	0.05	3.0	0.47	1.3	0.06	0.04	0.05	0.03	0.03	0.03
15	0.05	0.05	0.05	6.4	0.65	2.7	0.05	0.03	0.04	0.03	0.03	0.03
16	0.05	0.05	0.05	9.8	2.6	6.1	0.04	0.03	0.03	0.03	0.03	0.03
17	0.05	0.05	0.05	9.0	3.0	5.7	0.03	0.03	0.03	0.03	0.03	0.03
18	0.05	0.05	0.05	5.4	3.2	4.3	0.03	0.03	0.03	0.04	0.03	0.04
19	0.05	0.05	0.05	5.4	2.8	4.4	---	---	---	0.04	0.04	0.04
20	0.64	0.05	0.14	6.1	2.3	4.1	---	---	---	0.04	0.04	0.04
21	0.26	0.06	0.11	5.0	1.9	3.6	0.03	0.03	0.03	0.04	0.04	0.04
22	0.08	0.06	0.06	4.0	1.4	2.6	0.03	0.03	0.03	0.04	0.04	0.04
23	0.14	0.05	0.07	2.4	0.38	1.3	0.03	0.03	0.03	0.04	0.04	0.04
24	0.21	0.06	0.10	1.3	0.22	0.51	0.03	0.03	0.03	0.04	0.04	0.04
25	0.36	0.06	0.12	6.2	0.41	4.0	0.03	0.03	0.03	0.04	0.04	0.04
26	0.24	0.06	0.10	5.5	0.97	2.7	---	---	---	0.04	0.04	0.04
27	0.28	0.06	0.12	2.5	0.97	1.6	---	---	---	0.04	0.04	0.04
28	0.15	0.06	0.06	1.8	0.81	1.2	0.04	0.04	0.04	0.04	0.04	0.04
29	0.17	0.06	0.09	2.1	0.77	1.5	0.04	0.04	0.04	0.04	0.04	0.04
30	0.07	0.06	0.06	2.2	0.55	1.5	0.04	0.04	0.04	0.04	0.04	0.04
31	---	---	---	1.4	0.09	0.90	0.04	0.04	0.04	---	---	---
MONTH	0.64	0.05	0.09	9.8	0.04	1.9	---	---	---	---	---	---

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	0.04	0.03	0.04	0.04	0.04	0.04	0.05	0.04	0.05	0.04	0.04	0.04
2	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.04
3	0.04	0.04	0.04	0.04	0.03	0.04	0.05	0.05	0.05	0.04	0.04	0.04
4	0.04	0.04	0.04	0.04	0.03	0.04	0.05	0.05	0.05	3.7	0.04	1.2
5	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	4.2	0.10	1.3
6	0.05	0.04	0.04	0.04	0.04	0.04	0.06	0.05	0.05	3.9	0.04	1.0
7	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	5.0	0.04	2.5
8	0.05	0.04	0.05	0.04	0.04	0.04	0.05	0.04	0.05	4.2	1.5	3.4
9	0.05	0.05	0.05	0.04	0.04	0.04	0.05	0.04	0.04	5.6	2.2	4.4
10	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	7.3	4.9	6.3
11	0.05	0.05	0.05	0.05	0.04	0.05	0.04	0.04	0.04	7.4	6.5	7.2
12	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	7.3	0.89	5.3
13	0.12	0.05	0.06	0.05	0.05	0.05	0.04	0.04	0.04	5.4	0.43	3.0
14	0.06	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.04	4.2	0.07	1.9
15	0.06	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	1.0	0.04	0.29
16	0.06	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.16	0.04	0.05
17	0.06	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.05	0.04	0.04
18	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.04	0.04	0.04
19	0.06	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.09	0.04	0.05
20	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.40	0.04	0.04
21	0.05	0.05	0.05	0.06	0.05	0.05	0.03	0.03	0.03	2.4	0.04	0.79
22	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	2.4	0.04	0.96
23	0.06	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	2.4	0.04	0.82
24	0.06	0.05	0.05	0.05	0.04	0.05	0.03	0.03	0.03	---	---	---
25	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	2.2	0.08	0.77
26	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.93	0.04	0.11
27	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03	2.2	0.04	0.89
28	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.07	0.04	0.05
29	0.05	0.04	0.05	0.05	0.04	0.05	0.04	0.03	0.04	0.22	0.04	0.06
30	0.04	0.03	0.04	0.05	0.04	0.05	0.43	0.03	0.07	0.63	0.04	0.07
31	0.04	0.04	0.04	---	---	---	0.11	0.04	0.04	0.35	0.04	0.06
MONTH	0.12	0.03	0.05	0.06	0.03	0.05	0.43	0.03	0.04	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	0.05	0.04	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
2	0.05	0.04	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
3	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
4	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.04	0.04
5	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.04
6	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.05	0.04	0.03	0.04
7	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.04
8	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.04	0.04	0.03	0.04
9	0.04	0.04	0.04	0.05	0.04	0.05	0.05	0.04	0.04	0.04	0.03	0.04
10	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.05	0.04	0.04	0.04
11	0.04	0.03	0.03	0.05	0.04	0.04	0.05	0.04	0.05	0.04	0.04	0.04
12	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.04	0.04	0.04
13	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.04	0.04
14	0.03	0.03	0.03	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.04	0.05
15	0.04	0.03	0.03	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
16	0.04	0.03	0.04	0.05	0.04	0.04	---	---	---	0.05	0.05	0.05
17	0.04	0.04	0.04	0.05	0.04	0.04	---	---	---	0.05	0.05	0.05
18	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
19	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
20	0.04	0.04	0.04	0.04	0.04	0.04	---	---	---	0.05	0.05	0.05
21	0.04	0.04	0.04	0.04	0.04	0.04	---	---	---	0.05	0.05	0.05
22	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06	0.05	0.05
23	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.06	0.05	0.05
24	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.05
25	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04
26	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04	0.05	0.04	0.04	0.04
27	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.98	0.04	0.19
28	0.04	0.04	0.04	0.05	0.04	0.04	0.05	0.05	0.05	1.9	0.04	0.52
29	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	1.4	0.35	0.61
30	---	---	---	0.05	0.04	0.04	0.05	0.05	0.05	0.68	0.15	0.34
31	---	---	---	0.05	0.04	0.05	---	---	---	0.23	0.06	0.10
MONTH	0.05	0.03	0.04	0.05	0.04	0.04	---	---	---	1.9	0.03	0.09

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1.2	0.06	0.35	0.06	0.05	0.05	0.38	0.06	0.17	0.04	0.04	0.04
2	1.2	0.08	0.56	0.05	0.05	0.05	0.13	0.05	0.08	0.04	0.03	0.04
3	0.91	0.06	0.49	0.05	0.04	0.05	0.62	0.04	0.09	0.03	0.03	0.03
4	0.50	0.05	0.24	0.05	0.05	0.05	2.8	0.04	0.50	0.03	0.03	0.03
5	0.07	0.05	0.06	0.05	0.04	0.05	4.1	0.04	0.50	0.03	0.03	0.03
6	0.14	0.06	0.07	2.1	0.05	0.45	4.3	0.04	1.3	---	---	---
7	0.06	0.06	0.06	3.7	0.05	2.3	4.5	0.03	1.5	---	---	---
8	0.06	0.06	0.06	2.9	0.07	1.2	1.1	0.03	0.11	0.03	0.03	0.03
9	0.06	0.05	0.05	5.0	0.05	2.3	0.61	0.03	0.05	0.03	0.03	0.03
10	0.05	0.05	0.05	7.3	4.8	6.3	0.44	0.03	0.04	0.03	0.03	0.03
11	0.05	0.05	0.05	8.3	6.7	7.9	0.04	0.03	0.04	0.03	0.03	0.03
12	0.09	0.05	0.06	8.2	2.5	6.8	0.04	0.04	0.04	0.03	0.03	0.03
13	0.07	0.05	0.06	5.6	3.1	4.7	0.08	0.04	0.05	0.03	0.03	0.03
14	0.06	0.05	0.05	8.5	4.5	6.5	0.06	0.04	0.05	0.03	0.03	0.03
15	0.05	0.05	0.05	10.4	7.3	8.8	0.05	0.02	0.03	0.03	0.03	0.03
16	0.06	0.05	0.05	11.5	10.2	11.0	0.03	0.03	0.03	0.03	0.03	0.03
17	0.05	0.05	0.05	11.5	9.9	11.2	0.03	0.03	0.03	0.03	0.03	0.03
18	0.05	0.05	0.05	11.2	4.3	8.1	0.03	0.03	0.03	0.04	0.03	0.04
19	0.05	0.05	0.05	7.6	3.8	6.0	---	---	---	0.04	0.04	0.04
20	0.97	0.05	0.23	7.6	3.9	6.2	---	---	---	0.04	0.04	0.04
21	0.28	0.05	0.10	7.0	2.7	5.0	0.03	0.03	0.03	0.04	0.04	0.04
22	0.09	0.06	0.06	7.5	3.4	6.0	0.03	0.03	0.03	0.04	0.04	0.04
23	0.49	0.06	0.13	6.4	1.8	4.0	0.03	0.03	0.03	0.04	0.04	0.04
24	0.69	0.06	0.16	7.1	0.34	3.7	0.03	0.03	0.03	0.04	0.03	0.04
25	1.0	0.06	0.36	8.1	7.1	7.9	0.03	0.03	0.03	0.04	0.03	0.04
26	0.42	0.06	0.14	8.1	7.0	7.7	---	---	---	0.04	0.04	0.04
27	0.30	0.06	0.14	7.6	4.9	6.8	---	---	---	0.04	0.04	0.04
28	0.16	0.06	0.07	6.8	1.8	5.2	0.04	0.04	0.04	0.04	0.04	0.04
29	0.20	0.06	0.09	3.5	1.1	2.1	0.04	0.04	0.04	0.04	0.04	0.04
30	0.07	0.06	0.06	2.4	1.1	1.8	0.04	0.04	0.04	0.04	0.04	0.04
31	---	---	---	2.1	0.10	1.2	0.04	0.04	0.04	---	---	---
MONTH	1.2	0.05	0.13	11.5	0.04	4.6	---	---	---	---	---	---

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	6.8	6.9	8.0	6.6	6.8	7.5	6.9	7.1	6.7	6.6	6.6
2	7.6	6.9	7.1	7.1	6.6	6.7	7.3	7.0	7.1	6.8	6.6	6.7
3	8.3	6.8	7.2	7.1	6.6	6.7	7.1	7.0	7.0	6.6	6.4	6.6
4	7.7	6.8	7.1	7.0	6.6	6.8	7.0	6.9	6.9	6.5	6.4	6.4
5	6.9	6.7	6.8	6.9	6.6	6.7	6.9	6.6	6.8	6.4	6.4	6.4
6	7.0	6.8	6.8	7.1	6.6	6.8	6.8	6.6	6.7	---	---	---
7	7.0	6.7	6.8	8.4	6.7	7.0	6.8	6.6	6.6	---	---	---
8	7.0	6.6	6.7	8.1	6.6	7.0	6.6	6.5	6.5	6.4	6.3	6.4
9	6.7	6.5	6.6	8.3	6.8	7.0	6.5	6.5	6.5	6.4	6.4	6.4
10	6.6	6.3	6.5	7.6	6.6	6.9	6.6	6.5	6.5	6.4	6.4	6.4
11	6.7	6.2	6.4	7.2	6.6	6.8	7.1	6.4	6.6	6.5	6.4	6.5
12	6.7	6.3	6.5	7.8	6.7	6.9	7.2	6.5	6.7	6.6	6.5	6.5
13	6.8	6.4	6.6	7.6	6.7	7.0	6.9	6.6	6.7	6.6	6.5	6.5
14	6.6	6.4	6.5	7.8	6.7	7.1	6.9	6.6	6.7	6.5	6.5	6.5
15	7.1	6.5	6.6	7.8	6.7	7.0	6.6	6.4	6.5	6.5	6.5	6.5
16	6.9	6.6	6.7	7.4	6.6	6.8	6.4	6.3	6.3	6.5	6.3	6.4
17	6.9	6.6	6.8	8.4	6.7	7.2	6.3	6.2	6.2	6.6	6.4	6.5
18	7.5	6.7	6.9	7.7	6.8	7.1	6.2	6.1	6.2	6.6	6.4	6.5
19	7.3	6.8	7.0	7.5	6.9	7.0	---	---	---	6.7	6.5	6.6
20	7.4	6.7	7.0	7.8	7.0	7.2	---	---	---	6.7	6.6	6.6
21	7.3	6.8	7.0	7.4	7.0	7.2	6.4	6.3	6.3	6.6	6.6	6.6
22	7.1	6.8	6.9	8.2	6.9	7.3	6.4	6.2	6.3	6.7	6.6	6.6
23	7.3	6.8	7.0	7.7	7.0	7.3	6.3	6.2	6.3	6.7	6.6	6.7
24	7.5	6.9	7.1	7.7	7.1	7.3	6.3	6.2	6.3	6.8	6.7	6.8
25	7.5	6.9	7.0	8.2	6.9	7.3	6.3	6.2	6.2	6.9	6.8	6.8
26	7.2	6.9	7.0	8.3	7.1	7.5	---	---	---	6.9	6.8	6.8
27	7.5	6.9	7.1	8.5	7.3	7.7	---	---	---	7.0	6.9	6.9
28	7.1	6.9	6.9	8.6	7.2	7.7	6.5	6.4	6.4	7.0	6.9	7.0
29	7.1	6.9	7.0	8.6	7.0	7.6	6.7	6.5	6.6	7.0	6.8	7.0
30	7.1	6.7	6.9	8.7	7.1	7.8	6.8	6.6	6.7	7.2	6.9	7.0
31	---	---	---	8.6	7.0	7.6	6.8	6.6	6.7	---	---	---
MONTH	8.3	6.2	6.8	8.7	6.6	7.1	---	---	---	---	---	---

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.0	6.7	6.8	7.0	6.6	6.7	7.2	6.9	7.0	6.6	6.5	6.6
2	7.2	6.8	7.0	6.9	6.6	6.7	7.2	6.9	7.0	6.7	6.6	6.6
3	7.0	6.8	6.9	6.9	6.6	6.7	7.1	6.9	7.0	6.6	6.4	6.5
4	7.4	6.8	7.0	6.8	6.6	6.7	7.0	6.9	6.9	6.4	6.3	6.4
5	6.8	6.7	6.8	6.7	6.6	6.6	6.9	6.6	6.7	6.3	6.3	6.3
6	6.9	6.7	6.8	7.0	6.6	6.7	6.9	6.6	6.7	---	---	---
7	6.8	6.7	6.8	6.9	6.5	6.6	6.8	6.6	6.7	---	---	---
8	6.8	6.5	6.7	7.0	6.6	6.8	6.7	6.4	6.5	6.3	6.2	6.3
9	6.7	6.5	6.6	7.0	6.5	6.7	6.5	6.4	6.4	6.3	6.3	6.3
10	6.6	6.4	6.5	6.9	6.7	6.8	6.5	6.4	6.4	6.4	6.3	6.3
11	6.6	6.5	6.5	6.9	6.7	6.8	6.4	6.3	6.4	6.4	6.4	6.4
12	7.0	6.5	6.7	6.9	6.6	6.8	6.6	6.4	6.4	6.4	6.4	6.4
13	6.9	6.7	6.7	6.8	6.6	6.6	6.8	6.5	6.6	6.5	6.4	6.4
14	6.9	6.7	6.8	6.9	6.6	6.8	6.8	6.4	6.6	6.4	6.4	6.4
15	6.8	6.8	6.8	7.0	6.7	6.8	6.5	6.2	6.4	6.4	6.3	6.4
16	6.9	6.7	6.8	6.9	6.8	6.9	6.3	6.1	6.2	6.4	6.3	6.4
17	6.9	6.8	6.8	6.9	6.8	6.9	6.2	6.0	6.1	6.6	6.4	6.5
18	7.1	6.8	6.9	6.9	6.6	6.8	6.0	6.0	6.0	6.6	6.4	6.5
19	7.0	6.8	6.9	6.9	6.6	6.8	---	---	---	6.7	6.6	6.7
20	7.5	6.8	7.0	7.3	6.6	6.8	---	---	---	6.7	6.6	6.6
21	7.1	6.8	6.9	7.2	6.7	6.9	6.2	6.1	6.2	6.6	6.6	6.6
22	7.1	6.9	6.9	7.0	6.6	6.8	6.2	6.2	6.2	6.7	6.6	6.6
23	7.0	6.9	6.9	7.3	6.7	6.9	6.2	6.2	6.2	6.7	6.6	6.7
24	7.4	7.0	7.2	7.1	6.8	6.9	6.2	6.2	6.2	6.9	6.7	6.8
25	7.4	6.9	7.1	6.9	6.8	6.8	6.2	6.1	6.2	6.9	6.8	6.9
26	7.4	7.0	7.1	6.9	6.8	6.9	---	---	---	6.9	6.8	6.8
27	7.4	6.9	7.1	6.9	6.8	6.9	---	---	---	6.9	6.8	6.8
28	7.3	6.8	6.9	7.1	6.8	6.9	6.4	6.4	6.4	6.9	6.8	6.9
29	7.0	6.7	6.9	8.5	6.9	7.4	6.6	6.4	6.5	6.9	6.8	6.9
30	7.0	6.7	6.8	8.6	7.1	7.6	6.7	6.5	6.6	7.0	6.8	6.9
31	---	---	---	7.9	7.0	7.5	6.6	6.5	6.5	---	---	---
MONTH	7.5	6.4	6.9	8.6	6.5	6.9	---	---	---	---	---	---

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.2	20.4	20.8	15.3	14.6	14.9	11.3	10.6	11.0	7.5	6.7	7.0
2	21.0	19.8	20.2	15.6	14.7	15.1	11.0	9.9	10.3	7.7	6.9	7.3
3	19.9	18.8	19.3	16.1	15.1	15.5	9.9	9.1	9.4	8.7	7.3	7.9
4	19.7	18.8	19.3	16.8	15.8	16.3	9.1	8.4	8.8	9.9	8.3	8.9
5	19.9	18.7	19.2	18.1	16.6	17.2	8.6	8.0	8.4	12.0	9.3	10.3
6	19.8	18.6	19.1	18.7	17.4	17.9	8.0	7.4	7.7	11.4	10.4	10.9
7	19.6	18.6	19.1	18.8	18.3	18.6	7.6	6.9	7.2	10.4	8.5	9.3
8	19.6	18.7	19.1	18.7	17.9	18.3	7.3	6.7	6.9	9.4	8.7	9.1
9	20.4	18.9	19.4	17.9	16.5	17.0	7.0	6.3	6.6	9.1	7.4	8.2
10	19.8	19.4	19.6	16.7	15.8	16.2	7.7	6.2	6.8	8.4	5.5	6.9
11	19.6	19.2	19.4	17.0	15.5	16.0	8.6	7.0	7.8	7.0	5.0	5.6
12	20.2	19.1	19.5	16.6	15.3	15.9	8.9	8.4	8.8	6.5	4.3	5.1
13	21.4	19.7	20.3	16.2	13.4	15.2	8.8	8.2	8.5	5.6	4.6	5.0
14	20.6	20.2	20.4	13.8	11.8	12.7	8.4	7.4	8.0	5.6	4.4	4.9
15	20.2	19.2	19.6	12.8	11.8	12.4	7.4	7.0	7.2	5.9	4.4	5.0
16	19.7	18.5	19.1	14.1	12.7	13.4	7.1	6.7	6.9	5.2	4.3	4.7
17	20.1	18.7	19.4	14.3	13.4	13.8	7.4	6.8	7.2	5.2	4.0	4.8
18	19.7	18.9	19.1	14.5	13.6	14.1	7.2	6.6	6.9	6.3	5.0	5.4
19	18.9	18.0	18.4	15.6	14.1	14.6	6.6	6.4	6.5	6.4	5.5	5.9
20	19.3	17.8	18.5	14.7	13.9	14.3	6.4	5.7	6.1	5.6	4.8	5.2
21	18.9	17.7	18.3	15.1	14.1	14.5	5.7	5.1	5.5	5.4	4.8	5.1
22	18.6	17.8	18.2	15.7	14.6	14.8	5.3	4.9	5.1	5.8	4.6	5.0
23	17.9	17.1	17.4	15.1	14.1	14.4	5.5	4.9	5.2	5.1	4.3	4.8
24	17.2	16.1	16.7	14.6	13.4	14.0	6.8	5.5	6.2	---	---	---
25	16.5	16.1	16.3	14.2	13.3	13.6	7.5	6.8	7.1	5.1	3.4	4.2
26	17.1	16.4	16.7	13.3	12.8	13.0	7.4	6.9	7.2	3.6	3.1	3.4
27	17.9	16.9	17.3	12.9	12.5	12.7	7.6	6.8	7.2	4.0	3.0	3.3
28	17.7	17.1	17.5	14.1	12.6	13.2	7.3	6.6	6.9	3.0	2.2	2.7
29	17.1	16.0	16.6	13.0	10.6	11.5	6.8	6.3	6.5	3.0	2.0	2.5
30	16.2	15.2	15.7	11.5	10.1	10.7	7.3	6.3	6.8	3.4	2.5	2.9
31	15.7	14.7	15.2	---	---	---	7.3	6.5	6.9	3.5	2.5	3.0
MONTH	21.4	14.7	18.5	18.8	10.1	14.7	11.3	4.9	7.3	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	3.7	2.8	3.2	8.0	6.4	7.2	15.8	14.8	15.3	21.6	21.0	21.3
2	4.3	2.9	3.3	10.2	7.8	8.8	15.0	14.5	14.7	22.2	20.8	21.4
3	4.0	3.4	3.7	11.4	9.5	10.3	14.8	14.2	14.5	21.9	20.2	21.0
4	4.7	3.4	3.8	13.3	11.1	12.1	15.2	13.9	14.5	20.3	19.0	19.6
5	4.7	3.8	4.3	15.0	12.8	13.7	14.6	12.5	13.4	19.6	17.8	18.6
6	6.3	4.6	5.3	16.3	14.4	15.2	14.4	12.8	13.6	20.8	17.7	18.6
7	8.1	6.3	7.0	16.3	15.2	15.7	15.7	13.8	14.5	20.6	18.4	19.4
8	7.3	6.5	6.8	15.6	14.3	14.9	16.7	14.8	15.6	21.3	19.5	20.3
9	7.3	6.6	6.9	15.0	13.6	14.2	17.9	15.6	16.4	22.8	20.3	21.2
10	7.6	7.2	7.4	14.4	11.8	13.5	17.5	16.4	16.7	23.9	21.2	22.3
11	7.8	7.0	7.3	12.6	11.4	12.1	18.0	16.7	17.2	24.8	22.3	23.3
12	7.3	6.8	7.1	13.1	11.9	12.5	17.6	16.9	17.2	24.7	23.1	23.9
13	8.2	6.7	7.2	13.0	11.8	12.4	18.5	17.2	17.7	26.3	23.6	24.5
14	7.2	7.0	7.1	12.6	11.8	12.2	18.1	16.5	17.3	27.1	24.0	25.2
15	7.2	6.7	7.0	12.7	12.2	12.4	17.2	15.8	16.4	27.0	24.2	25.3
16	7.4	6.3	6.7	12.9	12.4	12.6	---	---	---	27.0	24.8	25.7
17	6.4	5.8	6.1	12.7	11.9	12.2	---	---	---	28.0	25.2	26.1
18	6.4	5.5	5.9	12.5	11.6	12.0	18.4	16.1	17.0	28.3	25.5	26.7
19	6.2	5.2	5.6	13.6	11.7	12.5	19.4	16.8	17.9	27.8	25.5	26.5
20	6.8	5.5	6.1	13.3	11.8	12.3	---	---	---	28.6	26.1	27.1
21	8.7	6.4	7.3	13.2	12.0	12.5	---	---	---	29.5	27.2	28.0
22	8.8	7.5	8.0	12.9	11.9	12.4	22.2	20.3	21.2	29.4	27.6	28.4
23	9.3	8.2	8.8	13.2	11.9	12.3	23.6	21.0	22.1	29.4	27.2	27.9
24	9.1	8.8	8.9	13.2	11.7	12.4	23.3	22.1	22.5	28.1	25.8	26.8
25	9.4	8.5	8.9	14.5	12.2	13.1	22.4	21.7	22.0	28.6	24.7	26.1
26	8.9	7.4	8.3	14.6	13.0	13.7	23.7	22.1	22.7	28.0	25.6	26.5
27	7.7	7.1	7.5	15.4	13.6	14.4	22.9	21.6	22.3	28.4	26.4	27.3
28	7.5	6.3	6.8	15.9	14.9	15.2	22.0	19.7	21.0	28.3	27.2	27.8
29	7.4	6.0	6.6	15.5	14.4	14.9	22.2	20.8	21.4	28.6	27.1	27.8
30	---	---	---	15.6	14.6	15.1	22.6	20.8	21.6	27.7	26.7	27.1
31	---	---	---	15.9	15.2	15.5	---	---	---	27.6	26.4	27.0
MONTH	9.4	2.8	6.5	16.3	6.4	12.9	---	---	---	29.5	17.7	24.5

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.9	26.8	27.3	29.6	26.5	27.3	30.3	28.9	29.6	26.9	25.9	26.5
2	28.8	26.5	27.4	28.4	26.8	27.4	29.9	28.8	29.4	26.3	25.1	25.5
3	29.6	27.2	27.9	29.0	26.2	27.4	28.8	28.0	28.4	25.8	24.8	25.1
4	28.9	27.0	27.9	29.6	27.3	28.2	29.6	28.0	28.5	25.6	24.5	24.9
5	27.7	26.4	27.0	30.3	27.5	28.4	29.1	28.0	28.5	25.3	24.3	24.8
6	27.4	26.1	26.8	31.2	28.7	29.5	28.5	27.2	27.8	---	---	---
7	28.1	26.4	26.8	31.9	29.5	30.3	27.4	26.0	26.6	---	---	---
8	28.2	26.6	27.1	32.4	29.6	30.5	26.8	25.4	26.1	25.2	24.1	24.5
9	28.7	26.7	27.4	31.6	29.6	30.3	26.1	24.8	25.4	25.9	24.6	25.1
10	29.2	26.6	27.4	31.6	29.3	30.5	26.9	24.6	25.5	25.9	25.0	25.4
11	29.1	26.8	27.6	30.8	29.7	30.2	27.6	24.9	26.0	25.5	25.0	25.2
12	28.4	26.8	27.2	31.6	29.5	30.3	27.4	25.3	26.1	25.8	24.5	25.0
13	26.9	25.7	26.2	32.0	29.9	30.8	26.0	25.5	25.8	25.3	24.2	24.5
14	26.9	25.7	26.3	32.5	30.2	31.1	25.8	24.7	25.2	24.4	23.5	23.9
15	28.3	26.1	27.0	31.2	29.4	30.3	24.8	22.3	23.6	24.7	23.2	23.8
16	28.0	26.9	27.4	30.6	28.6	29.4	23.6	22.0	22.8	24.3	23.3	23.7
17	28.2	26.6	27.3	30.6	28.9	29.6	24.1	22.3	23.1	25.2	23.5	24.1
18	30.0	26.8	28.1	30.2	28.8	29.5	24.2	22.5	23.2	24.4	22.9	23.6
19	30.2	27.8	28.6	30.3	28.9	29.5	---	---	---	23.1	22.1	22.4
20	29.3	28.1	28.7	31.2	28.7	29.6	---	---	---	22.6	22.1	22.3
21	28.7	27.2	27.8	30.6	28.9	29.7	25.2	24.3	24.7	22.6	21.5	22.0
22	29.4	27.3	28.2	31.1	29.5	30.1	25.1	24.6	24.8	22.3	21.0	21.7
23	30.3	28.3	29.1	30.3	28.7	29.2	25.6	24.4	24.9	22.3	21.0	21.6
24	29.4	28.5	28.9	29.6	28.6	29.0	25.5	24.4	24.9	22.5	21.3	21.8
25	30.0	28.3	29.0	30.2	28.5	29.1	25.8	24.3	24.9	22.7	21.3	21.7
26	29.3	28.2	28.7	30.3	28.8	29.4	---	---	---	22.8	21.4	21.9
27	28.8	27.8	28.2	30.7	28.8	29.7	---	---	---	22.9	21.9	22.3
28	28.8	28.0	28.3	30.0	28.8	29.2	27.0	25.5	26.0	23.2	22.4	22.7
29	28.7	27.5	28.1	29.9	28.2	28.9	27.9	26.1	26.9	23.9	22.1	22.7
30	28.6	27.2	27.9	30.3	28.7	29.4	27.0	26.0	26.5	24.4	22.7	23.4
31	---	---	---	30.4	29.1	29.6	27.3	25.6	26.2	---	---	---
MONTH	30.3	25.7	27.7	32.5	26.2	29.5	---	---	---	---	---	---

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.1	20.3	20.7	15.3	14.6	14.9	11.3	10.6	11.0	7.4	6.4	6.9
2	21.0	19.7	20.1	15.6	14.7	15.1	11.1	10.0	10.4	7.7	6.8	7.2
3	19.9	18.5	19.2	16.0	15.0	15.5	10.0	9.2	9.5	8.5	7.3	7.8
4	19.6	18.8	19.2	16.8	15.9	16.2	9.3	8.6	8.9	9.4	8.3	8.6
5	19.6	18.7	19.1	17.6	16.6	17.0	8.7	8.1	8.5	10.9	8.7	9.8
6	19.4	18.6	18.9	18.3	17.4	17.8	8.1	7.6	7.9	11.0	9.1	10.4
7	19.4	18.6	18.9	18.8	18.3	18.6	7.7	7.1	7.3	10.8	8.8	9.6
8	19.6	18.7	19.1	18.7	17.6	18.3	7.5	6.9	7.1	9.3	8.7	9.0
9	19.8	18.9	19.2	17.6	16.4	16.9	7.1	6.5	6.7	8.9	8.4	8.8
10	19.8	19.4	19.6	16.5	15.4	16.0	7.7	6.4	6.9	8.9	8.4	8.8
11	19.6	19.3	19.4	16.3	15.5	15.8	8.4	7.2	7.8	8.6	8.0	8.3
12	19.7	19.1	19.3	16.4	15.3	15.8	8.9	8.4	8.8	8.3	5.0	7.2
13	21.1	19.7	20.2	15.9	13.3	15.1	8.8	7.9	8.3	7.2	5.0	6.3
14	20.7	20.2	20.4	13.7	11.8	12.7	8.4	7.4	8.0	6.7	4.5	5.7
15	20.3	19.0	19.6	12.6	11.9	12.3	7.4	7.0	7.2	5.8	4.3	5.0
16	19.4	18.4	18.9	13.8	12.5	13.1	7.1	6.7	6.9	5.1	4.3	4.7
17	19.7	18.7	19.1	14.1	13.4	13.7	7.4	6.8	7.2	5.2	3.8	4.7
18	19.7	18.9	19.2	14.3	13.6	14.0	7.1	6.6	6.9	6.0	4.9	5.3
19	18.9	17.9	18.3	15.7	14.1	14.6	6.7	6.4	6.5	6.3	5.4	5.8
20	18.8	17.8	18.2	14.7	13.8	14.4	6.4	5.8	6.1	5.5	4.8	5.1
21	18.8	17.7	18.3	15.2	14.0	14.5	5.8	5.2	5.5	6.3	4.7	5.5
22	18.6	17.8	18.2	15.2	14.5	14.8	5.3	4.9	5.1	6.3	4.6	5.4
23	17.9	17.0	17.3	14.9	14.2	14.4	5.6	4.9	5.2	6.1	4.4	5.2
24	17.2	16.1	16.7	14.4	13.5	13.9	6.8	5.5	6.2	---	---	---
25	16.6	16.0	16.3	14.1	13.4	13.6	7.5	6.8	7.1	5.6	3.8	4.9
26	17.1	16.4	16.7	13.4	13.0	13.1	7.5	6.9	7.2	4.8	3.0	3.4
27	17.7	17.0	17.2	13.0	12.6	12.8	7.6	6.8	7.2	4.5	2.9	3.6
28	17.7	17.1	17.5	14.2	12.8	13.3	7.2	6.6	6.9	2.9	2.1	2.6
29	17.1	16.1	16.5	13.1	10.7	11.6	6.6	6.3	6.4	2.9	1.9	2.4
30	16.2	15.1	15.6	11.6	10.1	10.8	7.2	6.4	6.8	3.5	2.4	2.8
31	15.5	14.8	15.1	---	---	---	7.3	6.4	6.8	3.4	2.4	2.9
MONTH	21.1	14.8	18.5	18.8	10.1	14.7	11.3	4.9	7.4	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	3.6	2.6	3.1	8.0	6.2	7.1	15.8	14.8	15.3	21.6	21.0	21.2
2	4.1	2.8	3.3	9.7	7.7	8.7	15.0	14.2	14.7	22.1	20.8	21.2
3	3.9	3.3	3.6	11.3	9.5	10.2	14.8	14.1	14.5	21.6	20.2	20.9
4	4.6	3.3	3.7	12.9	11.1	12.0	15.1	13.9	14.5	20.2	18.8	19.5
5	4.6	3.7	4.2	14.6	12.8	13.6	14.6	12.3	13.4	19.1	17.9	18.4
6	6.3	4.5	5.2	16.0	14.4	15.1	14.3	12.8	13.4	19.6	17.7	18.4
7	7.7	6.3	6.8	16.2	15.2	15.6	15.5	13.7	14.3	20.2	18.2	19.2
8	7.1	6.2	6.6	15.7	14.3	14.9	16.2	14.9	15.4	21.2	19.3	20.2
9	7.2	6.5	6.8	14.7	13.1	13.9	17.9	15.5	16.2	22.1	20.2	21.0
10	7.4	7.0	7.3	14.4	11.8	13.5	17.5	16.4	16.7	22.9	21.2	21.8
11	7.6	6.9	7.2	12.6	11.2	12.1	17.9	16.7	17.2	24.0	22.2	22.7
12	7.2	6.9	7.1	13.1	11.9	12.4	17.6	16.9	17.2	24.1	23.1	23.5
13	7.7	6.8	7.1	12.9	11.6	12.4	18.3	17.1	17.7	24.3	23.5	23.7
14	7.2	7.0	7.1	12.6	11.7	12.2	18.0	16.6	17.4	24.6	23.9	24.1
15	7.2	6.7	7.0	12.6	12.1	12.4	16.9	15.5	16.3	26.0	24.2	24.9
16	7.4	6.3	6.7	12.8	12.4	12.6	---	---	---	26.4	24.6	25.3
17	6.4	5.8	6.1	12.7	11.9	12.2	---	---	---	26.5	25.0	25.4
18	6.4	5.5	5.8	12.5	11.3	11.9	18.2	16.1	16.9	26.8	25.4	25.8
19	6.2	5.2	5.6	13.5	11.7	12.4	19.1	16.9	17.8	26.8	25.4	26.0
20	6.8	5.5	6.1	13.2	11.8	12.2	---	---	---	27.7	25.9	26.7
21	8.4	6.4	7.2	13.2	12.1	12.5	---	---	---	28.4	27.1	27.5
22	8.8	7.5	7.9	12.9	11.7	12.3	22.0	20.2	20.9	28.8	27.6	28.0
23	9.4	8.2	8.8	12.7	11.8	12.2	22.6	20.9	21.5	29.2	27.0	27.6
24	9.1	8.8	8.9	13.2	11.5	12.3	23.2	21.9	22.4	27.2	25.7	26.2
25	9.3	8.5	8.9	13.9	12.1	12.8	22.4	21.5	22.0	26.1	24.5	24.9
26	8.9	7.3	8.3	14.3	12.8	13.4	23.2	22.0	22.5	27.1	25.3	25.8
27	7.7	7.1	7.5	15.3	13.5	14.2	22.8	21.6	22.3	27.7	26.4	27.0
28	7.4	6.3	6.8	15.9	14.8	15.1	21.6	19.5	20.5	27.8	27.1	27.5
29	7.1	6.0	6.6	15.5	14.3	14.8	22.0	20.4	21.0	28.3	27.1	27.7
30	---	---	---	15.6	14.3	15.0	22.1	20.7	21.1	27.7	26.6	27.0
31	---	---	---	15.9	15.1	15.4	---	---	---	27.6	26.3	26.7
MONTH	9.4	2.6	6.5	16.2	6.2	12.8	---	---	---	29.2	17.7	24.1

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.6	26.5	26.8	28.1	26.5	27.0	30.1	28.9	29.4	26.8	25.8	26.5
2	27.8	26.6	27.0	27.7	26.8	27.1	29.8	28.7	29.3	26.1	25.1	25.4
3	27.8	26.9	27.2	28.2	26.3	26.8	28.7	28.0	28.4	25.3	24.8	25.0
4	28.2	27.0	27.8	28.8	27.1	27.8	29.0	27.9	28.3	25.2	24.4	24.7
5	27.3	26.4	26.8	28.9	27.4	27.9	28.6	27.8	28.3	25.2	24.2	24.6
6	27.1	26.1	26.5	30.0	28.7	29.1	28.6	27.1	27.9	---	---	---
7	27.0	26.3	26.5	30.0	28.8	29.2	27.9	26.0	26.9	---	---	---
8	27.4	26.4	26.7	30.4	29.3	29.8	27.0	25.4	25.9	24.9	24.1	24.4
9	27.5	26.6	27.0	30.2	29.1	29.5	26.0	24.7	25.1	25.5	24.6	25.0
10	28.0	26.6	27.0	29.1	28.5	28.8	25.6	24.5	24.9	25.8	25.0	25.3
11	27.6	26.8	27.1	29.1	28.4	28.6	25.6	24.8	25.0	25.4	25.0	25.2
12	27.8	26.8	27.2	30.5	28.5	29.0	26.4	25.2	25.6	25.4	24.5	24.8
13	27.0	25.4	26.1	30.4	29.4	29.7	25.9	25.4	25.7	24.9	24.2	24.4
14	26.7	25.6	25.9	29.8	28.9	29.2	25.7	24.7	25.2	24.2	23.5	23.9
15	26.9	26.1	26.3	29.0	28.4	28.7	24.8	22.2	23.4	24.2	23.2	23.6
16	27.3	26.7	26.9	28.5	28.2	28.3	23.4	22.0	22.5	24.0	23.2	23.5
17	27.3	26.6	26.9	28.5	28.2	28.2	23.4	22.3	22.8	25.1	23.4	24.0
18	28.6	26.7	27.4	29.6	28.2	28.8	23.9	22.5	23.1	24.1	22.8	23.5
19	28.3	27.8	28.0	29.6	28.7	29.0	---	---	---	23.0	21.9	22.2
20	29.0	28.1	28.5	30.0	28.6	29.0	---	---	---	22.4	22.0	22.2
21	28.2	27.0	27.4	30.0	28.8	29.2	25.2	24.2	24.7	22.3	21.3	21.9
22	28.4	27.3	27.8	29.9	28.8	29.2	25.0	24.6	24.8	22.1	21.0	21.5
23	29.0	28.1	28.4	29.9	28.6	29.3	25.4	24.4	24.8	22.1	20.9	21.4
24	29.0	28.4	28.6	28.8	28.6	28.7	25.2	24.4	24.8	22.0	21.1	21.5
25	29.0	28.1	28.5	28.6	28.5	28.5	25.4	24.3	24.8	22.0	21.1	21.4
26	29.0	28.2	28.6	28.7	28.5	28.6	---	---	---	22.2	21.2	21.6
27	28.7	27.6	28.1	28.8	28.6	28.6	---	---	---	22.6	21.7	22.0
28	28.5	27.9	28.1	29.1	28.6	28.8	26.8	25.5	25.8	22.9	22.2	22.5
29	28.5	27.4	27.8	29.9	28.4	29.0	27.7	26.1	26.7	22.5	21.9	22.1
30	28.2	27.2	27.7	30.2	28.9	29.4	27.0	25.9	26.5	24.1	22.2	23.1
31	---	---	---	30.0	29.3	29.6	26.8	25.6	26.0	---	---	---
MONTH	29.0	25.4	27.4	30.5	26.3	28.7	---	---	---	---	---	---

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	2.4	1.6	2.1	7.0	6.2	6.7	8.5	8.1	8.3	10.3	10.0	10.2
2	3.4	2.0	2.7	7.2	6.4	7.0	9.1	8.4	8.7	10.2	9.8	10.0
3	4.1	2.9	3.6	7.2	6.3	7.0	8.9	8.5	8.7	10.0	9.7	9.9
4	4.9	3.7	4.3	6.9	6.2	6.6	9.2	8.7	8.9	9.9	9.4	9.7
5	5.0	4.2	4.6	6.7	5.8	6.3	9.5	8.6	9.1	9.8	9.1	9.6
6	5.3	4.5	4.9	6.5	5.7	6.2	10.1	9.2	9.6	9.3	8.7	9.1
7	5.2	4.6	4.9	6.4	5.6	6.0	10.1	9.4	9.8	9.3	8.3	8.9
8	5.3	4.8	5.0	6.1	5.3	5.8	10.0	9.7	9.8	8.6	8.3	8.4
9	5.7	4.9	5.2	6.6	5.6	6.0	10.3	9.7	10	9.0	8.2	8.6
10	5.6	5.2	5.4	6.2	5.6	5.9	10.6	9.8	10.2	9.8	5.8	9.0
11	6.0	5.5	5.6	6.1	5.0	5.7	---	---	---	10.0	6.6	9.4
12	5.9	5.3	5.5	7.2	5.5	6.4	---	---	---	11.9	9.5	10.1
13	6.1	5.0	5.4	8.8	6.6	7.5	---	---	---	11.1	10.1	10.6
14	6.2	5.1	5.4	9.3	8.3	8.7	---	---	---	11.4	9.8	10.8
15	7.0	4.9	5.7	8.7	8.2	8.4	---	---	---	11.4	10.6	11.0
16	6.4	5.7	6.0	8.2	7.7	7.9	---	---	---	11.3	10.7	11.1
17	6.2	5.5	5.7	7.7	7.2	7.5	---	---	---	11.3	10.8	11.1
18	6.4	5.7	5.9	7.8	7.4	7.6	---	---	---	11.2	10.3	10.9
19	6.5	6.0	6.3	8.2	7.6	7.9	10.2	9.9	10.0	11.6	10.4	10.8
20	6.7	6.3	6.5	8.1	6.5	7.7	10.2	10.0	10.1	11.3	10.8	11.1
21	7.0	6.5	6.7	7.7	6.7	7.3	10.5	10.1	10.3	11.4	10.8	11.0
22	7.6	6.8	7.1	7.1	6.2	6.7	10.7	10.4	10.5	11.4	10.8	11.1
23	7.9	7.3	7.5	7.5	6.5	7.2	10.7	10.6	10.6	11.7	10.8	11.3
24	8.8	7.2	7.9	8.0	6.8	7.6	10.7	10.2	10.4	---	---	---
25	8.4	7.1	7.7	8.1	7.3	7.7	10.2	9.8	10.0	12.2	11.3	11.8
26	7.6	6.7	7.2	7.9	7.0	7.7	10.1	9.8	9.9	12.2	11.5	11.9
27	7.5	6.7	7.0	7.8	6.8	7.5	10.0	9.8	9.9	12.2	10.8	11.8
28	7.2	6.7	6.9	8.2	7.3	7.7	10.3	9.6	10.0	12.8	11.7	12.3
29	7.5	6.4	7.0	9.4	8.1	8.7	10.6	9.6	10.2	12.8	12.2	12.5
30	7.2	5.6	6.4	9.3	8.4	8.7	10.7	10.1	10.5	12.9	12.3	12.7
31	6.8	5.4	6.2	---	---	---	10.6	10.2	10.4	12.9	12.3	12.6
MONTH	8.8	1.6	5.8	9.4	5.0	7.2	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	12.7	12.2	12.5	11.4	11.1	11.2	9.2	7.8	8.3	6.9	6.2	6.5
2	12.7	12.3	12.5	11.2	10.7	11.1	9.6	8.2	8.7	7.2	6.4	6.8
3	13.4	12.2	12.5	10.8	10.3	10.6	---	---	---	7.1	6.2	6.8
4	12.9	12.3	12.6	10.3	9.7	10.0	---	---	---	6.6	6.0	6.3
5	12.9	12.3	12.6	9.7	9.1	9.4	---	---	---	6.7	5.3	6.2
6	12.8	11.7	12.2	9.2	8.6	9.0	---	---	---	6.8	5.8	6.4
7	12.5	11.5	11.9	9.0	8.3	8.6	---	---	---	6.6	6.2	6.4
8	12.0	11.2	11.6	9.1	7.9	8.4	---	---	---	6.4	6.2	6.3
9	11.5	10.8	11.1	8.7	8.1	8.3	---	---	---	6.3	5.8	6.1
10	11.2	10.6	10.9	9.0	8.1	8.4	---	---	---	6.1	5.6	5.9
11	11.2	10.7	11.0	9.6	8.5	9.0	---	---	---	6.4	5.5	5.8
12	11.3	10.6	10.9	9.6	9.0	9.3	---	---	---	6.2	5.7	5.8
13	11.0	10.6	10.8	9.8	9.1	9.4	---	---	---	6.7	5.4	5.8
14	10.9	10.6	10.8	10.2	9.1	9.6	---	---	---	7.1	5.4	6.0
15	11.0	10.6	10.8	9.6	8.8	9.2	---	---	---	7.6	5.3	6.1
16	11.2	10.9	11.0	9.6	8.7	9.2	---	---	---	7.5	5.6	6.2
17	11.5	10.9	11.2	9.6	8.8	9.2	---	---	---	8.4	5.5	6.5
18	11.7	11.1	11.4	9.3	8.4	9.0	---	---	---	8.7	5.5	6.6
19	11.9	11.6	11.7	10.0	8.8	9.3	---	---	---	7.6	5.5	6.2
20	11.9	11.6	11.7	9.6	9.0	9.3	---	---	---	8.4	5.5	6.4
21	11.8	11.1	11.4	9.8	8.8	9.4	---	---	---	7.6	5.6	6.5
22	11.2	10.8	11.0	9.6	9.1	9.4	7.2	6.4	6.7	7.2	5.5	6.2
23	10.9	10.4	10.6	9.6	8.7	9.2	7.1	6.5	6.7	6.8	5.1	5.8
24	10.6	9.9	10.3	9.6	8.7	9.1	7.8	6.3	6.7	5.1	3.7	4.3
25	10.7	10.0	10.3	9.9	8.8	9.3	7.2	6.3	6.6	4.3	3.1	3.6
26	10.7	10.2	10.4	9.7	8.8	9.3	7.0	6.2	6.5	4.6	3.1	3.6
27	10.9	10.4	10.6	9.7	8.9	9.4	6.8	6.2	6.5	5.1	3.5	4.1
28	11.0	10.4	10.6	9.7	8.9	9.2	7.2	6.3	6.7	5.8	4.1	4.7
29	11.4	10.6	11.0	9.6	8.9	9.2	7.4	5.8	6.6	7.5	4.4	5.7
30	---	---	---	9.7	8.1	8.7	7.3	5.8	6.3	7.2	5.1	5.6
31	---	---	---	9.2	7.9	8.4	---	---	---	6.0	4.6	5.4
MONTH	13.4	9.9	11.3	11.4	7.9	9.3	---	---	---	8.7	3.1	5.8

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.7	5.0	5.7	9.6	4.0	5.5	7.5	4.9	6.0	4.9	4.5	4.7
2	8.5	5.6	6.4	7.5	4.5	5.6	6.5	4.7	5.4	5.4	4.8	5.0
3	10.1	5.8	7.1	7.8	4.1	5.4	5.1	4.6	4.9	5.3	5.0	5.2
4	9.0	5.3	7.1	7.1	4.9	5.7	5.5	4.4	4.6	5.1	4.8	4.9
5	6.1	5.0	5.4	6.6	4.6	5.3	5.1	4.3	4.6	4.9	4.6	4.7
6	6.8	4.9	5.6	7.3	5.0	5.6	5.2	3.6	4.6	---	---	---
7	7.0	4.6	5.3	10.9	5.3	6.7	5.2	4.7	4.9	---	---	---
8	7.0	4.3	5.3	9.3	4.4	6.6	4.9	4.5	4.7	4.9	4.2	4.4
9	5.7	4.1	4.6	9.7	5.0	6.6	5.1	4.4	4.7	4.4	3.6	4.0
10	6.9	4.4	5.0	8.8	1.3	5.5	5.8	4.4	4.9	4.8	3.9	4.4
11	7.5	4.9	5.5	7.4	0.3	3.4	8.5	4.6	5.5	5.3	4.5	5.0
12	7.2	4.8	5.9	9.6	3.0	5.7	7.9	4.7	5.7	5.4	4.9	5.2
13	7.4	5.5	6.0	9.2	4.6	6.2	6.2	4.8	5.4	5.4	4.9	5.1
14	6.6	5.0	5.7	10.0	3.7	6.6	6.0	4.5	5.0	5.1	4.8	5.0
15	8.4	4.9	5.9	8.9	1.3	5.7	5.4	4.3	5.0	5.0	4.5	4.8
16	7.5	5.4	6.1	8.4	0.3	3.3	5.2	4.5	4.9	4.6	4.3	4.5
17	7.2	5.2	6.0	10.9	0.3	4.9	4.9	4.2	4.6	5.7	4.4	5.0
18	8.6	5.5	6.6	8.6	4.3	6.2	4.7	4.3	4.5	5.4	4.2	5.0
19	8.7	5.6	6.7	8.9	4.2	5.8	---	---	---	6.2	5.1	5.7
20	8.3	5.7	6.8	10.2	4.8	6.8	---	---	---	6.1	5.5	5.8
21	8.8	5.7	6.7	8.9	4.7	6.9	3.9	3.7	3.8	5.8	5.5	5.7
22	8.2	5.3	6.4	9.4	4.5	6.9	3.9	3.6	3.8	6.0	5.4	5.7
23	8.9	5.2	6.5	7.9	5.1	6.5	3.8	3.4	3.6	6.4	5.8	6.1
24	8.3	5.8	6.6	7.8	5.2	6.4	3.5	3.3	3.4	6.4	5.8	6.1
25	8.4	5.5	6.7	8.5	0.6	3.9	3.6	3.2	3.3	6.2	5.9	6.1
26	7.3	5.5	6.3	9.6	0.8	5.7	---	---	---	6.3	5.8	6.0
27	8.4	5.6	6.7	9.4	4.7	7.0	---	---	---	6.4	5.9	6.1
28	7.0	5.3	6.0	9.8	5.6	6.9	4.7	4.0	4.2	6.6	5.8	6.3
29	7.2	4.9	5.9	9.6	5.4	7.0	5.9	4.3	4.9	6.3	4.8	5.9
30	7.1	4.5	5.8	9.5	5.3	7.5	5.8	4.7	5.3	6.9	5.5	6.2
31	---	---	---	8.9	5.7	7.2	5.7	4.4	5.0	---	---	---
MONTH	10.1	4.1	6.1	10.9	0.3	6.0	---	---	---	---	---	---

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	2.4	1.8	2.1	6.9	6.3	6.4	8.9	8.4	8.6	10.0	9.7	9.9
2	3.2	2.0	2.7	6.8	6.4	6.7	9.5	8.6	8.9	9.9	9.5	9.8
3	3.9	2.8	3.5	6.9	5.9	6.7	9.2	8.7	8.9	9.8	9.5	9.7
4	4.9	3.6	4.1	6.6	5.6	6.3	9.6	8.9	9.2	9.7	3.4	7.6
5	5.0	4.4	4.7	6.3	5.2	5.9	9.9	9.0	9.5	9.3	2.8	7.3
6	5.3	4.4	4.9	6.1	5.2	5.9	10.4	9.3	9.8	9.0	3.0	7.4
7	5.3	4.7	5.0	6.0	5.4	5.7	10.3	9.4	9.9	8.9	4.1	7.4
8	5.4	4.9	5.1	5.6	4.5	5.3	10.4	9.9	10.1	8.5	7.2	7.9
9	5.8	4.8	5.1	6.2	4.9	5.6	10.6	9.8	10.2	8.6	6.9	7.6
10	5.7	5.4	5.5	6.1	4.8	5.4	10.8	10.0	10.5	7.2	4.6	6.0
11	6.1	5.5	5.7	5.8	4.7	5.3	---	---	---	5.4	4.6	4.9
12	5.8	5.3	5.5	6.7	5.6	6.1	---	---	---	10.6	4.6	6.4
13	6.0	5.2	5.5	8.1	6.4	7.1	---	---	---	11.3	6.0	8.4
14	6.2	5.2	5.5	8.5	7.7	8.1	---	---	---	12.0	7.2	9.7
15	7.0	4.6	5.8	8.1	7.6	7.7	---	---	---	12.1	10.7	11.5
16	6.3	5.8	6.0	7.6	7.0	7.2	---	---	---	12.0	11.4	11.8
17	5.9	5.5	5.7	7.1	6.6	6.9	---	---	---	12.0	11.6	11.7
18	6.6	5.7	6.1	7.1	6.6	6.9	---	---	---	11.7	11.3	11.6
19	6.5	6.1	6.3	8.0	6.9	7.5	9.9	9.4	9.7	11.8	11.2	11.4
20	6.6	6.2	6.4	8.0	6.5	7.6	10.0	9.7	9.8	11.9	11.1	11.7
21	7.0	6.3	6.8	7.7	6.6	7.2	10.1	9.8	9.9	11.6	9.7	10.8
22	7.4	6.8	7.0	7.1	6.0	6.5	10.3	10.1	10.2	11.8	9.7	10.7
23	7.6	7.2	7.4	7.5	6.6	7.2	10.4	10.2	10.3	11.8	9.6	11.0
24	8.2	6.9	7.5	8.1	7.1	7.6	10.3	9.9	10.1	---	---	---
25	8.0	6.8	7.3	8.2	7.4	7.8	9.9	9.5	9.7	12.3	10.4	11.5
26	7.1	6.4	6.8	8.0	7.0	7.7	9.7	9.5	9.6	12.7	11.0	12.2
27	7.0	6.3	6.5	7.9	6.3	7.5	9.8	9.5	9.7	12.5	10.3	11.5
28	6.8	6.3	6.5	8.3	7.4	7.9	10.1	9.4	9.8	13.0	12.1	12.6
29	7.1	6.3	6.7	9.7	8.0	8.8	10.3	9.7	10.1	13.0	12.5	12.8
30	6.8	5.9	6.4	9.4	8.6	8.9	10.4	9.5	10.2	13.0	12.2	12.9
31	6.9	6.1	6.3	---	---	---	10.3	9.8	10.1	13.0	12.4	12.8
MONTH	8.2	1.8	5.7	9.7	4.5	6.9	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	12.9	12.6	12.8	11.6	11.3	11.4	8.8	8.0	8.3	7.0	6.1	6.5
2	12.9	12.6	12.7	11.5	10.9	11.2	8.8	8.2	8.4	7.1	6.6	6.8
3	13.0	12.6	12.8	11.0	10.4	10.8	8.8	8.2	8.5	7.3	5.9	7.0
4	13.1	12.7	12.8	10.4	9.8	10.2	9.2	8.5	8.9	6.8	6.1	6.4
5	12.9	12.6	12.7	9.9	9.4	9.6	9.9	9.1	9.4	6.8	6.1	6.5
6	12.9	12.1	12.5	9.4	8.9	9.1	9.7	8.9	9.2	7.0	5.7	6.4
7	12.4	11.8	12.1	9.1	8.3	8.7	9.2	9.0	9.1	6.4	5.9	6.3
8	12.1	11.6	11.8	9.0	7.7	8.3	9.2	8.8	9.0	6.4	5.8	6.2
9	11.6	11.1	11.4	8.6	8.0	8.2	10.0	8.7	9.0	6.3	5.5	6.0
10	11.4	10.9	11.1	9.1	8.0	8.2	10.1	8.4	8.8	5.9	5.4	5.6
11	11.2	10.9	11.1	9.5	8.3	9.0	8.5	8.0	8.2	6.0	5.2	5.6
12	11.1	10.7	10.9	9.5	9.1	9.2	8.4	7.7	8.0	6.0	5.4	5.7
13	10.8	10.6	10.7	9.7	9.3	9.5	7.8	7.2	7.5	5.7	5.2	5.5
14	10.8	10.6	10.7	9.9	9.4	9.6	7.7	7.0	7.2	5.9	5.2	5.5
15	10.9	10.6	10.7	9.5	9.0	9.3	8.2	7.3	7.7	6.9	5.4	5.9
16	11.0	10.8	10.8	9.5	9.2	9.3	---	---	---	7.1	5.5	6.1
17	11.4	10.9	11.1	9.6	9.0	9.3	---	---	---	7.0	5.4	5.9
18	11.8	11.3	11.6	9.3	8.6	9.1	8.2	7.8	8.0	7.1	5.5	6.0
19	12.0	11.7	11.9	9.9	9.0	9.3	8.0	7.7	7.8	6.6	5.6	6.0
20	12.0	11.7	11.9	9.7	9.2	9.4	---	---	---	7.2	5.2	6.2
21	11.7	11.4	11.6	9.8	9.4	9.6	---	---	---	6.5	5.3	5.9
22	11.4	10.9	11.2	9.7	9.4	9.6	6.9	6.4	6.6	6.7	5.4	5.7
23	11.0	10.5	10.8	9.7	9.2	9.4	6.6	6.2	6.4	6.7	5.0	5.5
24	10.7	10.3	10.5	9.8	8.9	9.4	7.8	6.2	6.6	5.0	3.5	4.1
25	10.7	10.2	10.4	9.8	9.3	9.5	7.0	6.4	6.6	3.6	2.7	3.1
26	11.1	10.3	10.6	9.8	9.2	9.6	6.8	6.2	6.5	3.8	2.8	3.0
27	11.0	10.6	10.7	9.8	9.3	9.6	6.9	6.3	6.6	3.8	2.7	3.5
28	11.1	10.6	10.8	9.7	9.2	9.4	7.1	6.4	6.7	4.5	2.2	3.6
29	11.4	11.0	11.3	9.6	9.3	9.4	7.2	5.9	6.4	7.0	3.1	5.0
30	---	---	---	9.6	8.7	9.1	6.7	5.8	6.1	7.0	5.0	5.5
31	---	---	---	9.3	8.1	8.6	---	---	---	5.8	4.1	4.9
MONTH	13.1	10.2	11.4	11.6	7.7	9.4	---	---	---	7.3	2.2	5.5

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.1	4.1	5.0	7.2	3.8	5.0	7.1	5.1	5.8	4.8	4.2	4.5
2	6.8	4.8	5.8	7.0	4.4	5.1	6.3	4.8	5.4	5.2	4.7	4.9
3	6.2	5.3	5.7	6.6	4.0	4.8	5.2	4.6	4.9	5.3	4.9	5.1
4	7.8	5.2	6.9	6.6	4.9	5.5	4.8	3.0	4.3	5.0	4.8	4.9
5	5.6	4.8	5.2	5.8	4.6	5.0	4.6	1.4	4.0	4.9	4.5	4.7
6	5.9	4.8	5.4	6.9	2.6	4.9	4.9	1.6	3.8	---	---	---
7	6.0	4.5	5.0	6.9	0.4	2.4	4.8	2.2	3.8	---	---	---
8	6.0	3.9	4.7	7.0	1.9	4.4	4.7	4.0	4.4	4.4	4.1	4.3
9	5.3	3.9	4.2	6.6	0.0	2.5	4.7	3.6	4.4	4.3	3.7	4.0
10	5.9	4.3	4.7	0.4	0.0	0.1	4.7	3.8	4.4	4.8	3.9	4.3
11	5.4	4.9	5.1	0.1	0.0	0.0	4.7	4.3	4.5	5.2	4.5	4.9
12	7.5	4.9	5.9	4.2	0.0	0.7	6.2	4.6	5.0	5.3	4.8	5.1
13	7.1	5.7	6.1	3.8	0.0	1.3	6.1	4.8	5.3	5.5	4.7	5.1
14	6.9	5.0	5.6	1.4	0.0	0.2	6.0	4.6	5.1	5.3	4.9	5.1
15	5.8	5.0	5.4	0.8	0.0	0.1	5.5	4.3	5.1	5.4	4.8	5.0
16	5.7	4.8	5.3	0.1	0.0	0.0	5.4	4.8	5.0	4.9	4.4	4.6
17	6.1	5.0	5.5	0.2	0.1	0.1	5.0	4.7	4.8	5.8	4.5	5.0
18	7.1	4.9	5.8	4.5	0.1	1.7	4.8	4.4	4.6	5.7	4.7	5.1
19	6.4	5.6	6.0	5.0	0.3	2.7	---	---	---	6.1	5.3	5.8
20	8.3	5.6	6.3	6.6	0.3	2.6	---	---	---	6.2	5.5	5.9
21	7.4	5.4	6.2	6.6	0.4	3.7	3.9	3.8	3.8	5.8	5.5	5.6
22	6.7	5.6	6.2	5.4	0.0	1.3	3.9	3.6	3.8	6.0	5.4	5.8
23	6.3	4.9	5.8	6.3	0.1	2.7	3.8	3.4	3.6	6.3	5.8	6.1
24	6.8	4.3	5.9	5.9	0.0	2.2	3.5	3.3	3.4	6.5	5.7	6.1
25	6.7	3.7	5.4	0.0	0.0	0.0	3.5	3.1	3.3	6.2	5.7	6.0
26	7.5	5.3	6.2	0.0	0.0	0.0	---	---	---	6.3	5.8	6.0
27	7.7	5.6	6.6	1.1	0.0	0.0	---	---	---	6.4	5.8	6.1
28	7.6	5.3	5.9	5.9	0.0	1.3	4.6	4.0	4.2	6.4	5.8	6.2
29	6.9	4.8	5.5	9.7	3.2	6.1	5.6	4.1	4.7	6.4	5.4	5.9
30	7.1	4.7	5.5	9.8	4.7	7.2	5.7	4.6	5.3	7.0	5.4	6.1
31	---	---	---	8.3	4.7	6.6	5.3	4.3	4.7	---	---	---
MONTH	8.3	3.7	5.6	9.8	0.0	2.6	---	---	---	---	---	---

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27	18	24	69	62	66	78	74	76	85	82	84
2	38	22	30	72	64	70	81	75	78	84	82	83
3	45	32	39	73	64	71	78	74	76	85	81	83
4	54	40	47	70	64	68	79	75	77	86	81	84
5	55	45	50	70	61	66	82	74	78	88	83	85
6	57	49	53	68	61	66	84	77	81	85	79	82
7	56	49	53	68	60	65	84	78	81	81	73	78
8	57	52	54	66	57	62	83	80	81	75	72	73
9	63	53	57	68	59	62	84	79	81	76	71	74
10	62	57	59	63	57	60	88	80	84	79	49	74
11	65	60	61	63	51	58	---	---	---	80	54	75
12	65	58	61	73	55	65	---	---	---	93	75	80
13	69	55	60	85	67	75	---	---	---	87	79	83
14	69	57	60	87	79	82	---	---	---	89	77	84
15	77	53	62	81	77	79	---	---	---	90	83	87
16	69	61	65	77	74	76	---	---	---	89	83	86
17	68	59	63	75	70	73	---	---	---	89	84	87
18	69	62	64	77	71	74	---	---	---	88	84	86
19	70	65	67	83	74	78	83	81	82	93	84	87
20	73	67	69	80	65	77	83	80	82	90	85	87
21	76	69	72	76	67	73	83	80	81	89	84	86
22	81	72	76	70	61	66	84	82	83	91	85	87
23	83	76	79	74	64	70	85	83	84	91	85	88
24	91	74	81	78	66	74	85	83	84	---	---	---
25	86	73	78	79	71	75	84	81	83	94	88	91
26	79	69	74	76	67	73	84	81	82	92	87	90
27	79	69	73	74	64	71	84	81	82	92	83	89
28	75	70	72	79	70	74	84	79	82	95	87	91
29	77	66	72	85	75	80	86	78	83	95	89	92
30	73	57	65	84	77	79	88	84	86	97	91	94
31	68	54	62	---	---	---	87	84	85	97	91	94
MONTH	91	18	61	87	51	71	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	96	91	94	96	90	93	92	78	83	79	70	74
2	97	92	94	99	93	95	95	81	86	83	72	77
3	102	93	95	98	91	95	---	---	---	81	69	76
4	100	93	96	97	90	93	---	---	---	72	65	69
5	100	94	97	95	88	91	---	---	---	71	57	67
6	101	93	97	93	87	89	---	---	---	72	62	68
7	105	94	98	92	83	86	---	---	---	72	67	70
8	100	92	95	89	79	84	---	---	---	72	68	70
9	94	89	92	85	79	82	---	---	---	72	64	69
10	93	88	91	83	79	80	---	---	---	73	63	67
11	94	89	91	90	79	84	---	---	---	77	63	69
12	93	88	90	92	83	87	---	---	---	74	67	69
13	92	88	89	92	84	88	---	---	---	82	64	69
14	90	88	89	96	86	89	---	---	---	89	64	73
15	91	88	89	90	83	87	---	---	---	96	64	75
16	92	89	90	90	83	87	---	---	---	94	68	76
17	93	88	90	90	82	86	---	---	---	108	67	80
18	95	89	92	87	77	83	---	---	---	112	67	83
19	96	91	94	96	82	87	---	---	---	97	68	78
20	96	93	95	91	84	87	---	---	---	109	68	81
21	97	93	95	92	84	88	---	---	---	100	71	84
22	96	91	93	91	84	88	83	71	76	95	70	80
23	94	90	92	89	82	86	84	73	77	89	64	74
24	92	86	89	91	81	86	92	72	78	64	46	54
25	93	86	89	97	82	89	83	72	76	56	38	44
26	90	87	88	95	84	90	83	71	76	59	38	45
27	91	87	88	97	88	92	79	72	75	66	44	52
28	90	85	87	98	89	92	81	71	76	75	52	60
29	95	86	90	96	88	91	85	66	74	96	56	72
30	---	---	---	96	82	87	85	65	72	92	64	71
31	---	---	---	93	80	84	---	---	---	76	58	68
MONTH	105	85	92	99	77	88	---	---	---	112	38	70

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	86	63	72	127	50	70	100	64	79	61	56	59
2	111	70	81	96	56	71	86	61	71	67	58	62
3	133	74	91	102	51	69	66	59	63	65	61	63
4	117	67	91	94	62	74	73	56	60	63	58	60
5	78	62	68	88	58	68	67	55	59	60	55	57
6	86	61	71	99	65	74	66	46	59	---	---	---
7	90	57	67	149	70	90	66	58	61	---	---	---
8	90	54	67	129	58	89	61	55	58	60	50	52
9	74	51	58	131	67	88	63	54	57	53	44	49
10	90	55	64	119	17	73	73	53	59	59	48	53
11	98	62	71	99	4	45	108	56	69	65	55	61
12	91	61	75	131	40	76	100	57	70	66	59	63
13	93	68	75	126	61	83	77	59	67	66	59	61
14	83	62	71	139	49	89	73	55	61	61	57	59
15	108	61	74	119	17	76	63	52	59	60	53	57
16	96	68	77	113	4	43	60	53	57	55	51	53
17	92	65	76	146	4	65	57	49	54	69	52	59
18	114	69	85	114	56	82	56	50	53	65	50	59
19	116	72	87	119	55	77	---	---	---	72	60	66
20	108	73	89	138	62	90	---	---	---	70	63	66
21	114	72	86	119	61	91	47	45	46	67	63	65
22	108	68	82	127	59	92	47	43	45	69	61	65
23	119	67	85	103	67	84	46	41	44	74	66	70
24	109	75	86	103	67	84	43	40	41	73	67	70
25	112	71	87	113	8	51	44	38	40	72	67	69
26	94	71	82	128	10	76	---	---	---	73	66	69
27	109	72	86	126	61	93	---	---	---	75	68	70
28	91	68	78	129	73	91	59	49	53	77	68	73
29	93	62	76	127	70	91	76	53	61	73	56	68
30	92	57	74	127	69	98	72	58	66	83	64	74
31	---	---	---	119	75	95	72	54	62	---	---	---
MONTH	133	51	78	149	4	79	---	---	---	---	---	---

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	27	20	24	68	63	64	81	76	79	83	79	82
2	35	22	30	68	63	66	85	77	80	83	78	81
3	42	31	38	69	59	67	82	76	79	83	80	82
4	54	39	45	67	57	65	82	78	80	83	29	65
5	54	48	51	65	54	62	85	77	81	83	24	65
6	57	47	53	64	55	62	88	78	82	82	26	67
7	58	50	54	64	58	61	86	79	83	80	37	65
8	58	53	55	60	48	57	86	82	83	74	63	69
9	64	52	56	64	51	58	87	80	84	73	60	66
10	63	59	60	62	48	55	90	82	86	62	39	52
11	66	60	62	59	47	54	---	---	---	46	39	42
12	63	58	60	68	56	62	---	---	---	83	39	53
13	68	57	60	78	65	70	---	---	---	89	50	68
14	69	58	61	79	73	76	---	---	---	93	59	77
15	77	50	63	75	71	72	---	---	---	94	85	91
16	69	62	65	72	67	69	---	---	---	94	89	92
17	64	59	62	69	64	67	---	---	---	93	90	91
18	71	62	66	70	64	67	---	---	---	94	90	92
19	69	65	67	82	68	75	81	77	79	95	90	92
20	70	66	68	79	65	76	80	78	79	94	88	92
21	75	68	72	76	66	71	80	78	79	91	78	86
22	79	72	75	71	59	65	81	79	80	92	78	85
23	80	75	78	75	66	71	83	80	81	92	77	87
24	85	71	78	79	70	74	83	81	82	---	---	---
25	82	70	75	79	72	75	82	79	81	96	83	90
26	73	66	70	77	68	74	81	78	80	95	84	92
27	73	65	68	76	60	72	81	79	80	93	80	87
28	71	66	68	81	70	75	83	77	80	97	89	93
29	73	65	69	88	74	81	84	79	82	97	92	94
30	69	60	64	85	79	81	86	79	84	98	92	95
31	68	61	63	---	---	---	84	81	83	98	91	95
MONTH	85	20	61	88	47	68	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	97	93	95	98	91	95	87	79	83	80	69	73
2	99	93	95	99	94	97	87	80	83	82	74	76
3	99	95	97	100	93	96	87	80	84	82	66	78
4	102	95	97	97	92	95	91	82	87	75	66	70
5	100	96	98	97	90	93	95	87	90	72	65	69
6	104	96	99	95	88	91	93	86	88	74	61	69
7	104	97	99	92	84	87	92	87	89	71	63	69
8	99	94	96	88	76	82	93	88	90	71	63	69
9	95	92	93	84	77	80	105	88	92	70	61	67
10	94	90	92	84	77	79	106	86	90	69	61	64
11	94	91	92	88	78	83	88	84	86	72	60	65
12	92	88	90	90	84	87	88	80	84	71	64	67
13	90	87	88	92	87	89	83	76	79	68	61	65
14	89	88	88	93	87	89	79	73	75	71	62	65
15	90	87	89	89	84	88	84	74	79	85	65	72
16	92	88	89	90	86	88	---	---	---	88	66	75
17	92	88	90	90	83	87	---	---	---	87	66	73
18	95	90	93	87	79	84	86	80	83	89	67	74
19	97	93	95	95	83	87	85	81	82	83	69	74
20	97	95	96	92	85	88	---	---	---	91	64	77
21	98	94	96	93	89	90	---	---	---	83	67	75
22	97	93	95	92	87	90	79	71	74	87	69	73
23	96	91	93	91	85	88	75	71	73	88	63	70
24	93	89	91	94	82	88	92	71	76	63	44	51
25	93	88	90	95	88	90	81	73	76	44	33	37
26	92	88	90	96	88	92	80	71	75	48	34	37
27	91	88	90	98	90	94	79	73	76	48	34	44
28	91	87	89	98	91	94	78	72	75	57	28	46
29	94	89	92	96	91	93	80	67	72	89	39	64
30	---	---	---	95	87	90	77	65	69	89	63	69
31	---	---	---	94	82	86	---	---	---	74	51	62
MONTH	104	87	93	100	76	89	---	---	---	91	28	66

02084472 PAMLICO RIVER AT WASHINGTON, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	78	51	63	92	48	63	94	67	76	60	52	56
2	87	60	72	89	55	65	83	63	71	64	57	59
3	79	67	72	85	50	60	67	59	64	64	59	62
4	100	65	88	86	62	70	62	39	55	61	58	60
5	71	60	65	76	59	64	60	18	52	59	54	57
6	74	60	67	92	34	64	63	21	49	---	---	---
7	76	56	62	92	5	31	60	28	48	---	---	---
8	76	49	59	94	25	59	58	50	55	53	49	51
9	67	49	53	88	0	33	57	44	54	52	45	48
10	76	54	59	5	0	0	58	46	53	59	47	52
11	69	62	64	1	0	0	58	52	55	63	55	59
12	95	62	74	56	0	9	77	56	61	65	58	61
13	88	70	76	51	0	17	75	59	65	66	56	61
14	85	62	69	19	0	2	73	56	62	63	58	61
15	73	63	67	10	0	1	63	52	60	64	57	59
16	72	60	67	1	0	0	62	56	58	58	52	55
17	77	63	69	3	1	1	58	55	56	71	53	60
18	92	61	74	59	1	22	56	52	53	66	56	60
19	82	72	76	66	4	35	---	---	---	70	62	67
20	108	72	82	88	4	34	---	---	---	71	63	68
21	94	68	78	88	5	49	47	45	46	67	62	64
22	85	72	79	71	0	17	47	43	46	69	62	66
23	82	63	75	82	1	35	46	41	44	72	65	69
24	89	56	76	77	0	29	42	40	41	74	65	69
25	87	48	70	0	0	0	43	37	40	71	65	68
26	96	69	80	0	0	0	---	---	---	72	66	68
27	100	72	85	14	0	0	---	---	---	74	66	70
28	98	68	76	77	0	17	58	49	52	75	67	72
29	89	61	71	128	42	79	71	51	59	73	62	68
30	91	60	70	130	61	94	72	57	66	84	63	72
31	---	---	---	110	62	88	65	53	58	---	---	---
MONTH	108	48	71	130	0	33	---	---	---	---	---	---

0208453300 PAMLICO RIVER AT LIGHT 5

LOCATION.--Lat 35°25'52", long 76°50'29", Beaufort County, Hydrologic Unit 03020104, on U.S. Coast Guard Channel Light 5.

PERIOD OF RECORD.--Water years 1989 to 1992, 1999 to current year.

PERIOD OF DAILY RECORD.--
SALINITY (TOP AND BOTTOM): May 1989 to September 1992, May 1999 to current year.
pH (TOP AND BOTTOM): May 1999 to current year.
WATER TEMPERATURE (TOP): May 1989 to September 1992, May 1999 to current year.
WATER TEMPERATURE (BOTTOM): May 1999 to current year.

DISSOLVED OXYGEN (TOP AND BOTTOM) : May 1989 to September 1992, May 1999 to current year.
DISSOLVED OXYGEN (MID): May 1989 to September 1992.
DISSOLVED OXYGEN, PERCENT SATURATION (TOP AND BOTTOM): May 1989 to September 1992, May 1999 to current year.
DISSOLVED OXYGEN, PERCENT SATURATION (MID): May 1989 to September 1992.

INSTRUMENTATION.--Water-quality monitor from May 1989 to September 1992. Constituents monitored were: specific conductance, top and bottom, water temperature top, dissolved oxygen, top, mid-depth and bottom. Water-quality monitor with satellite telemetry from May 1999 to current year. Constituents monitored were the same as previous water years except, mid-depth dissolved oxygen was not measured, water temperature, bottom, was added as well as pH top and bottom.

REMARKS.--Station operated in cooperation with the North Carolina Department of Environment and Natural Resources. The monitor was removed on August 29, 1999 to prevent possible destruction of the equipment during Hurricane Dennis. It was reinstalled on September 9, 1999. The monitor was removed again on September 14, 1999 to prevent possible destruction during Hurricane Floyd. It was reinstalled on October 21, 1999. The monitor was removed on September 16, 2003, to prevent possible destruction of the equipment during Hurricane Isabel. It was reinstalled on September 20, 2003. Top constituents were monitored at 8 ft above the streambed and bottom constituents, 2 ft above the streambed. Salinity and dissolved oxygen, percent saturation are computed. The salinity is computed from specific conductance using the conversion from U.S. Geological Survey Water-Supply Paper 2311. The dissolved oxygen percent saturation is computed using a barometric pressure of 760 mm of Hg beginning October 1, 2000. Salinity, minimum extremes are reported as <0.1 ppt. Dissolved oxygen, minimum extremes are reported as <1.0 mg/L. Dissolved oxygen, percent saturation, minimum extremes are reported as <10%.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	19.6, August 21, October 21, 2002	<0.1, on many days during the period
SALINITY (BOTTOM), ppt	20.8, October 23, 2002	<0.1, on many days during the period
pH (TOP), standard units	9.2, August 4, 2001, September 22, 2001	6.2, October 22, 23, 24, 1999
pH (BOTTOM), standard units	9.1, May 20, 22, 2004	5.9, October 23, 1999
WATER TEMPERATURE (TOP), °C	33.1, July 31, 1999	0.0, December 3, 1989, January 24, 2003
WATER TEMPERATURE (BOTTOM), °C	30.5, July 24, 1999	0.1, January 24, 2003
DISSOLVED OXYGEN (TOP), mg/L	18.5, February 5, 1991	<1.0, on many days during the period
DISSOLVED OXYGEN (BOTTOM), mg/L	18.6, January 5, 1992	<1.0, on many days during the period

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	11.2, July 26	<0.1, December 21
SALINITY (BOTTOM), ppt	15.7, July 16, 17	0.1, December 17, 18, 21, September 18
pH (TOP), standard units	9.2, September 22	6.6, May 20, June 4, 9
pH (BOTTOM), standard units	9.1, May 20, 22	6.4, May 8, 9, 10, 11, 23, 24
WATER TEMPERATURE (TOP), °C	31.8, July 10	2.4, February 2
WATER TEMPERATURE (BOTTOM), °C	29.5, August 2	2.6, February 2
DISSOLVED OXYGEN (TOP), mg/L	14.2, February 5	<1.0, October 7, 8, December 7, July 8
DISSOLVED OXYGEN (BOTTOM), mg/L	13.7, February 2, 5, 6	<1.0, on many days during the year
DISSOLVED OXYGEN, PERCENT SATURATION (TOP),%	144, August 23	<10, October 7, July 8
DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM),%	122, June 1	<10, on many days during the year

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	2.5	1.1	1.8	2.0	0.4	1.1	3.0	2.1	2.7	2.7	2.5	2.6
2	1.8	1.3	1.6	2.5	0.6	1.7	3.1	2.1	2.6	2.8	2.4	2.6
3	2.7	1.7	2.1	4.0	0.7	2.5	4.0	2.1	3.3	2.9	1.9	2.2
4	2.6	1.1	1.5	3.2	0.6	1.5	4.0	3.2	3.5	5.6	1.8	3.4
5	1.8	1.1	1.3	2.1	0.5	0.9	3.7	2.6	3.0	6.8	4.4	5.4
6	3.6	1.1	1.7	2.5	0.3	1.1	3.2	2.7	2.9	6.0	4.9	5.4
7	4.3	1.3	2.3	6.0	0.6	1.8	2.9	2.0	2.4	6.6	5.6	6.0
8	4.3	2.0	2.8	3.0	1.7	2.5	2.8	2.0	2.3	---	---	---
9	3.4	2.5	2.8	2.9	2.5	2.7	5.0	1.7	3.0	---	---	---
10	3.3	2.8	3.0	2.9	2.6	2.8	4.2	2.7	3.2	---	---	---
11	3.0	2.8	2.9	2.8	1.3	2.2	3.8	2.8	3.1	---	---	---
12	2.9	2.1	2.6	2.7	1.2	1.8	3.1	1.5	2.3	---	---	---
13	3.7	2.2	2.7	3.0	2.2	2.5	3.0	1.4	2.1	---	---	---
14	3.8	2.7	3.0	2.4	1.4	2.0	3.3	0.9	1.7	---	---	---
15	3.3	2.7	3.0	2.5	2.1	2.3	1.4	0.6	1.1	6.5	6.0	6.2
16	3.2	2.7	2.9	2.5	1.9	2.2	1.3	0.4	0.8	6.4	6.0	6.1
17	3.2	2.5	2.9	2.4	1.5	1.9	0.9	0.1	0.3	6.6	5.7	6.0
18	2.9	2.2	2.4	4.7	1.5	2.5	1.3	0.1	0.5	6.9	5.6	6.3
19	2.8	2.2	2.4	3.9	2.7	3.2	1.0	0.1	0.3	6.5	6.0	6.3
20	3.4	2.2	2.6	3.8	2.5	2.7	1.4	0.2	0.4	6.2	5.3	5.9
21	3.1	2.3	2.6	2.7	2.1	2.4	0.3	0.0	0.2	6.1	4.8	5.2
22	3.0	2.6	2.7	2.7	1.6	1.9	0.7	0.2	0.4	6.2	3.9	4.7
23	3.8	2.2	2.8	4.4	1.7	2.7	0.6	0.3	0.3	6.0	3.8	4.5
24	4.3	2.4	3.3	4.2	1.9	2.5	0.9	0.1	0.4	6.4	4.6	5.3
25	4.2	3.3	3.6	3.0	1.9	2.4	1.6	0.2	0.6	5.7	5.3	5.4
26	3.9	3.0	3.4	2.6	2.1	2.3	1.7	0.9	1.3	5.4	5.2	5.3
27	3.8	2.9	3.5	2.9	2.0	2.4	1.2	0.8	1.0	5.2	4.7	5.0
28	3.6	2.9	3.4	4.1	2.2	2.9	2.0	0.8	1.0	5.0	4.1	4.6
29	3.3	2.3	2.8	3.4	1.6	2.4	2.7	0.7	1.3	5.3	4.6	4.9
30	2.9	1.7	2.3	3.2	2.1	2.7	4.4	0.7	2.3	5.3	4.7	5.1
31	1.7	1.1	1.4	---	---	---	3.5	2.4	2.7	5.1	4.1	4.5
MONTH	4.3	1.1	2.6	6.0	0.3	2.2	5.0	0.0	1.7	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	5.4	4.0	4.6	2.9	0.5	1.0	3.1	2.3	2.8	2.9	2.3	2.6
2	5.5	4.8	5.2	3.3	1.2	2.1	3.0	1.6	2.5	2.6	2.0	2.4
3	5.7	4.2	4.8	6.0	1.8	2.3	2.8	1.6	2.0	2.4	1.2	2.2
4	5.2	3.7	4.4	2.5	1.7	2.0	2.8	1.5	2.0	2.3	0.9	1.5
5	5.1	3.7	4.5	2.5	1.8	2.1	2.8	1.0	1.8	3.1	0.9	1.5
6	5.1	3.7	4.5	5.5	2.4	3.4	3.5	2.0	2.5	3.0	0.9	1.3
7	4.3	3.1	3.9	6.8	2.2	3.9	3.4	2.0	2.7	1.7	0.6	1.0
8	5.2	2.2	3.5	3.6	2.5	3.1	5.7	2.1	3.0	1.6	0.5	1.0
9	4.9	2.5	3.7	5.1	3.1	4.0	7.1	2.7	3.3	2.2	0.7	1.1
10	3.0	1.7	2.2	4.6	3.4	4.1	4.4	2.9	3.7	2.0	0.8	1.1
11	2.1	1.3	1.6	4.8	3.2	3.8	4.4	3.1	3.7	2.3	0.7	1.2
12	2.8	1.4	2.3	4.8	3.1	3.7	3.8	3.7	3.8	2.4	1.0	1.3
13	2.5	1.2	1.8	4.6	2.6	3.5	4.0	2.9	3.7	1.3	1.1	1.2
14	1.6	0.8	1.1	4.2	3.0	3.7	3.9	2.7	3.2	1.8	1.2	1.4
15	5.0	0.7	1.9	3.9	3.1	3.5	4.2	2.5	2.9	2.6	1.2	1.5
16	5.0	1.2	2.5	3.7	2.9	3.3	4.2	2.0	2.8	2.4	1.2	1.5
17	3.6	1.5	2.1	3.4	2.1	2.8	3.4	2.0	2.3	2.9	1.7	2.0
18	3.6	1.5	2.2	4.6	2.2	2.9	2.3	1.6	2.1	2.6	1.9	2.1
19	2.5	1.3	1.7	4.4	2.4	3.1	2.0	1.6	1.7	2.6	2.1	2.3
20	3.0	1.4	1.9	3.9	2.9	3.3	2.1	1.5	1.8	2.5	2.0	2.3
21	2.8	1.8	2.4	3.6	2.8	3.0	3.4	1.5	2.0	2.8	1.9	2.2
22	2.5	2.0	2.1	2.9	1.5	2.1	2.5	1.9	2.1	3.1	2.1	2.6
23	3.1	2.1	2.3	4.3	1.7	2.7	2.2	1.7	2.0	3.5	2.7	3.1
24	2.8	2.3	2.6	3.8	1.4	2.1	3.1	1.5	1.9	4.9	3.1	3.5
25	2.9	2.3	2.7	2.9	1.6	2.2	3.2	2.1	2.6	3.5	3.2	3.3
26	3.7	2.7	3.0	3.2	1.5	1.9	2.4	1.9	2.1	3.6	3.1	3.5
27	3.7	2.4	3.2	2.1	1.3	1.5	2.3	1.6	1.9	3.9	3.1	3.5
28	2.4	1.6	2.0	3.8	1.2	2.4	3.2	1.6	1.9	4.2	3.5	3.8
29	1.6	0.6	0.9	3.8	3.2	3.5	3.6	1.5	2.2	4.9	4.0	4.3
30	---	---	---	3.4	2.4	2.9	2.8	1.9	2.4	4.7	4.3	4.5
31	---	---	---	3.4	2.6	3.0	---	---	---	4.7	4.1	4.5
MONTH	5.7	0.6	2.8	6.8	0.5	2.9	7.1	1.0	2.5	4.9	0.5	2.3

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.7	4.5	4.5	6.9	6.0	6.5	11.0	10.2	10.6	2.4	1.4	1.8
2	4.7	4.5	4.6	6.8	5.7	6.3	10.9	10.2	10.5	2.4	1.7	2.0
3	5.1	4.5	4.7	6.8	5.8	6.2	10.7	9.9	10.4	1.8	1.4	1.5
4	5.2	4.2	4.8	7.2	5.6	6.4	10.5	9.7	10.1	2.0	1.0	1.2
5	4.6	4.2	4.4	6.7	5.4	5.9	10.2	7.6	8.7	1.2	0.8	1.0
6	5.0	4.4	4.6	7.0	5.2	5.8	9.5	7.5	8.2	2.7	0.7	1.2
7	4.8	4.3	4.6	7.1	5.2	5.9	9.7	7.5	8.4	1.6	0.7	0.9
8	4.9	4.5	4.8	10.9	5.4	7.0	10.4	6.8	8.3	1.2	0.2	0.8
9	4.8	4.1	4.4	6.7	5.8	6.1	10.0	6.8	8.3	0.7	0.2	0.5
10	4.8	4.2	4.4	8.5	6.2	6.8	10	6.5	8.1	1.0	0.3	0.6
11	4.9	4.1	4.3	8.5	6.6	7.3	9.4	7.0	7.8	0.7	0.6	0.7
12	5.9	4.3	5.0	8.6	7.3	7.6	9.1	7.1	7.7	0.7	0.4	0.6
13	5.9	5.3	5.5	8.0	7.3	7.6	9.2	6.5	7.7	0.8	0.5	0.6
14	5.5	5.1	5.3	8.2	7.3	7.9	9.2	6.4	7.7	1.0	0.4	0.6
15	5.4	5.0	5.2	9.4	8.1	8.5	7.8	6.4	7.1	0.7	0.4	0.5
16	5.2	4.6	4.9	9.5	8.6	8.9	6.8	5.0	5.8	0.6	0.3	0.4
17	4.8	4.4	4.6	10.7	8.8	9.6	7.8	4.4	5.8	1.2	0.4	0.7
18	4.8	4.1	4.5	10.4	9.7	9.9	7.0	3.2	4.4	0.6	0.1	0.3
19	5.1	4.2	4.8	10.7	9.9	10.2	6.1	1.3	3.1	2.6	0.3	1.3
20	5.8	4.6	5.1	10.6	10.3	10.4	5.9	1.3	2.6	2.9	0.9	2.1
21	5.7	5.1	5.5	10.7	10.3	10.5	2.9	1.1	1.9	2.4	1.0	1.3
22	5.6	4.9	5.2	10.7	10.4	10.6	3.4	1.1	1.7	1.0	0.4	0.7
23	5.4	5.0	5.2	10.8	10.5	10.6	3.2	1.9	2.5	4.8	0.2	0.5
24	5.4	4.9	5.1	10.7	10.5	10.6	3.4	1.3	2.2	3.8	0.5	1.8
25	5.3	4.6	5.0	10.6	10.5	10.6	3.0	1.3	2.1	2.1	1.4	1.8
26	6.1	4.9	5.5	11.2	10.5	10.6	2.5	1.2	1.7	2.2	1.8	2.0
27	6.8	5.6	6.0	10.9	10.5	10.6	2.5	1.3	1.8	2.5	2.0	2.3
28	6.5	5.7	6.1	10.8	10.5	10.7	1.7	1.2	1.4	2.4	1.0	1.9
29	9.3	6.1	6.7	11.1	10.7	10.9	3.2	1.4	2.0	1.9	0.9	1.5
30	7.1	6.4	6.7	10.9	10.8	10.9	3.0	1.0	1.6	3.2	1.4	1.9
31	---	---	---	11.0	10.3	10.8	2.5	1.1	1.7	---	---	---
MONTH	9.3	4.1	5.1	11.2	5.2	8.7	11.0	1.0	5.5	4.8	0.1	1.2

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.8	3.2	4.6	4.8	4.2	4.6	5.0	2.6	3.1	9.2	7.6	8.4
2	5.6	1.4	2.9	4.9	3.5	4.7	4.1	2.2	2.8	9.3	8.0	8.9
3	5.4	1.7	3.0	5.1	4.3	4.8	4.1	2.6	3.4	10	9.1	9.6
4	5.0	1.9	3.7	5.0	4.3	4.6	3.9	3.1	3.6	10.2	6.2	9.5
5	5.4	1.2	4.5	5.5	3.9	4.9	3.7	2.5	3.0	10.6	6.4	9.6
6	5.1	4.0	4.9	5.9	4.1	5.3	3.4	2.6	3.0	10.4	5.6	8.9
7	6.8	4.8	5.5	6.2	4.5	5.7	4.1	2.0	3.0	8.1	5.6	6.4
8	6.6	2.5	4.7	5.7	2.8	4.8	4.7	4.1	4.4	---	---	---
9	6.4	2.6	4.3	5.4	2.6	3.0	5.2	3.2	4.8	---	---	---
10	3.3	2.9	3.1	3.4	2.6	2.8	4.9	3.8	4.3	---	---	---
11	3.1	2.9	3.0	5.3	2.8	4.4	3.8	2.8	3.1	---	---	---
12	5.2	2.9	3.4	5.0	2.8	3.9	4.9	2.3	3.5	---	---	---
13	5.7	2.8	4.0	4.0	2.2	2.7	5.3	1.8	3.8	---	---	---
14	4.7	2.9	4.1	2.6	1.7	2.1	3.6	0.9	2.2	---	---	---
15	3.8	2.8	3.1	2.6	2.2	2.4	1.9	0.6	1.3	6.5	5.8	6.1
16	3.4	2.8	3.2	5.5	2.5	3.5	2.3	1.0	1.7	6.3	5.9	6.0
17	3.4	2.9	3.2	6.2	2.5	5.0	2.2	0.1	1.0	6.7	5.7	6.3
18	3.7	2.2	2.8	6.2	4.3	5.6	2.7	0.1	1.3	6.8	6.0	6.4
19	4.0	2.4	3.3	5.2	2.8	4.0	3.4	0.2	1.4	6.4	6.0	6.2
20	4.3	2.8	3.8	3.8	2.4	3.0	3.4	0.2	0.7	6.2	5.7	5.9
21	4.2	2.8	3.3	4.1	2.9	3.6	3.1	0.1	1.4	6.6	5.7	6.4
22	3.2	2.6	2.8	4.5	2.1	3.8	5.3	1.1	3.2	6.7	4.7	6.2
23	4.4	2.6	3.8	5.0	3.3	4.3	6.0	3.4	5.2	6.0	4.4	5.1
24	4.4	2.8	3.9	5.6	2.8	4.5	5.8	1.2	4.2	6.5	4.9	5.5
25	4.3	3.5	3.9	5.6	2.0	3.9	6.5	1.6	5.1	5.6	5.1	5.3
26	4.0	3.3	3.8	6.2	3.1	4.8	7.9	6.1	7.1	5.4	5.1	5.2
27	4.0	3.3	3.8	6.3	3.6	5.3	8.4	7.7	8.1	5.1	4.6	5.0
28	3.8	2.9	3.5	5.7	2.6	4.5	8.3	7.7	8.1	5.5	4.0	4.6
29	3.7	2.5	3.0	3.6	1.6	2.7	8.3	6.5	7.8	6.0	4.9	5.4
30	4.6	2.7	3.7	5.2	2.6	3.7	9.3	1.9	6.9	6.2	4.8	5.2
31	4.6	2.8	4.3	---	---	---	9.3	6.8	8.3	6.2	4.1	4.9
MONTH	6.8	1.2	3.7	6.3	1.6	4.1	9.3	0.1	3.9	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	6.3	5.3	5.9	5.0	2.9	4.7	3.1	2.3	2.8	2.9	2.4	2.7
2	5.9	4.8	5.3	5.2	2.6	4.2	3.0	1.9	2.7	2.7	2.3	2.5
3	5.8	4.3	5.2	6.4	2.8	5.0	3.6	1.7	2.3	2.4	1.2	2.2
4	5.6	3.8	4.8	5.7	2.4	4.5	3.7	1.6	2.5	2.7	1.2	2.0
5	5.4	4.7	5.0	6.5	4.2	5.9	3.5	1.0	2.4	3.3	1.3	2.5
6	5.2	4.0	4.7	7.2	4.1	5.3	5.0	2.5	3.6	3.9	0.9	2.0
7	4.4	3.1	3.9	7.0	3.5	5.4	5.7	2.6	4.3	3.2	1.1	2.0
8	5.3	2.5	4.0	4.9	2.5	3.5	6.5	3.4	5.4	3.5	1.2	2.8
9	5.3	3.4	4.8	5.4	3.8	4.9	7.3	4.3	6.2	3.6	1.7	2.8
10	5.5	2.6	4.3	4.6	3.5	4.2	6.0	3.7	4.7	5.2	1.8	3.5
11	6.2	2.5	5.2	5.1	3.3	4.3	4.4	3.4	3.9	5.9	3.2	4.8
12	5.9	2.6	4.8	5.1	3.5	4.2	3.9	3.7	3.8	5.7	3.3	5.2
13	6.2	2.5	5.5	5.5	3.3	4.2	4.0	3.2	3.8	5.9	3.7	5.1
14	6.1	5.0	6.0	4.7	3.6	4.1	3.9	3.0	3.3	6.4	4.2	5.0
15	6.2	3.7	5.5	4.5	3.3	3.8	4.2	2.6	3.0	6.8	3.6	5.2
16	5.0	1.4	3.5	4.4	3.0	3.7	4.5	2.7	3.8	7.1	3.8	5.4
17	4.7	1.6	3.4	4.2	2.8	3.5	4.5	3.1	3.9	6.7	3.4	5.1
18	4.7	1.7	3.0	4.9	3.3	4.2	4.5	2.2	3.6	6.3	3.1	4.4
19	4.5	1.9	3.4	4.6	2.4	3.4	5.2	2.1	4.3	6.4	2.9	5.2
20	5.9	2.2	4.8	4.1	2.9	3.5	5.2	1.8	3.2	7.3	4.1	6.3
21	5.0	2.2	3.0	3.7	2.8	3.1	5.1	2.4	3.9	7.1	5.2	6.7
22	7.9	2.0	4.3	4.3	2.4	3.3	4.7	2.3	3.4	7.2	5.7	6.9
23	5.9	2.2	4.2	4.5	2.3	3.8	4.8	2.0	3.2	7.0	3.1	6.2
24	3.7	2.4	2.7	4.5	2.6	3.9	5.0	1.6	3.2	7.3	3.9	6.6
25	5.2	2.3	2.8	4.2	2.0	3.1	4.5	2.3	3.2	7.3	4.1	6.8
26	3.6	2.7	3.0	3.9	2.0	3.1	3.0	1.9	2.6	7.1	3.5	6.7
27	3.7	2.4	3.2	3.7	1.6	2.7	2.6	1.7	1.9	7.0	3.3	5.2
28	4.4	2.0	2.4	3.8	2.1	3.1	4.0	1.6	2.5	6.8	3.8	5.1
29	4.7	3.1	4.3	3.8	3.2	3.5	4.3	2.2	3.3	7.2	4.1	5.6
30	---	---	---	3.6	2.4	3.0	3.4	2.2	2.9	6.2	4.6	5.0
31	---	---	---	4.0	2.6	3.4	---	---	---	5.3	4.2	4.7
MONTH	7.9	1.4	4.2	7.2	1.6	4.0	7.3	1.0	3.5	7.3	0.9	4.6

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.8	4.5	4.6	11.3	7.1	9.1	11.1	10.5	10.8	5.0	2.6	4.0
2	5.7	4.5	4.8	11.3	7.1	9.8	10.9	10.3	10.6	5.7	1.9	3.1
3	5.9	4.6	5.1	11.8	6.9	10.8	10.7	9.9	10.4	5.6	1.5	3.2
4	5.4	4.3	5.0	11.4	7.3	10.3	10.9	9.8	10.2	5.7	1.4	4.3
5	4.7	4.3	4.5	12.3	6.4	10.1	10.8	8.3	10.0	5.5	3.1	4.7
6	5.2	4.4	4.9	13.4	10.7	12.5	10.7	7.6	9.2	4.9	1.2	3.4
7	5.5	4.4	4.8	13.4	11.3	12.9	10.9	9.5	10.4	4.4	1.0	2.7
8	5.6	4.6	4.9	13.3	11.8	12.8	11.3	10	10.8	1.9	0.3	1.1
9	5.6	4.1	4.7	13.7	12.2	13.1	11.1	10.4	10.8	1.9	0.3	0.9
10	7.1	4.2	5.0	13.8	13.5	13.6	11.0	9.8	10.7	2.3	0.4	0.9
11	8.1	4.2	6.4	13.7	12.2	13.4	10.6	9.3	10.1	3.3	0.6	1.1
12	8.2	4.5	5.7	13.3	9.8	12.9	10.7	7.8	9.8	5.1	0.5	2.2
13	6.5	5.3	5.7	14.3	12.4	13.1	10.8	6.6	8.9	5.7	0.5	1.8
14	6.2	5.2	5.5	15.1	13.9	14.4	9.8	6.4	8.4	1.1	0.4	0.7
15	5.8	5.2	5.4	15.6	14.3	15.1	8.8	6.5	7.7	1.8	0.5	0.7
16	6.7	5.0	5.7	15.7	15.3	15.6	9.5	5.1	8.0	5.9	0.5	2.1
17	8.1	4.7	5.7	15.7	13.8	15.5	9.6	7.0	9.1	3.9	0.6	2.4
18	8.5	4.2	6.8	15.5	10.7	14.3	9.3	5.9	8.2	0.8	0.1	0.3
19	9.9	5.6	8.8	14.7	10.3	13.7	9.3	6.8	8.5	2.8	0.4	1.7
20	9.8	5.3	8.3	14.5	10.4	12.8	9.7	7.0	8.9	2.8	1.3	2.5
21	8.6	5.5	6.8	13.9	10.5	12.2	9.9	7.6	9.3	5.7	1.0	2.1
22	7.0	5.3	5.8	13.8	10.5	11.9	10.1	8.1	9.7	5.9	1.1	4.3
23	9.2	5.3	6.5	13.5	10.6	11.5	9.8	4.8	8.4	5.7	3.6	5.3
24	9.3	5.3	8.1	12.4	10.6	10.8	9.4	3.6	7.6	5.6	2.7	5.2
25	9.8	5.8	9.2	14.0	10.6	12.6	8.5	2.0	4.6	6.2	2.1	4.5
26	12.2	6.4	9.5	13.6	10.9	12.0	5.4	1.2	2.8	5.4	1.8	3.0
27	12.5	9.1	11.1	12.4	10.6	11.3	6.7	1.3	2.6	3.6	2.0	2.5
28	11.2	5.9	8.7	12.1	10.7	11.3	8.0	1.2	2.9	2.8	1.0	2.0
29	12.1	6.4	9.9	11.7	10.9	11.2	6.7	1.8	3.7	3.3	0.9	1.9
30	11.1	6.7	8.7	11.1	10.9	11.0	3.1	1.0	2.3	3.4	1.8	2.6
31	---	---	---	11.1	10.5	11.0	4.2	1.4	2.7	---	---	---
MONTH	12.5	4.1	6.6	15.7	6.4	12.3	11.3	1.0	8.0	6.2	0.1	2.6

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.4	6.9	7.0	9.0	7.5	8.3	7.8	7.5	7.7	7.4	7.2	7.3
2	7.5	7.1	7.2	8.9	7.2	7.6	7.8	7.6	7.7	7.3	7.2	7.2
3	7.7	7.1	7.3	7.4	7.0	7.2	8.1	7.6	7.8	7.4	7.2	7.2
4	7.6	7.1	7.4	7.7	6.9	7.2	8.0	7.7	7.8	7.2	7.1	7.1
5	7.7	7.1	7.3	8.4	7.0	7.4	7.8	7.6	7.7	7.4	7.1	7.2
6	7.7	6.8	7.2	8.4	7.0	7.4	7.6	7.6	7.6	7.7	7.3	7.5
7	7.4	6.7	7.0	7.5	7.1	7.3	7.7	7.5	7.6	7.4	7.2	7.3
8	7.4	6.7	7.0	7.6	7.4	7.5	8.0	7.6	7.7	---	---	---
9	7.4	7.0	7.2	7.6	7.4	7.5	8.0	7.4	7.7	---	---	---
10	7.4	7.2	7.2	7.8	7.5	7.6	7.9	7.4	7.7	---	---	---
11	7.3	7.2	7.3	8.2	7.7	7.9	7.6	7.4	7.5	---	---	---
12	7.8	7.3	7.5	8.1	7.8	7.9	7.6	7.4	7.5	---	---	---
13	8.5	7.2	7.6	7.9	7.6	7.7	7.9	7.4	7.6	---	---	---
14	7.9	7.1	7.5	7.9	7.6	7.8	7.7	7.4	7.5	---	---	---
15	7.6	7.2	7.3	7.9	7.8	7.9	7.6	7.3	7.4	8.4	8.0	8.2
16	8.1	7.3	7.5	8.5	7.9	8.2	7.5	7.4	7.4	8.4	8.1	8.2
17	8.7	7.3	7.9	8.7	8.0	8.4	7.5	7.2	7.3	8.5	8.2	8.3
18	8.7	7.9	8.3	8.7	7.3	8.1	7.3	7.0	7.2	8.4	8.1	8.3
19	8.6	7.8	8.2	8.3	7.4	7.9	7.1	7.0	7.0	8.3	8.0	8.2
20	8.4	7.5	8.0	7.9	7.4	7.7	7.4	6.9	7.0	8.4	8.1	8.3
21	8.2	7.5	7.9	8.9	7.7	8.1	7.1	6.9	7.0	8.3	8.1	8.2
22	8.1	7.4	7.7	9.0	8.0	8.6	7.0	6.9	7.0	8.3	8.1	8.2
23	8.4	7.5	7.8	8.6	7.2	8.1	7.0	6.9	7.0	8.1	8.0	8.1
24	8.2	7.6	7.8	8.7	7.2	8.1	7.1	6.8	7.0	8.2	7.9	8.0
25	8.0	7.5	7.7	8.6	7.7	8.0	6.9	6.8	6.9	8.0	7.9	8.0
26	8.7	7.2	7.6	8.4	7.6	8.0	7.0	6.9	6.9	7.9	7.8	7.9
27	8.1	7.3	7.6	8.1	7.7	7.9	7.0	7.0	7.0	8.2	7.8	7.9
28	8.2	7.4	7.7	8.1	7.0	7.7	7.3	7.0	7.1	8.0	7.7	7.8
29	8.0	7.6	7.7	7.6	7.2	7.4	7.3	6.9	7.1	8.1	7.7	7.9
30	8.4	7.5	7.7	7.8	7.4	7.6	8.1	7.0	7.3	8.1	7.7	7.9
31	8.8	7.7	8.1	---	---	---	7.4	7.1	7.3	8.1	7.8	8.0
MONTH	8.8	6.7	7.6	9.0	6.9	7.8	8.1	6.8	7.4	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	8.3	7.9	8.1	8.1	7.6	7.8	8.4	7.7	7.9	7.4	6.8	7.0
2	8.3	8.1	8.2	7.8	7.4	7.6	8.2	7.7	7.9	7.3	6.9	7.1
3	8.3	7.8	8.2	8.6	7.0	7.8	8.1	7.6	7.8	7.3	7.0	7.2
4	8.5	7.9	8.2	7.9	7.3	7.5	7.8	7.5	7.7	8.0	7.2	7.4
5	8.5	8.3	8.4	8.1	7.3	7.6	7.6	7.4	7.5	8.3	7.1	7.7
6	8.5	7.7	8.2	7.7	7.1	7.4	8.3	7.4	7.7	8.6	6.7	7.6
7	8.5	7.6	8.1	7.7	7.0	7.4	8.6	7.4	8.1	8.4	6.9	7.7
8	8.6	7.8	8.2	7.4	7.2	7.3	8.6	6.9	8.0	8.3	7.0	7.7
9	8.7	8.0	8.4	7.5	7.1	7.3	8.6	6.7	8.2	8.8	6.8	7.7
10	8.8	8.2	8.5	7.5	7.3	7.4	8.3	7.3	7.7	8.4	7.0	7.7
11	8.8	8.4	8.6	7.6	7.4	7.5	7.7	7.2	7.4	8.9	6.8	7.8
12	8.7	8.3	8.5	8.3	7.3	7.9	7.4	7.2	7.3	8.6	6.8	7.8
13	8.9	8.2	8.6	8.7	7.2	8.0	7.4	7.1	7.2	8.3	7.5	7.9
14	8.8	8.0	8.4	8.3	7.4	7.9	7.4	7.2	7.3	8.3	7.3	7.7
15	8.6	7.3	8.0	8.8	7.5	8.3	7.8	7.3	7.5	7.8	7.0	7.4
16	8.1	7.3	7.8	8.5	7.4	8.0	8.2	7.2	7.6	8.2	7.0	7.3
17	8.0	7.3	7.7	8.5	7.6	8.0	8.2	7.4	7.9	8.2	7.0	7.3
18	7.8	7.4	7.6	8.8	7.1	8.0	8.1	7.7	7.9	8.2	6.8	7.3
19	8.3	7.5	7.9	8.1	7.3	7.7	8.1	7.6	7.8	7.5	6.9	7.2
20	8.0	7.4	7.7	8.7	7.6	8.1	8.2	7.3	7.7	8.2	6.6	7.4
21	7.8	7.5	7.6	8.5	7.6	8.1	8.0	7.2	7.5	7.9	6.9	7.4
22	8.5	7.6	8.0	8.6	7.7	8.1	7.8	7.3	7.6	7.7	6.9	7.4
23	8.8	7.7	8.2	8.9	8.0	8.4	7.9	7.4	7.6	8.0	6.9	7.5
24	8.5	7.8	8.2	8.9	8.1	8.5	8.0	6.8	7.5	8.0	6.8	7.3
25	8.6	7.9	8.2	8.7	8.2	8.4	7.3	7.0	7.2	8.2	7.1	7.7
26	8.2	7.4	7.8	8.7	7.3	8.3	7.4	7.1	7.3	8.1	7.1	7.6
27	7.7	7.4	7.5	8.4	7.6	8.2	7.4	7.1	7.3	7.7	6.8	7.4
28	8.0	7.4	7.7	8.3	7.4	7.8	8.0	6.9	7.4	8.1	7.3	7.5
29	7.8	7.4	7.6	8.1	7.5	7.8	7.9	6.9	7.3	8.0	7.0	7.6
30	---	---	---	8.5	7.7	8.0	7.3	6.9	7.2	7.9	6.8	7.2
31	---	---	---	8.3	7.7	8.1	---	---	---	7.3	6.8	7.0
MONTH	8.9	7.3	8.1	8.9	7.0	7.9	8.6	6.7	7.6	8.9	6.6	7.5

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.7	6.7	7.1	8.0	7.2	7.5	8.0	7.5	7.7	8.2	7.4	7.7
2	7.9	7.0	7.3	8.1	7.3	7.6	7.9	7.4	7.7	8.6	7.4	8.1
3	8.4	6.7	7.5	8.3	7.1	7.6	7.9	7.4	7.7	8.5	7.7	8.1
4	7.3	6.6	7.0	8.0	6.9	7.4	8.2	7.2	7.7	8.5	7.4	8.1
5	7.7	6.8	7.3	8.3	6.9	7.7	8.3	7.4	7.9	8.6	7.8	8.1
6	7.6	7.0	7.2	8.0	7.3	7.6	8.0	7.6	7.8	8.2	7.2	7.7
7	8.6	6.7	7.2	7.9	7.2	7.5	8.0	7.6	7.8	7.7	7.3	7.4
8	8.4	7.0	7.5	8.3	6.9	7.5	8.1	7.3	7.9	7.6	7.1	7.3
9	8.6	6.6	7.2	8.3	7.6	7.9	8.2	7.7	8.0	7.8	7.1	7.4
10	7.7	6.8	7.2	8.3	7.4	7.9	8.6	7.4	8.0	8.6	7.3	7.8
11	8.3	6.8	7.6	8.0	7.3	7.8	8.5	7.8	8.3	8.2	7.8	8.0
12	7.6	6.9	7.1	8.1	7.3	7.7	8.4	7.6	8.2	8.2	7.6	7.8
13	7.5	7.1	7.3	7.9	7.5	7.7	8.2	7.5	7.9	8.6	7.6	8.1
14	7.5	7.0	7.2	8.1	7.5	7.8	7.8	7.3	7.6	8.4	7.4	7.9
15	7.5	7.2	7.4	8.2	7.4	7.9	7.5	7.2	7.3	8.4	7.4	7.7
16	8.0	7.2	7.4	8.5	7.8	8.2	7.8	7.1	7.3	8.5	7.3	7.9
17	7.7	7.2	7.4	8.3	7.7	8.1	7.9	7.0	7.3	7.6	7.0	7.4
18	8.2	7.3	7.7	8.6	7.7	8.1	7.7	7.0	7.4	7.5	7.1	7.3
19	8.1	7.1	7.5	8.5	7.8	8.2	8.3	7.1	7.5	8.2	7.4	7.7
20	8.0	7.2	7.6	8.4	7.8	8.1	8.0	6.9	7.3	8.3	7.6	7.9
21	7.8	7.3	7.6	8.5	7.8	8.1	7.3	6.8	7.1	8.7	7.9	8.3
22	7.5	7.2	7.4	8.2	7.8	8.0	8.2	6.8	7.1	9.2	8.2	8.7
23	8.1	7.3	7.6	8.0	7.5	7.8	8.9	7.1	7.8	8.9	6.9	8.4
24	8.2	7.1	7.5	8.3	7.3	7.7	8.9	7.0	7.6	8.8	7.0	8.4
25	8.3	7.1	7.8	7.9	7.6	7.7	8.6	7.1	7.7	8.8	7.5	8.0
26	7.7	7.1	7.4	8.0	7.3	7.7	8.1	7.1	7.5	8.6	7.6	8.1
27	7.9	7.2	7.5	7.9	7.6	7.7	8.5	7.2	7.7	8.5	7.9	8.2
28	8.1	7.1	7.6	8.0	7.5	7.8	8.5	7.4	7.7	8.4	7.6	7.8
29	8.4	7.1	7.6	7.8	7.3	7.5	7.9	7.4	7.6	9.0	7.5	8.1
30	8.1	7.4	7.7	7.8	7.4	7.6	7.5	7.3	7.4	8.8	7.0	7.8
31	---	---	---	7.9	7.4	7.6	8.8	7.3	7.8	---	---	---
MONTH	8.6	6.6	7.4	8.6	6.9	7.8	8.9	6.8	7.7	9.2	6.9	7.9

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.9	6.8	6.8	7.0	6.9	6.9	7.9	7.4	7.7	6.9	6.8	6.8
2	7.4	6.8	7.1	6.9	6.9	6.9	7.8	7.5	7.7	6.8	6.7	6.8
3	7.5	6.8	7.1	6.9	6.9	6.9	7.9	7.5	7.7	6.8	6.7	6.7
4	7.3	6.8	6.9	7.0	6.9	6.9	7.9	7.7	7.8	7.1	6.7	6.8
5	7.2	6.8	6.9	7.0	7.0	7.0	7.8	7.5	7.7	7.2	6.8	6.9
6	6.9	6.8	6.8	7.0	7.0	7.0	7.7	7.5	7.6	7.3	6.7	6.9
7	7.0	6.8	6.9	7.1	7.0	7.0	7.7	7.5	7.6	7.4	6.8	7.1
8	7.2	6.8	6.9	7.4	7.0	7.1	7.6	7.5	7.6	---	---	---
9	7.2	6.8	7.0	7.4	7.0	7.3	7.7	7.5	7.6	---	---	---
10	7.4	7.2	7.2	7.5	7.3	7.4	7.5	7.3	7.4	---	---	---
11	7.3	7.2	7.3	7.4	7.0	7.1	7.6	7.4	7.5	---	---	---
12	7.4	6.9	7.2	7.4	7.0	7.2	7.5	7.3	7.4	---	---	---
13	8.0	6.9	7.1	7.5	7.2	7.4	8.0	7.3	7.5	---	---	---
14	7.6	6.8	7.0	7.8	7.5	7.6	7.7	7.3	7.5	---	---	---
15	7.6	7.0	7.3	7.7	7.6	7.7	7.4	7.2	7.3	8.3	8.0	8.1
16	7.6	7.2	7.4	7.7	7.4	7.5	7.3	7.2	7.3	8.3	8.0	8.2
17	7.6	7.2	7.3	7.7	7.3	7.4	7.3	7.1	7.2	8.2	8.1	8.1
18	8.6	7.2	8.0	7.5	7.2	7.3	7.2	7.0	7.1	8.3	8.0	8.1
19	8.4	7.1	7.5	7.9	7.2	7.4	7.1	6.9	7.0	8.3	8.0	8.1
20	7.7	7.0	7.2	8.1	7.5	7.8	7.2	6.8	7.0	8.3	8.1	8.2
21	8.0	7.0	7.4	8.1	7.4	7.6	7.2	6.9	7.0	8.1	8.0	8.1
22	8.1	7.4	7.7	8.3	7.4	7.5	7.1	6.8	7.0	8.2	7.9	8.0
23	7.9	7.2	7.6	7.5	7.2	7.3	7.1	6.8	7.0	8.1	7.9	8.0
24	7.7	7.5	7.6	7.5	7.1	7.2	7.1	6.9	7.0	8.2	7.8	8.0
25	7.6	7.3	7.5	7.9	7.0	7.3	7.1	6.9	7.0	8.0	7.9	7.9
26	7.5	7.1	7.2	8.0	7.0	7.2	7.1	7.0	7.1	7.9	7.8	7.8
27	7.8	7.2	7.3	7.4	6.9	7.1	7.2	7.0	7.1	8.0	7.8	7.8
28	8.1	7.1	7.5	7.6	7.0	7.2	7.1	7.0	7.1	7.9	7.7	7.8
29	7.8	7.2	7.6	7.7	7.3	7.5	7.0	6.9	7.0	7.9	7.5	7.7
30	7.5	7.0	7.2	7.8	7.4	7.5	7.2	6.8	6.9	8.0	7.4	7.8
31	7.4	6.9	6.9	---	---	---	6.9	6.8	6.9	8.0	7.6	7.8
MONTH	8.6	6.8	7.2	8.3	6.9	7.3	8.0	6.8	7.3	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	8.0	7.3	7.6	7.3	7.1	7.2	8.4	7.8	8.0	7.4	7.0	7.1
2	8.2	7.4	8.0	7.7	7.1	7.3	8.2	7.7	7.9	7.6	7.0	7.3
3	8.2	7.4	7.9	7.5	7.0	7.2	8.1	7.2	7.7	7.5	7.2	7.4
4	8.2	7.4	7.9	7.3	6.9	7.1	7.8	7.1	7.6	7.5	7.3	7.4
5	8.4	7.4	7.9	7.2	7.0	7.0	7.6	7.4	7.5	7.5	6.8	7.1
6	8.4	7.5	8.0	7.4	6.9	7.1	7.6	7.2	7.4	7.8	6.6	7.0
7	8.4	7.6	8.0	7.5	7.0	7.2	8.2	6.9	7.3	7.2	6.5	6.7
8	8.4	7.8	8.1	7.4	7.2	7.3	7.6	6.8	7.0	7.9	6.4	6.6
9	8.2	7.6	7.9	7.4	7.0	7.2	7.3	6.7	6.8	6.8	6.4	6.5
10	8.3	7.2	7.7	7.5	7.2	7.4	7.6	6.7	7.1	6.9	6.4	6.5
11	8.2	7.1	7.3	7.5	7.4	7.4	7.6	7.1	7.3	6.6	6.4	6.5
12	8.5	7.0	7.4	8.2	7.2	7.7	7.4	7.1	7.3	6.8	6.5	6.6
13	8.3	7.0	7.1	8.1	7.1	7.5	7.3	7.1	7.2	6.8	6.5	6.6
14	7.1	6.9	6.9	8.3	7.0	7.6	7.4	7.1	7.3	6.9	6.5	6.6
15	7.8	6.9	7.1	8.6	7.2	7.9	7.7	7.3	7.5	6.8	6.5	6.7
16	7.8	7.1	7.5	8.2	7.0	7.4	7.4	7.0	7.2	7.0	6.5	6.7
17	7.7	7.0	7.5	8.2	7.0	7.6	7.4	6.9	7.1	6.9	6.5	6.7
18	7.7	7.3	7.5	8.1	7.0	7.3	7.7	6.7	7.0	8.0	6.5	7.0
19	7.6	7.2	7.4	8.1	7.2	7.6	7.4	6.5	6.7	8.7	6.9	7.6
20	7.6	7.1	7.3	8.6	7.6	8.0	7.5	6.5	7.0	9.1	7.0	8.5
21	7.8	7.2	7.5	8.5	7.7	8.1	7.3	6.5	6.7	8.9	6.7	8.2
22	8.2	7.0	7.4	8.4	7.5	8.0	7.5	6.6	7.0	9.1	6.8	8.6
23	8.2	6.9	7.3	8.4	7.4	7.9	7.6	6.7	7.0	8.8	6.4	7.5
24	8.4	7.2	8.0	8.5	7.3	7.7	8.0	6.7	7.1	8.0	6.4	7.1
25	8.5	7.2	8.1	8.5	7.0	7.7	7.4	6.7	7.1	8.3	6.9	7.7
26	8.2	7.4	7.8	8.4	6.9	7.5	7.5	7.0	7.2	8.1	6.6	7.0
27	7.6	7.4	7.5	8.1	7.1	7.5	7.5	7.1	7.3	7.7	6.6	6.8
28	7.9	7.1	7.5	8.3	7.0	7.7	7.4	7.1	7.3	7.6	6.6	6.9
29	7.4	7.0	7.2	8.2	7.5	7.9	7.4	7.0	7.2	7.4	6.6	6.9
30	---	---	---	8.5	7.2	8.0	7.5	7.0	7.2	7.3	6.6	6.9
31	---	---	---	8.3	7.0	7.6	---	---	---	7.2	6.6	6.9
MONTH	8.5	6.9	7.6	8.6	6.9	7.5	8.4	6.5	7.2	9.1	6.4	7.1

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	6.6	7.1	7.1	6.7	6.9	7.8	7.4	7.7	7.6	7.5	7.6
2	7.2	6.8	7.1	7.0	6.8	6.9	8.1	7.5	7.8	8.5	6.9	7.9
3	7.5	6.7	6.9	7.0	6.8	7.0	8.0	7.7	7.8	8.2	6.8	7.3
4	7.3	6.6	6.9	7.0	6.8	6.9	7.9	7.4	7.7	8.1	6.9	7.1
5	7.6	6.7	7.2	7.2	6.8	6.9	8.2	7.3	7.6	7.2	6.9	7.0
6	7.4	6.9	7.1	7.0	6.9	7.0	8.1	7.2	7.8	7.6	6.9	7.1
7	7.3	6.8	7.0	7.0	7.0	7.0	7.9	7.6	7.8	7.5	7.0	7.1
8	7.5	6.8	7.2	---	---	---	7.9	7.3	7.5	7.6	7.1	7.3
9	7.3	6.6	6.9	---	---	---	7.4	7.1	7.2	8.0	7.1	7.5
10	7.3	6.6	6.9	---	---	---	7.2	7.0	7.1	8.5	7.2	7.7
11	7.3	6.8	6.9	---	---	---	7.3	6.9	7.0	8.1	7.2	7.8
12	7.5	6.8	7.0	---	---	---	7.6	6.9	7.0	8.2	7.2	7.5
13	7.5	6.8	7.2	---	---	---	8.0	7.0	7.4	8.6	7.2	7.8
14	7.4	7.0	7.2	---	---	---	7.7	7.2	7.4	8.5	7.9	8.1
15	7.5	7.0	7.2	---	---	---	7.5	7.2	7.3	7.9	7.0	7.6
16	7.4	6.8	7.0	7.1	7.1	7.1	7.5	6.9	7.1	7.9	6.8	7.1
17	7.5	6.8	7.1	7.1	7.0	7.0	7.0	6.9	7.0	7.4	6.8	6.9
18	8.0	7.0	7.2	7.4	7.0	7.0	7.3	6.9	7.0	7.4	7.1	7.2
19	7.3	7.1	7.3	7.9	7.0	7.1	7.0	6.9	7.0	8.0	7.2	7.5
20	7.7	7.2	7.4	8.0	7.0	7.2	7.4	6.9	7.0	8.0	7.2	7.7
21	7.7	7.2	7.3	8.0	6.9	7.3	7.1	6.9	7.0	8.0	6.8	7.5
22	7.6	7.1	7.4	7.9	6.9	7.2	7.1	6.9	7.0	7.7	6.8	7.0
23	7.5	6.8	7.2	7.8	7.0	7.3	7.1	6.8	7.0	7.1	6.8	6.9
24	7.1	6.7	6.9	8.0	7.0	7.4	7.9	6.8	7.0	8.1	6.8	7.0
25	7.2	6.8	6.9	7.8	7.0	7.2	8.5	6.8	7.2	8.0	6.9	7.1
26	7.0	6.8	6.9	7.4	7.0	7.1	7.9	6.7	7.1	8.3	7.0	7.6
27	7.0	6.8	6.9	7.8	7.0	7.3	8.0	7.0	7.4	8.5	7.2	8.0
28	7.9	6.7	7.0	8.0	7.0	7.3	7.6	7.0	7.4	8.1	7.3	7.8
29	7.3	6.8	6.9	7.8	7.0	7.4	7.8	7.0	7.3	8.1	7.3	7.7
30	7.3	6.8	6.9	7.8	7.4	7.6	7.8	7.4	7.6	7.7	6.8	7.3
31	---	---	---	8.0	7.6	7.7	8.5	7.5	7.7	---	---	---
MONTH	8.0	6.6	7.1	---	---	---	8.5	6.7	7.3	8.6	6.8	7.4

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.2	21.2	21.8	18.0	17.0	17.4	11.5	10.8	11.2	8.3	7.3	7.8
2	21.9	21.0	21.5	17.8	17.4	17.6	11.2	9.7	10.5	8.7	7.6	8.1
3	21.5	20.0	20.7	18.3	17.6	17.8	10.1	9.4	9.8	9.7	8.0	8.7
4	21.2	19.9	20.6	19.2	17.4	18.2	9.5	8.5	9.0	10.7	9.4	10
5	21.4	20.1	20.7	20.6	17.8	19.0	9.1	8.6	8.8	12.2	10.4	11.1
6	21.7	20.5	21.0	20.6	18.4	19.3	8.6	8.0	8.5	12.2	10.7	11.6
7	21.8	21.0	21.3	20.4	18.2	19.5	8.1	7.2	7.7	10.7	8.2	9.5
8	21.9	21.1	21.5	19.8	17.5	18.7	7.8	7.1	7.4	---	---	---
9	21.7	21.2	21.4	17.5	15.8	16.6	8.6	7.2	7.8	---	---	---
10	21.7	21.4	21.5	15.8	15.3	15.6	8.8	7.4	7.9	---	---	---
11	21.6	21.0	21.3	15.7	14.3	15.0	9.7	8.7	9.0	---	---	---
12	21.6	20.6	21.1	16.6	15.2	15.7	9.0	8.2	8.5	---	---	---
13	22.2	20.9	21.3	16.3	14.6	15.9	8.6	8.0	8.3	---	---	---
14	21.4	20.8	21.1	14.6	11.4	13.0	8.4	7.9	8.1	---	---	---
15	21.2	19.9	20.5	12.7	12.3	12.4	8.0	7.2	7.7	5.8	5.2	5.5
16	20.0	19.4	19.6	13.6	12.5	13.0	7.9	7.5	7.7	5.6	5.0	5.3
17	20.4	18.9	19.4	14.2	13.0	13.6	8.6	7.6	8.2	5.2	4.6	4.9
18	20.0	19.0	19.5	14.8	13.2	14.0	8.1	7.2	7.7	6.1	4.8	5.5
19	19.2	18.0	18.7	15.0	14.5	14.8	7.5	7.0	7.3	6.3	5.8	6.0
20	19.3	18.3	18.8	14.9	14.0	14.4	7.5	6.0	6.6	5.8	5.2	5.4
21	19.3	18.4	18.9	14.9	13.6	14.1	6.3	5.3	5.7	5.2	4.5	4.9
22	19.3	18.6	19.0	15.6	14.1	14.6	5.8	5.0	5.4	5.5	4.1	4.8
23	18.6	17.8	18.1	15.2	14.2	14.6	6.6	5.3	5.9	5.1	4.5	4.8
24	18.2	16.8	17.2	15.4	14.4	14.9	8.2	6.5	7.4	5.6	4.7	5.1
25	17.4	16.6	16.9	15.1	14.1	14.8	7.7	6.9	7.3	4.7	3.9	4.3
26	18.3	16.9	17.1	14.5	13.8	14.0	7.2	6.4	6.8	4.0	3.5	3.7
27	18.2	17.2	17.6	14.2	13.5	13.8	6.8	6.1	6.5	3.7	3.2	3.5
28	18.0	17.7	17.8	15.2	13.6	14.4	7.0	5.9	6.4	3.5	2.8	3.1
29	18.0	17.4	17.7	14.8	11.7	12.9	7.4	6.2	6.7	3.8	2.6	3.2
30	17.8	16.9	17.3	12.1	10.8	11.6	8.4	6.6	7.6	3.8	3.1	3.5
31	17.6	16.9	17.1	---	---	---	8.3	7.3	7.8	3.6	2.9	3.3
MONTH	22.2	16.6	19.6	20.6	10.8	15.4	11.5	5.0	7.8	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	3.7	2.6	3.2	9.1	7.5	8.2	14.0	13.2	13.6	20.6	19.9	20.5
2	4.0	2.4	3.1	10.2	8.3	9.5	13.4	13.0	13.2	21.5	20.5	21.0
3	4.8	3.4	3.9	12.1	7.6	10.6	13.4	12.6	13.0	21.4	20.6	21.1
4	5.6	3.7	4.3	12.9	11.2	11.9	13.6	12.8	13.2	20.9	19.6	20.1
5	5.5	4.2	4.9	14.0	12.5	13.1	13.1	12.1	12.5	21.2	19.0	19.9
6	7.0	4.9	5.7	14.1	11.0	13.3	12.9	11.3	12.0	21.6	19.7	20.5
7	8.8	7.0	7.8	14.3	11.3	13.6	14.4	11.6	12.9	24.0	20.6	21.8
8	8.1	7.1	7.6	13.5	11.8	12.9	15.4	12.3	14.2	23.4	22.2	22.8
9	8.0	6.7	7.4	12.3	11.5	11.9	16.8	12.6	15.1	23.9	22.2	22.8
10	7.9	7.3	7.7	11.7	10.3	11.2	15.7	14.7	15.3	24.5	23.0	23.6
11	8.5	7.7	8.1	11.0	9.4	10.4	16.4	15.2	15.8	25.3	22.9	23.8
12	8.3	7.4	7.8	11.7	10.0	10.9	15.9	15.5	15.7	25.1	23.6	24.1
13	8.6	7.2	7.7	11.6	10.7	11.0	16.9	15.8	16.3	25.7	24.2	24.8
14	8.2	7.6	7.9	11.5	10.6	11.1	16.7	15.9	16.4	26.3	24.8	25.3
15	8.1	7.3	7.9	12.5	11.2	11.6	15.9	15.1	15.6	26.6	25.1	25.7
16	7.3	6.2	6.7	12.4	11.7	12.1	16.9	15.0	15.8	27.0	25.1	25.8
17	6.7	6.0	6.2	12.3	11.6	11.9	18.2	16.1	17.0	26.9	25.1	25.7
18	6.6	5.8	6.2	12.4	10.7	11.3	19.4	17.1	18.0	26.4	25.0	25.7
19	6.8	5.6	6.2	12.4	11.3	11.8	19.5	17.9	18.7	26.9	25.1	25.8
20	7.9	6.7	7.1	12.8	11.1	11.9	20.5	18.3	19.3	28.4	25.3	26.5
21	8.8	7.4	8.1	13.1	12.0	12.5	21.0	19.3	20.2	28.5	26.4	27.1
22	9.3	8.1	8.5	12.3	11.4	11.9	21.3	20.0	20.6	28.4	26.5	27.3
23	9.4	7.9	8.5	11.9	10.4	11.3	21.9	20.2	21.1	28.0	26.4	27.1
24	9.0	8.2	8.5	12.1	10.5	11.6	22.1	20.8	21.5	27.6	25.7	26.6
25	8.7	8.0	8.4	13.1	11.4	12.2	21.5	20.2	20.7	29.2	26.0	27.1
26	8.3	7.4	7.8	14.5	12.3	13.2	21.8	20.5	21.1	28.7	27.1	27.9
27	7.4	6.6	7.0	15.4	13.7	14.5	21.3	20.6	21.0	28.7	26.9	27.9
28	7.6	5.9	6.8	15.2	14.4	15.0	21.1	19.1	20.3	28.3	27.2	27.7
29	8.3	6.2	7.2	14.4	13.8	14.0	20.7	19.3	19.9	27.9	26.6	27.3
30	---	---	---	14.0	13.3	13.7	21.0	19.7	20.3	27.1	25.9	26.4
31	---	---	---	13.9	13.5	13.7	---	---	---	26.5	25.8	26.2
MONTH	9.4	2.4	6.8	15.4	7.5	12.1	22.1	11.3	17.0	29.2	19.0	24.7

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.8	25.9	26.4	28.4	27.2	27.6	29.6	28.5	29.1	28.0	26.8	27.3
2	27.5	26.0	26.7	28.8	27.4	27.9	29.6	28.9	29.1	26.8	25.8	26.3
3	28.8	26.1	27.1	30.1	27.3	28.0	29.0	28.2	28.5	26.7	25.8	26.2
4	27.8	26.5	27.0	28.9	27.8	28.4	30.0	27.9	28.5	27.0	25.9	26.4
5	27.3	26.1	26.6	30.2	27.5	28.8	29.9	28.1	29.0	27.3	26.2	26.7
6	27.1	26.0	26.5	30.5	29.1	29.6	29.4	27.1	28.1	26.9	26.4	26.6
7	28.2	26.1	26.7	30.9	29.6	30.0	27.2	26.3	26.8	26.6	26.2	26.4
8	28.5	26.5	27.2	31.7	28.3	30.0	27.8	25.6	26.4	26.9	26.1	26.5
9	28.7	26.7	27.5	31.4	29.3	30.2	28.1	25.5	26.6	27.2	26.1	26.6
10	29.1	27.3	28.2	31.8	29.5	30.5	28.1	26.1	27.2	27.0	26.3	26.6
11	29.7	27.6	28.7	30.9	29.9	30.3	28.1	26.9	27.4	26.7	25.8	26.2
12	28.7	26.7	27.6	30.6	29.4	29.9	28.2	26.8	27.5	26.1	25.3	25.7
13	26.9	25.7	26.4	30.8	29.2	30.0	27.1	26.6	26.8	25.7	25.0	25.3
14	26.4	25.7	26.1	30.8	29.3	30.0	26.9	25.8	26.2	25.1	24.6	24.8
15	27.3	25.9	26.4	30.1	29.0	29.6	25.8	25.3	25.5	25.5	24.5	24.8
16	27.3	26.3	26.8	29.8	28.6	29.3	26.2	24.9	25.5	25.9	25.0	25.3
17	27.4	26.4	26.9	29.2	28.3	28.7	26.8	25.6	25.9	26.0	24.7	25.6
18	29.4	26.8	27.7	30.0	28.1	28.6	26.7	25.7	26.2	25.8	24.2	25.0
19	30.5	27.2	28.5	30.2	28.4	29.0	27.7	26.1	26.7	24.2	22.9	23.6
20	29.4	27.2	28.0	29.4	28.4	28.9	28.0	26.1	26.8	23.3	21.9	22.6
21	27.4	26.5	27.0	30.7	28.3	29.3	27.8	26.2	26.9	22.8	21.7	22.2
22	28.3	26.7	27.4	29.7	28.8	29.2	26.9	26.0	26.4	23.6	21.9	22.5
23	29.1	27.5	28.2	29.1	28.1	28.7	27.4	25.1	26.0	24.0	22.3	23.1
24	29.1	27.9	28.5	29.6	27.8	28.6	27.1	25.0	25.8	23.8	22.5	23.0
25	29.8	28.0	28.5	29.2	28.5	28.7	27.0	25.4	26.0	23.7	22.3	22.9
26	28.9	27.5	28.0	29.3	28.7	29.0	27.6	25.8	26.4	23.9	22.6	23.4
27	27.6	26.8	27.3	29.5	28.6	29.0	27.6	26.1	26.8	24.0	23.4	23.7
28	27.8	26.9	27.3	29.4	28.8	29.1	28.1	26.6	27.0	24.2	23.7	23.9
29	29.1	26.6	27.5	28.8	28.3	28.5	27.8	27.1	27.5	25.4	23.3	24.0
30	28.2	27.4	27.8	29.3	28.1	28.6	27.4	27.0	27.2	25.1	23.5	24.1
31	---	---	---	29.3	28.5	28.9	28.6	26.6	27.4	---	---	---
MONTH	30.5	25.7	27.4	31.8	27.2	29.1	30.0	24.9	27.0	28.0	21.7	24.9

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.1	22.4	23.2	17.9	17.8	17.8	12.7	10.9	11.4	7.9	7.8	7.9
2	23.5	20.9	22.0	17.9	17.8	17.9	11.2	10.3	10.6	8.1	7.8	7.9
3	22.8	20.2	21.2	18.0	17.9	17.9	10.9	9.5	9.9	8.1	7.9	8.0
4	22.6	20.6	21.5	18.0	17.9	18.0	9.5	8.7	9.1	9.7	8.1	8.3
5	22.7	20.4	22.1	18.0	17.9	18.0	9.0	8.6	8.8	12.0	8.1	8.9
6	22.2	21.7	22.0	18.1	18.0	18.0	8.9	8.4	8.6	12.0	8.8	9.9
7	22.2	21.8	21.9	18.9	18.0	18.2	8.4	7.5	8.0	10.8	8.7	9.5
8	22.1	21.3	21.8	18.9	17.5	18.3	8.5	8.3	8.4	---	---	---
9	22.0	21.1	21.7	17.7	15.8	16.7	8.6	7.8	8.4	---	---	---
10	21.7	21.4	21.5	15.9	15.4	15.6	8.8	8.2	8.5	---	---	---
11	21.6	21.0	21.3	17.0	15.2	16.3	9.6	8.7	9.0	---	---	---
12	21.4	20.7	21.0	16.9	15.2	16.2	9.1	8.3	8.7	---	---	---
13	21.8	21.0	21.2	16.3	14.6	15.9	9.2	8.2	8.7	---	---	---
14	21.8	21.1	21.3	14.6	11.9	13.1	8.6	7.9	8.3	---	---	---
15	21.2	19.9	20.5	12.8	12.3	12.4	8.0	7.2	7.8	5.8	5.2	5.5
16	20.0	19.4	19.7	14.1	12.6	13.2	8.3	7.7	8.0	5.7	5.1	5.3
17	19.7	18.9	19.2	14.3	13.2	13.9	8.5	7.8	8.2	5.3	4.7	5.0
18	19.7	19.1	19.5	14.2	13.5	14.0	8.3	7.6	8.0	6.2	4.8	5.4
19	19.6	18.8	19.4	14.9	13.8	14.4	8.3	7.1	7.7	6.3	5.8	6.0
20	19.5	18.7	19.3	14.9	14.0	14.5	8.1	6.1	6.8	5.8	5.2	5.5
21	19.4	18.7	19.1	14.7	14.1	14.6	7.2	5.7	6.4	5.5	4.8	5.2
22	19.3	18.6	19.0	14.7	14.4	14.6	7.9	5.9	7.0	5.1	4.5	4.9
23	18.7	18.1	18.4	14.7	14.5	14.6	8.0	7.0	7.8	5.1	4.6	5.0
24	18.3	16.9	17.5	15.0	14.6	14.7	7.9	7.0	7.5	6.2	4.8	5.2
25	17.5	16.7	17.1	15.1	14.7	14.9	7.8	7.3	7.6	4.8	3.9	4.3
26	17.3	17.0	17.2	14.9	14.4	14.8	7.5	7.2	7.4	4.0	3.5	3.8
27	17.9	17.2	17.5	14.9	14.5	14.7	7.5	7.3	7.4	3.7	3.3	3.5
28	17.9	17.7	17.8	15.2	14.4	14.8	7.5	7.2	7.4	3.5	2.8	3.2
29	17.9	17.4	17.7	14.8	11.9	12.9	7.6	7.3	7.5	3.6	2.9	3.3
30	17.9	17.4	17.7	13.2	11.6	12.3	8.2	7.4	7.6	3.8	3.3	3.5
31	17.8	17.4	17.8	---	---	---	7.9	7.6	7.7	3.7	3.0	3.3
MONTH	24.1	16.7	19.9	18.9	11.6	15.4	12.7	5.7	8.2	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	3.6	3.1	3.4	7.6	6.8	6.9	14.0	13.2	13.6	20.6	20.0	20.4
2	3.8	2.6	3.2	10.0	6.8	8.0	13.5	13.0	13.3	21.4	20.6	20.9
3	5.0	3.4	4.0	10.6	7.3	8.1	13.4	12.6	13.0	21.4	20.6	21.2
4	4.7	4.0	4.3	11.1	7.9	9.0	13.6	13.0	13.3	20.6	19.7	20.1
5	5.4	4.4	4.8	11.6	7.9	8.3	13.1	12.2	12.6	20.3	19.3	19.9
6	6.9	4.8	5.7	13.2	7.9	11.1	12.7	11.7	12.2	20.9	19.8	20.2
7	8.5	6.9	7.8	13.7	10.9	12.3	12.6	11.9	12.3	21.2	20.2	20.7
8	8.1	7.1	7.5	13.5	11.9	12.9	14.9	12.2	12.8	23.1	20.1	20.9
9	7.8	7.1	7.4	12.7	11.8	12.3	14.3	12.4	12.8	22.3	20.3	21.1
10	7.7	7.3	7.5	11.9	10.3	11.2	15.3	13.1	14.5	22.6	20.8	21.2
11	7.8	7.1	7.4	10.8	9.9	10.4	16.3	15.2	15.7	22.0	21.1	21.3
12	7.7	7.2	7.5	11.6	10.2	10.9	16.0	15.5	15.7	23.0	21.3	21.6
13	7.7	7.3	7.4	11.5	10.7	10.9	16.9	15.8	16.2	22.9	21.3	21.8
14	7.6	7.4	7.5	11.6	10.8	11.1	16.9	15.9	16.4	22.6	21.2	21.9
15	7.9	7.3	7.5	11.9	11.2	11.5	15.9	15.1	15.6	23.4	21.2	22.0
16	7.3	6.4	6.8	12.5	11.4	11.7	15.9	15.5	15.7	24.3	21.2	22.2
17	7.0	6.0	6.5	12.4	11.8	12.0	16.9	15.8	16.2	24.8	21.4	22.8
18	6.6	6.0	6.3	11.8	11.3	11.5	17.9	16.2	16.7	25.3	21.8	23.7
19	6.5	5.9	6.3	12.5	11.4	11.8	18.2	16.2	16.6	25.1	22.4	23.2
20	7.5	6.3	6.4	12.9	11.3	12.0	19.0	16.5	17.9	24.8	22.4	22.8
21	8.8	6.5	7.8	13.1	12.0	12.6	19.8	16.7	17.8	24.4	22.8	23.1
22	8.7	6.7	7.8	12.3	11.8	12.1	20.9	17.5	19.1	24.2	22.8	23.2
23	8.7	7.3	7.8	12.0	10.7	11.4	20.9	17.9	19.5	27.3	23.2	24.1
24	8.8	8.1	8.5	12.0	11.2	11.5	21.8	18.2	20.0	26.0	23.8	24.3
25	8.7	8.0	8.4	12.6	11.6	12.0	21.6	18.6	20.2	26.0	24.1	24.5
26	8.4	7.4	7.8	13.8	11.9	12.5	21.4	20.3	20.8	28.2	24.4	24.7
27	7.4	6.7	7.0	15.0	12.8	13.6	21.3	20.6	21.0	28.2	24.7	26.3
28	7.5	5.9	6.7	15.2	13.3	14.5	20.6	19.4	19.9	27.9	25.1	26.6
29	7.1	6.7	7.0	14.5	13.8	14.1	20.3	19.6	19.8	27.3	25.9	26.5
30	---	---	---	14.0	13.4	13.7	20.5	19.9	20.1	27.0	26.1	26.5
31	---	---	---	14.0	13.5	13.7	---	---	---	26.4	25.8	26.1
MONTH	8.8	2.6	6.7	15.2	6.8	11.5	21.8	11.7	16.4	28.2	19.3	22.8

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.9	25.9	26.3	27.7	26.7	27.1	29.4	28.6	28.9	27.1	26.9	27.0
2	26.6	25.9	26.1	27.6	26.6	27.0	29.5	28.9	29.1	27.0	25.8	26.5
3	26.9	25.6	26.1	27.6	26.6	26.8	29.0	28.2	28.5	26.6	25.8	26.2
4	27.4	26.0	26.5	28.2	26.7	27.0	29.1	27.9	28.2	26.6	26.0	26.4
5	27.1	25.9	26.4	28.0	26.9	27.1	29.3	27.9	28.3	26.5	26.2	26.4
6	26.7	25.8	26.1	27.2	26.8	27.0	28.7	27.7	28.1	26.7	26.3	26.5
7	26.8	25.9	26.2	28.0	26.9	27.1	27.7	26.5	27.0	26.5	26.3	26.4
8	27.6	26.0	26.6	27.8	27.0	27.2	26.9	26.6	26.7	27.0	26.0	26.4
9	28.3	26.4	27.0	27.6	27.1	27.3	26.8	26.7	26.7	27.1	26.0	26.5
10	28.6	26.3	27.5	27.4	27.2	27.3	26.9	26.6	26.7	26.9	26.3	26.5
11	28.5	26.6	27.1	28.2	27.3	27.5	27.1	26.7	26.8	26.5	25.8	26.2
12	28.3	26.6	27.5	29.1	27.4	27.6	27.2	26.7	26.9	26.4	25.3	25.8
13	27.3	26.0	26.5	27.9	27.4	27.6	27.3	26.6	26.9	26.3	25.0	25.5
14	26.3	25.8	26.1	28.0	27.6	27.8	26.8	25.7	26.4	25.1	24.6	24.8
15	27.0	25.8	26.2	28.1	27.7	27.9	26.0	25.2	25.6	24.7	24.4	24.5
16	27.0	25.8	26.3	28.1	27.9	28.0	25.9	24.8	25.6	25.7	24.7	25.1
17	27.3	25.8	26.6	28.6	28.0	28.1	25.8	25.6	25.7	26.0	24.9	25.3
18	28.7	25.8	26.5	28.7	28.1	28.3	26.3	25.6	25.8	25.8	24.2	25.0
19	27.4	26.1	26.3	29.0	28.2	28.3	26.0	25.7	25.8	24.2	23.1	23.7
20	27.8	26.1	26.6	29.1	28.1	28.4	26.6	25.9	26.0	23.4	22.3	22.9
21	27.3	26.5	26.8	29.1	28.1	28.4	26.1	25.9	26.0	23.1	21.7	22.0
22	27.8	26.5	27.0	29.4	28.1	28.6	26.2	25.9	26.1	23.2	21.8	22.6
23	28.1	26.2	27.2	29.1	28.2	28.6	26.4	26.0	26.1	22.9	22.0	22.4
24	28.0	26.3	26.8	29.4	27.8	28.4	26.5	25.8	26.0	23.0	22.1	22.3
25	28.6	26.5	26.7	29.1	28.1	28.4	26.6	25.6	26.0	23.4	22.2	22.5
26	27.7	26.6	26.9	28.7	28.1	28.3	26.9	25.7	26.1	23.7	22.5	23.0
27	27.1	26.7	26.8	29.1	28.1	28.5	27.4	26.1	26.5	23.9	23.1	23.6
28	27.7	26.7	27.1	29.4	28.2	28.7	27.0	26.1	26.6	24.1	23.5	23.8
29	27.3	26.7	26.8	28.8	28.3	28.5	28.2	26.3	27.0	24.3	23.3	23.5
30	27.7	26.7	27.3	29.3	28.1	28.7	27.7	27.0	27.2	24.0	23.5	23.6
31	---	---	---	29.3	28.5	28.9	27.8	26.8	27.0	---	---	---
MONTH	28.7	25.6	26.7	29.4	26.6	27.9	29.5	24.8	26.8	27.1	21.7	24.8

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.9	5.4	6.3	11.7	7.7	9.9	9.9	9.1	9.5	10.6	9.8	10.2
2	8.2	6.6	7.4	11.5	4.8	7.5	10.2	9.3	9.7	10.7	9.6	10.1
3	8.7	6.7	7.4	7.9	1.1	4.5	10.7	9.5	9.9	10.8	9.9	10.3
4	8.8	7.1	8.1	9.2	2.6	6.0	10.7	9.8	10.2	10.0	7.7	8.8
5	8.8	7.2	7.9	10.8	3.7	7.7	10.4	9.8	10.1	8.9	7.4	8.3
6	9.1	2.8	7.1	10.3	3.0	7.0	10.2	9.9	10.1	9.7	8.0	8.9
7	8.7	0.8	5.3	8.6	0.9	6.4	10.5	10.0	10.3	9.3	8.1	8.8
8	8.0	0.9	5.0	7.9	6.5	7.4	11.2	10.3	10.6	---	---	---
9	7.1	5.4	6.4	8.3	6.5	7.6	11.2	9.3	10.5	---	---	---
10	6.8	5.9	6.3	9.2	8.1	8.7	11.0	9.8	10.7	---	---	---
11	7.0	6.4	6.6	10.8	8.9	9.7	11.1	10.0	10.6	---	---	---
12	8.4	6.6	7.5	10.2	9.3	9.9	11.2	10.5	10.7	---	---	---
13	10.3	5.7	8.0	9.7	7.7	8.5	11.6	10.5	11.0	---	---	---
14	8.7	5.4	7.5	10.9	8.7	9.7	11.3	10.6	11.0	---	---	---
15	8.0	6.0	7.0	10.7	9.8	10.2	11.4	10.7	11.1	13.0	12.0	12.5
16	9.0	7.0	7.7	11.8	10.2	10.9	11.6	10.6	10.8	13.0	12.1	12.6
17	10.8	7.0	8.5	12.5	10.5	11.5	11.1	9.8	10.3	13.5	12.2	12.8
18	10.3	7.9	9.2	12.4	7.5	9.9	10.8	10.0	10.4	13.2	11.9	12.5
19	10.0	8.2	9.1	9.4	7.3	8.4	10.6	10.0	10.3	12.5	11.5	12.1
20	9.6	7.7	8.7	8.8	7.3	8.2	11.6	9.9	10.3	12.9	11.8	12.4
21	8.9	7.4	8.3	11.2	8.5	9.3	10.8	10.4	10.6	12.9	12.2	12.6
22	8.9	7.1	8.0	11.8	9.0	10.3	11.2	10.4	10.9	12.9	12.4	12.7
23	9.8	7.9	8.5	10.2	6.0	9.0	11.3	10.5	10.8	12.7	11.8	12.4
24	9.3	7.6	8.4	10.4	5.8	8.9	10.8	10.1	10.5	12.5	11.6	12.1
25	9.0	7.2	8.1	9.7	8.3	8.8	10.4	8.4	10.0	12.4	11.8	12.0
26	11.0	5.4	7.7	10.1	8.3	9.1	10.4	9.7	10.0	12.3	11.9	12.2
27	9.3	6.1	7.5	9.4	8.5	8.9	11.0	10.1	10.4	13.3	11.9	12.3
28	9.4	7.0	8.2	9.5	5.3	8.4	11.3	10.1	10.6	13.0	12.0	12.5
29	9.3	8.2	8.7	9.0	6.8	8.2	11.5	9.1	10.4	13.2	12.3	12.7
30	10.1	7.9	8.7	9.5	8.7	9.1	12.4	9.0	10.5	13.2	12.1	12.8
31	10.9	8.5	9.4	---	---	---	10.6	8.9	10.1	13.4	12.5	13.0
MONTH	11.0	0.8	7.7	12.5	0.9	8.7	12.4	8.4	10.4	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	13.8	12.8	13.4	12.8	11.2	12.1	10.6	9.3	9.7	7.9	4.9	6.2
2	13.8	13.2	13.5	11.9	10.4	11.2	10.2	9.2	9.6	7.0	5.2	6.3
3	13.7	12.2	13.3	12.6	6.8	11.1	10.4	9.4	9.8	7.0	6.1	6.6
4	14.0	12.5	13.4	11.4	9.8	10.5	9.9	9.5	9.7	8.8	6.7	7.5
5	14.2	13.3	13.8	11.4	9.7	10.4	10.0	9.4	9.7	9.4	6.4	8.4
6	13.9	11.4	12.9	10.3	7.2	9.1	11.2	9.1	10.1	9.9	3.6	8.2
7	12.9	10.8	12.0	9.7	6.0	8.8	11.7	9.3	10.8	10.0	6.2	8.7
8	12.8	11.4	12.0	9.4	8.2	8.9	11.6	5.9	10.4	9.7	7.5	8.9
9	13.4	11.8	12.5	9.4	7.0	8.9	11.8	3.6	10.4	11.5	6.6	8.9
10	13.5	11.9	12.8	10.0	8.7	9.4	10.6	8.4	9.5	10.1	6.9	8.8
11	13.3	12.4	12.9	10.4	9.5	9.9	9.7	8.3	8.9	10.3	4.8	8.6
12	13.0	12.1	12.5	11.6	8.9	10.8	9.0	8.2	8.7	9.4	5.5	8.1
13	13.8	12.0	12.9	12.8	7.9	10.9	8.9	7.8	8.4	8.8	7.7	8.2
14	13.6	12.2	12.8	11.5	8.9	10.6	9.0	8.0	8.7	9.0	7.5	8.1
15	13.2	8.7	11.7	13.2	9.3	11.4	10.0	8.9	9.3	8.4	6.5	7.8
16	12.4	8.8	11.5	11.6	8.8	10.5	10.6	8.2	9.7	9.0	6.9	7.7
17	12.4	9.3	11.8	11.5	9.7	10.6	10.6	9.0	10.1	9.2	6.9	7.7
18	12.1	11.0	11.7	12.2	6.0	10.5	10.2	9.7	9.9	9.4	6.5	7.8
19	13.1	11.8	12.4	10.9	7.9	9.9	9.8	9.1	9.6	8.4	7.5	7.9
20	12.5	10.6	12.1	12.3	9.8	10.8	9.7	8.3	9.0	9.5	6.3	8.1
21	11.7	10.9	11.5	11.3	9.6	10.6	9.8	8.0	8.8	9.3	7.0	8.6
22	12.9	11.2	11.9	11.6	10.1	10.8	9.3	8.2	8.8	8.8	6.8	8.2
23	13.5	10.6	12.3	12.7	10.2	11.2	9.3	8.4	8.9	9.1	6.5	8.1
24	12.6	11.4	12.0	12.6	10.3	11.4	9.4	5.7	8.5	9.2	4.0	7.6
25	12.7	11.5	11.9	11.7	10.3	11.1	8.0	5.7	7.3	9.4	7.3	8.5
26	12.0	10.0	11.2	11.5	7.5	10.6	8.0	6.9	7.6	8.7	7.3	8.0
27	11.4	10.2	10.8	10.7	9.3	10.3	8.0	6.8	7.6	7.9	6.4	7.4
28	12.3	10.9	11.6	9.9	8.7	9.3	9.1	5.1	7.8	8.4	7.0	7.7
29	12.4	11.5	12.0	10.0	8.4	9.3	9.0	5.1	7.6	8.2	6.5	7.5
30	---	---	---	11.0	9.2	10.0	8.2	5.6	7.3	8.2	5.6	6.8
31	---	---	---	10.5	8.8	10	---	---	---	7.3	5.6	6.6
MONTH	14.2	8.7	12.3	13.2	6.0	10.4	11.8	3.6	9.1	11.5	3.6	7.9

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.2	5.9	7.2	8.0	5.9	6.6	7.8	5.5	6.5	8.6	6.1	7.4
2	8.2	6.8	7.4	7.8	6.0	6.7	6.9	4.1	5.7	9.5	6.2	8.1
3	9.8	6.3	7.6	8.2	5.1	6.5	6.8	5.0	5.8	9.0	7.6	8.2
4	7.2	5.1	6.0	7.0	3.0	5.6	9.4	4.5	6.4	9.2	3.3	8.2
5	8.0	5.6	7.0	7.4	2.8	6.1	8.9	5.5	7.5	9.3	7.8	8.4
6	8.0	5.8	7.0	6.8	5.2	6.0	7.3	5.7	6.7	8.3	4.3	7.4
7	10.3	5.3	7.0	6.8	4.6	5.7	8.0	6.0	7.0	7.7	6.7	7.1
8	9.1	6.0	7.4	7.8	0.5	4.9	8.3	4.2	7.3	7.5	5.5	6.9
9	10.2	4.9	6.9	7.9	5.6	6.6	8.9	5.9	7.6	8.0	6.0	7.0
10	7.8	5.8	6.9	7.8	4.8	6.4	9.8	3.5	7.0	9.3	6.9	7.8
11	8.6	5.4	7.3	6.8	4.0	6.1	8.6	5.4	7.8	8.4	7.6	8.0
12	7.0	5.2	5.9	7.0	4.3	5.9	8.3	4.5	7.2	8.4	7.4	7.9
13	8.0	5.0	6.5	6.5	5.4	5.9	7.0	4.9	6.1	8.8	7.5	8.1
14	7.8	5.5	6.5	6.8	5.0	5.8	6.2	4.2	5.2	8.2	5.8	7.8
15	7.6	6.4	7.0	7.3	4.7	6.1	6.1	4.0	5.1	8.7	7.2	7.7
16	8.4	6.5	7.4	9.1	5.9	7.3	9.2	4.4	6.4	9.3	7.2	8.3
17	8.3	7.0	7.5	7.8	5.2	6.9	9.0	2.4	6.6	7.8	5.3	7.1
18	8.7	7.0	7.5	9.2	5.5	6.9	9.5	1.7	7.8	7.7	6.3	7.2
19	8.5	5.1	7.0	9.0	5.8	7.1	9.4	4.4	7.3	9.1	7.2	8.0
20	8.1	6.1	6.9	8.7	5.9	6.9	8.9	2.8	6.5	9.2	7.8	8.5
21	7.7	5.9	6.7	8.6	5.9	7.0	7.6	5.1	6.6	10.4	8.6	9.4
22	7.3	5.3	6.6	7.6	5.2	6.2	9.0	5.9	6.8	11.9	9.6	10.4
23	8.4	6.2	7.1	6.1	4.6	5.6	11.4	6.4	8.4	11.1	2.4	9.6
24	8.7	6.7	7.5	9.1	3.7	5.9	11.2	7.2	8.3	10.1	4.0	8.8
25	8.9	6.5	7.9	7.0	5.7	6.2	10.4	7.4	8.3	10.1	7.0	7.9
26	7.6	6.2	6.9	7.2	2.8	6.0	8.7	7.2	7.8	8.8	7.0	7.8
27	8.1	5.8	7.1	6.8	5.4	6.1	9.0	7.3	7.9	8.1	7.4	7.8
28	8.3	4.4	7.0	7.4	5.5	6.5	9.3	7.2	7.8	7.9	6.8	7.2
29	9.2	3.0	6.9	6.6	4.5	5.4	8.3	6.2	7.4	9.8	6.6	7.7
30	7.9	6.0	6.9	7.0	4.3	5.6	7.4	6.4	6.9	9.7	3.9	7.0
31	---	---	---	7.5	5.2	6.1	9.8	5.9	7.7	---	---	---
MONTH	10.3	3.0	7.0	9.2	0.5	6.2	11.4	1.7	7.0	11.9	2.4	8.0

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	3.7	0.0	1.1	2.1	0.7	1.1	10.0	7.5	9.1	5.8	4.5	4.8
2	8.7	0.0	5.0	2.0	0.4	0.7	10.3	9.5	9.8	4.7	3.3	4.1
3	8.5	0.1	6.0	1.5	0.4	1.0	10.4	9.4	10	4.5	3.5	3.9
4	8.0	0.1	3.3	1.0	0.3	0.5	10.5	10.0	10.2	7.0	2.9	4.0
5	7.7	0.0	1.3	1.1	0.3	0.6	10.6	10.0	10.3	8.7	3.6	4.8
6	1.8	0.0	0.1	0.5	0.2	0.3	10.4	9.8	10.2	9.3	3.8	5.5
7	0.4	0.0	0.1	2.3	0.2	0.6	10.6	9.8	10.2	10.3	6.1	8.9
8	6.7	0.0	1.1	6.7	0.3	2.1	9.9	9.5	9.7	---	---	---
9	6.9	0.0	3.2	7.4	0.7	6.1	10.6	9.3	9.7	---	---	---
10	7.0	6.0	6.5	8.1	6.0	7.6	10.4	8.7	9.5	---	---	---
11	7.0	6.4	6.7	7.8	0.9	3.3	10.9	9.9	10.5	---	---	---
12	7.2	1.8	5.7	7.7	1.7	4.9	10.6	9.4	10.1	---	---	---
13	9.3	1.7	4.9	7.9	4.3	6.9	11.7	8.7	10.2	---	---	---
14	8.0	1.1	3.8	9.2	7.4	8.4	11.3	10.1	10.8	---	---	---
15	8.1	4.4	7.0	9.0	8.3	8.6	11.2	10.7	11.0	13.0	11.8	12.5
16	8.0	6.4	7.2	9.1	5.3	7.5	11.0	9.8	10.4	13.1	12.1	12.6
17	9.9	6.4	8.0	9.0	4.5	5.9	10.8	8.8	9.9	12.6	11.8	12.2
18	---	---	---	7.3	4.3	5.3	10.6	9.1	10.2	12.6	11.6	12.1
19	---	---	---	8.5	4.6	6.6	10.6	8.1	9.9	12.5	11.6	12.1
20	---	---	---	9.0	7.5	8.4	10.8	9.4	10.4	12.7	11.7	12.3
21	---	---	---	9.0	6.9	7.8	10.9	8.9	10.4	12.0	11.3	11.7
22	---	---	---	9.7	6.3	7.2	11.0	5.6	8.7	12.8	11.0	11.5
23	8.2	5.7	7.4	7.8	5.7	6.3	8.6	5.6	6.9	12.6	11.3	12.0
24	8.1	7.0	7.5	7.7	4.7	5.5	9.8	5.5	6.9	12.7	11.1	12.0
25	8.0	6.6	7.4	8.9	4.1	6.3	9.5	6.1	7.4	12.2	11.8	12.0
26	7.6	5.0	6.1	8.6	2.6	4.7	8.5	7.6	8.1	12.4	11.9	12.2
27	8.3	4.7	5.9	6.7	2.3	3.8	8.2	7.2	7.9	12.8	11.9	12.3
28	9.1	4.7	7.3	7.9	2.0	5.1	7.9	6.6	7.4	13.2	12.1	12.6
29	8.7	5.2	7.8	9.3	6.9	8.4	7.2	6.2	6.7	13.1	10.9	12.0
30	7.6	2.6	5.0	9.5	7.3	8.5	11.3	5.6	6.8	13.3	10.1	12.4
31	6.9	1.2	2.0	---	---	---	6.8	5.3	5.7	13.2	11.1	12.6
MONTH	---	---	---	9.7	0.2	5.0	11.7	5.3	9.2	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	13.1	9.4	11.2	9.6	7.0	8.0	10.6	9.1	9.7	7.6	5.0	6.1
2	13.7	10.1	13.1	11.2	7.2	9.2	10.4	8.9	9.6	7.8	5.4	6.8
3	13.5	10.1	12.4	10.7	6.8	8.0	10.1	6.3	9.2	7.7	6.6	7.1
4	13.5	10.6	12.3	9.8	4.7	7.2	9.8	5.8	8.9	7.6	6.7	7.2
5	13.7	10.1	12.1	8.2	5.0	5.8	9.9	8.5	9.3	8.2	5.3	6.6
6	13.7	10.8	12.4	9.2	4.6	7.2	9.6	6.8	8.3	9.2	2.8	6.4
7	12.7	11.1	11.9	9.4	6.0	7.6	11.1	4.9	7.4	8.0	1.8	5.2
8	12.5	11.5	11.9	9.6	7.9	8.8	9.7	4.1	6.0	9.0	0.3	2.7
9	12.3	10.6	11.4	9.1	5.2	7.7	8.1	1.8	3.6	6.2	0.1	2.1
10	12.2	8.5	10.4	10.1	7.9	9.4	9.6	2.1	6.8	6.5	0.2	1.5
11	12.0	7.1	8.3	10.0	9.3	9.6	---	---	---	2.9	0.1	0.6
12	12.4	5.7	7.9	11.8	7.9	10.2	---	---	---	3.6	0.1	0.5
13	12.1	4.8	6.0	11.6	6.8	9.3	---	---	---	1.6	0.0	0.2
14	7.5	3.9	4.7	11.7	5.9	9.4	---	---	---	0.6	0.0	0.2
15	10.8	3.5	6.1	12.5	7.7	10.5	---	---	---	2.5	0.1	0.5
16	11.7	7.5	10.3	11.0	5.9	8.6	---	---	---	3.2	0.1	0.4
17	11.9	6.9	10.7	10.9	5.5	9.2	---	---	---	4.3	0.1	0.9
18	12.1	9.8	11.1	10.8	5.4	7.5	---	---	---	6.6	0.0	2.1
19	11.9	8.9	10.7	10.8	7.0	9.5	---	---	---	5.8	0.0	1.2
20	11.8	8.3	9.5	12.2	9.7	10.7	---	---	---	4.0	0.0	0.4
21	11.8	8.5	10.8	11.5	10.0	10.8	---	---	---	1.3	0.0	0.1
22	12.6	5.7	9.2	11.2	8.1	10.1	8.1	0.9	4.9	1.9	0.0	0.1
23	12.5	5.5	8.4	11.2	7.9	9.9	8.2	0.5	4.7	7.4	0.0	1.1
24	12.6	7.9	11.6	11.4	7.4	9.1	8.6	0.4	4.4	5.0	0.0	0.6
25	12.7	4.2	11.7	11.3	4.7	8.5	7.5	0.5	4.8	5.1	0.0	0.3
26	12.0	10.1	11.3	10.5	3.2	6.9	7.8	5.2	6.5	7.8	0.0	0.3
27	11.5	10.3	10.9	10.2	5.2	7.8	8.0	5.8	7.4	7.9	0.2	3.5
28	12.3	7.4	11.1	9.9	4.4	7.8	7.9	5.3	6.9	8.0	0.2	4.2
29	10.1	6.0	8.1	9.9	8.2	9.2	7.4	3.8	5.9	7.7	0.1	3.3
30	---	---	---	10.8	6.5	9.7	8.0	3.9	6.1	7.0	1.4	5.0
31	---	---	---	10.4	4.5	7.7	---	---	---	7.6	0.8	5.3
MONTH	13.7	3.5	10.3	12.5	3.2	8.7	---	---	---	9.2	0.0	2.7

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.7	4.2	7.5	4.5	0.0	1.4	5.5	3.5	4.5	6.0	2.3	3.6
2	8.6	3.1	6.8	3.3	0.0	0.6	6.1	3.3	4.9	9.0	0.4	5.6
3	8.1	1.7	5.2	3.5	0.0	0.3	6.3	4.8	5.4	8.0	0.3	4.6
4	7.3	2.2	4.7	3.7	0.1	0.4	7.5	4.1	5.4	7.9	0.2	2.2
5	7.8	5.1	6.6	5.0	0.1	0.5	7.8	2.8	5.0	4.6	0.3	1.3
6	7.5	4.7	6.1	0.2	0.1	0.2	7.2	2.9	5.7	6.8	0.4	2.6
7	7.3	2.7	5.5	1.1	0.2	0.2	6.6	4.6	5.6	6.3	0.5	2.9
8	7.6	2.1	6.1	0.5	0.0	0.2	6.0	3.1	4.0	7.0	2.9	5.6
9	7.0	1.0	4.7	0.1	0.0	0.0	3.6	1.1	2.0	7.5	2.9	6.0
10	7.2	0.1	4.2	0.1	0.0	0.0	3.0	0.5	1.0	8.2	3.6	6.4
11	6.8	0.1	1.8	0.7	0.0	0.1	3.3	0.0	0.9	7.8	1.3	6.4
12	7.0	0.1	4.4	1.5	0.0	0.1	5.0	0.0	1.2	8.0	1.0	4.5
13	6.9	1.9	5.7	0.1	0.0	0.0	6.6	0.0	3.2	8.5	1.1	5.7
14	6.8	3.9	5.9	0.1	0.0	0.0	6.2	1.8	4.2	8.1	6.4	7.8
15	7.0	4.6	6.1	0.3	0.0	0.1	5.9	3.0	4.6	8.2	4.6	7.0
16	7.0	0.1	3.0	0.1	0.1	0.1	6.2	0.4	2.7	8.1	0.0	4.4
17	7.5	0.1	3.5	0.2	0.1	0.1	1.9	0.0	0.6	7.1	0.4	3.0
18	8.0	0.1	2.2	3.9	0.1	0.6	4.3	0.0	0.6	7.5	6.1	6.9
19	4.8	0.0	0.5	6.3	0.2	0.8	0.9	0.0	0.1	8.7	6.8	7.6
20	7.4	0.0	1.6	6.8	0.2	2.0	4.4	0.0	0.5	8.8	6.4	8.0
21	7.4	0.0	2.9	6.9	0.0	2.7	0.4	0.0	0.0	9.0	0.8	7.1
22	7.1	0.1	4.5	5.9	0.0	2.3	0.2	0.0	0.1	8.6	0.0	2.8
23	6.6	0.1	3.3	5.6	0.0	2.8	2.4	0.0	0.2	4.0	0.7	2.1
24	5.6	0.0	0.9	6.7	0.1	4.2	7.8	0.0	0.6	7.4	0.2	2.4
25	5.8	0.0	0.3	5.9	0.0	1.3	9.4	0.0	4.2	7.3	0.2	2.5
26	4.5	0.0	0.6	3.7	0.0	0.6	8.3	0.6	5.7	7.7	0.3	4.9
27	1.3	0.0	0.1	5.4	0.0	1.9	8.2	0.2	6.2	7.8	2.2	6.7
28	7.3	0.0	1.7	6.3	0.0	2.3	7.9	0.1	5.8	7.2	3.8	6.6
29	5.9	0.0	1.5	4.8	0.9	3.5	7.5	0.2	4.0	7.4	3.4	6.0
30	5.5	0.0	2.3	5.6	3.1	4.6	8.1	5.0	6.8	6.5	2.3	4.5
31	---	---	---	6.3	4.2	5.0	9.4	4.8	6.4	---	---	---
MONTH	9.7	0.0	3.7	6.9	0.0	1.3	9.4	0.0	3.3	9.0	0.0	4.9

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	91	62	72	123	81	103	91	83	86	90	82	86
2	94	74	85	121	51	78	91	84	87	92	81	85
3	98	75	83	83	12	47	94	84	87	94	84	88
4	98	79	90	100	27	64	92	85	88	88	68	78
5	100	81	88	120	39	84	90	85	87	81	67	75
6	104	32	80	115	32	77	88	85	86	89	74	82
7	99	9	60	96	10	70	89	84	86	80	71	77
8	91	10	57	85	71	79	94	85	89	---	---	---
9	81	62	72	84	67	78	95	79	88	---	---	---
10	77	67	72	93	82	87	93	83	90	---	---	---
11	79	72	75	107	89	97	96	87	92	---	---	---
12	96	74	84	105	93	100	96	90	92	---	---	---
13	119	64	91	99	78	87	99	89	94	---	---	---
14	98	61	84	100	86	92	96	90	93	---	---	---
15	88	68	79	101	92	96	96	90	93	104	95	99
16	99	77	85	114	96	104	97	89	91	103	95	100
17	120	76	93	122	100	111	93	83	87	106	96	100
18	113	86	101	121	72	96	91	85	87	104	93	99
19	108	89	98	93	72	83	88	83	86	101	93	97
20	103	83	94	87	72	81	96	81	84	103	94	98
21	96	80	90	110	82	91	87	83	85	102	94	98
22	97	77	87	119	88	101	88	82	87	102	97	99
23	104	83	90	102	59	88	92	85	86	100	93	97
24	97	81	88	103	57	89	91	85	87	100	91	95
25	93	75	84	96	82	87	87	70	84	95	91	93
26	117	56	81	99	81	89	86	80	82	93	90	92
27	98	64	79	91	82	86	90	82	85	100	90	93
28	99	74	86	92	53	82	92	82	86	98	91	93
29	98	86	91	84	67	78	95	75	85	100	91	95
30	106	83	90	88	80	84	101	74	88	100	91	96
31	114	89	98	---	---	---	90	75	85	101	93	98
MONTH	120	9	84	123	10	86	101	70	88	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	104	96	100	108	95	103	103	89	93	88	54	69
2	106	98	101	103	89	98	98	88	92	79	58	71
3	104	93	102	117	57	101	99	89	93	79	69	74
4	110	97	103	105	92	97	94	91	93	99	74	82
5	111	103	108	110	93	99	94	88	91	105	71	92
6	109	94	103	99	65	87	106	85	94	111	40	92
7	111	91	101	95	56	85	114	86	103	117	69	99
8	108	96	101	89	79	84	115	55	101	113	87	103
9	112	98	104	87	65	82	119	34	104	134	76	103
10	114	99	107	90	80	85	107	83	95	121	81	104
11	114	104	110	94	85	89	99	83	90	124	56	102
12	111	102	105	107	79	98	91	83	88	114	65	97
13	118	100	108	117	71	99	92	79	86	108	92	100
14	115	103	108	105	80	97	92	82	89	112	91	99
15	112	73	99	124	85	105	101	89	94	105	79	96
16	102	73	94	108	82	98	109	83	98	113	84	96
17	101	76	96	106	89	99	113	93	105	113	85	95
18	98	89	94	112	55	96	109	101	105	116	79	95
19	108	94	100	102	72	92	107	98	103	106	92	97
20	104	88	100	116	90	100	106	89	98	121	77	102
21	100	91	97	108	89	100	109	87	97	118	88	108
22	113	95	102	108	93	100	105	92	99	113	85	103
23	117	91	105	117	94	103	106	93	100	117	81	103
24	108	97	103	117	94	105	107	64	97	117	49	96
25	109	98	102	111	97	103	91	63	82	121	90	108
26	102	83	95	112	70	101	91	77	85	112	93	103
27	94	84	89	106	93	102	90	76	86	102	80	95
28	103	89	95	99	87	92	103	56	87	108	88	98
29	105	93	100	97	81	90	100	56	84	105	82	95
30	---	---	---	107	88	97	91	62	80	102	70	85
31	---	---	---	102	85	96	---	---	---	91	69	82
MONTH	118	73	101	124	55	96	119	34	94	134	40	95

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	103	73	90	103	75	84	103	72	85	110	77	94
2	104	84	93	101	76	86	91	54	75	119	78	101
3	126	78	97	109	65	83	88	65	76	113	94	102
4	90	64	76	91	39	72	125	58	83	116	41	102
5	101	69	88	97	36	79	118	71	97	118	97	105
6	101	72	87	91	68	80	96	73	85	104	54	93
7	131	66	88	91	61	76	101	75	88	96	83	88
8	118	75	93	107	6	65	105	53	91	94	68	86
9	126	61	88	107	74	87	110	74	95	101	74	88
10	102	73	89	107	63	86	126	44	88	117	86	98
11	113	69	95	92	53	81	110	69	99	105	94	100
12	88	66	75	94	57	78	106	57	92	104	91	97
13	100	63	81	87	71	79	88	61	77	108	91	99
14	97	68	81	92	66	77	77	53	64	100	70	94
15	96	79	87	97	62	81	75	49	62	107	87	93
16	106	81	93	120	78	95	114	54	79	114	88	101
17	104	88	94	102	67	89	113	30	81	95	64	87
18	112	88	95	122	71	90	119	21	92	93	76	88
19	112	65	90	120	75	92	120	55	92	108	85	94
20	106	78	88	114	76	90	114	35	82	107	91	98
21	96	74	84	116	76	92	97	64	83	121	98	108
22	94	67	83	100	68	82	112	74	84	140	110	120
23	110	79	92	80	60	73	144	79	104	130	28	113
24	114	86	97	120	47	77	141	87	102	119	47	103
25	116	84	102	92	74	81	131	91	103	118	82	92
26	99	79	88	94	36	78	109	89	97	104	82	92
27	103	74	90	90	70	80	114	90	99	96	88	92
28	106	56	89	97	72	84	119	90	99	94	81	86
29	120	38	87	86	58	70	106	79	94	120	78	92
30	101	77	88	92	55	73	94	81	87	118	46	84
31	---	---	---	98	67	80	126	75	98	---	---	---
MONTH	131	38	89	122	6	81	144	21	88	140	28	96

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	43	0	12	22	7	12	92	71	84	49	38	41
2	99	0	57	21	4	8	93	85	88	40	28	35
3	96	1	67	16	4	10	91	84	88	38	30	33
4	90	1	37	11	3	5	91	87	89	62	25	34
5	86	0	15	12	3	7	91	86	89	81	31	42
6	21	0	1	5	2	3	89	85	87	84	33	49
7	5	0	0	25	2	6	90	84	87	89	53	78
8	76	0	12	71	3	22	85	81	83	---	---	---
9	78	0	36	75	7	63	89	80	83	---	---	---
10	80	68	73	82	61	76	90	75	82	---	---	---
11	79	73	76	78	9	33	95	86	91	---	---	---
12	81	20	64	79	18	50	91	81	87	---	---	---
13	106	19	55	80	44	70	100	76	87	---	---	---
14	91	12	43	86	73	80	97	86	92	---	---	---
15	89	50	77	85	78	81	95	90	93	104	93	99
16	88	70	79	86	51	71	92	83	88	104	95	100
17	108	70	87	86	44	57	91	75	85	100	92	96
18	---	---	---	70	42	52	89	77	86	101	91	96
19	---	---	---	84	45	65	88	69	84	101	93	97
20	---	---	---	89	74	83	87	80	86	101	93	98
21	---	---	---	89	68	77	88	74	85	95	89	92
22	---	---	---	95	62	71	89	47	72	100	86	90
23	88	61	79	77	56	62	71	47	58	99	89	94
24	85	73	79	77	46	54	83	46	58	103	87	95
25	82	69	77	88	41	62	79	51	62	94	92	93
26	79	52	63	85	26	47	71	64	67	94	90	93
27	88	49	62	66	23	38	68	60	66	97	90	93
28	96	49	76	78	20	51	66	55	62	99	91	94
29	92	55	82	87	68	80	60	52	56	99	82	90
30	80	27	52	88	70	80	95	47	57	101	76	94
31	72	13	22	---	---	---	57	45	48	100	84	95
MONTH	---	---	---	95	2	49	100	45	78	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	98	71	84	80	58	66	103	87	94	85	55	68
2	104	76	98	99	62	78	100	85	92	88	60	76
3	104	76	95	94	57	68	97	60	88	87	75	81
4	103	82	95	88	40	63	94	55	85	84	74	79
5	109	78	95	76	43	50	93	80	87	90	58	73
6	108	85	99	88	40	66	90	64	78	103	31	71
7	108	93	100	91	54	71	104	46	70	90	20	58
8	106	95	99	89	75	84	96	38	57	105	3	31
9	103	88	95	84	49	72	79	17	34	72	1	24
10	102	71	87	92	73	85	96	20	67	75	2	17
11	101	59	70	90	84	87	---	---	---	33	1	7
12	104	48	66	109	71	93	---	---	---	42	1	6
13	101	40	50	107	61	85	---	---	---	19	0	3
14	63	33	40	107	53	86	---	---	---	7	0	2
15	91	29	51	116	71	96	---	---	---	29	1	5
16	96	62	84	103	54	79	---	---	---	38	1	5
17	96	57	87	102	51	86	---	---	---	52	1	11
18	99	80	90	100	50	69	---	---	---	81	0	25
19	96	72	87	101	64	88	---	---	---	71	0	14
20	99	67	77	116	89	100	---	---	---	48	0	5
21	101	70	91	109	93	102	---	---	---	16	0	1
22	108	48	78	105	75	95	90	9	53	23	0	0
23	106	46	71	102	73	91	92	5	52	94	0	14
24	108	67	99	106	68	84	98	4	49	62	0	8
25	109	36	100	105	43	79	85	5	54	63	0	4
26	103	84	95	102	30	65	88	58	73	100	0	4
27	94	85	90	100	49	75	89	65	83	101	2	44
28	103	61	91	99	42	77	88	58	76	102	2	53
29	83	50	67	96	80	90	82	42	65	97	1	41
30	---	---	---	105	63	94	89	43	68	88	17	62
31	---	---	---	101	43	74	---	---	---	95	10	66
MONTH	109	29	84	116	30	81	---	---	---	105	0	31

0208453300 PAMLICO RIVER AT LIGHT 5—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	122	52	93	57	0	18	72	45	59	76	29	46
2	107	38	84	42	0	8	80	43	64	113	5	70
3	102	21	64	44	0	3	81	62	70	99	4	57
4	91	27	59	48	1	5	98	53	70	98	2	27
5	98	63	83	64	1	6	102	36	65	57	4	17
6	94	58	76	3	1	2	93	37	73	85	5	33
7	91	33	68	14	3	3	84	58	71	79	6	36
8	95	26	76	6	0	2	75	39	50	88	36	70
9	89	12	59	1	0	0	45	14	25	95	36	75
10	93	1	54	1	0	0	38	6	13	103	45	80
11	88	1	24	9	0	0	42	0	11	97	16	79
12	88	1	56	20	0	0	63	0	15	98	12	56
13	86	24	71	1	0	0	83	0	40	104	14	69
14	84	48	73	1	0	0	77	23	53	98	78	94
15	88	57	76	4	0	0	72	37	57	99	56	84
16	88	1	38	1	1	1	75	5	33	99	0	53
17	95	1	44	3	1	1	23	0	7	88	5	36
18	104	1	28	50	1	8	54	0	7	91	74	84
19	61	0	6	82	3	11	11	0	1	103	80	90
20	94	0	21	89	3	26	55	0	6	103	75	93
21	94	0	36	90	0	35	5	0	0	104	9	82
22	90	1	56	78	0	30	2	0	0	99	0	33
23	85	1	42	73	0	36	30	0	2	46	8	25
24	72	0	12	88	1	54	97	0	7	86	2	28
25	75	0	3	77	0	17	117	0	52	85	2	29
26	57	0	7	48	0	8	103	7	70	91	3	57
27	16	0	2	71	0	25	104	2	78	93	26	79
28	93	0	22	83	0	31	99	1	72	86	45	78
29	74	0	19	62	12	45	96	2	50	89	40	71
30	70	0	29	73	40	60	103	63	86	77	27	53
31	---	---	---	83	55	65	120	60	81	---	---	---
MONTH	122	0	46	90	0	16	120	0	42	113	0	59

0208455155 PAMLICO RIVER AT LIGHT 3

LOCATION.--Lat 35°21'25", long 76°38'47", Beaufort County, Hydrologic Unit 03020104, on U.S. Coast Guard Channel Light 3.

PERIOD OF RECORD.--Water years 1989 to 1992, 1999 to current year.

PERIOD OF DAILY RECORD.--
SALINITY (TOP AND BOTTOM): May 1989 to September 1992, May 1999 current year.
pH (TOP AND BOTTOM): May 1999 to current year.
WATER TEMPERATURE (TOP): May 1989 to September 1992, May 1999 to current year.
WATER TEMPERATURE (BOTTOM): May 1999 to current year.
DISSOLVED OXYGEN (TOP AND BOTTOM): May 1989 to September 1992, May 1999 to current year.
DISSOLVED OXYGEN (MID): May 1989 to September 1992.
DISSOLVED OXYGEN, PERCENT SATURATION (TOP AND BOTTOM): May 1989 to September 1992, May 1999 to current year.
DISSOLVED OXYGEN, PERCENT SATURATION (MID): May 1989 to September 1992.

INSTRUMENTATION.--Water-quality monitor from May 1989 to September 1992. Constituents monitored were: specific conductance, top and bottom, water temperature top, dissolved oxygen, top, mid-depth and bottom. Water-quality monitor with satellite telemetry from May 1999 to current year. Constituents monitored were the same as previous water years except, mid-depth dissolved oxygen was not measured, water temperature, bottom, was added as well as pH top and bottom.

REMARKS.--Station operated in cooperation with the North Carolina Department of Environment and Natural Resources. The monitor was removed on August 29, 1999 to prevent possible destruction of the equipment during Hurricane Dennis. It was reinstalled on September 9, 1999. The monitor was removed again on September 14, 1999 to prevent possible destruction during Hurricane Floyd. It was reinstalled on October 7, 1999. The monitor was removed on September 15, 2003 to prevent possible destruction of the equipment during Hurricane Isabel. It was reinstalled on September 21, 2003. Top constituents were monitored at 8 ft above the streambed and bottom constituents, 2 ft above the streambed. Salinity and dissolved oxygen, percent saturation are computed. The salinity is computed from specific conductance using the conversion from U.S. Geological Survey Water-Supply Paper 2311. The dissolved oxygen percent saturation is computed using a barometric pressure of 760 mm of Hg beginning October 1, 2000. Dissolved oxygen, minimum extremes are reported as <1.0 mg/L. Dissolved oxygen, percent saturation, minimum extremes are reported as <10%.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	20.3, August 26, 2002	0.3, October 11, 1999
SALINITY (BOTTOM), ppt	23.0, October 6, 2002	0.5, October 11, 27, 1999
pH (TOP), standard units	9.5, April 15, 2003, August 15, 2003	6.6, October 7, 1999
pH (BOTTOM), standard units	9.2, April 14, 15, 2003, August 15, 2003	6.6, May 27, 2000, July 12, 2001, May 8, 9, 15, 16, 17, 18, 2004
WATER TEMPERATURE (TOP), °C	33.3, August 20, 1990, July 9, 1991	0.0, January 25, 2003
WATER TEMPERATURE (BOTTOM), °C	32.6, August 1, 1999	0.6, January 25, 2003
DISSOLVED OXYGEN (TOP), mg/L	21.2, January 30, 1992	<1.0, on several days during the period
DISSOLVED OXYGEN (BOTTOM), mg/L	18.0, May 3, 1991	<1.0, on many days during the period

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	13.5, July 31	1.4, December 24
SALINITY (BOTTOM), ppt	17.1, July 8	2.0, December 25
pH (TOP), standard units	9.0, September 16	7.1, April 25, May 5
pH (BOTTOM), standard units	8.8, November 2, March 4, 5	6.6, May 8, 9, 15, 16, 17, 18
WATER TEMPERATURE (TOP), °C	31.6, July 10	2.8, January 28, 29, February 2
WATER TEMPERATURE (BOTTOM), °C	30.6, July 14	2.9, January 29, February 2
DISSOLVED OXYGEN (TOP), mg/L	14.0, September 16	4.6, July 24
DISSOLVED OXYGEN (BOTTOM), mg/L	13.3, January 12	<1.0, on many days during the year
DISSOLVED OXYGEN, PERCENT SATURATION (TOP),%	174, September 16	59, July 24
DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM),%	131, September 22	<10, on many days during the year

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4.7	3.1	3.7	5.7	4.5	5.4	6.0	5.1	5.5	3.7	3.4	3.5
2	4.5	3.0	3.6	5.5	4.6	5.2	6.0	5.5	5.8	3.5	3.4	3.5
3	4.2	3.4	3.8	5.4	4.3	5.0	6.2	5.7	6.0	3.5	3.1	3.3
4	3.9	3.2	3.4	5.4	3.4	4.5	6.3	5.9	6.1	4.6	3.1	3.7
5	3.4	3.1	3.2	5.0	3.2	3.8	6.5	5.7	5.9	6.8	4.6	5.8
6	3.9	2.8	3.2	4.2	2.6	3.2	6.7	5.9	6.3	6.7	5.7	6.2
7	3.8	3.2	3.3	4.0	2.9	3.6	6.8	6.1	6.5	7.0	6.0	6.5
8	5.2	3.5	4.3	6.1	3.9	5.1	6.4	4.7	5.4	7.2	6.7	7.0
9	6.3	4.8	5.7	7.2	5.3	6.2	6.5	4.4	5.3	7.3	7.1	7.2
10	6.3	5.2	5.9	5.5	5.2	5.4	7.5	4.9	6.2	7.6	6.9	7.2
11	6.0	5.3	5.6	5.5	4.8	5.3	7.5	6.5	6.7	7.5	7.0	7.3
12	6.3	5.3	5.8	5.2	4.2	4.7	7.0	5.7	6.3	7.4	7.0	7.3
13	6.4	4.8	5.4	5.6	4.8	5.2	7.1	6.2	6.4	7.3	7.1	7.2
14	6.5	5.7	6.1	6.4	4.4	5.5	6.8	5.2	5.9	7.4	7.3	7.3
15	6.3	5.6	5.8	6.2	4.7	5.2	5.3	4.6	5.0	7.5	7.3	7.3
16	6.3	5.9	6.0	5.3	4.1	4.7	5.4	4.1	4.7	7.5	7.3	7.4
17	6.0	5.0	5.4	4.4	3.7	3.9	5.0	3.6	4.1	7.5	7.4	7.5
18	6.0	5.0	5.6	5.1	3.8	4.4	4.4	3.6	4.0	7.6	7.4	7.5
19	6.0	5.5	5.7	8.5	4.7	6.5	3.9	3.3	3.6	7.6	7.3	7.5
20	6.0	5.4	5.6	7.1	5.6	6.5	4.2	3.1	3.6	7.8	7.6	7.7
21	6.2	5.0	5.5	6.8	5.6	6.1	3.7	2.0	3.2	7.8	7.5	7.7
22	6.7	5.5	6.0	5.9	5.0	5.5	2.4	1.9	2.2	7.6	7.3	7.4
23	7.4	6.7	7.0	5.9	4.9	5.4	2.2	1.8	1.9	7.6	7.3	7.4
24	7.3	6.0	6.7	5.6	4.9	5.3	3.0	1.4	1.9	7.8	7.1	7.4
25	7.3	6.5	7.0	5.8	5.1	5.5	3.2	1.6	2.0	7.8	7.5	7.7
26	6.9	6.2	6.5	5.4	5.2	5.3	3.3	2.4	2.7	7.9	7.4	7.5
27	7.0	6.0	6.6	5.9	5.3	5.6	3.4	2.4	2.8	7.7	7.4	7.5
28	6.8	6.0	6.5	7.3	5.5	6.1	3.2	2.6	2.9	7.5	5.7	7.0
29	6.6	6.2	6.4	6.5	5.2	5.7	3.0	2.4	2.7	7.1	5.7	6.9
30	6.5	5.6	6.2	6.4	4.9	5.8	3.9	2.4	3.1	7.5	7.0	7.2
31	6.0	5.6	5.9	---	---	---	4.1	3.3	3.6	7.3	7.1	7.2
MONTH	7.4	2.8	5.4	8.5	2.6	5.2	7.5	1.4	4.5	7.9	3.1	6.7
		FEBRUARY			MARCH			APRIL			MAY	
1	7.3	7.1	7.2	3.8	2.7	3.4	5.8	5.0	5.5	6.7	5.6	6.0
2	7.3	7.0	7.2	4.1	2.6	3.5	5.7	4.9	5.5	6.0	5.5	5.8
3	7.5	7.2	7.3	4.6	3.3	4.1	5.6	5.0	5.3	6.4	5.1	5.6
4	7.3	6.8	7.2	4.6	4.1	4.3	5.8	4.9	5.4	6.1	5.2	5.7
5	7.3	6.8	7.2	4.3	3.8	4.1	6.8	4.9	5.9	5.9	5.1	5.5
6	7.3	6.7	7.0	6.0	4.2	5.4	6.6	4.2	5.5	6.0	5.0	5.4
7	7.1	6.5	6.7	6.7	4.0	5.7	6.1	4.7	5.5	5.5	3.7	4.5
8	7.1	6.7	6.9	6.4	5.9	6.1	5.7	4.9	5.3	4.7	3.7	4.2
9	7.1	5.9	6.7	6.8	6.2	6.4	6.2	5.0	5.7	4.1	3.4	3.7
10	6.3	5.3	6.0	6.8	5.8	6.5	6.7	5.7	6.3	4.6	3.9	4.2
11	5.7	5.0	5.4	6.7	5.8	6.5	6.9	6.2	6.5	4.7	3.8	4.4
12	6.4	5.0	5.8	6.6	5.9	6.2	6.7	6.4	6.5	4.7	3.8	4.4
13	6.4	5.4	6.1	6.7	6.4	6.6	7.0	6.5	6.7	4.3	4.0	4.2
14	5.7	4.0	4.7	6.9	6.4	6.7	7.2	6.1	6.5	4.3	4.1	4.1
15	6.0	4.3	5.3	7.0	6.2	6.6	6.9	6.4	6.6	4.7	4.1	4.3
16	7.0	5.1	5.8	6.8	6.1	6.4	6.7	5.5	6.0	5.2	4.0	4.6
17	5.4	4.0	5.1	6.5	6.2	6.3	6.0	5.3	5.6	5.5	4.7	5.0
18	6.0	4.7	5.6	6.6	6.0	6.2	6.0	5.6	5.8	5.4	4.6	5.0
19	5.3	3.8	4.7	6.9	6.0	6.5	5.9	5.6	5.8	4.8	4.6	4.7
20	5.3	2.8	4.0	7.0	6.5	6.7	6.0	4.7	5.5	5.3	4.7	4.8
21	6.3	5.2	5.5	7.0	6.2	6.6	6.2	5.2	5.6	5.2	4.5	4.8
22	6.4	5.5	5.9	6.9	6.3	6.6	6.1	5.4	5.7	5.1	4.4	4.7
23	6.2	5.6	5.9	7.0	5.8	6.4	5.8	5.1	5.6	6.2	4.9	5.6
24	6.2	5.3	5.9	6.4	5.3	5.9	6.2	5.3	5.6	6.3	5.3	5.6
25	6.7	5.7	6.2	6.3	5.3	6.0	6.7	5.6	6.2	6.3	5.7	5.9
26	7.1	5.9	6.5	6.0	4.9	5.5	6.5	5.7	5.9	6.6	5.4	5.9
27	6.9	5.1	5.8	5.2	4.5	4.7	6.4	5.7	5.9	6.5	5.5	5.9
28	5.6	5.1	5.4	6.2	4.5	5.2	6.2	5.9	6.0	6.7	5.4	6.2
29	5.3	3.6	4.8	6.2	5.1	5.8	6.5	5.0	5.8	7.2	6.3	6.7
30	---	---	---	6.4	5.4	5.8	6.3	5.5	6.0	7.3	6.7	7.1
31	---	---	---	6.7	5.5	6.0	---	---	---	7.3	6.4	6.8
MONTH	7.5	2.8	6.0	7.0	2.6	5.8	7.2	4.2	5.9	7.3	3.4	5.2

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.5	6.5	6.9	9.9	9.5	9.7	13.3	12.3	12.7	8.5	7.6	8.1
2	7.6	6.4	6.8	9.6	9.2	9.4	13.0	12.4	12.7	8.8	8.0	8.4
3	7.3	6.5	6.9	9.7	9.3	9.5	12.9	11.9	12.4	8.0	7.5	7.7
4	8.7	6.7	7.4	10.1	9.4	9.7	12.6	12.0	12.3	7.7	7.5	7.6
5	8.4	6.9	7.5	10.2	9.3	9.7	12.3	12.0	12.1	8.1	7.6	7.8
6	8.2	7.0	7.7	10.1	9.4	9.7	12.6	12.1	12.3	8.5	7.1	8.1
7	8.2	7.7	7.9	9.9	8.7	9.2	12.6	12.1	12.5	7.6	7.0	7.3
8	8.4	7.8	8.1	9.8	9.0	9.4	12.2	11.2	11.6	7.8	6.8	7.4
9	8.1	7.5	7.6	9.9	9.7	9.8	11.4	10.8	11.0	7.7	4.9	6.1
10	8.1	7.3	7.5	9.7	9.3	9.5	11.6	10.9	11.3	5.6	4.1	5.0
11	7.6	6.8	7.4	10.8	9.7	10.3	11.5	11.2	11.4	5.6	4.9	5.2
12	8.1	7.3	7.7	10.8	10.2	10.4	11.5	11.3	11.4	5.4	4.3	4.6
13	9.1	7.8	8.4	11.1	10.3	10.7	12.9	11.4	11.9	5.0	3.8	4.5
14	8.9	8.3	8.5	10.7	10.4	10.6	12.9	11.4	11.8	5.0	4.1	4.6
15	8.6	8.3	8.5	10.9	10.4	10.7	12.2	11.7	11.9	4.8	4.5	4.6
16	8.5	8.1	8.3	10.9	10.6	10.8	11.9	11.1	11.5	4.7	3.2	4.3
17	8.3	7.9	8.2	11.2	10.7	10.9	11.8	10.5	11.3	8.5	4.4	6.1
18	8.4	7.1	7.8	11.5	10.9	11.1	11.3	10.0	10.8	8.2	4.5	5.7
19	8.0	7.0	7.5	11.8	11.1	11.5	10.1	8.3	9.7	7.8	5.9	7.2
20	9.0	7.8	8.3	12.1	11.5	11.8	9.5	7.8	8.5	8.5	6.7	7.7
21	9.3	8.6	9.0	12.2	11.7	12.0	8.6	5.8	7.3	8.0	7.1	7.4
22	9.0	8.4	8.7	12.2	12.0	12.1	7.0	5.5	6.2	7.1	4.7	5.8
23	8.8	7.8	8.4	12.6	12.0	12.2	8.3	6.4	7.3	5.3	2.7	3.9
24	8.1	7.8	8.0	12.5	12.2	12.3	8.7	7.3	8.1	6.3	3.4	4.8
25	8.1	7.6	7.9	12.4	12.0	12.2	8.6	6.8	7.7	7.0	5.1	6.2
26	9.6	7.6	8.6	12.5	11.8	12.2	8.5	7.1	7.6	7.1	6.0	6.7
27	9.7	9.0	9.3	12.6	12.1	12.3	8.3	7.5	7.9	7.8	6.2	6.8
28	9.8	9.2	9.4	12.8	12.3	12.5	8.3	7.6	7.9	7.8	6.1	6.7
29	10.2	9.2	9.6	13.4	12.7	12.8	8.8	7.9	8.2	7.8	6.2	6.7
30	9.8	9.3	9.6	13.3	12.8	13.0	8.9	7.2	8.0	8.5	7.0	7.7
31	---	---	---	13.5	12.3	13.0	9.0	7.6	8.0	---	---	---
MONTH	10.2	6.4	8.1	13.5	8.7	11.0	13.3	5.5	10.2	8.8	2.7	6.4

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.4	4.3	5.3	7.8	5.6	6.1	6.1	5.4	5.6	7.2	3.6	5.1
2	5.7	3.1	4.2	7.8	5.2	6.7	6.9	5.6	6.0	10.5	3.7	7.2
3	5.4	3.7	4.5	7.6	5.6	6.5	6.9	5.9	6.1	10.9	3.8	9.6
4	8.3	3.8	4.9	7.6	5.7	6.4	6.8	5.9	6.1	10.4	7.6	10.1
5	10.2	3.2	7.2	8.6	5.7	7.2	7.4	5.7	6.1	10.4	6.7	8.6
6	10.6	6.4	9.1	9.1	6.7	7.9	6.7	6.0	6.4	8.1	5.9	6.7
7	10.5	6.4	8.8	9.3	3.4	7.4	6.8	6.1	6.6	7.0	6.0	6.6
8	9.5	5.2	8.5	8.6	5.3	6.6	8.3	6.1	6.6	7.0	6.8	6.9
9	9.9	5.1	7.1	7.2	5.4	6.3	9.2	6.5	8.4	7.2	7.0	7.1
10	6.1	5.6	5.8	6.5	5.3	5.7	8.8	6.8	8.0	7.4	6.8	7.1
11	6.1	5.2	5.6	6.2	5.5	5.7	7.8	6.3	6.6	7.3	7.0	7.2
12	6.4	5.7	6.0	5.7	4.6	5.0	7.2	6.3	6.7	7.3	6.9	7.1
13	9.3	5.7	7.0	5.5	4.9	5.2	7.0	6.1	6.4	7.1	7.1	7.1
14	8.0	6.0	6.6	7.0	4.7	5.8	6.7	5.1	6.0	---	---	---
15	6.2	5.5	5.8	6.2	4.9	5.7	6.2	4.5	5.2	7.3	7.1	7.2
16	6.6	5.7	6.2	7.5	6.0	6.4	6.5	5.5	6.0	7.3	7.2	7.3
17	7.6	5.5	6.1	8.3	5.6	6.8	6.4	3.6	5.1	7.7	7.3	7.4
18	7.5	5.5	6.0	9.2	7.5	8.7	6.7	3.5	5.0	7.8	7.3	7.5
19	7.7	5.5	6.0	8.6	6.4	7.6	5.2	3.4	4.1	7.6	7.2	7.4
20	7.9	6.0	7.3	7.3	6.0	6.7	4.9	3.2	3.7	7.6	7.5	7.6
21	7.6	5.6	6.7	8.0	6.0	6.5	5.3	3.2	4.0	7.7	7.6	7.6
22	6.8	5.7	6.2	8.1	5.6	6.3	5.4	3.0	4.0	7.8	7.1	7.4
23	7.8	6.7	7.3	8.6	6.2	7.6	8.1	2.3	4.7	---	---	---
24	7.7	6.3	7.2	8.6	6.5	7.9	7.9	4.1	7.0	---	---	---
25	7.6	7.0	7.3	8.3	5.2	6.1	7.1	2.0	3.9	7.8	7.4	7.6
26	7.5	6.9	7.2	7.3	5.4	6.1	5.0	2.5	3.3	7.8	7.3	7.5
27	7.6	6.4	7.1	8.0	6.2	7.2	4.8	3.3	3.9	7.6	7.3	7.4
28	7.8	6.2	7.2	8.0	5.5	6.8	8.3	4.0	4.7	7.4	6.5	7.0
29	7.5	6.2	6.5	6.5	5.2	5.8	11.1	3.2	5.6	7.6	6.7	7.1
30	7.8	6.1	6.6	7.8	5.6	6.2	11.1	3.5	6.6	7.5	6.9	7.2
31	7.4	5.9	6.3	---	---	---	11.1	3.5	6.2	7.3	7.0	7.2
MONTH	10.6	3.1	6.6	9.3	3.4	6.6	11.1	2.0	5.6	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	7.3	7.1	7.2	7.8	4.1	6.0	5.8	5.3	5.6	6.6	5.8	6.1
2	7.3	7.0	7.2	8.9	4.1	5.9	5.9	5.3	5.6	6.7	5.6	5.8
3	7.8	7.1	7.3	10.1	4.2	6.7	7.1	5.2	5.7	6.2	5.0	5.5
4	7.4	7.1	7.2	9.0	4.1	6.0	7.3	5.1	6.0	6.4	5.0	5.8
5	7.3	7.0	7.2	6.8	4.1	4.9	6.8	5.2	6.1	6.7	5.0	5.6
6	7.3	6.7	7.0	7.3	4.3	5.8	9.1	5.5	6.7	8.8	5.0	5.8
7	7.0	6.4	6.7	8.3	5.3	7.0	9.3	5.9	7.6	6.5	4.7	5.7
8	7.5	6.7	6.9	6.4	5.9	6.1	9.3	5.6	7.6	7.7	4.5	5.7
9	7.6	6.8	7.2	7.0	6.3	6.6	10	5.7	7.1	7.6	4.5	6.2
10	7.3	5.7	6.4	6.9	5.9	6.5	9.1	6.4	7.5	8.3	4.2	5.5
11	8.0	5.6	6.3	6.8	6.2	6.5	7.6	6.4	6.9	9.2	4.4	5.9
12	8.0	5.9	6.8	7.0	6.0	6.5	6.8	6.4	6.5	9.2	4.5	5.5
13	6.4	5.9	6.3	8.2	6.5	6.8	7.0	6.5	6.7	6.5	4.5	5.2
14	7.3	5.6	6.3	7.6	6.6	6.8	7.1	6.1	6.5	7.2	4.3	5.3
15	7.5	4.9	5.8	7.4	6.4	6.9	7.3	6.3	6.6	10	4.3	7.1
16	7.0	4.9	5.9	7.1	6.2	6.7	7.5	6.0	6.8	9.6	4.8	7.6
17	5.5	4.1	5.1	6.9	6.2	6.4	7.4	5.6	6.8	9.2	5.1	7.0
18	6.1	4.7	5.7	7.8	6.0	6.6	7.6	5.6	5.9	9.0	4.9	6.7
19	6.6	5.6	6.0	8.2	6.0	6.6	5.9	5.6	5.7	5.4	4.7	4.8
20	10.2	5.2	6.9	7.1	6.5	6.9	6.1	5.6	5.8	8.7	4.7	5.5
21	6.4	5.2	5.7	7.1	6.2	6.6	7.5	5.3	5.8	8.7	4.7	5.6
22	9.1	5.9	6.3	6.9	6.3	6.7	6.9	5.5	5.9	8.9	4.7	5.8
23	7.5	5.9	6.2	7.2	6.5	6.9	7.0	5.4	6.0	9.5	5.0	5.9
24	6.5	6.0	6.3	7.1	5.7	6.8	6.2	5.4	5.7	6.4	5.3	5.8
25	6.7	5.7	6.2	7.0	5.9	6.3	6.7	5.6	6.2	6.5	5.8	6.1
26	7.1	5.9	6.6	6.4	5.3	6.0	6.6	5.8	6.2	9.3	5.7	6.3
27	6.9	5.1	5.9	6.5	5.0	5.8	6.6	5.6	5.9	7.3	5.8	6.2
28	5.6	5.2	5.4	6.2	4.8	5.5	6.5	5.8	6.0	7.6	6.2	6.6
29	6.7	4.9	5.6	6.2	5.2	5.8	6.9	5.8	6.4	9.5	6.7	7.3
30	---	---	---	6.4	5.7	6.0	7.0	5.7	6.1	9.2	7.0	7.4
31	---	---	---	7.1	5.6	6.1	---	---	---	7.5	6.4	6.9
MONTH	10.2	4.1	6.4	10.1	4.1	6.3	10.0	5.1	6.3	10.0	4.2	6.1

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.5	6.5	7.0	11.6	9.8	10.2	13.3	12.4	12.9	8.5	8.0	8.3
2	9.4	6.4	7.3	13.3	9.6	10.8	13.1	12.5	12.7	9.1	8.0	8.5
3	13.4	6.5	8.1	14.9	9.5	10.7	12.9	11.9	12.5	8.5	7.6	8.1
4	13.1	7.1	10	15.1	9.6	12.0	13.0	12.1	12.6	8.3	7.6	7.7
5	8.8	7.1	7.8	13.5	9.8	10.7	12.5	12.0	12.3	8.1	7.6	7.8
6	10.2	7.8	8.7	14.0	9.7	10.7	12.7	12.2	12.4	8.6	7.6	8.2
7	10.4	7.7	9.0	13.5	9.8	11.2	12.6	12.2	12.5	8.5	7.3	7.8
8	10	8.1	8.5	17.1	9.9	12.8	12.8	11.6	12.2	8.0	7.4	7.7
9	9.8	7.5	8.2	12.7	9.8	10.4	12.9	11.6	12.4	7.8	5.8	6.7
10	11.5	7.3	8.4	11.3	9.4	9.9	13.6	11.3	12.6	6.7	4.9	6.0
11	11.6	7.4	8.1	16.1	11.1	13.6	13.7	11.6	12.7	6.6	5.2	5.9
12	9.0	7.3	7.9	16.1	10.7	12.9	14.9	11.3	12.7	7.1	4.4	5.4
13	9.3	7.9	8.7	11.4	10.4	10.8	16.9	11.4	12.6	7.0	4.3	5.4
14	9.3	8.3	8.8	11.1	10.5	10.7	13.3	11.8	12.4	5.2	4.2	4.7
15	8.7	8.5	8.5	11.3	10.5	10.8	12.7	11.7	12.1	5.9	4.5	5.2
16	9.8	8.2	8.5	10.9	10.6	10.8	12.5	11.1	11.8	9.0	5.2	6.1
17	8.5	8.0	8.2	15.1	10.8	11.8	12.0	11.4	11.7	10.7	7.2	8.8
18	9.2	7.3	8.2	17.0	11.1	14.2	11.8	10.8	11.4	8.3	4.6	5.9
19	9.0	7.1	8.0	16.5	11.4	13.5	11.5	10	10.8	7.8	5.9	7.1
20	11.6	8.3	9.3	15.8	11.8	12.9	11.3	9.2	10.3	8.5	7.1	7.9
21	10.6	8.5	9.5	13.8	12.0	12.3	10.9	8.3	9.7	8.2	7.4	7.8
22	10.7	8.7	9.1	15.6	12.0	13.0	9.7	6.5	8.0	7.7	6.0	6.9
23	9.3	7.8	8.7	16.1	12.0	13.2	11.1	7.8	9.7	10.1	5.4	7.2
24	10.6	7.8	8.5	14.7	12.2	12.9	11.0	8.0	8.9	11.3	7.8	9.3
25	10.8	7.9	8.4	12.8	12.2	12.4	9.2	7.4	8.4	8.8	7.1	8.2
26	15.3	7.7	10.8	13.1	12.0	12.7	9.3	7.3	8.5	8.6	7.1	7.8
27	14.5	9.2	10.4	13.9	12.2	12.8	9.0	7.6	8.4	8.2	7.0	7.7
28	14.5	9.2	10.7	13.9	12.4	12.7	8.8	7.8	8.3	9.1	6.3	7.5
29	14.3	9.2	10.4	14.1	12.7	13.0	8.8	8.1	8.4	8.3	6.3	7.6
30	14.9	9.6	12.2	13.8	12.9	13.1	8.9	7.3	8.1	10.4	7.7	9.3
31	---	---	---	13.5	12.5	13.1	9.0	7.6	8.2	---	---	---
MONTH	15.3	6.4	8.9	17.1	9.4	12.0	16.9	6.5	10.9	11.3	4.2	7.3

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.8	8.1	8.5	8.7	8.4	8.6	8.0	7.8	7.9	8.6	7.9	8.3
2	8.6	8.2	8.4	8.8	8.2	8.6	8.0	7.9	8.0	8.6	8.2	8.4
3	8.8	8.0	8.3	8.8	8.4	8.6	8.1	7.9	8.0	8.8	8.3	8.5
4	8.8	8.2	8.5	8.8	8.2	8.6	8.0	7.8	7.9	8.5	7.8	8.2
5	8.9	8.5	8.6	8.9	8.2	8.6	7.8	7.7	7.7	8.0	7.7	7.8
6	8.7	8.2	8.5	8.9	7.8	8.6	7.8	7.6	7.7	8.2	7.6	7.9
7	8.7	8.2	8.5	8.5	7.6	7.9	7.9	7.6	7.7	8.1	7.7	7.9
8	8.5	8.0	8.3	8.1	7.6	7.7	8.3	7.7	8.0	8.2	7.8	8.0
9	8.7	7.8	8.2	7.9	7.5	7.8	8.3	7.9	8.1	8.1	8.0	8.0
10	8.3	7.9	8.1	7.8	7.5	7.7	8.2	7.7	8.0	8.1	7.8	7.9
11	8.0	7.6	7.8	8.4	7.6	7.9	7.9	7.6	7.8	8.1	7.9	8.0
12	8.8	7.6	8.2	8.3	7.6	8.1	8.2	7.6	7.9	8.2	8.0	8.1
13	8.8	8.1	8.3	8.1	7.7	7.9	8.1	7.8	8.0	8.3	8.1	8.2
14	8.4	7.7	8.0	8.0	7.7	7.9	8.1	7.8	7.9	8.3	8.1	8.2
15	8.0	7.5	7.7	8.1	7.8	8.0	8.0	7.8	7.9	8.3	8.1	8.2
16	8.8	7.7	8.1	8.8	7.9	8.3	8.2	7.8	8.0	8.2	8.1	8.2
17	8.9	7.8	8.4	8.8	8.4	8.6	8.2	7.7	8.0	8.2	8.1	8.2
18	8.8	8.4	8.5	8.9	8.4	8.7	8.0	7.7	7.8	8.2	8.1	8.2
19	8.6	8.1	8.4	8.7	7.5	8.0	7.9	7.7	7.8	8.2	8.0	8.1
20	8.6	8.1	8.4	8.2	7.7	7.9	7.8	7.6	7.7	8.1	8.0	8.1
21	8.4	7.8	8.2	8.9	8.1	8.5	8.2	7.6	7.8	8.2	8.0	8.1
22	8.1	7.8	7.9	8.9	8.4	8.6	7.7	7.4	7.5	8.2	8.1	8.2
23	8.4	7.7	8.1	8.9	8.4	8.7	7.6	7.3	7.5	8.2	8.1	8.1
24	8.4	7.9	8.1	8.8	8.4	8.6	7.8	7.4	7.5	8.1	7.9	8.0
25	7.9	7.8	7.8	8.5	8.3	8.4	7.5	7.3	7.4	8.0	7.9	8.0
26	8.3	7.7	7.8	8.4	8.2	8.3	7.4	7.3	7.4	7.9	7.8	7.9
27	7.9	7.6	7.8	8.4	8.1	8.3	7.5	7.3	7.4	8.0	7.8	7.8
28	7.9	7.7	7.8	8.5	7.4	8.1	8.6	7.3	7.7	7.8	7.7	7.8
29	7.9	7.6	7.8	7.9	7.6	7.8	8.2	7.4	7.8	7.9	7.7	7.8
30	8.4	7.8	8.0	8.0	7.7	7.8	8.1	7.6	7.8	7.9	7.7	7.8
31	8.7	7.8	8.2	---	---	---	8.3	7.6	7.9	7.9	7.8	7.8
MONTH	8.9	7.5	8.2	8.9	7.4	8.2	8.6	7.3	7.8	8.8	7.6	8.1
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	7.8	7.8	8.8	8.3	8.6	7.9	7.5	7.7	7.5	7.2	7.3
2	8.0	7.8	7.9	8.6	8.4	8.5	7.8	7.6	7.6	7.4	7.2	7.3
3	7.9	7.7	7.8	8.8	8.1	8.5	7.7	7.6	7.7	7.5	7.2	7.3
4	8.0	7.8	7.9	8.8	8.3	8.6	7.8	7.6	7.7	7.9	7.3	7.4
5	8.0	7.8	7.9	8.8	8.4	8.6	7.6	7.5	7.5	7.8	7.1	7.5
6	8.0	7.9	8.0	8.6	7.6	8.1	7.8	7.4	7.6	8.2	7.3	7.7
7	8.0	7.8	7.9	8.3	7.6	8.1	7.9	7.4	7.7	8.6	7.4	8.1
8	7.9	7.8	7.8	7.7	7.6	7.6	8.0	7.7	7.8	8.5	8.0	8.3
9	8.0	7.8	7.9	7.8	7.6	7.7	8.0	7.5	7.8	8.4	7.7	8.1
10	8.2	7.9	8.0	7.7	7.5	7.6	7.8	7.4	7.6	8.3	7.5	8.0
11	8.4	8.0	8.2	8.0	7.6	7.7	7.6	7.3	7.4	8.3	7.6	8.0
12	8.4	8.0	8.1	8.3	7.6	8.0	7.6	7.3	7.4	8.4	7.3	8.0
13	8.2	7.9	8.0	8.5	7.9	8.1	7.4	7.2	7.3	8.5	7.8	8.1
14	8.6	8.1	8.3	8.3	7.8	8.1	7.5	7.3	7.4	8.5	7.6	8.1
15	8.5	7.9	8.2	8.6	7.8	8.2	7.6	7.3	7.4	8.4	7.8	8.1
16	8.0	7.7	7.8	8.3	7.9	8.2	7.8	7.4	7.5	8.6	7.7	8.1
17	8.1	7.8	7.9	8.3	8.0	8.0	8.2	7.5	7.8	8.7	7.6	8.0
18	8.0	7.8	7.9	8.3	7.7	8.0	8.0	7.4	7.7	8.4	7.2	7.8
19	8.4	7.9	8.1	8.0	7.5	7.7	7.7	7.4	7.6	8.2	7.3	7.7
20	8.6	8.2	8.3	8.0	7.5	7.7	7.9	7.2	7.6	8.6	7.5	8.0
21	8.3	7.7	8.1	8.0	7.6	7.8	7.7	7.2	7.5	8.7	7.6	8.2
22	8.3	8.1	8.2	8.0	7.6	7.8	7.6	7.2	7.4	8.4	7.7	8.1
23	8.5	8.2	8.3	8.4	7.7	8.0	7.9	7.3	7.5	8.1	7.3	7.7
24	8.4	8.2	8.2	8.4	8.0	8.3	7.8	7.3	7.5	8.0	7.4	7.7
25	8.3	8.0	8.1	8.6	8.0	8.4	7.5	7.1	7.4	8.3	7.5	7.8
26	8.1	7.8	8.0	8.6	8.1	8.4	7.6	7.3	7.4	8.3	7.4	7.9
27	7.8	7.6	7.7	8.8	8.3	8.6	7.6	7.2	7.4	8.2	7.4	7.9
28	8.0	7.7	7.9	8.8	8.3	8.5	8.1	7.4	7.6	8.2	7.6	7.9
29	8.6	7.9	8.2	8.4	7.7	8.0	7.9	7.2	7.6	8.2	7.6	7.9
30	---	---	---	8.1	7.7	7.9	7.7	7.2	7.4	7.9	7.6	7.7
31	---	---	---	8.0	7.7	7.8	---	---	---	8.0	7.5	7.8
MONTH	8.6	7.6	8.0	8.8	7.5	8.1	8.2	7.1	7.5	8.7	7.1	7.9

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	7.6	7.9	8.3	7.7	8.0	8.0	7.7	7.8	8.1	7.6	7.8
2	8.3	7.6	8.0	8.2	8.0	8.1	8.1	7.6	7.8	7.9	7.4	7.7
3	8.4	7.6	8.1	8.4	7.8	8.1	8.0	7.6	7.8	8.0	7.5	7.8
4	8.1	7.5	7.8	8.2	7.8	8.1	8.6	7.6	8.0	8.1	7.7	7.9
5	8.2	7.3	7.8	8.2	7.7	8.1	8.3	7.9	8.1	8.3	7.7	8.0
6	8.0	7.6	7.9	8.3	8.1	8.2	8.1	7.9	8.0	8.1	7.7	8.0
7	8.2	7.6	7.9	8.3	8.0	8.2	8.2	7.9	8.1	8.0	7.6	7.7
8	8.1	7.7	7.9	8.3	8.0	8.2	8.3	8.1	8.2	8.1	7.6	7.8
9	8.2	7.5	7.8	8.4	7.9	8.1	8.3	8.1	8.2	8.1	7.5	7.8
10	8.1	7.5	7.8	8.4	8.1	8.2	8.3	8.1	8.2	8.5	7.8	8.2
11	8.1	7.6	7.9	8.2	8.0	8.2	8.3	8.1	8.2	8.4	7.7	8.1
12	7.8	7.5	7.6	8.2	8.0	8.2	8.3	8.0	8.1	8.6	7.9	8.2
13	7.8	7.5	7.6	8.1	7.7	7.9	8.2	7.7	7.9	8.6	8.2	8.3
14	7.8	7.6	7.7	8.3	7.8	8.0	8.0	7.6	7.9	8.4	8.1	8.3
15	7.8	7.6	7.7	8.2	7.9	8.1	7.9	7.6	7.7	8.6	7.9	8.2
16	7.9	7.7	7.8	8.4	8.0	8.2	8.2	7.6	7.9	9.0	8.0	8.4
17	7.9	7.5	7.7	8.3	8.1	8.2	8.2	7.9	8.0	8.5	7.3	8.0
18	8.1	7.4	7.7	8.4	8.0	8.2	8.2	7.9	8.0	7.8	7.3	7.5
19	8.1	7.5	7.8	8.6	8.0	8.2	8.5	7.9	8.1	7.9	7.6	7.7
20	8.0	7.7	7.8	8.6	8.0	8.3	8.7	7.9	8.4	8.0	7.8	7.9
21	7.9	7.5	7.7	8.5	7.9	8.3	8.7	8.4	8.6	8.2	7.8	7.9
22	7.7	7.5	7.6	8.3	8.1	8.2	8.6	8.3	8.4	8.8	8.0	8.4
23	8.3	7.5	7.9	8.2	7.7	8.0	8.9	8.3	8.6	8.9	8.5	8.7
24	8.4	8.0	8.2	8.4	7.6	8.0	8.7	8.1	8.4	8.6	8.4	8.5
25	8.5	8.1	8.3	8.2	8.0	8.1	8.4	7.8	8.1	8.4	8.0	8.3
26	8.2	7.8	8.1	8.3	8.1	8.2	8.1	7.8	7.9	8.5	8.1	8.3
27	8.4	8.0	8.2	8.2	7.8	8.1	8.1	7.7	7.9	8.1	7.6	7.9
28	8.4	8.0	8.2	7.9	7.6	7.7	8.3	7.7	8.0	8.0	7.5	7.8
29	8.6	7.8	8.2	8.0	7.6	7.7	8.1	7.8	8.0	8.6	7.8	8.0
30	8.4	7.7	8.0	8.0	7.6	7.8	8.1	7.7	7.8	8.4	7.8	8.1
31	---	---	---	8.0	7.6	7.8	8.4	7.7	8.0	---	---	---
MONTH	8.6	7.3	7.9	8.6	7.6	8.1	8.9	7.6	8.1	9.0	7.3	8.0

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.4	7.2	8.0	8.7	7.4	8.1	8.0	7.8	7.9	8.2	7.3	7.7
2	8.5	7.4	8.0	8.8	7.4	7.7	8.0	7.9	8.0	8.4	7.0	7.4
3	8.3	7.2	7.7	8.6	7.4	7.8	8.1	7.9	8.0	8.3	7.0	7.2
4	8.3	7.0	7.5	8.3	7.4	7.8	8.0	7.9	8.0	7.6	7.1	7.2
5	8.6	6.8	7.4	7.8	7.3	7.5	8.0	7.9	7.9	7.9	7.3	7.6
6	7.9	7.0	7.2	7.6	7.4	7.5	7.9	7.8	7.9	8.0	7.4	7.8
7	7.5	6.9	7.1	8.3	7.4	7.7	8.0	7.8	7.9	8.1	7.7	7.9
8	8.2	6.8	7.0	8.5	7.4	7.9	7.9	7.7	7.9	8.2	7.8	8.0
9	8.7	6.8	7.6	8.4	8.0	8.2	7.9	7.7	7.7	8.1	7.9	8.0
10	8.3	7.7	8.1	8.2	7.9	8.1	7.9	7.5	7.7	8.1	7.8	7.9
11	8.1	7.7	7.9	8.3	7.8	8.0	7.9	7.6	7.8	8.1	7.9	8.0
12	8.6	7.5	7.9	8.7	7.9	8.4	7.8	7.6	7.7	8.2	8.0	8.1
13	8.5	7.2	7.8	8.6	8.1	8.2	8.1	7.6	7.9	8.3	8.1	8.2
14	8.3	7.3	7.8	8.2	8.0	8.1	8.0	7.8	7.9	8.3	8.1	8.2
15	8.1	7.6	7.8	8.3	8.1	8.2	8.1	7.8	7.9	8.3	8.1	8.2
16	8.2	7.6	7.8	8.3	8.0	8.2	7.8	7.6	7.7	8.2	8.1	8.2
17	8.3	7.2	7.9	8.2	8.0	8.1	8.1	7.6	7.8	8.2	7.9	8.1
18	8.6	7.2	8.3	8.0	7.2	7.6	8.0	7.6	7.7	8.2	7.9	8.1
19	8.5	7.3	8.2	8.0	7.2	7.6	7.9	7.6	7.8	8.2	8.0	8.1
20	8.2	7.2	7.5	7.9	7.6	7.8	7.9	7.7	7.8	8.1	8.0	8.1
21	8.2	7.2	7.8	8.3	7.6	8.0	8.1	7.7	7.8	8.2	8.0	8.1
22	8.2	7.8	8.0	8.4	7.5	8.1	7.8	7.6	7.7	8.2	8.0	8.1
23	8.4	7.9	8.1	8.4	7.4	7.8	7.6	7.4	7.5	8.2	8.0	8.1
24	8.3	7.8	8.0	8.3	7.4	7.7	7.6	7.4	7.5	8.1	7.8	8.0
25	8.0	7.8	7.9	8.6	7.4	8.3	7.8	7.4	7.5	8.0	7.9	8.0
26	7.8	7.6	7.7	8.6	7.7	8.2	7.8	7.4	7.5	7.9	7.8	7.9
27	8.0	7.5	7.7	8.5	7.5	7.9	8.2	7.5	7.7	8.0	7.8	7.8
28	8.0	7.4	7.6	8.5	7.5	8.0	8.3	7.3	7.9	7.8	7.7	7.8
29	8.0	7.4	7.8	8.0	7.7	7.9	8.1	7.2	7.6	7.8	7.6	7.7
30	8.0	7.5	7.8	8.0	7.6	7.8	7.8	7.2	7.5	7.9	7.6	7.8
31	8.4	7.6	7.9	---	---	---	8.0	7.2	7.5	7.9	7.8	7.8
MONTH	8.7	6.8	7.8	8.8	7.2	7.9	8.3	7.2	7.8	8.4	7.0	7.9
		FEBRUARY			MARCH			APRIL			MAY	
1	7.9	7.8	7.8	8.5	7.4	7.8	7.8	7.5	7.7	7.5	6.9	7.2
2	7.9	7.8	7.8	8.5	7.3	7.9	7.8	7.4	7.6	7.4	7.1	7.3
3	7.9	7.5	7.8	8.4	7.3	7.7	7.7	7.3	7.6	7.5	7.2	7.3
4	8.0	7.8	7.8	8.8	7.3	8.1	7.8	7.1	7.6	7.3	7.2	7.3
5	8.0	7.7	7.9	8.8	7.7	8.4	7.6	7.4	7.5	7.8	7.1	7.5
6	8.0	7.9	7.9	8.5	7.4	7.9	7.6	7.2	7.4	8.2	7.0	7.5
7	8.0	7.8	7.9	8.2	7.3	7.6	7.8	7.1	7.4	7.9	7.0	7.3
8	7.9	7.8	7.8	7.7	7.6	7.7	7.8	6.9	7.4	8.2	6.6	7.2
9	7.9	7.6	7.7	7.8	7.3	7.6	7.9	7.0	7.5	7.4	6.6	6.9
10	8.1	7.3	7.9	7.7	7.5	7.6	7.7	7.0	7.3	8.1	6.7	7.2
11	8.2	7.3	7.8	8.0	7.6	7.7	7.5	6.9	7.2	8.4	6.7	7.4
12	8.2	7.3	7.8	8.2	7.6	7.8	7.6	7.1	7.4	7.7	6.7	7.3
13	8.1	7.8	8.0	8.3	7.5	8.0	7.5	7.3	7.3	7.5	6.8	7.1
14	8.1	7.5	7.8	8.3	7.7	8.1	7.5	7.3	7.4	8.2	6.8	7.3
15	8.2	7.4	7.9	8.3	7.7	8.0	7.6	7.3	7.4	8.3	6.6	7.1
16	8.0	7.6	7.8	8.2	7.6	8.0	7.4	7.1	7.3	7.7	6.6	6.9
17	8.1	7.8	7.9	8.2	7.8	8.0	8.1	7.0	7.3	8.0	6.6	6.9
18	7.9	7.8	7.9	8.1	7.2	7.9	7.9	6.8	7.6	8.1	6.6	7.0
19	8.1	7.4	7.8	8.0	7.0	7.7	7.8	7.4	7.6	8.1	7.2	7.5
20	8.2	7.4	7.7	8.0	7.5	7.7	7.7	7.1	7.4	8.1	6.8	7.5
21	8.3	7.7	8.0	8.0	7.6	7.8	7.7	6.9	7.4	8.3	6.8	7.5
22	8.3	7.4	8.1	8.0	7.7	7.8	7.6	6.9	7.3	8.3	6.9	7.5
23	8.4	7.8	8.2	8.2	7.6	7.8	7.7	6.7	7.3	7.9	6.9	7.5
24	8.2	7.8	8.1	8.4	7.3	7.7	7.7	7.2	7.4	8.0	7.3	7.6
25	8.3	8.0	8.1	8.6	7.2	8.1	7.4	7.1	7.3	7.9	7.5	7.6
26	8.1	7.8	8.0	8.6	7.1	8.0	7.5	7.0	7.3	8.1	6.9	7.6
27	7.8	7.6	7.7	8.5	7.1	7.8	7.6	7.3	7.4	8.2	7.1	7.7
28	8.0	7.7	7.9	8.7	7.3	8.3	7.9	7.1	7.4	8.2	7.1	7.7
29	8.3	7.5	7.9	8.4	7.7	8.1	7.8	7.0	7.3	8.0	7.0	7.6
30	---	---	---	8.1	7.6	7.9	7.5	7.0	7.3	7.8	7.2	7.6
31	---	---	---	8.0	7.2	7.8	---	---	---	8.0	7.4	7.8
MONTH	8.4	7.3	7.9	8.8	7.0	7.9	8.1	6.7	7.4	8.4	6.6	7.4

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	7.6	7.8	8.1	7.2	7.8	7.8	7.4	7.6	7.9	7.4	7.7
2	8.4	7.1	7.9	8.0	7.1	7.6	7.8	7.4	7.6	8.0	7.5	7.8
3	8.3	7.2	7.8	8.2	7.0	7.6	7.6	7.4	7.5	8.1	7.5	7.8
4	7.8	7.0	7.3	8.2	7.0	7.5	8.0	7.4	7.7	8.1	7.7	7.9
5	8.2	7.1	7.5	8.1	7.2	7.7	8.2	7.8	8.0	8.3	7.7	8.0
6	7.9	6.9	7.5	8.2	7.1	7.8	8.1	7.6	7.9	8.2	7.5	8.0
7	7.7	6.8	7.1	8.2	7.2	7.8	8.2	7.9	8.0	8.0	7.5	7.7
8	7.9	6.8	7.4	8.0	7.1	7.5	8.1	7.6	8.0	8.2	7.7	7.9
9	7.7	6.9	7.4	8.3	7.4	7.9	8.0	7.5	7.7	8.2	7.6	7.8
10	8.0	6.9	7.5	8.2	7.7	8.0	8.1	7.3	7.7	8.4	7.3	7.7
11	7.9	6.9	7.6	8.1	7.1	7.4	8.1	7.4	7.7	8.4	7.2	7.9
12	7.8	7.3	7.6	8.2	7.1	7.5	8.2	7.4	7.8	8.4	7.5	7.9
13	7.8	7.1	7.6	8.2	7.7	7.9	8.2	7.2	7.9	8.4	7.3	7.9
14	7.8	7.5	7.6	8.3	7.8	8.0	7.9	7.6	7.8	8.5	8.1	8.3
15	7.8	7.6	7.7	8.3	8.0	8.1	7.9	7.6	7.7	8.3	7.1	7.7
16	7.8	7.4	7.7	8.2	8.0	8.1	8.1	7.6	7.8	8.0	6.9	7.3
17	7.8	7.5	7.7	8.2	7.3	8.0	8.2	7.6	7.9	7.7	6.9	7.2
18	8.0	7.4	7.6	8.1	7.2	7.6	8.2	7.3	7.7	7.8	7.3	7.5
19	7.8	7.3	7.6	8.4	7.2	7.7	8.2	7.3	7.7	7.9	7.6	7.7
20	8.0	6.9	7.6	8.3	7.2	7.9	8.2	7.3	7.7	7.9	7.6	7.7
21	7.9	7.0	7.7	8.4	7.5	8.0	8.3	7.3	7.8	8.1	7.7	7.8
22	7.8	6.9	7.6	8.3	7.2	7.9	8.2	7.2	7.8	8.5	7.7	8.0
23	8.1	7.3	7.7	8.2	7.3	7.8	8.5	7.0	7.2	8.4	7.3	8.0
24	8.2	7.3	7.9	8.2	7.3	7.7	8.3	7.0	7.8	8.1	7.2	7.6
25	8.2	7.2	7.9	8.1	8.0	8.0	8.0	7.6	7.8	8.3	7.3	7.7
26	8.0	6.9	7.6	8.2	7.7	7.9	7.9	7.6	7.7	8.3	7.3	7.8
27	8.1	7.1	7.8	8.2	7.2	7.7	8.1	7.6	7.8	8.2	7.8	8.0
28	8.1	7.0	7.7	7.8	7.3	7.7	8.0	7.5	7.7	8.0	7.4	7.8
29	8.2	7.1	7.6	8.0	7.2	7.6	8.1	7.6	7.9	8.2	7.7	7.8
30	7.8	7.0	7.2	7.9	7.3	7.6	8.1	7.7	7.8	8.2	7.3	7.6
31	---	---	---	7.8	7.4	7.6	7.9	7.5	7.7	---	---	---
MONTH	8.4	6.8	7.6	8.4	7.0	7.8	8.5	7.0	7.8	8.5	6.9	7.8

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.3	21.7	22.5	19.4	18.1	18.6	11.7	11.1	11.4	8.2	7.6	7.9
2	22.6	21.7	22.1	19.2	18.0	18.7	11.4	10.3	10.9	8.2	7.6	7.9
3	21.9	20.4	20.9	20.8	18.4	19.2	10.4	9.4	10	9.4	7.9	8.5
4	21.4	20.1	20.7	20.8	18.8	19.9	9.6	8.9	9.3	10.7	8.9	9.8
5	22.0	20.4	20.9	21.3	19.6	20.4	9.3	8.9	9.1	11.1	10.1	10.7
6	21.6	20.2	20.9	21.7	20.2	21.0	9.2	8.5	9.0	11.4	10.3	11.0
7	21.6	20.6	21.1	21.3	19.9	20.6	8.5	7.8	8.2	10.3	8.6	9.3
8	21.3	21.0	21.2	19.9	18.5	19.3	8.2	7.2	7.7	8.6	7.8	8.1
9	21.6	21.0	21.3	18.5	16.4	17.4	8.0	7.0	7.6	7.9	6.8	7.5
10	21.7	21.4	21.5	16.4	15.7	16.1	8.9	7.3	8.0	7.2	5.3	6.2
11	21.5	21.1	21.3	16.5	15.4	15.8	9.6	8.8	9.0	5.4	4.9	5.1
12	21.7	20.8	21.2	16.8	15.4	16.1	9.5	8.4	8.9	5.0	3.9	4.6
13	22.0	20.9	21.3	16.3	15.0	16.0	8.9	8.3	8.5	5.3	4.0	4.9
14	21.6	21.0	21.1	15.0	13.2	14.0	8.7	8.3	8.5	5.4	4.8	5.1
15	21.1	19.8	20.3	13.6	12.4	12.9	8.4	7.8	8.1	5.8	5.0	5.3
16	20.9	19.4	19.8	17.3	12.4	13.7	8.3	7.1	7.9	5.4	4.9	5.1
17	20.5	18.9	19.6	14.5	13.5	13.7	9.1	8.1	8.6	5.3	4.5	4.8
18	19.9	19.0	19.5	15.2	13.8	14.7	8.3	7.6	7.9	5.8	4.9	5.3
19	19.3	18.4	18.9	15.1	14.3	14.8	7.8	7.2	7.5	6.2	5.5	5.9
20	19.8	18.5	19.1	15.1	14.4	14.7	7.2	6.7	7.0	5.5	4.8	5.1
21	19.3	18.5	19.0	15.9	14.0	14.7	7.0	6.2	6.6	5.0	4.4	4.7
22	19.5	18.7	19.1	16.1	14.2	15.0	6.5	5.8	6.1	5.3	4.2	4.6
23	18.7	17.9	18.3	15.7	14.4	14.9	6.9	5.7	6.3	4.9	4.5	4.7
24	17.9	17.1	17.4	15.7	14.3	14.9	8.3	6.8	7.6	5.2	4.4	4.8
25	17.1	16.9	17.0	15.3	14.3	14.9	8.0	7.0	7.7	4.7	3.7	4.3
26	18.0	16.9	17.3	14.3	13.8	14.1	7.4	6.9	7.1	4.0	3.7	3.8
27	18.3	17.2	17.8	14.0	13.5	13.8	7.2	6.4	6.8	3.9	3.6	3.8
28	18.0	17.8	17.9	15.5	13.8	14.5	8.3	6.2	6.9	3.6	2.8	3.3
29	18.2	17.6	17.9	14.6	12.2	13.2	7.8	6.4	6.9	3.7	2.8	3.2
30	18.0	17.3	17.6	12.3	11.1	11.7	8.1	7.6	7.9	4.0	3.1	3.4
31	19.0	17.4	17.8	---	---	---	8.8	7.4	7.9	3.8	3.0	3.4
MONTH	23.3	16.9	19.8	21.7	11.1	16.0	11.7	5.7	8.1	11.4	2.8	5.9
		FEBRUARY			MARCH			APRIL			MAY	
1	3.4	2.9	3.2	9.3	6.8	8.1	13.5	12.7	13.2	20.6	20.0	20.4
2	5.1	2.8	3.3	10.1	8.7	9.5	13.2	12.2	12.8	21.6	20.3	20.8
3	4.5	3.2	3.8	13.2	10.0	10.7	13.2	12.3	12.8	21.8	20.4	20.9
4	5.4	3.7	4.5	12.3	10.7	11.5	13.2	12.5	12.8	21.3	19.6	20.2
5	5.1	4.1	4.6	13.4	12.2	12.8	12.6	11.9	12.3	20.8	19.0	19.8
6	7.4	4.4	5.6	14.1	12.7	13.4	13.2	11.4	12.2	22.1	19.3	20.4
7	8.2	6.5	7.3	14.7	12.8	13.9	14.8	11.8	13.1	23.5	20.2	21.5
8	7.2	6.3	6.6	13.0	11.8	12.4	15.4	13.5	14.3	23.0	21.8	22.3
9	6.8	5.7	6.3	12.6	11.7	12.1	16.4	14.5	15.0	24.7	22.3	22.9
10	7.3	6.5	6.9	12.0	10.3	11.2	15.4	14.6	15.0	24.8	22.6	23.5
11	8.5	7.1	7.7	11.2	10.4	10.7	16.0	15.0	15.5	25.3	23.2	24.1
12	8.1	7.2	7.5	11.6	10.2	10.8	15.8	15.5	15.6	25.6	23.6	24.5
13	7.9	7.0	7.4	12.1	10.6	11.1	17.2	15.6	16.2	25.7	24.2	24.8
14	8.0	7.4	7.6	11.3	10.5	10.9	17.0	15.9	16.5	26.1	24.2	25.0
15	7.9	7.4	7.8	12.0	11.1	11.5	16.1	15.2	15.6	25.9	24.5	25.2
16	7.4	6.2	6.6	12.0	11.6	11.8	17.0	14.7	15.6	26.8	24.7	25.4
17	6.4	5.8	6.0	11.8	11.1	11.5	18.1	15.0	16.1	26.7	24.9	25.5
18	6.1	5.6	5.8	11.7	10.8	11.2	18.3	15.9	16.9	27.2	24.1	25.4
19	7.1	5.4	6.1	12.3	11.1	11.6	18.8	17.0	17.9	26.2	24.2	25.1
20	7.6	6.0	6.8	12.3	11.2	11.7	21.4	17.5	18.9	28.3	24.7	26.0
21	8.3	6.9	7.7	12.9	11.7	12.3	20.6	18.6	19.4	28.7	25.5	26.7
22	9.1	7.7	8.2	12.2	11.4	11.8	20.8	19.3	19.8	27.9	26.1	27.0
23	9.1	7.7	8.3	13.1	10.9	11.5	22.5	19.9	20.7	27.8	25.9	26.7
24	8.5	8.2	8.3	11.6	10.1	11.1	21.6	20.2	20.9	27.2	25.6	26.3
25	8.6	7.8	8.1	12.8	11.1	12.0	20.9	20.4	20.6	29.2	25.5	26.8
26	7.8	6.8	7.4	14.0	11.7	12.8	21.5	20.5	20.9	28.6	25.9	27.3
27	7.1	6.6	6.9	15.4	13.0	14.1	21.1	20.4	20.7	28.3	27.0	27.6
28	7.1	6.2	6.7	15.1	14.4	14.8	21.8	19.5	20.4	28.1	27.0	27.5
29	9.0	5.9	7.3	14.4	13.6	13.9	20.9	19.2	20.0	27.6	26.7	27.2
30	---	---	---	14.2	12.9	13.3	20.9	19.4	20.2	26.8	25.7	26.1
31	---	---	---	13.8	13.1	13.4	---	---	---	26.4	25.6	26.0
MONTH	9.1	2.8	6.6	15.4	6.8	11.9	22.5	11.4	16.7	29.2	19.0	24.5

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.9	25.8	26.3	28.8	27.1	27.6	29.5	28.4	28.9	27.7	26.9	27.2
2	28.0	25.7	26.7	29.0	27.3	27.8	29.3	28.7	29.0	26.9	26.3	26.6
3	29.6	26.4	27.2	29.2	27.2	27.9	28.8	27.9	28.3	27.1	25.9	26.4
4	27.4	26.3	26.8	28.4	27.6	28.0	30.4	27.5	28.5	27.0	26.2	26.6
5	27.5	25.6	26.5	30.0	27.6	28.6	30.0	28.2	28.9	27.6	26.2	26.8
6	27.2	25.7	26.6	30.8	28.8	29.5	28.8	27.2	28.0	27.2	26.6	27.0
7	27.7	26.2	26.9	31.1	29.1	30.1	27.9	26.5	27.2	26.9	26.4	26.6
8	28.6	26.7	27.4	31.0	29.3	30.1	27.9	26.1	26.9	27.0	26.4	26.7
9	29.4	27.0	27.7	31.5	29.0	30.1	27.7	26.0	26.5	27.0	26.4	26.7
10	28.8	27.2	27.9	31.6	29.6	30.4	27.9	26.0	26.8	27.0	26.4	26.6
11	29.6	27.4	28.4	30.6	29.8	30.2	28.2	26.5	27.1	26.6	25.7	26.0
12	28.5	26.8	27.6	30.5	29.7	29.9	27.3	26.4	26.8	26.0	25.2	25.6
13	26.8	26.0	26.5	30.4	29.0	29.7	26.9	26.3	26.6	25.8	24.7	25.2
14	26.6	25.8	26.1	30.9	29.4	30.0	26.6	25.8	26.3	25.2	24.7	24.9
15	27.1	25.7	26.3	30.4	29.3	29.8	25.8	25.4	25.6	25.6	24.6	24.9
16	27.0	26.2	26.6	29.8	28.8	29.3	26.8	25.2	25.8	26.4	24.8	25.4
17	27.0	26.2	26.6	29.1	28.3	28.7	27.6	25.6	26.4	26.0	25.2	25.7
18	29.1	26.5	27.6	30.0	28.1	28.5	27.0	25.7	26.2	25.5	24.1	24.8
19	30.5	27.4	28.5	31.1	27.9	28.7	28.7	26.0	26.8	24.1	22.6	23.3
20	28.9	27.4	28.2	31.0	28.2	28.8	28.9	26.5	27.6	22.7	21.8	22.2
21	27.8	26.5	27.2	30.6	28.0	29.1	28.3	27.5	27.9	22.8	21.4	22.2
22	28.1	26.4	27.2	30.9	28.6	29.3	27.7	27.0	27.3	24.6	21.4	22.7
23	29.0	27.1	28.0	29.4	28.0	28.7	27.7	26.1	26.8	24.6	22.3	23.1
24	28.5	27.7	28.1	30.3	27.7	28.6	27.2	26.2	26.7	24.0	22.4	23.1
25	29.6	27.6	28.3	30.1	28.2	29.0	27.0	25.8	26.3	23.8	22.5	23.1
26	28.4	27.4	27.8	30.1	29.0	29.5	27.1	26.0	26.5	23.8	22.9	23.3
27	27.9	27.0	27.3	29.8	29.0	29.4	27.4	26.4	26.9	23.7	23.0	23.3
28	27.7	26.9	27.2	29.2	28.1	28.6	27.9	26.5	27.1	24.2	23.2	23.6
29	29.4	26.9	27.4	28.8	27.8	28.2	27.8	26.9	27.3	25.3	23.3	23.8
30	27.9	26.8	27.4	29.0	28.1	28.6	27.5	26.9	27.2	24.6	23.8	24.0
31	---	---	---	29.5	28.3	28.7	28.7	26.6	27.5	---	---	---
MONTH	30.5	25.6	27.3	31.6	27.1	29.1	30.4	25.2	27.2	27.7	21.4	24.9

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.6	22.6	23.1	18.3	17.6	18.0	11.7	11.1	11.4	8.0	7.7	7.9
2	23.4	21.8	22.4	18.6	17.8	18.1	11.4	10.7	11.0	8.4	7.9	8.1
3	21.9	20.6	21.2	18.8	18.1	18.3	11.0	9.4	10.0	8.3	8.0	8.2
4	21.9	20.8	21.3	18.7	18.2	18.4	9.7	8.9	9.3	9.1	8.1	8.3
5	21.9	20.7	21.3	18.8	18.1	18.3	9.3	9.1	9.2	11.1	8.1	9.4
6	21.5	21.4	21.5	18.6	18.2	18.3	9.2	8.6	9.0	11.4	10.4	10.9
7	21.6	21.3	21.5	20.7	18.3	19.0	8.6	8.0	8.2	10.4	8.6	9.3
8	21.6	21.2	21.5	19.6	18.6	19.0	8.6	7.6	7.9	8.7	7.8	8.2
9	21.6	21.1	21.5	18.8	16.4	17.5	8.7	7.8	8.4	8.1	6.9	7.6
10	21.7	21.4	21.5	16.7	15.9	16.2	8.9	7.9	8.5	7.2	5.4	6.2
11	21.5	21.1	21.3	16.3	15.5	16.0	9.4	8.7	9.0	5.5	5.1	5.3
12	21.5	20.8	21.0	16.6	15.7	16.1	9.1	8.6	8.8	5.1	3.9	4.7
13	21.3	21.0	21.1	16.3	15.1	16.0	9.1	8.3	8.6	5.4	4.4	5.0
14	21.6	21.0	21.2	15.1	13.5	14.2	8.6	8.3	8.4	5.5	4.8	5.1
15	21.1	19.8	20.3	13.7	12.6	13.1	8.4	7.9	8.1	5.8	5.1	5.4
16	19.9	19.4	19.7	14.0	13.2	13.5	8.4	8.1	8.3	5.5	5.0	5.1
17	19.6	18.9	19.2	14.1	13.2	13.7	9.0	8.2	8.5	5.2	4.6	4.9
18	19.6	19.0	19.4	14.2	13.5	14.0	8.3	7.9	8.2	5.9	4.8	5.3
19	19.3	18.5	18.8	15.2	13.6	14.4	8.3	7.4	7.8	6.3	5.5	6.0
20	19.2	18.6	19.1	15.1	14.5	14.7	7.6	6.7	7.1	5.5	4.9	5.1
21	19.3	18.9	19.1	14.8	14.0	14.3	7.0	6.3	6.6	5.0	4.5	4.8
22	19.4	18.7	19.1	14.8	14.3	14.5	6.8	6.1	6.5	5.1	4.3	4.7
23	18.7	18.0	18.3	14.9	14.5	14.6	7.1	6.3	6.6	5.0	4.5	4.7
24	18.4	17.1	17.6	14.8	14.6	14.6	7.3	6.4	7.0	5.3	4.5	4.9
25	17.4	16.9	17.2	15.2	14.4	14.8	7.8	7.2	7.6	4.8	3.8	4.3
26	17.4	17.1	17.3	14.8	14.1	14.4	7.5	7.0	7.2	4.0	3.8	3.9
27	18.3	17.2	17.6	14.6	14.3	14.5	7.2	6.4	6.8	4.0	3.7	3.8
28	17.9	17.6	17.7	15.5	13.9	14.6	7.3	6.6	7.0	3.7	3.1	3.4
29	18.2	17.7	17.9	14.7	12.2	13.2	7.8	6.7	7.2	3.7	2.9	3.3
30	18.0	17.4	17.7	12.4	11.2	11.8	8.3	7.3	7.8	3.9	3.2	3.5
31	17.9	17.4	17.7	---	---	---	8.2	7.5	7.9	3.8	3.1	3.4
MONTH	23.6	16.9	19.8	20.7	11.2	15.6	11.7	6.1	8.2	11.4	2.9	5.8
		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	3.0	3.2	7.9	6.7	7.1	13.4	12.7	13.2	20.6	20.0	20.3
2	3.5	2.9	3.2	10.0	6.8	8.3	13.2	12.2	12.8	21.5	20.3	20.8
3	4.3	3.3	3.7	10.0	6.9	8.6	13.0	12.3	12.6	21.8	20.4	20.9
4	5.0	3.8	4.3	12.2	7.7	10.2	13.2	12.5	12.8	20.4	19.6	19.9
5	5.1	4.2	4.6	13.2	9.6	12.0	12.6	11.8	12.3	20.6	19.1	19.7
6	7.5	4.6	5.8	13.6	12.1	13.1	12.4	11.3	11.8	21.2	19.2	20.0
7	8.3	6.6	7.4	13.9	11.4	12.5	13.1	11.8	12.2	21.2	20.4	20.6
8	7.2	6.3	6.7	13.0	11.8	12.4	13.5	12.0	12.8	22.9	20.5	21.5
9	6.8	6.1	6.6	12.3	11.7	12.0	15.5	12.4	14.0	22.3	20.6	21.3
10	7.2	6.6	6.9	12.0	10.3	11.1	15.2	12.9	14.2	23.4	20.7	22.2
11	7.6	6.9	7.2	11.1	10.3	10.6	15.8	13.9	15.1	24.3	21.3	22.9
12	7.4	7.0	7.2	11.3	10.2	10.6	15.8	15.3	15.5	24.6	22.1	23.6
13	7.8	7.0	7.3	11.4	10.6	10.8	17.1	15.6	16.2	24.4	23.3	24.0
14	7.7	7.2	7.5	11.3	10.5	10.9	16.8	15.9	16.4	25.1	23.6	24.2
15	7.9	7.2	7.6	11.6	11.0	11.2	16.1	15.2	15.6	25.6	22.3	23.7
16	7.4	6.1	6.6	11.8	11.2	11.5	15.7	15.0	15.4	25.0	22.8	24.0
17	6.4	5.7	6.0	11.8	11.2	11.5	16.1	15.4	15.6	25.7	23.0	24.3
18	6.1	5.6	5.9	11.5	10.8	11.1	18.1	15.9	16.6	26.3	22.9	24.3
19	6.8	5.6	5.9	12.2	10.9	11.5	18.7	16.9	17.7	26.1	24.3	25.1
20	7.2	6.0	6.3	12.2	10.9	11.6	19.2	17.4	17.9	26.3	24.2	25.0
21	8.3	6.8	7.7	12.8	11.6	12.2	20.5	17.5	18.9	27.2	24.3	25.8
22	8.5	7.3	8.0	12.2	11.4	11.7	20.4	18.9	19.6	27.6	25.0	26.3
23	8.7	7.8	8.1	11.6	10.8	11.1	21.8	18.8	20.3	27.3	25.4	26.5
24	8.3	8.1	8.2	11.5	10.9	11.2	21.6	20.1	20.8	27.2	25.6	26.3
25	8.5	7.8	8.1	12.7	11.1	11.8	20.9	20.4	20.6	27.3	25.6	26.1
26	7.8	6.8	7.4	13.5	11.8	12.6	21.5	20.5	20.8	27.9	25.9	26.7
27	7.1	6.6	6.9	14.2	11.9	13.2	21.0	20.4	20.7	28.2	26.8	27.3
28	7.1	6.2	6.7	15.0	13.5	14.5	20.6	19.4	19.8	27.9	26.8	27.3
29	7.2	6.3	6.8	14.3	13.6	13.9	20.6	19.5	19.9	27.4	26.7	27.1
30	---	---	---	13.7	12.9	13.2	20.8	19.5	20.0	26.8	25.7	26.2
31	---	---	---	13.6	12.9	13.3	---	---	---	26.4	25.6	26.0
MONTH	8.7	2.9	6.5	15.0	6.7	11.5	21.8	11.3	16.4	28.2	19.1	23.9

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.8	25.8	26.2	27.5	27.1	27.3	29.3	28.5	28.8	27.4	26.9	27.2
2	27.3	25.8	26.2	27.8	27.1	27.4	29.2	28.6	28.9	26.9	26.3	26.6
3	26.7	25.9	26.4	28.1	27.0	27.4	28.8	27.9	28.3	26.8	25.8	26.2
4	26.8	25.8	26.2	28.2	27.0	27.6	28.5	27.6	27.9	26.9	26.2	26.5
5	27.3	25.7	26.2	28.5	27.3	27.8	29.3	28.1	28.6	27.6	26.2	26.7
6	26.9	26.0	26.3	29.1	27.8	28.6	29.0	27.2	28.0	27.2	26.6	27.0
7	26.9	26.0	26.2	29.6	28.4	29.1	27.2	26.5	26.8	27.0	26.4	26.6
8	27.8	26.1	26.9	29.8	27.9	28.9	27.1	26.3	26.6	27.0	26.4	26.7
9	27.9	26.5	27.3	30.3	29.0	29.4	26.6	26.2	26.4	27.0	26.4	26.7
10	28.6	26.3	27.4	30.3	29.6	29.8	27.0	26.2	26.6	26.8	26.4	26.6
11	28.5	26.4	27.6	29.9	28.4	29.1	27.2	26.4	26.7	26.7	25.8	26.1
12	28.5	26.8	27.6	29.9	28.3	29.2	27.0	26.4	26.8	26.0	25.3	25.5
13	26.8	26.1	26.5	30.3	29.0	29.6	26.9	26.4	26.7	25.6	24.9	25.2
14	26.3	25.9	26.1	30.6	29.4	29.8	26.6	25.9	26.4	25.2	24.7	24.9
15	26.8	25.7	26.2	30.1	29.3	29.6	25.9	25.5	25.7	25.0	24.5	24.8
16	26.8	26.3	26.6	29.7	28.8	29.1	26.2	25.4	25.7	25.3	24.7	24.9
17	27.0	26.2	26.6	29.0	28.5	28.7	26.3	25.7	25.9	26.0	24.7	25.3
18	28.5	26.5	27.0	28.8	28.2	28.6	26.3	25.6	25.9	25.5	24.1	24.8
19	29.1	27.4	27.7	29.4	28.1	28.4	26.8	26.0	26.2	24.1	22.6	23.3
20	28.2	26.7	27.7	29.1	28.0	28.5	27.2	26.2	26.7	22.8	22.0	22.4
21	27.5	26.7	27.2	29.3	28.0	28.5	28.0	26.7	27.3	22.6	21.5	22.0
22	27.6	26.8	27.2	29.7	28.5	28.8	27.6	26.9	27.2	23.9	21.8	22.3
23	28.7	27.0	27.6	29.1	28.1	28.7	27.5	26.7	26.9	23.1	22.0	22.6
24	28.4	27.5	28.0	29.1	27.7	28.1	27.1	26.2	26.7	23.0	22.2	22.6
25	28.3	27.4	27.7	28.8	28.2	28.4	26.8	25.7	26.2	23.0	22.3	22.6
26	28.3	26.7	27.4	29.5	28.5	28.8	26.8	26.0	26.3	23.3	22.5	22.9
27	27.8	27.0	27.3	29.5	28.5	29.0	27.4	26.4	26.9	23.6	23.1	23.3
28	27.7	27.0	27.4	29.2	28.1	28.6	27.2	26.4	26.7	24.2	23.3	23.6
29	28.1	26.9	27.1	28.8	27.8	28.2	27.8	27.0	27.4	24.1	23.4	23.6
30	27.4	27.0	27.2	28.9	28.2	28.5	27.5	26.9	27.2	24.1	23.6	23.8
31	---	---	---	29.2	28.3	28.7	27.4	26.7	26.9	---	---	---
MONTH	29.1	25.7	27.0	30.6	27.0	28.7	29.3	25.4	26.9	27.6	21.5	24.8

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.5	7.7	9.0	---	---	---	10.1	9.3	9.7	13.0	11.4	12.3
2	9.8	8.3	8.9	---	---	---	10.2	9.7	9.9	13.4	12.1	12.6
3	10.9	7.7	8.7	---	---	---	10.5	9.8	10.1	13.6	12.3	12.8
4	11.3	8.6	9.9	---	---	---	10.2	9.8	10	12.6	10.7	11.7
5	12.2	9.9	10.6	---	---	---	10.4	9.8	10.1	10.8	9.9	10.4
6	11.6	9.4	10.4	---	---	---	10.2	9.7	10	10.9	9.7	10.1
7	11.8	9.4	10.7	---	---	---	10.8	9.9	10.3	10.8	9.9	10.3
8	10.7	8.3	9.5	---	---	---	12.4	10.4	11.2	11.2	10.3	10.7
9	10.2	7.3	8.4	---	---	---	12.5	10.9	11.7	10.9	10.3	10.6
10	8.6	7.2	7.6	---	---	---	11.8	9.8	11.0	11.2	10.3	10.8
11	7.7	7.0	7.4	---	---	---	10.3	9.4	9.9	11.8	10.8	11.3
12	12.4	7.1	9.3	---	---	---	11.1	9.6	10.4	13.0	11.5	12.1
13	12.1	8.9	9.8	---	---	---	10.8	10.2	10.5	12.6	11.9	12.3
14	9.8	7.4	8.5	---	---	---	10.9	10.0	10.3	12.6	11.8	12.2
15	8.9	6.7	7.8	---	---	---	11.0	10.3	10.5	12.3	11.8	12.1
16	12.4	7.7	8.9	---	---	---	11.6	10.3	10.8	12.3	11.6	12.0
17	13.4	8.2	10.1	---	---	---	11.5	10.1	10.8	12.3	11.6	12.0
18	11.8	9.2	9.7	---	---	---	11.2	10.3	10.7	12.3	11.5	11.9
19	10.8	8.5	9.5	11.5	7.1	9.1	10.9	10.5	10.7	12.0	11.2	11.5
20	10.7	8.7	9.6	9.8	8.5	9.0	10.9	10.5	10.7	12.0	11.2	11.6
21	9.6	8.1	8.9	13.7	9.3	10.6	12.0	10.7	11.1	12.3	11.4	11.8
22	8.9	7.9	8.3	12.7	10.2	11.3	11.3	10.8	11.0	12.5	11.7	12.1
23	---	---	---	13.1	10.2	11.6	11.3	10.8	11.0	12.2	11.7	11.9
24	---	---	---	12.6	10.6	11.4	11.3	10.9	11.1	12.2	11.4	11.8
25	---	---	---	10.7	9.7	10.2	11.0	10.4	10.7	11.9	11.4	11.6
26	---	---	---	10.0	9.3	9.8	10.8	10.4	10.6	11.9	11.5	11.7
27	---	---	---	9.9	9.2	9.5	11.1	10.6	10.8	12.1	11.4	11.7
28	---	---	---	10.1	6.9	9.0	13.6	10.6	11.3	12.4	11.7	11.9
29	---	---	---	9.3	7.9	8.9	12.3	11.0	11.6	12.5	11.7	12.1
30	---	---	---	10.0	8.8	9.3	12.2	10.9	11.5	12.5	11.5	12.0
31	---	---	---	---	---	---	12.5	10.9	11.5	12.6	12.0	12.2
MONTH	---	---	---	---	---	---	13.6	9.3	10.7	13.6	9.7	11.7
		FEBRUARY			MARCH			APRIL			MAY	
1	12.6	12.1	12.4	---	---	---	10.3	9.3	9.7	7.6	6.0	7.0
2	12.9	12.3	12.5	---	---	---	10.2	9.4	9.8	7.6	5.9	6.8
3	12.6	11.7	12.3	---	---	---	10.2	9.5	9.9	7.7	6.0	6.8
4	12.7	12.0	12.4	---	---	---	10.2	9.6	9.9	8.9	6.8	7.5
5	12.7	12.2	12.4	---	---	---	10.1	9.5	9.8	9.0	5.9	7.7
6	12.6	11.9	12.4	---	---	---	10.9	9.3	10.1	8.9	6.8	8.0
7	12.1	11.4	11.7	---	---	---	10.7	9.7	10.3	10.3	7.2	8.9
8	11.9	11.2	11.6	---	---	---	10.7	10.0	10.3	9.5	8.6	9.0
9	12.3	11.5	11.8	---	---	---	10.4	9.3	10.1	9.4	7.9	8.7
10	12.5	11.7	12.0	10.2	9.1	9.7	10.1	8.8	9.4	9.2	7.7	8.5
11	12.5	11.8	12.2	11.1	9.7	10.3	9.1	8.2	8.7	9.3	7.7	8.4
12	12.3	11.2	11.8	12.2	10.2	11.1	9.2	7.8	8.5	9.3	7.4	8.5
13	---	---	---	13.0	10.7	11.3	8.7	7.7	8.1	9.4	7.8	8.4
14	---	---	---	11.8	10.6	11.3	8.6	7.7	8.2	9.3	7.6	8.4
15	---	---	---	13.0	10.5	11.5	8.8	8.0	8.3	8.9	7.7	8.3
16	---	---	---	11.8	10.6	11.3	9.6	8.3	8.8	9.2	7.3	8.1
17	---	---	---	11.9	10.6	10.9	10.1	8.6	9.4	9.8	6.8	7.8
18	---	---	---	11.6	10.2	10.8	9.6	8.3	8.9	9.0	6.2	7.4
19	---	---	---	10.9	9.3	10.1	8.9	7.9	8.5	8.3	6.3	7.2
20	---	---	---	11.1	9.6	10.3	9.2	7.2	8.4	9.7	6.7	7.9
21	---	---	---	10.9	9.9	10.4	8.7	7.4	8.3	10.2	7.1	8.4
22	---	---	---	11.0	9.9	10.5	8.5	7.1	8.0	8.7	7.2	7.9
23	---	---	---	12.3	10.2	11.2	8.7	7.7	8.2	8.2	6.0	7.0
24	---	---	---	12.1	10.9	11.6	8.4	7.2	7.9	8.1	6.2	7.2
25	---	---	---	12.9	10.8	11.9	7.9	6.2	7.3	8.8	6.8	7.6
26	---	---	---	12.4	11.0	11.8	8.2	7.3	7.7	8.5	6.3	7.5
27	---	---	---	12.5	11.1	11.9	8.3	6.9	7.6	7.9	5.8	7.2
28	---	---	---	12.5	10.5	11.4	9.6	7.4	8.2	7.9	6.4	7.1
29	---	---	---	10.6	9.5	10.0	9.2	7.0	8.3	8.0	6.3	7.1
30	---	---	---	10.6	9.6	10.1	8.4	6.2	7.4	7.3	6.3	6.8
31	---	---	---	10.5	9.6	10	---	---	---	7.6	6.4	7.1
MONTH	---	---	---	---	---	---	10.9	6.2	8.8	10.3	5.8	7.7

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	6.7	7.2	7.8	5.7	6.9	6.9	5.6	6.2	7.8	6.3	6.8
2	8.6	6.4	7.6	7.9	6.8	7.2	7.2	5.4	6.3	8.1	5.9	7.0
3	9.0	6.2	7.5	8.6	6.3	7.3	7.7	5.3	6.3	8.6	6.6	7.5
4	7.7	5.6	6.7	7.8	6.3	7.2	12.3	5.6	8.0	8.8	7.2	7.9
5	8.2	5.2	6.8	8.0	6.3	7.2	8.8	6.4	7.6	9.5	7.0	8.0
6	7.7	6.4	7.2	7.7	6.8	7.2	7.5	6.2	6.8	8.2	6.6	7.6
7	8.1	6.4	7.3	7.8	6.4	7.2	8.3	6.5	7.3	8.1	6.2	6.8
8	7.6	6.5	7.0	7.9	6.0	7.0	8.8	7.4	8.0	8.2	6.2	6.8
9	8.0	6.0	6.8	8.3	5.9	7.1	8.6	7.2	7.8	7.8	6.4	7.1
10	7.5	5.6	6.6	8.5	6.7	7.4	8.6	7.0	7.8	9.3	7.0	7.9
11	7.8	6.3	7.0	7.6	6.4	7.0	9.1	7.2	8.0	8.6	6.5	7.6
12	7.0	6.0	6.4	7.7	6.6	7.1	8.8	6.9	7.7	9.1	6.9	7.9
13	7.0	5.9	6.4	7.1	5.7	6.5	7.7	5.6	6.9	9.4	7.6	8.1
14	7.1	6.3	6.7	7.6	6.0	6.5	7.2	5.7	6.7	8.1	7.4	7.8
15	7.1	6.6	6.8	7.7	6.0	6.8	7.5	6.1	6.6	10.1	6.9	8.1
16	7.4	6.6	6.9	8.2	6.5	7.2	9.7	6.3	7.8	14.0	7.6	9.7
17	7.0	6.2	6.7	8.0	6.8	7.4	9.7	7.5	8.6	9.2	5.7	7.5
18	7.5	6.0	6.7	8.6	6.6	7.3	9.0	7.2	7.9	7.5	5.4	6.9
19	7.5	6.5	7.0	9.6	6.4	7.5	9.8	7.2	8.1	8.2	6.9	7.4
20	7.2	6.4	6.8	8.6	6.4	7.3	9.1	6.2	8.1	8.0	7.4	7.6
21	7.1	6.2	6.6	8.9	5.8	7.2	8.8	7.5	8.1	8.8	7.2	7.9
22	7.2	6.3	6.7	7.6	6.2	6.7	8.8	7.3	7.8	11.3	8.1	9.6
23	8.0	6.5	7.2	6.5	5.2	5.8	10.4	7.5	8.6	10.7	9.4	10
24	8.6	7.1	7.8	8.4	4.6	6.4	---	---	---	9.4	8.4	8.8
25	9.4	7.6	8.2	7.3	6.2	6.7	---	---	---	8.5	7.6	8.0
26	7.9	6.6	7.2	7.5	6.5	6.9	---	---	---	9.0	7.4	8.1
27	8.0	6.6	7.4	7.2	5.3	6.3	7.6	6.2	6.9	7.7	6.3	7.0
28	8.2	7.1	7.6	5.8	4.8	5.2	9.1	6.2	7.3	7.8	5.5	6.6
29	9.0	6.8	7.6	6.7	4.7	5.3	8.2	6.8	7.5	10.2	7.1	7.9
30	7.7	5.7	7.0	6.4	5.2	5.7	8.0	6.6	7.1	9.3	7.2	7.9
31	---	---	---	6.9	5.3	6.1	10.0	6.6	7.8	---	---	---
MONTH	9.4	5.2	7.0	9.6	4.6	6.8	---	---	---	14.0	5.4	7.8

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.2	3.7	7.4	10.4	5.2	8.7	9.3	8.6	9.0	12.0	8.7	10.6
2	9.8	5.1	7.9	10.9	4.7	6.7	9.6	8.8	9.3	12.5	5.6	8.6
3	9.1	5.2	7.3	9.8	4.1	7.0	9.9	8.8	9.5	12.4	5.2	6.7
4	9.2	3.4	6.5	9.2	3.5	6.8	9.8	9.3	9.6	9.4	6.2	7.1
5	10.5	1.0	5.0	7.5	2.6	4.7	10.0	9.3	9.7	10.7	7.9	9.2
6	7.9	1.9	4.3	5.9	3.0	4.0	9.8	8.6	9.5	10.9	9.0	10.2
7	6.4	0.7	3.3	8.5	3.2	5.2	10.5	9.5	9.9	11.2	10.3	10.8
8	8.4	0.5	2.2	8.7	3.1	6.6	10.2	8.7	9.9	11.5	10.9	11.2
9	10.0	0.5	4.7	9.0	7.9	8.6	10.0	8.5	9.0	11.3	10.6	11.0
10	8.3	6.3	7.4	9.5	7.9	8.8	10.2	8.2	9.1	11.6	10.7	11.2
11	7.4	6.5	7.1	9.8	7.7	8.6	10.1	9.1	9.7	12.1	11.3	11.7
12	10.2	6.2	7.5	10.4	8.5	9.7	9.8	8.9	9.4	13.3	11.9	12.5
13	9.4	4.3	6.6	9.8	8.6	9.1	10.5	8.6	10	13.2	12.5	12.8
14	8.7	4.7	6.8	9.5	8.7	9.0	10.7	9.8	10.2	13.1	12.3	12.7
15	8.5	6.5	7.5	9.8	8.6	9.2	10.7	9.9	10.3	13.0	12.3	12.6
16	8.6	6.7	7.4	9.5	7.4	8.8	10.0	9.3	9.7	12.8	12.1	12.4
17	8.8	4.3	7.6	9.6	6.8	8.2	11.0	9.4	10.1	12.8	11.4	12.3
18	9.3	4.3	8.2	7.9	4.6	6.2	10.7	9.4	10.1	12.6	11.4	12.2
19	9.4	4.9	8.0	8.1	4.9	6.9	10.8	9.7	10.4	12.4	11.8	12.0
20	8.1	4.6	6.1	8.1	7.2	7.6	10.8	10.2	10.7	12.5	11.8	12.2
21	8.3	4.7	6.8	9.1	6.8	8.0	11.6	10.4	10.9	12.8	12.0	12.3
22	8.4	7.1	7.8	9.1	6.1	8.3	11.0	9.9	10.7	12.9	12.0	12.5
23	9.3	7.4	8.2	9.1	6.0	7.1	11.0	9.0	10.2	12.7	11.8	12.3
24	8.7	7.6	8.1	8.9	5.2	6.5	10.5	8.7	9.3	12.6	11.2	12.2
25	8.0	7.4	7.7	9.2	5.3	8.2	10.8	8.9	10.3	12.4	12.0	12.2
26	7.7	6.6	7.1	9.4	6.3	8.1	10.8	10.3	10.5	12.4	12.0	12.2
27	8.3	6.0	7.2	9.1	5.5	7.2	12.0	10.5	11.0	12.6	11.9	12.2
28	8.4	5.2	6.4	9.0	5.6	7.6	12.1	8.0	11.2	12.6	11.8	12.3
29	8.5	5.2	7.7	8.6	7.5	8.2	12.1	6.8	10.3	12.4	10.5	11.9
30	8.6	6.4	7.8	9.2	7.5	8.5	11.7	6.9	9.4	12.6	11.4	12.0
31	9.4	6.3	7.7	---	---	---	11.6	6.4	9.6	13.1	11.2	12.4
MONTH	10.5	0.5	6.8	10.9	2.6	7.6	12.1	6.4	10.0	13.3	5.2	11.4
		FEBRUARY			MARCH			APRIL			MAY	
1	12.9	11.2	12.4	13.0	8.8	10.7	10.1	9.2	9.8	7.9	2.2	5.5
2	12.8	12.2	12.5	12.6	8.2	10.6	10.2	9.0	9.8	---	---	---
3	12.9	10.6	12.3	12.2	8.4	9.9	10.2	8.7	9.6	---	---	---
4	12.8	10.3	12.3	12.9	8.2	10.8	10.2	7.8	9.6	---	---	---
5	12.7	11.6	12.3	12.3	8.2	11.1	10.1	8.9	9.8	---	---	---
6	12.9	11.6	12.5	11.1	8.3	9.9	10.3	7.7	9.3	---	---	---
7	12.5	11.7	12.1	9.8	7.7	8.7	10.7	7.4	8.9	8.5	4.5	6.6
8	12.1	10.6	11.7	9.6	9.1	9.3	10.0	5.3	8.6	9.0	1.3	5.5
9	12.0	10.1	11.0	9.7	7.6	9.0	10.5	6.7	8.9	7.2	1.1	3.9
10	12.5	8.2	11.5	9.7	9.0	9.3	9.6	6.1	8.1	8.7	1.3	5.7
11	12.7	7.7	10.8	10.5	9.5	9.9	9.1	5.6	8.0	9.5	1.6	6.0
12	11.7	8.1	10.1	11.3	9.2	10.1	9.6	6.8	9.0	8.0	2.2	6.6
13	11.7	10.7	11.3	11.5	8.4	10.5	9.3	8.5	8.8	7.4	3.5	5.8
14	11.5	9.1	10.5	11.4	9.6	10.7	9.7	8.4	9.0	8.8	3.1	6.3
15	11.7	8.5	10.6	11.3	9.6	10.5	9.6	8.5	9.1	8.6	0.2	4.0
16	11.3	10.5	11.0	11.1	9.4	10.3	9.0	7.0	8.4	7.4	0.4	3.4
17	11.8	10.9	11.3	10.9	9.8	10.4	10.7	6.2	8.2	7.8	0.1	3.6
18	11.7	11.2	11.5	10.8	7.1	10.0	9.9	5.0	9.0	7.5	0.2	3.8
19	12.2	9.1	11.2	10.5	5.8	9.7	9.3	8.2	8.8	8.2	5.3	6.8
20	12.2	9.2	10.8	10.9	9.2	10	9.8	6.8	8.4	8.3	0.7	6.3
21	12.1	10.7	11.5	10.7	9.8	10.2	9.7	5.5	8.5	8.5	0.5	6.4
22	12.1	9.2	11.5	10.8	9.8	10.3	9.7	5.2	8.4	8.3	1.3	5.8
23	12.2	10.4	11.7	11.5	9.8	10.4	9.8	2.3	8.1	7.5	1.1	6.4
24	11.7	10.4	11.4	11.8	8.8	9.9	9.8	7.3	8.6	7.8	5.8	6.9
25	11.7	10.8	11.3	12.5	8.3	10.8	9.1	6.4	8.1	7.7	6.6	7.0
26	11.4	10.9	11.1	12.0	6.9	10.4	9.3	6.2	7.9	7.6	1.5	6.5
27	11.1	10.6	10.9	11.6	6.9	9.5	9.6	6.8	8.2	7.8	3.9	6.4
28	11.7	10.9	11.3	12.2	7.8	10.8	9.8	5.2	8.1	8.0	4.0	6.6
29	12.6	9.7	11.3	10.7	9.6	10.1	9.8	2.7	6.8	7.6	3.6	6.5
30	---	---	---	10.5	9.5	10.0	8.7	2.9	6.7	7.3	4.4	6.7
31	---	---	---	10.4	7.5	9.8	---	---	---	7.8	6.1	7.1
MONTH	12.9	7.7	11.4	13.0	5.8	10.1	10.7	2.3	8.6	---	---	---

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	6.8	7.3	7.3	3.7	6.2	6.3	5.0	5.6	6.8	5.3	6.2
2	8.0	4.0	6.8	6.9	1.5	5.1	6.5	5.0	5.8	7.8	5.9	6.8
3	7.6	0.9	5.8	7.5	0.6	5.1	6.2	5.3	5.7	7.9	5.3	6.7
4	6.6	0.8	3.0	7.3	0.3	3.7	7.5	5.1	5.9	8.2	6.5	7.2
5	8.1	4.3	6.1	6.7	1.9	5.4	7.7	5.8	6.8	9.0	6.5	7.4
6	7.3	2.2	6.1	7.4	1.5	5.7	7.6	5.0	6.8	7.8	5.4	7.2
7	6.9	1.1	4.0	7.2	2.2	5.4	8.0	6.6	7.2	7.3	5.2	6.2
8	7.3	1.7	5.7	6.1	0.3	3.3	7.9	5.2	6.8	8.0	5.9	6.7
9	7.0	1.2	5.5	7.4	3.1	5.8	7.0	4.8	5.6	7.3	6.1	6.6
10	7.9	0.6	5.5	7.2	4.8	6.2	7.1	3.9	5.2	8.6	4.3	6.4
11	7.6	1.0	6.1	6.3	0.3	2.6	6.8	3.4	4.6	8.5	3.5	6.7
12	7.5	5.4	6.7	6.8	0.5	3.2	7.6	2.5	4.9	8.5	4.9	7.2
13	7.5	3.9	6.6	6.9	5.2	6.2	7.4	1.0	5.8	8.5	4.3	7.0
14	7.3	6.3	6.8	7.1	5.6	6.2	6.7	4.7	5.8	8.4	7.4	8.0
15	7.5	6.6	7.1	7.2	5.7	6.4	6.6	5.0	5.8	7.8	3.3	5.9
16	7.4	5.4	7.0	7.3	6.1	6.6	8.0	5.0	6.6	7.0	1.4	4.5
17	7.3	6.4	7.0	7.0	1.9	5.9	8.1	5.4	6.9	6.3	0.9	3.6
18	7.8	6.4	6.9	6.6	0.4	3.0	7.9	4.1	5.9	6.5	4.1	5.8
19	7.5	5.4	6.8	7.9	0.7	3.6	7.9	3.0	5.6	7.4	5.9	6.6
20	7.5	1.9	5.9	7.2	0.8	4.7	7.2	3.5	5.2	7.5	6.1	6.8
21	7.0	2.7	6.1	7.2	2.1	5.7	7.6	3.1	5.6	8.6	6.6	7.3
22	7.1	2.0	6.2	7.0	0.1	4.5	7.2	2.8	5.3	11.0	6.7	7.9
23	7.7	5.3	6.8	6.0	0.2	4.0	8.9	0.7	2.5	9.5	4.2	7.7
24	8.3	4.3	6.9	6.6	1.1	4.2	7.7	1.0	5.5	7.9	3.7	5.8
25	8.5	4.0	7.0	6.4	5.5	5.9	7.2	4.7	6.1	7.5	4.1	5.7
26	7.6	0.6	5.1	6.7	3.9	5.0	6.4	4.9	5.7	7.8	3.8	5.8
27	7.9	2.4	6.4	6.4	1.2	4.3	7.5	5.2	6.2	7.2	5.8	6.6
28	7.8	1.8	6.1	5.1	1.9	4.6	7.4	5.1	6.2	6.8	3.8	5.7
29	8.0	2.0	6.0	6.8	1.8	4.7	8.2	5.9	7.1	7.3	5.3	6.0
30	6.8	1.3	3.5	6.2	2.2	4.7	7.8	6.5	7.0	7.6	4.2	5.3
31	---	---	---	6.2	5.0	5.7	7.0	5.6	6.5	---	---	---
MONTH	8.5	0.6	6.1	7.9	0.1	5.0	8.9	0.7	5.9	11.0	0.9	6.4

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	123	88	104	---	---	---	93	85	89	110	96	104
2	114	95	102	---	---	---	92	88	90	114	101	106
3	124	86	97	---	---	---	93	87	89	118	104	109
4	128	96	111	---	---	---	89	85	87	110	96	103
5	140	111	119	---	---	---	91	86	88	97	90	93
6	132	105	117	---	---	---	88	84	86	99	88	92
7	133	106	121	---	---	---	92	84	87	94	86	90
8	121	94	107	---	---	---	105	87	94	95	87	91
9	115	83	95	---	---	---	105	91	98	91	87	89
10	98	82	87	---	---	---	100	85	93	91	84	87
11	87	79	84	---	---	---	91	81	86	92	85	89
12	141	80	105	---	---	---	97	83	90	100	90	94
13	139	100	110	---	---	---	93	87	90	99	93	97
14	111	83	96	---	---	---	94	85	88	100	92	96
15	98	75	87	---	---	---	94	87	89	99	93	96
16	139	84	97	---	---	---	98	87	91	97	91	94
17	149	89	111	---	---	---	98	87	93	97	90	94
18	130	99	106	---	---	---	95	86	90	97	92	94
19	117	91	103	115	70	90	91	88	89	97	90	92
20	118	93	103	97	84	89	90	87	89	95	88	91
21	103	88	96	137	90	105	99	87	91	97	89	92
22	97	85	90	128	100	112	92	86	89	98	90	94
23	---	---	---	132	101	115	93	86	90	95	91	93
24	---	---	---	126	105	113	96	91	93	96	88	92
25	---	---	---	107	95	101	93	86	90	91	88	90
26	---	---	---	98	90	95	90	86	88	90	87	89
27	---	---	---	96	89	92	92	86	88	92	86	89
28	---	---	---	98	69	88	115	87	94	92	88	90
29	---	---	---	88	78	85	102	90	96	94	87	91
30	---	---	---	93	81	86	103	92	97	96	86	91
31	---	---	---	---	---	---	107	92	97	96	90	92
MONTH	---	---	---	---	---	---	115	81	91	118	84	94
		FEBRUARY			MARCH			APRIL			MAY	
1	95	90	93	---	---	---	99	89	93	84	66	78
2	101	91	94	---	---	---	96	89	93	86	66	76
3	97	88	93	---	---	---	97	89	94	87	67	76
4	99	92	96	---	---	---	97	90	94	101	75	83
5	100	94	96	---	---	---	95	89	91	99	64	84
6	103	95	99	---	---	---	104	86	94	101	74	89
7	101	95	98	---	---	---	105	90	98	117	80	101
8	98	92	95	---	---	---	106	97	101	110	98	104
9	100	92	96	---	---	---	104	93	100	112	92	102
10	104	96	99	92	83	89	101	88	94	111	90	100
11	106	98	102	101	87	93	92	82	87	113	91	100
12	104	93	98	112	91	100	93	78	85	114	88	102
13	---	---	---	121	96	103	90	78	83	115	94	102
14	---	---	---	108	96	103	88	79	84	115	91	102
15	---	---	---	121	96	105	89	80	84	109	93	101
16	---	---	---	110	98	105	97	83	89	115	89	100
17	---	---	---	109	97	101	107	87	96	123	83	96
18	---	---	---	107	93	99	101	84	93	114	74	90
19	---	---	---	102	85	93	95	83	89	103	76	88
20	---	---	---	104	88	95	102	76	91	125	81	98
21	---	---	---	102	92	97	96	80	90	129	87	105
22	---	---	---	103	91	97	94	77	88	111	89	100
23	---	---	---	113	93	103	101	86	92	105	74	87
24	---	---	---	111	100	106	96	80	88	102	77	89
25	---	---	---	121	101	110	88	69	82	114	83	95
26	---	---	---	118	103	112	93	82	87	110	79	95
27	---	---	---	125	106	116	93	77	85	102	73	91
28	---	---	---	124	103	112	108	81	91	101	81	91
29	---	---	---	104	92	97	101	77	92	102	79	90
30	---	---	---	102	92	96	94	69	82	90	78	84
31	---	---	---	101	92	96	---	---	---	95	79	87
MONTH	---	---	---	---	---	---	108	69	90	129	64	93

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	98	83	90	100	72	88	91	72	80	99	79	86
2	109	79	95	102	86	92	94	70	82	102	74	87
3	116	77	95	111	80	94	99	69	81	108	81	94
4	98	70	84	101	81	92	164	72	104	111	89	98
5	104	64	85	106	80	94	117	82	99	121	87	100
6	97	79	90	103	88	95	96	79	88	104	83	96
7	102	79	92	106	84	96	106	81	93	102	77	85
8	98	81	89	106	79	94	113	92	101	103	77	86
9	103	76	86	113	77	95	110	89	98	98	80	88
10	98	71	84	116	88	100	109	87	98	117	87	99
11	102	80	90	101	85	93	117	90	101	108	81	95
12	91	76	82	103	87	94	111	86	97	112	85	97
13	88	74	80	95	74	86	97	70	86	116	92	99
14	88	78	83	102	79	86	89	71	83	99	89	94
15	90	81	85	103	79	90	92	75	81	124	83	99
16	93	82	87	108	85	94	122	77	97	174	92	118
17	88	77	84	105	88	96	123	92	107	113	70	92
18	98	75	85	114	85	94	113	90	99	90	66	83
19	100	82	91	130	82	97	125	89	102	96	81	87
20	94	82	87	113	82	95	119	78	104	92	85	88
21	91	77	83	119	74	94	113	95	103	102	83	91
22	92	79	85	102	80	87	112	92	99	135	93	111
23	104	82	93	85	67	75	132	93	108	126	109	117
24	111	91	100	112	59	84	---	---	---	110	98	104
25	123	97	106	96	80	87	---	---	---	101	89	94
26	102	84	91	98	86	91	---	---	---	107	87	96
27	102	84	93	95	70	82	96	77	87	91	74	83
28	105	90	97	75	63	68	116	77	92	93	65	78
29	118	86	97	87	60	68	105	86	94	125	84	94
30	98	72	88	83	68	74	102	83	90	111	86	95
31	---	---	---	91	69	80	130	83	100	---	---	---
MONTH	123	64	89	130	59	89	---	---	---	174	65	94

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	107	44	87	111	55	92	86	78	82	101	74	89
2	113	60	92	117	50	72	87	80	84	106	48	73
3	104	59	83	106	44	75	87	80	84	105	44	57
4	104	39	74	99	37	73	85	82	84	82	53	60
5	119	11	56	81	28	50	87	81	84	97	67	81
6	90	22	49	63	32	43	85	75	83	98	81	92
7	73	8	38	95	34	56	89	81	84	97	90	94
8	95	6	26	95	33	72	87	75	84	98	92	95
9	114	6	54	94	85	90	84	73	77	95	90	92
10	95	72	84	97	80	89	87	70	77	94	88	91
11	84	73	80	100	79	87	88	78	84	95	89	92
12	116	70	85	107	86	99	84	77	81	103	93	98
13	106	48	75	100	87	93	90	75	86	104	97	101
14	99	53	77	92	85	88	92	84	87	104	96	100
15	94	73	83	94	82	88	91	84	87	104	97	100
16	94	73	81	91	72	85	85	79	83	101	95	98
17	96	47	82	93	66	79	95	80	87	101	89	96
18	102	47	90	76	45	60	91	80	86	101	89	96
19	102	53	86	80	48	67	90	82	87	100	95	97
20	87	50	66	80	71	75	90	85	88	99	93	96
21	90	51	74	90	67	78	95	85	89	100	93	96
22	92	77	84	90	60	82	89	81	87	101	94	97
23	100	79	87	90	59	70	89	74	83	100	92	96
24	92	80	85	88	51	64	85	72	77	99	88	95
25	83	77	81	92	52	82	90	74	86	96	93	94
26	80	69	73	92	62	79	90	85	87	95	91	93
27	88	63	76	89	54	71	100	87	90	96	90	93
28	89	55	67	87	55	75	100	67	92	95	89	93
29	90	55	82	82	74	78	100	57	86	94	79	89
30	90	68	82	85	70	79	98	58	80	96	86	91
31	99	66	81	---	---	---	98	54	81	99	84	93
MONTH	119	6	75	117	28	76	100	54	84	106	44	91
		FEBRUARY			MARCH			APRIL			MAY	
1	97	84	93	110	72	88	97	88	94	88	24	61
2	96	91	93	112	67	90	97	85	93	---	---	---
3	99	80	93	108	71	85	97	82	91	---	---	---
4	99	81	95	120	70	97	97	74	91	---	---	---
5	100	90	95	118	75	104	95	84	91	---	---	---
6	106	91	100	106	77	94	95	72	87	---	---	---
7	104	96	101	95	71	82	100	69	84	95	50	74
8	100	88	96	91	85	88	96	50	81	105	14	63
9	98	83	90	91	71	84	105	63	87	83	12	44
10	104	67	94	88	82	85	95	59	79	103	15	66
11	106	64	90	95	85	89	91	54	80	114	18	71
12	97	67	84	103	82	91	97	68	90	95	25	78
13	98	89	94	105	76	95	96	86	90	89	41	69
14	96	75	88	104	87	97	98	86	92	107	37	75
15	99	71	89	104	87	95	96	85	92	106	2	48
16	93	85	90	102	86	95	90	70	84	90	5	41
17	95	88	91	100	90	96	108	62	83	96	1	44
18	94	89	92	99	64	91	103	51	93	93	2	46
19	100	73	90	97	53	89	97	86	92	102	64	83
20	101	74	88	102	84	92	105	71	89	103	8	76
21	103	88	97	101	92	95	107	58	92	107	6	79
22	104	77	97	101	90	96	108	56	91	106	16	73
23	105	88	100	105	89	95	112	25	89	94	13	80
24	99	88	97	108	81	91	111	82	96	99	71	85
25	100	92	96	118	76	100	102	71	91	96	81	87
26	96	90	92	115	64	98	105	69	88	97	19	82
27	91	87	90	113	64	91	108	76	92	100	49	81
28	97	88	93	120	75	107	109	57	89	102	50	84
29	103	79	93	105	93	98	109	30	75	96	45	82
30	---	---	---	101	90	96	97	32	73	90	55	83
31	---	---	---	100	71	94	---	---	---	97	75	88
MONTH	106	64	93	120	53	93	112	25	88	---	---	---

0208455155 PAMLICO RIVER AT LIGHT 3—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	100	84	90	92	47	79	83	65	72	86	67	78
2	101	50	85	88	19	65	85	65	75	98	74	85
3	95	11	72	96	8	65	80	69	74	99	65	83
4	83	10	37	94	4	47	97	65	76	103	81	90
5	103	53	76	86	24	69	101	75	88	115	81	92
6	92	27	75	97	19	74	97	64	87	99	68	91
7	87	14	50	95	28	71	101	83	90	91	65	78
8	93	21	71	81	4	44	99	65	85	101	74	84
9	89	15	70	99	40	76	88	60	70	92	76	83
10	102	7	70	96	63	82	89	49	65	108	54	81
11	97	12	78	84	4	34	85	43	58	106	44	84
12	95	68	85	90	6	43	95	31	61	104	60	88
13	94	49	82	92	69	82	93	12	72	104	53	85
14	91	78	85	95	74	83	83	59	72	102	90	97
15	94	82	88	96	76	85	81	62	71	95	40	71
16	93	67	88	96	79	87	99	62	81	85	17	55
17	92	79	87	91	25	76	101	67	85	78	11	44
18	101	80	87	86	5	39	98	51	73	78	50	70
19	96	69	87	104	9	46	99	37	70	87	70	77
20	96	24	75	93	10	60	91	44	65	87	71	78
21	89	34	77	94	27	74	97	39	71	100	75	84
22	90	25	78	92	1	58	91	35	67	131	77	91
23	100	67	86	78	3	51	113	9	31	111	48	89
24	107	55	89	86	14	54	97	13	68	92	43	68
25	109	51	89	83	71	77	90	59	76	88	47	67
26	97	8	66	88	50	65	80	61	71	92	44	68
27	101	30	81	84	16	57	95	65	78	85	68	77
28	99	23	77	66	25	60	94	64	77	81	45	67
29	103	25	75	87	23	60	105	74	90	87	62	71
30	86	16	44	80	28	61	99	82	89	90	50	62
31	---	---	---	81	65	74	88	70	82	---	---	---
MONTH	109	7	77	104	1	64	113	9	74	131	11	78

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18

LOCATION.--Lat 35°31'05", long 76°29'47", Hyde County, Hydrologic Unit 03020104, on U.S. Coast Guard Channel Light 18.

PERIOD OF RECORD.--Water years 2002 to current year.

PERIOD OF DAILY RECORD.--
SALINITY (TOP AND BOTTOM): May 2002 to current year.
pH (TOP AND BOTTOM): May 2002 to current year.
WATER TEMPERATURE (TOP AND BOTTOM): May 2002 to current year.
DISSOLVED OXYGEN (TOP AND BOTTOM): May 2002 to current year.
DISSOLVED OXYGEN, PERCENT SATURATION (TOP AND BOTTOM): May 2002 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry from May 2002 to current year.

REMARKS.--Station operated in cooperation with the North Carolina Department of Environment and Natural Resources. The monitor was removed on September 15, 2003 to prevent possible destruction of the equipment during Hurricane Isabel. It was reinstalled on September 21, 2003. Top constituents were monitored at 8 ft above the streambed and bottom constituents, 2 ft above the streambed. Salinity and dissolved oxygen, percent saturation are computed. The salinity is computed from specific conductance using the conversion from U.S. Geological Survey Water-Supply Paper 2311. The dissolved oxygen percent saturation is computed using a barometric pressure of 760 mm Hg. Dissolved oxygen, minimum extremes are reported as <1.0 mg/L. Dissolved oxygen, percent saturation, minimum extremes are reported as <10%.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	18.5, October 11, 2002	0.3, August 17, 23, 2003
SALINITY (BOTTOM), ppt	20.5 October 25, 26, 2002	0.3, August 17, 23, 2003
pH (TOP), standard units	8.5, July 17, 2002	5.5, August 23, 2003
pH (BOTTOM), standard units	8.2, on several days during the period	5.5, August 23, 2003
WATER TEMPERATURE (TOP), °C	32.6, July 9, 2004	0.2, January 25, 2003
WATER TEMPERATURE (BOTTOM), °C	30.8, July 31, 2002	0.4, January 24, 2003
DISSOLVED OXYGEN (TOP), mg/L	13.6, February 9, 2003	<1.0, July 22, 26, 27, 2004
DISSOLVED OXYGEN (BOTTOM), mg/L	13.1, January 25, 2003	<1.0, on many days during the period

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SALINITY (TOP), ppt	10.7, September 28	1.0, December 27
SALINITY (BOTTOM), ppt	13.3, September 28	1.3, May 25, 28
pH (TOP), standard units	8.4, July 9	5.9, December 27, 28, 29
pH (BOTTOM), standard units	7.9, September 28, 30	6.4, December 27, May 23, 25, June 10
WATER TEMPERATURE (TOP), °C	32.6, July 9	2.6, January 29
WATER TEMPERATURE (BOTTOM), °C	30.0, July 15	2.8, January 29
DISSOLVED OXYGEN (TOP), mg/L	12.0, January 28, 29, 30, February 1, 2, 3	<1.0, July 22, 26, 27
DISSOLVED OXYGEN (BOTTOM), mg/L	11.7, February 18	<1.0, on many days during the year
DISSOLVED OXYGEN, PERCENT SATURATION (TOP),%	119, July 9	<10, July 22, 26, 27
DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM),%	98, September 21	<10, on many days during the year

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.3	4.7	5.0	5.3	4.8	5.1	5.3	5.1	5.3	2.9	1.8	2.0
2	5.1	4.8	4.9	5.6	4.7	5.1	5.3	4.8	5.2	2.6	1.8	2.0
3	5.0	4.9	4.9	5.8	5.0	5.3	5.1	4.7	4.9	2.2	1.9	2.0
4	5.0	4.8	4.9	5.9	5.3	5.6	5.3	4.7	4.9	2.4	2.0	2.2
5	5.0	4.6	4.9	6.2	5.5	5.9	5.2	5.0	5.0	2.7	1.9	2.3
6	5.0	4.7	4.9	6.2	5.3	5.6	5.1	4.8	5.0	2.3	1.8	2.1
7	5.0	4.6	4.8	5.5	5.4	5.5	5.0	4.9	5.0	2.3	1.5	2.0
8	4.9	4.7	4.8	5.9	5.4	5.6	5.1	4.7	4.9	2.2	1.7	2.1
9	5.0	4.8	4.9	5.9	5.7	5.8	5.0	4.8	5.0	2.3	1.6	2.0
10	5.1	4.9	5.0	5.7	5.6	5.7	5.6	4.8	5.0	2.7	2.0	2.5
11	5.0	4.5	4.8	5.7	5.6	5.7	5.6	4.8	5.0	2.6	2.3	2.4
12	4.9	4.5	4.6	5.7	5.6	5.7	5.0	4.3	4.8	2.8	2.5	2.7
13	5.2	4.7	4.9	5.7	5.4	5.6	4.9	4.1	4.5	2.7	2.6	2.6
14	5.3	4.8	5.0	5.6	5.4	5.6	4.9	4.5	4.7	3.0	2.7	2.8
15	5.3	4.8	4.9	5.6	5.0	5.4	4.5	3.7	4.1	3.2	2.8	2.9
16	5.4	5.1	5.3	5.6	5.3	5.5	4.2	3.3	3.8	3.2	2.9	3.1
17	5.3	4.9	5.1	5.6	5.3	5.5	4.2	3.6	3.9	3.3	2.8	3.1
18	5.4	5.0	5.2	5.6	5.3	5.5	3.8	3.1	3.5	3.3	2.9	3.1
19	5.2	5.1	5.2	5.8	5.3	5.5	3.6	2.8	3.3	3.4	2.8	3.1
20	5.2	5.0	5.1	5.4	5.3	5.3	3.3	2.2	2.6	3.3	2.7	2.9
21	5.2	4.9	5.1	5.4	5.2	5.4	3.0	2.0	2.4	3.2	2.8	2.9
22	5.0	4.0	4.8	5.4	5.1	5.3	2.8	2.3	2.6	3.3	2.9	3.0
23	5.1	4.9	5.0	5.4	5.1	5.3	2.7	2.2	2.4	3.3	2.6	3.2
24	5.3	4.9	5.1	5.6	5.2	5.4	2.9	2.2	2.6	3.4	3.0	3.1
25	5.4	5.1	5.2	5.5	5.2	5.4	2.9	1.4	1.6	3.8	3.0	3.2
26	5.3	5.1	5.2	5.4	5.1	5.3	1.9	1.3	1.6	3.8	2.8	3.2
27	5.3	5.2	5.2	5.3	5.2	5.2	1.7	1.0	1.3	3.1	2.7	2.9
28	5.4	5.2	5.3	5.3	5.2	5.3	2.0	1.1	1.5	3.3	2.9	3.1
29	5.5	5.2	5.3	5.4	5.1	5.2	3.3	1.2	1.9	3.4	3.0	3.3
30	5.4	5.1	5.2	5.4	5.2	5.3	3.5	1.8	2.1	3.3	3.2	3.2
31	5.3	4.7	5.0	---	---	---	2.6	1.7	1.9	3.3	2.7	3.2
MONTH	5.5	4.0	5.0	6.2	4.7	5.5	5.6	1.0	3.6	3.8	1.5	2.7
		FEBRUARY			MARCH			APRIL			MAY	
1	3.3	2.9	3.1	4.3	3.8	4.2	4.4	4.2	4.3	3.8	3.4	3.6
2	3.5	3.2	3.3	4.6	3.9	4.3	4.4	4.1	4.2	3.8	3.2	3.4
3	3.7	3.3	3.5	---	---	---	4.4	4.2	4.3	3.3	2.9	3.1
4	3.9	3.6	3.7	---	---	---	4.5	4.3	4.4	3.3	2.7	3.0
5	4.1	3.8	4.0	---	---	---	4.6	4.4	4.5	3.0	2.6	2.8
6	4.5	3.8	4.2	---	---	---	4.5	4.4	4.5	3.1	2.4	2.8
7	4.4	4.1	4.2	---	---	---	4.6	4.3	4.5	2.7	2.4	2.6
8	4.5	4.0	4.4	---	---	---	4.5	4.3	4.4	2.7	1.7	2.3
9	4.3	4.1	4.2	---	---	---	4.4	4.2	4.4	2.5	2.4	2.5
10	4.2	4.1	4.2	---	---	---	4.5	4.3	4.4	2.5	2.1	2.3
11	4.2	4.0	4.2	---	---	---	4.6	4.5	4.5	2.4	2.3	2.4
12	4.5	3.6	4.3	4.2	3.9	4.0	4.6	4.5	4.6	2.4	2.3	2.4
13	4.2	4.0	4.1	4.2	3.5	4.0	4.7	4.4	4.6	2.5	2.4	2.4
14	4.3	4.1	4.2	4.2	3.2	3.9	4.5	4.1	4.3	2.4	2.1	2.3
15	4.7	3.4	4.3	4.3	3.6	4.2	4.5	3.6	4.3	2.3	2.1	2.3
16	4.4	3.2	3.9	4.3	3.0	3.7	4.4	3.5	3.9	2.4	1.9	2.2
17	4.4	3.5	4.1	4.3	3.2	4.0	4.1	3.8	3.9	2.3	1.8	2.1
18	4.4	2.8	3.8	4.2	3.2	4.0	4.0	3.7	3.8	2.2	1.9	2.1
19	4.1	3.6	3.9	4.3	3.5	4.1	3.8	3.6	3.7	2.1	1.7	1.9
20	4.2	3.5	4.1	4.4	3.9	4.1	3.9	3.5	3.6	2.1	1.7	1.8
21	4.1	3.3	3.6	4.3	3.2	4.0	3.8	3.3	3.7	2.1	1.7	1.8
22	3.8	3.3	3.7	4.2	3.5	4.1	3.7	3.4	3.6	1.9	1.4	1.7
23	3.8	3.5	3.7	4.3	3.6	4.0	3.6	3.4	3.5	1.8	1.2	1.4
24	4.0	3.7	3.8	4.1	2.9	3.9	3.7	3.3	3.5	1.6	1.3	1.4
25	4.2	3.8	4.0	4.1	2.4	3.5	3.9	3.4	3.7	1.5	1.3	1.4
26	4.5	4.0	4.2	4.1	2.7	3.4	3.9	3.2	3.7	1.6	1.4	1.4
27	4.6	4.2	4.4	4.4	2.3	3.7	3.5	3.3	3.4	1.6	1.4	1.5
28	4.4	4.0	4.3	4.1	2.3	3.3	3.5	3.2	3.3	1.6	1.3	1.5
29	4.4	4.0	4.2	4.3	2.4	3.5	3.6	3.2	3.4	1.9	1.4	1.6
30	---	---	---	4.3	2.5	3.5	3.6	3.2	3.4	2.3	1.7	1.9
31	---	---	---	4.5	2.8	3.9	---	---	---	2.3	1.5	1.9
MONTH	4.7	2.8	4.0	---	---	---	4.7	3.2	4.0	3.8	1.2	2.2

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1.9	1.6	1.7	4.8	3.7	4.0	7.2	6.7	7.0	6.8	6.5	6.7
2	1.8	1.5	1.7	4.6	3.9	4.1	7.5	7.1	7.3	6.7	6.5	6.6
3	1.9	1.6	1.8	4.4	4.0	4.3	7.4	6.5	7.1	6.8	6.6	6.7
4	2.7	1.8	2.0	4.6	3.9	4.3	6.5	5.7	6.2	6.7	6.6	6.7
5	2.1	1.8	1.9	4.4	4.1	4.2	6.5	5.2	6.0	7.0	6.7	6.8
6	2.3	1.8	2.1	4.6	3.6	4.2	6.5	4.2	5.2	8.0	6.8	7.3
7	2.4	1.9	2.1	4.6	3.8	4.1	5.6	3.9	4.3	8.8	7.2	7.5
8	2.8	2.1	2.4	4.8	4.2	4.5	5.9	4.3	5.1	9.9	7.7	8.9
9	3.1	2.2	2.4	4.7	4.1	4.4	5.6	4.1	4.8	9.7	8.6	9.4
10	2.8	2.3	2.5	4.7	4.0	4.5	5.9	4.4	5.4	9.3	8.5	8.7
11	2.7	2.4	2.5	5.7	3.7	4.6	6.1	4.8	5.3	8.7	8.1	8.4
12	2.9	2.4	2.6	6.7	4.6	5.3	6.1	4.6	5.3	8.5	8.1	8.4
13	3.2	2.7	2.9	5.7	4.6	5.0	6.5	4.6	5.4	8.5	8.4	8.4
14	3.0	2.8	2.9	5.1	4.0	4.7	6.2	3.8	5.1	8.6	8.3	8.5
15	3.0	2.5	2.9	5.0	4.5	4.7	5.0	3.2	4.0	8.6	8.5	8.6
16	3.2	2.8	3.0	5.0	4.2	4.7	4.8	2.2	3.2	8.6	8.5	8.5
17	3.2	2.4	2.9	5.0	4.2	4.7	5.7	2.5	3.9	9.3	8.5	8.8
18	2.7	2.4	2.5	5.2	4.7	4.9	5.9	3.8	5.5	9.3	8.8	9.0
19	3.0	2.5	2.6	5.2	4.4	4.8	5.5	2.9	4.3	9.3	8.2	9.0
20	3.3	2.6	3.0	6.4	4.3	4.8	4.1	3.2	3.4	8.9	8.7	8.7
21	3.6	3.0	3.2	7.1	4.7	5.1	3.7	2.4	3.3	8.8	8.4	8.7
22	3.9	3.1	3.3	8.8	4.8	6.7	2.7	1.8	2.3	8.7	8.4	8.6
23	3.4	3.1	3.3	7.4	5.8	6.1	2.9	2.2	2.4	8.6	8.0	8.3
24	3.4	3.2	3.3	6.2	5.2	5.8	3.1	2.0	2.5	8.6	8.3	8.5
25	3.5	3.3	3.4	6.1	4.9	5.5	3.9	2.4	3.0	8.8	8.5	8.7
26	3.5	3.1	3.2	8.2	5.4	6.6	5.0	3.5	4.3	9.2	8.8	8.9
27	3.9	3.2	3.4	7.6	5.6	6.5	5.6	3.8	4.8	9.3	9.0	9.2
28	4.4	3.1	3.5	6.4	5.6	6.1	5.9	4.6	5.2	10.7	9.3	9.9
29	4.3	3.3	3.6	6.2	5.7	6.0	8.3	5.2	6.6	10.2	9.6	9.9
30	4.4	3.5	3.8	6.5	5.7	6.1	8.6	7.1	7.7	10.0	9.9	10
31	---	---	---	7.2	6.2	6.6	7.6	6.4	7.1	---	---	---
MONTH	4.4	1.5	2.7	8.8	3.6	5.1	8.6	1.8	4.9	10.7	6.5	8.4

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND , BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.8	5.5	5.7	6.1	5.6	5.9	5.3	5.2	5.3	8.8	7.8	8.4
2	5.7	4.8	5.3	6.5	5.9	6.2	5.3	5.2	5.3	9.0	8.2	8.8
3	5.2	4.9	5.0	7.0	6.2	6.6	5.3	4.9	5.1	9.0	7.9	8.7
4	5.3	5.0	5.1	7.1	6.9	7.0	5.3	4.9	5.1	8.7	7.2	8.1
5	5.0	4.9	5.0	7.4	6.8	7.1	5.3	5.0	5.1	8.5	2.8	6.4
6	5.2	4.9	5.1	7.2	6.5	7.0	5.1	4.9	5.0	5.1	2.0	2.6
7	5.5	5.1	5.4	7.0	5.6	6.4	5.0	4.9	5.0	2.4	1.9	2.1
8	6.0	5.4	5.7	6.7	5.6	6.2	5.4	4.9	5.1	2.9	2.1	2.3
9	6.4	5.0	5.9	5.9	5.7	5.8	5.4	5.2	5.3	6.8	2.8	5.2
10	6.1	5.0	5.2	5.8	5.6	5.7	6.0	5.1	5.7	5.4	2.2	2.8
11	5.2	4.7	4.9	5.7	5.6	5.7	5.6	4.8	5.1	4.4	2.3	2.8
12	5.2	4.7	5.0	5.7	5.6	5.7	5.4	4.9	5.1	4.8	2.6	3.0
13	5.6	4.9	5.2	5.7	5.4	5.6	5.5	4.3	4.9	4.3	2.7	3.1
14	7.5	5.6	6.6	5.7	5.4	5.6	4.9	4.5	4.8	5.3	3.0	4.7
15	7.0	4.8	5.1	5.6	5.5	5.6	4.8	4.0	4.4	5.2	2.9	4.1
16	5.8	5.2	5.5	5.7	5.5	5.6	5.0	4.7	4.8	4.1	3.0	3.3
17	5.7	5.1	5.5	5.7	5.5	5.6	4.9	3.7	4.4	3.6	3.1	3.3
18	5.6	5.1	5.4	5.7	5.5	5.6	4.3	3.6	4.1	3.9	2.9	3.4
19	5.4	5.2	5.2	5.8	5.3	5.6	4.2	3.1	3.8	4.1	3.0	3.5
20	5.4	5.1	5.3	5.7	5.3	5.4	3.6	2.4	3.3	3.8	2.8	3.3
21	5.2	5.0	5.1	5.7	5.4	5.6	3.7	2.4	3.4	3.9	3.2	3.5
22	5.3	4.9	5.0	5.6	5.3	5.5	3.6	2.7	3.3	3.9	3.2	3.6
23	5.4	5.0	5.2	5.6	5.5	5.5	3.7	3.2	3.6	4.2	3.2	3.4
24	5.5	5.0	5.2	5.6	5.5	5.6	3.7	3.3	3.6	3.4	3.0	3.2
25	5.7	5.3	5.5	5.6	5.2	5.5	3.6	2.5	3.3	4.0	3.0	3.3
26	6.0	5.7	5.9	5.5	5.3	5.4	3.5	2.0	2.5	4.1	3.4	3.7
27	6.3	5.3	5.9	5.5	5.4	5.4	3.0	1.7	2.1	3.9	2.8	3.5
28	6.4	5.7	6.1	5.5	5.2	5.3	8.5	2.5	6.9	3.3	2.9	3.1
29	6.3	5.3	5.6	5.4	5.1	5.2	9.0	7.8	8.6	3.7	3.0	3.4
30	5.5	5.3	5.4	5.4	5.2	5.3	9.0	5.9	8.3	3.7	3.2	3.3
31	5.7	5.3	5.6	---	---	---	8.6	7.0	8.1	3.4	3.2	3.3
MONTH	7.5	4.7	5.4	7.4	5.1	5.8	9.0	1.7	4.9	9.0	1.9	4.1
		FEBRUARY			MARCH			APRIL			MAY	
1	4.8	3.3	4.0	5.4	4.1	5.0	5.1	4.2	4.4	3.9	3.6	3.7
2	5.8	4.7	5.2	4.9	3.5	4.4	4.4	4.1	4.2	4.0	3.2	3.5
3	5.9	4.8	5.6	5.4	4.1	4.9	4.4	4.2	4.3	3.5	3.0	3.2
4	5.6	3.9	5.2	5.4	4.5	5.2	4.6	4.3	4.4	3.6	2.9	3.3
5	6.4	5.3	5.7	4.9	3.0	4.3	4.7	4.4	4.5	3.6	2.8	3.2
6	6.4	4.2	5.6	4.0	2.6	3.4	4.8	4.4	4.6	3.3	2.9	3.1
7	5.7	4.1	4.4	4.5	3.0	4.1	4.7	4.5	4.5	3.5	2.8	3.3
8	4.6	4.2	4.4	4.3	3.0	3.7	4.5	4.3	4.4	3.5	2.7	3.2
9	4.9	4.3	4.7	4.5	3.4	4.2	4.6	4.3	4.5	3.7	3.1	3.4
10	5.0	4.2	4.8	4.4	3.9	4.2	4.9	4.4	4.6	3.5	2.3	2.7
11	4.9	4.4	4.6	4.2	4.0	4.1	5.6	4.5	4.8	2.7	2.3	2.5
12	5.7	4.4	5.0	4.2	3.9	4.1	5.4	4.5	4.7	2.7	2.3	2.5
13	5.5	4.2	4.7	4.1	3.9	4.1	4.7	4.4	4.6	2.6	2.4	2.5
14	5.6	4.4	4.9	4.8	4.0	4.5	4.7	4.2	4.4	2.8	2.2	2.4
15	5.9	4.0	5.0	4.9	3.1	4.2	4.7	4.3	4.4	2.5	2.3	2.3
16	4.7	2.8	4.2	5.1	3.0	3.9	4.5	4.2	4.4	2.6	2.2	2.4
17	4.5	3.8	4.3	4.9	3.3	4.2	4.7	3.8	4.3	2.8	2.4	2.6
18	4.5	3.4	4.1	4.9	3.1	4.3	4.4	3.8	4.0	3.1	2.1	2.7
19	4.3	3.3	4.1	4.4	3.0	4.0	4.1	3.7	3.9	2.2	1.7	2.0
20	4.3	3.8	4.2	4.6	3.2	4.2	4.1	3.4	3.9	2.5	1.9	2.3
21	4.4	3.1	3.9	4.5	3.0	3.8	4.5	3.4	4.0	2.6	2.1	2.4
22	4.9	3.1	4.1	4.1	2.7	3.3	4.1	3.5	3.8	2.4	1.7	2.1
23	6.3	3.9	5.2	4.3	2.7	3.5	4.0	3.4	3.7	2.1	1.5	1.7
24	6.4	4.4	5.7	5.2	2.7	4.0	3.9	3.5	3.6	1.9	1.4	1.6
25	5.3	3.2	4.2	5.4	3.3	4.4	4.1	3.8	3.9	1.7	1.3	1.5
26	5.8	3.4	4.3	5.4	3.3	4.5	3.9	3.3	3.8	1.7	1.5	1.7
27	4.6	3.4	4.4	5.4	3.0	4.2	4.0	3.3	3.6	1.8	1.4	1.6
28	4.5	3.5	4.4	4.6	2.6	3.6	3.9	3.3	3.5	1.8	1.3	1.5
29	4.7	3.1	4.4	4.3	2.9	3.7	3.9	3.5	3.7	2.4	1.4	1.8
30	---	---	---	4.2	2.5	3.3	3.8	3.5	3.6	4.3	1.9	2.1
31	---	---	---	5.3	3.1	4.5	---	---	---	4.4	1.6	2.1
MONTH	6.4	2.8	4.7	5.4	2.5	4.1	5.6	3.3	4.2	4.4	1.3	2.5

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

SALINITY, WATER, UNFILTERED, PARTS PER THOUSAND—CONTINUED, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	2.3	1.6	2.0	8.0	7.2	7.6	9.5	7.6	8.8	8.3	7.4	7.9
2	2.2	1.8	2.0	7.7	6.5	7.4	8.4	7.4	7.9	8.0	6.6	7.2
3	2.7	1.8	2.1	7.6	6.6	7.3	8.2	6.9	7.4	6.8	6.6	6.7
4	4.4	2.0	3.2	7.8	7.2	7.6	7.0	6.5	6.8	9.2	6.6	6.9
5	3.4	1.9	2.8	7.8	6.0	7.3	6.9	6.5	6.7	11.3	8.9	10.4
6	3.5	2.3	2.8	6.9	4.4	5.3	6.7	4.8	5.9	11.5	10.8	11.3
7	5.2	3.5	4.3	7.6	5.0	6.5	6.4	5.8	6.2	11.8	11.2	11.4
8	5.7	4.9	5.3	8.2	5.9	7.3	8.0	6.1	6.7	12.0	9.4	11.3
9	5.9	5.0	5.4	7.9	4.9	6.3	9.1	7.6	8.4	10.5	9.3	9.7
10	5.1	3.1	4.5	8.8	5.2	7.5	9.5	8.5	9.1	10.1	8.6	9.5
11	4.2	2.6	2.9	9.8	8.2	9.2	9.6	8.6	9.2	10.1	8.4	9.4
12	3.2	2.4	2.7	10.1	8.6	9.6	9.7	8.3	9.1	9.3	8.3	8.6
13	6.0	2.9	4.4	9.7	6.5	8.1	9.7	7.6	8.9	8.5	8.3	8.4
14	5.9	5.3	5.7	7.7	5.0	5.5	8.2	4.5	6.6	11.5	8.3	9.8
15	5.9	4.7	5.4	6.5	4.7	5.2	6.4	4.5	6.0	11.8	10.7	11.5
16	5.7	3.3	5.0	5.6	4.9	5.2	6.1	5.6	6.0	11.5	9.5	11.0
17	3.7	2.9	3.1	11.0	5.3	7.9	6.7	5.5	6.3	11.5	9.0	10.3
18	3.7	3.0	3.4	11.7	8.8	10.4	7.8	6.7	7.1	9.5	8.8	9.1
19	3.5	2.7	3.2	11.3	9.0	10.2	7.9	6.0	7.1	9.3	8.3	9.0
20	5.2	3.2	4.1	11.0	9.3	10.2	7.5	5.9	6.6	8.9	8.7	8.7
21	6.2	4.6	5.5	10.7	9.8	10.3	7.1	4.3	6.0	8.8	8.7	8.7
22	6.2	4.9	5.9	11.0	10.3	10.7	6.8	3.6	5.1	8.7	8.5	8.7
23	5.9	3.4	4.7	11.0	10.2	10.7	7.0	5.6	6.4	8.7	8.5	8.6
24	4.9	3.4	4.1	10.7	9.3	10.3	7.7	6.2	6.9	10.4	8.4	8.9
25	5.6	3.9	4.6	10.8	9.5	10.4	9.4	7.6	8.7	12.2	10.3	11.2
26	5.8	3.2	4.1	10.8	10.2	10.6	10	8.6	9.6	12.7	11.8	12.3
27	7.2	3.8	4.9	10.7	9.9	10.5	10.4	9.5	10.0	13.2	12.4	12.9
28	8.5	5.5	7.4	10.6	9.1	10.2	10.4	9.6	10.1	13.3	10	11.8
29	7.5	4.9	6.7	10.4	8.8	9.9	10.4	9.8	10.2	10.9	10.0	10.5
30	7.9	7.0	7.6	10.2	9.0	9.6	10.2	8.0	9.1	10.6	10.0	10.2
31	---	---	---	9.8	8.1	9.3	9.1	7.3	8.3	---	---	---
MONTH	8.5	1.6	4.3	11.7	4.4	8.5	10.4	3.6	7.7	13.3	6.6	9.7

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.0	6.8	6.8	7.3	7.2	7.2	7.5	7.4	7.5	6.6	6.4	6.5
2	7.0	6.8	6.8	7.2	7.1	7.2	7.5	7.3	7.5	6.6	6.4	6.5
3	7.0	6.9	6.9	7.2	7.1	7.2	7.4	7.3	7.4	6.5	6.4	6.5
4	7.0	6.9	6.9	7.2	7.1	7.1	7.5	7.3	7.4	6.7	6.4	6.6
5	7.1	6.9	7.0	7.2	7.0	7.1	7.5	7.5	7.5	6.7	6.4	6.6
6	7.2	6.9	7.0	7.2	7.1	7.1	7.5	7.5	7.5	6.7	6.3	6.5
7	7.2	6.9	7.0	7.3	7.2	7.2	7.5	7.5	7.5	7.0	6.4	6.5
8	7.0	7.0	7.0	7.3	7.2	7.3	7.5	7.5	7.5	7.0	6.6	6.8
9	7.0	6.9	7.0	7.4	7.3	7.4	7.5	7.4	7.5	6.9	6.5	6.7
10	7.1	7.0	7.1	7.4	7.4	7.4	7.5	7.3	7.5	7.1	6.7	7.0
11	7.1	6.9	7.0	7.5	7.4	7.4	7.5	7.4	7.4	7.0	6.8	6.9
12	7.1	6.9	7.0	7.4	7.4	7.4	7.4	7.2	7.4	7.1	6.9	7.1
13	7.2	7.0	7.1	7.5	7.4	7.4	7.4	7.1	7.2	7.1	7.0	7.1
14	7.1	7.0	7.1	7.6	7.5	7.5	7.4	7.3	7.3	7.1	7.0	7.1
15	7.2	7.1	7.2	7.6	7.4	7.5	7.3	7.1	7.2	7.2	7.1	7.2
16	7.3	7.2	7.2	7.6	7.5	7.5	7.2	7.0	7.1	7.3	7.2	7.2
17	7.3	7.2	7.2	7.6	7.5	7.5	7.3	7.1	7.1	7.3	7.2	7.2
18	7.3	7.2	7.2	7.6	7.4	7.6	7.2	7.0	7.1	7.3	7.2	7.2
19	7.4	7.2	7.3	7.5	7.4	7.5	7.1	6.9	7.0	7.3	7.0	7.2
20	7.3	7.2	7.3	7.5	7.4	7.4	7.0	6.6	6.8	7.2	7.0	7.1
21	7.3	7.2	7.3	7.5	7.4	7.4	6.9	6.6	6.7	7.2	7.2	7.2
22	7.4	7.2	7.3	7.5	7.3	7.4	6.9	6.7	6.8	7.2	7.1	7.2
23	7.4	7.3	7.4	7.7	7.3	7.5	6.8	6.6	6.8	7.2	7.2	7.2
24	7.5	7.3	7.4	8.0	7.3	7.5	6.9	6.7	6.8	7.3	7.2	7.2
25	7.5	7.4	7.4	7.5	7.3	7.4	6.9	6.0	6.2	7.4	7.2	7.3
26	7.4	7.3	7.4	7.4	7.3	7.4	6.5	6.1	6.3	7.4	7.2	7.3
27	7.4	7.3	7.3	7.4	7.3	7.3	6.3	5.9	6.1	7.3	7.1	7.2
28	7.4	7.3	7.4	7.4	7.3	7.3	6.5	5.9	6.2	7.3	7.1	7.2
29	7.4	7.3	7.3	7.5	7.3	7.4	6.8	5.9	6.3	7.3	7.2	7.3
30	7.4	7.3	7.3	7.5	7.5	7.5	6.7	6.3	6.5	7.3	7.2	7.3
31	7.4	7.2	7.2	---	---	---	6.6	6.3	6.4	7.3	7.1	7.2
MONTH	7.5	6.8	7.2	8.0	7.0	7.4	7.5	5.9	7.0	7.4	6.3	7.0
		FEBRUARY			MARCH			APRIL			MAY	
1	7.3	7.2	7.2	7.4	7.3	7.4	7.3	7.3	7.3	7.1	7.0	7.1
2	7.3	7.2	7.2	7.4	7.3	7.4	7.3	7.2	7.3	7.2	7.1	7.1
3	7.3	7.2	7.2	7.3	7.1	7.2	7.3	7.3	7.3	7.2	7.1	7.2
4	7.3	7.2	7.2	7.3	7.2	7.2	7.3	7.2	7.3	7.2	7.0	7.2
5	7.2	7.2	7.2	7.3	7.1	7.2	7.4	7.3	7.3	7.1	6.9	7.0
6	7.2	7.1	7.2	7.3	7.1	7.3	7.4	7.3	7.4	7.0	6.9	6.9
7	7.2	7.1	7.2	7.3	7.3	7.3	7.5	7.3	7.4	7.0	6.8	6.9
8	7.2	7.2	7.2	7.4	7.3	7.4	7.4	7.2	7.3	7.0	6.5	6.7
9	7.2	7.2	7.2	7.4	7.4	7.4	7.4	7.2	7.3	7.0	6.8	6.8
10	7.2	7.2	7.2	7.5	7.4	7.4	7.3	7.2	7.3	6.8	6.7	6.8
11	7.3	7.2	7.2	7.5	7.4	7.5	7.3	7.2	7.2	6.9	6.8	6.9
12	7.3	7.3	7.3	7.5	7.4	7.5	7.3	7.2	7.2	6.9	6.8	6.9
13	7.3	7.3	7.3	7.5	7.4	7.5	7.3	7.2	7.2	6.9	6.9	6.9
14	7.3	7.3	7.3	7.5	7.4	7.4	7.3	7.2	7.2	6.9	6.8	6.8
15	7.3	7.3	7.3	7.5	7.4	7.4	7.3	7.1	7.3	6.8	6.8	6.8
16	7.4	7.2	7.3	7.4	7.4	7.4	7.3	7.1	7.2	6.9	6.7	6.8
17	7.4	7.3	7.3	7.4	7.3	7.4	7.2	7.1	7.1	6.8	6.7	6.8
18	7.4	7.3	7.4	7.4	7.3	7.3	7.1	7.0	7.1	6.8	6.7	6.8
19	7.4	7.4	7.4	7.4	7.3	7.4	7.1	7.1	7.1	6.8	6.6	6.7
20	7.4	7.3	7.4	7.4	7.3	7.4	7.2	7.1	7.2	6.7	6.6	6.7
21	7.4	7.3	7.3	7.4	7.4	7.4	7.2	7.1	7.2	6.8	6.6	6.6
22	7.4	7.3	7.3	7.5	7.4	7.4	7.2	7.1	7.2	6.7	6.4	6.6
23	7.3	7.2	7.3	7.5	7.4	7.4	7.2	7.1	7.1	6.6	6.4	6.5
24	7.3	7.3	7.3	7.5	7.4	7.5	7.2	7.1	7.1	6.6	6.5	6.6
25	7.3	7.2	7.2	7.5	7.4	7.4	7.2	7.1	7.1	6.7	6.5	6.6
26	7.4	7.3	7.4	7.5	7.4	7.4	7.2	7.0	7.1	6.7	6.5	6.5
27	7.5	7.4	7.5	7.6	7.4	7.4	7.2	7.1	7.1	6.5	6.5	6.5
28	7.5	7.4	7.5	7.4	7.4	7.4	7.2	7.1	7.1	6.6	6.4	6.5
29	7.5	7.4	7.4	7.5	7.4	7.5	7.3	7.1	7.1	6.6	6.5	6.6
30	---	---	---	7.5	7.4	7.5	7.1	7.1	7.1	6.7	6.6	6.6
31	---	---	---	7.5	7.3	7.4	---	---	---	6.7	6.6	6.7
MONTH	7.5	7.1	7.3	7.6	7.1	7.4	7.5	7.0	7.2	7.2	6.4	6.8

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.7	6.6	6.6	7.2	6.9	7.0	7.5	7.1	7.2	7.3	7.2	7.3
2	6.9	6.6	6.7	7.1	7.0	7.0	7.3	7.0	7.2	7.2	7.0	7.1
3	6.8	6.7	6.8	7.3	7.0	7.1	7.1	7.0	7.1	7.2	7.0	7.1
4	6.9	6.8	6.8	7.3	7.0	7.1	7.4	7.0	7.1	7.2	7.2	7.2
5	6.9	6.8	6.9	7.4	7.0	7.2	7.7	7.0	7.2	7.3	7.2	7.2
6	7.0	6.9	6.9	7.4	7.2	7.3	7.4	6.9	7.1	7.3	7.1	7.2
7	6.9	6.8	6.9	7.5	7.1	7.2	7.2	6.8	6.9	7.2	7.1	7.2
8	6.9	6.8	6.9	7.8	7.2	7.2	7.4	6.8	7.0	7.2	7.0	7.1
9	6.9	6.6	6.8	8.4	7.1	7.4	7.1	6.9	7.0	7.4	7.2	7.3
10	6.9	6.7	6.8	8.1	7.1	7.6	7.1	6.8	6.9	7.5	7.3	7.4
11	6.9	6.8	6.8	7.7	6.8	7.2	7.1	6.8	6.9	7.4	7.2	7.3
12	6.9	6.8	6.8	7.2	6.8	7.0	7.5	6.9	7.1	7.4	7.2	7.3
13	7.0	6.9	6.9	7.3	7.0	7.1	7.3	6.9	7.1	7.4	7.3	7.3
14	7.0	6.9	7.0	7.6	7.1	7.3	7.1	6.6	6.9	7.4	7.3	7.4
15	7.0	6.9	7.0	7.5	7.2	7.3	6.8	6.4	6.6	7.4	7.3	7.4
16	7.0	7.0	7.0	7.6	7.2	7.3	6.6	6.2	6.4	7.6	7.3	7.4
17	7.0	6.9	7.0	7.5	7.0	7.2	6.6	6.2	6.4	7.5	7.3	7.4
18	7.0	6.9	7.0	7.9	7.1	7.3	6.8	6.5	6.7	7.5	7.4	7.4
19	7.1	6.8	7.0	7.3	7.1	7.2	6.8	6.4	6.7	7.6	7.4	7.6
20	7.1	6.9	7.0	7.2	7.0	7.1	6.7	6.6	6.7	7.7	7.5	7.6
21	7.0	7.0	7.0	7.3	6.8	7.1	6.9	6.5	6.8	7.9	7.6	7.7
22	7.0	6.9	7.0	7.2	6.6	6.9	6.5	6.2	6.4	8.0	7.6	7.7
23	7.2	7.0	7.1	7.3	6.9	7.2	6.4	6.2	6.3	8.0	7.6	7.8
24	7.2	7.1	7.1	7.8	7.1	7.3	6.3	6.0	6.2	7.9	7.7	7.8
25	7.2	7.0	7.1	8.0	7.0	7.4	6.6	6.1	6.4	7.9	7.8	7.8
26	7.1	7.0	7.1	7.4	6.6	7.0	6.7	6.5	6.6	8.0	7.8	7.9
27	7.2	7.0	7.1	7.7	6.6	7.2	6.8	6.7	6.8	8.0	7.9	8.0
28	7.1	6.8	7.0	7.4	7.1	7.2	6.9	6.8	6.8	8.0	7.6	7.8
29	7.1	7.0	7.0	7.4	7.1	7.2	7.0	6.8	6.9	8.2	7.8	7.9
30	7.0	6.9	7.0	7.5	7.2	7.3	7.2	7.0	7.1	8.2	7.5	7.9
31	---	---	---	7.5	7.1	7.3	7.4	7.2	7.2	---	---	---
MONTH	7.2	6.6	6.9	8.4	6.6	7.2	7.7	6.0	6.8	8.2	7.0	7.5

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.6	21.9	22.2	18.0	17.5	17.6	11.2	10.6	10.9	9.3	8.1	8.7
2	22.3	21.3	21.8	18.2	17.5	17.8	10.7	9.6	10.4	9.3	8.5	8.9
3	21.3	20.5	20.8	19.2	17.7	18.3	9.8	8.9	9.3	10.1	8.8	9.4
4	21.1	20.1	20.6	19.6	18.2	18.9	8.9	8.5	8.6	10.9	9.9	10.5
5	22.1	20.5	20.9	20.4	18.0	19.1	8.8	8.5	8.7	12.5	10.9	11.7
6	21.8	20.7	21.2	21.4	19.3	20.4	8.6	7.9	8.4	12.7	11.6	12.2
7	21.6	20.9	21.1	21.2	20.4	20.9	7.9	7.3	7.6	11.6	9.0	10.3
8	21.3	21.0	21.2	20.4	18.4	19.4	7.3	6.4	7.1	9.3	8.0	8.7
9	21.7	20.9	21.3	18.4	16.4	17.4	7.5	6.8	7.2	8.1	7.2	7.4
10	21.4	21.3	21.4	16.4	15.9	16.1	8.7	7.1	7.5	7.3	5.6	6.4
11	21.3	20.8	21.0	16.9	15.5	15.9	9.0	8.2	8.6	5.6	4.2	4.9
12	21.5	20.5	20.9	16.6	15.8	16.2	8.8	8.4	8.6	4.8	4.2	4.4
13	21.7	20.8	21.1	16.7	14.9	16.2	8.7	8.3	8.6	5.2	4.0	4.5
14	21.4	20.7	21.0	14.9	13.1	13.8	8.8	8.2	8.5	5.5	4.7	5.1
15	21.0	19.8	20.4	13.1	11.8	12.6	8.6	8.2	8.5	5.7	5.1	5.4
16	20.1	19.0	19.4	13.4	12.5	12.9	8.5	7.7	8.3	5.4	4.7	5.0
17	19.6	18.6	19.2	14.6	13.0	13.5	9.0	7.9	8.7	5.0	4.0	4.4
18	19.6	18.8	19.2	14.8	13.9	14.4	8.8	8.2	8.4	5.8	4.6	5.1
19	18.9	18.2	18.6	15.4	14.4	14.9	8.7	7.7	8.0	6.2	5.7	5.8
20	19.2	18.3	18.6	15.2	14.7	15.0	8.0	6.4	7.1	6.1	4.4	5.1
21	19.2	18.5	18.8	15.1	14.4	14.6	6.5	5.8	6.0	5.0	3.8	4.2
22	19.3	18.5	19.1	14.8	14.2	14.5	6.3	5.6	5.9	4.9	4.0	4.5
23	18.5	17.4	17.8	15.1	14.5	14.7	7.3	5.8	6.4	4.9	4.2	4.6
24	17.6	16.4	17.1	15.6	14.7	15.2	9.0	7.0	7.5	5.2	4.3	4.8
25	16.7	16.4	16.6	15.3	14.4	14.9	9.0	8.3	8.7	4.7	3.8	4.1
26	17.4	16.7	16.9	14.4	14.1	14.2	8.4	7.8	8.1	3.8	3.3	3.5
27	17.7	17.1	17.4	14.2	13.7	13.9	7.9	7.2	7.6	3.6	3.2	3.4
28	17.7	17.5	17.6	14.8	13.9	14.3	8.2	7.3	7.7	3.4	2.8	3.2
29	18.0	17.5	17.8	14.5	12.1	13.2	8.4	7.4	7.7	3.4	2.6	2.9
30	18.1	17.2	17.6	12.2	11.1	11.6	9.2	7.6	8.7	3.7	2.8	3.3
31	17.8	17.0	17.4	---	---	---	9.3	8.3	8.7	3.5	2.9	3.3
MONTH	22.6	16.4	19.5	21.4	11.1	15.7	11.2	5.6	8.1	12.7	2.6	6.0
		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	2.8	3.2	8.9	7.0	7.7	13.8	13.3	13.6	21.4	20.8	21.0
2	3.8	2.8	3.2	10.1	8.1	9.1	13.4	12.7	13.0	22.0	21.0	21.4
3	4.7	3.5	4.1	12.3	9.7	11.0	13.0	12.5	12.7	22.0	20.9	21.7
4	5.6	4.3	4.7	13.6	11.4	12.3	13.2	12.5	12.8	22.2	19.7	20.6
5	5.3	4.5	4.9	14.4	12.5	13.5	12.7	11.8	12.2	20.9	19.8	20.3
6	6.9	5.2	6.0	15.5	14.4	15.0	12.7	11.4	12.0	22.4	20.4	21.0
7	8.3	6.9	7.9	16.0	15.1	15.4	13.5	12.0	12.4	23.5	20.8	21.7
8	8.6	7.7	8.0	15.2	13.7	14.4	14.6	12.9	13.6	23.4	21.1	22.8
9	7.7	7.3	7.5	13.8	12.9	13.3	15.8	14.3	14.9	24.1	22.5	23.1
10	8.0	7.4	7.6	13.0	10.6	11.8	15.8	15.2	15.5	24.4	23.1	23.7
11	9.0	7.6	8.1	10.9	9.9	10.5	16.5	15.5	15.9	25.0	23.9	24.4
12	8.7	7.6	8.1	11.2	9.9	10.6	16.0	15.5	15.7	25.5	24.4	25.0
13	8.6	7.6	7.9	11.5	10.3	10.9	16.8	15.9	16.4	25.8	24.8	25.2
14	8.4	8.0	8.1	11.4	10.6	11.1	17.0	16.3	16.7	26.2	25.3	25.7
15	8.2	7.7	8.0	11.7	11.2	11.4	16.3	15.5	15.8	26.4	25.3	25.9
16	7.7	6.4	6.8	12.2	11.5	11.8	16.8	15.2	15.9	26.6	25.6	26.0
17	6.4	5.9	6.1	12.0	11.4	11.7	16.9	15.5	16.3	26.9	25.8	26.1
18	6.3	5.3	5.8	12.1	10.9	11.3	18.5	16.4	17.4	27.2	25.7	26.3
19	6.6	5.4	6.0	12.5	11.4	11.8	19.4	18.0	18.8	26.8	26.1	26.5
20	7.4	6.2	6.8	12.8	11.3	11.9	20.2	18.6	19.1	27.4	25.7	26.5
21	8.3	7.2	7.8	12.9	12.1	12.5	21.1	19.4	20.3	28.3	26.4	27.1
22	9.8	7.9	8.4	12.6	11.5	12.0	21.4	20.6	21.0	28.3	26.8	27.5
23	9.5	8.2	8.7	11.9	11.0	11.3	22.2	21.1	21.6	28.4	27.3	27.8
24	8.9	8.6	8.8	12.1	10.8	11.5	22.5	21.6	22.0	28.0	27.2	27.6
25	8.7	8.2	8.4	12.8	11.6	12.2	21.7	21.1	21.5	28.4	27.0	27.4
26	8.2	7.4	7.8	14.1	12.5	13.2	22.2	21.4	21.8	28.7	27.2	28.1
27	7.4	6.6	7.0	16.3	13.4	14.6	22.1	21.3	21.7	29.1	27.7	28.4
28	7.0	6.1	6.6	15.7	15.1	15.4	21.6	20.0	20.8	28.6	28.0	28.3
29	8.4	6.5	7.1	15.1	13.6	14.0	21.1	19.9	20.5	28.4	27.3	27.9
30	---	---	---	13.7	13.0	13.4	21.3	20.1	20.7	27.3	26.1	26.6
31	---	---	---	14.4	13.1	13.6	---	---	---	26.6	25.9	26.2
MONTH	9.8	2.8	6.9	16.3	7.0	12.3	22.5	11.4	17.1	29.1	19.7	25.1

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.9	26.0	26.4	28.2	26.7	27.2	30.0	28.7	29.3	28.4	27.1	27.7
2	27.4	26.0	26.7	28.1	27.3	27.7	29.6	29.1	29.3	27.1	26.4	26.7
3	28.3	26.4	26.8	28.8	27.5	27.9	29.1	27.8	28.4	27.0	26.0	26.4
4	26.9	26.2	26.6	28.9	27.9	28.5	28.8	26.9	27.7	27.0	26.2	26.5
5	26.9	26.1	26.4	29.8	27.9	28.8	29.5	27.9	28.6	27.0	26.2	26.6
6	27.2	26.0	26.4	30.4	29.0	29.7	28.9	27.3	28.0	27.1	26.4	26.7
7	27.1	26.1	26.6	31.3	29.7	30.2	27.5	25.3	26.1	26.8	26.4	26.6
8	27.1	26.0	26.5	31.3	29.6	30.1	27.6	25.6	26.3	27.3	26.4	26.7
9	29.0	26.3	27.2	32.6	29.5	30.2	26.6	26.0	26.2	27.1	26.6	26.8
10	28.7	27.2	27.9	32.3	29.8	30.8	27.5	26.0	26.8	27.1	26.4	26.7
11	29.4	27.8	28.4	31.3	29.8	30.3	27.8	26.6	27.0	26.5	25.8	26.1
12	28.7	27.0	27.9	30.3	29.6	30.0	27.8	26.9	27.4	26.1	25.3	25.7
13	27.3	26.1	26.6	30.4	29.1	29.7	27.3	26.2	26.9	25.7	25.2	25.4
14	26.8	26.0	26.3	30.8	29.4	30.0	26.9	25.8	26.4	25.3	24.8	24.9
15	27.1	26.1	26.6	30.3	29.4	29.9	25.9	25.0	25.5	25.6	24.6	25.0
16	27.3	26.7	27.0	30.0	28.9	29.3	26.2	24.7	25.2	25.8	25.2	25.3
17	27.2	26.7	26.9	29.6	28.6	29.1	26.2	25.0	25.6	26.3	25.5	25.9
18	28.8	26.9	27.5	30.3	28.6	28.9	26.7	25.6	25.8	26.0	24.2	25.2
19	29.7	27.5	28.2	29.0	28.3	28.7	28.4	26.0	26.7	24.2	22.4	23.3
20	28.9	27.3	28.1	29.0	27.8	28.3	28.7	27.3	28.0	22.5	22.0	22.3
21	27.8	26.1	26.9	29.1	27.6	28.0	28.9	28.1	28.5	23.0	21.3	21.9
22	27.6	26.7	27.1	29.5	28.0	28.5	28.2	27.3	27.7	23.7	21.6	22.2
23	28.9	27.1	27.9	29.0	27.8	28.3	27.5	26.4	27.0	23.7	21.7	22.8
24	29.0	28.0	28.3	29.1	27.4	27.9	27.2	26.1	26.7	23.6	22.5	23.0
25	29.0	28.0	28.5	29.3	27.8	28.5	26.9	25.6	26.4	23.7	22.7	23.2
26	28.9	27.8	28.3	29.3	27.7	28.4	27.6	26.0	26.8	23.5	22.8	23.2
27	28.2	27.3	27.6	29.3	28.2	28.8	27.6	26.8	27.3	23.8	23.1	23.4
28	27.8	27.2	27.5	29.0	28.0	28.5	27.4	26.6	27.0	24.1	23.3	23.7
29	27.8	26.9	27.2	28.6	27.6	28.1	28.0	26.8	27.3	24.5	23.4	23.8
30	27.4	26.7	27.1	29.3	27.9	28.6	27.3	26.9	27.1	24.4	23.7	24.1
31	---	---	---	29.6	28.5	29.1	28.9	26.7	27.4	---	---	---
MONTH	29.7	26.0	27.2	32.6	26.7	29.0	30.0	24.7	27.1	28.4	21.3	24.9

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.8	22.5	22.7	17.8	17.7	17.8	11.2	10.6	10.9	8.3	8.0	8.1
2	22.7	21.3	22.1	17.9	17.7	17.8	10.7	9.9	10.3	8.3	8.0	8.1
3	21.3	19.7	20.7	18.1	17.8	17.9	10.2	9.0	9.4	8.4	8.2	8.3
4	20.9	20.1	20.6	18.0	17.9	18.0	9.0	8.4	8.7	9.4	8.4	8.6
5	20.7	20.4	20.6	18.1	18.0	18.1	8.8	8.5	8.6	12.0	8.8	10.2
6	21.0	20.4	20.7	18.7	18.0	18.1	8.6	8.0	8.3	12.3	11.3	11.9
7	21.0	20.8	20.9	20.8	18.2	19.3	8.0	7.3	7.6	11.6	9.5	10.3
8	21.1	20.9	21.0	19.5	18.5	19.0	7.4	6.6	7.1	9.6	8.2	8.9
9	21.4	21.0	21.2	18.5	16.4	17.5	7.6	6.8	7.3	9.3	8.2	8.9
10	21.5	21.3	21.4	16.4	16.0	16.2	8.7	7.5	7.8	8.4	5.7	6.7
11	21.4	20.9	21.1	16.0	15.6	15.7	9.0	8.2	8.6	6.6	4.9	5.4
12	21.7	20.3	21.0	16.6	15.8	16.2	9.0	8.2	8.4	6.6	4.4	4.9
13	21.3	20.7	21.1	16.7	15.0	16.2	8.7	8.2	8.5	5.6	4.3	5.1
14	21.4	21.2	21.3	15.0	13.1	13.9	8.7	8.2	8.4	6.5	5.4	6.1
15	21.3	20.1	20.5	13.1	12.5	12.7	8.6	8.2	8.4	6.2	5.5	5.9
16	20.1	18.5	19.2	13.2	12.4	12.6	8.6	8.3	8.4	6.0	5.0	5.4
17	19.3	18.4	18.8	13.5	12.6	13.1	9.0	8.4	8.7	5.6	4.4	4.9
18	19.4	18.8	19.1	14.5	13.1	13.6	8.6	7.6	8.0	5.9	5.1	5.5
19	18.8	18.3	18.5	15.3	13.8	14.8	8.4	7.8	8.0	6.4	5.8	6.1
20	18.8	18.3	18.6	15.2	14.7	15.0	8.1	6.6	7.4	6.2	5.1	5.5
21	19.3	18.5	18.8	15.1	14.0	14.5	6.9	6.1	6.4	5.9	4.1	5.3
22	19.4	18.6	19.0	14.6	14.1	14.4	6.9	6.0	6.4	5.8	4.8	5.4
23	18.6	16.9	17.6	14.7	14.5	14.6	7.0	6.1	6.5	5.6	4.6	5.0
24	17.6	16.4	17.1	15.4	14.6	14.9	7.4	6.6	6.8	5.3	4.5	4.9
25	16.9	16.5	16.8	15.2	14.4	14.8	8.3	7.0	7.8	4.9	4.0	4.4
26	17.0	16.9	17.0	14.4	14.1	14.2	8.3	7.3	7.7	4.3	3.7	3.9
27	17.5	17.0	17.2	14.3	13.8	14.0	7.8	7.2	7.6	4.1	3.5	3.9
28	17.6	17.2	17.4	14.8	13.9	14.3	7.8	7.4	7.7	3.6	3.0	3.4
29	18.0	17.5	17.7	14.5	12.1	13.2	7.8	7.7	7.7	3.6	2.8	3.1
30	17.8	17.4	17.6	12.2	11.1	11.6	8.4	7.7	7.9	3.8	3.0	3.4
31	17.9	17.5	17.7	---	---	---	8.3	8.0	8.1	3.9	3.1	3.4
MONTH	22.8	16.4	19.5	20.8	11.1	15.5	11.2	6.0	8.0	12.3	2.8	6.2
		FEBRUARY			MARCH			APRIL			MAY	
1	3.7	3.4	3.6	7.6	6.8	7.0	13.8	13.4	13.6	21.3	20.7	21.0
2	3.7	3.5	3.6	10.3	7.1	9.1	13.4	12.7	13.0	22.0	21.0	21.4
3	4.7	3.5	3.8	10.3	8.6	9.5	13.0	12.5	12.7	22.1	21.0	21.7
4	5.0	4.0	4.4	11.6	9.1	9.7	13.2	12.6	12.9	21.0	19.4	20.0
5	4.7	4.3	4.4	14.0	10.0	11.7	12.8	11.9	12.3	20.9	19.3	20.0
6	6.9	4.7	5.4	15.4	13.9	14.9	12.1	11.3	11.7	20.9	20.0	20.4
7	8.4	6.3	7.7	15.5	14.8	15.0	12.5	11.6	12.1	21.0	20.1	20.3
8	8.6	7.6	8.0	15.2	13.8	14.4	14.4	12.2	13.2	21.7	20.1	20.8
9	7.8	7.5	7.6	13.8	12.4	13.1	15.3	13.9	14.5	22.2	21.2	21.7
10	7.8	7.6	7.7	13.0	10.6	11.8	15.7	14.4	15.1	24.3	21.4	22.8
11	7.9	7.7	7.8	10.9	10.0	10.5	16.0	15.1	15.6	24.5	23.6	24.0
12	7.9	7.6	7.7	11.3	10.1	10.6	15.9	15.3	15.7	25.3	23.6	24.5
13	7.8	7.3	7.6	11.5	10.4	10.9	16.8	15.9	16.4	25.7	23.9	24.8
14	8.2	7.7	8.0	11.5	11.0	11.2	16.9	16.4	16.7	26.1	23.9	25.4
15	8.0	7.7	7.9	11.4	11.3	11.3	16.4	15.1	15.7	26.4	24.6	25.7
16	7.7	6.4	6.8	12.1	11.3	11.4	16.1	15.6	15.8	26.0	25.0	25.5
17	6.4	5.9	6.1	12.1	11.5	11.8	16.9	15.7	16.1	25.9	24.6	25.3
18	6.3	5.4	5.9	11.6	11.1	11.4	18.5	16.4	17.1	26.6	24.9	25.5
19	6.7	5.5	6.1	12.6	11.5	11.9	19.5	17.6	18.7	26.9	25.7	26.3
20	7.4	6.2	6.7	12.4	11.6	11.9	19.5	18.0	18.7	26.8	25.4	25.8
21	8.3	7.2	7.8	13.0	12.0	12.4	21.0	18.3	19.3	26.3	25.1	25.6
22	8.8	8.1	8.5	12.8	11.8	12.1	21.3	19.5	20.5	27.8	25.4	26.4
23	8.6	8.1	8.3	11.9	11.2	11.5	22.0	20.6	21.1	27.9	26.5	27.2
24	8.4	8.1	8.2	11.9	11.2	11.6	22.5	21.0	21.7	28.0	26.2	27.3
25	8.7	8.2	8.4	13.0	11.6	11.9	21.7	21.2	21.5	27.5	26.2	27.0
26	8.3	7.4	7.8	13.7	11.8	12.4	22.2	21.4	21.8	27.6	26.2	26.7
27	7.4	6.6	7.0	14.5	12.2	12.9	22.1	21.3	21.6	28.4	26.9	27.6
28	7.2	6.1	6.6	15.4	12.7	15.0	21.4	18.7	20.1	28.5	27.5	28.1
29	7.2	6.9	7.1	15.2	13.6	14.1	21.0	19.3	20.1	28.1	27.2	27.6
30	---	---	---	13.8	13.2	13.4	21.3	20.0	20.6	27.2	26.4	26.7
31	---	---	---	14.0	13.3	13.4	---	---	---	26.7	25.9	26.2
MONTH	8.8	3.4	6.8	15.5	6.8	11.9	22.5	11.3	16.9	28.5	19.3	24.5

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.9	25.8	26.3	27.1	27.0	27.1	29.0	28.1	28.4	26.9	26.5	26.7
2	27.1	26.1	26.5	27.1	26.9	27.0	29.3	28.6	28.9	26.8	26.4	26.6
3	27.0	26.0	26.4	27.1	26.8	26.9	29.0	27.4	28.3	26.5	25.9	26.2
4	26.7	26.1	26.3	27.0	26.8	26.9	27.8	26.8	27.2	26.8	26.1	26.4
5	26.6	25.4	26.0	27.2	26.8	26.9	28.6	27.5	28.0	26.7	26.6	26.6
6	26.4	25.8	26.0	29.1	27.1	28.4	28.6	27.7	28.0	26.7	26.5	26.6
7	26.2	25.8	26.0	29.0	27.0	27.6	27.7	26.5	27.4	26.6	26.5	26.5
8	26.2	26.1	26.1	29.1	27.2	27.7	26.7	25.8	26.1	27.0	26.4	26.6
9	26.1	25.9	26.0	29.4	27.7	28.5	26.3	26.2	26.3	27.0	26.5	26.7
10	27.9	26.0	26.4	29.1	27.6	28.0	26.5	26.3	26.3	27.0	26.5	26.7
11	28.6	27.1	27.7	29.1	28.1	28.7	26.4	26.3	26.4	26.6	26.0	26.4
12	28.5	27.1	27.8	28.9	28.1	28.6	26.5	26.3	26.4	26.0	25.2	25.6
13	27.1	26.2	26.6	29.4	28.4	28.7	26.6	26.3	26.4	25.7	25.1	25.3
14	26.6	26.3	26.4	29.9	28.5	29.4	26.7	26.0	26.4	25.8	24.9	25.4
15	26.4	26.2	26.3	30.0	29.0	29.5	26.1	25.6	25.9	25.8	25.3	25.6
16	26.9	26.1	26.4	29.7	28.5	29.1	25.7	25.5	25.6	25.5	25.1	25.3
17	27.1	26.6	26.8	29.0	28.3	28.7	25.6	25.5	25.6	26.1	25.4	25.7
18	27.6	26.6	27.0	28.7	28.5	28.6	25.6	25.6	25.6	25.9	24.1	25.1
19	28.2	27.2	27.6	28.7	28.4	28.5	25.9	25.5	25.6	24.1	22.3	23.1
20	27.8	27.2	27.4	28.5	28.3	28.4	26.0	25.6	25.7	22.4	21.9	22.1
21	27.3	26.6	27.0	28.4	28.3	28.3	27.9	25.6	26.2	22.3	21.1	21.6
22	26.7	26.5	26.6	28.4	28.2	28.3	28.4	26.2	27.0	22.0	21.5	21.8
23	28.4	26.6	27.0	28.4	28.2	28.3	26.7	26.3	26.5	22.5	21.5	21.9
24	28.0	26.8	27.4	28.2	27.8	28.1	26.8	26.6	26.7	23.4	22.3	22.6
25	27.7	26.7	27.2	28.1	27.9	28.0	26.8	26.7	26.7	22.7	22.5	22.6
26	28.4	26.6	27.7	28.1	28.0	28.1	26.7	26.6	26.7	22.7	22.6	22.6
27	27.9	27.2	27.5	28.1	27.9	28.0	26.7	26.6	26.6	22.8	22.6	22.7
28	27.4	27.2	27.2	28.2	27.8	27.9	26.7	26.5	26.6	24.0	22.7	23.2
29	27.4	27.1	27.2	28.1	27.8	27.9	26.8	26.5	26.6	23.9	23.0	23.4
30	27.2	27.1	27.1	28.2	27.9	28.0	27.2	26.6	26.9	23.7	23.4	23.6
31	---	---	---	29.0	27.9	28.2	27.0	26.5	26.7	---	---	---
MONTH	28.6	25.4	26.8	30.0	26.8	28.1	29.3	25.5	26.7	27.0	21.1	24.7

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.6	5.9	6.3	7.4	7.0	7.2	9.2	8.6	9.0	9.3	8.6	9.1
2	6.8	6.0	6.2	7.3	6.8	7.1	9.4	8.9	9.2	9.3	8.2	9.1
3	7.0	6.5	6.7	7.0	6.4	6.8	9.6	9.1	9.4	9.3	8.9	9.1
4	7.0	6.5	6.7	6.8	5.4	6.3	9.8	9.4	9.5	9.3	8.8	9.1
5	7.8	6.6	6.9	6.7	4.4	5.8	9.9	9.4	9.6	9.1	8.6	8.8
6	7.8	6.3	7.1	6.9	5.3	6.3	10.3	9.4	9.7	8.8	8.5	8.6
7	7.8	6.7	7.3	7.1	6.6	6.8	10.4	9.8	10.0	9.1	8.5	8.8
8	7.5	7.1	7.3	7.3	6.8	7.0	10.7	10.0	10.2	8.9	8.5	8.7
9	7.3	6.7	7.0	8.2	7.2	7.7	10.4	9.5	9.9	9.0	8.6	8.9
10	7.2	6.8	7.0	8.4	7.8	8.2	10.7	9.8	10.2	9.6	8.6	9.3
11	7.2	6.8	7.0	8.6	8.1	8.3	10.3	9.7	10.1	10.0	9.1	9.5
12	7.2	6.8	7.0	8.4	7.9	8.2	10.2	9.7	10.0	10.3	9.7	10.0
13	7.1	6.3	6.9	8.9	8.0	8.4	10.1	9.4	9.7	10.4	9.9	10.2
14	6.9	6.3	6.6	9.3	8.7	9.1	10.2	9.8	10	10.2	9.9	10.1
15	7.5	6.4	7.1	9.5	9.2	9.3	10.2	9.8	10.0	10.2	9.9	10.1
16	7.6	7.2	7.4	9.4	9.1	9.3	10.1	9.6	9.9	10.5	10.0	10.2
17	7.6	7.2	7.4	9.8	9.0	9.3	9.9	9.1	9.6	10.5	10.0	10.3
18	7.6	7.1	7.4	9.7	8.8	9.3	10.0	9.5	9.7	10.4	10.1	10.2
19	7.8	7.3	7.5	9.0	8.3	8.7	10.1	9.5	9.8	10.3	10.0	10.2
20	7.8	7.3	7.5	8.7	8.4	8.6	10.3	9.5	10	10.8	10.1	10.4
21	7.6	7.2	7.5	9.0	8.4	8.6	10.5	10.0	10.3	10.9	10.4	10.7
22	7.4	7.0	7.2	8.7	7.4	8.4	10.5	9.9	10.2	10.8	10.4	10.6
23	7.6	7.2	7.4	9.3	7.6	8.7	10.4	9.9	10.1	10.8	10.5	10.7
24	8.0	7.3	7.6	10.0	7.3	8.4	10.2	9.3	10	10.9	10.5	10.7
25	7.9	7.6	7.8	8.3	7.3	8.0	9.8	9.3	9.5	11.2	10.7	11.0
26	7.8	7.4	7.7	8.3	8.1	8.2	10.0	9.4	9.7	11.6	11.0	11.3
27	7.6	7.3	7.5	8.2	7.9	8.1	9.8	9.1	9.5	11.7	11.2	11.5
28	7.6	7.3	7.5	8.2	7.7	7.9	9.8	9.1	9.4	12.0	11.4	11.7
29	7.6	7.2	7.4	8.9	7.9	8.6	9.4	8.0	9.0	12.0	11.8	11.9
30	7.8	7.1	7.4	9.1	8.8	8.9	9.4	8.2	9.0	12.0	11.6	11.9
31	7.6	7.1	7.3	---	---	---	9.3	8.8	9.0	11.9	11.6	11.8
MONTH	8.0	5.9	7.2	10.0	4.4	8.1	10.7	8.0	9.7	12.0	8.2	10.1
		FEBRUARY			MARCH			APRIL			MAY	
1	12.0	11.7	11.9	11.0	10.5	10.9	9.3	9.0	9.1	---	---	---
2	12.0	11.7	11.9	10.7	10.3	10.5	9.3	8.9	9.2	---	---	---
3	12.0	11.6	11.8	10.5	10.2	10.3	9.3	9.1	9.2	---	---	---
4	11.8	11.5	11.6	10.3	9.9	10.1	9.4	9.1	9.2	---	---	---
5	11.7	11.4	11.6	10.1	9.3	9.8	9.6	9.3	9.5	---	---	---
6	11.6	10.9	11.3	9.6	9.1	9.3	9.8	9.5	9.6	7.6	7.4	7.5
7	11.0	10.7	10.8	9.2	8.9	9.1	9.9	9.4	9.6	8.0	7.5	7.6
8	11.0	10.6	10.8	9.2	8.7	9.0	9.6	8.9	9.3	7.7	7.1	7.4
9	10.9	10.6	10.8	9.2	8.9	9.1	9.2	8.9	9.1	7.9	7.2	7.3
10	11.0	10.6	10.8	10.2	9.0	9.6	9.1	8.6	8.8	7.4	6.7	7.0
11	10.9	10.1	10.5	10.6	9.8	10.1	8.7	8.5	8.6	7.3	6.9	7.1
12	10.3	9.8	10.1	10.2	9.9	10.1	8.6	8.3	8.4	7.3	6.8	7.1
13	10.3	10.1	10.2	10.2	9.8	10.0	8.3	8.2	8.3	7.2	6.8	6.9
14	10.2	10.0	10.1	10.2	9.9	10.0	8.4	8.2	8.3	7.0	6.6	6.8
15	10.4	9.2	9.9	10.1	9.4	9.9	8.8	8.3	8.5	6.9	6.4	6.6
16	11.0	10.4	10.8	10.0	9.4	9.8	8.7	8.4	8.6	6.8	6.3	6.6
17	11.2	10.8	11.0	9.7	9.4	9.5	8.5	8.2	8.4	6.9	6.2	6.5
18	11.8	11.2	11.5	9.7	9.3	9.5	8.2	7.9	8.1	6.7	6.0	6.4
19	11.5	11.1	11.3	9.8	9.3	9.5	8.1	7.8	8.0	6.2	5.5	6.0
20	11.2	10.8	11.0	9.9	9.4	9.6	---	---	---	6.3	5.9	6.1
21	11.0	10.6	10.8	9.7	9.5	9.6	---	---	---	6.2	5.9	6.1
22	10.8	10.5	10.7	9.9	9.5	9.7	---	---	---	6.1	5.5	5.8
23	10.7	10.4	10.5	10.2	9.6	9.8	---	---	---	6.1	5.5	5.8
24	10.5	10.3	10.4	10.2	9.8	9.9	---	---	---	6.4	5.9	6.1
25	10.4	9.9	10.1	10.1	9.6	9.8	---	---	---	6.4	6.1	6.3
26	10.7	10.2	10.4	10.1	9.4	9.7	---	---	---	6.4	5.7	6.2
27	11.2	10.5	10.9	10.0	9.3	9.6	---	---	---	6.2	5.8	6.0
28	11.3	11.0	11.2	9.8	9.0	9.3	---	---	---	6.2	5.8	6.1
29	11.3	10.9	11.1	9.5	9.2	9.3	---	---	---	6.4	6.1	6.2
30	---	---	---	9.5	9.2	9.4	---	---	---	6.5	6.2	6.4
31	---	---	---	9.9	9.0	9.3	---	---	---	6.7	6.4	6.6
MONTH	12.0	9.2	10.9	11.0	8.7	9.7	---	---	---	---	---	---

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.8	6.6	6.7	6.6	5.1	5.9	6.9	5.2	6.0	7.5	6.7	7.1
2	6.8	6.6	6.7	6.4	5.7	6.1	6.5	4.7	5.7	6.8	5.5	6.2
3	6.7	6.3	6.5	6.9	6.0	6.4	5.9	4.9	5.4	6.2	5.4	5.8
4	6.8	6.2	6.5	7.0	5.4	6.3	7.2	5.5	6.0	6.3	5.8	6.0
5	6.9	6.6	6.8	6.9	5.9	6.4	7.8	5.7	6.4	6.3	5.8	6.1
6	6.9	6.6	6.8	7.2	6.4	6.7	6.9	6.0	6.3	6.2	5.2	5.9
7	6.8	6.1	6.6	7.3	5.7	6.5	7.5	5.8	6.1	6.2	4.2	5.8
8	6.5	6.1	6.4	7.2	5.7	6.1	7.2	4.8	5.8	5.7	3.2	4.7
9	6.7	5.2	6.3	8.6	5.7	6.5	6.8	3.9	5.5	6.3	5.0	5.8
10	6.5	5.9	6.3	8.3	5.9	7.0	6.3	2.8	4.4	6.8	6.0	6.4
11	6.6	6.1	6.4	7.4	3.8	5.9	6.2	3.7	5.1	6.6	6.0	6.3
12	6.6	6.2	6.4	6.1	2.5	4.9	7.8	4.1	5.7	6.7	6.2	6.4
13	7.0	6.4	6.7	6.4	5.0	5.8	6.9	4.3	5.8	6.6	6.1	6.4
14	7.0	6.7	6.9	6.7	6.0	6.3	6.3	5.3	5.8	6.7	6.1	6.4
15	7.0	6.8	7.0	6.0	3.8	4.6	5.7	5.1	5.4	6.6	5.7	6.1
16	7.1	6.9	7.0	4.3	3.7	3.9	5.5	4.7	5.1	6.6	5.7	6.0
17	7.0	6.8	6.9	4.2	3.2	3.8	5.1	3.5	4.4	6.7	5.4	6.2
18	7.2	6.8	6.9	4.2	3.6	3.9	4.5	2.9	3.4	6.6	6.0	6.3
19	7.3	6.1	6.8	3.7	3.5	3.6	5.1	3.2	4.1	7.2	6.5	6.9
20	7.0	6.3	6.7	3.7	3.3	3.5	5.5	4.6	5.3	7.5	7.0	7.3
21	6.8	6.4	6.6	6.5	2.6	4.5	5.8	5.4	5.6	8.3	7.3	7.7
22	6.8	6.0	6.5	6.0	0.3	2.8	5.7	5.2	5.5	8.9	7.5	7.9
23	6.7	6.0	6.4	5.9	3.3	5.3	5.2	4.8	5.0	8.9	7.4	8.3
24	6.6	6.2	6.4	8.0	5.6	6.4	5.2	4.5	4.8	8.1	7.4	7.8
25	6.5	5.9	6.3	8.1	6.2	6.9	5.7	4.4	5.0	7.9	7.3	7.6
26	6.3	6.0	6.2	7.0	0.4	4.2	6.0	4.1	5.1	7.8	7.3	7.5
27	6.6	6.0	6.3	7.6	0.4	5.5	6.0	4.9	5.5	7.5	7.1	7.3
28	6.4	4.5	6.1	6.6	5.7	6.1	6.1	4.8	5.6	7.3	4.8	6.5
29	6.4	5.6	6.1	6.9	5.6	6.2	5.8	3.4	4.8	7.8	6.6	7.0
30	6.3	5.4	6.0	7.2	6.2	6.7	6.3	3.5	5.1	7.6	6.4	7.2
31	---	---	---	7.0	5.3	6.3	8.0	6.3	6.8	---	---	---
MONTH	7.3	4.5	6.5	8.6	0.3	5.5	8.0	2.8	5.4	8.9	3.2	6.6

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.2	5.4	5.7	6.8	6.2	6.5	---	---	---	5.0	3.1	4.1
2	6.7	5.1	5.9	6.4	5.6	6.0	---	---	---	4.4	3.1	4.0
3	6.9	6.1	6.5	6.1	5.0	5.4	---	---	---	4.1	3.1	3.5
4	6.8	5.5	6.1	5.2	4.1	4.8	---	---	---	3.9	2.1	3.0
5	6.7	5.8	6.3	4.7	3.6	4.2	---	---	---	8.5	1.4	3.8
6	6.1	5.3	5.8	4.3	2.6	3.4	---	---	---	8.7	4.5	8.1
7	5.7	4.6	4.9	6.7	2.5	4.1	10.0	9.6	9.8	8.9	8.3	8.6
8	5.6	4.9	5.3	7.3	3.0	5.3	---	---	---	8.8	8.1	8.6
9	5.4	4.4	4.9	8.2	7.2	7.7	---	---	---	8.2	3.1	5.7
10	7.1	4.3	6.5	8.4	7.8	8.2	---	---	---	9.6	5.1	8.9
11	7.1	6.5	6.8	8.3	7.6	8.1	9.8	9.2	9.6	9.8	7.1	9.1
12	7.1	5.8	6.6	8.5	7.5	8.1	9.7	8.9	9.5	10.2	6.0	9.5
13	6.8	5.0	6.2	9.2	8.2	8.7	9.6	8.8	9.2	10.2	8.2	9.5
14	5.8	3.5	4.6	9.7	9.1	9.4	9.7	9.0	9.5	9.8	4.5	7.3
15	7.2	3.5	6.6	9.9	9.5	9.7	9.9	9.6	9.7	10.0	6.8	8.5
16	7.2	6.4	6.9	9.8	8.3	9.2	9.7	8.3	9.3	10.1	8.1	9.7
17	7.3	5.5	6.6	10.0	8.2	9.1	9.5	8.1	8.7	10.2	8.7	9.8
18	7.3	5.4	6.8	9.5	7.1	8.3	9.7	9.2	9.4	10.0	8.2	9.3
19	7.6	6.9	7.2	8.9	7.3	8.5	9.6	8.6	9.2	9.9	9.2	9.6
20	7.5	6.6	7.2	8.5	8.2	8.4	10.0	9.2	9.5	10.1	9.2	9.8
21	7.5	7.2	7.3	8.4	7.3	8.1	10.0	9.0	9.7	10.4	8.5	9.7
22	8.1	6.9	7.4	8.4	7.2	7.9	10.0	8.0	9.2	10.2	8.2	9.1
23	7.8	7.5	7.7	8.3	6.7	7.4	9.4	8.3	9.1	10.3	8.0	9.7
24	8.2	7.3	7.9	8.0	6.6	7.2	9.6	8.2	8.7	10.4	9.8	10.2
25	8.2	7.1	7.8	8.2	7.3	7.9	9.6	7.6	8.5	10.6	10.1	10.4
26	7.4	6.5	7.0	8.2	7.7	8.0	9.7	7.3	9.0	10.7	9.9	10.4
27	7.7	5.7	6.6	---	---	---	9.5	7.3	9.0	11.1	10.0	10.5
28	7.0	5.9	6.3	---	---	---	8.4	5.8	6.5	11.4	10.8	11.1
29	7.6	5.9	7.2	---	---	---	6.3	5.4	6.0	11.5	10.8	11.2
30	7.6	6.9	7.3	---	---	---	6.1	5.0	5.4	11.3	10.4	11.0
31	7.4	6.6	6.9	---	---	---	5.4	3.6	4.6	11.2	10.7	11.0
MONTH	8.2	3.5	6.5	---	---	---	---	---	---	11.5	1.4	8.5
		FEBRUARY			MARCH			APRIL			MAY	
1	11.0	9.8	10.2	10.8	8.4	9.4	9.1	7.5	8.8	---	---	---
2	10.1	9.6	9.9	10.9	9.3	10.5	9.2	8.8	9.0	---	---	---
3	10.0	9.0	9.6	10.5	7.7	9.5	9.2	8.9	9.0	---	---	---
4	10.4	8.4	9.2	9.5	8.3	8.9	9.3	8.8	9.1	---	---	---
5	9.8	8.5	9.1	9.8	7.2	8.8	9.5	9.3	9.4	---	---	---
6	---	---	---	9.7	9.1	9.4	9.6	9.1	9.4	7.6	6.6	7.2
7	---	---	---	9.3	8.2	8.6	9.6	8.8	9.3	7.1	5.6	6.5
8	---	---	---	9.3	8.8	9.2	9.3	8.1	8.9	6.8	4.6	5.6
9	---	---	---	9.3	8.6	9.1	9.1	8.4	8.8	6.2	4.0	5.0
10	---	---	---	10.3	9.1	9.7	8.9	7.7	8.3	7.2	3.1	5.5
11	---	---	---	10.4	10.0	10.2	8.6	6.1	7.9	7.0	6.3	6.7
12	10.6	7.0	9.3	10.3	9.7	10.1	8.4	6.2	8.0	7.0	5.8	6.5
13	10.6	7.5	9.7	10.2	9.5	10	8.2	7.9	8.1	6.8	5.3	6.2
14	9.9	5.8	8.6	10.0	8.4	9.1	8.3	7.8	8.1	6.6	3.3	6.2
15	10.4	5.7	8.1	9.9	7.8	8.6	9.0	8.2	8.4	6.5	5.4	6.2
16	10.9	10.4	10.7	9.7	7.1	7.9	8.5	7.6	8.0	6.6	5.4	6.2
17	11.2	10.8	11.0	9.8	7.5	9.1	8.3	6.6	7.4	6.5	4.5	5.6
18	11.7	11.2	11.3	9.7	5.5	8.8	8.2	7.3	7.8	6.3	3.6	4.7
19	11.4	11.0	11.3	9.9	7.8	9.5	8.0	7.2	7.7	6.3	3.8	5.8
20	11.2	10.8	11.0	9.8	9.3	9.6	---	---	---	6.3	5.3	6.0
21	11.0	10.5	10.8	9.9	9.6	9.8	---	---	---	5.9	4.1	5.0
22	10.9	9.7	10.3	10.2	9.7	9.9	---	---	---	5.8	3.6	4.7
23	10.0	9.0	9.6	10.1	9.2	9.8	---	---	---	6.1	3.2	4.9
24	9.3	8.6	8.9	10.0	7.8	8.6	---	---	---	6.4	5.7	6.1
25	10.5	8.8	10	9.8	7.0	8.3	---	---	---	6.4	5.5	6.1
26	10.7	8.1	10.2	9.3	6.3	7.7	---	---	---	6.5	5.3	5.9
27	11.3	10.7	10.9	9.4	6.0	7.3	---	---	---	6.0	4.7	5.7
28	11.3	11.0	11.2	9.5	6.2	8.8	---	---	---	6.2	4.8	5.8
29	11.3	10.0	10.7	9.6	9.3	9.5	---	---	---	6.3	4.9	5.8
30	---	---	---	9.6	8.8	9.4	---	---	---	6.4	3.0	6.0
31	---	---	---	9.4	7.7	8.4	---	---	---	6.6	2.9	6.2
MONTH	---	---	---	10.9	5.5	9.1	---	---	---	---	---	---

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.7	6.2	6.4	2.7	1.3	1.9	3.6	0.0	0.6	6.0	3.8	4.6
2	6.9	5.6	6.2	1.8	1.0	1.4	5.1	0.0	2.5	6.3	3.6	5.0
3	6.6	5.3	6.3	1.4	0.3	0.9	6.0	1.3	4.6	6.3	5.8	6.0
4	6.5	3.9	5.2	0.9	0.2	0.4	5.9	4.5	5.5	6.4	1.7	5.7
5	6.6	5.1	5.9	2.4	0.1	0.5	6.6	3.0	5.0	2.5	1.1	1.4
6	6.4	3.7	5.3	6.6	0.2	4.2	6.8	4.5	6.3	2.0	1.0	1.5
7	4.4	3.3	3.8	5.3	0.0	1.3	6.5	5.0	5.6	1.7	0.8	1.2
8	3.9	2.1	3.0	2.7	0.0	0.5	5.7	3.2	5.0	4.9	0.3	1.4
9	2.5	1.5	1.9	5.6	0.1	1.7	3.7	2.1	2.9	6.4	1.6	5.5
10	5.1	1.4	2.3	3.9	0.0	0.6	2.4	0.8	1.5	6.4	3.3	5.1
11	6.1	2.3	5.4	1.3	0.0	0.4	1.9	0.1	0.9	6.0	3.4	4.4
12	6.4	5.3	6.1	0.1	0.0	0.0	0.8	0.1	0.3	6.4	4.1	5.9
13	6.4	2.7	4.7	3.5	0.0	1.0	1.4	0.2	0.3	6.6	6.2	6.4
14	3.9	2.6	3.3	6.5	0.2	4.7	6.1	0.2	3.2	6.4	1.3	3.7
15	4.9	2.2	3.2	6.8	2.0	5.2	5.5	4.2	4.7	2.5	0.9	1.4
16	6.1	1.8	3.0	6.3	4.6	5.5	4.8	3.8	4.3	4.4	0.7	1.7
17	6.7	5.2	6.3	4.8	0.2	2.0	4.2	2.9	3.4	6.6	0.4	3.4
18	6.6	4.4	6.1	1.2	0.2	0.5	3.4	1.4	2.4	7.0	6.0	6.7
19	6.7	5.1	5.9	1.9	0.3	0.6	3.0	1.0	1.7	7.8	6.9	7.4
20	6.3	4.6	5.3	1.7	0.4	0.6	2.3	0.6	1.5	8.1	7.5	7.7
21	5.0	3.7	4.2	0.5	0.0	0.2	4.3	0.5	1.6	8.5	7.7	8.0
22	4.5	2.5	3.7	0.1	0.0	0.0	5.1	1.0	2.9	8.3	7.6	8.0
23	6.3	2.7	4.5	0.3	0.0	0.0	2.7	1.1	1.7	7.9	6.1	6.8
24	6.1	2.4	4.5	0.1	0.0	0.0	2.4	1.2	1.6	7.2	4.0	6.1
25	4.6	1.3	2.9	0.1	0.0	0.0	1.4	0.9	1.1	4.2	2.9	3.5
26	6.2	1.1	4.5	0.6	0.0	0.1	1.5	0.5	0.9	3.7	2.8	3.2
27	5.8	2.4	4.3	0.0	0.0	0.0	1.2	0.5	0.8	3.2	2.3	2.8
28	3.4	1.8	2.3	0.4	0.0	0.0	0.8	0.0	0.3	6.6	2.0	4.1
29	5.2	1.7	2.5	0.9	0.0	0.1	1.0	0.0	0.2	6.6	5.6	6.3
30	3.2	2.0	2.3	1.1	0.0	0.2	5.6	0.1	3.0	6.5	5.3	5.8
31	---	---	---	3.0	0.0	0.4	6.5	4.4	5.2	---	---	---
MONTH	6.9	1.1	4.4	6.8	0.0	1.1	6.8	0.0	2.6	8.5	0.3	4.7

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	76	68	72	78	74	76	83	78	81	81	74	78
2	77	68	71	77	72	75	84	79	82	81	71	78
3	79	72	75	76	67	73	84	80	82	82	77	80
4	79	72	75	74	58	68	84	81	82	83	79	81
5	90	74	77	74	47	63	85	81	82	84	79	81
6	89	70	80	78	58	70	87	81	83	82	78	80
7	89	76	82	79	74	77	87	82	84	81	75	78
8	85	80	82	79	74	77	87	83	84	76	73	75
9	82	75	79	84	77	80	86	79	82	75	72	74
10	82	77	79	86	80	83	89	82	85	78	72	75
11	81	76	79	89	82	84	89	84	86	78	72	75
12	82	76	78	86	81	83	88	83	86	80	75	78
13	81	71	78	89	82	86	86	80	83	81	77	79
14	78	71	74	89	84	88	87	84	85	81	78	79
15	83	72	78	90	86	88	88	84	86	81	79	80
16	84	78	80	90	86	88	86	82	84	82	79	80
17	83	78	81	96	86	90	85	78	82	82	78	80
18	82	77	80	95	87	91	86	81	83	83	78	81
19	84	78	81	88	82	86	85	80	83	83	80	82
20	85	78	81	87	83	85	84	80	83	84	80	82
21	82	78	80	90	82	84	85	80	83	84	81	83
22	79	76	78	86	73	83	84	80	82	85	81	83
23	80	76	78	92	75	86	84	80	83	84	81	83
24	84	77	79	100	72	84	86	78	83	85	81	84
25	81	78	80	82	72	79	84	80	82	86	83	84
26	82	76	80	81	79	80	84	80	82	87	83	85
27	80	76	79	80	77	78	82	76	80	88	84	87
28	80	77	79	80	75	77	82	76	79	89	85	87
29	80	76	78	84	78	82	79	67	76	90	87	89
30	82	74	78	84	81	82	81	69	78	91	87	89
31	80	74	76	---	---	---	80	75	78	89	87	89
MONTH	90	68	78	100	47	81	89	67	82	91	71	81
		FEBRUARY			MARCH			APRIL			MAY	
1	90	87	89	94	89	91	90	86	88	---	---	---
2	90	87	89	94	88	92	89	85	88	---	---	---
3	92	88	90	97	91	94	88	86	87	---	---	---
4	93	89	91	97	93	95	90	86	88	---	---	---
5	93	88	91	96	91	94	90	87	88	---	---	---
6	92	89	91	95	91	93	92	87	89	88	82	85
7	94	89	92	93	89	91	95	88	90	94	84	87
8	93	90	91	91	86	89	94	86	90	91	81	86
9	92	89	90	88	85	87	93	87	90	93	83	86
10	92	89	91	92	85	89	91	87	89	87	79	83
11	92	85	89	96	88	90	89	86	87	89	82	85
12	88	83	86	93	90	91	87	83	85	89	82	86
13	87	85	86	93	89	91	86	83	85	87	82	85
14	87	85	86	94	90	91	87	84	85	86	81	84
15	87	78	84	92	86	91	89	84	86	85	79	82
16	90	87	89	92	86	90	90	85	87	85	78	81
17	90	88	89	90	86	88	87	84	86	87	77	81
18	94	89	92	89	85	87	87	82	84	84	75	80
19	92	90	91	92	85	88	86	84	85	78	68	75
20	91	89	90	94	87	89	---	---	---	80	74	77
21	93	90	91	92	89	91	---	---	---	79	74	77
22	94	89	91	92	88	90	---	---	---	78	69	74
23	93	89	90	94	88	90	---	---	---	78	70	75
24	91	88	90	94	89	91	---	---	---	81	75	78
25	90	84	87	93	89	92	---	---	---	83	77	80
26	89	86	87	98	90	93	---	---	---	82	73	79
27	92	88	90	102	89	94	---	---	---	81	74	78
28	93	89	91	99	90	93	---	---	---	80	74	78
29	95	90	92	93	89	91	---	---	---	82	78	80
30	---	---	---	92	88	90	---	---	---	81	78	80
31	---	---	---	96	86	90	---	---	---	83	79	82
MONTH	95	78	90	102	85	91	---	---	---	---	---	---

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, TOP—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	85	82	84	85	64	74	91	68	79	97	85	91
2	86	82	84	82	73	78	86	62	75	86	69	78
3	86	79	82	89	76	81	76	64	70	78	67	72
4	85	78	81	91	70	81	94	69	76	79	72	75
5	87	82	84	91	76	83	103	73	83	79	73	76
6	87	82	85	96	84	88	90	76	81	78	65	73
7	85	76	83	99	76	86	94	71	76	78	53	72
8	81	76	80	98	76	82	91	60	72	71	40	58
9	87	66	79	119	75	86	85	49	69	79	63	72
10	84	75	81	112	78	94	79	35	56	86	75	80
11	87	78	83	100	50	79	78	46	64	82	74	78
12	84	79	82	81	33	66	100	52	73	83	76	79
13	88	80	83	85	66	77	87	53	73	81	74	79
14	88	83	86	90	79	83	78	66	73	81	74	77
15	88	85	87	80	50	60	70	62	66	80	69	74
16	89	86	88	57	48	51	67	57	62	81	69	73
17	88	85	87	55	42	50	63	43	54	83	67	76
18	94	85	88	55	47	50	56	36	42	80	74	77
19	96	78	87	48	45	47	66	40	52	85	77	81
20	91	80	86	48	43	45	71	58	67	87	81	84
21	87	80	83	85	34	57	76	69	73	97	83	88
22	87	76	82	77	4	36	73	66	70	105	86	91
23	87	76	82	76	42	69	66	61	63	105	84	96
24	86	79	82	105	71	82	65	56	60	95	87	91
25	85	76	81	105	79	90	72	55	63	94	85	89
26	82	77	80	91	5	54	76	51	64	92	85	88
27	85	76	80	99	5	71	76	62	69	89	83	86
28	81	57	78	86	73	79	77	61	71	86	56	77
29	82	71	77	89	71	80	73	43	60	94	78	83
30	80	68	76	94	80	86	79	44	64	91	76	85
31	---	---	---	92	70	82	104	79	87	---	---	---
MONTH	96	57	83	119	4	72	104	35	68	105	40	80

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	72	63	66	72	65	69	---	---	---	42	26	35
2	76	59	68	68	59	63	---	---	---	37	26	34
3	78	68	73	64	53	57	---	---	---	35	26	30
4	76	62	68	55	43	51	---	---	---	33	18	25
5	75	65	70	50	38	45	---	---	---	79	12	35
6	68	59	65	46	28	37	---	---	---	81	41	75
7	64	52	55	75	27	44	84	80	82	80	74	77
8	63	55	59	78	32	57	---	---	---	76	70	74
9	61	50	56	84	77	80	---	---	---	70	27	49
10	81	49	74	86	80	83	---	---	---	78	44	73
11	80	73	77	84	77	82	84	80	82	77	58	72
12	81	65	74	86	76	83	83	76	81	79	49	75
13	77	56	70	92	84	89	82	76	79	79	65	75
14	66	40	52	94	89	92	83	77	81	78	37	59
15	80	40	74	93	90	92	84	82	83	80	55	68
16	78	69	75	93	78	87	83	71	79	80	65	77
17	79	59	71	96	78	86	82	70	75	79	69	76
18	80	58	73	92	69	80	82	77	80	80	65	74
19	82	74	77	87	71	85	81	73	78	80	74	77
20	81	71	77	85	82	83	82	78	79	80	74	78
21	81	77	79	83	72	80	82	74	79	80	68	76
22	87	74	80	82	71	78	81	66	74	80	65	72
23	83	78	81	82	66	73	78	68	74	80	64	76
24	86	76	82	80	65	72	79	68	72	81	77	80
25	84	73	81	81	72	79	81	64	72	82	78	80
26	77	67	73	80	75	78	81	61	76	81	76	80
27	81	59	68	---	---	---	80	61	76	84	76	80
28	73	61	66	---	---	---	70	49	55	86	81	83
29	80	62	76	---	---	---	53	45	50	86	81	84
30	80	72	77	---	---	---	52	42	46	85	78	83
31	78	70	73	---	---	---	46	31	39	84	81	83
MONTH	87	40	71	---	---	---	---	---	---	86	12	68
		FEBRUARY			MARCH			APRIL			MAY	
1	83	74	77	90	69	78	88	72	85	---	---	---
2	77	73	75	95	78	91	88	84	86	---	---	---
3	76	68	73	93	67	84	87	84	86	---	---	---
4	81	65	71	88	72	79	89	83	86	---	---	---
5	76	66	71	93	65	81	89	86	88	---	---	---
6	---	---	---	96	90	94	89	84	87	85	73	80
7	---	---	---	93	81	86	90	82	87	80	62	72
8	---	---	---	92	87	90	89	77	85	76	51	62
9	---	---	---	89	82	87	90	82	87	71	45	57
10	---	---	---	93	86	90	89	76	83	85	35	64
11	---	---	---	92	90	91	87	61	79	84	75	80
12	89	59	78	93	87	91	85	62	81	84	70	78
13	89	63	81	93	86	90	85	80	83	83	63	75
14	84	49	73	92	77	83	85	80	83	82	39	75
15	87	48	68	91	71	78	90	82	85	81	65	77
16	89	86	88	90	65	72	86	77	81	82	66	75
17	90	88	89	91	69	85	86	67	76	80	54	69
18	93	90	91	89	50	81	85	75	81	78	44	58
19	93	89	91	93	72	88	87	76	83	78	47	72
20	92	88	90	92	86	89	---	---	---	79	65	74
21	93	88	91	94	89	92	---	---	---	73	50	61
22	92	83	88	94	90	92	---	---	---	74	44	58
23	86	76	82	93	85	90	---	---	---	78	40	62
24	79	73	76	91	72	79	---	---	---	81	72	77
25	90	75	85	93	65	77	---	---	---	81	69	77
26	90	69	86	89	58	72	---	---	---	82	67	74
27	93	89	90	91	56	69	---	---	---	77	59	72
28	94	90	91	95	59	88	---	---	---	80	61	75
29	93	83	88	94	91	92	---	---	---	80	62	73
30	---	---	---	93	84	91	---	---	---	80	38	75
31	---	---	---	90	74	81	---	---	---	82	36	77
MONTH	---	---	---	96	50	85	---	---	---	---	---	---

0208455560 PUNGO RIVER AT CHANNEL LIGHT 18—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION, BOTTOM—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	84	76	80	34	16	24	47	0	8	75	48	58
2	86	70	77	23	13	18	67	0	33	79	45	63
3	83	66	78	18	4	12	76	17	59	79	72	74
4	81	48	65	11	3	5	75	57	69	80	21	71
5	83	63	73	30	1	6	86	38	64	31	14	18
6	79	46	66	86	3	54	88	58	81	25	13	18
7	54	41	47	69	0	17	83	63	71	21	10	15
8	48	26	37	35	0	7	71	40	61	61	4	17
9	31	19	23	73	1	21	46	26	36	81	20	69
10	65	17	29	51	0	8	30	10	19	80	41	64
11	79	29	69	17	0	5	24	1	11	74	43	55
12	81	68	78	1	0	0	10	1	4	79	50	73
13	80	34	59	46	0	13	18	2	4	81	76	78
14	49	32	41	86	3	62	76	2	40	78	16	45
15	61	27	40	90	26	68	68	52	59	31	11	17
16	77	22	37	82	60	72	59	47	52	54	9	21
17	84	65	79	63	3	26	51	36	42	82	5	41
18	83	55	77	16	3	6	42	17	30	85	74	82
19	86	65	75	25	4	8	37	12	21	91	82	87
20	80	58	67	22	5	7	28	7	19	94	86	89
21	63	46	53	6	0	3	55	6	21	98	87	91
22	56	31	47	1	0	0	66	12	37	95	87	91
23	81	34	57	4	0	0	34	14	21	91	70	78
24	78	30	58	1	0	0	30	15	20	85	46	71
25	59	16	37	1	0	0	18	11	14	49	34	41
26	80	14	57	8	0	0	19	6	12	43	32	37
27	74	30	55	0	0	0	15	6	10	37	27	33
28	43	23	30	5	0	0	10	0	4	79	23	48
29	66	21	31	12	0	0	13	0	2	78	66	74
30	40	25	29	14	0	3	71	1	38	77	63	69
31	---	---	---	39	0	6	82	55	66	---	---	---
MONTH	86	14	55	90	0	15	88	0	33	98	4	56

02084557 VAN SWAMP NEAR HOKE, NC

LOCATION.--Lat 35°43'51", long 76°44'46", Washington County, Hydrologic Unit 03020104, on left bank at upstream side of culvert on State Highway 32, and 4.8 mi east of Hoke.

DRAINAGE AREA.--23 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above NGVD of 1929, from topographic map. Satellite telemetry at station.

REMARKS.--Records poor. No flow occurs periodically. Minimum discharge for current water year also occurred June 4.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	83	26	115	33	53	20	9.4	0.70	47	18	24
2	93	74	25	110	32	49	20	8.6	0.50	38	17	23
3	78	65	25	102	31	45	19	17	0.32	31	25	21
4	62	58	24	88	30	42	18	52	2.5	26	31	19
5	51	53	27	74	29	39	16	53	19	24	29	18
6	43	49	32	61	28	37	15	47	15	19	35	21
7	37	45	33	53	28	35	14	41	18	15	29	28
8	31	42	33	48	26	34	13	34	26	12	25	28
9	27	39	32	44	25	32	13	27	35	9.0	22	47
10	23	35	32	41	25	31	12	22	35	6.5	20	54
11	20	32	85	38	24	32	11	18	39	5.5	18	47
12	18	30	106	36	24	33	11	14	36	6.6	22	40
13	16	27	105	34	29	31	14	11	29	6.8	60	34
14	13	25	128	32	32	30	38	8.8	23	6.8	97	30
15	12	23	147	30	33	29	44	7.0	18	7.0	169	29
16	11	21	146	28	41	35	43	5.7	14	8.1	177	29
17	10	19	146	27	48	61	39	4.7	13	8.3	151	26
18	11	18	144	26	55	61	34	3.8	11	9.3	131	24
19	11	20	140	27	55	59	30	3.1	9.4	12	106	22
20	12	34	136	27	52	54	25	2.5	8.2	13	80	19
21	13	41	131	26	49	49	22	2.0	6.2	e19	60	16
22	13	41	127	25	45	44	19	2.5	4.3	e20	53	13
23	13	39	123	24	41	40	16	9.1	3.0	e20	45	10
24	13	37	151	24	38	37	14	9.7	2.5	19	36	8.2
25	13	36	153	23	37	31	12	8.0	2.4	20	31	6.5
26	13	33	146	25	36	28	11	5.9	16	20	26	5.0
27	13	31	141	28	48	25	12	4.7	17	20	25	3.9
28	13	30	135	33	57	23	14	3.5	17	20	27	2.5
29	55	29	130	34	56	21	12	2.1	58	20	27	3.3
30	91	27	125	35	---	19	11	1.3	57	19	26	3.7
31	90	---	120	34	---	18	---	0.89	---	18	25	---
TOTAL	1,025	1,136	3,054	1,352	1,087	1,157	592	439.29	536.02	525.9	1,643	655.1
MEAN	33.1	37.9	98.5	43.6	37.5	37.3	19.7	14.2	17.9	17.0	53.0	21.8
MAX	106	83	153	115	57	61	44	53	58	47	177	54
MIN	10	18	24	23	24	18	11	0.89	0.32	5.5	17	2.5
CFSM	1.44	1.65	4.28	1.90	1.63	1.62	0.86	0.62	0.78	0.74	2.30	0.95
IN.	1.66	1.84	4.94	2.19	1.76	1.87	0.96	0.71	0.87	0.85	2.66	1.06

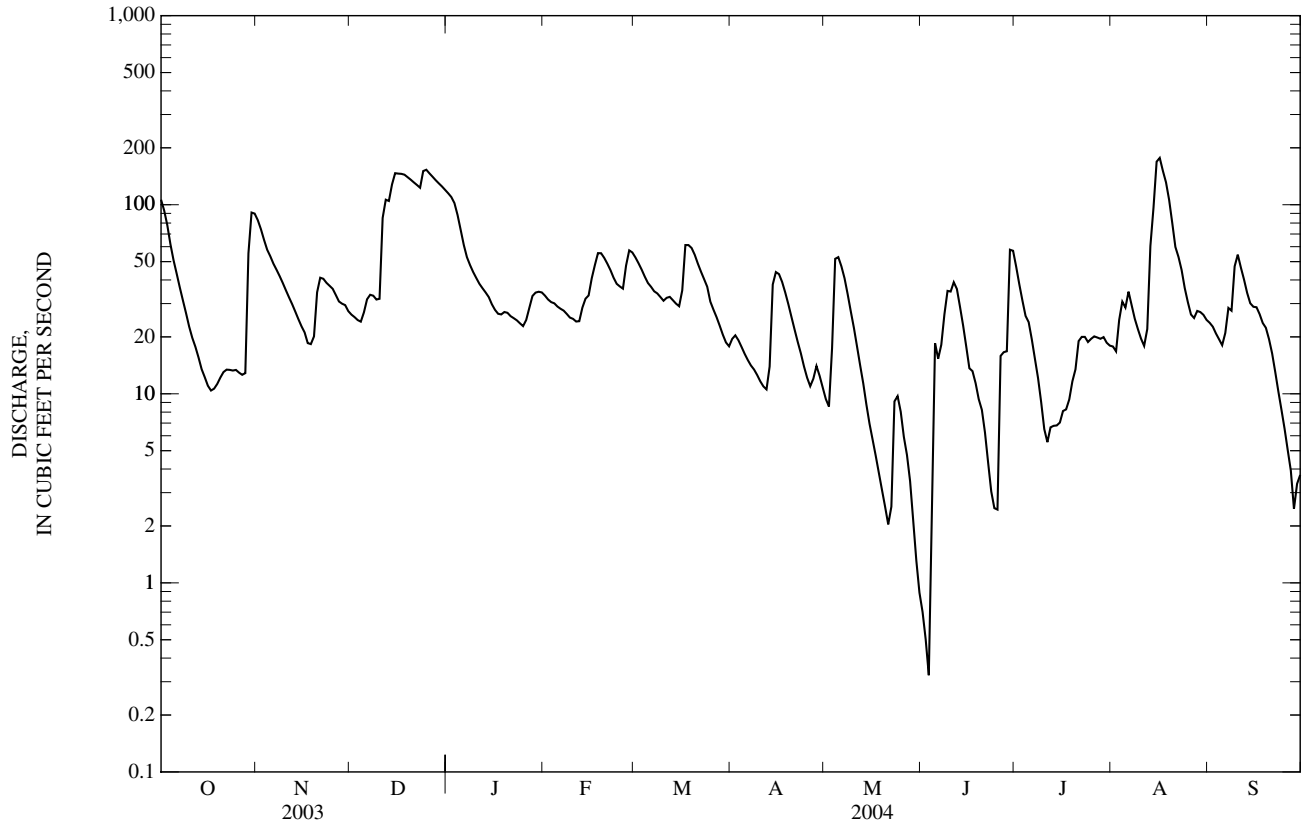
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

MEAN	19.5	16.0	18.6	40.3	45.5	55.4	40.4	24.6	11.0	6.10	14.2	21.2
MAX	166	121	98.5	124	122	142	101	122	43.8	55.2	74.9	189
(WY)	(2000)	(1978)	(2004)	(1978)	(1998)	(1983)	(1983)	(1978)	(2001)	(1989)	(2003)	(1999)
MIN	0.02	0.01	0.03	0.72	9.76	8.78	4.68	0.58	0.29	0.01	0.00	0.03
(WY)	(1979)	(2002)	(2002)	(1989)	(2002)	(1992)	(1985)	(1985)	(1985)	(1997)	(1997)	(1995)

02084557 VAN SWAMP NEAR HOKE, NC—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1977 - 2004	
ANNUAL TOTAL	17,874.24		13,202.31			
ANNUAL MEAN	49.0		36.1		26.2	
HIGHEST ANNUAL MEAN					51.7	1978
LOWEST ANNUAL MEAN					6.91	2002
HIGHEST DAILY MEAN	153	Dec 25	177	Aug 16	385	Nov 7, 1977
LOWEST DAILY MEAN	0.74	Jul 11	0.32	Jun 3	0.00	Aug 21, 1983
ANNUAL SEVEN-DAY MINIMUM	1.6	Jul 7	1.2	May 29	0.00	Sep 12, 1985
MAXIMUM PEAK FLOW			183	Aug 16	409	Nov 6, 1977
MAXIMUM PEAK STAGE			4.56	Dec 24	7.43	Sep 16, 1999
INSTANTANEOUS LOW FLOW			0.23*	Jun 3	0.00	Oct 1, 1978
ANNUAL RUNOFF (CFSM)	2.13		1.57		1.14	
ANNUAL RUNOFF (INCHES)	28.91		21.35		15.48	
10 PERCENT EXCEEDS	117		81		75	
50 PERCENT EXCEEDS	35		27		9.5	
90 PERCENT EXCEEDS	3.8		8.1		0.13	

* See REMARKS.
e Estimated.



02084557 VAN SWAMP NEAR HOKE, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1993-96, 2002 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 2002 to July 2004.
WATER TEMPERATURE: April 2002 to July 2004.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry from April 2002 to July 2004.

REMARKS.--Station operated as part of the NAWQA program April 2002 to current year. Station was operated March 1993 to September 1996 as part of the Albemarle-Pamlico NAWQA program.

EXTREMES FOR PERIOD OF DAILY RECORD.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	205, November 21, 22, 2002	55, July 25, 2002
WATER TEMPERATURE, °C	27.2, August 24, 2002	2.3. January 24, 2003

EXTREMES FOR CURRENT YEAR.--

CONSTITUENT	MAXIMUM RECORDED	MINIMUM RECORDED
SPECIFIC CONDUCTANCE, microsiemens	143, December 20, 21, 22, 23	67, July 21
WATER TEMPERATURE, °C	25.6, July 14	5.0, January 25, 26, February 2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Medium code	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L (71846)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
21...	1430	9	13	754	5.8	60	3.5	131	16.2	7.31	19.0	.27	.21
DEC													
22...	1100	9	127	770	--	--	3.4	141	8.7	6.67	22.0	.09	.07
FEB													
19...	0830	9	56	764	8.5	69	3.6	113	6.8	7.38	27.1	--	E.03
MAR													
17...	0900	9	62	760	8.7	79	3.9	104	11.2	6.96	35.0	--	<.04
APR													
15...	0900	9	44	760	7.6	72	4.1	110	12.8	7.10	32.9	--	E.03
MAY													
14...	0930	9	9.2	770	6.7	70	3.2	113	17.6	7.28	29.7	.12	.09
JUN													
10...	1030	9	35	762	6.2	69	3.6	105	20.6	7.29	33.6	.16	.13
JUL													
15...	0945	9	7.3	754	5.0	60	4.0	98	24.3	7.24	28.6	1.11	.86
AUG													
12...	1030	D	18	--	6.4	--	3.3	106	21.1	--	--	--	--
19...	0900	9	109	762	4.3	48	3.5	141	20.5	6.49	39.1	.21	.16
SEP													
23...	0930	9	10	764	6.6	81	3.6	108	25.7	6.53	12.5	.24	.19

02084557 VAN SWAMP NEAR HOKE, NC—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Biomass periphyton, ashfree drymass g/m2 (49954)	Periphyton biomass ash weight, g/m2 (00572)
OCT													
21...	<.06	E.005	.04	.025	.008	.026	1.72	.6	<.1	.6	54.5	--	--
DEC													
22...	1.20	<.008	<.02	--	E.004	.043	2.42	.4	<.1	.4	39.0	--	--
FEB													
19...	.36	<.008	.03	--	E.003	.014	1.06	.7	<.1	.7	28.5	--	--
MAR													
17...	.23	<.008	.12	--	<.006	.027	.99	1.9	<.1	1.9	22.7	--	--
APR													
15...	.46	<.008	.10	--	<.006	.018	1.29	1.2	<.1	1.2	26.4	--	--
MAY													
14...	E.04	<.008	.10	--	E.004	.025	1.38	1.6	<.1	1.6	41.4	--	--
JUN													
10...	.32	<.008	.17	--	<.006	.024	1.19	3.0	<.1	3.0	29.2	--	--
JUL													
15...	<.06	<.008	.43	--	<.006	.047	2.50	10.2	<.1	10.2	47.2	--	--
AUG													
12...	--	--	--	--	--	--	--	--	--	--	--	1.2	4.0
19...	1.55	<.008	.04	--	E.005	.023	2.80	1.0	<.1	1.0	38.5	--	--
SEP													
23...	E.06	<.008	.12	--	E.003	.025	1.64	2.4	<.1	2.3	45.9	--	--

Date	Periphyton biomass dry weight, g/m2 (00573)	Biomass chlorophyll ratio, periphyton, number (70950)	Pheophytin a, periphyton, mg/m2 (62359)	Chlorophyll a periphyton, chromofluoro, mg/m2 (70957)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT							
21...	--	--	--	--	95	19	.67
DEC							
22...	--	--	--	--	46	18	6.2
FEB							
19...	--	--	--	--	92	8	1.2
MAR							
17...	--	--	--	--	85	21	3.5
APR							
15...	--	--	--	--	49	24	2.9
MAY							
14...	--	--	--	--	81	20	.50
JUN							
10...	--	--	--	--	64	34	3.2
JUL							
15...	--	--	--	--	96	28	.55
AUG							
12...	5.200	465	7.3	2.6	--	--	--
19...	--	--	--	--	92	48	14
SEP							
23...	--	--	--	--	89	11	.30

Remark codes used in this table:
< -- Less than
E -- Estimated value

Medium codes used in this table:
9 -- Surface water
D -- Plant tissue

02084557 VAN SWAMP NEAR HOKE, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	131	128	129	124	123	123	128	126	127	140	139	139
2	133	130	132	125	123	124	128	126	127	140	140	140
3	136	133	134	127	125	126	128	126	127	141	140	140
4	139	135	137	129	127	128	128	126	127	140	139	140
5	140	138	139	131	128	130	126	123	125	140	139	139
6	141	139	140	132	130	131	127	123	126	139	137	138
7	141	139	140	131	130	130	124	121	122	138	137	137
8	142	140	141	131	129	130	123	121	122	137	136	136
9	142	140	141	131	129	130	123	121	122	136	134	135
10	141	140	141	131	129	130	123	118	122	134	132	133
11	141	139	140	132	130	131	121	100	113	133	131	132
12	140	138	139	132	129	131	120	114	116	132	131	131
13	140	138	139	132	130	131	123	120	121	131	130	131
14	140	137	138	132	130	131	123	111	119	131	130	130
15	138	135	136	132	130	131	128	120	124	130	129	130
16	137	134	135	132	131	131	133	128	131	130	129	129
17	135	134	134	132	131	131	138	133	136	129	128	129
18	136	134	135	132	131	132	141	138	139	129	127	128
19	136	134	135	133	128	131	142	140	141	128	127	128
20	136	134	135	131	124	128	143	141	142	128	127	127
21	137	134	136	124	117	119	143	142	142	127	125	126
22	137	135	136	119	118	118	143	142	143	126	125	125
23	138	136	137	120	118	119	143	142	143	126	124	125
24	139	136	138	121	119	120	142	132	136	125	124	125
25	139	137	138	123	120	121	138	134	136	125	121	124
26	140	137	139	124	122	123	140	138	139	122	119	120
27	140	138	139	125	124	124	140	139	139	119	117	118
28	141	133	138	125	124	125	140	138	139	117	115	116
29	137	112	123	127	125	126	139	138	139	116	115	116
30	120	116	118	127	125	126	139	138	138	115	114	115
31	123	120	121	---	---	---	139	138	139	115	114	115
MONTH	142	112	136	133	117	127	143	100	131	141	114	129
		FEBRUARY			MARCH			APRIL			MAY	
1	116	115	115	118	116	117	116	115	116	117	116	116
2	117	115	116	119	117	118	117	114	115	117	115	116
3	117	116	117	120	118	119	115	113	114	116	104	112
4	118	117	117	120	119	119	115	113	114	111	105	108
5	118	117	118	120	119	120	115	113	114	107	105	106
6	118	117	118	121	119	120	115	113	114	108	107	107
7	119	118	118	120	118	119	115	114	114	111	108	109
8	119	117	118	119	117	118	116	115	115	112	111	111
9	118	117	118	119	116	118	117	115	116	113	112	113
10	118	117	118	120	117	118	117	116	117	114	112	113
11	119	118	118	119	116	118	118	116	117	114	113	114
12	119	116	118	120	118	119	118	116	117	115	114	114
13	118	116	117	120	118	119	117	105	114	116	114	115
14	118	115	116	120	118	119	116	111	114	---	---	---
15	116	114	114	120	119	119	116	113	114	116	114	115
16	114	109	111	120	106	116	116	114	115	116	114	115
17	112	110	111	110	102	106	118	116	116	116	114	115
18	113	110	112	104	101	102	120	118	118	115	112	113
19	116	113	114	107	103	105	121	119	120	114	112	113
20	118	116	117	109	106	107	121	120	121	114	112	113
21	120	118	118	110	108	109	122	120	121	114	111	112
22	120	119	120	111	109	110	122	120	121	112	101	109
23	120	119	120	111	110	110	122	120	121	121	99	112
24	121	120	121	112	111	111	122	121	121	123	120	122
25	120	119	119	114	112	113	122	121	121	121	118	119
26	120	117	119	115	113	114	122	119	121	119	115	117
27	117	112	113	116	114	115	119	116	118	115	113	114
28	114	112	113	117	116	116	119	117	119	113	110	111
29	117	113	115	117	115	116	119	116	117	111	108	110
30	---	---	---	118	116	117	118	116	117	109	107	108
31	---	---	---	118	115	117	---	---	---	107	106	107
MONTH	121	109	117	121	101	115	122	105	117	---	---	---

02084557 VAN SWAMP NEAR HOKE, NC—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	107	105	106	104	100	102	---	---	---	---	---	---
2	105	103	104	106	103	104	---	---	---	---	---	---
3	103	101	102	109	106	107	---	---	---	---	---	---
4	102	73	97	110	108	109	---	---	---	---	---	---
5	122	75	111	113	109	111	---	---	---	---	---	---
6	121	118	120	113	110	111	---	---	---	---	---	---
7	120	105	112	112	109	111	---	---	---	---	---	---
8	107	98	104	111	108	109	---	---	---	---	---	---
9	106	96	101	109	105	107	---	---	---	---	---	---
10	108	104	106	106	102	104	---	---	---	---	---	---
11	109	99	105	104	97	100	---	---	---	---	---	---
12	109	107	108	99	96	97	---	---	---	---	---	---
13	111	108	109	102	99	101	---	---	---	---	---	---
14	112	110	110	101	97	99	---	---	---	---	---	---
15	113	111	112	97	93	95	---	---	---	---	---	---
16	114	112	113	94	90	93	---	---	---	---	---	---
17	114	113	114	91	89	91	---	---	---	---	---	---
18	115	113	114	90	88	89	---	---	---	---	---	---
19	115	112	114	89	88	89	---	---	---	---	---	---
20	118	115	116	91	80	88	---	---	---	---	---	---
21	119	114	116	---	---	---	---	---	---	---	---	---
22	116	113	114	---	---	---	---	---	---	---	---	---
23	114	110	112	---	---	---	---	---	---	---	---	---
24	110	108	109	90	80	88	---	---	---	---	---	---
25	109	96	106	92	88	90	---	---	---	---	---	---
26	118	79	105	89	87	88	---	---	---	---	---	---
27	116	114	114	88	79	84	---	---	---	---	---	---
28	114	87	109	---	---	---	---	---	---	---	---	---
29	101	86	94	---	---	---	---	---	---	---	---	---
30	100	94	97	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	122	73	108	---	---	---	---	---	---	---	---	---

02084557 VAN SWAMP NEAR HOKE, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.6	17.8	18.2	15.9	14.9	15.5	12.0	10.7	11.4	10.4	9.7	10.1
2	18.4	17.9	18.1	16.2	15.2	15.8	11.7	10.1	10.9	10.9	10.0	10.4
3	17.9	17.0	17.4	16.9	15.7	16.3	10.1	8.9	9.4	11.5	10.5	11.0
4	18.0	17.1	17.5	17.9	16.9	17.4	10.0	9.2	9.5	12.8	11.4	12.2
5	18.3	17.6	17.9	18.5	17.8	18.1	10.8	10.0	10.5	13.8	12.7	13.3
6	18.2	17.4	17.8	18.9	18.3	18.6	10.3	9.3	10	13.7	11.8	13.0
7	18.3	17.7	18.0	18.8	18.4	18.7	9.3	8.3	8.7	11.8	9.6	10.5
8	18.6	18.1	18.3	18.4	16.3	17.4	8.4	7.4	8.0	9.6	8.7	9.0
9	19.2	18.6	18.9	16.3	14.7	15.4	8.7	7.3	8.0	9.1	8.7	8.9
10	19.3	19.0	19.2	14.9	14.3	14.7	11.4	8.5	9.4	8.7	7.6	8.3
11	19.2	18.8	19.0	15.5	14.3	14.9	12.5	11.4	12.0	7.6	6.6	7.1
12	19.2	18.6	18.9	16.6	15.3	15.9	11.6	10.4	10.7	8.2	6.8	7.5
13	19.1	18.3	18.7	16.6	14.9	16.2	10.4	9.7	9.9	9.0	7.7	8.3
14	18.7	18.1	18.3	14.9	12.8	13.6	10.9	10.0	10.5	8.7	8.0	8.4
15	18.4	17.2	17.9	13.3	12.2	12.8	10.8	10.0	10.4	9.0	8.2	8.6
16	17.2	15.6	16.3	14.8	13.3	14.0	10.1	9.4	9.8	8.4	7.4	7.8
17	16.4	14.9	15.7	16.1	14.6	15.4	11.2	10.1	10.8	7.8	6.5	7.1
18	16.8	16.0	16.5	16.6	15.4	16.1	10.8	10.1	10.3	9.9	7.8	8.8
19	16.0	14.5	15.3	17.4	16.4	16.8	10.1	9.5	9.8	9.9	8.3	9.2
20	16.1	14.4	15.3	16.8	14.5	15.6	9.5	9.0	9.2	8.3	6.7	7.3
21	17.0	15.2	16.1	14.5	13.1	13.8	9.0	8.5	8.8	6.7	5.7	6.3
22	17.1	16.3	16.9	14.3	13.2	13.8	9.4	8.5	8.9	7.4	5.6	6.5
23	16.3	14.4	15.0	14.4	13.6	14.0	10.6	9.1	9.7	7.3	6.4	6.8
24	14.4	13.0	13.6	14.8	13.3	14.0	12.0	10.6	11.6	8.2	6.5	7.2
25	14.9	13.2	13.9	14.8	13.3	14.2	11.9	10.5	11.3	7.6	5.0	6.2
26	16.5	14.9	15.8	13.5	12.7	13.1	10.5	9.6	9.9	5.4	5.0	5.3
27	17.6	16.3	16.9	13.6	12.4	13.0	9.7	9.0	9.4	5.8	5.3	5.5
28	17.5	16.9	17.1	15.8	13.6	14.7	9.6	8.9	9.3	5.9	5.3	5.6
29	16.9	15.9	16.5	15.2	12.0	13.4	10.2	9.1	9.6	6.6	5.1	5.8
30	16.2	15.2	15.7	12.0	10.6	11.3	11.2	10.2	10.8	7.3	5.9	6.5
31	15.8	14.8	15.3	---	---	---	10.7	10.0	10.3	6.9	5.9	6.3
MONTH	19.3	13.0	17.0	18.9	10.6	15.2	12.5	7.3	10.0	13.8	5.0	8.2
		FEBRUARY			MARCH			APRIL			MAY	
1	6.2	5.1	5.7	10.5	8.5	9.5	12.5	11.6	12.1	16.1	15.1	15.6
2	6.8	5.0	5.9	12.4	10.5	11.5	12.5	11.4	12.0	17.4	16.1	16.7
3	8.4	6.6	7.4	13.4	12.1	12.7	12.7	11.4	12.0	17.4	16.2	17.1
4	8.4	7.2	7.8	13.8	12.2	13.0	13.6	11.1	12.2	16.2	14.4	15.1
5	8.1	6.8	7.6	14.7	13.3	14.0	12.8	10.5	11.7	15.5	13.9	14.6
6	11.0	7.7	9.0	15.0	14.2	14.6	12.7	9.5	11.1	16.6	15.0	15.7
7	12.1	11.0	11.6	14.5	13.4	13.9	14.4	11.0	12.6	17.3	15.8	16.5
8	11.1	8.5	9.6	13.4	11.6	12.4	15.9	13.1	14.4	17.5	16.9	17.2
9	8.5	7.1	7.8	11.6	10.0	10.8	16.3	14.0	15.2	17.6	16.7	17.1
10	9.6	8.3	9.0	10.9	9.2	10	15.1	13.3	14.3	18.3	17.1	17.6
11	10.1	9.1	9.6	10.6	8.4	9.5	15.9	14.4	15.0	18.6	17.2	17.8
12	9.6	8.2	8.9	11.8	9.6	10.7	15.2	13.7	14.1	18.6	17.3	17.9
13	9.2	7.6	8.4	11.3	9.6	10.5	16.4	14.0	15.0	18.6	17.4	18.0
14	8.9	8.1	8.6	10.9	9.1	10.1	16.2	13.8	14.9	---	---	---
15	9.2	8.3	8.9	11.6	10.5	11.0	14.2	12.6	13.5	19.2	17.8	18.4
16	8.3	6.6	7.1	12.8	11.6	12.0	14.0	12.2	13.2	19.1	18.0	18.5
17	7.0	6.6	6.8	12.4	10.2	11.2	15.0	12.8	13.9	19.0	17.8	18.4
18	8.0	6.7	7.3	10.9	9.1	10.0	16.3	14.6	15.4	19.3	17.7	18.4
19	8.6	6.8	7.8	12.4	10.5	11.4	16.9	15.5	16.1	20.1	18.2	19.0
20	9.7	7.9	8.8	12.1	10.2	11.3	17.2	15.7	16.4	20.7	18.8	19.6
21	11.3	9.7	10.5	13.1	11.8	12.4	17.3	15.9	16.6	21.3	19.3	20.2
22	10.7	9.6	10.2	12.3	10.3	11.3	17.4	16.1	16.7	22.3	20.2	20.9
23	10.1	8.9	9.6	10.6	8.8	9.8	17.9	16.1	17.0	21.6	20.4	21.0
24	9.9	9.7	9.8	11.1	8.8	10.0	17.4	16.3	17.0	21.4	20.4	21.0
25	10.1	9.2	9.6	12.7	10.0	11.4	16.3	15.0	15.5	21.7	20.8	21.2
26	9.3	7.4	8.2	13.8	11.5	12.7	17.3	15.5	16.3	22.4	21.1	21.7
27	7.4	6.8	7.1	14.8	12.4	13.6	16.7	16.0	16.4	22.2	20.9	21.5
28	8.4	6.5	7.4	14.8	13.3	14.1	16.0	14.1	14.8	22.7	20.9	21.6
29	9.3	7.2	8.3	13.3	12.0	12.5	15.2	13.1	14.2	21.8	20.4	21.0
30	---	---	---	12.4	11.4	11.9	15.9	14.2	15.0	20.4	19.0	19.4
31	---	---	---	12.7	11.8	12.2	---	---	---	21.0	19.1	20.0
MONTH	12.1	5.0	8.4	15.0	8.4	11.7	17.9	9.5	14.5	---	---	---

02084557 VAN SWAMP NEAR HOKE, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.1	20.3	21.1	21.8	20.6	21.1	---	---	---	---	---	---
2	21.5	19.8	20.6	21.5	20.7	21.1	---	---	---	---	---	---
3	22.5	20.3	21.3	21.7	20.6	21.1	---	---	---	---	---	---
4	21.9	20.6	21.2	21.8	20.9	21.3	---	---	---	---	---	---
5	21.5	19.9	20.6	22.8	21.1	21.8	---	---	---	---	---	---
6	21.0	19.0	19.9	22.8	21.6	22.3	---	---	---	---	---	---
7	21.8	19.9	20.7	23.0	21.8	22.5	---	---	---	---	---	---
8	21.8	20.3	20.9	23.0	21.8	22.5	---	---	---	---	---	---
9	21.8	20.6	21.2	23.5	22.1	22.7	---	---	---	---	---	---
10	21.6	20.5	21.1	23.7	22.4	23.0	---	---	---	---	---	---
11	22.3	21.0	21.6	23.4	22.9	23.2	---	---	---	---	---	---
12	22.0	20.1	20.8	24.0	22.9	23.4	---	---	---	---	---	---
13	20.1	18.3	19.0	25.0	23.6	24.1	---	---	---	---	---	---
14	19.8	18.9	19.3	25.6	24.1	24.6	---	---	---	---	---	---
15	20.3	19.2	19.8	25.4	24.0	24.6	---	---	---	---	---	---
16	20.4	19.9	20.2	24.0	22.6	23.2	---	---	---	---	---	---
17	20.9	20.0	20.4	23.2	21.6	22.5	---	---	---	---	---	---
18	22.2	20.6	21.2	23.7	22.3	23.0	---	---	---	---	---	---
19	22.2	21.3	21.7	23.8	22.7	23.2	---	---	---	---	---	---
20	22.1	20.4	21.5	23.5	22.5	23.0	---	---	---	---	---	---
21	20.4	18.8	19.6	---	---	---	---	---	---	---	---	---
22	21.3	19.6	20.3	---	---	---	---	---	---	---	---	---
23	22.8	21.0	21.7	---	---	---	---	---	---	---	---	---
24	22.4	21.6	21.9	23.0	22.4	22.6	---	---	---	---	---	---
25	23.0	21.4	22.1	23.4	22.6	23.0	---	---	---	---	---	---
26	23.0	22.0	22.4	24.1	23.0	23.4	---	---	---	---	---	---
27	22.0	20.7	21.1	24.3	23.7	23.9	---	---	---	---	---	---
28	21.8	20.6	21.0	---	---	---	---	---	---	---	---	---
29	22.1	21.0	21.5	---	---	---	---	---	---	---	---	---
30	21.6	20.9	21.2	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	23.0	18.3	20.9	---	---	---	---	---	---	---	---	---