

# Quality of Surface Waters of the United States, 1968

## Part 2. South Atlantic Slope and Eastern Gulf of Mexico Basins

---

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 2092

*Prepared in cooperation with the States  
of Alabama, Florida, Georgia, Louisiana,  
Mississippi, North Carolina,  
South Carolina, Virginia,  
and other agencies*



UNITED STATES DEPARTMENT OF THE INTERIOR

ROGERS C. B. MORTON, *Secretary*

GEOLOGICAL SURVEY

V. E. McKelvey, *Director*

Library of Congress catalog-card No. GS 43-68

---

For sale by the Superintendent of Documents, U.S. Government Printing Office  
Washington, D.C. 20402 — Price \$2.35 domestic postpaid or \$2.00 GPO Bookstore  
Stock Number 2401-02385

## PREFACE

This report was prepared by the U.S. Geological Survey in cooperation with the States of Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Virginia, and with other agencies, by personnel of the Water Resources Division, E. L. Hendricks, chief hydrologist, G. W. Whetstone, assistant chief hydrologist for Scientific Publications and Data Management, under the general direction of G. A. Billingsley, chief, Reports Section, and B. A. Anderson, chief, Data Reports Unit.

The data were collected under the supervision of district chiefs of the Water Resources Division, as follows:

W. L. Broadhurst.....	Tuscaloosa, Ala.
A. N. Cameron.....	Atlanta, Ga.
L. E. Carroon.....	Jackson, Miss.
C. S. Conover.....	Tallahassee, Fla.
J. W. Gambrell.....	Richmond, Va.
R. C. Heath.....	Raleigh, N. C.
R. R. Meyer.....	Baton Rouge, La.
J. S. Stallings.....	Columbia, S. C.

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^

^



## CONTENTS

Preface.....	Page III
List of Water-Quality stations, in downstream order, for which records are published.....	VII
Introduction.....	1
Collection and examination of data.....	3
Chemical quality.....	4
Temperature.....	4
Sediment.....	4
Expression of results.....	5
Composition of surface waters.....	7
Mineral constituents in solution.....	7
Silica.....	7
Aluminum.....	9
Iron.....	9
Manganese.....	9
Calcium.....	9
Magnesium.....	9
Sodium and potassium.....	9
Bicarbonate, carbonate, and hydroxide.....	9
Sulfide.....	10
Sulfate.....	10
Chloride.....	10
Fluoride.....	10
Bromide.....	11
Iodide.....	11
Nitrogen, organic.....	11
Nitrogen, ammonia.....	11
Nitrite.....	11
Nitrate.....	11
Phosphorus.....	11
Boron.....	12
Dissolved solids.....	12
Arsenic.....	12
Barium.....	12
Cadmium.....	12
Chromium.....	12
Cobalt.....	13
Copper.....	13
Lead.....	13
Lithium.....	13
Mercury.....	13
Nickel.....	14
Strontium.....	14
Zinc.....	14
Properties and characteristics of water.....	14
Dissolved solids.....	14
Hardness.....	15
Acidity.....	15
Sodium adsorption ratio.....	15
Specific conductance.....	16
Hydrogen-ion concentration.....	16
Temperature.....	16
Color.....	16
Turbidity.....	17
Density at 20°C.....	17
Dissolved oxygen.....	17
Chemical oxygen demand.....	17

Composition of surface waters--Continued	
Properties and characteristics of water--Continued	Page
Biochemical oxygen demand.....	17
Biological and microbiological information.....	17
Organics.....	18
Sediment.....	18
Streamflow.....	19
Publications.....	19
Cooperation.....	20
Division of work.....	21
Literature cited.....	22
Index.....	371

### ILLUSTRATION

	Page
Figure 1. Map of the United States showing basins covered by the ten water-supply papers of quality of surface waters in 1968.....	2

# WATER-QUALITY STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

[Letters after station name designate type of data: (c) chemical,  
(t) water temperature, (s) sediment]

	Page
<b>SOUTH ATLANTIC SLOPE AND EASTERN GULF OF MEXICO BASINS</b>	
<b>JAMES RIVER BASIN</b>	
Jackson River (head of James River) at Falling Spring, Va. (c).....	24
Jackson River at Clifton Forge, Va. (c).....	25
Cowpasture River near Clifton Forge, Va. (c).....	26
Craig Creek at Eagle Rock, Va. (c).....	27
James River at Buchanan, Va. (ct).....	28
Maury River at Buena Vista, Va. (c).....	30
Maury River at Glasgow, Va. (c).....	30
James River above Pedlar River, at Holcombs Rock, Va. (c).....	31
Pedlar River at Holcombs Rock, Va. (c).....	32
James River at Bent Creek, Va. (c).....	32
Tye River at Norwood, Va. (c).....	33
James River at Wingina, Va. (c).....	34
Rockfish River at Howardsville, Va. (c).....	34
James River at Howardsville, Va. (c).....	35
James River at Scottsville, Va. (c).....	36
Slate River at Highway 652, near Arvonnia, Va. (c).....	36
James River at U.S. Highway 15 bridge, at Brems Bluff, Va. (c).....	37
Rivanna River near Columbia, Va. (c).....	38
James River at Columbia, Va. (c).....	38
Willis River at Flanagan Mills, Va. (c).....	39
James River at Cartersville, Va. (ct).....	40
James River near Richmond, Va. (ct).....	42
Appomattox River:	
Holiday Creek near Andersonville, Va. (c).....	44
<b>CHOWAN RIVER BASIN</b>	
Chowan River near Eure, N.C. (ct).....	44
Meherrin River at Emporia, Va. (ct).....	46
<b>ROANOKE RIVER BASIN</b>	
Roanoke (Staunton) River at Altavista, Va. (ct).....	47
Roanoke (Staunton) River at Randolph, Va. (cts).....	49
Dan River at Paces, Va. (cs).....	53
North Hyco Creek near Leasburg, N.C. (t).....	55
South Hyco Creek:	
Double Creek near Roseville, N.C. (t).....	56
South Hyco Creek near Roseville, N.C. (t).....	56
Hyco River at McGehees Mill, N.C. (ct).....	57
<b>PAMLICO RIVER BASIN</b>	
Tar River at Tarboro, N.C. (cs).....	58
Durham Creek at Edward, N.C. (t).....	59
<b>CAPE FEAR RIVER BASIN</b>	
Cape Fear River near Navassa, N.C. (ct).....	59
Cape Fear River at Royster, N.C. (ct).....	61
<b>PEE DEE RIVER BASIN</b>	
Yadkin River at Yadkin College, N.C. (cs).....	62
South Yadkin River near Mocksville, N.C. (s).....	65
Pee Dee River at Peedee, S.C. (cts).....	65
Lynches River at Effingham, N.C. (t).....	69
<b>SANTEE RIVER BASIN</b>	
Catawba River (head of Santee River):	
Wateree River (continuation of Catawba River):	
Broad River:	
North Tyger River near Fairmont, S.C. (t).....	70
Enoree River near Enoree, S.C. (t).....	71

## SOUTH ATLANTIC SLOPE AND EASTERN GULF OF MEXICO BASINS--Continued

Santee River BASIN--Continued	Page
Santee River near Fort Motte, S.C. (cs).....	72
Santee River near Pineville, S.C. (cs).....	73
COOPER RIVER BASIN	
Cooper River:	
West Branch Cooper River:	
Lake Moultrie tailrace near Moncks Corner, S.C. (cs).....	74
EDISTO RIVER BASIN	
Edisto River near Givhans, S.C. (cts).....	75
SAVANNAH RIVER BASIN	
Chattooga River (head of Savannah River) near Clayton, Ga. (c).....	79
Tallulah River near Clayton, Ga. (ct).....	80
Keowee River near Jocassee, S.C. (t).....	81
Savannah River near Iva, S.C. (c).....	81
Savannah River at Augusta, Ga. (c).....	82
Upper Three Runs near New Ellenton, S.C. (cs).....	83
Savannah River at Burtons Ferry Bridge, near Milhaven, Ga. (ct).....	84
Savannah River near Clio, Ga. (c).....	85
OGEECHEE RIVER BASIN	
Ogeechee River near Eden, Ga. (c).....	86
Canoochee River near Claxton, Ga.(c).....	87
ALTAMAHA RIVER BASIN	
South River (head of Altamaha River):	
Ocmulgee River (continuation of South River):	
Falling Creek near Juliette, Ga. (ct).....	88
Ocmulgee River at Macon, Ga. (c).....	89
Ocmulgee River at Lumber City, Ga. (c).....	90
Middle Oconee River near Athens, Ga. (c).....	90
Oconee River at Milledgeville, Ga. (c).....	91
Oconee River at Dublin, Ga. (c).....	92
Altamaha River:	
Ohoopsee River near Reidsville, Ga. (c).....	92
Altamaha River at Doctortown, Ga. (ct).....	93
SATILLA RIVER BASIN	
Satilla River near Waycross, Ga. (c).....	96
Satilla River at Atkinson, Ga. (c). .....	96
ST. MARYS RIVER BASIN	
St. Marys River near MacClenny, Fla. (ct).....	97
St. Marys River near Gross, Fla. (c).....	100
ST. JOHNS RIVER BASIN	
St. Johns River:	
Jane Green Creek near Deer Park, Fla. (ct).....	101
St. Johns River near Cocoa, Fla. (ct).....	103
St. Johns River near Christmas, Fla. (ct).....	104
Wekiva River near Sanford, Fla. (ct).....	106
Oklawaha River at Moss Bluff, Fla. (ct).....	107
Oklawaha River at State Highway 19, near Salt Springs, Fla. (ct)..	108
LAKE OKEECHOBEE AND THE EVERGLADES	
Lake Okeechobee:	
Fisheating Creek at Palmdale, Fla. (ct).....	110
Kissimmee River at S-65E, near Okeechobee, Fla. (ct).....	112
Canal 41A above S-68 at Lake Istokpoga, near Lake Placid, Fla.	
(ct).....	113
Taylor Creek above Okeechobee, Fla. (ct).....	115
St. Lucie River:	
South Fork St. Lucie River:	
St. Lucie Canal at lock, near Stuart, Fla. (ct).....	116
West Palm Beach Canal at HGS-5, at Canal Point, Fla. (ct).....	117
Hillsboro Canal below HGS 4, near South Bay, Fla. (ct).....	119
North New River Canal below HGS-4, near South Bay, Fla. (ct).....	120
Diversion from Conservation Area 2 to Conservation Area 3 at S-143,	
near Andytown, Fla. (c).....	122
North New River Canal near Fort Lauderdale, Fla. (ct).....	123
North New River Canal at State Road 7, near Fort Lauderdale, Fla.	
(c).....	124
Miami Canal at HGS-3 and S-3, at Lake Harbor, Fla. (ct).....	125
Miami Canal at S-31, near Miami, Fla. (ct).....	126
Miami Canal East of levee 30, near Miami, Fla. (ct).....	127
Tamiami Canal above S-12B, near Miami, Fla. (ct).....	129

SOUTH ATLANTIC SLOPE AND EASTERN GULF OF MEXICO BASINS--Continued	
LAKE OKEECHOBEE AND THE EVERGLADES--Continued	Page
Caloosahatchee Canal (head of Caloosahatchee River) at Moore Haven, Fla. (ct).....	130
PEACE RIVER BASIN	
Peace River at Zolfo Springs, Fla. (ct).....	131
Peace River at Arcadia, Fla. (ct).....	135
COASTAL BASINS BETWEEN MYAKKA RIVER AND HILLSBOROUGH RIVER	
Manatee River near Myakka Head, Fla. (ct).....	139
Little Manatee River near Wimauma, Fla. (c).....	140
North Prong Alafia River at Keysville, Fla. (ct).....	141
South Prong Alafia River near Lithia, Fla. (ct).....	142
Alafia River at Lithia, Fla. (ct).....	143
Lithia Springs near Lithia, Fla. (ct).....	147
HILLSBOROUGH RIVER BASIN	
Hillsborough River:	
Big ditch near Crystal Springs, Fla. (ct).....	147
Cypress Creek near San Antonio, Fla. (ct).....	150
COASTAL BASINS BETWEEN HILLSBOROUGH RIVER AND WITHLACOOCHEE RIVER	
Rocky Creek near Sulphur Springs, Fla. (ct).....	151
Lake Tarpon near Tarpon Springs, Fla. (ct).....	152
Anclote River near Elfers, Fla. (ct).....	154
Pithlachascotee River near Richey Lakes, Fla. (ct).....	155
WITHLACOOCHEE RIVER BASIN	
Withlacoochee River near Eva, Fla. (ct).....	156
Withlacoochee River near Dade City, Fla. (ct).....	158
Little Withlacoochee River at Rerdell, Fla. (ct).....	159
Withlacoochee River near Holder, Fla. (ct).....	160
Rainbow Springs near Dunnellon, Fla. (ct).....	161
SUWANNEE RIVER BASIN	
Suwannee River at Fargo, Ga. (c).....	162
Alapaha River at Statenville, Ga. (c).....	163
Withlacoochee River near Pinetta, Fla. (ct).....	164
Suwannee River at Branford, Fla. (ct).....	165
Santa Fe River at Worthington Springs, Fla. (ct).....	167
COASTAL BASINS BETWEEN AUCILLA RIVER AND OCHLOCKONEE RIVER	
Sopchoppy River near Sopchoppy, Fla. (ct).....	169
OCHLOCKONEE RIVER BASIN	
Ochlockonee River near Thomasville, Ga. (c).....	170
Ochlockonee River near Havana, Fla. (ct).....	171
APALACHICOLA RIVER BASIN	
Chattahoochee River (head of Apalachicola River) near Leaf, Ga. (c).	172
Chattahoochee River near Cornelia, Ga. (c).....	173
Chattahoochee River near Roswell, Ga. (t).....	174
Sweetwater Creek near Austell, Ga. (c).....	175
Chattahoochee River near Fairburn, Ga. (c).....	175
Chattahoochee River near Whitesburg, Ga. (c).....	176
Chattahoochee River at West Point, Ga. (c).....	177
Chattahoochee River at Columbus, Ga. (c).....	178
Chattahoochee River at Alaga, Ala. (c).....	179
Flint River near Griffin, Ga. (c).....	180
Flint River near Culloden, Ga. (c).....	180
Flint River at Montezuma, Ga. (c).....	181
Flint River at Albany, Ga. (c).....	182
Flint River at Newton, Ga. (c).....	183
Flint River at Bainbridge, Ga. (c).....	183
Apalachicola River at Chattahoochee, Fla. (ct).....	184
Chipola River near Altha, Fla. (ct).....	186
CHOCTAWHATCHEE RIVER BASIN	
Choctawhatchee River near Newton, Ala. (t).....	187
Choctawhatchee River at Caryville, Fla. (ct).....	188
YELLOW RIVER BASIN	
Yellow River at Milligan, Fla. (ct).....	189
BLACKWATER RIVER BASIN	
Blackwater River near Bradley, Ala. (t).....	190
ESCAMBIA RIVER BASIN	
Conecuh River (head of Escambia River) at Brantley, Ala. (ct).....	191
MOBILE RIVER BASIN	
Cartecay River (head of Mobile River):	
Coosawattee River (continuation of Cartecay River) near Ellijay, Ga. (c).....	193

SOUTH ATLANTIC SLOPE AND EASTERN GULF OF MEXICO BASINS--Continued	
MOBILE RIVER BASIN--Continued	Page
Coosawatee River at Carters, Ga. (c).....	194
Conasauga River:	
Holly Creek near Chatsworth, Ga. (c).....	195
Conasauga River at Tilton, Ga. (c).....	195
Oostanaula River (continuation of Coosawatee River) at Resaca, Ga. (t).....	196
Oostanaula River near Rome, Ga. (c).....	197
Etowah River at Canton, Ga. (c).....	197
Etowah River at Allatoona Dam, above Cartersville, Ga. (c).....	198
Etowah River at Rome, Ga. (c).....	199
Coosa River (continuation of Oostanaula River) near Rome, Ga. (c)...	199
Cedar Creek near Cedartown, Ga. (c) .....	200
Chattooga River at Summerville, Ga. (c).....	201
Coosa River at Gadsden, Ala. (t).....	201
Coosa River at Childersburg, Ala. (ct).....	202
Alabama River (continuation of Coosa River) at Selma, Ala. (ct).....	203
Limestone Creek near Monroeville, Ala. (t).....	205
Alabama River at Claiborne, Ala. (ct).....	206
Tombigbee River at Gainesville, Ala. (ct).....	210
Mulberry Fork:	
Sipsey Fork near Grayson, Ala. (cs).....	210
Black Warrior River at Tuscaloosa, Ala. (ct).....	212
Tombigbee River near Jackson, Ala. (ct).....	216
PASCAGOULA RIVER BASIN	
Pascagoula River at Merrill, Miss. (c).....	220
Cypress Creek near Janice, Miss. (cs).....	220
PEARL RIVER BASIN	
Pearl River:	
Tuscolameta Creek at Walnut Grove, Miss. (c).....	221
Pearl River near Monticello, Miss. (ct).....	222
Pearl River near Bogalusa, La. (cts).....	224
Bogue Chitto near Tylertown, Miss. (c).....	229
Analyses of samples collected at partial-record stations.....	230
Miscellaneous analyses of lakes and streams in south Atlantic slope and eastern Gulf of Mexico basins.....	254

# QUALITY OF SURFACE WATERS OF THE UNITED STATES, 1968

## PART 2

### INTRODUCTION

The water-quality investigations of the United States Geological Survey are concerned with chemical and physical characteristics of surface- and ground-water supplies of the Nation. The data herein deal with the amounts of matter in solution and in suspension in streams, and represent that portion of the National Water Data System collected by the U.S. Geological Survey in cooperation with State, municipal, and other Federal agencies.

The records of chemical analysis, water temperature, and suspended sediment of surface waters given in this volume serve as a basis for determining the suitability of waters for various uses. The flow and water quality of a stream are related to variations in rainfall and other forms of precipitation. In general, lower concentrations of dissolved solids may be expected during periods of high flow than during periods of low flow. Conversely, the suspended solids in some streams may change materially with relatively small variations in flow, whereas for other streams the quality of the water may remain relatively uniform throughout large ranges in discharge.

The Geological Survey has published annual records of chemical quality, water temperature, and suspended sediment since 1941. The records prior to 1948 were published each year in a single volume for the entire country, and in two volumes in 1948 and in 1949. From 1950 to 1958, the records were published in 4 volumes; from 1959 to 1963 in 5 volumes; from 1964 to 1967 in 6 volumes; and since 1968 in 10 volumes. The drainage basins covered by the 10 volumes are shown in Figure 1. The shaded area in Figure 1 represents the section of the country covered in this volume for the water year 1968 (October 1, 1967 to September 30, 1968).

To meet interim requirements, water-quality records have been released by the Geological Survey in annual reports, beginning with the 1964 water year, by State. These reports are entitled, "Water Resources Data for (State), Part 2. Water Quality Records." Distribution of these reports is limited and primarily for local needs. Any revisions or corrections found necessary to the records published in these annual State reports have been made and published in this volume without reference.

The records herein are listed by drainage basins in a downstream direction along the main stream. All stations on a tributary entering above a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. In the list of water-quality stations in the front of this volume, the rank of the tributaries is indicated by an indentation. Each indentation represents one rank.

As an added means of identification, a station number has been assigned for each stream location where regular measurements of water quantity or quality have been made. The numbers have been assigned to conform with the standard downstream order of listing gaging stations. The numbering system consists of an 8-digit number, such as 01127500. The first 2 digits, "01" identifies the Part or hydrologic region used by the Geological Survey for reporting hydrologic data. The next 6 digits is the

station number which represents the location of the station in the standard downstream order within each of the 16 parts (Fig. 1). The complete number (01127500) appears just to the left of the station name. The assigned numbers are in numerical order but are not consecutive. Gaps are left in the numbers to allow for new stations that may be established.

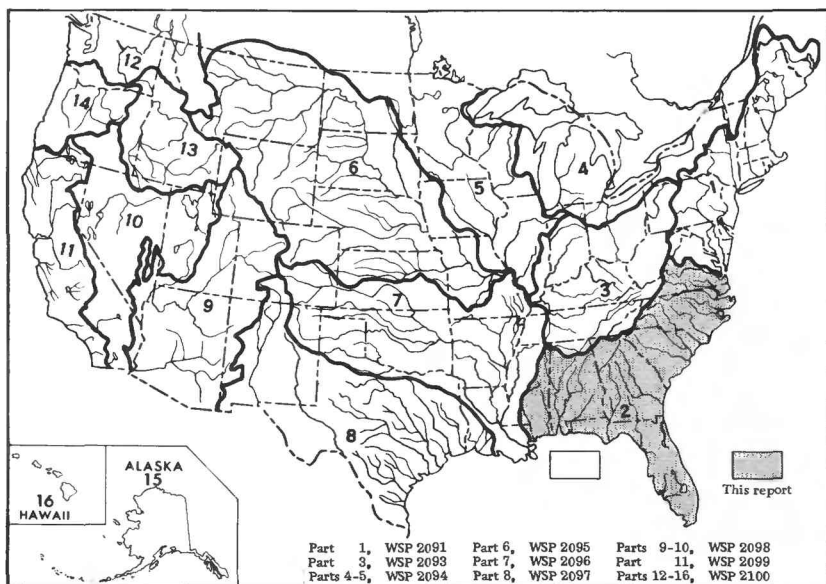


Figure 1.--Map of the United States showing basins covered by the 10 water-supply papers on quality of surface waters in 1968. The shaded part represents the section of the country covered by this volume; the unshaded part represents the section of the country covered by other water-supply papers.

Descriptive statements are given for each sampling station where chemical analyses, temperature measurements, or sediment determinations have been made. These statements include location of the station, drainage area, periods of records available, extremes of dissolved solids, hardness, specific conductance, temperature, sediment loads, and other pertinent data. Records of discharge of the streams at or near the sampling station are included in most tables of analyses.

During the water year ending September 30, 1968, the Geological Survey maintained 166 stations on 109 streams for the study of chemical and physical characteristics of surface water. Samples were collected daily and monthly at 145 of these locations for chemical-quality studies. Samples also were collected less frequently at many other points. Water temperatures were measured continuously at 27 and daily at 58 stations. All surface water samples collected and analyzed during the year have not been included. Single analyses made of daily samples before compositing have not been reported. Specific conductance is determined and reported for almost all daily samples.

At chemical-quality stations where data are continuously recorded at the stream site (monitors), the records consist of daily maximum, minimum, and mean values for each constituent measured. More detailed records (hourly values) may be obtained by writing the district office listed under Division of Work on page 21.



Quantities of suspended sediment are reported for 12 stations during the year ending September 30, 1968. Sediment samples were collected one or more times daily at most stations, depending on the rate of flow and changes in stage of the stream. Particle-size distributions of sediments were determined at 3 stations.

Some of the stations for which data are published in this volume are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

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

International Hydrological Decade (IHD) River Stations provide a general index of runoff and materials in the water balance (discharge of water, and dissolved and transported solids) of the world. In the United States, IHD Stations provide indices of runoff and the general distribution of water in the principal river basins of the conterminous United States and Alaska.

Irrigation network stations are water-quality stations located at or near certain streamflow gaging stations west of the main stem of the Mississippi River. Data collected at these stations are used to evaluate the chemical quality of surface waters used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to water year 1966, these data were published in the annual water-supply paper series, "Quality of Surface Water for Irrigation, Western States."

Pesticide program is a network of regularly sampled water-quality stations where additional monthly samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Radiochemical program is a network of regularly sampled water-quality stations where additional samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

## COLLECTION AND EXAMINATION OF DATA

Quality of water stations usually are located at or near points on streams where streamflow is measured by the U.S. Geological Survey. The concentration of solutes and sediments at different locations in the stream-cross section may vary widely with different rates of water discharge depending on the source of the material and the turbulence and mixing of the stream. In general, the distribution of sediment in a stream section is much more variable than the distribution of solutes. It is necessary to sample some streams at several verticals across the channel and especially for sediment, to uniformly traverse the depth of flow. These measurements require special sampling equipment to adequately integrate the vertical and lateral variability of the concentration in the section. These procedures yield a velocity-weighted mean concentration for the section.

The near uniformly dispersed ions of the solute load move with the velocity of the transporting water. Accordingly, the mean section concentration of solutes determined from samples is a precise measure of the total solute load. The mean section concentration obtained from suspended sediment samples is a less precise measure of the total sediment load, because the sediment samplers do not traverse the bottom 0.3 foot of the sampling vertical where the concentration of suspended sediment is greatest and because a significant part of the coarser particles in many streams move in essentially continuous contact with the bed and are not represented in the suspended sediment sample. Hence, the computed sediment loads presented

in this report are usually less than the total sediment loads. For most streams the difference between the computed and total sediment loads will be small, in the order of a few percent.

### CHEMICAL QUALITY

The methods of collecting and compositing water samples for chemical analysis are described by Rainwater and Thatcher (1960) and by Brown, Skougstad, and Fishman (1970). No single method of compositing samples is applicable to all problems related to the study of water quality. Composites are made on the basis of dissolved-solids content as indicated by measurements of conductivity of daily samples, supplemented by other information such as chloride content, river stage, weather conditions and other background information of the stream.

### TEMPERATURE

Daily water temperatures were measured at most of the stations at the time samples were collected for chemical quality or sediment content. So far as practicable, the water temperatures were taken at about the same time each day. Large streams have a small diurnal temperature change while small, 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 continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day, and the monthly averages.

### SEDIMENT

In general, suspended-sediment samples were collected daily with depth-integrating samplers (U.S. Inter-Agency, 1963). At some stations, samples were collected at a fixed sampling point at one vertical in the cross section. Depth-integrated samples were collected periodically at three or more verticals in the cross section to determine the cross-sectional distribution of the concentration of suspended sediment with respect to that at the daily sampling vertical. In streams where transverse distribution of sediment concentration ranged widely, samples were taken at two or more verticals to define more accurately the average concentration of the cross section. During periods of high or rapidly changing flow, samples generally were taken several times a day and, in some instances, hourly.

Sediment concentrations were determined by filtration-evaporation method. At many stations the daily mean concentration for some days was obtained by plotting the velocity-weighted instantaneous concentrations on the gage-height chart. The plotted concentrations, adjusted if necessary, for cross-sectional distribution were connected or averaged by continuous curves to obtain a concentration graph. This graph represented the estimated velocity-weighted concentration at any time, and for most periods daily mean concentrations were determined from the graph. The days were divided into shorter intervals when the concentration or water discharge were changing rapidly. During some periods of minor variation in concentration, the average concentration of the samples was used as the daily mean concentration. During extended periods of relatively uniform concentration and flow, samples for a number of days were composited to obtain average concentrations and average daily loads for each period. (See Expression of Results, p. 5.)

For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge. The estimates were further guided by precipitation records and sediment discharge at other stations in the same or adjacent basins.

In many instances where there were no observations for several days, the suspended-sediment loads for individual days were not estimated, because numerous factors influencing the quantities of transported sediment made it very difficult to make accurate estimates for individual days. However, estimated loads of suspended sediment for missing days in an otherwise continuous period of sampling have been included in monthly and annual totals in order to provide a complete record. For some streams, samples were collected weekly, monthly, or less frequently, and only rates of sediment discharge at the time of sampling are shown.

In addition to the records of quantities of suspended sediment transported, records of particle sizes of sediment are included. The particle sizes of suspended sediment for many of the stations, and the particle sizes of the bed material for some of the stations were determined intermittently.

The size of particles carried in suspension by streams commonly ranges from colloids (finer than about 0.24 microns) to coarse sand (2.0 mm). The common methods of particle-size analysis cannot accommodate such a wide range. Hence, it was necessary to separate most samples into two parts, that part coarser than 0.062 mm and that part finer than 0.062 mm. The separations were made by sieve or by fall velocity technique. The coarse fractions were classified by sieve separation or by visual-accumulation tube (U.S. Inter-Agency, 1957). The fine fractions were classified by the pipet method (Kilmer and Alexander, 1949) or the bottom withdrawal tube method (U.S. Inter-Agency, 1943).

## EXPRESSION OF RESULTS

The quantities of solute concentrations analyzed in the laboratory are measured in milligrams per liter. Milligrams per liter (mg/l, MG/L) is a unit which represents the weight of solute per unit volume of water.

Milliequivalents per liter are not reported but they can be converted easily from milligrams per liter data. A milliequivalent per liter (me/l) is one thousandth of a gram equivalent weight of a constituent. Chemical equivalence in milliequivalents per liter can be obtained by (a) dividing the concentration in milligrams per liter by the combining weight of that ion, or (b) by multiplying the concentration (in mg/l) by the reciprocals of the combining weights. Table 1 below, lists the reciprocals of the combining atomic weights based on carbon-12 (International Union of Pure and Applied Chemistry, 1961).

Table 1.--Factors for conversion of chemical constituents in milligrams per liter to milliequivalents per liter

Ion	Multi- ply by	Ion	Multi- ply by
Aluminum ( $\text{Al}^{+3}$ ) . . . . .	0.11119	Iodide ( $\text{I}^{-1}$ ) . . . . .	0.00788
Ammonia as $\text{NH}^{+1}$ . . . . .	.05544	Iron ( $\text{Fe}^{+3}$ ) . . . . .	.05372
Arsenic ( $\text{As}^{+3}$ ) . . . . .	.04004	Lead ( $\text{Pb}^{+2}$ ) . . . . .	.00965
Barium ( $\text{Ba}^{+2}$ ) . . . . .	.01456	Lithium ( $\text{Li}^{+1}$ ) . . . . .	.14411
Bicarbonate ( $\text{HCO}_3^{-1}$ ) . . . . .	.01639	Magnesium ( $\text{Mg}^{+2}$ ) . . . . .	.08226
Bromide ( $\text{Br}^{-1}$ ) . . . . .	.01251	Manganese ( $\text{Mn}^{+2}$ ) . . . . .	.03640
Cadmium ( $\text{Cd}^{+2}$ ) . . . . .	.01779	Mercury ( $\text{Hg}^{+2}$ ) . . . . .	.00997
Calcium ( $\text{Ca}^{+2}$ ) . . . . .	.04990	Nickel ( $\text{Ni}^{+2}$ ) . . . . .	.03406
Carbonate ( $\text{CO}_3^{-2}$ ) . . . . .	.03333	Nitrate ( $\text{NO}_3^{-1}$ ) . . . . .	.01613
Chloride ( $\text{Cl}^{-1}$ ) . . . . .	.02821	Nitrite ( $\text{NO}_2^{-1}$ ) . . . . .	.02174
Chromium ( $\text{Cr}^{+6}$ ) . . . . .	.11539	Phosphate ( $\text{PO}_4^{-3}$ ) . . . . .	.03159
Cobalt ( $\text{Co}^{+2}$ ) . . . . .	.03394	Potassium ( $\text{K}^{+1}$ ) . . . . .	.02557
Copper ( $\text{Cu}^{+2}$ ) . . . . .	.03148	Sodium ( $\text{Na}^{+1}$ ) . . . . .	.04350
Cyanide ( $\text{CN}^{-1}$ ) . . . . .	.03844	Strontium ( $\text{Sr}^{+2}$ ) . . . . .	.02283
Fluoride ( $\text{F}^{-1}$ ) . . . . .	.05264	Sulfate ( $\text{SO}_4^{-2}$ ) . . . . .	.02082
Hydrogen ( $\text{H}^{+1}$ ) . . . . .	.99209	Sulfide ( $\text{S}^{-2}$ ) . . . . .	.06238
Hydroxide ( $\text{OH}^{-1}$ ) . . . . .	.05880	Zinc ( $\text{Zn}^{+2}$ ) . . . . .	.03060

The hardness of water is conventionally expressed in all water analyses in terms of an equivalent quantity of calcium carbonate. Such a procedure is required because hardness is caused by several different cations, present in variable proportions. It should be remembered that hardness is an expression in conventional terms of a property of water. The actual presence of calcium carbonate in the concentration given is not to be assumed. The hardness caused by calcium and magnesium (and other cations if significant) equivalent to the carbonate and bicarbonate is called carbonate hardness; the hardness in excess of this quantity is called noncarbonate hardness. Hardness or alkalinity values expressed in milligrams per liter as calcium carbonate may be converted to milliequivalents per liter by dividing by 50.

The value usually reported as dissolved solids is the residue on evaporation after drying at 180°C for 1 hour. For some waters, particularly those containing moderately large quantities of soluble salts, the value reported is calculated from the quantities of the various determined constituents using the carbonate equivalent of the reported bicarbonate. The calculated sum of the constituents may be given instead of or in addition to the residue. In the analyses of most waters used for irrigation, the quantity of dissolved solids is given in tons per acre-foot as well as in milligrams per liter.

Specific conductance is given for most analyses and was determined by means of a conductance bridge and using a standard potassium chloride solution as reference. Specific conductance values are expressed in micromhos per centimeter at 25°C. Specific conductance in micromhos is 1 million times the reciprocal of specific resistance at 25°C. Specific resistance is the resistance in ohms of a column of water 1 centimeter long and 1 square centimeter in cross section.

The discharge of the streams is reported in cubic feet per second (see Streamflow, p. 19) and the temperature in degrees Celsius (°C). Color is expressed in units of the platinum-cobalt scale proposed by Hazen (1892). A unit of color is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Hydrogen-ion concentration is expressed in terms of pH units. By definition the pH value of a solution is the negative logarithm of the concentration of gram ions of hydrogen.

An average of analyses for the water year is given for most daily sampling stations. Most of these averages are arithmetical, time-weighted, or discharge-weighted; when analyses during a year are all on 10-day composites of daily samples with no missing days, the arithmetical and time-weighted averages are equivalent. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the river each day for the water year. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all of the water passing a given station during the year. A discharge-weighted average is computed by multiplying the discharge for the 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. For most streams, discharge-weighted averages are lower than arithmetical averages because at times of high discharge the rivers generally have low concentrations of dissolved solids.

A program for computing these averages by digital computer was instituted in the 1962 water year. This program extended computations to include averages for pH values expressed in terms of hydrogen ion and averages for the concentration of individual constituents expressed in tons per day. Concentrations in tons per day are computed the same as daily sediment loads.

The concentration of sediment in milligrams per liter is computed as 1,000,000 times the ratio of the weight of sediment to the weight of water-sediment mixture. Daily sediment loads are expressed in tons per day and except for subdivided days, are usually obtained by multiplying daily mean sediment concentrations in mg/l by the daily mean discharge in cubic feet per second, and the conversion factor, normally 0.0027.

For those days when the published sediment discharge value differs from the value computed, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method.

Particle-size analyses are expressed in percentages of material finer than classified sizes (in millimeters). The size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Clay:	Smaller than 0.004 mm
Silt:	Between 0.004 and 0.062 mm
Sand:	Between 0.062 and 2.0 mm
Gravel:	Between 2.0 and 64.0 mm

The particle-size distributions given in this report are not necessarily representative of the particle sizes of sediment in transport in the natural stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis of the silt and clay.

Prior to the 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit ( $^{\circ}\text{F}$ ). In October 1967, the U.S. Geological Survey began to use the metric system; data for chemical constituents and concentrations of suspended sediment are now reported in milligrams per liter (mg/l) and water temperatures are given in degrees Celsius (centigrade,  $^{\circ}\text{C}$ ). In waters with a density of 1.000 g/ml (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. (See table 2 on page 8.) To convert temperature in degrees Celsius to degrees Fahrenheit see table 3 on page 8.

## COMPOSITION OF SURFACE WATERS

All natural waters contain dissolved mineral matter. The quantity of dissolved mineral matter in a natural water depends primarily on the type of rocks or soils with which the water has been in contact and the length of time of contact. Ground water is generally more highly mineralized than surface runoff because it remains in contact with the rocks and soils for much longer periods. Some streams are fed by both surface runoff and ground water from springs or seeps. Such streams reflect the chemical character of their concentrated underground sources during dry periods and are more dilute during periods of heavy rainfall. The dissolved-solids content in a river is frequently increased by drainage from mines or oil fields, by the addition of industrial or municipal wastes, or--in irrigated regions--by drainage from irrigated lands.

The mineral constituents and physical properties of natural waters reported in the tables of analyses include those that have a practical bearing on water use. The results of analyses generally include silica, iron, calcium, magnesium, sodium, potassium (or sodium and potassium together calculated as sodium), carbonate, bicarbonate, sulfate, chloride, fluoride, nitrate, boron, pH, dissolved solids, and specific conductance. Aluminum, manganese, color, acidity, dissolved oxygen, and other dissolved constituents and physical properties are reported for certain streams. Microbiologic (coliforms) and organic components (pesticides, total organic carbon) and minor elements (arsenic, cobalt, cadmium, copper, lead, mercury, nickel, strontium, zinc, etc.) are determined occasionally for some streams in connection with specific problems and the results are reported. The source and significance of the different constituents and properties of natural waters are discussed in the following paragraphs. The constituents are arranged in the order that they appear in the tables.

### MINERAL CONSTITUENTS IN SOLUTION

#### Silica ( $\text{SiO}_2$ )

Silica is dissolved from practically all rocks. Some natural surface waters contain less than 5 milligrams per liter of silica and few contain more than 50 mg/l, but the more common range is from 10 to 30 mg/l. Silica affects the usefulness of a water because it contributes to the formation of boiler scale; it usually is removed from

Table 2.--Factors for conversion of sediment concentration in parts per million to milligrams per liter \*

[ All values calculated to three significant figures]

Range of concentration (ppm)	Multi- ply by	Range of concentration (ppm)	Multi- ply by
0 - 15,900	1.00	322,000 - 341,000	1.26
16,000 - 46,800	1.02	342,000 - 361,000	1.28
46,900 - 76,500	1.04	362,000 - 380,000	1.30
76,600 - 105,000	1.06	381,000 - 399,000	1.32
106,000 - 133,000	1.08	400,000 - 416,000	1.34
134,000 - 159,000	1.10	417,000 - 434,000	1.36
160,000 - 185,000	1.12	435,000 - 451,000	1.38
186,000 - 210,000	1.14	452,000 - 467,000	1.40
211,000 - 233,000	1.16	468,000 - 483,000	1.42
234,000 - 256,000	1.18	484,000 - 498,000	1.44
257,000 - 279,000	1.20	499,000 - 514,000	1.46
280,000 - 300,000	1.22	515,000 - 528,000	1.48
301,000 - 321,000	1.24	529,000 - 542,000	1.50

\* Based on water density of 1.000 g/ml and sediment density of 2.65 g/cc.

Table 3.--Degrees Celsius (°C) to degrees Fahrenheit (°F)\*  
(Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

\*C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.

feed water for high-pressure boilers. Silica also forms troublesome deposits on the blades of steam turbines. However, it is not physiologically significant to humans, livestock, or fish, nor is it of importance in irrigation water.

#### Aluminum (Al)

Aluminum is usually present only in negligible quantities in natural waters except in areas where the waters have been in contact with the more soluble rocks of high aluminum content such as bauxite and certain shales. Acid waters often contain large amounts of aluminum. It may be troublesome in feed waters where it tends to be deposited as a scale on boiler tubes.

#### Iron (Fe)

Iron is dissolved from many rocks and soils. On exposure to air, normal basic waters that contain more than 1 mg/l of iron soon become turbid with the insoluble reddish ferric compounds produced by oxidation. Surface waters, therefore, seldom contain as much as 1 mg/l of dissolved iron, although some acid waters carry large quantities of iron in solution. Iron causes reddish-brown stains on porcelain or enameled ware and fixtures and on fabrics washed in the water. Concentrations of more than 0.3 mg/l are not acceptable for drinking and culinary use. (U.S. Public Health Service, 1962).

#### Manganese (Mn)

Manganese is dissolved in appreciable quantities from rocks in some sections of the country. It resembles iron in its chemical behavior and in its occurrence in natural waters. However, manganese in rocks is less abundant than iron. As a result the concentration of manganese is much less than that of iron and is not regularly determined in many areas. It is especially objectionable in water used in laundry work and in textile processing. Concentrations as low as 0.2 mg/l may cause a dark-brown or black stain on fabrics and porcelain fixtures. Appreciable quantities of manganese are often found in waters containing objectionable quantities of iron.

#### Calcium (Ca)

Calcium is dissolved from almost all rocks and soils, but the highest concentrations are usually found in waters that have been in contact with limestone, dolomite, and gypsum. Calcium and magnesium make water hard and are largely responsible for the formation of boiler scale. Most waters associated with granite or silicious sands contain less than 10 mg/l of calcium; waters in areas where rocks are composed of dolomite and limestone contain from 30 to 100 mg/l; and waters that have come in contact with deposits of gypsum may contain several hundred mg/l.

#### Magnesium (Mg)

Magnesium is dissolved from many rocks, particularly from dolomitic rocks. Its effect in water is similar to that of calcium. The magnesium in soft waters may amount to only 1 or 2 mg/l, but water in areas that contain large quantities of dolomite or other magnesium-bearing rocks may contain from 20 to 100 mg/l or more of magnesium.

#### Sodium and potassium (Na and K)

Sodium and potassium are dissolved from practically all rocks. Sodium is the predominant cation in some of the more highly mineralized waters found in the western United States. Natural waters that contain only 3 or 4 mg/l of the two together are likely to carry almost as much potassium as sodium. As the total quantity of these constituents increases, the proportion of sodium becomes much greater. Moderate quantities of sodium and potassium have little effect on the usefulness of the water for most purposes, but waters that carry more than 50 to 100 mg/l of the two may require careful operation of steam boilers to prevent foaming. More highly mineralized waters that contain a large proportion of sodium salts may be unsatisfactory for irrigation.

#### Bicarbonate, carbonate and hydroxide ( $\text{HCO}_3$ , $\text{CO}_3$ , OH)

Bicarbonate, carbonate, or hydroxide is sometimes reported as alkalinity. The alkalinity of a water is produced by anions or molecular species of weak acids which

are not fully dissociated above a pH of 4.5. Since the major causes of alkalinity in most natural waters are carbonate and bicarbonate ions dissolved from carbonate rocks, the results are usually reported in terms of these constituents. Although alkalinity may suggest the presence of definite amounts of carbonate, bicarbonate or hydroxide, there are other ions that contribute to alkalinity such as silicates, phosphates, borates, possibly fluoride, and certain organic anions which may occur in colored waters. The significance of alkalinity to the domestic, agricultural, and industrial user is usually dependent upon the nature of the cations (Ca, Mg, Na, K) associated with it. Alkalinity in moderate amounts does not adversely affect most users.

Hydroxide may occur in water that has been softened by the lime process. Its presence in streams usually can be taken as an indication of contamination and does not represent the natural chemical character of the water.

#### Sulfide (S)

Sulfide occurs in water as a result of bacterial and chemical processes. It usually is present as hydrogen sulfide. Variable amounts may be found in waters receiving sewage and (or) industrial wastes, such as from tanneries, papermills, chemical plants, and gas manufacturing work (California State Water Quality Control Board, 1963).

Waters containing sulfides, especially hydrogen sulfide, may be considered undesirable because of their odor. The U.S. Public Health Service (1962) states that water on carriers subject to Federal quarantine regulations shall have no objectionable taste or odor. The toxicity to aquatic organisms differs significantly with the species and the nature of associated ions.

#### Sulfate ( $\text{SO}_4$ )

Sulfate is dissolved from most sedimentary rocks. Large quantities may be derived from beds of gypsum, sodium sulfate deposits, and some types of shale. Organic material containing sulfur adds sulfate to the water as a phase of the sulfur cycle. In natural waters, concentrations range from a few mg/l to several thousand mg/l.

The U.S. Public Health Service (1962) recommends that the sulfate concentration not exceed 250 mg/l in drinking and culinary water on carriers subject to Federal quarantine regulations.

Sulfates are less toxic to crops than chlorides.

#### Chloride (Cl)

Chloride is dissolved from rock materials in all parts of the country. Surface waters in the humid regions are usually low in chloride, whereas streams in arid or semiarid regions may contain several hundred mg/l of chloride leached from soils and rocks, especially where the streams receive return drainage from irrigated lands or are affected by ground-water-inflow carrying appreciable quantities of chloride. Large quantities of chloride in water that contains a high content of calcium and magnesium increases the water's corrosiveness. The presence of abnormal concentrations of chloride and nitrogenous material together in water supplies indicates possible pollution by human or animal wastes.

#### Fluoride (F)

Fluoride has been reported as being present in some rocks to about the same extent as chloride. However, the quantity of fluoride in natural surface waters is ordinarily very small compared to that of chloride. Investigations have proved that fluoride concentrations of about 0.6 to 1.7 mg/l reduced the incidence of dental caries and that concentrations greater than 1.7 mg/l also protect the teeth from cavities but cause an undesirable black stain (Durfor and Becker, 1964, p. 20). Public Health Service, 1962, states, "When fluoride is naturally present in drinking water, the concentration should not average more than the appropriate upper control limit (0.6 to 1.7 mg/l). Presence of fluoride in average concentration greater than two times the optimum values shall constitute grounds for rejection of the supply." Concentration higher than the stated limits may cause mottled enamel in teeth, endemic cumulative fluorosis, and skeletal effects.



### Bromide (Br)

Bromine is a very minor element in the earth's crust and is normally present in surface waters in only minute quantities. Measurable amounts may be found in some streams that receive industrial wastes, and some natural brines may contain rather high concentrations. It resembles chloride in that it tends to be concentrated in sea water.

### Iodide (I)

Iodide is considerably less abundant both in rocks and water than bromine. Measurable amounts may be found in some streams that receive industrial wastes, and some natural brines may contain rather high concentrations. It occurs in sea water to the extent of less than 1 mg/l. Rankama and Sahama (1950) report iodide present in rainwater to the extent of 0.001 to 0.003 mg/l and in river water in about the same amount. Few waters will contain over 2.0 mg/l.

### Nitrogen, organic (N)

Organic nitrogen includes all nitrogenous organic compounds, such as amino acid, polypeptides, and proteins. It is present naturally in all surface waters as the result of inflow of nitrogenous products from the watershed and the normal biological life of the stream.

Organic nitrogen is not pathologically significant but is sometimes an indication of pollution.

### Nitrogen, ammonia ( $\text{NH}_4$ , as N)

Ammonia nitrogen includes nitrogen in the forms of  $\text{NH}_3$  and  $\text{NH}_4^{+1}$ . As a component of the nitrogen cycle, it is often present in water, but usually in only small amounts. More than 0.1 mg/l usually indicates organic pollution (Rudolph, 1931).

There is no evidence that ammonia nitrogen in water is physiologically significant to man or livestock. Fish, however, cannot tolerate large quantities.

### Nitrite ( $\text{NO}_2$ )

Nitrite is unstable in the presence of oxygen and is, therefore, absent or present in only minute quantities in most natural waters under aerobic condition. The presence of nitrite in water is sometimes an indication of organic pollution.

Recommended tolerances of nitrite in domestic water supplies differ widely. A generally accepted limit is 2 mg/l, but as little as 0.1 mg/l has been proposed (California State Water Quality Control Board, 1963).

### Nitrate ( $\text{NO}_3$ )

Nitrate in water is considered a final oxidation product of nitrogenous material and may indicate contamination by sewage or other organic matter, such as agricultural runoff, or industrial waste. The quantities of nitrate present in surface waters are generally less than 5 mg/l (as  $\text{NO}_3$ ) and have no effect on the value of the water for ordinary uses.

It has been reported that as much as 2 mg/l of nitrate in boiler water tends to decrease intercrystalline cracking of boiler steel. Studies made by Faucett and Miller (1946), Waring (1949) and by the National Research Council (Maxcy, 1950) concluded that drinking water containing nitrates in excess of 44 mg/l (as  $\text{NO}_3$ ) should be regarded as unsafe for infant feeding. U.S. Public Health Service (1962) sets 45 mg/l as the upper limit.

### Phosphorus (P)

Phosphorus is an essential element in the growth of plants and animals. It occurs in water as organically bound phosphorus or as phosphate ( $\text{PO}_4$ ). Some sources that contribute nitrate, such as organic wastes are also important sources of phosphorus. The addition of phosphates in water treatment constitutes a possible source although the dosage is usually small. In some areas phosphate fertilizers may yield some phosphorus to water. Another important source is the use of phosphates in detergents.

Domestic and industrial sewage effluents often contain considerable amounts of phosphorus. Concentrations of phosphorus found in water are not reported to be toxic to man, animal, or fish. However, the element can stimulate the growth of algae, which may cause taste and odor problems in public water treatment and esthetic problems in recreation areas.

#### Boron (B)

Boron in small quantities has been found essential for plant growth, but irrigation water containing more than 1 mg/l boron is detrimental to citrus and other boron-sensitive crops. Boron is reported in Survey analyses of surface waters in arid and semiarid regions of the Southwest and West where irrigation is practiced or contemplated, but few of the surface waters analyzed have harmful concentrations of boron.

#### Dissolved solids

The reported quantity of dissolved solids--the residue on evaporation--consists mainly of the dissolved mineral constituents in the water. It may also contain some organic matter and water of crystallization. Waters with less than 500 mg/l of dissolved solids are usually satisfactory for domestic and some industrial uses. Water containing several thousand mg/l of dissolved solids are sometimes successfully used for irrigation where practices permit the removal of soluble salts through the application of large volumes of water on well-drained lands, but generally water containing more than about 2,000 mg/l is considered to be unsuitable for long-term irrigation under average conditions.

#### Arsenic (As)

Arsenic compounds are present naturally in some waters, but the occurrence of quantities detrimental to health is rare. Weed killers, insecticides and many industrial effluents contain arsenic and are potential sources of water pollution. The U.S. Public Health Service (1962) states that the concentration of arsenic in drinking water on carriers subject to Federal quarantine regulations should not exceed 0.01 mg/l and concentrations in excess of 0.05 mg/l are grounds for rejection of the supply. Concentrations of 2-4 mg of arsenic per liter are reported not to interfere with the self-purification of streams (Rudolfs and others, 1944) but concentrations in excess of 15 mg/l may be harmful to some fish.

#### Barium (Ba)

Barium may replace potassium in some of the igneous rock minerals, especially feldspar, and barium sulfate (barite) is a common barium mineral of secondary origin. Only traces of barium are present in surface water and sea water. Because natural water contains sulfate, barium will dissolve only in trace amounts. Barium sometimes occurs in brines from oil-well wastes.

The U.S. Public Health Service (1962) states that water containing concentrations of barium in excess of 1.0 mg/l is not suitable for drinking and culinary use because of the serious toxic effects of barium on heart, blood vessels, and nerves.

#### Cadmium (Cd)

This element is found in nature largely in the form of the sulfide, and as an impurity in zinc-lead ores. The carbonate and hydroxide are not very soluble in water and will precipitate at high pH values; the chloride, nitrate, and sulfate are soluble and remain in solution under most pH conditions.

The extensive use of the element and its salts in metallurgy, electroplating, ceramics, and photography make it a frequent component of industrial wastes.

The U.S. Public Health Service (1962) established as grounds for rejection any water containing more than 0.01 mg/l of cadmium.

#### Chromium (Cr)

Few if any waters contain chromium from natural sources. Natural waters can probably contain only traces of chromium as a cation unless the pH is very low. When

chromium is present in water, it is usually the result of pollution by industrial wastes. Concentrations of more than 0.05 mg/l of chromium in the hexavalent form constitute grounds for rejection of a water for domestic use on the basis of the standards of the U.S. Public Health Service (1962).

#### Cobalt (Co)

Cobalt occurs in nature in the minerals smaltite,  $(\text{Co}, \text{Ni})\text{As}_2$ , and cobaltite,  $\text{CoAsS}$ . Alluvial deposits and soils derived from shales often contain cobalt in the form of phosphate or sulfate, but other soil types may be markedly deficient in cobalt in any form (Bear, 1955). Ruminant animals may be adversely affected by grazing on land deficient in cobalt.

For domestic water supplies, no maximum safe concentration has been established.

#### Copper (Cu)

Copper is a fairly common trace constituent of natural water. Small amounts may be introduced into water by solution of copper and brass water pipes and other copper-bearing equipment in contact with the water, or from copper salts added to control algae in open reservoirs. Copper salts such as the sulfate and chloride are highly soluble in waters with a low pH but in water of normal alkalinity the salts hydrolyze and the copper may be precipitated. In the normal pH range of natural water containing carbon dioxide, the copper might be precipitated as carbonate. The oxidized portions of sulfide-copper ore bodies contain other copper compounds. The presence of copper in mine water is common.

Copper imparts a disagreeable metallic taste to water. As little as 1.5 mg/l can usually be detected, and 5 mg/l can render the water unpalatable. Copper is not considered to be a cumulative systemic poison like lead and mercury; most copper ingested is excreted by the body and very little is retained. The pathological effects of copper are controversial, but it is generally believed very unlikely that humans could unknowingly ingest toxic quantities from palatable drinking water. The U.S. Public Health Service (1962) recommends that copper should not exceed 1.0 mg/l in drinking and culinary water.

#### Lead (Pb)

Lead seldom occurs in most natural waters, but industrial mine and smelter effluents may contain relatively large amounts of lead which contaminates the streams. Also, atmospheric contamination which is produced from several types of engine exhausts has considerably increased the availability of this element for solution in rainfall, resulting in contamination of lead in streams (Hem, 1970).

Lead in the form of sulfate is reported to be soluble in water to the extent of 31 mg/l (Seidell, 1940) at 25°C. In natural water this concentration would not be approached, however, since a pH of less than 4.5 would probably be required to prevent formation of lead hydroxide and carbonate. It is reported (Pleissner, 1907) that at 18°C water free of carbon dioxide will dissolve the equivalent of 1.4 mg/l of lead and the solubility is increased nearly four fold by the presence of 2.8 mg/l of carbon dioxide in the solution. Presence of other ions may increase the solubility of lead. Reports on human tolerance of lead vary widely, but the U.S. Public Health Service (1962) states that lead shall not exceed 0.05 mg/l in drinking and culinary water on carriers subject to Federal quarantine regulations.

#### Lithium (Li)

Lithium is present in some minerals but is not abundant in nature. From available information, most fresh waters rarely contain lithium of concentrations exceeding 10 mg/l, but larger quantities may be present in brines and thermal waters. Lithium is used in metallurgy, medicinal water, and some types of glass and storage batteries. Waste from such industries may contain lithium.

#### Mercury (Hg)

Mercury is the only common metal which is liquid at ordinary temperatures. It occurs free in nature but its chief source is cinnabar ( $\text{HgS}$ ). Mercury compounds are virulent culminative poisons which are readily absorbed through the respiratory and gastrointestinal tracts or through unbroken skin (Weast and Selby, 1967).

The main source of high concentrations of dissolved mercury in water, in the form of highly toxic methyl mercury,  $\text{Hg}(\text{CH}_3)_2$ , comes from waste discharges from industrial users of mercury and from mercurial pesticides.

Fish from streams and lakes subject to mercury contamination have been found to contain amounts of mercury above the safe limits for food consumption. The U.S. Public Health Service has proposed that the upper limits of dissolved mercury in water for domestic use should not exceed 5 micrograms per liter (0.005 mg/l).

#### Nickel (Ni)

Elemental nickel seldom occurs in nature, but its compounds are found in many ores and minerals. Many nickel salts are quite soluble and may contribute to water pollution, especially when discharged from metal-plating industries.

The U.S. Public Health Service (1962) has not placed a limit on nickel concentration in public water supplies.

#### Strontium (Sr)

Strontium is a typical alkaline-earth element and is similar chemically to calcium. Strontium may be present in natural water in amounts up to a few mg/l much more frequently than the available data indicate. In most surface water the amount of strontium is small in proportion to calcium. However, in sea water the ratio of strontium to calcium is 1:30.

#### Zinc (Zn)

Zinc is abundant in rocks and ores but is only a minor constituent in natural water because the free metal and its oxides are only sparingly soluble. In most alkaline surface waters it is present only in trace quantities, but more may be present in acid water. Chlorides and sulfates of zinc are highly soluble. Zinc is used in many commercial products, and industrial wastes may contain large amounts.

Zinc in water does not cause serious effects on health, but produces undesirable esthetic effects. The U.S. Public Health Service (1962, p. 55) recommends that the zinc content not exceed 5 mg/l in drinking and culinary water.

### PROPERTIES AND CHARACTERISTICS OF WATER

#### Dissolved solids

Theoretically, dissolved solids are anhydrous residues of the dissolved substances in water.

All solutes affect the chemical and physical properties of the water and result in an osmotic pressure. Water with several thousand mg/l of dissolved solids is generally not palatable, although those accustomed to highly mineralized water may complain that less concentrated water tastes flat. The U.S. Public Health Service (1962) recommends that the maximum concentration of dissolved solids not exceed 500 mg/l in drinking and culinary water on carriers subject to Federal quarantine regulations, but permits 1,000 mg/l if no better water is available. Reported livestock tolerances range from 3,000 mg/l (Colorado Agricultural Experiment Station, 1943) to 15,000 mg/l (Heller, 1933).

Industrial tolerances for dissolved solids differ widely, but few industrial processes will permit more than 1,000 mg/l. The Geological Survey classifies the degree of salinity of these more mineralized bodies of water as follows (Swenson and Baldwin, 1965):

Dissolved solids (mg/l)	Degree of salinity
Less than 1,000 . . . . .	Nonsaline.
1,000 to 3,000 . . . . .	Slightly saline.
3,000 to 10,000. . . . .	Moderately saline.
10,000 to 35,000 . . . . .	Very saline.

## Hardness

Hardness is the characteristic of water that receives the most attention in industrial and domestic use. It is commonly recognized by the increased quantity of soap required to produce lather. The use of hard water is also objectionable because it contributes to the formation of scale in boilers, water heaters, radiators, and pipes, with the resultant decrease in rate of heat transfer, possibility of boiler failure, and loss of flow.

Hardness is caused almost entirely by compounds of calcium and magnesium. Other constituents--such as iron, manganese, aluminum, barium, strontium, and free acid--also cause hardness, although they usually are not present in quantities large enough to have any appreciable effect.

Generally, bicarbonate and carbonate determine the proportions of "carbonate" hardness of water. Carbonate hardness is the amount of hardness chemically equivalent to the amount of bicarbonate and carbonate in solution. Carbonate hardness is approximately equal to the amount of hardness that is removed from water by boiling.

Noncarbonate hardness is the difference between the hardness calculated from the total amount of calcium and magnesium in solution and the carbonate hardness. The scale formed at high temperatures by the evaporation of water containing non-carbonate hardness commonly is tough, heat resistant, and difficult to remove.

Although many people talk about soft water and hard water, there has been no firm line of demarcation. Water that seems hard to an easterner may seem soft to a westerner. In this report hardness of water is classified as follows:

Hardness range (calcium carbonate in mg/l)	Hardness description
0-60 . . . . .	Soft
61-120 . . . . .	Moderately hard
121-180 . . . . .	Hard
More than 180 . . . . .	Very hard

Durfor and Becker, 1964, p. 23-27.

## Acidity ( $H^{+1}$ )

The use of the terms acidity and alkalinity is widespread in the literature of water analysis and is a cause of confusion to those who are more accustomed to seeing a pH of 7.0 used as a neutral point. Acidity of a natural water represents the content of free carbon dioxide and other uncombined gases, organic acids and salts of strong acids and weak bases that hydrolyze to give hydrogen ions. Sulfates of iron and aluminum in mine and industrial wastes are common sources of acidity.

## Sodium adsorption ratio (SAR)

The term "sodium adsorption ratio (SAR)" was introduced by the U.S. Salinity Laboratory Staff (1954). It is a ratio expressing the relative activity of sodium ions in exchange reaction with soil and is an index of the sodium or alkali hazard to the soil. Sodium adsorption ratio is expressed by the equation:

$$SAR = \frac{Na^{+}}{\sqrt{\frac{Ca^{++} + Mg^{++}}{2}}}$$

where the concentrations of the ions are expressed in milliequivalents per liter.

Waters are divided into four classes with respect to sodium or alkali hazard: low, medium, high, and very high, depending upon the SAR and the specific conductance. At a conductance of 100 micromhos per centimeter the dividing points are at SAR values of 10, 18, and 26, but at 5,000 micromhos the corresponding dividing points are SAR values of approximately 2.5, 6.5, and 11. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Specific conductance (micromhos per centimeter at 25°C)

Specific conductance is a convenient, rapid determination used to estimate the amount of dissolved solids in water. It is a measure of the ability of water to transmit a small electrical current (see p. 6). The more dissolved solids in water that can transmit electricity the greater the specific conductance of the water. Commonly, the amount of dissolved solids (in mg/l) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well and it may even vary in the same source with changes in the composition of the water (Durfor and Becker, 1964 p. 27-29).

Specific conductance of most waters in the eastern United States is less than 1,000 micromhos, but in the arid western parts of the country, a specific conductance of more than 1,000 micromhos is common.

Hydrogen-ion concentration (pH)

Hydrogen-ion concentration is expressed in terms of pH units (see p. 6). The values of pH often are used as a measure of the solvent power of water or as an indicator of the chemical behavior certain solutions may have toward rock minerals.

The degree of acidity or alkalinity of water, as indicated by the hydrogen-ion concentration, expressed as pH, is related to the corrosive properties of water and is useful in determining the proper treatment for coagulation that may be necessary at water-treatment plants. A pH of 7.0 indicates that the water is neither acid nor alkaline. pH readings progressively lower than 7.0 denote increasing acidity and those progressively higher than 7.0 denote increasing alkalinity. The pH of most natural surface waters ranges between 6 and 8. Some alkaline surface waters have pH values greater than 8.0 and waters containing free mineral acid or organic matter usually have pH values less than 4.5.

The investigator who utilizes pH data in his interpretations of water analyses should be careful to place pH values in their proper perspective.

Temperature

Temperature is an important factor in properly determining the quality of water. This is very evident for such a direct use as an industrial coolant. Temperature is also important, but perhaps not so evident, for its indirect influence upon aquatic biota, concentrations of dissolved gases, and distribution of chemical solutes in lakes and reservoirs as a consequence of thermal stratification and variation.

Surface water temperatures tend to change seasonally and daily with air temperatures, except for the outflow of large springs. Superimposed upon the annual temperature cycle is a daily fluctuation of temperature which is greater in warm seasons than in cold and greater in sunny periods than with a cloud cover. Natural warming is due mainly to absorption of a solar radiation by the water and secondarily to transfer of heat from the air. Condensation of water vapor at the water surface is reported to furnish measurable quantities of heat. Heat loss takes place largely through radiation, with further losses through evaporation and conduction to the air and to the streambed. Thus the temperature of a small stream generally reaches a maximum in mid- to late afternoon due to solar heating and reaches a minimum from early to mid-morning after nocturnal radiation.

Color

In water analysis the term "color" refers to the appearance of water that is free from suspended solids. Many turbid waters that appear yellow, red, or brown when viewed in the stream show very little color after the suspended matter has been removed. The yellow-to-brown color of some waters is usually caused by organic matter extracted from leaves, roots, and other organic substances in the ground. In some areas objectionable color in water results from industrial wastes and sewage. Clear deep water may appear blue as the result of a scattering of sunlight by the water molecules. Water for domestic use and some industrial uses should be free from any perceptible color. A color less than 15 units generally passes unnoticed (U.S. Public Health Service, 1962). Some swamp waters have natural color in excess of 300 units.

The extent to which a water is colored by material in solution is commonly reported as a part of a water analysis because a significant color in water may indicate the presence of organic material that may have some bearing on the dissolved solids content. Color in water is expressed in terms of units between 0 and 500 or more based on the above standard (see p. 6 ).

#### Turbidity

Turbidity is the optical property of a suspension with reference to the extent to which the penetration of light is inhibited by the presence of insoluble material. Turbidity is a function of both the concentration and particle size of the suspended material. It is reported in terms of mg/l of silica or Jackson turbidity units (JTU).

Turbid water is abrasive in pipes, pumps, and turbine blades. Although turbidity does not directly measure the safety of drinking water, it is related to the consumer's acceptance of the water. A level of 5 JTU of turbidity becomes objectionable to a considerable number of people (U.S. Public Health, 1962).

#### Density at 20°C

Density is the mass of any substance per unit volume at a designated standard temperature. Density should not be confused with specific gravity, which is a mass-to-mass relation.

The density value has some use in industries that utilize brines and whose basic unit of concentration of dissolved material is density. Density is used primarily by the chemist in the computation of milligrams per liter for highly mineralized waters.

#### Dissolved oxygen (DO)

Oxygen dissolved in water is derived from the air and from the oxygen given off in the process of photosynthesis by aquatic plants.

Dissolved oxygen in water has no adverse physiological effect and actually increases the palatability of the water. No minimum concentration of dissolved oxygen required to support fish life has been listed because the oxygen requirements of fish vary with the species and age, with temperature, and with concentration of other substances in the water.

Dissolved oxygen is responsible for many of the corrosion problems in industry.

#### Chemical Oxygen demand (COD)

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

#### Biochemical oxygen demand (BOD)

Biochemical oxygen demand is a measure of the oxygen required to oxidize the organic material usable as a source of food by aerobic organisms.

#### Biological and microbiological information

Biological and microbiological information is an important aspect in the evaluation of water quality. The kinds and amount of aquatic biota in a stream or lake can be useful "indicators" of environmental conditions and particularly of the degree of pollution of water with organic wastes (Doudoroff and Warren, 1957). Biological information includes qualitative and quantitative analyses of plankton, bottom organisms, and particulate inorganic and amorphous matter present. Microbiological information includes quantitative identification of certain bacteriological indicator organisms.

Chlorophyll (plant pigment).--The concentrations of photosynthetic pigments in natural waters vary with time and changing aquatic conditions. Concentrations of chlorophyll *a*, *b*, and *c* (spectrophotometric determination) are used to estimate the biomass and photosynthetic capacity of phytoplankton (blue-green algae). Ratios between the different forms of chlorophyll are thought to indicate the taxonomic composition or the physiological state of the algae community (Slack, 1970).

**Plankton.**--Plankton is the floating (or weakly swimming) animal or plant life in a body of water consisting, chiefly of minute plants (as diatoms and blue-green algae) and of minute animals (as protozoan, entomostracans and various larvae). Algae are known to cause tastes and odor in water supply.

Plankton population in water is obtained by count level (the number of organisms per milliliter).

**Coliform bacteria.**--Coliform organisms have long been used as indicators of sewage pollution, although the group includes bacteria from diverse natural sources and habitats. For example, members of the coliform group are indigenous to soil and vegetation as well as feces. Standards for drinking-water quality provide definite minimums as to number of samples examined and the maximum number of coliform organisms allowable per 100 milliliters (ml) of finished water (Slack, 1970). The coliform population of water is determined either by the most probable number (MPN), or by the incubation membrane filter method, a direct count of coliform colonies per plate.

**Fecal coliform bacteria.**--Fecal coliform is that portion of the coliform group that is present in the intestinal tract of warm-blooded animals and is capable of producing gas from lactos in suitable culture medium at 44.5° C. Organisms from other sources generally cannot produce gas in this manner. (American Public Health Assoc. and others, 1965). Thus, in general, the presence of fecal coliform organisms indicates recent pollution (Slack, 1970).

#### Organics

**Phenols.**--Phenolic material in water resources is invariably the result of pollution. Phenols are widely used as disinfectants and in the synthesis of many organic compounds. Waste products from oil refineries, coke areas, and chemical plants may contain high concentrations. Fortunately, phenols decompose in the presence of oxygen and micro-organisms, and their persistence downstream from point of entry is relatively short lived. The rate of decomposition is dependent on the environment.

Very low concentrations impart such a disagreeable taste to water that it is highly improbable that harmful amounts could be consumed unknowingly. Reported thresholds of detection of taste and odor range from 0.001 to 0.01 mg/l.

**Cyanide (CN).**--Cyanides are not found free in nature, but may become contaminants of water supplies by means of effluents from gasworks, coke ovens, steel mills, electroplating processes, and chemical industries. In natural streams and organic soils, simple cyanides are decomposed by bacterial action, whereas the metal-cyanide complexes are often quite stable and more resistant to degradation. The U.S. Public Health Service (1962) set a recommended limit of 0.01 mg cyanide per liter and a mandatory limit of 0.2 mg/l for waters subject to interstate regulations.

**Detergents (methylene blue active substance, MBAS).**--Anionic surfactants in detergents resist chemical oxidation and biological breakdown. Soap is an example of this class and the synthetic members are sodium salts of organic sulfonates or sulfates (Rose, 1966). Their persistence in water over long periods of time contributes to pollution of both ground water and surface water. Some of the effects produced from detergent pollution are unpleasant taste, odor, and foaming (Wayman, and others, 1962). Although the physiological implications of MBAS to human beings is unknown, prolonged ingestion of this material by rats is believed to be nontoxic (Paynter, 1960). The U.S. Public Health Service (1962) recommends that MBAS should not exceed 0.5 mg/l in drinking and culinary waters.

**Total Organic Carbon (TOC).**--Total organic carbon is a measure of the organically related carbonaceous content of water. It includes all natural and manmade organic compounds which are combustible at a temperature of 950° C.

#### Sediment

Fluvial sediment generally is regarded as that material which is transported by, suspended in, or deposited by water. Suspended sediment is that part which remains in suspension in water owing to the upward components of turbulent currents or by



colloidal suspension. Much fluvial sediment results from the natural process of erosion, which in turn is part of the geologic cycle of rock transformation. This natural process may be accelerated by agricultural practices. Sediment also is contributed by a number of industrial and construction activities. In certain sections, waste materials from mining, logging, oil-field, and other industrial operations introduce large quantities of suspended material.

The quantity of sediment, transported or available for transportation, is affected by climatic conditions, form or nature of precipitation, character of the solid mantle, plant cover, topography, and land use. The mode and rate of sediment erosion, transport, and deposition is determined largely by the size distribution of the particles or more precisely by the fall velocities of the particles in water. Sediment particles in the sand size range (larger than 0.062 mm) do not appear to be affected by flocculation or dispersion resulting from the mineral constituents in solution. In contrast, the sedimentation diameter of clay and silt particles in suspension may vary considerably from point to point in a stream or reservoir, depending on the mineral matter in solution and in suspension and the degree of turbulence present. The size of sediment particles in transport at any point depends on the type of erodible and soluble material in the drainage area, the degree of flocculation present, time in transport, and characteristics of the transporting flow. The flow characteristics include velocity of water, turbulence, and the depth, width, and roughness of the channel. As a result of these variable characteristics, the size of particles transported, as well as the total sediment load, is in constant adjustment with the characteristics and physical features of the stream and drainage area.

## STREAMFLOW

Most of the records of stream discharge, used in conjunction with the chemical analyses and in the computation of sediment loads in this volume, are published in the Geological Survey water-supply paper series, "Surface Water Supply of the United States, 1966-70." The discharge reported for a composite sample is usually the average of daily mean discharges for the composite period. The discharges reported in the tables of single analyses are either daily mean discharges or discharges obtained at the time samples were collected and computed from a stage-discharge relation or from a discharge measurement.

## PUBLICATIONS

Reports giving records of chemical quality and temperatures of surface waters and suspended-sediment loads of streams in the area covered by this volume for the water years 1941-68, are listed below:

Numbers of water-supply papers containing records for Part 2, 1941-68

Year	WSP	Year	WSP	Year	WSP	Year	WSP
1941	942	1948	1132	1955	1400	1962	1941
1942	950	1949	1162	1956	1450	1963	1947
1943	970	1950	1186	1957	1520	1964	1954
1944	1022	1951	1197	1958	1571	1965	1961
1945	1030	1952	1250	1959	1641	1966	1991
1946	1050	1953	1290	1960	1741	1967	2011
1947	1102	1954	1350	1961	1881	1968	2092

Geological Survey reports containing chemical quality, temperature, and sediment data obtained before 1941 are listed on next page. Publications dealing largely with the quality of ground-water supplies and only incidentally covering the chemical composition of surface waters are not included. Publications that are out of print are preceded by an asterisk.

## PROFESSIONAL PAPER

- \*135. Composition of river and lake waters of the United States, 1924.

## BULLETINS

- \*479. The geochemical interpretation of water analyses, 1911.  
770. The data of geochemistry, 1924.

## WATER-SUPPLY PAPERS

- \*108. Quality of water in the Susquehanna River drainage basin, with an introductory chapter on physiographic features, 1904.  
\*161. Quality of water in the upper Ohio River basin and at Erie, Pa., 1906.  
\*193. The quality of surface waters in Minnesota, 1907.  
\*236. The quality of surface waters in the United States, Part 1, Analyses of waters east of the one hundredth meridian, 1909.  
\*237. The quality of the surface waters of California, 1910.  
\*239. The quality of surface waters of Illinois, 1910.  
\*273. Quality of the water supplies of Kansas, with a preliminary report on stream pollution by mine waters in southeastern Kansas, 1911.  
\*274. Some stream waters of the western United States, with chapters on sediment carried by the Rio Grande and the industrial application of water analyses, 1911.  
\*339. Quality of the surface waters of Washington, 1914.  
\*363. Quality of the surface waters of Oregon, 1914.  
\*418. Mineral springs of Alaska, with a chapter on the chemical character of some surface waters of Alaska, 1917.  
\*596-B. Quality of water of Colorado River in 1925-26, 1928.  
\*596-D. Quality of water of Pecos River in Texas, 1928.  
\*596-E. Quality of the surface waters of New Jersey, 1928.  
\*636-A. Quality of water of the Colorado River in 1926-28, 1930.  
\*636-B. Suspended matter in the Colorado River in 1925-28, 1930.  
\*638-D. Quality of water of the Colorado River in 1928-30, 1932.  
\*839. Quality of water of the Rio Grande basin above Fort Quitman, Tex., 1938.  
\*889-E. Chemical character of surface water of Georgia, 1944.  
\*998. Suspended sediment in the Colorado River, 1925-41, 1947.  
1048. Discharge and sediment loads in the Boise River drainage basin, Idaho, 1939-40, 1948.  
1110-C. Quality of water of Conchas Reservoir, New Mexico, 1939-49, 1952.

Many of the reports listed are available for consultation in the larger public and institutional libraries. Copies of Geological Survey publications still in print may be purchased at a nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, who will, upon request, furnish lists giving prices.

## COOPERATION

Many Municipal, State and Federal agencies assisted in collecting records for these quality-of-water investigations. Many of the investigations were supported by funds appropriated directly to the U.S. Geological Survey. The State, local, and Federal agencies that cooperated in these quality-of-water investigations are listed below:

Alabama--Geological Survey of Alabama, P. E. LaMoreaux, State geologist;  
Tennessee Valley Authority.

Florida--Florida Bureau of Geology; Central and Southern Florida Flood Control District; Reedy Creek Improvement District; Southwest Florida Water Management

District; West Coast Inland Navigation District; West Orange Water Conservation Association; Counties of Broward, Collier, Dade, Duval, Hillsborough, Lake, Lee, Manatee, Marion, Okaloosa, Orange, Polk, Volusia; Cities of Boca Raton, Fort Lauderdale, Miami, Miami Beach, Pompano Beach; Corps of Engineers, U.S. Army; Fish and Wildlife Service, U.S. Department of the Interior; National Park Service, U.S. Department of the Interior.

Georgia--Georgia Water Quality Control Board, R. S. Howard, Jr., executive secretary; Georgia Department of Mines, Mining and Geology, Dr. A. S. Furcron, director.

Louisiana--Louisiana Department of Public Works, C. H. Downs, director.

Mississippi--Mississippi Board of Water Commissioners, J. W. Pepper, water engineer; Mississippi Research and Development Center, Dr. K. C. Wagner, director; Mississippi State Highway Department, T. C. Robins, director; Pearl River Valley Water Supply District, Eugene Thomas, general manager; Harrison County Board of Supervisors, Laz Quave, president; Harrison County Development Commission, Tommy Munroe, president; Jackson County Port Authority, A. S. Johnson, director; Jackson County Board of Supervisors, E. A. Khayat, president; city of Jackson, A. C. Thompson, mayor; Corps of Engineers, U.S. Army, Vicksburg and Mobile Districts; National Aeronautics and Space Administration; U.S. Soil Conservation Service, U.S. Department of Agriculture.

North Carolina--North Carolina Department of Water Resources, G. E. Pickett, director; Soil Conservation Service, U.S. Department of Agriculture.

South Carolina--South Carolina State Development Board, J. D. Little, Jr., director; South Carolina Public Service Authority, J. B. Thomason, general manager.

Virginia--Virginia Department of Conservation and Economic Development, M. M. Sutherland, director; Corps of Engineers, U.S. Army.

## DIVISION OF WORK

The quality-of-water work was performed by the Water Resources Division of the Geological Survey, E. L. Hendricks, chief hydrologist, and under the direction of the district chiefs listed in the preface.

Correspondence regarding the records in this report or any additional information should be directed to the district chief of the appropriate Geological Survey-Water Resources Division district office as indicated in the following table.

State	District Office	Address
Alabama	Tuscaloosa 35486	P. O. Box V University
Florida	Tallahassee 32304	903 W. Tennessee St.
Georgia	Atlanta 30309	Room 301 900 Peachtree St., N.E.
Louisiana	Baton Rouge 70806	6554 Florida Blvd.
Mississippi	Jackson 39206	430 Bounds St.
North Carolina	Raleigh 27602	P. O. Box 2857 Room 440, Century Sta. P.O. Bldg.
South Carolina	Columbia 29201	Suite 200 2001 Assembly St.
Virginia	Richmond 23220	Room 304 200 West Grace St.

## LITERATURE CITED

- Bartsch, A. F., 1948, Biological aspects of stream pollution: *Sewage Works Jour.*, vol. 20, p. 292-302.
- Bear, F. E., 1955, *Chemistry of the soil*: New York, Reinhold Co., 373 p.
- Brown, Eugene, Skougstad, M. W., and Fishman, M. J., 1970, Methods for collection and analysis of water samples for dissolved minerals and gases: *U.S. Geol. Survey Techniques of Water-Resources Inv.*, book 5, chap. A1, 160 p.
- California State Water Quality Control Board, 1963, *Water quality criteria*: Pub. 3-A, p. 226.
- Colorado Agriculture Experiment Station, 1943, Mineral tolerances in livestock drinking water: 56th Ann. Rept.
- Doudoroff, Peter and Warren, C. E., 1957, Biological indices of water pollution with special reference to fish populations; Biological problems in water pollution: Cincinnati, U.S. Pub. Health Service, Robert A. Taft Sanitary Eng. Cent., p. 144-163.
- Durfor, C. N. and Becker, E., 1964, Public water supplies of the 100 largest cities in the United States; 1962: *U.S. Geol. Survey Water-Supply Paper* 1812, p. 20.
- Faucett, R. L. and Miller, H. C., 1946, Methemoglobinemia occurring in infants fed milk diluted with well waters of high nitrate content: *Jour. Pediatrics*, v. 29, p. 593.
- Hazen, Allen, 1892, A new color standard for natural waters: *Am. Chem. Jour.* v. 12, p. 427-428.
- Heller, V. G., 1933, The effect of saline and alkaline waters on domestic animals: *Oklahoma Agr. Mech. Coll. Expt. Sta. Bull.* 217.
- Hem, J. D., 1970, Study and interpretation of chemical characteristics of natural water, revised edition: *U.S. Geol. Survey Water-Supply Paper* 1473, 363 p.
- International Union of Pure and Applied Chemistry, 1961, Table of Atomic weights based on carbon-12: *Chem. and Eng. News*, v. 39, no. 42, Nov. 20, 1961, p. 43.
- Kilmer, V. J. and Alexander, L. T., 1949, Methods of making mechanical analyses of soils: *Soil Sci.*, v. 68, p. 15-24.
- Lane, E. W., and others, 1947, Report of the Subcommittee on sediment terminology: *Am. Geophys. Union Trans.*, v. 28, no. 6, p. 936-938.
- Magistad, O. C., and Christiansen, J. E., 1944, Saline Soils, their nature and management: *U.S. Dept., Agriculture Circ.* 707, p. 8-9.
- Maxcy, K. F., 1950, Report on the relation of nitrate concentrations in well waters to the occurrence of methemoglobinemia: *Natl. Research Council, Bull. Sanitary Eng. and Environment*, App. D., p. 271.
- Paynter, O. E., 1960, The chronic toxicity of dodecylbenzene sodium sulfonate: *U.S. Public Health Conference on Physiological Aspects of Water Quality Proc.*, Washington, D.C., Sept. 8-9, 1960, p. 175-179.
- Pleissner, M., 1907, Über die Löslichkeit einiger Bleiverbindungen in wasser: *Arb. Kais. Gesundheitsamt*, v. 26, p. 384-443.
- Rainwater, F. H., and Thatcher, L. L., 1960, Methods for collection and analysis of water samples: *U.S. Geol. Survey Water-Supply Paper* 1454, 301 p.
- Rankama, K., and Sahama, T. G., 1950, *Geochemistry*: Chicago Univ. Press, Chicago, Ill., p. 767.
- Riffenburg, H. B., 1925, Chemical character of ground waters of the northern Great Plains: *U.S. Geol. Survey Water-Supply Paper* 560-B, p. 31-52.
- Rose, Arthur and Elizabeth, 1966, *The condensed chemical dictionary*: Reinhold Pub. Corp., New York, 7th ed., p. 285.
- Rudolfs, Willem, and others, 1944, Critical review of the literature of 1943: *Sewage Works Jour.*, v. 16, p. 222.
- Rudolph, Z., 1931, Principles of the determination of the physical and chemical standards of water for drinking, industrial, and domestic purposes: *Water Pollution Abs.* 4 (March).
- Seidell, Atherton, 1940, Solubilities of inorganic and metal organic compounds, 3d ed., v. 1, D. van Nostrand, New York, p. 1409.
- Slack, K. V., 1970, Selected interim procedures for biological and microbiological investigations: *U.S. Geol. Survey, Water Resources Division*, preliminary rept. by WRD Committee on Biology and Microbiology, 80 p. (open file).

- Swenson, H. A. and Baldwin, H. L., 1965, A Primer on water quality: Washington, U.F. Govt. Printing Office, 27 p.
- U.S. Inter-Agency Committee on Water Resources, Subcommittee on Sedimentation, A study of methods used in measurement and analysis of sediment loads in streams. Published by the St. Anthony Falls Hydraulic Laboratory, Minneapolis, Minn.
- \_\_\_\_\_, 1943, A study of new methods of size analysis of suspended-sediment samplers, Rept. 7.
- \_\_\_\_\_, 1957, The development and calibration of visual-accumulation tube: Rept. 11.
- \_\_\_\_\_, 1957, Some fundamentals of particle-size analysis: Rept. 12.
- \_\_\_\_\_, 1959, Federal Inter-agency sedimentation instruments and reports: Rept. AA.
- \_\_\_\_\_, 1963, Determinations of fluvial sediment discharge: Rept. 14.
- U.S. Public Health Service, 1962, Drinking water standards: U.S. Dept. Health, Education, and Welfare, Public Health Service: Pub. no. 956.
- U.S. Salinity Laboratory Staff, 1954, Diagnosis and improvement of saline and alkali soils: U.S. Dept. Agriculture, Agriculture Handb. 60, p. 1-160.
- Waring, F. H., 1949, Significance of nitrates in water supplies: Am. Water Works Assoc. Jour., v. 41, no. 2., p. 147-150.
- Wayman, C. H., 1962, Limitations of the methylene blue method for ABS determinations: U.S. Geol. Survey, Prof. Paper 450-B, art. 49, p. B117-B120.
- Wayman, C. H., Robertson, J. B., and Page, H. G., 1962, Foaming characteristics of synthetic-detergent solutions: U.S. Geol. Survey, Prof. Paper 450D, art. 178, p. D198.
- Weast, R. C. and Selby, S. M., 1967, Handbook of chemistry and physics: Cleveland, The Chem. Rubber Co., 48th ed., p. B-120-121.

## WATER-QUALITY STATIONS IN DOWNSTREAM ORDER

## PART 2. SOUTH ATLANTIC SLOPE AND EASTERN GULF OF MEXICO BASINS

## JAMES RIVER BASIN

02012500 JACKSON RIVER AT FALLING SPRING, VA.

LOCATION.--Lat 37°52'36", long 79°58'39", Alleghany County, midstream at gaging station on right bank 20 ft upstream from Smith Bridge, 0.8 mile south of Falling Spring, 1.6 miles downstream from Falling Spring Creek, and 5.5 miles north of Covington.

DRAINAGE AREA.--409 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1947 to September 1948, October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968										
DATE	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)
NOV.										
15...	122	3.7	.00	37	5.8	2.3	2.0	104	30	3.0
DEC.										
19...	494	4.2	.00	22	3.2	.9	.4	67	13	3.0
JAN.										
18...	252	3.5	.13	30	5.1	2.3	.8	86	25	3.0
FEB.										
15...	347	3.8	.00	26	4.4	1.4	.8	82	15	3.3
MAR.										
10...	279	2.0	.00	30	5.0	1.8	1.2	94	20	2.1
APR.										
12...	423	3.4	.04	24	3.4	1.4	.8	73	15	2.3
MAY										
05...	423	4.7	.02	24	3.8	2.1	2.0	72	18	3.1
13...	259	5.1	.05	29	3.3	2.1	1.2	89	22	1.9
JUNE										
17...	244	5.0	.03	17	2.4	1.4	1.6	54	11	1.6
JULY										
24...	132	5.5	.01	41	6.0	2.1	2.7	113	34	2.6
AUG.										
05...	129	6.3	.03	47	3.2	2.8	1.6	148	10	4.0
21...	111	7.0	.01	45	6.8	2.3	2.3	125	40	2.0
SEPT.										
04...	85	6.3	.05	47	8.1	2.1	2.7	130	52	3.0
12...	91	6.0	.00	44	7.6	2.3	2.7	127	47	3.3
DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAP- BONATE HARD- NESS	SPECT- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
NOV.										
15...	.2	.1	.01	127	116	31	225	8.2	4	8
DEC.										
19...	.1	1.2	.00	84	67	12	136	7.9	7	7
JAN.										
18...	.2	.9	.02	113	95	24	190	8.0	0	5
FEB.										
15...	.2	1.3	.02	102	83	16	168	8.0	1	3
MAR.										
10...	.1	.4	.03	112	96	19	195	7.8	9	7
APR.										
12...	.2	.4	.00	95	75	15	144	8.4	14	3
MAY										
05...	.1	.2	.00	99	74	15	162	7.4	16	3
13...	.2	.6	.01	118	86	14	185	7.8	21	8
JUNE										
17...	.1	1.1	.07	72	54	9	112	7.5	18	15
JULY										
24...	.3	.4	.00	160	127	34	278	8.4	24	12
AUG.										
05...	.0	.5	.03	148	130	8	275	8.0	27	5
21...	0	.3	.02	168	140	38	308	8.2	26	5
SEPT.										
04...	.2	.2	.00	195	151	44	320	8.0	19	5
12...	.2	.2	.00	174	142	38	290	8.2	18	5

## JAMES RIVER BASIN

25

02015200 JACKSON RIVER AT CLIFTON FORGE, VA.

LOCATION.--Lat 37°48'44", long 79°49'15", Alleghany County, midstream at bridge on U.S. Highway 220, 1.6 miles east of Selma and 2.0 miles northwest of Iron Gate.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFSA)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PU- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
17...	200	6.4	.34	74	5.8	74	5.9	128	123	95
NOV.										
15...	210	5.4	.21	76	8.8	69	4.3	130	106	107
DEC.										
19...	1040	4.7	.06	29	4.0	15	2.0	80	30	24
JAN.										
18...	450	4.1	.24	41	5.1	55	3.4	130	63	60
FEB.										
15...	600	4.6	.10	26	9.7	27	2.1	106	39	30
MAR.										
10...	460	3.7	.07	57	6.4	45	3.1	113	70	78
APR.										
12...	780	3.5	.05	35	4.1	17	2.0	81	40	28
MAY										
05...	790	5.2	.06	28	3.9	17	2.7	74	32	24
13...	440	5.4	.09	37	5.1	34	2.0	114	49	38
JUNE										
18...	1220	5.8	.12	46	5.2	39	4.3	114	58	49
JULY										
24...	190	6.4	.09	73	7.3	101	8.6	132	106	139
AUG.										
05...	190	7.5	.18	67	7.5	90	8.6	167	131	92
21...	152	7.9	.14	60	8.3	107	7.8	159	125	115
SEPT.										
04...	110	7.6	.24	111	10	149	7.8	164	166	217
12...	122	7.8	.23	105	12	115	7.8	176	179	176

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
17...	.2	2.7	.10	486	208	103	700	7.2	--	160
NOV.										
15...	.7	2.4	.20	454	226	120	750	7.5	10	175
DEC.										
19...	.2	1.3	.02	163	88	23	270	7.9	8	50
JAN.										
18...	.4	1.8	.07	331	123	16	520	7.7	2	160
FEB.										
15...	.2	1.7	.12	192	105	18	330	7.6	2	90
MAR.										
10...	.4	1.3	.12	330	168	75	555	7.3	12	80
APR.										
12...	.1	.6	.07	185	105	38	300	6.9	16	35
MAY										
05...	.2	.9	.04	164	86	26	262	7.1	17	35
13...	.2	1.8	.16	250	114	20	390	7.3	23	70
JUNE										
18...	.1	1.8	.09	275	136	43	430	7.6	21	60
JULY										
24...	.6	2.8	.30	524	211	103	890	7.6	26	120
AUG.										
05...	.4	3.0	.33	525	198	61	840	7.8	27	160
21...	.3	3.3	.37	533	184	54	880	7.7	28	105
SEPT.										
04...	.4	3.9	.03	823	318	183	1400	7.5	20	160
12...	.3	2.8	.19	745	312	168	1200	7.5	19	200

A ESTIMATED.

JAMES RIVER BASIN  
02016000 COWPASTURE RIVER NEAR CLIFTON FORGE, VA.

LOCATION.--Lat 37°47'30", long 79°45'35", Alleghany County, midstream at gaging station on left bank 100 ft downstream from bridge on State Highway 633, 2.5 miles upstream from confluence with Jackson River, and 4.0 miles southeast of Clifton Forge.

DRAINAGE AREA.--456 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1947 to September 1948, October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAP- BONATE (HC03)	SULFATE (S04)	CHLO- RIDE (CL)
OCT.										
18...	161	3.9	.00	25	7.3	1.4	1.2	95	9.0	1.5
NOV.										
15...	119	4.2	.00	29	2.4	1.4	1.2	87	10	2.0
DEC.										
19...	485	4.5	.04	14	2.4	1.4	.9	43	10	2.5
JAN.										
18...	274	5.3	.19	17	3.2	.9	.4	58	10	1.5
FEB.										
15...	339	3.9	.00	15	3.4	1.2	.5	53	9.2	2.8
MAR.										
10...	204	1.9	.00	20	3.3	1.4	.8	68	9.0	2.4
APR.										
12...	357	3.3	.06	16	2.4	1.1	.8	52	8.0	1.7
MAY										
05...	371	4.5	.04	15	2.9	1.4	.8	51	7.2	1.6
13...	226	4.2	.08	32	5.2	3.4	1.6	88	25	9.0
JUNE										
19...	425	4.6	.01	24	3.5	.9	.8	80	7.8	1.6
JULY										
24...	91	5.2	.01	27	3.4	1.6	1.2	91	9.4	1.8
AUG.										
05...	107	6.9	.03	32	2.7	2.8	1.2	91	16	4.9
21...	109	6.0	.02	28	4.2	2.3	.8	96	10	1.9
SEPT.										
04...	63	4.7	.02	29	3.5	2.1	.8	102	9.8	1.4
12...	79	4.2	.02	28	4.4	1.4	1.2	101	11	1.9

DATE	FLUD- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PD4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA.MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
18...	.0	.3	.00	103	87	9	160	8.0	--	5
NOV.										
15...	.0	.2	.00	89	82	11	150	8.0	4	5
DEC.										
19...	.0	.9	.13	56	44	9	88	7.7	7	5
JAN.										
18...	.0	.6	.00	66	55	8	114	7.8	0	5
FEB.										
15...	.1	.8	.08	69	52	8	104	7.8	0	5
MAR.										
10...	.0	.3	.01	67	65	9	132	7.8	10	5
APR.										
12...	.2	.3	.00	66	50	8	98	7.6	16	5
MAY										
05...	.0	1.8	.06	62	49	7	93	7.4	17	2
13...	.2	1.1	.18	138	100	28	216	7.4	23	7
JUNE										
19...	.0	.3	.02	89	74	8	144	7.9	24	5
JULY										
24...	.1	.3	.00	96	81	6	170	8.2	28	5
AUG.										
05...	.6	.3	.22	111	92	17	201	7.7	26	8
21...	.0	.6	.03	107	86	8	188	8.0	28	8
SEPT.										
04...	.0	.2	.00	111	86	3	185	8.1	21	0
12...	.1	.2	.02	104	88	4	180	7.9	20	10



## JAMES RIVER BASIN

27

02018300 CRAIG CREEK AT EAGLE ROCK, VA.

LOCATION.--Lat 37°38'43", long 79°49'04", Botetourt County, midstream at bridge on Route 685, 0.2 mile upstream from mouth, 0.4 mile south of Bessemer, and 0.7 mile downstream from Patterson Creek.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	OIS- CHARGE (CFS)A	SILICA (SI02)	OIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
18...	113	3.7	.00	15	9.5	1.8	1.6	83	9.0	3.5
NOV.										
15...	115	4.2	.02	20	5.3	1.6	1.2	72	8.0	8.0
DEC.										
19...	879	5.2	.11	8.4	1.7	1.4	.9	27	7.0	2.5
JAN.										
18...	358	8.4	.20	12	1.4	1.3	1.0	38	6.2	3.0
FEB.										
15...	354	4.2	.05	10	3.4	1.2	.5	40	6.6	2.6
MAR.										
10...	205	2.1	.00	15	3.9	1.4	.8	58	7.8	2.3
APR.										
12...	377	4.0	.07	9.0	2.7	1.4	.4	35	6.2	1.6
MAY										
05...	393	4.8	.08	8.6	2.4	1.4	1.2	34	6.6	2.0
14...	199	3.9	.08	13	2.7	1.1	.4	50	6.2	1.4
JUNE										
17...	207	3.5	.03	11	2.4	1.1	.8	43	6.2	1.8
JULY										
24...	70	3.5	.01	24	4.0	1.6	1.2	88	8.6	1.9
AUG.										
05...	139	7.0	.00	47	4.0	2.8	2.0	154	9.4	2.8
21...	134	5.2	.02	18	4.0	1.4	1.2	68	9.4	1.8
SEPT.										
04...	35	4.2	.02	22	4.6	1.4	.8	82	9.8	2.1
12...	39	4.4	.02	24	5.5	1.4	1.2	94	12	2.2

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	OIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
18...	.1	.3	.00	97	76	8	150	8.0	--	3
NOV.										
15...	.2	.0	.00	74	72	14	126	8.0	10	5
DEC.										
19...	.0	.6	.17	43	28	6	61	7.4	7	30
JAN.										
18...	.0	.5	.01	45	36	5	80	7.5	1	15
FEB.										
15...	.1	.7	.00	53	39	6	82	7.6	1	8
MAR.										
10...	.1	.3	.03	59	54	7	112	7.8	9	8
APR.										
12...	.1	.5	.07	47	34	6	67	7.5	15	5
MAY										
05...	.0	.2	.00	44	32	4	73	6.9	16	8
14...	.0	.3	.00	59	44	4	92	7.0	20	5
JUNE										
17...	.1	.2	.01	54	38	4	84	7.5	22	3
JULY										
24...	.1	.3	.00	93	78	6	169	7.9	25	10
AUG.										
05...	.1	.6	.06	152	133	7	280	8.1	25	10
21...	.0	.3	.02	85	62	7	141	7.9	28	17
SEPT.										
04...	.0	.2	.00	96	74	8	160	7.9	20	5
12...	.2	.1	.00	99	84	6	171	8.0	18	7

A ESTIMATED.

## 02019500 JAMES RIVER AT BUCHANAN, VA.

LOCATION.--Lat 37°31'50", long 79°40'45", in Botetourt County, at gaging station on left bank at Chesapeake and Ohio Railway station at Buchanan, 300 ft upstream from bridge on U.S. Highway 11, 1,000 ft upstream from Purgatory Creek, 1.5 miles downstream from Looney Creek, and at mile 301.2.

DRAINAGE AREA.--2,084 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1947 to September 1948, October 1951 to September 1952, October 1955 to September 1956, February 1967 to March 1968 (monthly), April to September 1968 (daily).  
Water temperatures: October 1947 to September 1948, May 1951 to September 1956, April to September 1968.  
Sediment records: May 1951 to September 1956 (discontinued).

## EXTREMES.--1967-68:

Dissolved solids: Maximum, 434 mg/l Sept. 1-10; minimum, 115 mg/l Apr. 1-10.  
Hardness: Maximum, 198 mg/l Sept. 21-30; minimum, 74 mg/l Apr. 1-10.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
04...	558	4.0	.03	37	5.9	18	2.1	110	35	22
17...	520	4.5	.10	52	6.6	23	2.7	125	50	34
NOV.										
14...	558	3.8	.10	41	9.4	25	2.0	108	47	40
15...	532	4.2	.19	32	16	26	2.3	106	52	46
21...	482	4.3	.11	44	7.8	33	3.1	128	51	36
DEC.										
19...	2940	4.6	.14	21	4.1	7.1	1.6	68	19	10
JAN.										
03...	1300	5.1	.02	31	2.6	17	1.5	88	27	18
18...	1260	9.2	.21	29	6.3	15	.7	96	30	16
30...	4440	4.5	.06	20	3.8	8.0	1.6	59	20	12
FEB.										
13...	1880	4.1	.06	31	3.9	9.0	1.2	83	22	13
15...	1670	4.0	.08	26	5.8	9.0	1.3	87	20	13
MAR.										
05...	966	2.4	.10	40	6.1	22	2.3	111	36	34
10...	989	1.5	.04	41	6.3	23	2.0	111	39	38
APR.										
01-10	--	3.2	.06	23	4.1	6.9	1.2	69	20	12
11-20	--	2.5	.03	26	4.9	11	1.6	83	20	17
21-30	--	3.9	.05	31	4.6	15	2.0	92	29	20
MAY										
01-10	--	4.6	.00	24	4.5	11	2.0	75	24	14
11-20	--	4.9	.03	29	5.8	16	2.3	91	27	22
21-31	--	4.7	.00	27	5.1	13	2.0	80	28	20
JUNE										
01-10	--	3.5	.03	25	4.0	12	1.6	65	21	17
11-20	--	3.4	.04	29	4.5	12	2.0	84	25	19
21-30	--	2.4	.05	35	5.2	14	2.0	97	29	27
JULY										
01-10	--	3.1	.04	40	6.0	26	2.3	122	39	35
11-20	--	3.7	.03	45	7.0	34	4.7	126	54	48
21-31	--	4.6	.02	52	6.6	38	4.7	134	52	55
AUG.										
01-10	--	4.4	.02	52	5.8	38	4.7	133	52	54
11-19	--	5.9	.03	47	7.8	43	10	138	63	55
20...	794	--	.35	27	6.4	14	4.1	89	30	19
21-31	--	4.9	.00	47	7.5	42	4.3	137	63	48
SEPT.										
01-10	--	5.5	.04	63	8.9	74	6.2	154	92	96
11-20	--	5.8	.04	58	8.3	51	5.1	155	78	64
21-30	--	5.3	.06	65	8.8	59	6.2	162	87	81

## ANALYSES OF ADDITIONAL SAMPLES

APR.										
12...	2010	2.8	.09	25	3.9	8.7	1.2	75	21	15
MAY										
05...	2040	5.0	.08	22	4.5	9.4	2.0	71	17	14
14...	1170	3.9	.08	32	5.5	14	1.2	92	27	24
JUNE										
17...	1060	2.1	.06	29	5.0	12	2.0	86	24	21
JULY										
24...	405	4.7	.08	56	6.0	44	5.1	118	67	60
AUG.										
05...	475	8.1	.05	31	2.6	26	3.1	65	54	32
21...	458	5.4	.09	41	7.0	36	5.1	128	51	36
SEPT.										
04...	296	6.3	.06	60	9.1	74	4.7	154	98	91
12...	318	2.5	.02	47	7.6	53	5.1	149	87	74

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1..	195	233	160	360	520	670	18..	246	227	238	470	510	660
2..	200	190	158	410	495	730	19..	250	245	290	470	620	700
3..	196	175	172	400	430	775	20..	270	236	273	442	300	635
4..	188	178	182	410	455	710	21..	272	234	220	418	438	615
5..	185	180	200	418	495	690	22..	260	244	225	445	500	660
6..	180	172	220	420	550	690	23..	285	244	232	480	460	700
7..	177	174	240	425	525	710	24..	285	261	290	510	470	720
8..	168	178	240	360	490	720	25..	280	262	320	480	530	720
9..	177	219	261	400	490	715	26..	282	273	330	490	475	710
10..	178	240	280	450	465	720	27..	278	290	350	460	495	740
11..	187	235	255	495	565	495	28..	222	285	362	505	525	680
12..	198	235	240	500	595	540	29..	213	162	332	570	540	630
13..	205	245	222	490	465	680	30..	215	129	340	512	590	675
14..	210	245	238	500	630	595	31..	--	146	--	525	650	--
15..	211	243	220	500	610	605	AVER- AGE						
16..	240	250	235	495	766	640	223	222	252	460	512	671	
17..	245	260	237	460	440	615							

## 29

EXTREMES, 1967-68.--Continued

Specific conductance: Maximum daily, 775 micromhos Sept. 3; minimum daily, 129 micromhos May 30.  
Water temperatures: Maximum, 27.0°C July 2, 18, 19, Aug. 9, 22-25.

Period of record:

Dissolved solids (1929-30, 1947-48, 1951-56, April to September 1968): Maximum, 434 mg/l Sept. 1-10, 1968; minimum, 70 mg/l Mar. 11-20, 1956.

Hardness (1929-30, 1947-48, 1955-56, April to September 1968): Maximum, 198 mg/l Sept. 21-30, 1968; minimum, 48 mg/l Apr. 11-20, 1956.

Specific conductance (1953-56, April to September 1968): Maximum daily, 945 micromhos Sept. 27, 1954; minimum daily, 73 micromhos Mar. 25, 1953.  
Water temperatures: Maximum, 31.0°C July 5, 1955; minimum freezing point Dec. 20, 1951, Dec. 21, 22, 1954.

REMARKS.--Sample collection for chemical analyses changed from monthly to daily frequency beginning Apr. 1, 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	OIS- SOLVED SOLIDS (RESIDUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPEC- IFIC COND- UCTANCE (MICRO- MOS)	PH	TEMP- ERATURE (DEG C)	COLOR
DATE										
OCT.										
04....	.1	.7	.00	186	117	27	311	7.4	18	25
17....	.5	1.4	.00	234	157	54	390	7.9	8	47
NOV.										
14....	.1	.6	.01	235	142	53	392	7.5	--	45
15....	.2	.6	.04	251	146	59	400	7.9	16	60
21....	.0	1.5	.07	242	142	37	400	7.5	6	70
DEC.										
19....	.3	1.1	.03	111	69	14	169	7.7	--	32
JAN.										
03....	.0	.5	.00	150	89	17	250	6.8	--	10
18....	.1	1.2	.06	157	98	20	270	7.8	1	45
30....	.2	1.0	.14	110	66	18	153	7.3	8	25
FEB.										
13....	.2	1.4	.03	125	84	16	200	7.6	0	15
15....	.2	1.4	.05	122	90	18	215	7.8	2	25
MAR.										
05....	.1	1.1	.08	214	126	35	340	7.6	7	35
10....	.3	.8	.07	214	130	39	360	7.6	9	35
APR.										
01-10	.1	.4	.08	115	74	17	184	7.4	--	25
11-20	.0	.6	.00	129	86	18	226	7.6	--	10
21-30	.1	.6	.00	154	96	21	259	7.5	--	25
MAY										
01-10	.0	.6	.00	119	80	18	194	7.3	--	18
11-20	.1	1.2	.03	157	96	21	242	7.8	--	25
21-31	.0	1.1	.00	149	88	22	230	7.7	--	30
JUNE										
01-10	.1	.7	.00	129	78	25	211	7.5	--	25
11-20	.1	1.4	.03	141	92	24	245	7.5	--	15
21-30	.2	.9	.00	178	109	29	300	7.7	--	25
JULY										
01-10	.1	.9	.06	227	124	24	405	7.7	--	50
11-20	.2	1.1	.08	261	142	39	482	7.9	--	50
21-31	.3	1.0	.10	282	156	46	490	7.9	--	50
AUG.										
01-10	.3	.8	.08	278	154	45	492	7.7	--	45
11-19	.3	.7	.05	306	150	36	555	8.0	--	56
20....	.2	2.2	.18	--	--	--	300	7.6	--	--
21-31	.2	.6	.07	296	148	34	516	7.8	--	45
SEPT.										
01-10	.3	1.1	.05	434	192	66	713	7.9	--	60
11-20	.3	1.0	.02	368	179	52	616	8.0	--	70
21-30	.2	1.5	.10	425	198	66	685	8.2	--	90

#### ANALYSES OF ADDITIONAL SAMPLES

APR.										
12...	.2	1.1	.02	119	80	18	195	7.8	15	28
MAY										
05...	.2	.8	.02	118	72	14	196	7.4	17	20
14...	.2	2.3	.10	163	102	27	261	7.4	20	45
JUNE										
17...	.0	.7	.05	147	94	23	241	7.8	23	20
JULY										
24...	.2	1.5	.11	325	164	67	510	8.0	26	70
AUG.										
05...	1.0	1.1	.41	205	88	35	322	7.6	28	50
21...	.1	1.1	.11	278	132	27	470	7.8	30	50
SEPT.										
04...	.2	1.4	.03	448	188	62	755	8.0	21	80
12...	.2	2.3	.10	316	148	26	535	8.0	20	37

## TEMPERATURE (°C) OF WATER, APRIL TO SEPTEMBER 1968

[illegible]

## JAMES RIVER BASIN

## 02024200 MAURY RIVER AT BUENA VISTA, VA.

LOCATION.--Lat 37°44'46", long 79°22'18", Rockbridge County, midstream at bridge on U.S. Highway 60, at Buena Vista and 2.0 miles upstream from Indian Gap Run.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
17...	194	4.7	.00	26	13	2.5	2.0	126	11	5.0
NOV.										
15...	183	2.5	.41	16	7.8	3.2	1.6	134	13	3.0
DEC.										
19...	627	5.9	.06	28	5.8	2.3	.9	106	9.0	3.5
JAN.										
18...	371	3.4	.15	29	6.8	1.8	.3	112	11	2.0
FEB.										
15...	515	4.4	.00	36	7.8	1.8	1.3	130	8.8	4.2
MAR.										
10...	486	1.8	--	34	7.5	2.1	1.2	129	9.2	3.2
APR.										
12...	417	3.2	.09	28	6.9	1.6	.8	114	7.6	3.6
MAY										
05...	429	4.9	.06	23	6.3	1.6	1.2	93	8.4	2.4
13...	281	4.3	.06	32	6.1	1.8	.8	105	9.8	3.3
JUNE										
20...	245	4.6	.02	32	8.3	1.8	1.6	130	10	3.8
JULY										
24...	124	4.8	.02	36	11	2.3	2.3	153	9.6	3.5
AUG.										
05...	141	5.3	.02	52	2.7	2.1	1.6	159	9.0	3.4
21...	146	3.9	.13	27	4.9	21	3.1	86	32	27
SEPT.										
04...	246	4.1	.04	33	8.3	2.3	1.6	129	13	2.3
12...	159	4.6	.07	35	9.5	1.8	2.0	144	15	2.8

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
17...	.2	.7	.13	141	118	15	225	8.0	--	5
NOV.										
14...	.1	.8	.04	123	122	12	240	8.1	5	8
DEC.										
19...	.0	1.9	.19	109	95	8	185	7.9	7	8
JAN.										
18...	.1	2.3	.07	110	100	8	200	8.2	1	8
FEB.										
15...	.1	3.3	.08	134	122	16	230	8.1	2	8
MAR.										
10...	.0	1.6	.13	120	115	10	225	8.0	10	5
APR.										
12...	.2	1.4	.06	109	100	6	185	7.9	16	7
MAY										
05...	.0	.8	.05	97	84	8	170	7.8	17	2
13...	.2	1.4	.10	126	105	19	202	7.6	22	10
JUNE										
20...	.1	1.3	.08	128	115	8	226	8.0	22	5
JULY										
24...	.1	1.2	.14	148	133	8	281	8.2	28	10
AUG.										
05...	.1	1.0	.15	152	140	9	282	8.2	27	5
21...	.0	.5	.11	162	88	18	330	7.8	28	40
SEPT.										
04...	.0	.4	.03	137	116	10	241	8.0	21	3
12...	.1	.7	.14	147	126	8	270	7.9	20	8

## 02024500 MAURY RIVER AT GLASGOW, VA.

LOCATION.--Lat 37°37'52", long 79°26'38", Rockbridge County, midstream at bridge on State Highway 130 at Glasgow, and 0.5 mile upstream from mouth.

DRAINAGE AREA.--831 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
17...	210	4.6	.00	34	11	5.3	2.3	137	16	8.0
NOV.										
15...	190	2.9	.00	41	7.3	4.1	4.3	145	16	3.5
DEC.										
19...	650	4.4	.00	31	6.3	1.8	.8	113	13	3.0
JAN.										
18...	380	3.5	.18	31	7.3	2.9	.6	118	13	4.0
FEB.										
15...	530	3.6	.00	35	8.0	2.6	1.7	132	12	4.5
MAR.										
10...	590	1.0	.00	36	9.2	2.5	1.2	148	8.2	4.4
APR.										
12...	430	3.5	.07	32	7.6	3.4	1.2	125	13	3.3
MAY										
14...	290	4.7	.08	35	7.5	2.8	1.6	134	14	1.7
JUNE										
17...	255	4.5	.02	33	6.9	3.2	2.0	126	11	3.8
JULY										
24...	130	4.7	.00	45	7.6	6.9	6.2	160	22	6.5
AUG.										
06...	150	6.3	.00	25	3.4	1.6	.8	84	8.6	3.0
21...	155	5.4	.05	39	9.4	4.1	2.0	154	12	5.1
SEPT.										
04...	270	4.0	.02	40	11	6.9	2.0	163	15	8.6
12...	170	4.1	.03	36	8.8	4.4	2.7	142	18	5.3

## JAMES RIVER BASIN

31

02024500 MAURY RIVER AT GLASGOW, VA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH	TEMPERATURE (DEG C)	COLOR
OCT.										
17...	.2	.1	1.1	159	130	18	260	7.6	--	5
NOV.										
15...	.0	1.1	1.1	143	132	14	275	7.8	16	5
DEC.										
15...	.1	2.5	.33	120	104	11	204	7.6	7	10
JAN.										
18...	.2	2.0	.22	122	108	12	215	8.1	1	10
FEB.										
15...	.2	2.8	.56	141	120	12	225	8.0	3	5
MAR.										
10...	.2	1.3	.19	135	129	7	250	8.0	11	7
APR.										
12...	.1	1.3	.90	128	112	10	210	8.0	15	8
MAY										
14...	.2	1.5	.37	139	120	10	230	7.5	20	8
JUNE										
17...	.1	1.1	.41	130	110	7	218	7.9	28	3
JULY										
24...	.3	.4	1.5	181	144	10	330	7.7	29	20
AUG.										
06...	.1	.2	.00	83	76	7	156	7.9	24	8
21...	.0	.7	1.5	165	136	10	310	7.9	28	10
SEPT.										
04...	.2	.6	.86	173	145	11	307	7.9	21	5
12...	.1	.8	.69	148	125	8	298	7.8	21	7

A ESTIMATED.

02024800 JAMES RIVER ABOVE PEDLAR RIVER, AT HOLCOMBS ROCK, VA.

LOCATION.--Lat 37°30'32", long 79°16'04", Amherst County, on left bank 300 ft upstream from Pedlar River and approximately 0.9 mile upstream from gaging station at Holcombs Rock, Bedford County.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	SILICA (SiO2)	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	SULFATE (SO4)	CHLORIDE (CL)
OCT.										
17...	1030	6.7	.03	24	6.8	17	2.7	89	24	21
NOV.										
15...	1080	3.9	.08	38	7.1	15	2.3	116	28	22
DEC.										
19...	4080	5.3	.04	21	4.6	4.4	1.2	76	13	5.5
JAN.										
17...	2070	4.2	.20	26	5.3	8.2	1.1	90	19	12
FEB.										
15...	2990	4.3	.11	29	6.1	7.2	1.3	103	18	8.1
MAR.										
09...	1670	2.0	.07	37	8.0	8.1	2.0	122	26	24
APR.										
12...	1660	3.4	.13	25	4.6	6.4	1.2	84	16	10
MAY										
05...	1629	5.2	.06	22	4.6	6.4	1.6	78	15	8.2
14...	1860	4.3	.08	30	5.7	11	1.2	105	20	12
JUNE										
17...	1580	3.1	.10	28	4.6	12	2.7	109	17	15
JULY										
23...	732	4.5	.04	42	7.3	24	4.7	134	41	30
AUG.										
06...	892	5.0	.08	28	2.4	15	2.7	76	26	18
21...	1020	6.0	.06	42	6.9	32	5.1	131	45	39
SEPT.										
03...	618	4.6	.09	41	8.3	33	3.9	150	50	31
11...	740	3.6	.07	46	9.2	34	4.7	152	52	44

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH	TEMPERATURE (DEG C)	COLOR
OCT.										
17...	.2	1.0	.15	159	89	18	240	7.7	--	30
NOV.										
15...	.2	.2	.30	171	124	29	300	7.3	21	45
DEC.										
19...	.1	1.2	.01	103	71	8	162	7.8	--	22
JAN.										
17...	.0	1.2	.09	125	86	12	220	7.7	1	30
FEB.										
15...	.2	1.6	.18	132	97	12	220	7.6	2	25
MAR.										
09...	.1	.8	.10	178	125	25	310	7.5	9	28
APR.										
12...	.2	1.0	.08	120	82	13	194	7.6	14	20
MAY										
05...	.1	.8	.06	105	74	10	181	7.2	18	10
14...	.4	1.0	.06	148	98	12	235	7.5	19	40
JUNE										
17...	.1	.6	.15	139	89	0	227	7.5	25	30
JULY										
23...	.2	1.3	.21	234	136	26	410	7.5	31	50
AUG.										
06...	.3	5.0	.29	153	81	18	255	7.7	24	30
21...	.1	.9	.20	247	134	26	425	7.7	30	50
SEPT.										
03...	.1	1.2	.06	269	137	14	440	7.6	25	90
11...	.1	.5	.23	288	154	30	480	7.4	23	65

## JAMES RIVER BASIN

## 02025300 PEDLAR RIVER AT HOLCOMBS ROCK, VA.

LOCATION.--Lat 37°30'36", long 79°16'08", Amherst County, midstream at bridge on Route 650, 400 ft upstream from mouth and 0.6 mile northwest of Holcombs Rock, Bedford County.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SID2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
17...	114	10	.05	4.0	1.5	3.2	1.6	20	6.0	2.5
NOV.										
15...	86	12	.09	4.4	1.0	2.8	1.2	19	3.0	3.0
DEC.										
19...	276	9.5	.13	2.8	.5	1.4	.4	14	2.2	1.5
JAN.										
17...	213	8.2	.18	2.8	.7	1.8	.2	12	3.6	1.0
FEB.										
15...	152	10	.04	2.0	1.2	2.1	.5	11	2.2	2.0
MAR.										
09...	82	9.5	.11	2.8	.7	2.5	.8	16	3.2	2.0
APR.										
12...	114	9.8	.13	3.0	.8	2.1	.8	14	3.6	2.1
MAY										
05...	104	10	.20	3.2	1.0	2.8	1.6	17	3.0	3.0
14...	84	11	.21	4.0	.4	2.3	.8	18	4.2	2.0
JUNE										
17...	167	11	.15	3.6	.5	2.3	1.2	18	2.2	1.7
JULY										
23...	34	7.8	.06	4.2	.7	2.5	1.6	22	2.2	1.8
AUG.										
06...	25	13	.00	3.6	.5	2.5	.8	19	1.0	1.4
21...	15	10	.02	3.8	1.7	4.1	2.3	20	5.4	3.6
SEPT.										
11...	25	9.3	.10	3.8	1.0	2.8	2.0	22	3.4	2.6

DATE	FLUD- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
17...	.0	.4	.03	33	16	0	39	7.2	--	10
NOV.										
15...	.0	.3	.04	30	15	0	37	7.4	10	15
DEC.										
19...	.0	.6	.00	46	9	0	34	7.0	7	40
JAN.										
17...	.0	.8	.05	30	10	0	32	7.0	1	15
FEB.										
15...	.1	.6	.04	26	10	1	31	7.1	0	7
MAR.										
09...	.0	.0	.01	26	10	0	30	7.1	10	8
APR.										
12...	.1	.8	.03	33	11	0	30	7.0	14	10
MAY										
05...	.0	.4	.20	39	12	0	38	6.7	15	5
14...	.0	.7	.04	39	16	1	37	6.8	19	20
JUNE										
17...	.0	.5	.07	36	11	0	38	7.0	21	13
JULY										
23...	.2	.2	.01	43	14	0	43	7.2	28	25
AUG.										
06...	.0	.6	.06	36	11	0	35	7.1	24	8
21...	.1	1.0	.04	49	16	0	51	6.9	27	30
SEPT.										
11...	.1	.3	.09	41	14	0	49	7.1	21	25

A ESTIMATED.

## 02026000 JAMES RIVER AT BENT CREEK, VA.

LOCATION.--Lat 37°32'10", long 78°49'30", Appomattox County, midstream at gaging station on left bank 300 ft upstream from bridge on U.S. Highway 60 at town of Bent Creek, 150 ft downstream from Bent Creek, 1.0 mile downstream from Oladstone, and at mile 222.9.

DRAINAGE AREA.--3,671 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1947 to September 1948, October 1967 to September 1968.

Water temperatures: October 1947 to September 1948.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SID2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
18...	1270	7.8	.09	21	5.8	7.5	2.3	79	18	12
NOV.										
14...	1030	5.3	.73	33	5.3	8.7	2.0	90	26	15
DEC.										
18...	4420	5.2	.04	18	4.4	4.1	.8	63	16	5.0
JAN.										
17...	3490	4.7	.30	19	4.1	7.1	1.3	66	18	7.0
FEB.										
16...	3250	4.9	.09	27	6.1	6.9	1.6	81	17	4.7
MAR.										
09...	1750	3.0	.23	35	6.3	15	2.0	111	22	21
APR.										
11...	3930	3.5	.15	23	4.5	6.0	1.2	76	16	10
MAY										
05...	3270	5.1	.22	24	4.9	10	2.0	80	20	14
14...	1960	4.1	.10	22	5.1	6.9	2.0	76	16	9.2
JUNE										
17...	2400	3.3	.14	26	6.7	12	2.7	89	21	15
JULY										
23...	922	2.8	.04	30	5.6	19	3.5	98	31	19
AUG.										
06...	1530	4.9	.09	34	5.6	19	3.5	98	33	25
22...	1610	3.6	.03	41	8.3	27	5.9	112	43	41
SEPT.										
03...	850	2.4	.15	37	7.2	29	3.5	110	54	33
11...	1190	4.6	.10	33	6.6	24	3.9	98	44	24

## JAMES RIVER BASIN

33

02026000 JAMES RIVER AT BENT CREEK, VA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
18...	.0	2.3	.08	137	81	17	190	7.8	--	25
NOV.										
14...	.2	5.1	.12	154	103	29	233	7.4	8	60
DEC.										
18...	.3	2.5	.07	83	61	10	149	7.6	7	18
JAN.										
17...	.2	1.8	.08	99	64	10	160	7.3	1	45
FEB.										
16...	.0	2.9	.07	120	83	16	196	7.2	2	18
MAR.										
09...	.3	1.2	.20	169	114	23	265	7.6	10	30
APR.										
11...	.1	1.6	.04	110	77	14	185	7.3	16	40
MAY										
05...	.1	1.8	.08	135	80	14	220	7.2	18	28
14...	.1	1.5	.12	106	76	14	177	7.1	18	18
JUNE										
17...	.2	5.0	.09	147	92	18	226	7.5	25	32
JULY										
23...	.2	5.2	.03	249	99	18	307	8.6	30	30
AUG.										
06...	.1	7.2	.24	195	108	27	328	7.8	25	40
22...	.2	7.9	.17	233	136	44	419	7.5	31	47
SEPT.										
03...	.2	5.6	.04	232	123	33	400	8.2	25	50
11...	.1	7.0	.26	209	109	28	341	7.8	24	50

02026200 TYE RIVER AT NORWOOD, VA.

LOCATION.--Lat 37°38'32", long 78°48'44", Nelson County, midstream at bridge on State Highway 626 at Norwood, 0.3 mile upstream from mouth and 1.5 miles downstream from Rucker Run.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS) A	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
18...	--	9.7	3.5	22	9.2	12	1.6	0	184	8.0
NOV.										
14...	--	10	11	8.0	1.9	9.7	1.6	0	177	6.5
DEC.										
18...	960	8.5	1.1	3.6	1.0	3.0	.4	0	72	4.0
JAN.										
17...	570	7.5	3.4	4.0	1.2	3.8	1.7	0	72	3.0
FEB.										
16...	530	9.1	2.8	4.6	1.0	4.8	.8	0	89	3.5
MAR.										
09...	390	9.4	5.6	4.0	1.2	5.7	.8	0	108	3.2
APR.										
11...	490	8.8	3.9	3.8	1.6	6.9	1.2	0	110	3.9
MAY										
04...	380	10	4.6	4.8	2.2	6.0	1.2	0	111	4.9
14...	390	10	8.1	11	3.8	7.6	2.0	0	170	5.7
JUNE										
17...	370	9.7	4.7	16	3.2	6.7	1.2	0	139	4.3
JULY										
23...	135	10	3.8	71	5.0	13	2.3	0	311	4.4
AUG.										
06...	120	10	4.2	66	5.2	16	2.7	0	349	6.0
22...	28	11	.70	34	5.3	8.5	3.5	0	198	4.0
SEPT.										
03...	45	11	7.3	127	7.3	35	2.7	0	527	10
11...	230	9.6	7.3	117	7.0	22	3.9	0	526	11

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
18...	.2	.8	.00	233	93	93	780	3.0	--	3
NOV.										
14...	.2	3.4	.00	168	28	28	800	2.9	5	10
DEC.										
18...	.1	1.0	.00	96	13	13	400	3.2	5	7
JAN.										
17...	.2	1.7	.00	87	15	15	440	3.2	1	15
FEB.										
16...	.1	.8	.04	88	14	14	560	3.1	1	2
MAR.										
09...	.1	.9	.00	112	15	15	470	3.1	9	28
APR.										
11...	.1	1.1	.04	123	16	16	630	3.0	16	5
MAY										
04...	.2	.9	.00	118	21	21	640	2.9	18	8
14...	.1	2.0	.00	174	44	44	800	2.8	18	5
JUNE										
17...	.3	1.3	.00	202	52	52	760	2.9	22	5
JULY										
23...	.2	1.2	.00	428	198	198	1100	3.0	28	5
AUG.										
06...	.4	3.8	.00	463	187	187	995	3.0	26	10
22...	.2	1.2	.00	288	158	158	660	3.3	28	5
SEPT.										
03...	.3	2.3	.02	713	347	347	1420	3.0	25	10
11...	.4	3.3	.00	668	308	308	1550	2.8	23	5

A ESTIMATED.

## JAMES RIVER BASIN

## 02028400 JAMES RIVER AT WINGINA, VA.

LOCATION.--Lat 37°38'10", long 78°43'12", Nelson County, midstream at bridge on State Highway 56 at Wingina and 1.0 mile downstream from Sheldries Creek.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS) A	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (S04)	CHLO- RIDE (CL)
OCT.										
18....	1300	5.0	.11	23	7.3	14	2.7	41	61	14
NOV.										
14....	1060	6.2	.12	25	4.4	11	2.0	30	61	10
DEC.										
18....	4500	6.1	.02	14	2.7	3.6	1.2	14	38	5.0
JAN.										
17....	3500	5.6	1.3	15	3.9	7.5	1.1	44	25	8.0
FEB.										
16....	3350	6.1	.03	21	3.4	6.0	1.2	20	49	5.0
MAR.										
09....	1800	4.7	.01	23	5.6	12	1.6	30	62	14
APR.										
11....	4000	4.4	.20	20	4.1	6.2	1.2	44	34	9.6
MAY										
04....	3320	5.6	.31	22	4.1	8.7	1.6	35	48	10
14....	2020	4.1	.28	22	4.0	6.7	1.2	43	39	8.7
JUNE										
17....	2700	3.6	.39	26	4.6	12	3.1	62	38	15
JULY										
23....	970	2.3	.02	33	5.2	18	3.5	74	60	18
AUG.										
06....	1580	4.0	.00	43	3.0	20	3.9	70	72	24
22....	1680	4.0	.04	36	6.8	21	6.2	85	51	32
SEPT.										
03....	1000	1.9	.18	46	7.0	30	3.5	89	88	34
11....	1250	6.2	.13	44	6.3	21	4.3	48	111	21

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAP- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
18....	.2	2.4	.00	167	88	56	245	7.0	--	10
NOV.										
14....	.1	.3	.00	129	81	57	218	6.6	7	5
DEC.										
18....	.2	1.6	.00	90	45	34	128	6.3	6	5
JAN.										
17....	.2	2.4	.05	102	54	18	160	6.9	1	90
FEB.										
16....	.2	1.8	.01	108	59	42	147	6.9	2	3
MAR.										
09....	.2	1.5	.04	145	81	6	220	6.4	10	8
APR.										
11....	.2	.7	.01	111	66	30	165	6.7	16	20
MAY										
04....	.2	1.8	.00	122	72	43	204	6.9	18	22
14....	.1	1.8	.01	120	71	36	177	6.7	19	25
JUNE										
17....	.2	4.8	.01	143	85	34	223	7.3	25	25
JULY										
23....	.2	3.5	.00	193	105	45	326	7.5	27	40
AUG.										
06....	.2	6.9	.11	222	120	62	358	7.4	27	30
22....	.2	4.6	.00	207	118	48	362	7.8	31	30
SEPT.										
03....	.2	4.1	.00	267	144	70	460	8.0	26	30
11....	.3	4.1	.02	249	137	98	398	7.1	25	37
A ESTIMATED.										

## 02028770 ROCKFISH RIVER AT HOWARDSVILLE, VA.

LOCATION.--Lat 37°43'58", long 78°38'56", Albemarle County, midstream at bridge on State Highway 626 at Howardsville, 0.2 mile upstream from mouth and 1.5 miles downstream from Ivy Creek.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS) A	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (S04)	CHLO- RIDE (CL)
OCT.										
18....	--	8.5	.02	4.8	3.4	3.7	1.6	29	7.0	3.0
NOV.										
14....	--	9.4	.21	4.8	1.2	3.2	1.2	22	5.0	2.0
DEC.										
18....	440	11	.14	3.6	1.2	3.2	.9	15	2.0	3.5
JAN.										
17....	250	7.4	.27	3.2	1.5	2.0	.6	14	3.4	3.5
FEB.										
16....	225	10	.08	3.2	1.2	2.1	.5	14	2.6	2.6
MAR.										
09....	160	8.2	.15	3.6	.7	2.8	.8	16	1.8	2.4
APR.										
11....	180	8.6	.17	4.0	1.1	1.8	.8	17	2.8	2.6
MAY										
04....	170	9.3	.09	4.0	1.1	2.3	.8	19	2.2	2.5
14....	230	9.7	.24	4.8	1.3	2.1	.4	27	1.4	2.4
JUNE										
17....	120	9.2	.13	4.4	1.0	2.5	1.2	21	3.2	2.8
JULY										
23....	60	7.8	.05	5.0	1.1	2.1	1.6	24	1.4	3.7
AUG.										
06....	55	9.2	.00	5.2	2.7	2.8	2.0	22	3.2	3.4
22....	40	8.7	.06	3.6	1.6	3.2	3.1	20	4.6	3.8
SEPT.										
03....	20	8.2	.09	4.2	1.8	2.5	1.2	25	3.6	3.4
11....	24	7.9	.08	3.6	1.0	2.8	2.0	18	2.0	3.5



## 02028770 ROCKFISH RIVER AT HOWARDSVILLE, VA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA.MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
18....	.0	.7	.41	53	26	3	64	7.2	--	30
NOV.										
14....	.0	.3	.00	26	17	0	45	7.4	7	18
DEC.										
18....	.0	.9	.17	24	14	2	36	7.1	4	20
JAN.										
17....	.0	1.2	.03	34	14	2	41	7.0	1	25
FEB.										
16....	.1	.9	.06	31	13	2	36	7.2	1	8
MAR.										
09....	.1	.0	.03	28	12	0	35	7.0	9	10
APR.										
11....	.1	.8	.03	39	14	0	37	7.4	15	20
MAY										
14....	.2	.3	.00	35	14	0	41	6.9	18	12
JUNE										
14....	.2	.4	.01	41	18	0	45	6.8	17	25
JULY										
17....	.0	.5	.03	41	15	0	46	7.1	22	10
AUG.										
23....	.1	.4	.00	40	17	0	52	7.3	25	15
SEP.										
06....	.1	1.0	.04	46	18	0	52	7.0	27	20
22....	.1	1.3	.07	41	16	0	52	6.7	28	40
OCT.										
03....	.0	.2	.03	45	18	0	55	7.4	23	5
11....	.1	.6	.15	45	13	0	45	7.0	22	33

A ESTIMATED.

## 02028780 JAMES RIVER AT HOWARDSVILLE, VA.

LOCATION.--Lat 37°43'58", long 78°38'40", Buckingham County, near right bank at bridge on State Highway 602 at Howardsville, Albermarle County, and 5.0 miles downstream from Ryan Creek.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS) A	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
18....	1500	4.5	.04	26	10	11	2.3	66	35	15
NOV.										
14....	1260	6.0	1.3	30	3.4	9.7	2.3	66	37	10
DEC.										
18....	5550	6.1	.42	17	3.4	4.6	1.2	54	17	5.0
JAN.										
17....	4800	5.2	.58	16	3.9	8.4	1.1	54	19	9.0
FEB.										
16....	3550	8.2	.07	20	5.3	6.3	.9	67	24	7.8
APR.										
11....	4800	4.0	.14	19	6.1	7.1	1.2	59	27	10
MAY										
14....	2400	3.3	.17	22	4.6	6.7	1.2	66	23	9.5
JUNE										
17....	3100	3.1	.15	25	5.0	10	2.0	70	30	16
JULY										
23....	1080	2.3	.02	34	5.2	20	3.9	84	53	20
AUG.										
06....	1090	3.8	.00	41	4.6	20	3.9	79	61	25
22....	1080	4.6	.20	33	5.8	20	4.3	68	55	26
SEP.										
03....	690	2.2	.11	44	7.3	29	4.3	92	79	35
11....	1370	5.0	.05	38	6.7	23	3.9	82	76	23

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA.MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
18....	.2	2.6	.03	145	92	36	233	7.4	--	20
NOV.										
14....	.2	.8	.05	134	89	35	210	7.5	7	50
DEC.										
18....	.2	1.4	.08	79	56	12	134	7.3	6	33
JAN.										
17....	.1	2.3	.04	101	56	12	165	7.2	1	80
FEB.										
16....	.1	1.9	.00	110	73	18	180	7.4	2	60
APR.										
11....	.2	2.3	.07	115	72	23	184	7.2	15	20
MAY										
14....	.0	2.1	.02	117	73	19	180	7.1	19	30
JUNE										
17....	.1	1.6	.01	128	84	26	213	7.6	25	13
JULY										
23....	.3	5.9	.00	203	108	38	341	7.7	27	45
AUG.										
06....	.3	7.0	.03	216	120	56	350	7.7	27	30
22....	.2	3.5	.21	189	107	52	335	7.3	32	25
SEP.										
03....	.2	5.9	.00	278	141	66	440	8.2	26	35
11....	.2	4.8	.07	237	122	54	385	7.4	25	55

A ESTIMATED.

## JAMES RIVER BASIN

## 02029000 JAMES RIVER AT SCOTTSVILLE, VA.

LOCATION.--Lat 37°47'50", long 78°29'30", Albemarle County, midstream at gaging station on left bank, 400 ft downstream from bridge on State Highway 20 at Scottsville, 8.8 miles upstream from Hardware River, and at mile 184.8.

DRAINAGE AREA.--4,571 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1930 to March 1931, October 1947 to September 1948, October 1951 to September 1952, October 1967 to September 1968.  
Water temperatures: May 1951 to September 1956.  
Sediment records: December 1950 to September 1956.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAP- RONATE (HC03)	SULFATE (S04)	CHLO- RIDE (CL)
OCT.										
17...	1570	5.6	.00	22	7.8	12	2.7	58	48	12
NOV.										
14...	1280	6.7	1.2	26	3.2	8.3	2.0	58	38	8.5
DEC.										
18...	5630	7.2	.69	14	3.6	4.1	1.2	37	19	5.0
JAN.										
17...	4960	5.7	1.1	12	2.9	6.1	1.4	33	21	8.0
FEB.										
16...	3640	6.1	.76	21	3.7	5.3	1.2	49	23	6.4
MAR.										
09...	2130	5.1	.47	24	5.3	12	1.6	64	33	20
APR.										
11...	4940	4.5	.48	19	3.6	5.5	.8	46	28	9.3
MAY										
04...	4260	5.5	.10	22	4.6	7.4	1.6	61	28	10
15...	2460	4.8	.22	19	4.0	6.2	.8	52	23	8.7
JUNE										
16...	3160	3.6	.05	22	3.9	8.7	2.0	60	26	11
JULY										
23...	1110	2.3	.03	34	5.2	18	3.9	72	57	23
AUG.										
06...	1120	4.3	.60	38	4.1	18	3.5	69	63	23
22...	1110	4.6	.05	26	4.2	17	3.9	67	35	22
SEPT.										
03...	727	1.5	.07	45	6.7	29	3.9	100	77	36
12...	1430	3.9	.09	37	7.0	24	3.9	59	88	25
DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
17...	.2	3.4	.15	160	86	39	225	7.5	--	10
NOV.										
14...	.2	.4	.08	116	78	31	189	7.5	7	50
DEC.										
18...	.2	1.7	.10	75	49	19	118	7.1	5	35
JAN.										
17...	.2	1.9	.04	85	43	16	130	7.0	1	80
FEB.										
16...	.3	2.5	.08	106	60	20	173	7.4	1	40
MAR.										
09...	.3	1.3	.16	138	82	30	218	7.4	9	27
APR.										
11...	.2	1.8	.02	100	63	26	150	7.1	16	35
MAY										
04...	.2	1.7	.00	113	73	23	195	7.0	19	15
15...	.1	2.5	.07	105	62	20	157	6.9	18	30
JUNE										
16...	.1	1.9	.03	116	70	22	185	7.6	27	8
JULY										
23...	.2	1.7	.00	196	107	48	328	7.6	27	28
AUG.										
06...	.2	5.7	.02	204	113	56	340	7.8	28	40
22...	.3	1.5	.14	151	82	27	260	7.4	31	25
SEPT.										
03...	.1	2.4	.00	251	140	58	440	7.8	25	25
12...	.3	6.7	.01	238	122	74	384	7.7	24	27

## 02030600 SLATE RIVER AT HIGHWAY 652, NEAR ARVONIA, VA.

LOCATION.--Lat 37°42'36", long 78°20'08", Buckingham County, midstream at bridge on State Highway 652, 0.7 mile upstream from mouth and 2.0 miles north of Arvonis.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS) A	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (S04)	CHLO- RIDE (CL)
OCT.										
18...	79	11	.06	5.6	3.4	3.9	2.3	30	6.0	2.5
NOV.										
14...	59	15	.42	6.4	3.4	4.6	1.2	35	5.0	2.5
DEC.										
18...	164	12	.41	4.4	2.7	3.2	1.2	25	7.0	3.0
JAN.										
17...	316	8.1	.23	3.2	2.2	2.5	.6	17	6.2	1.5
FEB.										
16...	151	15	.27	4.4	2.7	3.1	.5	28	5.2	2.4
MAR.										
09...	115	12	.29	4.8	2.4	3.2	.4	29	5.4	3.0
APR.										
11...	136	12	.30	5.6	2.1	3.0	.8	31	5.4	2.8
MAY										
05...	127	12	.25	5.4	2.2	3.0	.8	29	4.4	2.7
15...	168	13	.12	5.8	2.9	3.2	1.2	34	3.0	3.4
JUNE										
16...	81	14	.29	5.4	2.0	3.0	1.2	30	4.2	3.0
JULY										
22...	44	11	.00	7.0	2.4	3.2	1.2	37	2.8	2.3
AUG.										
06...	58	12	.00	8.2	1.2	4.0	1.6	32	5.4	3.2
22...	44	11	.08	6.8	2.4	3.9	2.0	32	7.0	3.4
SEPT.										
03...	20	11	.20	6.2	3.0	4.6	1.2	38	5.4	3.5
11...	40	12	.17	5.8	2.1	3.2	1.6	33	3.0	1.2

A ESTIMATED.

## JAMES RIVER BASIN

37

02030600 SLATE RIVER AT HIGHWAY 652, NEAR ARVONIA, VA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
18...	.2	.7	.00	68	28	4	65	7.1	--	30
NOV.										
14...	.1	.8	.00	53	30	0	65	7.7	7	30
DEC.										
18...	.1	.5	.13	46	22	2	56	7.4	4	40
JAN.										
17...	.0	.9	.04	47	17	3	49	7.0	1	70
FEB.										
16...	.3	.7	.10	54	22	0	59	7.2	0	20
MAR.										
09...	.0	.0	.02	47	22	0	55	7.7	8	22
APR.										
11...	.2	.7	.00	57	24	0	64	7.2	15	25
MAY										
05...	.0	.3	.00	55	22	0	60	7.3	17	20
15...	.0	.6	.01	55	26	0	64	6.9	16	20
JUNE										
16...	.1	.7	.01	57	22	0	61	7.7	24	25
JULY										
22...	.1	.3	.00	59	28	0	74	7.5	26	18
AUG.										
06...	.1	.6	.38	58	26	0	69	7.1	27	25
22...	.0	1.2	.05	56	27	1	82	7.0	27	35
SEPT.										
03...	.0	.3	.00	55	28	0	80	7.7	21	25
11...	.1	.4	.01	53	23	0	68	7.4	20	25
A ESTIMATED.										

02030690 JAMES RIVER AT BREMO BLUFF, VA.

LOCATION.--Lat 37°42'38", long 78°17'57", Fluvanna County; midstream at bridge on U.S. Highway 15 at Brema Bluff, 1.3 miles downstream from Slate River and at mile 171.

DRAINAGE AREA.--5,040 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	POT- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
JAN.										
17...	--	5.8	.64	11	3.4	5.2	1.0	35	14	7.0
FEB.										
14...	--	9.7	.06	17	3.9	5.6	.9	51	23	5.6
MAR.										
09...	--	5.2	1.2	24	4.4	5.2	1.6	66	28	13
APR.										
11...	--	4.8	.44	19	3.9	5.5	.8	52	24	8.6
MAY										
04...	--	5.8	.11	22	4.1	7.6	1.6	64	25	10
15...	--	3.7	.04	20	4.1	6.9	1.6	49	31	9.2
JUNE										
16...	--	3.8	.18	23	4.1	9.6	2.0	50	29	12
JULY										
22...	--	3.6	.01	33	5.2	14	3.1	67	58	22
AUG.										
06...	--	7.4	.00	23	2.6	9.9	2.3	54	30	13
22...	--	4.6	.05	42	5.8	21	4.3	38	106	25
SEP.										
03...	--	2.1	.04	40	6.8	27	3.4	88	74	34
11...	--	3.6	.05	36	6.2	23	3.9	57	84	24

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
JAN.										
17...	.0	1.8	.05	73	41	12	118	7.2	1	70
FEB.										
15...	.2	1.9	.13	95	58	16	148	7.4	1	40
MAR.										
09...	.3	1.4	.08	130	78	24	188	7.3	9	25
APR.										
11...	.2	1.8	.01	107	64	22	155	7.7	15	30
MAY										
04...	.3	1.6	.00	117	72	20	189	7.3	--	20
15...	.0	2.9	.00	113	68	28	170	6.9	19	17
JUNE										
16...	.1	4.5	.02	128	74	26	196	7.6	28	20
JULY										
22...	.2	2.6	.00	184	103	52	315	7.7	30	20
AUG.										
06...	.1	1.9	.02	125	68	23	202	7.9	28	40
22...	.1	3.1	.00	239	128	97	380	7.7	32	25
SEP.										
03...	.2	1.5	.03	249	128	56	420	8.2	25	20
11...	.2	3.3	.01	218	115	69	355	7.8	24	25

## JAMES RIVER BASIN

## 02034080 RIVANNA RIVER NEAR COLUMBIA, VA.

LOCATION.--Lat 37°45'50", long 78°11'08", Fluvanna County, midstream at bridge on State Highway 6, 1.3 miles north-west of Columbia and 1.7 miles upstream from mouth.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS) A	SILICA (%O2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
18...	324	8.5	.13	4.0	2.9	4.6	3.1	22	6.0	6.4
NOV.										
14...	167	10	.17	6.8	1.9	5.5	2.0	29	7.0	5.0
DEC.										
18...	578	10	.24	5.2	1.4	3.4	1.2	19	6.0	4.6
JAN.										
17...	1240	6.9	.25	4.4	1.5	4.2	1.0	15	6.4	4.5
FEB.										
16...	369	14	.16	4.0	1.9	4.0	.9	21	6.2	4.4
MAR.										
09...	267	8.7	.16	4.8	1.4	4.1	.8	21	5.0	5.0
APR.										
11...	315	8.6	.16	5.0	1.6	4.1	.8	21	5.2	5.4
MAY										
04...	244	8.1	.08	5.6	1.9	4.6	2.0	28	6.4	5.4
15...	336	8.2	.05	6.2	1.8	4.4	1.6	26	4.8	5.2
JUNE										
16...	178	10	.10	6.0	1.4	4.4	1.6	24	5.0	5.5
JULY										
22...	148	8.9	.04	7.0	1.1	4.4	2.7	25	6.0	5.4
AUG.										
07...	254	8.7	.05	6.4	1.8	4.4	2.7	27	5.4	6.8
23...	121	7.1	.18	8.8	2.4	6.2	3.1	34	9.4	8.1
SEPT.										
08...	84	6.3	.09	8.2	2.3	9.2	2.3	37	10	8.7
11...	136	7.7	.06	7.6	2.4	6.2	3.4	34	8.6	7.8

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA.MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
18...	.2	.3	.50	67	22	4	67	6.8	--	40
NOV.										
14...	.0	.6	.77	44	25	2	52	7.4	7	12
DEC.										
18...	.0	1.8	.32	38	19	4	57	7.0	4	60
JAN.										
17...	.0	2.1	.15	47	17	4	57	6.9	1	60
FEB.										
16...	.3	1.9	.52	48	18	2	60	7.1	1	15
MAR.										
09...	.1	1.4	.44	45	18	1	56	7.0	8	20
APR.										
11...	.1	.3	.42	47	20	3	60	7.2	14	15
MAY										
04...	.0	1.6	.34	53	22	0	76	6.8	19	8
15...	.0	2.5	.48	48	23	2	67	6.9	17	5
JUNE										
16...	.1	2.7	.41	55	21	2	71	7.2	26	10
JULY										
22...	.3	3.0	.43	62	22	2	79	7.2	27	35
AUG.										
07...	.1	2.3	.21	59	24	2	78	7.0	24	20
23...	.1	2.3	.58	74	32	4	112	7.1	28	28
SEPT.										
08...	.3	1.7	.54	68	30	0	108	7.7	22	15
11...	.1	3.5	.63	68	29	2	128	7.3	21	15

A ESTIMATED.

## 02034100 JAMES RIVER AT COLUMBIA, VA.

LOCATION.--Lat 37°45'00", long 78°09'40", Cumberland County, near right bank at bridge on State Highway 699 at Columbia, Fluvanna County, 0.8 mile upstream from Hooper Rock Creek, and at mile 161.8.

DRAINAGE AREA.--5,744 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SILICA (%O2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)
OCT.										
18...	6.3	.02	24	7.3	12	2.7	68	38	13	.1
NOV.										
14...	7.4	1.5	26	2.7	7.6	2.0	50	37	9.0	.2
DEC.										
18...	7.1	.60	15	3.2	4.1	1.2	43	17	6.0	.1
JAN.										
17...	5.8	.56	11	3.6	5.5	1.0	38	15	5.5	.1
FEB.										
16...	6.5	.81	22	3.9	9.5	1.2	57	28	6.4	.2
MAR.										
09...	4.5	.31	23	4.8	9.6	1.6	62	33	14	.2
APR.										
11...	5.4	.32	20	4.2	5.5	1.2	56	22	10	.2
MAY										
04...	6.0	.16	22	4.6	8.7	1.6	71	22	10	.2
15...	4.6	.05	18	4.1	6.2	1.6	46	28	8.1	.1
JUNE										
16...	4.3	.15	21	3.9	8.7	2.0	54	30	12	.1
JULY										
22...	4.2	.00	31	5.3	15	3.1	60	58	21	.3
AUG.										
07...	4.5	.06	32	4.1	16	3.1	71	50	20	.3
23...	4.4	.04	33	5.5	19	3.9	57	66	24	.2
SEPT.										
03...	2.9	.03	40	7.0	27	3.5	80	78	33	.3
11...	3.3	.03	38	6.9	24	3.9	57	98	25	.3

## JAMES RIVER BASIN

39

## 02034100 JAMES RIVER AT COLUMBIA, VA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.									
18...	4.1	.00	156	90	35	230	7.5	--	20
NOV.									
14...	4.3	.01	116	76	35	203	7.5	7	64
DEC.									
18...	1.4	.13	76	50	15	119	7.5	5	48
JAN.									
17...	1.8	.06	80	42	11	120	7.1	1	80
FEB.									
16...	2.0	.14	110	64	18	194	7.4	1	40
MAR.									
09...	1.8	.13	138	78	27	195	7.5	9	30
APR.									
11...	1.8	.04	107	68	22	158	7.3	--	45
MAY									
04...	1.8	.00	125	74	16	195	7.2	19	23
15...	2.4	.00	95	62	24	150	7.0	19	10
JUNE									
16...	2.6	.02	118	70	25	184	7.6	27	20
JULY									
22...	2.6	.00	186	100	51	309	7.7	29	20
AUG.									
07...	2.9	.00	174	100	42	300	7.6	24	25
23...	2.7	.00	185	104	58	325	7.2	30	30
SEPT.									
03...	3.8	.00	250	128	62	410	8.0	25	20
11...	2.7	.01	233	124	78	388	7.8	24	20

## 02034500 WILLIS RIVER AT FLANAGAN MILLS, VA.

LOCATION.--Lat 37°40'00", long 78°10'00". Cumberland County, midstream at gaging station on left bank 15 ft upstream from bridge on State Highway 690, 0.4 mile east of Flanagan Mills, 6.9 miles upstream from mouth, and 7.7 miles downstream from Reynolds Creek.

DRAINAGE AREA.--247 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
18...	--	3.6	.08	10	3.9	5.5	2.3	51	6.0	4.5
NOV.										
14...	--	17	.43	8.8	3.6	5.1	2.3	46	4.0	3.5
DEC.										
18...	164	16	.41	6.4	2.9	3.7	1.6	30	8.0	3.5
JAN.										
17...	1500	6.5	.18	4.8	1.4	2.5	1.0	14	8.0	4.0
FEB.										
16...	125	6.2	.49	6.4	3.4	4.7	.8	38	7.0	3.4
MAR.										
09...	--	12	.58	6.8	3.2	4.6	.8	37	7.4	3.7
APR.										
11...	119	16	.43	8.0	2.2	4.4	.8	44	6.2	3.6
MAY										
04...	98	16	.24	6.8	4.2	5.5	1.6	47	6.0	3.4
15...	120	16	.12	8.8	3.8	4.6	1.2	49	4.2	3.4
JUNE										
16...	96	15	.08	7.4	3.4	7.8	2.0	41	7.8	2.8
JULY										
22...	22	15	.06	10	5.3	4.1	1.6	57	4.4	3.8
AUG.										
07...	72	14	.14	9.8	2.1	3.4	2.0	38	5.0	2.7
23...	38	15	.20	9.8	2.9	4.6	2.3	47	7.0	3.7
SEPT.										
03...	16	15	.37	9.8	4.7	4.1	1.6	55	7.6	3.7
11...	29	15	.26	8.4	3.8	3.9	2.0	52	7.8	3.5

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
18...	.2	.9	.02	74	41	0	98	7.4	--	10
NOV.										
14...	.1	1.1	.07	64	37	0	89	7.4	6	35
DEC.										
18...	.2	.7	.19	69	28	4	74	7.2	4	70
JAN.										
17...	.0	1.4	.07	59	18	6	50	6.7	0	100
FEB.										
16...	.2	.7	.15	63	30	0	82	7.4	1	27
MAR.										
09...	.1	.0	.05	66	30	0	74	7.2	8	30
APR.										
11...	.1	1.0	.01	65	34	0	88	7.2	18	27
MAY										
04...	.1	.5	.00	76	35	0	96	7.1	16	25
15...	.1	.5	.01	74	38	0	89	7.1	17	20
JUNE										
16...	.2	.9	.09	87	32	0	91	7.5	22	35
JULY										
22...	.1	.4	.00	83	47	0	111	7.6	25	25
AUG.										
07...	.1	.8	.04	68	30	0	82	7.3	24	20
23...	.0	.6	.05	72	36	0	118	7.2	26	30
SEPT.										
03...	.0	.6	.00	75	44	0	108	7.9	20	35
11...	.1	.2	.02	78	36	0	98	7.3	20	30

## JAMES RIVER BASIN

02035000 JAMES RIVER AT CARTERSVILLE, VA.  
(International Hydrological Decade River Station)

LOCATION.--Lat 37°40'15", long 78°05'10". Goochland County, at gaging station on left bank 200 ft downstream from bridge on State Highway 45, between Pemberton and Cartersville, Cumberland County, 2 miles downstream from Willis River, and at mile 152.4.

DRAINAGE AREA.--6,242 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1947 to September 1948, January 1966 to March 1968 (monthly), April to September 1968 (daily).

Water temperatures: April to September 1968.

EXTREMES.--April to September 1968:

Dissolved solids: Maximum, 222 mg/l Sept. 21-30; minimum, 90 mg/l June 11-20.

Hardness: Maximum, 116 mg/l Sept. 22-30; minimum, 38 mg/l June 1-10, 11-20.

Specific conductance: Maximum daily, 375 micromhos Sept. 2, 7; minimum daily, 78 micromhos May 29.

Water temperatures: Maximum, 36.0°C July 2.

Period of record:

Dissolved solids: Maximum, 222 mg/l Sept. 21-30, 1968; minimum, 64 mg/l July 11-20, 1929.

Hardness: Maximum, 116 mg/l Sept. 21-30, 1968; minimum, 39 mg/l Apr. 21-30, 1929.

Specific conductance: Maximum daily, 375 micromhos Sept. 2, 7, 1968; minimum daily, 78 micromhos May 29, 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLD- RIDE (CL)
OCT.										
03...	2800	4.9	.04	26	6.0	13	2.6	62	41	14
19...	3220	8.5	.08	14	4.1	8.0	2.7	41	27	8.0
NOV.										
01...	3750	7.5	.03	22	5.0	8.9	2.0	63	27	11
14...	1790	7.9	1.4	23	3.4	7.6	2.0	44	36	8.0
30...	1950	7.1	.47	26	3.4	11	1.9	49	40	13
DEC.										
11...	22100	7.4	.42	12	2.2	4.1	2.0	30	17	4.5
18...	7200	8.2	.60	13	2.7	5.1	1.2	38	17	4.5
JAN.										
02...	5800	8.6	.10	14	3.8	4.7	1.0	36	19	5.4
12...	5420	7.8	.89	20	3.6	9.6	1.0	53	26	11
17...	9000	5.7	.56	8.8	3.9	5.0	.7	30	13	8.0
FEB.										
02...	20300	6.3	.05	22	3.8	5.9	.9	63	18	9.8
16...	5010	9.6	.06	18	4.4	5.6	.9	56	23	6.6
19...	4170	6.3	.72	23	4.1	5.4	1.2	60	24	6.0
28...	3490	7.7	1.6	20	4.6	6.9	1.2	58	23	7.4
MAR.										
09...	3150	5.9	.38	16	3.2	7.4	1.2	43	25	10
28...	9300	5.7	.15	15	3.3	4.4	1.2	46	16	7.0
APR.										
01-10	--	6.6	.15	17	4.0	4.8	1.2	55	17	6.7
11-20	--	6.0	.075	16	4.0	5.3	1.6	52	20	8.3
21-24	--	6.6	.01	18	4.9	6.7	1.6	57	25	8.2
30...	--	4.5	.07	22	5.1	7.1	1.6	62	26	12
MAY										
01-10	--	7.2	.04	20	4.1	7.8	1.6	60	23	9.1
11-20	--	7.3	.12	17	4.2	6.2	1.2	51	21	8.0
21-31	--	7.8	.07	13	5.6	6.7	2.0	47	17	8.4
JUNE										
01-10	--	8.1	.09	15	3.3	5.3	1.6	44	18	6.9
11-20	--	8.2	.13	15	3.8	6.4	1.6	46	21	7.5
21-30	--	6.2	.05	20	4.5	7.5	1.6	51	29	11
JULY										
01-04	--	5.8	.05	23	4.4	9.6	2.3	49	39	14
11-20	--	5.2	.06	25	4.9	9.4	2.3	58	38	14
21-31	--	5.1	.00	24	3.7	13	2.7	56	40	14
AUG.										
01-10	--	7.7	.03	23	5.6	12	3.1	54	40	14
11-20	--	6.3	.01	27	6.1	17	3.1	61	48	19
21-31	--	5.1	.03	31	4.6	22	3.1	68	52	24
SEPT.										
01-09	--	5.6	.00	36	6.0	23	3.9	78	62	25
17-20	--	6.4	.02	31	5.6	19	3.9	77	53	20
22-30	--	3.4	.00	40	3.8	23	3.9	77	68	24
TIME										
WTO. AVG.	--	6.5	.59	22	4.5	11	2.2	56	33	13

ANALYSES OF ADDITIONAL SAMPLES

APR.										
11...	5680	5.2	.32	18	3.4	5.5	.8	51	20	8.5
30...	4170	--	--	--	--	--	--	--	--	--
MAY										
04...	5270	6.3	.14	19	4.1	9.9	1.6	59	23	11
15...	3450	5.3	.04	15	3.6	5.7	1.6	41	24	7.5
28...	29800	5.8	.08	11	2.9	5.0	1.2	27	20	6.3
JUNE										
16...	3500	4.8	.14	18	3.5	8.0	2.0	50	24	11
JULY										
02...	1560	4.3	.06	25	4.5	11	2.0	55	39	17
22...	1450	5.7	.00	23	4.5	12	3.1	52	40	17
AUG.										
02...	1070	6.9	.00	34	3.0	15	3.1	58	56	16
07...	2210	6.2	.03	20	4.1	11	3.1	50	32	13
22...	1800	5.6	.03	40	6.1	19	4.3	42	100	22
29...	886	4.1	.05	34	7.2	22	4.3	79	53	28
SEPT.										
03...	806	3.3	.07	36	6.4	23	3.5	75	66	30
11...	922	3.2	.02	32	6.4	22	3.9	66	70	24

## JAMES RIVER BASIN

41

02035000 JAMES RIVER AT CARTERSVILLE, VA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHMS)	PH	TEMP- ERATURE (DEG C)	COLOR
DCT.										
03....	.2	6.2	.00	150	90	39	247	6.7	16	23
19....	.4	2.6	.09	99	53	21	148	7.3	--	25
NOV.										
01....	.2	.7	.00	124	76	24	181	6.6	14	15
14....	.0	4.1	.13	113	72	36	171	7.5	8	60
30....	.1	3.9	.03	146	80	40	213	7.3	5	35
DEC.										
11....	.2	2.0	.11	82	38	13	98	6.8	4	60
18....	.3	1.7	.16	72	43	10	110	7.3	5	50
JAN.										
02....	.1	2.5	.03	75	50	20	110	7.3	1	20
12....	.3	1.3	.03	111	66	23	160	7.3	0	60
17....	.2	1.8	.08	69	38	14	106	7.1	1	90
FEB.										
02....	.0	2.1	.04	99	70	18	153	6.9	6	15
16....	.2	2.1	.08	100	63	17	160	7.4	1	64
19....	.1	2.2	.08	104	67	18	179	7.3	2	27
28....	.1	2.4	.09	109	69	21	173	7.3	3	45
MAR.										
09....	.2	1.6	.18	99	54	19	144	7.0	9	10
28....	.0	1.3	.08	82	50	12	132	7.3	12	18
APR.										
01-10	.2	1.5	.11	98	59	14	141	7.4	--	15
11-20	.0	1.2	.00	94	57	14	146	7.3	--	5
21-24	.1	1.8	.00	98	65	22	158	7.8	--	8
30....	.1	2.4	.09	120	75	24	195	7.4	16	5
MAY										
01-10	.0	1.5	.00	105	67	18	171	7.3	--	10
11-20	.1	2.0	.00	100	60	18	139	7.2	--	15
21-31	.1	2.2	.03	100	56	17	144	7.5	--	15
JUNE										
01-10	.1	2.2	.04	92	52	16	130	7.4	--	5
11-20	.0	2.2	.03	90	52	14	133	7.4	--	25
21-30	.2	2.1	.00	110	69	27	193	7.4	--	18
JULY										
01-04	.2	3.3	.00	137	76	36	225	7.2	--	15
11-20	.2	2.3	.00	134	83	35	219	7.2	--	12
21-31	.2	3.9	.06	130	76	30	236	7.2	--	10
AUG.										
01-10	.1	4.1	.05	142	81	40	238	7.6	--	25
11-20	.2	2.8	.04	164	92	42	274	7.4	--	20
21-31	.2	2.0	.01	182	97	42	290	7.8	--	23
SEPT.										
01-09	.3	2.2	.00	211	114	50	367	8.0	--	20
17-20	.3	3.0	.00	183	100	37	310	7.8	--	25
22-30	.3	2.3	.00	222	116	53	356	7.8	--	20
TIME										
4TD. AVG.	.1	2.3	.52	129	74	28	206	7.4	--	--

## ANALYSES OF ADDITIONAL SAMPLES

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
APR.																																
11....	.1				1.9		.04		95		60		18		144		7.4		14		30											
30....	--			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY																																
04....	.1				2.2		.04		119		65		17		185		7.2		19		20											
15....	.1				2.0		.06		88		52		19		130		7.0		19		12											
28....	.1				2.1		.06		75		40		18		106		6.9		12		35											
JUNE																																
16....	.2				2.1		.03		104		59		18		163		7.6		27		15											
JULY																																
02....	.2				3.5		.02		144		82		37		230		7.4		--		20											
22....	.2				2.8		.05		144		76		33		243		7.5		30		18											
AUG.																																
02....	.2				5.7		.02		174		96		48		300		7.5		31		20											
07....	.2				2.1		.07		127		68		27		204		7.5		24		20											
22....	.2				3.1		.06		232		124		90		370		7.2		31		20											
29....	.3				2.5		.00		195		114		49		345		8.2		25		25											
SEPT.																																
03....	.2				3.9		.02		221		116		54		369		7.9		26		25											
11....	.3				2.4		.05		206		108		54		330		7.9		24		20											

## TEMPERATURE (°C) OF WATER, APRIL TO SEPTEMBER 1968

## JAMES RIVER BASIN

## 02035000 JAMES RIVER AT CARTERSVILLE, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), APRIL TO SEPTEMBER 1968															
DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER		
1..	127	171	146	232	285	370	18..	142	136	166	240	255	310		
2..	127	180	142	240	295	375	19..	145	154	150	225	278	--		
3..	--	195	119	245	260	370	20..	151	164	161	230	225	320		
4..	136	183	117	182	180	370	21..	154	175	165	212	248	--		
5..	138	170	132	--	164	365	22..	154	--	193	--	268	360		
6..	140	171	--	--	196	365	23..	155	186	190	--	305	--		
7..	148	175	120	--	255	375	24..	162	--	200	198	223	--		
8..	155	163	141	--	245	360	25..	--	194	237	250	362	--		
9..	150	151	--	--	255	355	26..	--	178	188	255	268	355		
10..	148	149	122	--	248	--	27..	--	167	200	235	286	351		
11..	153	147	109	205	260	--	28..	--	106	199	240	315	--		
12..	147	136	100	230	285	--	29..	167	78	193	230	335	--		
13..	143	132	87	220	285	--	30..	--	111	210	--	330	351		
14..	147	134	105	220	305	--	31..	--	155	--	282	360	--		
15..	143	130	144	200	310	--	AVER-								
16..	146	125	153	215	300	--	AGE-		146	151	153	--	267	--	
17..	144	132	159	205	232	300									

## 02037500 JAMES RIVER NEAR RICHMOND, VA.

LOCATION.--Lat 37°33'47", long 77°32'50", Henrico County, at gaging station on left bank, 0.1 mile upstream from Huguenot Memorial Bridge, 0.5 mile west of city limits of Richmond, 1.7 miles downstream from Bosher Dam, 3.3 miles upstream from Powhite Creek, and at mile 111.7.

DRAINAGE AREA.--6,757 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1947 to September 1956 (daily), February 1967 to March 1968 (monthly), April to September 1968 (daily).

Water temperatures: October 1947 to September 1951, October 1952 to September 1956, April to September 1968.

EXTREMES.--April to September 1968:

Dissolved solids: Maximum, 200 mg/l Sept. 11-20; minimum, 80 mg/l May 21-31.

Hardness: Maximum, 108 mg/l Sept. 21-30; minimum, 43 mg/l May 21-31.

Specific conductance: Maximum daily, 360 micromhos Sept. 11; minimum daily, 82 micromhos May 30, 31.

Water temperatures: Maximum, 35.0°C Aug. 23-25.

Period of record:

Dissolved solids (1947-56, April to September 1968): Maximum, 200 mg/l Sept. 11-20, 1968; minimum, 58 mg/l Apr. 1-10, Dec. 1-10, 1948.

Hardness (1947-56, April to September 1968): Maximum, 110 mg/l Oct. 1-10, 1954; minimum, 33 mg/l Mar. 1-10, 1955.

Water temperatures: Maximum, 35.0°C Aug. 23-25, 1968; minimum, freezing point Feb. 8, 9, 1951, Jan. 19, 1954, Jan. 9, Feb. 24, 25, 1956.

REMARKS.--Sample collection for chemical analyses changed from monthly to daily frequency beginning April 1, 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLD- RIDE (CL)
OCT.										
04..	1970	6.1	.00	28	5.6	10	2.2	21	77	10
NOV.										
01..	3200	7.6	.09	25	4.9	7.5	1.8	76	24	7.8
16..	1230	8.1	.76	18	5.3	7.4	2.0	42	34	9.5
DEC.										
04..	3950	8.1	.48	23	4.0	11	1.7	46	23	14
11..	31600	8.2	.02	11	1.8	3.3	1.6	21	16	4.5
JAN.										
09..	6160	8.3	.09	15	4.4	8.5	1.1	48	21	7.6
23..	6810	8.8	.47	12	34	7.1	1.6	33	21	8.0
FEB.										
05..	18900	7.8	.24	14	2.8	3.2	.8	44	13	4.0
15..	4580	6.4	.04	16	4.4	5.8	.9	54	19	6.8
MAR.										
04..	3200	6.3	.34	18	4.4	7.4	1.2	47	26	10
19..	28400	6.4	.08	10	2.7	3.2	1.6	30	12	5.6
APR.										
01-10	---	5.8	.08	16	3.5	4.6	1.6	49	18	8.1
11-20	---	4.5	.08	17	3.8	5.7	2.0	52	20	9.6
21-30	---	4.9	.00	19	4.2	7.1	1.6	53	22	9.6
MAY										
01-04	---	5.6	.00	20	5.1	8.3	1.6	60	24	11
15-20	---	5.2	.01	18	4.4	5.7	1.2	46	25	7.8
21-31	---	7.1	.05	12	3.3	5.7	2.0	39	15	7.0
JUNE										
01-10	---	7.3	.04	15	3.6	5.3	1.2	39	21	6.6
11-20	---	6.3	.04	18	3.2	6.7	1.6	49	21	8.4
21-30	---	5.5	.02	20	4.1	8.0	1.6	52	28	13
JULY										
01-06	---	4.4	.04	21	4.5	8.0	1.6	52	32	12
07-09	---	5.1	.00	17	3.6	6.0	1.6	42	24	9.1
10-20	---	4.0	.00	21	4.5	8.5	2.3	52	35	12
21-31	---	4.8	.02	23	4.1	12	2.7	53	39	13
AUG.										
01-10	---	5.8	.00	24	5.3	13	3.1	52	44	14
11-20	---	4.1	.00	26	4.5	13	3.1	58	45	18
21-31	---	4.8	.02	25	5.6	16	3.9	62	42	23
SEPT.										
01-10	---	3.5	.02	32	5.3	19	4.3	72	54	28
11-20	---	5.9	.01	36	5.3	17	4.7	51	85	17
21-30	---	3.2	.00	33	5.5	15	3.9	67	66	21
TIME										
WTD. AVG.	---	5.4	.53	22	4.5	9	2.5	52	35	13
ANALYSIS OF ADDITIONAL SAMPLES										
APR.										
01..	5400	7.9	.18	13	3.0	4.1	1.2	40	13	3.4



## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

TIME																								
WD. AVG.	.2	1.9	.52	125	72	30	202	7.4	--	--														

APR.	01...	.1	1.8	.14	71	46	13	122	7.4	--	15
------	-------	----	-----	-----	----	----	----	-----	-----	----	----

SPECIFIC CONDUCTANCE (MICROMHDS AT 25°C), APRIL TO SEPTEMBER 1964

DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1..	122	157	120	198	270	280	18..	154	150	169	193	275	311
2..	120	172	121	190	275	278	19..	154	--	168	197	265	308
3..	126	173	121	188	278	325	20..	154	148	195	210	255	309
4..	126	171	123	230	262	325	21..	155	124	198	212	255	309
5..	129	--	123	228	262	325	22..	154	123	194	240	308	308
6..	140	--	123	200	204	321	23..	149	123	197	200	282	308
7..	138	--	123	170	188	323	24..	--	125	205	194	286	310
8..	142	--	125	163	204	320	25..	154	123	206	195	285	317
9..	146	--	125	165	220	350	26..	--	120	207	193	267	315
10..	149	--	123	187	248	348	27..	155	124	210	191	280	312
11..	151	--	126	180	222	360	28..	166	88	204	181	267	310
12..	186	--	126	195	225	312	29..	176	84	200	194	267	315
13..	162	--	125	205	226	310	30..	160	82	204	195	260	317
14..	--	--	146	211	224	309	31..	--	82	--	232	260	--
15..	153	144	144	213	245	309	AVER-						
16..	155	147	144	214	248	310	AGE.						
17..	155	--	164	213	280	311	149	--	--	158	199	251	315

## TEMPERATURE (°C) OF WATER, APRIL TO SEPTEMBER 1968

[illegible]

## JAMES RIVER BASIN

02038850 HOLIDAY CREEK NEAR ANDERSONVILLE, Va.  
(Hydrologic bench-mark station)

LOCATION.--Lat 37°24'55", long 78°38'10", Buckingham County, at gaging station on right bank 350 ft downstream from bridge on State Highway 614, 1.0 mile upstream from Holiday Lake, and 5.2 miles southwest of Andersonville.

DRAINAGE AREA.--8.53 sq mi.

PERIOD OF RECORD.--Chemical analyses: March 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT. 24...	2.8	14	.06	3.8	1.8	2.3	.5	17	2.6	3.1
NOV. 28...	3.3	13	.38	2.1	1.1	2.2	.5	16	3.2	2.3
JAN. 29...	5.5	11	.06	2.9	1.3	2.0	.4	13	3.6	2.9
MAR. 28...	5.5	9.6	.38	2.4	.7	2.3	.4	15	1.8	1.8
APR. 25...	6.0	9.5	.71	1.8	1.3	2.1	.4	16	2.2	1.7
MAY 28...	26	6.2	.14	2.2	1.0	1.4	.8	6	6.2	1.8
JULY 18...	1.5	12	.21	4.0	1.2	2.5	.4	22	1.4	1.4
AUG. 13...	1.4	11	.39	4.2	1.1	3.0	.8	22	2.2	2.0
SEPT. 23...	.68	12	.34	3.2	1.4	2.8	.8	21	1.4	1.4

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT. 24...	.1	.5	.00	30	17	3	35	6.4	11	40
NOV. 28...	.0	.5	.00	39	10	0	32	6.4	4	25
JAN. 29...	.0	.6	.01	25	12	1	31	6.4	4	10
MAR. 28...	.0	.6	.00	37	9	0	30	7.0	12	35
APR. 25...	.0	.8	.02	26	10	0	32	6.9	15	50
MAY 28...	.2	.9	.00	41	10	5	26	6.1	10	35
JULY 18...	.0	.7	.05	43	15	0	43	7.1	24	25
AUG. 13...	.0	.5	.00	35	15	0	43	7.0	24	30
SEPT. 23...	.1	.4	.08	45	14	0	41	7.2	19	35

## CHOWAN RIVER BASIN

02050160 CHOWAN RIVER NEAR EURE, N.C.

LOCATION.--Lat 36°31'09", long 76°54'13", Gates County, water-quality recorder at Gatlington Landing, 1.8 miles downstream from Somerton Creek, and 6.3 miles northwest of Eure.

DRAINAGE AREA.--2,550 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

Water temperatures: October 1967 to August 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)
SEPT. 24...	1030	7.0	0.07	6.6	1.6	8.0	6.1	27	0	6.4	14
24...	1030	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)	PH	COLOR
SEPT. 24...	0.2	0.7	0.17	79	0.11	23	1	0.7	105	6.4	50
24...	--	--	--	--	--	--	--	--	--	8.2	--

DATE	ALKAL- INITY AS CAC03	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEM- PERA- TURE (DEG C)
SEPT. 24...	22	0.08	--	24
24...	--	--	7.2	--

A FIELD DETERMINATION.

CHOWAN RIVER BASIN  
09050160 CHOWAN RIVER NEAR EURE, N.C.--Continued

46

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM
1.....	--	--	140	135	330	160	--	--	200	180	300	170
2.....	--	--	140	130	340	320	--	--	190	170	240	150
3.....	--	--	135	115	350	180	--	--	160	140	170	100
4.....	--	--	120	110	380	290	--	--	140	140	110	95
5.....	--	--	120	110	350	240	--	--	150	140	210	110
6.....	110	100	130	120	570	240	--	--	180	150	200	160
7.....	110	100	125	120	550	450	--	--	190	160	260	170
8.....	110	105	130	120	550	470	--	--	200	180	300	220
9.....	105	90	130	130	500	290	--	--	200	190	300	220
10.....	90	80	140	130	300	220	--	--	210	180	230	190
11.....	105	85	140	135	280	190	--	--	200	180	200	170
12.....	67	67	145	135	400	180	--	--	210	190	170	130
13.....	120	110	140	130	600	210	--	--	200	160	180	130
14.....	120	115	140	135	360	210	--	--	170	160	180	120
15.....	125	115	140	140	300	190	--	--	--	--	210	145
16.....	130	110	145	140	340	200	--	--	--	--	200	150
17.....	125	110	150	140	470	340	--	--	--	--	160	130
18.....	115	85	150	145	590	420	--	--	--	--	150	130
19.....	120	100	155	145	580	430	--	--	--	--	140	140
20.....	130	120	--	--	760	350	--	--	--	--	150	130
21.....	130	125	--	--	570	260	--	--	--	--	130	120
22.....	135	130	--	--	440	260	--	--	--	--	120	110
23.....	135	130	--	--	420	50	--	--	260	230	110	100
24.....	140	130	--	--	250	60	--	--	170	150	140	110
25.....	135	130	--	--	210	150	--	--	170	150	160	140
26.....	130	125	--	--	250	200	--	--	150	140	170	140
27.....	135	130	--	--	270	210	--	--	--	--	180	170
28.....	140	130	165	160	--	--	--	--	300	210	180	170
29.....	140	130	160	160	--	--	--	--	300	210	180	160
30.....	140	135	170	160	--	--	--	--	--	--	160	130
31.....	140	130	--	--	--	--	200	190	--	--	150	140
AVERAGE	122	112	--	--	430	250	--	--	--	--	185	143

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM
1.....	150	140	170	160	160	140	84	84	--	--	--	--
2.....	140	130	170	160	170	140	90	84	--	--	--	--
3.....	160	140	170	160	160	130	90	86	--	--	--	--
4.....	160	150	170	160	170	130	92	90	--	--	--	--
5.....	160	140	160	160	180	130	100	90	--	--	--	--
6.....	150	140	160	150	190	160	104	94	--	--	--	--
7.....	170	160	160	150	200	170	108	94	--	--	--	--
8.....	170	170	160	150	190	130	108	104	--	--	--	--
9.....	170	160	160	160	140	130	108	104	--	--	--	--
10.....	180	170	160	160	150	130	112	104	--	--	--	--
11.....	170	160	160	160	140	130	--	--	--	--	--	--
12.....	180	170	170	160	130	130	--	--	--	--	--	--
13.....	190	160	--	--	140	130	--	--	--	--	--	--
14.....	180	160	--	--	160	140	--	--	--	--	--	--
15.....	170	150	--	--	170	160	--	--	--	--	--	--
16.....	170	160	--	--	170	160	--	--	--	--	--	--
17.....	170	160	--	--	160	150	--	--	--	--	--	--
18.....	170	160	--	--	160	150	--	--	--	--	--	--
19.....	170	160	--	--	160	140	--	--	--	--	--	--
20.....	160	150	120	120	140	110	66	60	--	--	--	--
21.....	160	150	130	120	140	110	68	66	--	--	--	--
22.....	170	160	140	140	160	140	70	66	--	--	--	--
23.....	170	170	140	140	160	150	76	70	--	--	--	--
24.....	170	160	150	150	150	120	140	72	--	--	--	--
25.....	170	160	150	150	140	90	162	--	--	--	192	98
26.....	170	160	160	160	100	90	126	74	--	--	242	96
27.....	170	150	160	150	--	--	76	72	--	--	240	90
28.....	170	170	160	150	--	--	146	74	--	--	242	100
29.....	160	160	160	140	--	--	112	72	--	--	200	98
30.....	170	160	150	130	--	--	168	76	--	--	242	104
31.....	--	--	160	140	--	--	292	44	--	--	--	--
AVERAGE	167	157	156	149	157	135	--	--	--	--	--	--

TEMPERATURE (°C) OF WATER, OCTOBER 1967 TO AUGUST 1968

MONTH	TEMPERATURE (° F) OF WATER (DAY)																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER																																
MAXIMUM	--	--	--	--	--	21	21	20	21	21	21	--	19	19	19	19	18	18	18	18	17	17	17	17	18	17	16	16	16	15	14	18
MINIMUM	--	--	--	--	--	21	20	20	20	20	19	--	19	18	18	18	18	18	17	17	17	16	16	16	16	16	16	15	14	14	--	--
NOVEMBER																																
MAXIMUM	16	16	16	16	15	14	13	12	12	12	12	12	10	10	10	--	--	--	--	--	--	--	--	--	--	--	--	8	9	8	--	--
MINIMUM	19	15	15	15	14	13	12	12	11	11	11	11	11	9	9	9	9	--	--	--	--	--	--	--	--	--	--	8	7	7	--	--
DECEMBER																																
MAXIMUM	7	7	8	7	7	7	7	7	7	7	8	9	9	8	7	7	8	8	8	9	8	7	6	4	4	4	4	4	4	4	7	
MINIMUM	7	7	8	7	7	6	6	7	7	5	7	8	8	7	6	6	7	7	7	7	8	7	6	4	4	3	3	3	3	3	6	
JANUARY																																
MAXIMUM	4	3	3	4	3	3	3	2	1	1	0	0	0	1	1	2	2	3	2	2	2	3	3	3	2	2	2	2	3	3	2	
MINIMUM	3	3	3	3	3	3	2	1	1	0	0	0	1	1	1	0	0	1	1	2	2	3	3	2	2	2	2	2	2	3	--	
FEBRUARY																																
MAXIMUM	5	6	7	7	7	8	7	6	6	6	5	4	4	4	--	--	--	--	--	--	--	--	4	3	4	4	4	4	--	--	--	
MINIMUM	4	5	6	6	6	6	5	4	4	4	4	3	3	3	--	--	--	--	--	--	--	--	3	3	2	3	2	3	4	--	--	
MARCH																																
MAXIMUM	4	6	4	6	7	7	8	9	11	10	10	11	11	10	9	9	10	11	13	14	15	13	13	13	14	14	16	16	16	16	10	
MINIMUM	3	3	2	2	4	5	6	6	7	8	9	9	11	9	10	9	7	9	10	11	11	13	13	12	12	12	13	13	14	--	9	
APRIL																																
MAXIMUM	16	16	16	17	16	16	16	17	17	17	17	17	17	17	18	17	18	18	18	17	18	17	17	17	17	17	18	18	17	18	--	17
MINIMUM	16	15	16	16	15	14	14	15	16	16	17	16	16	16	16	15	16	16	16	16	17	17	17	17	17	17	17	17	17	17	--	16
MAY																																
MAXIMUM	18	18	18	19	19	19	19	19	19	21	21	21	21	21	21	21	22	22	22	22	23	23	23	22	22	22	22	22	21	20	19	19
MINIMUM	17	16	17	17	17	17	17	18	18	19	20	20	20	20	20	21	21	21	21	20	19	21	22	22	22	22	22	21	20	19	19	--
JUNE																																
MAXIMUM	20	20	20	21	22	22	23	23	23	23	24	24	24	24	24	23	23	22	22	23	23	23	24	25	26	--	--	--	--	--	--	23
MINIMUM	19	19	19	19	20	20	21	22	22	23	23	23	23	23	23	23	23	22	22	23	23	23	23	23	24	--	--	--	--	--	--	27
JULY																																
MAXIMUM	27	30	29	30	35	28	28	28	26	28	26	28	27	28	29	28	28	28	27	27	27	27	27	27	28	28	28	28	28	28	28	25
MINIMUM	25	26	26	27	26	26	26	26	26	26	26	26	26	25	24	24	25	25	24	25	25	25	25	25	25	25	25	26	27	26	26	26
AUGUST																																
MAXIMUM	29	30	30	30	31	32	31	32	32	31	31	31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## CHOWAN RIVER BASIN

02052000 NEHERIN RIVER AT EMPORIA, VA.

LOCATION.--Lat 36°41'20", long 77°32'20", Greenville County, at gaging station on left bank at downstream side of bridge on U.S. Highway 301 in Emporia and 2.1 miles upstream from Falling Run.

DRAINAGE AREA.--749 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to March 1968 (monthly), April to September 1968 (daily).  
Water temperatures: April to September 1968.

EXTREMES.--April to September 1968:

Dissolved solids: Maximum, 85 mg/l Sept. 21-30; minimum, 57 mg/l June 11-20.

Hardness: Maximum, 32 mg/l Aug. 1-10, Sept. 21-30; minimum, 22 mg/l Apr. 1-10, June 1-10, 11-20.

Specific conductance: Maximum daily, 153 micromhos Sept. 29; minimum daily, 46 micromhos May 29.

Water temperatures: Maximum, 30.0°C Aug. 23, 25.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)
OCT.										
03...	79	16	.11	6.6	2.2	5.8	1.8	38	2.0	5.0
30...	74	17	.17	6.1	2.6	5.8	2.2	40	1.8	3.9
NOV.										
16...	98	16	.91	10	1.5	6.9	2.7	44	2.0	7.5
DEC.										
05...	653	17	.41	5.1	2.6	5.6	1.8	31	3.0	4.5
11...	874	16	.09	4.9	2.2	5.4	2.0	28	4.4	3.9
JAN.										
10...	486	15	.14	4.9	2.3	4.9	1.2	22	6.0	5.3
23...	448	14	.06	3.6	1.9	5.1	1.6	20	7.0	5.4
FEB.										
06...	386	16	.10	4.8	2.7	6.2	1.2	28	7.2	6.1
15...	295	15	.07	5.2	2.2	5.6	.9	30	5.8	5.7
MAR.										
05...	401	12	.38	4.8	2.0	5.5	1.2	28	5.2	5.2
19...	2040	10	.06	3.8	1.8	4.6	1.6	17	6.6	4.9
APR.										
01-10	--	14	.24	5.6	2.1	4.6	1.6	34	3.0	3.6
11-20	--	14	.28	5.2	2.6	4.8	1.6	32	6.2	3.9
21-30	--	15	.09	5.8	2.2	5.3	1.6	33	5.4	5.0
MAY										
01-10	--	14	.13	6.0	2.7	5.3	1.2	34	5.4	4.4
11-20	--	13	.09	5.6	3.0	5.5	1.6	38	2.4	5.3
21-31	--	13	.05	6.2	2.4	4.8	1.6	34	5.7	4.4
JUNE										
01-10	--	12	.09	5.6	1.9	4.1	1.6	24	5.8	4.4
11-20	--	13	.07	5.8	1.8	3.4	1.6	24	7.2	3.5
21-30	--	14	.01	6.4	2.7	4.4	1.6	30	6.4	3.1
JULY										
01-10	--	14	.12	6.0	3.4	5.0	2.0	41	3.0	3.4
11-19	--	13	.06	7.4	2.3	4.8	1.6	36	3.2	4.4
20...	349	--	.05	15	1.9	4.8	2.0	35	1.9	7.8
21-31	--	13	.03	8.0	1.7	5.0	2.0	36	4.4	4.8
AUG.										
01-10	--	14	.14	7.8	3.2	5.5	2.3	43	5.8	4.2
11-20	--	14	.08	7.8	2.7	5.3	2.3	42	6.0	4.5
21-31	--	13	.04	6.8	2.7	6.9	2.3	39	7.4	5.6
SEPT.										
01-10	--	12	.06	7.2	2.4	6.2	3.1	40	3.4	6.7
11-20	--	11	.05	9.2	1.6	7.6	3.1	44	2.6	8.0
21-30	--	11	.04	8.4	2.6	9.6	3.1	49	1.8	7.7
TIME										
WTD. AVG.	--	13	.59	6.7	2.4	5.5	2.0	36	4.8	4.9
DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 18° C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHMS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
03...	.2	.4	.03	57	26	0	77	6.6	18	15
30...	.1	.4	.04	62	26	0	79	7.0	10	22
NOV.										
16...	.1	.1	.20	54	31	0	86	7.2	6	25
DEC.										
05...	.1	.4	.03	65	24	0	71	7.2	6	50
11...	.1	.7	.02	75	21	0	68	6.7	--	30
JAN.										
10...	.1	.7	.04	44	22	4	65	6.7	1	44
23...	.2	1.1	.00	60	17	1	62	6.8	4	50
FEB.										
06...	.1	1.0	.18	71	23	0	63	7.0	3	23
15...	.1	.8	.05	61	22	0	72	7.3	2	45
MAR.										
05...	.1	.2	.10	63	20	0	68	7.1	6	38
19...	.1	.8	.11	54	17	3	56	6.6	9	50
APR.										
01-10	.1	.4	.06	66	22	0	69	7.1	--	30
11-20	.0	.4	.02	59	24	0	72	7.1	--	25
21-30	.1	.4	.00	62	24	0	71	7.0	--	22
MAY										
01-10	.1	.4	.00	74	26	0	72	7.3	--	22
11-20	.1	.4	.01	66	26	0	76	7.6	--	15
21-31	.1	.8	.03	71	26	0	75	7.2	--	35
JUNE										
01-10	.3	.8	.04	71	22	2	61	7.1	--	45
11-20	.0	1.8	.05	57	22	2	64	7.3	--	90
21-30	.1	.6	.06	58	27	2	71	7.0	--	40
JULY										
01-10	.2	.6	.01	71	29	0	86	7.0	--	25
11-19	.2	1.0	.00	62	28	0	80	7.0	--	28
20...	.3	.8	.00	--	46	18	126	6.9	--	--
21-31	.1	.9	.00	69	27	0	81	7.0	--	25
AUG.										
01-10	.0	1.3	.00	70	32	0	93	7.3	--	15
11-20	.1	.7	.01	66	30	0	92	7.3	--	30
21-31	.1	1.1	.04	73	28	0	95	7.0	--	10
SEPT.										
01-10	.1	1.9	.02	72	28	0	100	7.1	--	15
11-20	.2	1.8	.08	71	30	0	106	7.1	--	20
21-30	.2	2.1	.18	85	32	0	118	7.3	--	17
TIME										
WTD. AVG.	.1	.9	.53	68	27	0	82	7.1	--	--

## CHOWAN RIVER BASIN

47

02052000 MEHERRIN RIVER AT EMPORIA, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR APRIL TO SEPTEMBER 1968

DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1..	67	70	57	77	90	107	18..	71	73	66	73	90	107
2..	68	71	62	78	88	98	19..	17	77	64	71	95	97
3..	67	72	63	80	90	92	20..	73	77	69	126	96	96
4..	67	73	65	81	89	93	21..	73	86	69	73	98	99
5..	67	72	55	89	92	98	22..	73	81	69	71	95	90
6..	68	72	57	91	93	98	23..	76	85	67	79	98	98
7..	70	71	60	87	98	100	24..	77	81	69	80	88	104
8..	71	73	62	92	95	104	25..	76	83	70	86	96	119
9..	73	73	64	92	100	110	26..	70	83	73	88	94	112
10..	75	74	66	90	95	104	27..	67	83	72	84	98	140
11..	75	80	68	87	94	107	28..	64	83	72	80	96	150
12..	74	73	57	93	95	110	29..	66	48	73	82	94	153
13..	71	77	55	87	93	116	30..	69	58	75	84	97	115
14..	68	77	62	82	90	115	31..	--	56	--	88	98	--
15..	69	76	64	79	90	110	AVER-						
16..	72	76	67	83	91	102	AGE-	70	74	65	83	93	108
17..	71	74	64	69	87	100							

TEMPERATURE (°C) OF WATER, APRIL TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
APRIL.....	20	15	13	15	16	14	15	15	18	16	15	19	14	20	16	14	15	14	17	18	19	17	17	16	15	15	15	15	15	--	16	
MAY.....	15	15	17	18	18	18	16	17	17	19	19	19	21	19	20	19	20	19	20	18	21	20	18	21	20	18	19	17	16	19	17	20
JUNE.....	17	19	17	18	18	18	20	20	20	19	19	20	18	19	18	19	21	20	20	22	21	24	--	27	23	26	25	25	26	--	20	
JULY.....	28	27	25	24	23	24	25	26	27	27	25	27	23	27	28	27	28	28	25	26	29	27	27	29	28	27	29	26	27	28	26	
AUGUST...	28	29	29	27	27	23	28	26	28	26	28	26	28	29	28	28	28	28	27	29	29	30	29	30	27	25	25	25	24	--	24	
SEPTEMBER	23	27	28	28	28	27	24	26	25	--	21	--	25	25	26	24	25	24	22	24	20	25	20	23	24	25	26	23	24	18	--	24

## ROANOKE RIVER BASIN

02060500 ROANOKE (STAUNTON) RIVER AT ALTAVISTA, VA.

LOCATION.--Lat 37°06'16, long 79°17'44, Campbell County, at gaging station on right bank 12 ft upstream from bridge on U.S. Highway 29, 0.3 mile south of Altavista, 0.3 mile downstream from Sycamore Creek, 3.5 miles upstream from Big Otter River, and at mile 286.5.

DRAINAGE AREA.--1,802 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1950 to September 1951, October 1955 to September 1956, October 1967 to March 1968 (monthly), April to September 1968 (daily).

Water temperatures: October 1950 to September 1951, February 1953 to September 1956, April to September 1968.

Sediment records: February 1953 to September 1956.

## EXTREMES.--1967-68:

Dissolved solids: Maximum, 120 mg/l Aug. 1-10; minimum, 85 mg/l Apr. 11-20.

Hardness: Maximum, 94 mg/l Sept. 1-10; minimum, 56 mg/l Apr. 1-10.

Specific conductance: Maximum daily, 250 micromhos Aug. 7, 23; minimum daily, 106 micromhos May 22-24.

Water temperatures: Maximum, 28.0°C Aug. 8, 17, 18.

## Period of record:

Dissolved solids (1950-51, April to September 1968): Maximum, 150 mg/l Sept. 21-30, 1951; minimum, 70 mg/l Apr. 1-10, 1951.

Hardness (1950-51, April to September 1968): Maximum, 94 mg/l Sept. 1-10, 1968; minimum, 44 mg/l Dec. 1-10, 1950, Apr. 1-10, 1951.

Specific conductance: Maximum daily, 388 micromhos Aug. 19, 1954; minimum daily, 54 micromhos Aug. 18, 1955.

Water temperatures: Maximum, 30.0°C Aug. 10, 1951; minimum, freezing point on many days during winter periods.

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	OIS- CHARGE (GFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	8ICAR- BONATE (HC03)	SULFATE (S04)	CHLO- RIDE (CL)
OCT.										
03...	372	8.7	.02	14	5.3	12	2.4	78	14	6.9
NOV.										
08...	291	7.9	.05	18	6.8	24	2.3	97	13	12
27...	428	6.8	.05	17	3.6	10	2.0	83	4.4	6.2
DEC.										
13...	535	10	.03	9.0	3.4	18	2.2	68	13	3.8
JAN.										
03...	276	10	.02	11	4.3	2.0	2.3	97	10	12
24...	1940	11	.06	8.2	4.6	18	1.5	38	10	5.5
FEB.										
12...	264	10	.14	12	5.1	24	1.7	77	13	14
MAR.										
06...	168	9.4	.11	12	4.0	36	2.3	106	14	6.3
18...	3360	9.8	.00	8.6	3.0	12	1.6	38	11	5.0
24...	348	9.5	.11	9.4	3.3	18	2.0	65	8.4	8.8
APR.										
01-10	--	6.2	.00	14	4.7	4.6	2.3	62	9.0	7.0
11-20	--	5.4	.01	15	6.3	5.0	2.7	70	11	8.5
21-30	--	7.2	.11	14	5.7	6.0	2.7	69	1.0	7.7
MAY										
01-10	--	6.4	.04	17	3.2	6.0	2.3	71	11	8.7
11-20	--	5.3	.00	18	6.6	6.0	2.3	75	13	8.5
21-31	--	7.4	.05	15	5.3	5.5	2.7	66	9.8	7.3
JUNE										
01-10	--	4.4	.00	18	6.3	6.9	3.5	80	9.4	10
11-20	--	6.3	.00	17	6.3	6.7	2.3	76	13	8.8
21-30	--	3.7	--	20	6.4	6.2	2.3	82	12	9.1
JULY										
01-10	--	3.1	.00	19	7.0	6.0	2.3	83	13	9.8
11-20	--	4.1	.01	19	7.0	7.1	1.2	86	11	9.6
21-31	--	4.5	.00	20	5.7	7.6	3.1	86	11	9.3
AUG.										
01-10	--	5.2	.00	20	6.3	9.6	3.5	88	13	8.1
11-20	--	5.9	.01	18	7.0	7.8	3.1	82	13	9.4
21-31	--	4.0	.01	20	5.8	8.7	2.3	70	17	11
SEPT.										
01-10	--	4.5	.04	19	6.2	7.4	3.1	84	13	9.4
11-20	--	5.3	.01	19	6.6	6.2	2.7	85	9.4	8.0
21-30	--	4.9	.00	20	6.2	8.0	2.7	89	12	8.8
TIME										
WTD. AVG.	--	5.4	.51	18	5.9	7.4	2.6	78	12	8.8

## ROANOKE RIVER BASIN

## 02060500 ROANOKE (STAUNTON) RIVER AT ALTAVISTA, VA.—Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECT- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
03...	.1	.8	.00	107	58	0	160	7.8	16	10
NOV.										
08...	.3	.6	.05	133	72	0	250	9.1	1	10
27...	.2	1.0	.03	103	58	0	165	7.8	7	5
DEC.										
13...	.3	.9	.11	99	36	0	144	7.6	7	45
JAN.										
03...	.2	.4	.12	127	46	0	194	7.8	4	7
24...	.1	.8	.10	99	40	0	140	8.9	3	20
FEB.										
12...	.3	.7	.20	134	51	0	205	9.3	0	10
MAR.										
06...	.2	.0	.12	153	46	0	225	9.7	4	8
18...	.4	1.4	1.6	75	38	7	104	7.7	8	25
24...	.2	.8	.06	99	37	0	155	9.5	10	30
APR.										
01-10	.0	.8	.02	88	56	5	128	7.1	--	15
11-20	.0	.8	.02	85	63	6	155	7.5	--	0
21-30	.1	.9	.01	91	60	3	145	7.4	--	17
MAY										
01-10	.1	1.0	.00	93	66	8	152	7.2	--	15
11-20	.0	.9	.00	102	71	9	150	7.4	--	5
21-31	.1	1.4	.01	96	58	4	144	7.6	--	28
JUNE										
01-10	.1	1.1	.00	105	70	4	169	7.5	--	3
11-20	.2	1.2	.01	98	69	7	184	7.8	--	5
21-30	.1	.8	.01	105	76	9	198	7.6	--	3
JULY										
01-10	.1	1.0	.01	106	76	8	196	7.6	--	10
11-20	.1	.8	.05	109	76	5	192	7.7	--	10
21-31	.1	1.0	.00	100	74	4	196	7.6	--	5
AUG.										
01-10	.0	1.5	.32	120	75	3	205	7.6	--	8
11-20	.1	.7	.09	105	74	6	185	7.6	--	10
21-31	.1	.5	.05	118	74	17	198	7.6	--	7
SEPT.										
01-10	.1	.5	.10	108	94	24	178	7.6	--	8
11-20	.2	.4	.00	100	76	6	183	7.6	--	5
21-30	.1	.4	.05	111	74	2	190	7.9	--	3
TIME										
WTD. AVG.	.1	.9	.55	103	70	7	175	7.6	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR APRIL TO SEPTEMBER 1968

DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1..	122	142	164	192	198	175	18..	161	149	198	200	188	185
2..	123	152	168	158	200	178	19..	163	155	218	193	188	184
3..	126	155	168	195	197	178	20..	165	154	210	193	187	184
4..	121	153	168	158	197	179	21..	160	155	211	196	187	210
5..	129	155	170	196	195	176	22..	161	106	198	193	190	212
6..	128	152	170	198	197	170	23..	160	106	200	191	250	189
7..	129	152	170	157	250	179	24..	146	106	204	196	222	186
8..	129	152	171	196	245	182	25..	160	152	195	190	189	184
9..	138	152	171	198	202	180	26..	127	152	193	203	189	183
10..	140	153	172	195	165	182	27..	144	150	193	197	188	183
11..	142	151	173	193	155	178	28..	134	150	194	201	193	184
12..	141	151	172	193	195	178	29..	123	169	195	197	195	184
13..	152	150	165	195	180	184	30..	139	168	196	200	192	184
14..	154	149	167	162	180	184	31..	--	172	--	195	188	--
15..	153	148	166	195	190	183	AVER-						
16..	157	148	168	198	197	184	AGE.	142	148	183	190	196	183
17..	159	149	204	194	190	186							

## TEMPERATURE (°C) OF WATER, WATER YEAR APRIL TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
APRIL.....	12	14	10	13	13	11	13	13	14	12	12	13	13	13	13	14	15	15	15	15	15	14	15	15	15	15	14	14	14	--	13	
MAY.....	15	15	15	15	15	16	16	17	17	17	17	17	17	17	17	17	17	17	17	16	16	17	16	16	16	16	15	15	17	17	18	16
JUNE.....	19	19	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	19	19	22	22	23	23	24	24	24	--	20	20	
JULY.....	23	23	24	23	23	21	22	22	23	21	22	22	23	23	22	22	22	21	24	22	24	24	22	24	24	24	22	23	24	23	24	24
AUGUST.....	24	24	24	22	23	24	23	28	23	24	21	23	23	24	23	28	23	23	23	24	24	24	23	21	21	21	20	22	21	--	23	
SEPTEMBER	22	22	22	22	22	22	23	23	22	22	21	22	22	22	22	22	22	22	21	21	23	23	21	21	21	21	20	22	22	21	--	21

## 02066000 ROANOKE (STAUNTON) RIVER AT RANDOLPH, VA.

LOCATION.--Lat 36°54'54, long 78°44'28, Halifax County, at gaging station on right bank 14 ft downstream from bridge on State Highway 746, 2.8 miles northwest of Randolph, Charlotte County, 3.6 miles upstream from Roanoke Creek, and at mile 227.3. Sediment samples collected from bridge.

DRAINAGE AREA.--3,000 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1950 to September 1956, October 1967 to March 1968 (monthly), April to September 1968 (daily).  
Water temperatures: October 1950 to September 1956, April to September 1968.  
Sediment records: January 1954 to September 1968.

## EXTREMES.--1967-68:

Dissolved solids (April to September): Maximum, 108 mg/l Sept. 1-10, 21-30; minimum, 75 mg/l Apr. 1-10.  
Hardness (April to September): Maximum, 75 mg/l Sept. 21-30; minimum, 44 mg/l Apr. 1-10.  
Specific conductance (April to September): Maximum daily, 205 micromhos Sept. 7; minimum daily, 94 micromhos Apr. 2.  
Water temperatures (April to September): Maximum, 35.0°C Aug. 15.  
Sediment loads: Maximum daily, 4,450 tons, May 28; minimum daily, 3 tons Sept. 30.

## Period of record:

Dissolved solids: Maximum, 108 mg/l Sept. 11C. 2130; minimum, 75 mg/l Apr. 110.

Dissolved solids: Maximum, 108 mg/l Sept. 1-10, 21-30; minimum, 75 mg/l Apr. 1-10.

Hardness (April to September 1968): Maximum, 75 mg/l Sept. 21-30; minimum, 44 mg/l Apr. 1-10.

Specific conductance (April to September 1968): Maximum daily, 205 micromhos Sept. 7; minimum daily, 94 micromhos Apr. 2.

Water temperatures (April to September 1968): Maximum, 35.0°C Aug. 15.

Sediment concentrations (1954-57): Maximum daily, 2,060 mg/l May 20, 1957; minimum daily, 6 mg/l Dec. 28-31, 1955.

Sediment loads (1954-57): Maximum daily, 71,500 tons Mar. 2, 1954; minimum daily, 3 tons Sept. 30, 1968.

REMARKS.--Sediment samples collected daily from January 1954 to June 1957, at approximately ten-day intervals and during flood stages from July 1957 to September 1963, and weekly and during flood stages from October to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	OIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	PO- TAS- SIUM (NA)	PHOS- PHATE (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.										
02...	525	8.4	.09	13	4.5	6.1	2.2	61	8.6	6.1
NOV.										
06...	525	9.4	.11	14	5.6	7.1	2.0	71	8.0	6.1
27...	595	9.2	.11	14	5.1	8.7	2.0	67	9.2	9.1
DEC.										
11...	5130	9.1	.01	7.9	2.2	4.0	2.2	29	9.4	5.1
JAN.										
03...	3120	13	.00	6.4	3.0	5.0	1.4	32	6.2	4.0
22...	1770	12	.15	7.7	2.6	4.8	1.3	32	6.6	3.4
FEB.										
12...	695	8.7	.26	11	4.4	6.5	1.3	58	8.6	6.0
MAR.										
04...	838	6.8	.11	12	4.1	6.4	1.6	60	6.4	6.7
18...	8910	8.5	.03	6.0	2.4	4.8	1.2	26	7.8	3.5
23...	4680	6.8	.02	12	4.7	6.0	2.0	59	9.0	6.4
APR.										
01-10	--	8.3	.00	11	4.0	5.3	2.0	55	6.6	5.5
11-20	--	7.6	.09	11	4.6	6.4	2.3	60	8.0	7.1
21-30	--	6.6	.07	11	4.6	7.1	2.3	63	7.6	7.4
MAY										
01-10	--	7.0	.00	12	5.6	7.3	2.3	64	12	7.5
11-20	--	7.0	.00	14	5.8	7.6	2.7	70	7.0	8.8
21-31	--	7.4	.02	13	4.9	7.4	2.3	63	11	7.7
JUNE										
01-10	--	6.2	.02	14	5.3	7.8	2.3	66	9.8	9.3
11-20	--	7.9	.01	13	4.4	7.8	2.3	63	9.6	7.7
21-30	--	7.1	.00	15	5.7	8.5	2.3	72	11	8.0
JULY										
01-10	--	6.9	.00	16	5.6	6.4	2.7	71	11	9.4
11-20	--	6.5	.00	16	5.5	7.6	2.3	72	12	9.1
21-31	--	6.6	.00	18	5.2	7.8	2.3	77	10	8.3
AUG.										
01-10	--	6.1	.00	20	3.8	7.8	2.3	76	13	9.0
11-20	--	6.8	.00	14	6.1	9.4	3.1	76	13	8.6
21-31	--	5.0	.01	17	6.0	11	2.3	80	17	9.3
SEPT.										
01-10	--	4.8	.00	17	6.4	8.7	2.7	84	11	9.5
11-20	--	6.2	.01	18	6.1	8.7	2.7	87	11	8.7
21-30	--	4.9	.00	23	4.5	9.4	3.1	90	11	10
TIME										
WTD. AVG.	--	6.7	.51	15	5.2	7.8	2.4	70	11	8.2

## ROANOKE RIVER BASIN

02068000 ROANOKE (STAUNTON) RIVER AT RANDOLPH, VA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
OCT.										
02...	.1	1.2	.00	86	50	0	126	7.3	18	18
NOV.										
06...	.2	.4	.03	83	57	0	142	7.5	9	13
27...	.1	.4	.02	92	56	1	145	7.4	6	5
DEC.										
11...	.0	1.7	.09	62	29	5	81	6.8	8	25
JAN.										
03...	.1	.9	.04	48	29	3	77	7.1	2	10
22...	.1	.9	.07	66	30	4	77	7.0	4	33
FEB.										
12...	.2	1.1	.00	78	46	0	124	7.5	2	18
MAR.										
04...	.1	.3	.05	85	48	0	126	7.5	3	15
18...	.2	1.2	.20	65	25	4	71	7.1	10	40
23...	.1	.8	.01	77	49	1	116	6.8	12	5
APR.										
01-10	.1	.6	.04	75	44	0	111	6.9	--	5
11-20	.1	.4	.06	80	48	0	122	7.3	--	3
21-30	.0	.3	.00	81	48	0	129	7.3	--	3
MAY										
01-10	.1	.6	.00	86	54	1	135	7.6	--	5
11-20	.1	2.0	.17	94	58	1	148	7.7	--	3
21-31	.1	1.0	.01	90	52	0	137	7.7	--	15
JUNE										
01-10	.3	.8	.02	93	56	2	143	7.6	--	15
11-20	.1	1.3	.03	91	52	0	139	7.4	--	2
21-30	.0	.5	.04	94	60	1	167	7.4	--	3
JULY										
01-10	.1	.3	.03	94	63	5	166	7.5	--	10
11-20	.1	.8	.01	96	62	4	172	7.5	--	3
21-31	.1	.7	.00	98	66	3	177	7.4	--	5
AUG.										
01-10	.1	.7	.00	99	64	2	174	7.3	--	5
11-20	.1	.3	.00	93	60	0	168	7.3	--	5
21-31	.1	.3	.01	107	68	2	184	7.5	--	5
SEPT.										
01-10	.1	.1	.06	108	79	0	193	7.4	--	5
11-20	.2	.3	.00	104	70	0	188	7.7	--	5
21-30	.2	.3	.01	108	75	1	188	8.1	--	5
TIME										
WTD. AVG.	.1	.6	.52	93	59	1	155	7.5	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), APRIL TO SEPTEMBER 1968

DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	DAY	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1..	107	124	130	169	173	194	18..	126	165	128	192	170	177
2..	94	121	129	182	168	195	19..	120	154	144	177	144	177
3..	101	126	129	150	187	190	20..	122	151	150	163	172	183
4..	114	128	138	170	160	178	21..	118	151	155	180	142	181
5..	113	130	139	167	160	177	22..	117	154	157	176	177	189
6..	114	132	147	185	158	203	23..	120	158	170	174	187	187
7..	118	146	151	144	188	205	24..	118	159	170	158	180	179
8..	113	144	155	166	174	198	25..	130	157	157	180	185	180
9..	113	149	155	173	188	195	26..	134	147	148	179	190	186
10..	122	153	153	156	179	197	27..	149	147	175	190	182	184
11..	124	150	138	179	180	187	28..	134	99	182	191	190	184
12..	125	146	125	180	181	193	29..	132	101	177	175	195	203
13..	126	151	136	184	175	195	30..	138	116	180	172	200	204
14..	115	143	144	171	153	194	31..	--	118	--	177	197	--
15..	113	142	152	170	161	200	AVER-						
16..	104	141	152	168	168	200	AGE-	120	140	149	172	175	189
17..	126	141	118	136	171	178							

## TEMPERATURE (°C) OF WATER, APRIL TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
APRIL.....	15	14	14	14	14	13	13	13	15	13	13	12	12	15	16	15	15	15	16	17	17	17	17	15	15	14	14	14	14	13	--	14	
MAY.....	13	15	17	16	14	15	15	15	18	15	19	19	17	18	17	18	18	17	16	16	17	17	17	18	15	18	16	16	17	17	16		
JUNE.....	17	17	20	19	20	21	22	23	23	24	25	24	22	21	24	24	21	21	22	23	25	24	25	25	25	27	25	25	25	27	--	22	
JULY.....	28	27	26	24	23	25	26	25	24	25	24	23	23	24	25	26	26	24	22	24	25	25	25	25	26	26	25	25	25	24	24	24	
AUGUST....	25	25	24	25	25	26	26	26	25	26	26	26	26	24	29	35	25	26	27	27	27	26	26	25	24	26	25	23	22	21	19	23	
SEPTEMBER	21	20	20	22	23	24	21	20	20	20	23	21	20	19	18	23	23	19	20	20	19	19	--	19	19	20	20	20	19	18	18	--	20



## ROANOKE RIVER BASIN

51

02068000 ROANOKE (STAUNTON) RIVER AT RANDOLPH, VA.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(WHERE NO DAILY CONCENTRATIONS ARE REPORTED, LOADS ARE ESTIMATED.)

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)
1	946	--	51	1440	--	58	1370	--	55
2	433	--	23	1490	--	60	1480	15	60
3	1110	--	60	1490	--	60	1320	--	53
4	1220	--	66	1500	15	61	1370	--	55
5	1240	--	67	897	--	36	1890	--	117
6	1560	--	84	500	--	20	1730	--	107
7	1250	20	68	1010	--	41	1540	--	96
8	803	--	22	1410	--	57	1440	--	89
9	429	--	6	1410	--	57	1390	23	86
10	877	--	24	1420	--	58	1230	--	66
11	1440	--	78	1410	15	57	3880	--	838
12	1490	--	80	823	--	18	6570	--	3020
13	1380	--	74	462	--	10	4840	--	1830
14	1350	18	66	928	--	20	2750	--	742
15	827	--	22	1490	--	57	2170	--	234
16	445	--	10	1370	--	55	1900	31	159
17	969	--	26	1350	--	55	1350	--	73
18	1450	--	78	1340	14	51	773	--	31
19	1630	--	88	768	--	17	1200	--	65
20	1590	--	86	426	--	9	1790	--	150
21	1480	15	60	903	--	20	1650	--	138
22	810	--	22	1090	--	41	1640	--	137
23	466	--	10	1500	--	57	3950	100	2030
24	970	--	26	1340	--	51	2890	--	1170
25	1410	--	76	1070	0	26	1560	--	84
26	1480	--	80	1330	--	50	1090	--	58
27	1800	--	107	486	--	12	1480	--	80
28	1620	25	106	599	--	15	2430	--	656
29	865	--	36	1280	--	48	7070	--	3440
30	495	--	13	1320	--	50	6260	--	3040
31	1010	--	41	--	--	--	2800	--	1130
TOTAL	34865	--	1661	33752	--	1227	74793	--	19889

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)
1	1680	--	181	3660	--	593	2170	30	168
2	1340	--	54	5710	--	1000	2760	--	183
3	2460	--	179	4720	62	828	1690	--	91
4	2200	--	164	3440	--	557	874	--	47
5	2800	--	214	1570	--	170	1510	--	82
6	2790	27	213	1660	--	179	1760	--	95
7	1720	--	70	1900	--	205	1780	--	96
8	1130	--	46	7630	--	176	1800	--	97
9	2910	--	707	1610	--	174	1800	30	146
10	2790	--	676	1580	--	171	1110	--	60
11	2750	--	678	863	--	70	854	--	46
12	2640	--	642	535	--	43	2300	--	186
13	2810	00	683	1270	--	132	6480	--	1570
14	6300	--	3000	1610	40	174	8590	--	4160
15	8860	--	4300	1550	--	167	5370	--	870
16	8960	--	4350	1490	--	161	3910	40	422
17	8620	--	3900	1490	41	161	3670	--	396
18	6830	--	3320	852	--	69	7960	--	2790
19	5310	--	2580	525	--	43	8250	--	3230
20	4150	--	1680	1080	--	117	5430	--	660
21	2280	--	616	1520	--	123	5110	--	552
22	1830	--	494	1500	--	122	4830	--	301
23	6360	--	3350	2290	--	185	3920	20	212
24	5810	--	3060	1420	--	77	2300	--	124
25	6770	--	3560	655	--	52	2470	--	167
26	6190	--	3260	759	--	41	3920	--	423
27	4350	--	1760	1380	--	75	3420	--	277
28	2310	--	312	170	--	92	2920	--	197
29	1650	--	178	1450	--	78	2210	--	149
30	2490	--	336	--	--	--	1990	40	215
31	2860	--	386	--	--	--	1280	--	138
TOTAL	12450	--	45015	51669	--	6035	103798	--	18240

## ROANOKE RIVER BASIN

## 02086000 ROANOKE (STAUNTON) RIVER AT RANDOLPH, VA.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)
1	1660	--	46	2800	--	367	1780	20	96
2	1750	--	163	2330	--	217	1650	--	89
3	4900	--	248	2230	--	178	1910	--	155
4	2360	--	255	1500	20	103	1790	--	121
5	2440	--	264	1820	--	98	1630	--	88
6	3760	52	934	2270	--	184	1510	--	102
7	3960	--	362	2230	--	216	1450	--	92
8	1060	--	122	2270	--	184	1420	24	92
9	2110	--	114	2270	--	153	1340	--	83
10	2360	--	114	2210	--	90	732	--	36
11	3050	--	209	2150	12	70	1350	--	128
12	3140	--	254	2120	--	86	1700	--	161
13	2340	9	57	2390	--	161	1580	--	128
14	1170	--	28	2610	--	176	1480	--	140
15	850	--	21	2580	--	174	1420	35	134
16	1070	--	70	2410	--	303	963	--	65
17	2150	--	116	2540	--	240	579	--	43
18	1760	--	71	2360	29	185	1340	--	145
19	1720	--	70	2240	--	151	1880	--	203
20	1750	16	75	2220	--	150	1620	--	131
21	1260	--	52	2230	--	120	1410	--	76
22	1510	--	87	2260	--	153	1410	10	61
23	1850	--	100	1820	--	98	979	--	40
24	1520	--	82	1510	--	61	450	--	12
25	1720	--	116	1970	22	117	831	--	34
26	4110	--	888	1920	--	104	1300	--	70
27	1050	17	57	3330	--	805	1370	--	74
28	1250	--	68	8240	--	4450	1220	--	87
29	1700	--	12	4050	--	666	1350	25	91
30	2250	--	142	2550	--	175	626	--	50
31	--	--	--	2010	--	109	--	--	--
TOTAL	61960	--	5623	75180	--	10550	40440	--	2793

02075500 DAN RIVER AT PACES, VA.

LOCATION.--Lat 36°38'32", long 79°05'23", Halifax County, at gaging station on right bank 100 ft upstream from bridge on State Highway 658, 0.5 mile southeast of Paces, 0.5 mile upstream from Big Toby Creek, 2.7 miles upstream from Birch Creek, and at mile 36.0. Sediment samples collected from bridge.

DRAINAGE AREA.--2,550 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1955 to August 1956.

Water temperatures: January 1954 to September 1956.

Sediment records: January 1954 to September 1968.

EXTREMES.--1967-68:

Sediment loads: Maximum daily, 34,760 tons March 14; minimum daily, 17 tons Sept. 3.

Period of record:

Sediment concentrations (1954-57): Maximum daily, 2,280 mg/l July 13, 1955, Sept. 18, 1957; minimum daily,

10 mg/l Jan. 17, 1956.

Sediment loads: Maximum daily, 94,200 tons Sept. 18, 1957; minimum daily, 11 tons Sept. 23, 1956.

REMARKS.--Sediment samples collected daily from January 1954 to June 1957, at approximately ten-day intervals and during flood stages from July 1957 to September 1963, and weekly and during flood stages from October 1963 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
MAR. 23...	2720	12	.10	4.4	2.1	8.7	1.6	30	7.6	6.8
DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA.MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
MAR. 23...	.2	1.0	.17	63	20	C	77	7.1	16	15

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968  
(WHERE NO DAILY CONCENTRATIONS ARE REPORTED, LOADS ARE ESTIMATED)

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)
1	1380	52	194	988	--	72	1040	--	56
2	743	--	80	1060	--	114	1110	--	90
3	665	--	54	1090	--	118	1420	82	314
4	616	36	60	1250	--	68	1830	--	494
5	652	--	70	1130	--	122	2250	--	608
6	694	--	75	813	--	66	2040	--	441
7	763	--	103	733	--	59	1830	--	148
8	659	--	71	722	--	78	1710	--	277
9	669	--	54	790	--	107	1670	--	271
10	555	--	45	689	--	37	2010	--	271
11	684	--	55	781	--	84	5200	--	3440
12	928	--	100	742	21	40	6890	421	7830
13	1040	--	84	747	--	40	6070	--	4560
14	793	--	86	571	--	46	3680	--	3380
15	743	31	62	679	--	55	2390	--	452
16	720	--	78	708	--	57	2050	38	210
17	576	--	47	706	--	38	1860	--	151
18	711	--	77	761	--	41	1510	32	130
19	938	--	101	691	16	30	1420	--	153
20	917	--	99	719	--	39	1820	--	147
21	1130	--	92	592	--	32	1950	--	158
22	791	34	72	625	--	34	1780	--	192
23	786	--	64	727	--	39	4740	--	512
24	614	--	66	838	--	45	8060	78	1700
25	701	--	76	963	--	52	3940	--	851
26	836	--	113	1060	23	66	2880	--	622
27	847	--	69	1100	--	119	2630	--	329
28	1080	--	117	812	--	44	2990	--	870
29	878	25	59	831	--	45	13900	--	13240
30	799	--	65	895	--	48	12600	482	16400
31	640	--	52	--	--	--	5100	--	3140
TOTAL	24544	--	2440	24713	--	1835	106710	--	61437

## ROANOKE RIVER BASIN

02075500 DAN RIVER AT PACRS, VA.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)
1	334C	--	117C	3000	--	324	1530	--	83
2	206C	--	441	2930	--	316	1540	--	125
3	216C	--	525	2950	56	446	1430	24	93
4	226C	--	431	2940	--	397	1290	--	70
5	231C	--	437	2470	--	133	1190	--	80
6	251C	--	356	2270	--	123	1250	--	84
7	2330	--	315	2090	--	113	1240	--	100
8	230C	41	261	2020	--	100	1270	--	103
9	2320	--	164	2010	--	100	1210	--	124
10	1910	--	258	1600	15	75	1260	--	102
11	210C	--	340	1730	--	93	1140	--	92
12	178C	--	321	1650	--	89	2750	480	3560
13	290C	--	311	1410	--	76	11500	--	22620
14	704C	--	1140	1530	--	81	15700	--	34760
15	1230C	--	731C	1560	--	84	6290	--	7470
16	724C	210	4110	1560	--	84	3440	--	929
17	425C	--	1550	1600	19	82	5060	--	3420
18	321C	--	693	1500	--	81	10300	--	19180
19	280C	--	378	1350	--	73	5370	--	2460
20	324C	65	565	1180	--	64	3710	--	701
21	377C	--	611	1400	--	76	2950	--	542
22	4710	--	1400	1450	--	80	2700	--	474
23	523C	--	1600	1310	--	71	2680	--	434
24	407C	--	1200	1210	11	36	2800	70	529
25	480C	--	711	1360	--	73	2560	--	449
26	421C	74	835	1260	--	68	2240	--	353
27	315C	--	465	1120	--	60	2150	--	366
28	200C	--	352	1250	--	68	2100	--	357
29	277C	--	259	1340	--	72	1580	--	337
30	251C	--	271	--	--	--	1920	--	327
31	267C	--	367	--	--	--	1880	62	315
TOTAL	111140	--	30361	51310	--	3556	104430	--	100889
DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)
1	1740	--	282	221C	--	388	1590	--	322
2	1720	--	265	2290	--	402	1700	--	413
3	1950C	--	310	1830	--	296	2600	730	3940
4	2220	--	450	1580	51	218	2260	--	2380
5	2420	--	575	1660	47	211	2100	--	567
6	307C	98	812	1580	--	192	1580	--	384
7	341C	--	921	1280	--	138	1410	--	324
8	2680	--	615	1270	--	137	1330	--	305
9	2360	--	467	1330	--	158	2100	80	454
10	219C	--	443	1340	--	199	2620	--	601
11	2110	--	349	1270	61	269	3130	--	718
12	1990	--	349	1230	--	190	2500	--	540
13	197C	--	314	1420	--	211	2190	--	473
14	1800	--	243	1650	--	267	1820	--	369
15	161C	45	164	1660	--	269	1610	--	326
16	1610	--	196	1680	--	272	1430	80	309
17	1630	--	198	1700	--	298	1310	--	265
18	1570	--	170	1410	--	228	1560	--	316
19	1560	--	168	1380	--	186	2340	--	505
20	1550	--	167	1280	43	149	1950	--	395
21	1540	--	175	1100	--	119	1710	--	369
22	1420	--	153	1090	--	118	1590	80	343
23	1310	--	159	1040	--	109	1380	--	279
24	1570	85	300	1080	--	111	1140	--	215
25	2260	--	580	1090	--	132	949	--	128
26	2750	--	743	1420	54	207	1100	--	148
27	2080	--	449	4100	--	1330	1090	--	147
28	1740	--	326	6130	--	2670	1220	--	165
29	1540	--	240	5670	--	1510	1010	--	136
30	1650	--	267	2690	--	481	904	56	137
31	--	--	--	2050	--	415	--	--	--
TOTAL	59950	--	11043	57970	--	11320	50563	--	15973





## 02077300 HYCO RIVER AT MCGEEHES MILL, N.C.

LOCATION.--Lat 36°31'02", long 79°01'42", Person County, at gaging station 200 ft downstream from bridge on Secondary Road 1322 at McGehees Mill, and 1.7 miles downstream from Hyco Dam.

DRAINAGE AREA.--191 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

Water temperatures: August 1964 to September 1968.

EXTREMES.--1967-68:

Water temperatures: Maximum, 33.0°C Aug. 7, 9, 19, 21, 22; minimum, 2.0°C Feb. 27, 28, Mar. 4.

Period of record:

Water temperatures: Maximum, 33.0°C July 14, 1966, Aug. 7, 9, 19, 21, 22, 1968; minimum, freezing point Jan. 29-31, Feb. 1, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	8[CAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)
JUNE 20... 20...A	0924 0924	13 13	10 ---	.00 ---	8.0 ---	4.2 ---	4.6 ---	1.3 ---	37 ---	0 ---	9.6 ---	4.8 ---
DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	URTHO- PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPFCI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JUNE 20... 20...A	.1 ---	.5 ---	.04 ---	73 ---	.10 ---	2.56 ---	37 ---	6 ---	.3 ---	100 ---	7.0 6.6	15 ---

DATE	ALKA- LINITY AS CaCO <sub>3</sub>	DISS- OLVED OXYGEN	TEMP- ERATURE (DFG C)
JUNE 20... 20...A	30 ---	-- 6.6	27 27

A FIELD DETERMINATION.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968  
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

MONTH	DAY																																AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																	
MAXIMUM	19	19	21	21	22	22	21	17	19	19	18	18	17	18	19	20	20	17	16	17	16	16	17	17	16	16	15	14	14	14	15	18	
MINIMUM	15	16	17	18	18	19	17	17	17	18	17	16	14	14	17	17	18	16	14	12	13	13	12	13	16	13	13	13	12	12	13	15	
NOVEMBER																																	
MAXIMUM	16	17	16	14	12	11	10	10	10	12	13	14	13	12	12	9	9	10	10	9	9	10	12	9	11	10	10	9	8	6	--	11	
MINIMUM	14	15	13	12	10	8	7	7	7	8	10	11	11	10	9	6	6	7	6	8	8	9	7	8	7	9	6	4	5	--	--	8	
DECEMBER																																	
MAXIMUM	8	8	8	8	8	7	9	11	10	10	9	10	10	11	10	9	10	10	11	11	11	11	11	10	9	9	9	8	8	9	8	9	
MINIMUM	6	5	7	6	5	5	5	7	8	9	8	9	8	9	9	9	8	9	10	11	11	11	10	9	9	9	8	8	8	8	8		
JANUARY																																	
MAXIMUM	8	8	8	8	7	7	9	7	6	6	4	4	4	4	4	4	5	5	6	6	7	6	6	6	6	6	5	5	6	6	6	6	
MINIMUM	8	7	7	7	7	7	7	6	6	4	4	4	3	4	4	4	4	4	4	4	5	6	6	6	6	6	5	4	5	6	6	5	
FEBRUARY																																	
MAXIMUM	6	6	6	6	6	7	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	6	6	7	6	--	--	6	
MINIMUM	6	6	6	6	6	6	6	6	6	6	5	4	4	4	4	4	4	4	4	4	4	5	4	4	4	4	3	2	2	3	--	--	
MARCH																																	
MAXIMUM	6	6	6	6	7	8	8	11	9	12	12	7	7	7	8	8	8	10	13	13	16	15	13	14	14	17	16	18	18	20	20	11	8
MINIMUM	3	3	3	2	3	3	4	3	6	8	7	7	7	7	7	8	8	8	10	11	13	12	11	11	11	12	13	14	14	16	8	--	
APRIL																																	
MAXIMUM	18	16	15	16	16	17	18	18	19	17	17	21	22	23	22	21	22	21	24	22	24	23	21	19	20	21	21	20	19	21	--	20	
MINIMUM	14	13	14	14	15	14	14	16	16	17	15	14	16	17	18	16	18	18	18	18	19	18	17	16	17	16	17	17	16	16	--	16	
MAY																																	
MAXIMUM	22	22	24	22	22	20	19	19	21	21	21	24	24	23	23	22	23	23	26	23	22	20	22	24	22	20	20	19	19	20	21	22	
MINIMUM	16	17	19	18	19	16	16	16	17	19	21	21	21	18	18	20	19	20	19	18	17	17	18	21	19	18	19	18	19	20	18	20	
JUNE																																	
MAXIMUM	22	22	21	22	23	23	23	23	23	23	24	25	26	26	26	26	25	23	24	24	24	26	26	27	27	27	27	26	27	--	--	24	
MINIMUM	20	21	21	21	22	23	23	23	23	23	24	25	23	23	24	25	23	22	23	24	24	24	26	26	26	27	27	26	24	25	--	24	
JULY																																	
MAXIMUM	28	28	28	27	26	26	26	26	26	25	25	25	25	27	28	28	28	28	28	27	27	28	27	27	27	28	28	28	28	28	27	27	
MINIMUM	27	27	27	26	24	24	26	26	25	25	25	25	24	27	28	28	27	27	27	27	27	27	26	27	26	27	28	28	27	27	27	26	
AUGUST																																	
MAXIMUM	28	29	29	29	29	31	33	32	33	32	31	29	29	31	30	31	32	32	33	32	33	32	32	32	32	32	29	26	27	27	26	30	
MINIMUM	27	28	28	28	29	29	31	31	30	30	27	26	27	28	28	29	30	30	30	30	30	30	30	30	30	30	29	26	24	24	23	23	
SEPTEMBER																																	
MAXIMUM	26	27	27	27	27	27	26	26	26	26	25	24	24	24	24	22	24	24	23	24	24	23	23	24	24	24	24	23	23	23	--	25	
MINIMUM	24	25	25	25	26	26	24	23	23	24	24	23	21	22	22	22	22	22	22	22	22	21	21	21	21	22	23	23	20	21	--	23	

## PAMLICO RIVER BASIN

02083500 TAR RIVER AT TARBORO, N.C.

LOCATION.—Lat 35°53'40", long 77°32'00", Edgecombe County, at gaging station near right bank on downstream end of pier of bridge on U.S. Highway 84 in Tarboro, 6.5 miles downstream from Fishing Creek, and 49.2 miles upstream from Pamlico River at Washington.

DRAINAGE AREA.—2,140 sq mi, approximately.

PERIOD OF RECORD.—Chemical Analyses: October 1944 to September 1945, October 1953 to September 1954, October 1961 to September 1968.

Water temperatures: October 1944 to September 1945, October 1953 to September 1954, October 1961 to September 1967.

Sediment records: January 1958 to December 1967 (discontinued).

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	CAR- BONATE (C03)	SULFATE (SO4)	CHLO- RIDE (CL)
JUNE 20... 20...A	1645 1645	2040 2040	9.6 --	.48 --	4.0 --	1.5 --	3.4 --	1.6 --	15 --	0 --	6.6 --	5.0 --

DATE	FLUD- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JUNE 20... 20...A	.2 --	1.1 --	.19 --	75 --	.10 --	413 --	16 --	4 --	.4 --	60 --	6.2 6.0	100 --

DATE	ALKA- LITY AS CAC03	METHY- LENE BLUE ACTIVE SUB- STANCE	DISS- OLVED OXYGEN	TEMP- ERATURE (DEG C)
JUNE 20... 20...A	12 --	.00 --	-- 6.4	24 24

A FIELD DETERMINATION

SUSPENDED SEDIMENT, OCTOBER TO DECEMBER 1967

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CON- CENTRA- TION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CON- CENTRA- TION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CON- CENTRA- TION (MG/L)	LOAD (TONS)
1	1290	55	192	315	8	7.0	825	15	33
2	940	30	76	319	8	7.0	876	12	28
3	882	34	81	305	9	7.0	925	15	37
4	766	25	52	306	7	6.0	1340	50	181
5	618	19	32	299	10	8.0	1420	45	173
6	555	20	30	315	5	4.0	1580	45	192
7	490	16	21	359	5	5.0	1680	48	218
8	433	14	16	348	4	4.0	1370	22	81
9	414	12	13	314	5	4.0	1210	30	98
10	377	11	11	347	5	5.0	1060	30	86
11	405	14	15	303	5	4.0	1110	25	75
12	432	15	17	296	6	5.0	1490	55	221
13	412	11	12	305	6	5.0	3020	108	881
14	397	13	14	315	6	5.0	3750	95	962
15	406	12	13	325	6	5.0	3640	88	865
16	399	12	13	321	5	4.0	3400	52	477
17	361	10	10	328	4	4.0	2820	40	305
18	380	10	10	329	5	4.0	2270	35	215
19	368	11	11	336	5	5.0	1950	35	184
20	326	8	7.0	287	5	4.0	1860	30	151
21	330	8	7.0	314	7	6.0	1790	32	155
22	324	8	7.0	319	7	6.0	1780	35	168
23	280	8	6.0	363	7	7.0	2590	45	315
24	308	10	8.0	472	18	23	3990	65	700
25	318	9	8.0	715	30	58	4610	61	759
26	332	9	8.0	977	50	132	5260	80	1140
27	328	9	8.0	1010	30	82	5210	79	1110
28	314	8	7.0	937	20	51	4720	35	446
29	328	7	6.0	888	18	70	4590	52	644
30	335	8	7.0	776	15	31	4910	70	928
31	307	7	6.0				5380	55	799
TOTAL	14155	--	724.0	13143	--	568.0	82426	--	12627





## CAPE FEAR RIVER BASIN

02107571 CAPE FEAR RIVER NEAR NAVASSA, N.C.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), DECEMBER 1967 TO SEPTEMBER 1968.--CONTINUED

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM
1.....	200	200	200	200	---	---	2400	200	200	200	20400	600
2.....	200	200	---	---	---	---	3200	200	200	200	19500	400
3.....	200	200	---	---	---	---	4200	200	200	200	18700	500
4.....	200	200	---	---	---	---	3700	200	200	200	17400	400
5.....	200	200	---	---	200	200	6200	200	200	200	18000	650
6.....	200	200	200	200	200	200	7600	200	200	200	18500	1400
7.....	200	200	900	200	3200	200	9000	200	300	200	15700	900
8.....	200	200	1200	200	3000	200	8000	200	620	200	15600	700
9.....	200	200	2300	200	3100	300	5600	200	450	200	15100	700
10.....	200	200	3800	200	2600	200	3000	200	690	200	15600	800
11.....	200	200	5500	200	2000	200	2000	200	780	200	13900	600
12.....	200	200	5700	200	2300	200	1700	200	1000	200	14900	500
13.....	---	---	---	---	500	200	200	200	2400	200	15000	800
14.....	---	---	---	---	200	200	200	200	1900	200	16000	1200
15.....	---	---	5700	200	200	200	200	200	1730	200	17000	2400
16.....	200	200	6000	200	200	200	200	200	2400	200	19700	4400
17.....	200	200	---	---	200	200	200	200	3300	200	20700	4800
18.....	200	200	---	---	200	200	200	200	2530	200	23200	7200
19.....	200	200	---	---	200	200	200	200	3940	200	24000	7000
20.....	---	---	---	---	700	200	200	200	4430	200	25300	7700
21.....	---	---	---	---	200	200	200	200	4060	200	26500	10500
22.....	---	---	---	---	300	200	200	200	4630	200	26600	10900
23.....	200	200	4000	200	250	200	200	200	5540	200	27600	11400
24.....	200	200	4100	200	400	200	200	200	6110	200	28000	10800
25.....	200	200	4400	200	1300	200	200	200	5700	200	27600	9500
26.....	200	200	8600	200	2300	200	200	200	4500	200	26600	800
27.....	200	200	7400	200	2000	200	---	---	5380	200	26000	6900
28.....	200	200	6400	200	2050	200	---	---	10200	200	25100	6200
29.....	200	200	6900	200	2200	200	---	---	6650	200	24400	6200
30.....	200	200	2800	200	3200	200	---	---	15100	200	19900	4700
31.....	200	200	---	---	2430	200	200	200	14000	200	---	---
AVERAGE	200	200	---	---	1290	203	2190	200	3530	203	20750	4050

TEMPERATURE (°C) OF WATER, DECEMBER 1967 TO SEPTEMBER 1968

	DAY																																	AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
DECEMBER	MAXIMUM	10	10	10	12	11	11	11	12	11	12	11	10	13	14	13	13	12	11	12	10	11	13	14	12	11	12	11	9	12	8	--	--	12
	MINIMUM	9	8	9	10	9	9	9	9	9	9	9	9	12	10	8	9	9	9	10	10	11	11	10	9	9	9	9	7	7	--	--	9	
JANUARY	MAXIMUM	--	--	--	8	8	7	7	7	6	5	4	3	4	4	3	3	3	3	3	3	4	4	5	5	5	5	5	7	4	7	7	5	
	MINIMUM	--	--	--	7	7	6	6	6	5	4	3	3	3	3	2	2	2	2	2	3	3	4	4	5	4	4	4	4	5	6	4		
FEBRUARY	MAXIMUM	8	10	9	9	9	9	10	8	---	---	---	---	7	7	7	8	7	8	9	8	8	6	6	6	6	6	7	8	---	---	8		
	MINIMUM	6	6	7	8	7	8	8	8	7	---	---	---	---	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7	8	---	---	6	
MARCH	MAXIMUM	8	9	8	9	9	12	9	17	14	12	13	15	16	14	13	12	12	12	13	14	16	18	16	15	16	16	17	17	---	---	13		
	MINIMUM	5	5	6	6	6	7	7	8	9	10	11	12	13	13	12	11	11	12	12	13	14	15	14	14	14	14	13	13	15	16	---	11	
APRIL	MAXIMUM	19	18	18	22	23	19	19	21	20	19	19	19	---	---	19	20	20	19	---	---	---	21	22	22	23	23	22	22	22	27	21		
	MINIMUM	17	16	17	17	17	18	18	18	19	19	18	18	---	---	---	17	17	18	18	---	---	---	20	20	20	20	20	21	21	20	21	19	
MAY	MAXIMUM	22	---	---	---	---	23	23	23	24	24	24	24	---	---	24	26	---	---	---	---	---	---	26	29	26	27	27	26	26	27	---	---	
	MINIMUM	21	---	---	---	---	22	21	21	21	21	22	27	---	---	23	23	---	---	---	---	---	---	23	23	24	24	23	23	---	---	---		
JUNE	MAXIMUM	---	---	---	---	25	24	26	26	26	26	27	27	28	28	28	30	28	28	29	29	30	32	32	32	32	32	29	31	31	33	29		
	MINIMUM	---	---	---	---	24	21	24	24	25	25	25	26	25	24	24	25	24	25	26	26	27	26	27	27	28	28	29	27	29	28	26		
JULY	MAXIMUM	33	33	31	31	30	30	31	29	29	28	28	28	29	30	30	32	32	32	32	30	30	31	30	31	31	31	---	---	---	32	31		
	MINIMUM	28	29	29	28	28	28	28	27	27	26	26	25	27	27	28	29	28	28	28	27	27	28	28	28	28	28	28	28	28	27	28		
AUGUST	MAXIMUM	31	31	30	30	32	31	32	32	32	33	32	32	31	33	32	34	32	33	33	33	33	34	33	34	34	34	32	30	29	29	32		
	MINIMUM	29	28	28	28	28	28	29	29	29	30	30	29	29	29	29	29	29	29	29	29	30	31	31	31	31	32	31	29	28	28	27	29	
SEPTEMBER	MAXIMUM	27	27	28	28	28	29	29	29	28	29	30	28	28	28	27	27	27	27	27	26	29	28	26	27	26	27	27	27	27	27	26	---	28
	MINIMUM	26	26	27	27	27	27	27	27	27	27	27	27	26	26	26	26	26	26	26	26	25	25	24	24	26	26	26	26	26	26	---	26	

## CAPE FEAR RIVER BASIN

61

## 02107572 CAPE FEAR RIVER AT ROYSTER, N.C.

LOCATION.--Lat 34°16'15", long 78°00'00", Brunswick County, water-quality recorder at Royster, 2.5 miles downstream from Indian Creek.

DRAINAGE AREA.--7,060 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: November 1961 to September 1968.  
Water temperatures: November 1961 to September 1968.

## EXTREMES.--1967-68:

Specific conductance: Maximum daily, 20,000 micromhos Aug. 31, Sept. 1-3, 17-30; minimum daily, 78 micromhos Oct. 2.

Water temperatures: Maximum, 35.0°C Aug. 23; minimum, 3.0°C Jan. 12, 17.

## Period of record:

Specific conductance: Maximum daily, 20,000 micromhos on many days in 1966 and 1968; minimum daily, 43 micromhos Oct. 16, 1964.

Water temperatures: Maximum, 35.0°C Aug. 23, 1968; minimum, 3.0°C Jan. 16, 17, 1968.

REMARKS.--Recorder intake about 1 foot below surface.

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM
1.....	3000	121	14500	220	770	160	--	--	--	--	180	180
2.....	1300	78	17200	250	820	158	--	--	--	--	200	160
3.....	3800	100	17100	270	1040	180	--	--	--	--	160	160
4.....	4600	170	9600	220	300	178	--	--	--	--	170	150
5.....	5400	175	1800	220	228	165	--	--	--	--	170	170
6.....	5200	162	1400	220	190	150	--	--	125	125	160	160
7.....	4600	179	2100	220	150	150	--	--	125	100	160	160
8.....	7000	180	16000	240	155	150	120	120	100	100	160	140
9.....	9900	195	16000	1400	180	150	120	120	100	110	160	160
10.....	8000	187	12400	400	175	135	120	120	115	115	180	160
11.....	5800	188	4000	410	200	135	120	120	130	110	190	180
12.....	7850	198	3300	370	155	90	--	--	145	130	1000	190
13.....	9900	200	5800	410	165	180	--	--	140	120	200	195
14.....	8800	165	10000	500	190	135	--	--	160	120	210	100
15.....	8700	170	10000	410	150	140	--	--	160	60	150	100
16.....	9600	190	17500	250	140	140	--	--	160	120	160	120
17.....	1200	190	17000	400	140	125	--	--	160	130	120	100
18.....	1400	140	16000	360	150	130	--	--	140	120	120	110
19.....	7400	190	16000	300	150	75	--	--	130	120	120	90
20.....	7800	185	16000	310	170	125	--	--	180	120	100	80
21.....	7800	170	16100	390	220	150	--	--	180	160	100	80
22.....	7800	165	16200	440	160	100	--	--	205	160	100	90
23.....	8400	195	15800	200	100	100	--	--	240	180	90	90
24.....	11400	210	15000	1250	110	100	--	--	1500	80	80	80
25.....	13800	210	12750	210	125	110	--	--	3600	160	90	80
26.....	11800	200	9100	150	120	100	--	--	1800	170	120	80
27.....	11800	200	1125	185	110	200	--	--	3100	180	160	140
28.....	11400	220	1500	160	115	100	--	--	1800	190	160	90
29.....	12000	230	750	180	110	100	--	--	3400	170	100	80
30.....	6600	210	1570	110	100	90	--	--	--	--	100	80
31.....	12800	270	--	--	--	--	--	--	--	--	100	80
AVERAGE	7640	181	10450	355	229	130	--	--	739	135	170	123
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM
1.....	120	100	1820	180	--	--	3400	200	620	180	20000	2300
2.....	150	110	1880	180	--	--	6600	220	260	180	20000	1880
3.....	160	140	1500	190	--	--	7600	220	200	140	20000	2200
4.....	160	160	1380	60	--	--	7400	220	160	140	18800	1760
5.....	170	160	240	200	--	--	10000	270	160	120	18800	2200
6.....	180	160	560	200	3300	240	11000	240	180	140	--	--
7.....	180	160	--	--	6000	220	12000	240	360	140	--	--
8.....	180	160	--	--	5800	200	11500	260	500	140	--	--
9.....	180	150	--	--	5300	200	9400	280	880	140	--	--
10.....	160	150	--	--	4700	200	4800	280	1040	160	17600	3400
11.....	160	150	--	--	4400	200	4800	240	520	160	15600	1980
12.....	140	150	--	--	4200	200	3100	240	1080	170	16000	1280
13.....	180	155	--	--	2700	180	560	220	1940	180	16000	3000
14.....	190	150	--	--	600	180	320	200	1320	200	15200	3400
15.....	200	160	--	--	520	180	240	180	1320	220	17200	4200
16.....	220	160	--	--	290	180	210	160	2000	220	18800	6200
17.....	260	160	--	--	200	180	200	180	2600	220	20000	7200
18.....	240	160	--	--	200	180	220	160	2650	220	20000	9400
19.....	260	160	--	--	280	140	180	160	2800	240	20000	9800
20.....	180	150	--	--	380	140	160	140	3000	240	20000	10400
21.....	200	160	--	--	900	140	180	160	2800	220	20000	12400
22.....	300	150	--	--	2200	140	200	160	2800	240	20000	13200
23.....	320	150	--	--	1700	180	220	180	2800	260	20000	16600
24.....	2050	156	--	--	2000	200	220	140	3500	280	20000	13200
25.....	1240	180	--	--	3300	200	180	140	3200	320	20000	12000
26.....	300	180	--	--	4200	200	180	140	3300	280	20000	11000
27.....	640	180	--	--	4200	200	190	180	4600	300	20000	9400
28.....	860	180	--	--	4200	200	520	180	5600	320	20000	8800
29.....	1240	180	--	--	4600	200	1280	180	16800	480	20000	9000
30.....	1920	200	--	--	5400	200	800	180	19800	720	20000	7400
31.....	--	--	--	--	--	--	180	600	20000	2100	--	--
AVERAGE	426	157	--	--	2850	187	3160	209	3510	298	10000	6940

## CAPE FEAR RIVER BASIN

02107572 CAPE FEAR RIVER AT ROYSTER, N.C.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																																	AVER- AGE
	MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																		
MAXIMUM	24	24	24	24	24	25	24	24	24	24	24	23	23	23	23	23	23	23	23	23	22	22	22	21	22	22	21	21	20	19	19	19	23	
MINIMUM	22	22	22	22	23	23	23	23	23	23	23	23	22	22	22	23	22	21	21	20	20	19	20	20	19	20	19	19	18	18	18	18	21	
NOVEMBER																																		
MAXIMUM	19	20	20	19	18	17	17	16	16	17	17	17	16	16	15	14	15	15	14	15	15	14	14	15	14	14	14	14	14	13	14	--	16	
MINIMUM	18	18	18	18	17	16	15	14	15	15	15	15	14	15	13	13	12	13	12	13	13	13	13	13	13	13	13	13	12	12	12	--	14	
DECEMBER																																		
MAXIMUM	12	12	13	13	13	12	12	12	11	12	12	14	14	14	14	13	13	12	13	14	15	14	16	15	13	12	12	12	12	13	11	10	--	13
MINIMUM	11	10	12	11	11	10	11	11	11	11	11	12	12	12	12	11	11	11	11	12	12	13	13	11	10	11	11	10	10	9	8	--	11	
JANUARY																																		
MAXIMUM	--	--	--	--	--	--	--	8	7	7	6	5	8	7	6	6	6	6	7	6	6	8	8	10	8	6	7	8	9	10	9	--	--	
MINIMUM	--	--	--	--	--	--	--	6	5	5	4	3	5	4	4	4	4	4	4	4	4	6	6	5	5	5	4	7	6	6	7	8	--	
FEBRUARY																																		
MAXIMUM	--	--	--	--	--	--	11	9	10	9	8	7	8	8	8	9	7	7	7	7	7	7	7	7	7	7	6	7	7	--	--	--	8	
MINIMUM	--	--	--	--	--	--	9	8	8	7	8	7	7	7	7	4	4	5	6	6	6	6	6	6	6	5	5	4	7	6	5	--	--	
MARCH																																		
MAXIMUM	7	7	8	8	8	9	9	9	10	10	12	13	14	14	14	15	12	12	13	13	14	15	16	15	16	15	15	16	17	17	18	17	13	
MINIMUM	6	5	6	6	6	6	7	8	9	9	9	11	12	12	12	12	11	11	11	12	11	12	14	15	14	14	14	14	15	16	16	11	11	
APRIL																																		
MAXIMUM	20	18	16	18	19	18	17	19	19	19	19	19	19	19	19	19	19	20	20	21	20	21	21	21	22	22	22	22	23	22	22	--	20	
MINIMUM	17	17	17	17	17	17	17	18	18	18	18	18	18	17	17	17	17	18	18	18	18	19	19	19	20	19	20	20	21	21	20	--	18	
MAY																																		
MAXIMUM	22	22	22	28	23	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	21	21	21	19	18	22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUNE																																		
MAXIMUM	--	--	--	--	--	--	24	26	26	26	26	27	27	28	27	28	27	28	28	28	28	28	28	28	29	30	30	32	32	32	32	31	--	28
MINIMUM	--	--	--	--	--	--	23	23	24	24	24	24	24	24	24	25	26	26	26	26	26	26	27	26	27	27	28	28	28	28	28	--	26	
JULY																																		
MAXIMUM	31	31	32	32	32	31	31	31	30	29	29	30	29	29	29	29	29	31	30	31	31	29	29	30	31	31	32	33	32	32	32	31	31	31
MINIMUM	29	29	29	29	29	29	28	28	28	28	28	27	27	27	27	27	27	28	28	28	28	28	28	28	28	28	28	28	28	28	29	29	29	28
AUGUST																																		
MAXIMUM	31	31	31	31	32	33	33	33	33	33	33	33	31	31	32	32	32	32	32	33	33	33	33	33	35	34	33	34	32	31	29	28	27	32
MINIMUM	29	29	28	28	28	29	29	30	30	30	30	30	29	29	29	29	29	29	29	29	29	29	29	30	30	31	31	31	32	32	31	29	28	26
SEPTEMBER																																		
MAXIMUM	27	28	28	28	29	--	--	--	30	29	29	29	29	27	28	28	28	28	28	28	27	26	28	27	27	27	27	27	27	27	27	--	28	
MINIMUM	26	26	27	27	27	--	--	--	28	27	27	27	27	27	26	26	26	26	26	26	26	25	24	25	25	25	26	26	26	26	25	--	26	

## PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, N.C.

LOCATION.--Lat 35°51'24", long 80°23'10", Davidson County, at gaging station near left bank on downstream end of pier of bridge on U.S. Highway 84, 1.5 miles south of Yadkin College, 8.2 miles downstream from Reedy Creek, and 295 miles upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--2,280 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1943 to September 1944, October 1950 to September 1951, October 1955 to September 1967.

Water temperatures: October 1943 to September 1944, October 1950 to September 1951, October 1955 to September 1967.

Sediment records: January 1951 to September 1968.

## EXTREMES.--1967-68:

Sediment concentrations: Maximum daily, 1,590 mg/l July 13; minimum daily, 8 mg/l Feb. 12.

Sediment loads: Maximum daily, 43,800 tons Mar. 13; minimum daily, 35 tons Nov. 20.

## Period of record:

Sediment concentrations: Maximum daily, 2,970 mg/l May 26, 1952; minimum daily, 1 mg/l Dec. 3, 1953.

Sediment loads: Maximum daily, 126,000 tons Mar. 13, 1963; minimum daily, 3 tons Dec. 3, 1953.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CC3)	SULFATE (SC4)	CHLO- RIDE (CL)
JUNE 17...	1745	2050	13	.00	3.6	1.3	5.6	1.4	19	0	5.2	3.8

DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC CONC- ENTRANCE (MICRO- MHCS)	PH	COLOR
JUNE 17...	.1	2.6	.25	50	.07	277	14	0	.6	56	6.3	6

DATE	ALKAL- INITY AS CAC03	MEIHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JUNE	17...	16	.00	25

## PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT YADKIN COLLEGE, N.C.--Continued

SUSPENDED SEDIMENT, WATER YEAR, OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)
1	1850	98	490	1280	42	145	1410	22	84
2	1370	70	259	1400	42	159	1550	23	96
3	1240	58	194	1860	58	291	1990	30	161
4	1200	52	168	2770	74	553	2530	30	205
5	1210	48	157	1860	49	246	2380	45	289
6	1130	42	128	1620	40	175	1910	51	263
7	1070	42	121	1520	31	127	1710	51	235
8	1120	45	136	1430	20	77	1560	48	202
9	1170	35	110	1430	15	60	1560	29	122
10	1290	48	167	1440	18	70	1870	55	278
11	1510	60	244	1450	20	78	6070	546	8950
12	1350	39	142	1370	25	92	11400	793	24400
13	1200	40	130	1300	28	98	7190	379	7360
14	1150	40	124	1320	30	107	3890	234	2460
15	1160	35	110	1310	18	64	2910	155	1220
16	1150	30	93	1280	17	59	2580	130	906
17	1150	30	93	1240	20	70	2230	78	470
18	1160	32	100	1260	19	65	2170	63	369
19	1980	90	481	1260	20	68	3390	245	2240
20	2220	110	659	1310	10	35	2660	112	804
21	1620	70	306	1260	11	37	2370	90	575
22	1450	40	157	1250	11	37	2750	115	854
23	1300	37	130	1300	11	9038	9030	532	12900
24	1240	37	124	1330	15	54	5300	309	4420
25	1230	38	126	1680	70	318	3280	112	992
26	1740	45	211	1700	30	138	2740	78	577
27	2180	62	365	1550	28	117	2400	78	505
28	1700	60	275	1430	20	77	3500	248	2340
29	1500	41	166	1360	15	55	11400	574	17700
30	1420	30	115	1350	17	62	6200	238	3980
31	1260	36	122	--	--	--	3570	160	1540
TOTAL	43320	--	6203	43910	--	3572	115500	--	97497
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)
1	3070	118	978	3720	60	603	2000	20	108
2	2680	100	724	3680	60	599	1940	19	100
3	2500	80	540	3720	60	603	1880	38	193
4	2500	65	439	3440	60	557	1870	25	126
5	2490	55	370	3040	60	492	1820	20	98
6	2480	60	402	2720	61	448	1790	19	92
7	2760	90	671	2620	55	389	1780	15	72
8	2620	72	509	2530	40	273	1740	17	79
9	2270	65	398	2400	35	227	1740	15	70
10	2510	92	623	2360	45	287	1770	22	105
11	3100	108	903	2290	30	185	1870	30	151
12	2840	82	629	2120	8	46	4140	573	6400
13	2840	79	605	2090	11	62	14600	1110	43800
14	5170	145	2020	2080	12	67	11400	650	20000
15	5590	120	1810	2040	12	66	5300	520	7440
16	3690	97	966	2080	25	140	3580	302	2920
17	2930	85	672	2060	18	100	3730	915	9210
18	2620	66	467	2010	25	136	5330	355	5110
19	2660	62	445	1940	48	251	4460	198	2380
20	2900	65	509	1910	31	160	3690	140	1390
21	3250	62	544	2000	23	124	3150	100	851
22	4290	98	1140	1930	17	89	2870	92	713
23	4910	122	1620	1840	18	89	2990	68	549
24	5780	133	2080	1880	15	76	2930	78	517
25	5810	114	1790	1900	18	92	2790	67	505
26	4650	132	1660	1860	15	75	2480	52	348
27	3530	92	877	1830	15	74	2310	72	449
28	3040	78	640	1840	16	79	2370	65	416
29	3140	65	551	1900	25	128	2270	67	411
30	3270	60	530	--	--	--	2280	82	505
31	3640	60	590	--	--	--	2240	75	454
TOTAL	105530	--	26702	67830	--	6517	105110	--	105562

### PEE DEE RIVER BASIN

02116500 YADKIN RIVER AT<sup>2</sup>YADKIN COLLEGE, N.C.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL				MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	2290	58	359	3100	73	611	2460	145	963
2	2620	72	509	2520	55	374	2320	130	814
3	2640	80	570	2320	52	327	2240	128	774
4	2520	78	531	2180	50	294	2120	120	687
5	2910	92	723	2260	50	305	2040	125	689
6	3640	109	1070	2140	50	289	1900	122	626
7	3210	90	780	2000	50	270	1700	115	555
8	2850	72	554	1890	70	357	1850	115	574
9	2560	63	435	1900	60	308	2620	278	197
10	2510	50	389	1880	50	254	6380	761	13100
11	2530	45	307	1880	62	315	4670	285	3590
12	2420	43	281	2670	165	1190	3210	185	1600
13	2350	43	273	3200	178	1540	2610	150	1060
14	2190	40	237	2430	112	735	2600	140	983
15	2270	40	245	3780	290	2960	2320	130	814
16	2240	30	181	3950	160	171	2030	120	658
17	2110	32	182	2800	103	779	2040	116	639
18	2050	30	166	2520	90	612	2050	115	637
19	2030	30	164	2230	80	482	1940	114	597
20	2050	30	166	2110	85	484	1890	110	561
21	2060	33	183	2020	80	436	1850	109	544
22	2010	36	195	1950	80	421	1840	102	507
23	1940	35	183	1940	70	367	1740	100	470
24	2120	70	400	1930	70	365	1700	90	413
25	4550	255	3130	1900	60	308	1630	90	396
26	3950	110	1170	1900	55	282	1680	88	399
27	2480	80	536	2200	120	713	1790	80	387
28	2270	72	441	5070	440	6020	1590	75	322
29	2340	100	632	4290	245	2840	1640	70	310
30	3170	158	1350	2850	185	1420	1550	68	285
31	---	---	---	2780	160	1200	---	---	---
TOTAL	76880	--	16342	78590	--	27029	68070	--	34146
SEPTEMBER									
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	1380	67	250	1190	55	177	845	30	68
2	1260	58	197	1340	57	206	880	25	59
3	1520	92	378	1900	57	292	953	20	51
4	1710	125	577	3110	190	1600	934	20	50
5	1610	98	426	2280	110	677	876	28	66
6	1500	90	365	2410	90	586	820	25	55
7	1430	85	328	1800	99	437	876	25	59
8	1420	70	268	1350	80	292	987	25	67
9	1280	62	214	1270	70	240	1000	25	68
10	1260	60	204	1650	125	557	949	22	56
11	1400	65	246	1680	125	567	1530	235	970
12	2100	300	1700	1660	90	403	1570	125	530
13	4860	1590	20900	1660	68	305	1230	80	266
14	4320	745	8690	1380	60	224	1070	60	173
15	2790	395	2980	1510	70	285	930	50	126
16	1960	250	1320	2320	128	802	891	40	96
17	1790	175	846	1910	105	642	857	35	81
18	1670	187	843	1530	68	280	795	34	73
19	1840	145	720	1430	50	193	804	31	67
20	2280	130	800	1250	50	169	809	30	66
21	2130	120	690	1160	40	125	805	22	48
22	1650	100	445	1180	35	112	895	20	48
23	1340	88	318	1030	30	83	867	20	48
24	1480	78	312	985	30	80	791	18	38
25	1380	70	260	982	30	80	736	19	38
26	1340	70	253	966	30	78	744	19	38
27	1540	130	540	903	32	78	759	19	39
28	1820	102	501	888	32	77	924	19	47
29	1470	85	337	864	30	70	914	19	47
30	1270	70	240	857	25	58	884	19	45
31	1210	60	196	852	25	58	---	---	---
TOTAL	56010	--	46344	45297	--	9833	27925	--	3483
TOTAL DISCHARGE FOR YEAR (CFS-DAYS) .....									839072
TOTAL LOAD FOR YEAR (TONS) .....									38320

## 02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, N.C.

LOCATION.--Lat 35°50'39", long 80°39'38", Rowan County, at gaging station on right bank at downstream side of bridge on Secondary Road 1972, 1 mile upstream from Little Creek, 4 miles downstream from Fifth Creek, 4.5 miles upstream from Hunting Creek and 6.5 miles southwest of Mocksville.

DRAINAGE AREA.--313 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1954, October 1960 to August 1967.

Water temperatures: October 1980 to August 1987.

Sediment records: January 1955 to December 1967 (discontinued).

## SUSPENDED SEDIMENT, OCTOBER TO DECEMBER 1967

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)
1	145	--	--	126	13	4.0	167	8	4.0
2	129	--	--	147	38	15	167	9	4.0
3	120	--	--	262	38	27	215	10	6.0
4	113	--	--	220	32	19	303	10	8.0
5	108	--	--	180	12	6.0	242	10	7.0
6	104	--	--	162	7	3.0	210	12	7.0
7	100	--	--	154	20	9.0	192	16	6.0
8	106	--	--	142	25	10	180	14	7.0
9	115	--	--	140	15	6.0	172	10	5.0
10	129	--	--	140	8	3.0	260	210	147
11	131	--	--	133	7	3.0	813	1020	2240
12	122	--	--	133	8	3.0	1320	2580	9200
13	119	--	--	136	9	3.0	969	220	576
14	111	--	--	133	10	4.0	489	83	110
15	111	--	--	124	6	2.0	366	60	59
16	115	--	--	119	7	2.0	315	44	37
17	111	--	--	120	7	2.0	280	30	23
18	140	--	--	120	6	2.0	295	76	61
19	220	--	--	129	7	2.0	630	463	788
20	167	--	--	126	7	2.0	474	206	264
21	138	--	--	124	7	2.0	363	62	61
22	131	--	--	122	7	2.0	534	277	399
23	126	--	--	122	8	3.0	1580	1170	4990
24	117	8	3.0	138	15	6.0	1040	158	444
25	124	10	3.0	189	20	10	534	60	87
26	189	15	8.0	212	20	11	420	40	45
27	167	20	9.0	170	18	8.0	360	80	78
28	140	15	6.0	152	29	12	828	684	1530
29	136	15	6.0	140	11	4.0	1800	1010	4910
30	131	11	4.0	147	7	3.0	1090	402	1180
31	129	12	4.0				570	108	166
TOTAL	4044	--	43.0	4462	--	188.0	17178	--	27449.0

 02131000 PEE DEE RIVER AT PEDEE, S.C.  
(International Hydrological Decade River Station)

LOCATION.--Lat 34°12'15", long 79°32'55", Marion County, at gaging station in pier of bridge on U.S. Highway 76 at Peedee, 0.2 mile downstream from Atlantic Coast Line Railroad bridge, 8.5 miles downstream from Black Creek, and at mile 102.8 upstream from Winyah Bay.

DRAINAGE AREA.--8,830 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1948 to September 1949, October 1961 to September 1968.

Water temperatures: October 1948 to September 1949, October 1961 to September 1968.

Sediment records: February 1967 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 140 micromhos Dec. 3; minimum daily, 52 micromhos July 16.

Water temperatures: Maximum, 32.0°C Aug. 8; minimum, 2.0°C Jan. 18.

Sediment concentrations: Maximum daily, 170 mg/l Dec. 31; minimum daily, 18 mg/l Sept. 30.

Sediment loads: Maximum daily, 4,890 tons Mar. 17; minimum daily, 73 tons Sept. 30.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED ALUM- INUM (AL)	DIS- SOLVED IRON (FE)	DIS- SOLVED MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)
OCT.												
23...	2770	8.1	--	.04	--	4.8	1.6	13	2.0	35	0	7.8
NOV.												
21...	1820	8.6	--	.02	.00	4.9	1.7	16	2.2	41	0	7.6
DEC.												
13...	11620	9.9	--	.03	.00	4.6	2.2	12	2.3	33	0	8.4
JAN.												
22...	29200	8.7	--	.10	--	3.6	1.6	5.6	1.4	16	0	6.4
FEB.												
16...	9280	10	--	.04	--	4.5	2.1	9.5	1.4	24	0	10
MAR.												
19...	19700	9.8	--	.03	--	5.2	1.9	6.5	1.4	21	0	8.8
APR.												
16...	3870	10	.1	.02	--	4.0	1.6	7.9	1.3	24	0	7.2
MAY												
17...	5150	8.1	--	.01	--	5.1	1.6	11	1.2	30	0	7.2
JUNE												
18...	8110	9.1	--	.03	.00	4.4	1.7	7.6	1.6	26	0	8.4
JULY												
16...	8610	9.3	--	.03	--	4.1	1.6	7.3	1.6	25	0	6.8
AUG.												
16...	5150	9.5	--	.03	.00	4.1	1.6	12	2.0	35	0	6.8
SEPT.												
18...	2220	8.4	.1	.06	.00	4.5	1.8	20	2.2	46	0	8.2

## PEE DEE RIVER BASIN

02131000 PEE DEE RIVER AT PEEDEE, S.C.—Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	128	103	83	85	90	84	92	116	97	112	136
2	110	124	105	80	86	92	81	97	108	98	114	137
3	106	122	140	80	88	85	85	98	109	97	118	---
4	98	120	130	84	84	93	89	101	102	103	108	---
5	100	120	124	88	83	89	89	102	99	101	108	112
6	106	124	115	88	86	80	89	101	100	102	107	106
7	110	121	108	87	86	85	89	92	100	---	106	115
8	110	123	105	84	90	85	88	95	95	---	108	119
9	120	---	106	90	90	90	84	94	97	99	113	112
10	115	120	105	---	94	101	80	101	88	---	112	---
11	120	119	115	---	94	100	89	101	88	---	115	112
12	120	129	115	---	91	90	109	101	111	---	111	116
13	117	125	102	75	88	84	95	101	107	99	114	114
14	115	124	93	---	90	80	90	99	96	96	118	123
15	115	123	107	---	90	86	84	104	93	108	112	124
16	115	121	100	---	94	80	84	97	95	52	108	122
17	111	125	100	70	93	78	80	98	88	87	107	---
18	106	125	99	70	90	79	83	100	89	102	104	129
19	106	123	95	69	91	79	86	105	96	98	111	124
20	110	120	100	70	93	74	95	105	102	95	100	123
21	111	121	104	71	86	76	95	102	97	92	97	123
22	113	120	105	70	90	75	93	100	99	85	100	122
23	112	115	108	73	90	75	92	106	104	80	102	124
24	110	123	106	77	---	78	93	101	100	83	104	---
25	114	115	95	---	---	76	91	104	96	86	107	123
26	121	116	95	79	94	77	94	102	103	94	107	136
27	130	105	95	80	91	79	94	101	106	101	104	134
28	121	102	100	79	85	85	98	97	103	103	106	139
29	122	88	92	83	85	90	99	102	99	98	106	136
30	125	90	94	83	---	90	94	98	99	107	126	132
31	118	---	89	85	---	85	---	98	---	112	135	---

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	14.0	9.0	8.0	7.0	4.0	17.0	17.0	20.0	26.0	28.0	23.0
2	18.0	16.0	8.0	7.0	7.0	5.0	14.0	18.0	21.0	27.0	27.0	23.0
3	18.0	15.0	11.0	7.0	6.0	7.0	14.0	19.0	22.0	27.0	28.0	---
4	19.0	14.0	9.0	8.0	6.0	6.0	14.0	19.0	23.0	27.0	28.0	---
5	20.0	14.0	8.0	7.0	6.0	6.0	16.0	19.0	23.0	26.0	28.0	24.0
6	21.0	12.0	7.0	7.0	5.0	7.0	14.0	18.0	23.0	26.0	28.0	25.0
7	20.0	10.0	9.0	7.0	6.0	7.0	15.0	18.0	23.0	25.0	29.0	25.0
8	27.0	9.0	9.0	5.0	5.0	7.0	15.0	18.0	22.0	26.0	32.0	26.0
9	20.0	---	10.0	5.0	5.0	9.0	17.0	18.0	23.0	26.0	30.0	25.0
10	21.0	9.0	12.0	---	6.0	10.0	17.0	19.0	23.0	---	28.0	---
11	19.0	10.0	12.0	---	5.0	11.0	16.0	19.0	23.0	26.0	28.0	24.0
12	19.0	11.0	12.0	---	4.0	13.0	14.0	21.0	23.0	25.0	26.0	23.0
13	19.0	12.0	11.0	4.0	4.0	12.0	14.0	21.0	23.0	24.0	26.0	23.0
14	18.0	12.0	10.0	---	3.0	9.0	15.0	21.0	22.0	26.0	26.0	21.0
15	18.0	11.0	11.0	---	4.0	8.0	16.0	21.0	23.0	26.0	28.0	22.0
16	18.0	9.0	10.0	---	4.0	11.0	17.0	21.0	24.0	26.0	28.0	22.0
17	18.0	8.0	9.0	4.0	4.0	11.0	16.0	21.0	23.0	27.0	28.0	---
18	19.0	10.0	10.0	2.0	5.0	11.0	16.0	22.0	24.0	27.0	29.0	23.0
19	17.0	9.0	11.0	3.0	4.0	10.0	18.0	22.0	24.0	27.0	28.0	22.0
20	15.0	9.0	12.0	3.0	4.0	11.0	18.0	21.0	25.0	27.0	28.0	23.0
21	20.0	9.0	12.0	4.0	6.0	12.0	19.0	20.0	24.0	26.0	28.0	23.0
22	15.0	11.0	14.0	6.0	4.0	13.0	19.0	20.0	24.0	27.0	29.0	22.0
23	15.0	12.0	11.0	5.0	5.0	12.0	19.0	20.0	25.0	26.0	29.0	22.0
24	15.0	11.0	9.0	6.0	---	11.0	20.0	21.0	26.0	26.0	29.0	---
25	16.0	12.0	9.0	---	---	12.0	18.0	21.0	26.0	27.0	29.0	23.0
26	14.0	12.0	9.0	4.0	4.0	11.0	17.0	22.0	26.0	27.0	29.0	23.0
27	14.0	12.0	8.0	4.0	4.0	12.0	18.0	23.0	27.0	27.0	28.0	23.0
28	14.0	10.0	9.0	4.0	5.0	12.0	18.0	21.0	26.0	28.0	25.0	23.0
29	13.0	9.0	8.0	4.0	7.0	14.0	18.0	21.0	25.0	28.0	23.0	23.0
30	13.0	10.0	7.0	5.0	---	14.0	17.0	21.0	26.0	26.0	23.0	22.0
31	14.0	---	7.0	7.0	---	15.0	---	20.0	---	27.0	23.0	---



## 02131000 PEE DEE RIVER AT PEEDEE, S.C.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	3920	48	508	3500	52	491	5520	25	373
2	3280	42	372	3210	47	407	5980	37	597
3	2650	34	243	3530	44	419	5190	35	499
4	3330	54	486	4250	45	516	5150	35	487
5	3980	51	548	4020	48	521	4240	47	538
6	4110	54	599	2760	36	268	3780	30	306
7	3760	53	538	2030	21	115	5210	35	492
8	3690	51	508	4340	52	609	5570	36	541
9	2850	38	292	4130	--	558	4920	34	452
10	2350	58	368	2540	33	226	4940	41	547
11	5960	108	1740	3110	32	269	4370	43	507
12	5360	49	709	3670	33	327	8630	103	2400
13	5070	45	616	3360	33	299	11400	123	3790
14	5230	66	932	1990	30	161	12000	91	2950
15	4160	45	505	2040	28	154	11400	70	2150
16	2940	36	286	3760	32	325	9550	60	1550
17	1910	24	124	4420	45	537	8710	91	2140
18	2840	51	391	4340	35	410	8660	113	2640
19	1990	26	140	3950	29	309	8570	52	1200
20	2260	36	220	2950	29	200	9090	53	1300
21	3340	36	325	1950	26	137	9590	55	1420
22	3690	27	269	2880	38	295	10400	54	1520
23	2780	36	270	3760	33	335	10600	56	1600
24	1760	35	166	4340	35	410	10900	98	2780
25	2740	41	304	3760	33	335	11300	83	2530
26	3740	49	495	6400	71	230	11700	66	2080
27	4370	51	602	6020	57	924	11300	42	1280
28	4250	43	493	4410	36	429	10800	40	1170
29	3860	46	479	5440	32	470	11000	40	1190
30	2460	34	226	5340	26	375	14300	124	4790
31	1900	24	123	--	--	--	16700	170	7670
TOTAL	106530	--	13877	111800	--	11063	271070	--	53480
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	17400	99	4650	14400	34	1320	7970	69	1480
2	17600	72	3420	13600	37	1360	8350	54	1220
3	17200	58	2690	12800	37	1280	8280	62	1390
4	16400	53	2350	12200	42	1380	6150	79	1310
5	15200	--	2040	11700	64	2020	4240	41	469
6	14100	44	1680	11400	38	1170	6070	46	754
7	13200	44	1570	11200	30	907	7380	54	1080
8	13400	64	2320	10700	41	1180	7140	67	1290
9	15300	65	2690	9960	46	1240	7200	69	1340
10	15900	--	2790	9950	75	2010	6670	70	1260
11	16400	--	3100	10100	41	1120	5050	46	627
12	--	--	--	9770	64	1690	5630	62	942
13	19900	154	8270	9460	34	868	8690	52	1220
14	--	--	--	9710	29	760	13200	117	4170
15	--	--	--	9630	34	884	16900	166	7570
16	31900	--	6030	9290	45	1130	15800	143	6100
17	34300	48	4450	9020	82	2000	18300	99	4890
18	36100	42	4090	8830	60	1430	18500	--	4750
19	36700	36	3570	6590	53	943	19600	89	4710
20	35500	31	2970	4760	48	605	21200	82	4690
21	32700	31	2740	6540	81	1430	22400	62	3750
22	29000	34	2660	7210	38	740	22100	65	3880
23	25000	30	2020	7250	66	1290	21200	58	3320
24	21800	33	1940	7590	--	1330	19600	--	3070
25	19400	--	1830	7080	--	765	17400	59	2770
26	18000	40	1940	5450	32	470	15000	39	1580
27	17200	34	1580	4020	66	716	12500	37	1290
28	16700	38	1710	5630	49	745	10600	49	1400
29	16200	30	1310	6530	32	564	10100	69	1880
30	15500	34	1420	--	--	--	9830	67	1780
31	15100	33	1350	--	--	--	9730	60	1580
TOTAL	593100	--	79180	262360	--	33347	382780	--	77522

### PEE DEE RIVER BASIN

02131000 PEE DEE RIVER AT PEEDEE, S.C.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	9640	93	2420	5170	90	1260	8800	66	1570
2	2990	43	1160	5560	62	931	7170	55	1060
3	10200	43	1180	6440	63	1100	3960	35	374
4	10100	--	1230	6550	75	1330	2560	30	209
5	9680	59	1540	5650	62	946	4630	74	925
6	8790	58	1380	4230	56	640	5450	57	839
7	7820	29	612	2900	46	371	5610	64	969
8	6380	44	792	4240	75	859	6550	60	1040
9	5550	66	989	3440	77	1130	8020	73	1580
10	7870	69	1470	5770	78	1220	9330	97	2440
11	9370	69	1750	5840	73	1150	10800	57	1660
12	9950	53	1420	5040	77	1370	1050	127	4700
13	9800	54	1430	2860	53	409	14600	92	3630
14	8610	--	1160	2390	22	142	14000	74	2800
15	5830	49	771	4810	99	1290	12800	67	2320
16	4280	53	612	5190	68	953	11500	92	2860
17	5630	85	1290	5300	75	1070	10100	98	2670
18	7130	59	1140	6000	68	1100	7640	54	1110
19	6950	65	1220	7730	97	2020	5370	56	812
20	6970	75	1410	8010	85	1840	7430	73	1460
21	6580	75	1330	5500	52	772	9070	77	1890
22	4500	25	304	4910	53	703	9410	73	1850
23	2910	37	291	6910	75	1400	8190	59	1300
24	4620	79	985	6710	66	1200	4810	43	558
25	5390	67	975	6210	59	989	2960	46	368
26	4870	69	907	5470	62	916	5330	118	1700
27	4530	70	856	3400	44	404	6010	78	1270
28	4590	76	942	2610	30	211	6130	86	1420
29	3730	574	574	6550	180	1910	5910	83	1320
30	3070	43	356	8100	77	1680	4950	67	895
31	--	--	--	8770	74	1750	--	--	--
TOTAL	205330	--	32496	170350	--	32746	232810	--	47620
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	2550	51	351	2520	34	231	2900	44	345
2	1940	39	204	3470	44	472	1800	23	112
3	4100	84	930	4970	--	671	1100	--	59
4	4310	62	721	5190	54	757	1000	--	54
5	3880	71	744	3500	43	453	1900	44	226
6	3060	34	281	2550	44	303	3000	54	437
7	6310	114	1940	5000	86	1160	3700	46	460
8	5820	118	1850	5310	49	703	3500	28	265
9	4690	61	772	5100	--	657	770	24	110
10	4610	--	747	5110	45	609	1300	--	105
11	4310	116	1350	3570	33	318	2110	45	256
12	5510	127	1890	2180	26	153	2540	274	274
13	7100	87	1670	1820	32	157	2750	41	304
14	8300	103	2310	3470	71	665	2100	28	159
15	9360	108	2730	4930	40	532	1800	26	126
16	8390	52	1180	5290	70	1000	1490	25	101
17	6700	43	778	4780	55	710	1400	--	94
18	6450	50	871	4500	48	583	2190	59	349
19	6610	48	857	3300	30	267	2380	40	257
20	7700	55	1140	2800	36	272	2670	27	195
21	8020	58	1260	4600	70	869	3510	62	588
22	5790	40	625	5500	55	817	2710	32	234
23	3660	39	385	5900	56	892	1580	19	81
24	4800	73	946	5800	53	830	1300	--	105
25	4690	--	633	5500	63	936	1980	42	225
26	4410	33	393	4000	37	400	2460	41	272
27	4250	36	413	2100	32	181	2420	26	170
28	3710	--	341	1800	39	190	2810	37	281
29	2380	32	206	1800	25	131	2500	25	169
30	1730	33	154	1800	29	141	1800	18	73
31	2500	55	371	2800	47	355	--	--	--
TOTAL	157640	--	29043	121840	--	16415	66100	--	6486
TOTAL DISCHARGE FDR YEAR (CFS-DAYS)									2681710
TOTAL LOAD FDR YEAR (TONS)									433275

02132000 LYNCHES RIVER AT EFFINGHAM, S.C.

LOCATION.--Lat 34°03'05", long 79°45'15", Florence County, temperature recorder at gaging station on left bank at downstream side of bridge on U.S. Highway 52, 75 ft upstream from Atlantic Coast Line Railroad bridge, and 1 mile south of Effingham.

DRAINAGE AREA.--1,030 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1951 to September 1952, October 1960 to April 1966.  
Water temperatures: October 1954 to September 1968.

EXTREMES.--1967-68:

Water temperatures: Maximum, 31.0°C Aug. 23, 24; minimum, 2.0°C on several days during January and February.

Period of record:

Water temperatures: Maximum, 32.0°C on several days in 1960, 1961, and 1963; minimum, 1.0°C Mar. 12, 1960, Jan. 31, 1968.

REMARKS.--Recorder malfunctioned July 7 to Aug. 5.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	16.0	13.0	12.0	8.0	8.0	7.0	7.0	9.0	8.0	5.0	3.0
2	18.0	16.0	14.0	13.0	8.0	7.0	7.0	7.0	10.0	9.0	6.0	4.0
3	18.0	16.0	14.0	13.0	9.0	7.0	7.0	7.0	10.0	9.0	8.0	6.0
4	18.0	16.0	14.0	13.0	9.0	8.0	9.0	7.0	9.0	8.0	8.0	6.0
5	19.0	17.0	13.0	11.0	9.0	7.0	9.0	7.0	8.0	6.0	8.0	6.0
6	19.0	18.0	11.0	9.0	8.0	6.0	7.0	6.0	8.0	6.0	9.0	7.0
7	19.0	18.0	9.0	8.0	9.0	8.0	7.0	6.0	7.0	6.0	9.0	8.0
8	19.0	18.0	9.0	7.0	10.0	9.0	6.0	4.0	8.0	6.0	11.0	7.0
9	18.0	18.0	8.0	7.0	11.0	10.0	4.0	3.0	8.0	6.0	13.0	9.0
10	19.0	18.0	9.0	8.0	12.0	11.0	3.0	3.0	7.0	6.0	13.0	12.0
11	19.0	18.0	9.0	8.0	13.0	12.0	3.0	3.0	7.0	6.0	13.0	12.0
12	18.0	17.0	11.0	8.0	14.0	13.0	3.0	2.0	6.0	4.0	14.0	13.0
13	18.0	17.0	11.0	9.0	13.0	12.0	3.0	2.0	5.0	4.0	14.0	13.0
14	18.0	16.0	11.0	9.0	12.0	11.0	3.0	2.0	5.0	3.0	14.0	11.0
15	18.0	16.0	11.0	9.0	12.0	11.0	2.0	2.0	6.0	4.0	11.0	9.0
16	18.0	16.0	9.0	7.0	11.0	11.0	3.0	2.0	6.0	4.0	12.0	11.0
17	18.0	17.0	8.0	6.0	11.0	9.0	3.0	2.0	7.0	4.0	14.0	12.0
18	18.0	17.0	9.0	8.0	11.0	10.0	3.0	2.0	7.0	6.0	15.0	12.0
19	17.0	15.0	9.0	8.0	13.0	11.0	4.0	2.0	6.0	4.0	16.0	13.0
20	16.0	13.0	8.0	8.0	15.0	13.0	5.0	3.0	6.0	4.0	17.0	14.0
21	14.0	12.0	9.0	8.0	16.0	15.0	6.0	4.0	6.0	5.0	19.0	16.0
22	15.0	13.0	9.0	9.0	17.0	16.0	6.0	5.0	6.0	4.0	19.0	18.0
23	14.0	13.0	11.0	9.0	17.0	12.0	7.0	6.0	6.0	4.0	19.0	17.0
24	15.0	13.0	11.0	10.0	12.0	10.0	7.0	6.0	4.0	3.0	17.0	14.0
25	15.0	14.0	12.0	11.0	9.0	8.0	6.0	4.0	3.0	2.0	14.0	12.0
26	14.0	13.0	12.0	11.0	9.0	8.0	4.0	3.0	4.0	2.0	15.0	13.0
27	14.0	12.0	12.0	12.0	9.0	8.0	4.0	3.0	5.0	3.0	17.0	13.0
28	13.0	12.0	12.0	10.0	9.0	8.0	5.0	3.0	5.0	4.0	17.0	14.0
29	12.0	10.0	10.0	8.0	9.0	9.0	6.0	4.0	5.0	5.0	19.0	16.0
30	12.0	11.0	8.0	8.0	9.0	7.0	8.0	6.0	---	---	20.0	17.0
31	12.0	12.0	---	---	8.0	7.0	8.0	8.0	---	---	21.0	18.0
MONTH	19.0	10.0	14.0	6.0	17.0	6.0	9.0	2.0	10.0	2.0	21.0	3.0
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.0	19.0	17.0	13.0	21.0	18.0	26.0	23.0	---	---	22.0	21.0
2	20.0	17.0	17.0	14.0	22.0	19.0	27.0	24.0	---	---	24.0	21.0
3	18.0	16.0	18.0	16.0	23.0	20.0	27.0	24.0	---	---	25.0	22.0
4	17.0	15.0	19.0	17.0	23.0	20.0	26.0	23.0	---	---	26.0	23.0
5	19.0	17.0	18.0	17.0	23.0	21.0	23.0	22.0	---	---	26.0	24.0
6	19.0	17.0	19.0	15.0	23.0	21.0	22.0	21.0	28.0	26.0	26.0	24.0
7	18.0	16.0	17.0	14.0	22.0	20.0	---	---	28.0	26.0	26.0	24.0
8	19.0	16.0	17.0	14.0	21.0	20.0	---	---	28.0	27.0	26.0	24.0
9	21.0	18.0	17.0	15.0	21.0	19.0	---	---	29.0	27.0	25.0	23.0
10	21.0	18.0	17.0	15.0	20.0	19.0	---	---	29.0	27.0	25.0	23.0
11	18.0	17.0	18.0	17.0	20.0	19.0	---	---	29.0	27.0	26.0	23.0
12	17.0	20.0	20.0	17.0	21.0	20.0	---	---	29.0	25.0	24.0	22.0
13	17.0	14.0	20.0	19.0	22.0	20.0	---	---	27.0	24.0	22.0	21.0
14	18.0	16.0	19.0	18.0	22.0	19.0	---	---	28.0	24.0	22.0	20.0
15	19.0	17.0	18.0	17.0	22.0	20.0	---	---	29.0	27.0	22.0	20.0
16	19.0	17.0	19.0	18.0	22.0	21.0	---	---	29.0	27.0	22.0	20.0
17	17.0	16.0	20.0	18.0	22.0	21.0	---	---	29.0	27.0	22.0	20.0
18	17.0	16.0	19.0	18.0	22.0	21.0	---	---	30.0	28.0	21.0	20.0
19	20.0	17.0	20.0	18.0	22.0	21.0	---	---	30.0	28.0	23.0	20.0
20	21.0	18.0	20.0	18.0	22.0	21.0	---	---	29.0	27.0	23.0	21.0
21	23.0	20.0	19.0	17.0	23.0	22.0	---	---	30.0	28.0	23.0	21.0
22	22.0	21.0	18.0	16.0	23.0	22.0	---	---	30.0	28.0	22.0	20.0
23	21.0	20.0	19.0	16.0	24.0	22.0	---	---	31.0	28.0	23.0	20.0
24	21.0	19.0	21.0	18.0	24.0	23.0	---	---	31.0	29.0	23.0	20.0
25	19.0	17.0	25.0	22.0	26.0	23.0	---	---	30.0	28.0	24.0	21.0
26	20.0	17.0	21.0	20.0	26.0	23.0	---	---	29.0	28.0	23.0	21.0
27	21.0	18.0	22.0	19.0	24.0	24.0	---	---	29.0	26.0	23.0	22.0
28	21.0	19.0	21.0	19.0	25.0	23.0	---	---	26.0	23.0	23.0	22.0
29	18.0	18.0	19.0	16.0	25.0	22.0	---	---	23.0	21.0	23.0	21.0
30	17.0	16.0	21.0	18.0	26.0	22.0	---	---	22.0	21.0	23.0	21.0
31	---	---	21.0	18.0	---	---	---	---	22.0	21.0	---	---
MONTH	23.0	14.0	25.0	13.0	26.0	18.0	---	---	31.0	21.0	26.0	20.0

## Santee River Basin

02157000 NORTH TYGER RIVER NEAR FAIRMONT, S.C.

LOCATION.--Lat 34°55'45", long 82°02'40", Spartanburg County, temperature recorder at gaging station 80 ft downstream from Frey Creek and 2.2 miles north of Fairmont.

DRAINAGE AREA.--44 sq mi.

PERIOD OF RECORD.--Chemical analyses: February 1951 to May 1966.  
Water temperatures: October 1966 to September 1968.

EXTREMES.--1967-68:

Water temperatures: Not reported.

Period of record:

Water temperatures: Maximum, 23.0°C Aug. 3, 4, 1967; minimum, 3.0°C Feb. 26, 1967

REMARKS.--Recorder malfunctioned, Jan. 5 to Feb. 27; clock stopped July 5-15.

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.0	11.0	11.0	11.0	7.0	7.0	4.0	4.0	---	---	7.0	7.0
2	14.0	12.0	12.0	11.0	7.0	7.0	4.0	4.0	---	---	8.0	7.0
3	14.0	13.0	12.0	11.0	7.0	7.0	4.0	4.0	---	---	8.0	8.0
4	15.0	13.0	11.0	11.0	7.0	6.0	4.0	4.0	---	---	8.0	8.0
5	16.0	14.0	11.0	9.0	7.0	6.0	---	---	---	---	8.0	8.0
6	16.0	14.0	9.0	8.0	7.0	7.0	---	---	---	---	9.0	8.0
7	16.0	15.0	8.0	7.0	7.0	6.0	---	---	---	---	9.0	8.0
8	15.0	14.0	7.0	7.0	8.0	7.0	---	---	---	---	9.0	8.0
9	14.0	14.0	7.0	7.0	9.0	8.0	---	---	---	---	10.0	9.0
10	16.0	14.0	7.0	7.0	9.0	9.0	---	---	---	---	11.0	11.0
11	16.0	13.0	8.0	7.0	9.0	9.0	---	---	---	---	11.0	11.0
12	14.0	13.0	9.0	8.0	9.0	9.0	---	---	---	---	11.0	11.0
13	14.0	13.0	9.0	9.0	9.0	8.0	---	---	---	---	11.0	11.0
14	14.0	13.0	9.0	8.0	8.0	8.0	---	---	---	---	10.0	9.0
15	15.0	13.0	9.0	8.0	8.0	8.0	---	---	---	---	9.0	9.0
16	15.0	13.0	8.0	7.0	8.0	8.0	---	---	---	---	11.0	10.0
17	14.0	14.0	7.0	6.0	8.0	7.0	---	---	---	---	11.0	11.0
18	14.0	14.0	7.0	7.0	8.0	7.0	---	---	---	---	11.0	11.0
19	14.0	13.0	7.0	7.0	8.0	8.0	---	---	---	---	12.0	11.0
20	13.0	12.0	7.0	6.0	9.0	9.0	---	---	---	---	13.0	12.0
21	12.0	11.0	7.0	7.0	9.0	9.0	---	---	---	---	14.0	13.0
22	12.0	11.0	8.0	7.0	10.0	9.0	---	---	---	---	14.0	14.0
23	12.0	12.0	9.0	8.0	10.0	7.0	---	---	---	---	14.0	12.0
24	12.0	12.0	9.0	8.0	7.0	6.0	---	---	---	---	12.0	11.0
25	12.0	12.0	8.0	8.0	6.0	5.0	---	---	---	---	12.0	11.0
26	12.0	12.0	8.0	8.0	5.0	5.0	---	---	---	---	13.0	11.0
27	12.0	11.0	9.0	8.0	5.0	4.0	---	---	---	---	14.0	12.0
28	11.0	11.0	9.0	8.0	4.0	4.0	---	---	7.0	7.0	14.0	13.0
29	11.0	9.0	8.0	6.0	4.0	4.0	---	---	7.0	7.0	15.0	14.0
30	10.0	9.0	7.0	7.0	4.0	4.0	---	---	---	---	16.0	14.0
31	11.0	10.0	---	---	4.0	4.0	---	---	---	---	17.0	16.0
MONTH	16.0	9.0	12.0	6.0	10.0	4.0	---	---	---	---	17.0	7.0
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	15.0	17.0	15.0	18.0	17.0	22.0	19.0	22.0	21.0	18.0	18.0
2	15.0	14.0	17.0	16.0	18.0	17.0	22.0	20.0	22.0	21.0	19.0	17.0
3	14.0	13.0	17.0	17.0	19.0	17.0	23.0	21.0	23.0	21.0	21.0	18.0
4	14.0	13.0	18.0	17.0	19.0	19.0	23.0	21.0	23.0	21.0	20.0	19.0
5	15.0	14.0	17.0	17.0	21.0	19.0	---	---	22.0	21.0	20.0	19.0
6	14.0	14.0	17.0	14.0	21.0	20.0	---	---	23.0	21.0	21.0	20.0
7	16.0	14.0	16.0	14.0	21.0	20.0	---	---	23.0	21.0	20.0	18.0
8	17.0	15.0	16.0	14.0	21.0	19.0	---	---	23.0	22.0	19.0	18.0
9	17.0	16.0	17.0	16.0	19.0	19.0	---	---	26.0	22.0	19.0	18.0
10	16.0	14.0	17.0	16.0	19.0	19.0	---	---	24.0	22.0	19.0	19.0
11	15.0	13.0	18.0	16.0	19.0	19.0	---	---	23.0	22.0	19.0	18.0
12	15.0	13.0	17.0	17.0	20.0	19.0	---	---	22.0	21.0	18.0	17.0
13	16.0	14.0	18.0	17.0	19.0	19.0	---	---	21.0	21.0	18.0	16.0
14	17.0	15.0	19.0	18.0	21.0	19.0	---	---	23.0	21.0	18.0	16.0
15	17.0	14.0	19.0	18.0	21.0	19.0	---	---	23.0	21.0	18.0	16.0
16	16.0	14.0	18.0	18.0	20.0	18.0	21.0	19.0	23.0	21.0	18.0	17.0
17	16.0	14.0	19.0	18.0	21.0	19.0	21.0	20.0	23.0	21.0	19.0	18.0
18	17.0	15.0	19.0	18.0	22.0	19.0	21.0	21.0	23.0	22.0	18.0	18.0
19	18.0	16.0	19.0	18.0	21.0	21.0	21.0	20.0	23.0	22.0	19.0	18.0
20	19.0	18.0	19.0	18.0	21.0	21.0	21.0	20.0	23.0	22.0	19.0	18.0
21	19.0	18.0	19.0	17.0	21.0	21.0	22.0	20.0	23.0	22.0	20.0	18.0
22	19.0	18.0	18.0	17.0	22.0	21.0	22.0	21.0	23.0	22.0	19.0	18.0
23	18.0	18.0	17.0	16.0	22.0	20.0	22.0	20.0	23.0	22.0	19.0	17.0
24	18.0	17.0	17.0	17.0	21.0	21.0	22.0	20.0	23.0	22.0	19.0	17.0
25	17.0	15.0	18.0	17.0	22.0	21.0	22.0	21.0	23.0	22.0	19.0	17.0
26	17.0	14.0	19.0	18.0	22.0	21.0	22.0	21.0	23.0	22.0	19.0	18.0
27	17.0	15.0	19.0	19.0	23.0	21.0	22.0	21.0	22.0	20.0	19.0	18.0
28	16.0	16.0	19.0	19.0	23.0	22.0	22.0	21.0	21.0	19.0	19.0	18.0
29	16.0	14.0	19.0	18.0	23.0	22.0	22.0	21.0	19.0	17.0	19.0	17.0
30	16.0	14.0	18.0	17.0	22.0	19.0	22.0	21.0	19.0	17.0	19.0	17.0
31	---	---	18.0	17.0	---	---	21.0	21.0	18.0	17.0	---	---
MONTH	19.0	13.0	19.0	14.0	23.0	17.0	---	---	26.0	17.0	21.0	16.0

## SANTÉE RIVER BASIN

71

02160500 ENOREE RIVER NEAR ENOREE, S.C.

LOCATION.--Lat 34°36', long 81°54', Spartanburg County, temperature recorder at gaging station 60 ft upstream from bridge on State Highway 49, 0.8 mile upstream from Warrior Creek, and 4 miles southeast of Enoree.

DRAINAGE AREA.--307 sq mi.

PERIOD OF RECORD.--Chemical analyses: February 1946 to May 1960.

Water temperatures: October 1966 to September 1968.

EXTREMES.--1967-68:

Water temperatures: Maximum, 28.0°C Aug. 22-24; minimum, 2.0°C Jan. 10, 13, Feb. 14.

Period of record:

Water temperatures: Maximum, 28.0°C Aug. 22-24, 1968; minimum, 2.0°C Jan. 10, 13, Feb. 14, 1968.

REMARKS.--Recorder malfunctioned Sept. 24-30.

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.0	13.0	12.0	12.0	7.0	6.0	6.0	6.0	9.0	8.0	5.0	3.0
2	17.0	13.0	14.0	12.0	6.0	6.0	6.0	6.0	8.0	8.0	7.0	4.0
3	17.0	14.0	13.0	11.0	7.0	6.0	7.0	6.0	8.0	6.0	8.0	6.0
4	18.0	15.0	12.0	11.0	7.0	6.0	8.0	7.0	7.0	6.0	8.0	6.0
5	19.0	16.0	11.0	8.0	6.0	6.0	8.0	6.0	6.0	4.0	8.0	6.0
6	19.0	16.0	8.0	7.0	6.0	5.0	6.0	5.0	6.0	4.0	9.0	6.0
7	18.0	17.0	7.0	6.0	8.0	6.0	5.0	5.0	6.0	4.0	9.0	7.0
8	17.0	16.0	7.0	5.0	9.0	8.0	5.0	3.0	7.0	5.0	9.0	7.0
9	17.0	16.0	7.0	5.0	11.0	9.0	3.0	3.0	6.0	4.0	12.0	8.0
10	19.0	17.0	8.0	6.0	11.0	11.0	3.0	2.0	6.0	4.0	12.0	11.0
11	17.0	16.0	9.0	7.0	11.0	9.0	3.0	3.0	6.0	4.0	12.0	11.0
12	16.0	15.0	11.0	8.0	9.0	9.0	3.0	3.0	4.0	3.0	12.0	12.0
13	16.0	14.0	11.0	9.0	9.0	8.0	3.0	2.0	4.0	3.0	12.0	11.0
14	17.0	19.0	11.0	9.0	8.0	7.0	3.0	3.0	4.0	2.0	11.0	8.0
15	18.0	15.0	10.0	8.0	9.0	8.0	3.0	3.0	5.0	3.0	8.0	7.0
16	17.0	15.0	8.0	6.0	9.0	9.0	3.0	3.0	6.0	4.0	9.0	8.0
17	17.0	16.0	7.0	6.0	9.0	8.0	3.0	3.0	6.0	4.0	11.0	9.0
18	17.0	15.0	9.0	7.0	9.0	8.0	4.0	3.0	5.0	4.0	11.0	9.0
19	15.0	13.0	9.0	6.0	11.0	9.0	4.0	3.0	6.0	3.0	12.0	9.0
20	13.0	11.0	7.0	6.0	12.0	11.0	4.0	4.0	6.0	3.0	13.0	10.0
21	13.0	11.0	7.0	6.0	13.0	12.0	6.0	4.0	6.0	6.0	15.0	12.0
22	14.0	12.0	8.0	6.0	13.0	13.0	6.0	5.0	6.0	5.0	16.0	13.0
23	13.0	12.0	9.0	8.0	13.0	8.0	7.0	6.0	6.0	4.0	15.0	11.0
24	13.0	12.0	9.0	9.0	8.0	6.0	7.0	6.0	6.0	4.0	11.0	9.0
25	16.0	13.0	9.0	9.0	6.0	5.0	6.0	5.0	6.0	4.0	11.0	8.0
26	13.0	12.0	9.0	8.0	7.0	6.0	5.0	4.0	6.0	4.0	12.0	8.0
27	12.0	11.0	9.0	9.0	6.0	5.0	4.0	4.0	6.0	4.0	13.0	9.0
28	12.0	11.0	9.0	7.0	6.0	5.0	5.0	4.0	5.0	4.0	13.0	11.0
29	11.0	9.0	7.0	6.0	6.0	6.0	6.0	5.0	5.0	4.0	14.0	12.0
30	11.0	9.0	7.0	7.0	6.0	5.0	7.0	6.0	---	---	17.0	13.0
31	12.0	11.0	---	---	6.0	6.0	9.0	7.0	---	---	16.0	14.0
MONTH	19.0	9.0	14.0	5.0	13.0	5.0	9.0	2.0	9.0	2.0	17.0	3.0
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	16.0	18.0	13.0	21.0	17.0	25.0	22.0	25.0	22.0	19.0	18.0
2	17.0	14.0	19.0	16.0	21.0	19.0	26.0	22.0	26.0	23.0	21.0	18.0
3	14.0	12.0	20.0	17.0	22.0	19.0	25.0	23.0	26.0	23.0	22.0	19.0
4	14.0	11.0	19.0	17.0	23.0	21.0	23.0	20.0	26.0	24.0	22.0	20.0
5	14.0	13.0	18.0	16.0	23.0	21.0	20.0	20.0	26.0	23.0	22.0	20.0
6	14.0	13.0	17.0	14.0	22.0	19.0	22.0	20.0	27.0	23.0	23.0	21.0
7	15.0	12.0	16.0	13.0	21.0	19.0	23.0	21.0	27.0	24.0	23.0	21.0
8	16.0	13.0	17.0	14.0	19.0	19.0	23.0	21.0	27.0	24.0	22.0	19.0
9	17.0	14.0	17.0	14.0	19.0	19.0	22.0	21.0	27.0	24.0	22.0	19.0
10	16.0	14.0	18.0	15.0	20.0	19.0	21.0	20.0	27.0	24.0	21.0	19.0
11	15.0	12.0	18.0	17.0	21.0	20.0	21.0	20.0	27.0	24.0	21.0	19.0
12	16.0	12.0	19.0	17.0	21.0	21.0	21.0	21.0	25.0	22.0	20.0	18.0
13	16.0	12.0	20.0	19.0	22.0	20.0	21.0	21.0	23.0	22.0	19.0	17.0
14	16.0	13.0	20.0	18.0	21.0	19.0	22.0	21.0	24.0	22.0	19.0	17.0
15	18.0	15.0	18.0	17.0	22.0	19.0	23.0	22.0	24.0	23.0	19.0	17.0
16	17.0	13.0	19.0	17.0	23.0	20.0	23.0	22.0	26.0	23.0	19.0	17.0
17	16.0	13.0	19.0	18.0	22.0	21.0	24.0	22.0	27.0	23.0	19.0	18.0
18	16.0	13.0	19.0	18.0	22.0	21.0	24.0	23.0	27.0	24.0	19.0	19.0
19	18.0	14.0	21.0	19.0	22.0	21.0	24.0	22.0	27.0	24.0	19.0	19.0
20	19.0	16.0	19.0	17.0	23.0	21.0	24.0	22.0	26.0	24.0	21.0	19.0
21	20.0	17.0	19.0	17.0	23.0	21.0	24.0	22.0	27.0	24.0	21.0	19.0
22	19.0	16.0	18.0	16.0	23.0	21.0	24.0	22.0	28.0	24.0	21.0	18.0
23	19.0	17.0	19.0	16.0	24.0	21.0	24.0	22.0	28.0	24.0	21.0	18.0
24	17.0	17.0	22.0	18.0	24.0	22.0	24.0	22.0	28.0	25.0	---	---
25	17.0	14.0	23.0	19.0	25.0	22.0	26.0	23.0	27.0	25.0	---	---
26	17.0	13.0	22.0	18.0	26.0	23.0	26.0	23.0	26.0	24.0	---	---
27	16.0	14.0	22.0	19.0	25.0	23.0	26.0	23.0	25.0	22.0	---	---
28	16.0	14.0	20.0	18.0	24.0	20.0	26.0	23.0	23.0	21.0	---	---
29	14.0	13.0	19.0	16.0	24.0	20.0	25.0	23.0	22.0	19.0	---	---
30	17.0	13.0	19.0	17.0	24.0	21.0	24.0	23.0	21.0	18.0	---	---
31	---	---	20.0	17.0	---	---	24.0	22.0	20.0	18.0	---	---
MONTH	20.0	11.0	23.0	13.0	26.0	17.0	26.0	20.0	28.0	18.0	---	---

## SANTEE RIVER BASIN

02169800 SANTEE RIVER NEAR FORT MOTTE, S.C.

LOCATION.--Lat 33°45', long 80°37', Calhoun County, at gaging station 0.3 mile downstream from confluence of Wateree and Congaree Rivers and 4.0 miles west of Fort Motte.

DRAINAGE AREA.--14,100 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1966 to June 1968.  
Sediment records: July 1966 to June 1968 (periodic).

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	89	---	---	74	---	---	97	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	108	---	---	---
7	---	---	95	---	85	92	---	96	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	101	---	---	---	---	88	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	88	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	95	---	---	---	83	90	---	---	---	---	---	---
14	---	---	78	---	---	---	---	---	---	---	---	---
15	---	120	---	---	---	---	---	105	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	85	---	---	---	---	---
19	103	---	---	64	---	---	---	---	---	---	---	---
20	---	---	---	64	88	92	---	---	---	---	---	---
21	---	---	---	65	---	---	---	86	95	---	---	---
22	---	---	83	68	---	---	---	---	---	---	---	---
23	---	---	---	70	---	---	---	---	---	---	---	---
24	---	115	---	---	---	---	---	---	---	---	---	---
25	---	---	---	74	---	---	103	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	101	---	---	---	---	---	---	---	95	---	---	---
28	---	---	81	---	89	---	---	101	---	---	---	---
29	---	92	---	---	---	---	99	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	75	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

## PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1967 TO JUNE 1968

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 4, 1967	1020	11000	59	1750	FEB 7, 1968	1430	16800	32	1450
OCT 13, 1967	1100	13200	36	1280	FEB 13, 1968	1415	16000	32	1380
OCT 19, 1967	1350	9200	37	919	FEB 20, 1968	1430	8600	23	534
OCT 27, 1967	0910	10100	36	982	FEB 28, 1968	0950	9500	25	641
NOV 1, 1967	1115	11000	44	1310	MAR 7, 1968	1400	8000	19	410
NOV 9, 1967	1010	11000	37	1100	MAR 13, 1968	1415	13600	54	1980
NOV 15, 1967	1410	6000	35	567	MAR 20, 1968	1030	26600	83	5960
NOV 24, 1967	1100	7250	21	411	APR 4, 1968	0945	11600	38	1190
NOV 29, 1967	1105	15600	59	2490	APR 9, 1968	1030	12500	43	1450
DEC 7, 1967	0930	16000	30	1300	APR 11, 1968	1030	12500	45	1520
DEC 14, 1967	1045	25000	197	13300	APR 18, 1968	1500	8900	46	1110
DEC 22, 1967	1100	25600	87	6010	APR 25, 1968	1400	11000	49	1460
DEC 28, 1967	1400	20600	52	2890	APR 29, 1968	1415	8600	30	697
JAN 4, 1968	1420	27600	50	3730	MAY 8, 1968	1300	7750	36	753
JAN 19, 1968	1115	29600	41	3280	MAY 15, 1968	1100	14400	55	2140
JAN 20, 1968	1045	28600	35	3700	MAY 21, 1968	1300	11000	67	1990
JAN 21, 1968	1000	27600	40	2980	MAY 28, 1968	1300	7750	32	670
JAN 22, 1968	1100	25600	38	2630	JUN 6, 1968	1015	12500	42	1420
JAN 23, 1968	1200	25100	30	2030	JUN 21, 1968	0900	15600	60	2530
JAN 25, 1968	1200	25600	49	3390	JUN 27, 1968	1230	14400	51	1980
JAN 31, 1968	1445	23100	43	2680					

SANTEE RIVER BASIN

73

02171500 SANTEE RIVER NEAR PINEVILLE, S.C.  
(International Hydrological Decade River Station and radiochemical station)

LOCATION.--Lat 33°27'15", long 80°09'25", Berkeley County, at gaging station 2.4 miles downstream from Lake Marion Dam, 3.0 miles upstream from Dead River, and 6.7 miles west of Pineville.

DRAINAGE AREA.--14,700 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1951 to September 1952, January 1966 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITTER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO2)	DIS- SOLVED ALUM- INUM (AL)	DIS- SOLVED IRON (FE)	DIS- SOLVED MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)
OCT. 23...	534	9.6	--	.06	--	5.4	1.7	7.2	1.8	25	0	8.0
NOV. 21...	563	9.9	--	.02	--	5.6	2.4	9.0	1.9	31	0	9.4
DEC. 13...	560	8.6	--	.01	--	5.8	2.2	10	1.7	32	0	8.0
JAN. 18...	7140	9.6	--	.07	--	5.1	1.2	7.7	1.5	17	0	7.8
FEB. 16...	576	9.2	--	.02	--	4.5	1.8	7.1	1.4	22	0	8.4
MAR. 19...	576	7.6	--	.01	--	4.5	1.7	8.0	1.2	26	0	5.6
APR. 16...	528	6.8	.2	.02	--	5.7	1.1	7.5	1.3	24	0	6.8
MAY 16...	522	5.5	--	.01	--	5.2	1.6	9.1	1.7	27	0	7.2
JUNE 17...	1790	3.1	--	.02	.00	4.5	1.6	9.7	1.5	30	0	6.4
JULY 15...	560	8.0	--	.02	.00	4.3	1.5	8.9	1.6	28	0	6.4
AUG. 14...	569	9.6	--	.02	--	4.3	1.5	8.8	1.8	29	0	5.8
SEPT. 17...	531	10	.1	.02	.00	4.6	1.9	9.6	1.6	29	0	7.0

DATE	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- TENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
OCT. 23...	6.3	.1	.5	.00	53	53	20	0	74	6.4	30
NOV. 21...	8.5	.2	.3	.00	62	58	24	0	87	6.3	1
DEC. 13...	7.5	.2	.3	.00	60	59	24	0	89	6.5	2
JAN. 18...	8.8	.2	.3	.00	50	73	18	4	77	6.1	30
FEB. 16...	6.7	.0	.4	.01	51	56	18	0	73	6.8	15
MAR. 19...	7.6	.0	.6	.01	50	51	18	0	81	6.7	10
APR. 16...	6.8	.1	.5	.00	49	59	18	0	77	6.3	15
MAY 16...	7.7	.2	.6	.05	52	52	20	0	82	6.5	10
JUNE 17...	7.4	.1	.3	.00	49	54	18	0	81	6.8	5
JULY 15...	6.8	.2	.4	.00	52	52	17	0	79	6.6	5
AUG. 14...	6.4	.2	.4	--	53	60	17	0	79	6.5	5
SEPT. 17...	8.1	.1	.2	.01	57	62	20	0	84	6.2	5

DETERMINATIONS OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	DATE	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
NOV 21, 1967..	563	10	15	APR 16.....	525	15	21
DEC 13.....	560	6	9.1	MAY 16.....	522	8	11
FEB 16, 1968..	576	34	53	JUN 17.....	1790	8	39
MAR 19.....	576	16	25				

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE OF COLLECTION	DISCHARGE (CFS)	URANIUM (UG/L)	RADIUM (PC/L)	GROSS B (PC/L)	GROSS A (UG,U/L)	GROSS B	GROSS A
01-03-68	500	<0.4	<0.1	3.8	1.9	0.7	0.4
01-18-68	7220	<.4	.1	3.6	.7	5.1	1.6
02-16-68	544	<.4	<.1	3.4	1.1	.7	.8
03-19-68	576	<.4	<.1	2.6	.7	1.5	.8
04-16-68	525	<.4	<.1	3.4	1.3	2.3	2.0
05-16-68	522	<.4	<.1	2.8	.4	<.4	.6
06-17-68	1790	<.4	<.1	3.3	.4	<.4	.4
07-15-68	528	<.4	<.1	2.8	<.4	1.3	<.4
08-14-68	537	<.4	<.1	3.0	<.4	.7	<.4
09-17-68	531	<.4	<.1	3.1	<.4	<.4	<.4

DETERMINED AT RADIOCHEMICAL SURVEILLANCE UNIT, DENVER, COLORADO

## COOPER RIVER BASIN

02172001 LAKE MOULTRIE TAILRACE NEAR MONCK'S CORNER, S.C.

LOCATION.--Lat 33°14'40", long 79°59'30", Berkeley County, 0.5 mile upstream from Atlantic Coast Line Railroad bridge and 3.5 miles north-northeast of Moncks Corner.

PERIOD OF RECORD.--Chemical analyses: October 1963 to June 1964, October 1964 to July 1968.  
Sediment records: October 1963 to June 1968 (periodic).

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	90	---	---	---	---	---	101	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	105	---	---	---	---	---
4	100	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	110	---	---	---
6	---	---	---	---	---	85	---	---	---	---	---	---
7	---	---	---	---	80	---	---	---	---	---	---	---
8	---	118	---	---	---	---	---	110	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	104	---	---	98	---	---	---	---	---
11	92	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	106	---	---	---
13	---	---	---	---	---	97	---	---	---	---	---	---
14	---	---	---	---	80	---	---	---	---	---	---	---
15	---	135	---	---	---	---	---	126	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	101	---	---	110	---	---	---	---	---
18	90	---	---	---	---	---	125	---	---	---	---	---
19	---	---	---	---	---	---	---	---	111	---	---	---
20	---	---	---	---	---	87	---	---	---	---	---	---
21	---	---	---	---	80	---	---	---	---	---	---	---
22	---	86	---	---	---	---	---	109	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	78	---	---	100	---	---	---	---	---
25	101	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	103	---	---	---
27	---	---	---	---	---	86	---	---	---	---	---	---
28	---	---	---	---	90	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	116	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	80	---	---	---	---	---	96	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

## PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 4, 1967	1500	9160	12	297	FEB 21.....	1500	22900	18	1110
OCT 11.....	1500	7760	9	189	FEB 28.....	1500	9080	46	1130
OCT 18.....	1500	12600	10	340	MAR 6.....	1500	16500	16	713
OCT 25.....	1500	14000	15	567	MAR 13.....	1500	14600	40	1580
NOV 1.....	1500	13600	10	367	MAR 20.....	1500	13100	14	495
NOV 8.....	1500	19100	18	928	MAR 27.....	1500	12100	10	327
NOV 15.....	1500	10600	7	200	APR 3.....	1500	12400	9	301
NOV 22.....	1500	7040	3	57	APR 10.....	1500	12400	8	268
NOV 29.....	1500	10400	11	309	APR 17.....	1500	4940	34	453
DEC 6.....	1500	16100	10	435	APR 18.....	1500	4680	30	379
DEC 13.....	1500	22300	10	602	APR 24.....	1500	6760	93	1700
DEC 20.....	1500	22500	9	547	MAY 1.....	1500	11600	35	1100
DEC 27.....	1500	23600	17	1080	MAY 8.....	1500	8410	11	250
JAN 1, 1968	1500	23100	7	437	MAY 15.....	1500	8550	15	346
JAN 10.....	1500	27400	8	592	MAY 22.....	1500	14000	17	643
JAN 17.....	1500	28000	20	1510	MAY 29.....	1500	6420	6	104
JAN 24.....	1500	28200	22	1680	JUN 5.....	1500	4740	8	102
JAN 31.....	1500	27800	23	1730	JUN 12.....	1500	27700	11	823
FEB 7.....	1500	20700	24	1340	JUN 19.....	1500	22200	8	480
FEB 14.....	1500	25000	20	1350	JUN 26.....	1500	15200	14	575



## EDISTO RIVER BASIN

75

02175000 EDISTO RIVER NEAR GIVHANS, S.C.  
(International Hydrological Decade River Station)

LOCATION.--Lat 33°01'40", long 80°23'30", Dorchester County, at gaging station at bridge on State Highway 61, 2.3 miles downstream from Four Hole Swamp and 2.8 miles west of Givhans.

DRAINAGE AREA.--2,730 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: June 1964 to January 1965, March 1967 to September 1968.

Water temperatures: March 1967 to September 1968.

Sediment records: March 1967 to September 1968.

## EXTREMES.--1967-68:

Specific conductance: Maximum daily, 77 micromhos June 28; minimum daily, 37 micromhos Nov. 10, 17, May 10.

Water temperatures: Maximum, 32.0°C Aug. 1; minimum, 8.0°C Jan. 13-19.

Sediment concentrations: Maximum daily, 36 mg/l Oct. 10; minimum daily, 2 mg/l Feb. 23, Mar. 5, 17.

Sediment loads: Maximum daily, 205 tons Jan. 11; minimum daily, 5 tons Sept. 19, 24, 26-28.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO2)	DIS- SOLVED ALUM- INUM (AL)	DIS- SOLVED IRON (FE)	DIS- SOLVED MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)
DEC.												
12...	1760	7.1	--	.06	--	2.9	.3	4.5	.8	9	0	3.8
JAN.												
18...	2870	6.8	--	.01	--	3.5	.8	3.6	.7	7	0	4.8
FEB.												
15...	1760	2.0	--	.03	--	3.1	.7	4.2	.2	11	0	3.2
MAR.												
08...	2490	5.3	--	.02	--	4.1	1.0	4.5	1.6	15	0	6.4
18...	1780	1.2	--	.01	.01	4.3	.3	5.1	.9	16	0	4.2
APR.												
15...	1590	3.9	.3	.13	--	3.4	.6	4.8	.4	15	0	3.4
MAY												
16...	938	5.2	--	.05	--	3.0	.4	4.6	.2	11	0	2.8
JUNE												
17...	3840	5.9	--	.15	.00	4.0	.7	3.9	.7	8	0	7.2
JULY												
15...	2450	6.3	--	.06	--	4.3	.7	3.8	.6	11	0	5.4
AUG.												
15...	925	5.9	--	.07	.00	2.8	.6	4.0	.9	10	0	3.2
SEPT.												
17...	690	6.1	.1	.04	.00	2.1	.5	5.8	.6	11	0	4.8

## CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
DEC.											
12...	4.7	.1	.5	.06	29	45	8	1	40	5.9	35
JAN.											
18...	5.8	.1	.6	.05	29	44	12	7	42	6.0	30
FEB.											
15...	5.4	.0	.4	.10	24	31	11	2	39	6.3	20
MAR.											
08...	2.5	.1	.5	.06	33	38	14	2	53	6.3	35
18...	5.9	.0	.4	.07	31	38	12	0	53	6.6	40
APR.											
15...	5.6	.1	.9	.15	31	45	11	0	48	6.1	60
MAY											
16...	3.6	.2	.3	.14	26	40	9	0	39	5.8	30
JUNE											
17...	4.0	.2	1.3	.00	32	58	13	7	45	6.3	100
JULY											
15...	4.2	.1	.8	.00	31	51	14	4	47	6.0	80
AUG.											
15...	5.6	.1	.7	.19	29	39	10	2	41	6.0	30
SEPT.											
17...	5.9	.0	.3	.05	31	34	7	0	44	5.5	15

## EDISTO RIVER BASIN

## 02175000 EDISTO RIVER NEAR GIYHANS, S.C.--Continued

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	46	55	47	53	50	58	54	50	68	57	56
2	56	45	58	47	50	51	60	55	53	66	56	56
3	55	43	55	47	50	53	58	55	51	59	62	53
4	55	47	50	45	50	55	54	51	47	60	62	56
5	50	49	50	45	51	50	55	49	46	63	64	48
6	44	48	50	41	47	52	56	47	43	59	62	46
7	50	49	43	42	47	49	57	45	42	60	58	57
8	50	46	41	43	47	46	55	43	43	61	47	53
9	50	39	41	44	46	49	60	44	49	59	48	51
10	50	37	42	44	48	50	60	37	56	59	47	53
11	51	41	42	41	47	52	59	39	57	56	49	49
12	48	43	44	42	47	52	59	38	57	56	56	49
13	46	45	43	45	50	53	57	40	56	53	60	51
14	49	45	43	58	48	53	56	45	60	52	58	52
15	51	43	41	50	48	53	56	47	60	55	53	52
16	50	39	44	55	41	55	52	50	57	58	48	53
17	51	37	45	55	45	50	49	51	54	57	52	52
18	52	43	44	56	46	55	48	55	60	56	52	50
19	45	47	46	45	46	58	49	55	61	58	52	45
20	41	53	45	45	52	55	51	50	60	61	61	48
21	47	51	43	46	50	55	52	49	60	63	61	49
22	46	51	42	45	50	53	53	47	66	62	46	---
23	49	44	44	42	47	53	---	45	67	59	45	51
24	49	40	47	44	49	55	53	44	68	60	51	55
25	50	45	48	48	54	54	50	43	71	56	50	58
26	51	47	48	50	55	54	50	43	73	55	57	40
27	46	54	51	53	55	54	51	41	73	57	56	44
28	49	55	58	55	53	52	53	41	77	60	59	43
29	49	55	44	54	50	52	52	45	72	63	52	39
30	50	56	41	54	---	54	53	45	67	59	49	53
31	48	---	43	52	---	55	---	47	---	57	53	---
MONTH	49	46	46	48	49	53	54	46	59	59	54	50

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	15.0	12.0	9.0	9.0	7.0	20.0	19.0	23.0	26.0	32.0	24.0
2	17.0	17.0	11.0	9.0	11.0	7.0	19.0	20.0	23.0	27.0	28.0	23.0
3	17.0	17.0	13.0	9.0	12.0	9.0	19.0	21.0	24.0	27.0	---	25.0
4	18.0	16.0	11.0	11.0	11.0	8.0	20.0	21.0	24.0	27.0	29.0	26.0
5	19.0	14.0	10.0	9.0	8.0	8.0	20.0	21.0	25.0	27.0	29.0	27.0
6	19.0	12.0	9.0	8.0	6.0	11.0	20.0	20.0	24.0	22.0	29.0	26.0
7	20.0	13.0	11.0	9.0	8.0	11.0	18.0	20.0	24.0	25.0	29.0	27.0
8	19.0	12.0	11.0	6.0	8.0	10.0	20.0	20.0	24.0	26.0	30.0	27.0
9	19.0	11.0	11.0	6.0	8.0	11.0	21.0	20.0	---	26.0	29.0	27.0
10	21.0	11.0	13.0	6.0	7.0	13.0	21.0	20.0	23.0	26.0	29.0	26.0
11	19.0	10.0	14.0	6.0	7.0	14.0	14.0	21.0	---	26.0	---	25.0
12	18.0	11.0	15.0	4.0	7.0	16.0	18.0	21.0	24.0	26.0	29.0	24.0
13	18.0	11.0	14.0	3.0	6.0	14.0	18.0	22.0	24.0	26.0	29.0	22.0
14	18.0	13.0	13.0	3.0	6.0	13.0	18.0	---	23.0	26.0	28.0	22.0
15	18.0	13.0	15.0	3.0	6.0	13.0	20.0	23.0	23.0	26.0	30.0	24.0
16	18.0	11.0	14.0	3.0	6.0	14.0	18.0	24.0	24.0	26.0	29.0	24.0
17	19.0	11.0	11.0	3.0	7.0	14.0	18.0	24.0	24.0	---	30.0	21.0
18	19.0	13.0	13.0	3.0	6.0	14.0	18.0	25.0	24.0	26.0	29.0	24.0
19	17.0	12.0	14.0	3.0	6.0	14.0	21.0	---	23.0	26.0	29.0	24.0
20	---	9.0	15.0	4.0	7.0	14.0	21.0	23.0	24.0	26.0	30.0	---
21	15.0	11.0	16.0	4.0	9.0	16.0	22.0	23.0	24.0	---	30.0	24.0
22	16.0	12.0	16.0	4.0	8.0	16.0	22.0	21.0	24.0	26.0	31.0	24.0
23	16.0	14.0	15.0	7.0	7.0	16.0	---	22.0	24.0	26.0	31.0	24.0
24	17.0	13.0	11.0	7.0	7.0	14.0	21.0	22.0	24.0	26.0	30.0	24.0
25	17.0	15.0	9.0	7.0	5.0	13.0	20.0	23.0	25.0	26.0	31.0	24.0
26	16.0	13.0	9.0	5.0	5.0	14.0	20.0	23.0	25.0	26.0	31.0	24.0
27	14.0	16.0	9.0	8.0	7.0	14.0	21.0	23.0	---	27.0	31.0	24.0
28	15.0	14.0	10.0	8.0	7.0	15.0	21.0	23.0	---	28.0	27.0	24.0
29	13.0	12.0	9.0	8.0	8.0	16.0	20.0	23.0	---	28.0	24.0	23.0
30	13.0	14.0	7.0	9.0	---	17.0	19.0	---	26.0	28.0	23.0	---
31	---	---	8.0	10.0	---	18.0	---	23.0	---	28.0	24.0	---
MONTH	17.5	13.0	12.0	6.5	7.5	13.0	19.5	22.0	24.0	26.5	29.0	24.5

## EDISTO RIVER BASIN

77

02175000 EDISTO RIVER NEAR GIYHANS, S.C.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	862	8	19	894	7	17	1220	12	40
2	850	12	28	898	8	19	1310	11	39
3	854	9	21	890	8	19	1430	11	42
4	856	9	21	870	7	16	1560	12	51
5	890	10	24	886	7	17	1690	13	59
6	922	9	22	898	8	19	1800	11	53
7	954	12	31	910	8	20	1900	11	56
8	982	10	27	922	8	20	1970	11	59
9	1000	11	30	934	9	23	1980	6	32
10	1010	36	98	962	9	23	1940	--	31
11	986	12	32	982	10	27	1860	6	30
12	942	11	28	1010	10	27	1760	5	24
13	918	11	27	1010	8	22	1660	5	22
14	894	13	31	1030	9	25	1580	6	26
15	882	9	21	1030	6	17	1540	8	33
16	886	10	24	1030	6	17	1520	6	25
17	906	10	24	1030	7	19	1520	11	45
18	926	11	28	1010	7	19	1540	10	42
19	930	8	20	990	8	21	1550	9	38
20	906	9	22	986	9	24	1560	--	42
21	890	6	14	958	7	18	1550	10	42
22	870	10	23	922	6	15	1530	10	41
23	850	9	21	930	6	15	1520	11	45
24	850	10	23	938	6	15	1500	12	49
25	870	9	21	962	6	16	1460	9	35
26	870	10	24	986	7	19	1440	10	39
27	882	8	19	1010	7	19	1400	13	49
28	894	8	19	1050	7	20	1420	9	35
29	902	8	19	1100	7	21	1480	12	48
30	902	8	19	1170	8	25	1490	10	40
31	898	12	29	--	--	--	1480	13	52
TOTAL	28044	--	809	29198	--	594	49160	--	1264

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	1500	8	32	2420	3	20	1680	5	23
2	1550	9	38	2360	4	25	1700	4	18
3	1700	7	32	2340	4	25	1700	4	18
4	1800	9	44	2280	4	25	1730	8	37
5	1900	7	36	2240	4	24	1760	2	9.0
6	1900	8	41	2200	3	18	1820	4	20
7	2000	5	27	2160	10	58	1860	4	20
8	2100	9	51	2120	5	29	1880	5	25
9	2200	6	36	2060	5	28	1890	3	15
10	2200	8	48	1990	6	32	1870	4	25
11	2300	33	205	1930	10	52	1830	5	25
12	2400	23	149	1880	5	25	1830	5	25
13	2500	11	74	1830	6	30	1840	5	25
14	2500	10	68	1790	4	19	1840	4	20
15	2500	--	68	1770	6	29	1820	7	34
16	2600	7	49	1740	4	19	1820	4	25
17	2700	14	102	1710	6	28	1800	2	10
18	2850	8	62	1660	4	18	1800	8	39
19	3000	6	49	1630	5	22	1800	6	29
20	3130	12	101	1580	5	21	1850	5	25
21	3300	7	62	1560	3	13	1910	5	26
22	3460	7	65	1540	3	12	1980	7	37
23	3530	8	76	1520	2	8.0	2060	5	28
24	3480	5	47	1530	3	12	2100	7	40
25	3350	13	118	1540	4	17	2100	7	40
26	3170	3	26	1550	3	13	2060	7	39
27	2990	4	32	1560	3	13	1960	6	32
28	2830	3	23	1580	3	13	1840	6	30
29	2700	3	22	1620	4	17	1720	8	42
30	2580	4	28	--	--	--	1640	9	40
31	2480	3	20	--	--	--	1590	8	34
TOTAL	79200	--	1831	53690	--	665.0	57080	--	855.0

## EDISTO RIVER BASIN

02175000 EDISTO RIVER NEAR GIVHANS, S.C.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

APRIL				MAY				JUNE			
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)		
1	1580	8	34	942	10	25	930	7	18		
2	1480	6	24	950	12	31	862	9	21		
3	1420	4	23	986	13	35	827	8	18		
4	1370	8	30	1030	15	42	824	7	16		
5	1330	14	50	1090	14	41	824	10	22		
6	1290	18	63	1160	13	41	815	6	13		
7	1270	14	98	1220	16	63	930	9	20		
8	1260	10	34	1250	10	34	862	10	23		
9	1280	13	45	1280	12	41	862	7	16		
10	1460	18	71	1330	12	43	954	7	18		
11	1620	17	74	1390	14	53	1300	8	28		
12	1620	15	66	1430	16	62	1590	15	64		
13	1600	15	65	1370	14	52	2030	12	66		
14	1590	13	56	1230	14	46	2610	14	99		
15	1600	13	56	1040	9	25	3080	15	125		
16	1600	14	60	942	9	23	3470	11	103		
17	1640	12	53	914	10	25	3800	15	154		
18	1670	--	54	930	7	18	4230	14	169		
19	1640	13	56	998	--	27	4730	13	166		
20	1930	10	41	1070	13	38	5190	13	182		
21	1370	10	37	1140	9	28	5220	13	183		
22	1240	15	50	1230	9	30	4770	10	129		
23	1140	--	37	1330	9	32	4190	13	147		
24	1070	11	32	1420	8	31	3630	11	180		
25	1010	13	35	1480	7	28	3080	9	75		
26	958	12	31	1490	7	28	2520	11	76		
27	914	14	35	1420	11	42	2150	6	34		
28	878	12	28	1210	17	60	1930	6	30		
29	866	20	47	1230	8	27	1670	6	27		
30	918	13	32	1140	6	18	1580	7	30		
31	--	--	--	1030	6	17	--	--	--		
TOTAL	40214	--	1417	36772	--	1096	71260	--	2171		
JULY				AUGUST				SEPTEMBER			
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)		
1	1480	8	32	1140	5	15	660	4	7.0		
2	1340	5	18	1030	4	11	694	5	9.0		
3	1190	4	13	1000	5	14	708	5	10		
4	1090	5	15	1010	4	11	723	6	12		
5	1070	7	20	1010	4	11	732	7	14		
6	1120	5	15	964	7	18	750	6	12		
7	1160	6	19	956	6	15	747	4	8.0		
8	1170	5	16	460	6	16	760	6	12		
9	1230	5	17	953	7	18	792	10	21		
10	1360	5	18	908	8	20	788	8	17		
11	1470	6	24	866	6	31	866	8	19		
12	1660	7	31	866	5	26	866	8	19		
13	1940	12	52	838	4	14	813	7	15		
14	2260	9	55	890	5	12	760	7	14		
15	2640	10	71	925	7	17	729	10	20		
16	2560	10	79	968	8	21	723	4	8.0		
17	3040	7	58	960	8	21	690	6	11		
18	3050	9	74	928	8	20	691	6	11		
19	3030	8	65	911	6	15	663	4	7.0		
20	3010	15	122	872	7	16	648	3	5.0		
21	2920	8	63	866	8	19	645	4	7.0		
22	2880	7	54	862	8	19	645	--	7.0		
23	2870	7	54	872	7	16	657	6	11		
24	2840	3	23	844	10	23	660	3	5.0		
25	2740	6	44	760	9	18	666	4	7.0		
26	2560	6	41	702	5	9.0	669	3	5.0		
27	2260	5	31	672	5	9.0	672	3	5.0		
28	1880	5	25	669	6	10	675	3	5.0		
29	1590	9	39	666	6	9.0	681	5	9.0		
30	1420	6	23	645	5	9.0	687	3	6.0		
31	1280	6	21	645	5	9.0	--	--	--		
TOTAL	62510	--	1232	27152	--	492.0	21449	--	319.0		
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)								555729			
TOTAL LOAD FOR YEAR (TONS)								12744.1			

## SAVANNAH RIVER BASIN

79

02177000 CHATTOOGA RIVER NEAR CLAYTON, GA.

LOCATION.--Lat 34°49', long 83°18', Rabun County, S.C. at gaging station on left bank 150 ft downstream from bridge on U.S. Highway 76, 2.8 miles upstream from Stekoa Creek, 7 miles southeast of Clayton, 9 miles downstream from War Woman Creek, and 9 miles upstream from confluence with Tallulah River.

DRAINAGE AREA.--207 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAG- NESE- NESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO <sub>4</sub> )
FEB. 27...	8.3	<.10	<.05	.5	.2	1.0	.4	.06	<2.0
MAR. 27...	6.5	.10	<.05	.5	.1	.8	.5	.10	<2.0
APR. 25...	7.5	.10	<.05	.6	.1	1.0	.4	<.10	<2.0
MAY 15...	6.5	.55	<.05	.4	.2	1.9	.7	<.10	<2.0
JUNE 12...	5.0	1.1	<.05	.5	.3	1.0	.7	.10	<2.0
JULY 23...	8.0	.30	.05	.6	.3	1.8	.5	.10	2.0
AUG. 27...	7.7	.18	<.05	.7	.2	2.7	.6	<.10	<2.0
SEPT. 25...	8.3	.27	<.05	.8	.3	1.2	.5	<.10	<2.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO <sub>4</sub> )	HARD- NESS (CA, MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 27...	2.0	.01	.05	2	12	15	7.0	.3	<30
MAR. 27...	1.0	<.10	<.10	6	10	<5	7.0	.3	<30
APR. 25...	1.5	<.10	<.10	4	12	15	5.0	.4	430
MAY 15...	3.5	.14	.15	4	12	50	36	.5	9300
JUNE 12...	<.5	.16	.15	6	13	80	48	.7	2300
JULY 23...	.1	.09	.10	6	15	30	2.0	.2	36
AUG. 27...	1.0	<.05	.10	8	17	15	6.0	.9	73
SEPT. 25...	1.0	<.05	.75	4	15	30	4.1	.1	72

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CaCO <sub>3</sub>	PH	DIS- SOLVED OXYGEN
FEB. 27...	1300	478	5	7	6.5	11.9
MAR. 27...	1350	486	12	7	6.3	--
APR. 29...	1230	542	13	7	7.3	10.6
MAY 15...	1130	880	16	5	6.4	10.4
JUNE 12...	1350	820	21	5	7.0	9.3
JULY 23...	1130	307	23	10	7.6	9.9
AUG. 27...	1545	194	24	7	6.3	8.9
SEPT. 25...	1315	--	20	7	6.4	--

SAVANNAH RIVER BASIN  
02178400 TALLULAH RIVER NEAR CLAYTON, GA.  
(Hydrologic bench-mark station)

LOCATION.--Lat 34°53'25", long 83°31'50", Rabun County, at gaging station on right bank 100 ft downstream from bridge on county road, 120 ft downstream from Persimon Creek, 8 miles upstream from Burton Dam, and 10.3 miles west of Clayton.

DRAINAGE AREA.--56.5 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

Water temperatures: September 1964 to September 1968.

EXTREMES.--1967-68:

Water temperatures: Maximum, 26.0°C July 28, Aug. 17, 23; minimum, 1.0°C on several days in February and March.

Period of record:

Water temperatures: Maximum, 28.0°C July 28, 1966; minimum, freezing point on several days during winter periods.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SILICA (SI02)	DISS- SOLVED IRON (FE)	DISS- OLVED MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PC- TAS- SIUM (K)	STRON- TIUM (SR)	TOTAL ALUM- INIUM (AL)	BICAP- BONATE (HCO3)	SULFATE (SO4)	CHLO- FIDE (CL)
OCT.												
11...	11	.02	--	1.1	.5	1.1	.6	--	--	8	.C	.8
NOV.												
08...	8.8	.02	--	1.2	.4	1.0	.4	--	--	8	.C	.5
JAN.												
31...	7.9	.01	.00	1.1	.4	1.0	.4	.00	.2	8	.0	2.0
FEB.												
28...	8.9	.01	.00	1.1	.4	1.0	.4	.00	.0	7	.C	1.0
MAY												
31...	8.6	.01	.00	1.3	.4	1.2	.5	.00	.1	8	.C	1.5
JULY												
31...	10	.01	.00	1.3	4.0	1.2	.5	.00	.1	8	.0	1.8
SEPT.												
30...	9.9	.04	--	1.5	.5	1.4	.7	--	--	8	.C	1.0

DATE	FLUC- TIDE (F)	NITRATE (NO3)	PHOS- PHATE (PC4)	DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	PH	DIS- SOLVED OXYGEN
OCT.									
11...	.1	.0	.02	19	19	4	7	17	5
NOV.									
08...	.3	.0	.01	17	17	4	7	16	0
JAN.									
31...	.1	1.0	.00	6	18	4	7	14	0
FEB.									
28...	1.0	1.2	.00	10	18	4	6	15	0
MAY									
31...	.1	1.1	.00	8	19	4	7	17	0
JULY									
31...	.1	.9	.00	10	20	4	7	17	0
SEPT.									
30...	.1	.C	--	22	19	6	7	22	0

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	PH	DIS- SOLVED OXYGEN
OCT.					
11...	1100	135	12	6.4	14.0
NOV.					
08...	1030	170	4	6.2	15.5
JAN.					
31...	--	206	9	6.9	--
FEB.					
28...	1425	140	4	6.7	--
MAY					
31...	1220	135	18	6.6	--
JULY					
31...	1110	132	17	6.6	--
SEPT.					
30...	1500	56	--	6.5	--

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER																																
MAXIMUM	11	14	14	16	16	16	17	15	14	16	14	14	14	14	14	14	14	12	11	12	12	12	12	11	11	11	9	8	9	8	9	13
MINIMUM	8	10	11	11	12	12	14	14	14	13	11	11	11	12	13	14	12	9	8	9	9	11	11	9	8	7	6	6	8	8	10	
NOVEMBER																																
MAXIMUM	10	12	11	11	8	7	6	6	7	8	10	10	9	8	7	7	9	7	7	9	10	9	10	8	10	8	5	8	--	--	8	
MINIMUM	10	11	9	8	6	5	4	4	4	4	7	8	8	6	5	4	7	5	5	6	7	9	8	9	8	7	5	4	5	--	7	
DECEMBER																																
MAXIMUM	7	6	7	6	6	7	9	10	11	11	11	11	11	11	12	11	9	12	13	13	13	10	10	6	7	7	7	8	8	7	6	9
MINIMUM	6	6	6	4	4	6	7	9	10	11	11	9	7	8	11	8	7	9	12	13	13	10	10	6	5	6	7	6	7	5	6	8
JANUARY																																
MAXIMUM	7	7	9	10	7	6	7	5	5	7	7	7	6	6	3	4	5	6	6	7	9	9	9	7	6	6	7	9	9	10	7	5
MINIMUM	6	7	7	7	4	5	5	3	3	5	6	6	6	3	3	3	3	3	5	6	6	8	7	5	3	4	6	7	7	9	5	7
FEBRUARY																																
MAXIMUM	10	9	7	7	6	6	6	4	4	3	3	3	6	6	4	4	7	6	4	4	6	6	6	6	7	4	4	--	--	--	6	
MINIMUM	9	7	5	4	3	3	6	4	3	2	2	1	1	1	3	2	3	1	3	3	1	1	2	2	1	2	1	3	2	--	--	3
MARCH																																
MAXIMUM	4	7	8	7	8	9	9	9	12	11	11	11	7	8	9	11	11	13	14	14	15	12	8	8	11	13	11	12	14	13	7	10
MINIMUM	1	2	4	2	3	4	4	4	6	9	9	11	6	4	6	8	7	6	8	9	11	12	7	4	5	6	7	9	10	11	7	4
APRIL																																
MAXIMUM	17	13	10	11	11	12	13	13	13	13	13	13	12	16	14	13	17	17	18	17	18	16	15	14	13	12	11	14	--	--	14	
MINIMUM	12	9	9	8	11	7	10	11	11	11	9	8	8	11	11	8	8	11	12	13	10	13	13	11	8	9	9	9	--	--	10	
MAY																																
MAXIMUM	16	17	16	14	15	14	14	12	14	14	13	17	17	16	17	18	16	17	17	14	13	14	14	17	19	19	17	16	14	16	17	16
MINIMUM	9	11	11	12	11	8	9	11	11	12	12	13	14	13	14	13	12	11	10	9	11	13	14	15	15	13	11	11	11	11	11	12
JUNE																																
MAXIMUM	17	17	20	19	20	18	16	16	17	20	19	21	21	20	22	18	21	22	22	20	22	22	22	23	22	21	22	24	--	--	20	
MINIMUM	12	14	14	14	14	14	16	15	16	16	16	13	14	15	16	15	17	17	17	17	17	17	17	17	18	18	14	14	16	--	15	
JULY																																
MAXIMUM	24	23	20	18	19	22	23	22	19	19	21	19	19	20	21	22	23	20	23	22	22	24	23	21	24	24	25	26	23	21	21	22
MINIMUM	17	18	18	17	17	17	18	17	17	17	17	17	17	17	17	17	18	18	18	18	18	18	18	18	18	19	19	19	19	18	18	18
AUGUST																																
MAXIMUM	23	22	22	22	22	23	24	25	25	25	23	24	23	24	26	25	22	24	24	24	26	24	22	24	22	21	19	19	17	17	17	23
MINIMUM	18	19	18	18	18	18	19	19	20	21	19	17	19	19	19	19	16	18	19	19	19	19	19	19	19	19	19	17	16	13	13	14
SEPTEMBER																																
MAXIMUM	16	20	20	19	18	22	21	19	18	19	18	18	21	19	17	17	17	15	18	19	19	19	19	19	18	17	18	19	19	--	--	19
MINIMUM	14	15	15	15	17	17	14	14	16	16	14	12	13	13	12	13	16	15	15	15	15	15	15	15	14	13	16	14	16	14	--	15

## SAVANNAH RIVER BASIN

81

## 02185000 KEOOWE RIVER NEAR JOCASSEE, S.C.

LOCATION.--Lat 34°57'21", long 82°54'41", Oconee County, temperature recorder at gaging station on right bank 0.6 mile downstream from bridge on State Highway 11, 1.8 miles southeast of Jocassee, and 2.6 miles upstream from Eastatote Creek.

DRAINAGE AREA.--148 sq mi.

PERIOD OF RECORD.--Water temperatures: October 1981 to April 1968 (discontinued).

REMARKS.--Recorder malfunctioned Mar. 20 to Apr. 19.

DAY	OCTOBER		TEMPERATURE (°C) OF WATER, OCTOBER 1967 TO APRIL 1968		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.0	13.0	11.0	11.0	8.0	8.0	8.0	8.0	10.0	9.0	6.0	5.0		
2	16.0	13.0	12.0	11.0	8.0	8.0	8.0	8.0	9.0	9.0	7.0	5.0		
3	17.0	14.0	12.0	10.0	9.0	8.0	9.0	8.0	9.0	9.0	7.0	8.0	7.0	
4	18.0	16.0	11.0	10.0	8.0	7.0	9.0	9.0	9.0	7.0	7.0	8.0	7.0	
5	18.0	16.0	9.0	8.0	7.0	7.0	7.0	9.0	7.0	7.0	6.0	8.0	6.0	
6	18.0	17.0	8.0	7.0	8.0	7.0	7.0	6.0	7.0	6.0	8.0	7.0		
7	18.0	17.0	7.0	6.0	9.0	8.0	7.0	7.0	7.0	7.0	6.0	9.0	7.0	
8	17.0	17.0	8.0	6.0	11.0	9.0	7.0	5.0	8.0	7.0	9.0	7.0		
9	17.0	16.0	7.0	6.0	11.0	11.0	6.0	5.0	7.0	6.0	8.0	8.0		
10	17.0	16.0	8.0	7.0	12.0	11.0	8.0	6.0	7.0	6.0	11.0	9.0		
11	17.0	14.0	8.0	8.0	12.0	12.0	7.0	7.0	6.0	6.0	11.0	11.0		
12	16.0	14.0	9.0	8.0	12.0	11.0	7.0	6.0	6.0	4.0	12.0	11.0		
13	16.0	15.0	9.0	8.0	11.0	9.0	7.0	5.0	4.0	11.0	8.0			
14	17.0	15.0	9.0	8.0	10.0	9.0	6.0	6.0	5.0	4.0	8.0	7.0		
15	17.0	16.0	8.0	7.0	12.0	10.0	6.0	5.0	6.0	5.0	8.0	7.0		
16	18.0	17.0	7.0	6.0	12.0	9.0	6.0	5.0	7.0	6.0	9.0	8.0		
17	17.0	17.0	6.0	6.0	9.0	9.0	6.0	6.0	7.0	6.0	11.0	9.0		
18	17.0	15.0	7.0	6.0	12.0	9.0	6.0	6.0	7.0	6.0	11.0	9.0		
19	14.0	12.0	7.0	6.0	13.0	12.0	6.0	6.0	6.0	4.0	12.0	10.0		
20	12.0	11.0	7.0	6.0	13.0	13.0	7.0	6.0	7.0	4.0	---	---		
21	12.0	11.0	7.0	6.0	13.0	13.0	8.0	7.0	7.0	7.0	---	---		
22	13.0	11.0	8.0	7.0	13.0	12.0	8.0	8.0	7.0	6.0	---	---		
23	13.0	12.0	9.0	8.0	12.0	8.0	9.0	8.0	6.0	5.0	---	---		
24	13.0	12.0	9.0	8.0	8.0	7.0	9.0	8.0	6.0	5.0	---	---		
25	14.0	12.0	8.0	8.0	8.0	7.0	8.0	7.0	6.0	5.0	---	---		
26	13.0	11.0	8.0	7.0	8.0	8.0	7.0	6.0	6.0	5.0	---	---		
27	11.0	9.0	8.0	8.0	8.0	7.0	7.0	6.0	7.0	5.0	---	---		
28	10.0	9.0	8.0	6.0	8.0	8.0	8.0	7.0	7.0	6.0	---	---		
29	9.0	8.0	6.0	6.0	8.0	8.0	8.0	8.0	6.0	6.0	---	---		
30	9.0	8.0	---	6.0	8.0	7.0	8.0	8.0	---	---	---	---		
31	11.0	9.0	---	---	8.0	7.0	10.0	9.0	---	---	---	---		
MONTH	18.0	8.0	12.0	6.0	13.0	7.0	10.0	5.0	10.0	4.0	---	---		

## 02187500 SAVANNAH RIVER NEAR IVA, S.C.

LOCATION.--Lat 34°15'20", long 82°44'42", Anderson County, at gaging station on left bank at downstream side of bridge on State Highway 184, 0.5 mile upstream from Little Generostee Creek, 5.8 miles southwest of Iva, and at mile 296.5.

DRAINAGE AREA.--2,231 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

Water temperatures: October 1962 to September 1967.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SI02)	TOTAL IRON (FE)	MANG- NESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB. 27...	7.5	0.10	0.05	1.5	.5	4.3	.9	.10	<2.0
MAR. 27...	7.7	.17	0.05	1.8	.6	2.6	1.1	.10	<2.0
APR. 29...	9.0	.40	0.05	2.2	.6	3.4	1.1	.10	<2.0
MAY 15...	8.2	.45	0.05	1.6	.5	1.9	1.4	0.10	<2.0
JUNE 12...	6.0	.10	0.05	1.3	.6	2.7	1.0	0.10	2.0
JULY 23...	8.8	.15	0.05	1.4	.6	3.0	.9	0.10	<2.0
AUG. 27...	9.0	.10	.08	1.7	.7	4.2	1.1	0.10	4.0
SEPT. 25...	9.0	.18	.06	2.0	.7	2.8	.9	0.10	3.0
DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 27...	3.0	.10	0.05	6	30	5	8.0	.9	36
MAR. 27...	2.0	.24	0.05	6	29	<5	8.0	.5	420
APR. 29...	3.3	.30	0.05	8	34	15	5.0	.9	2400
MAY 15...	3.0	.24	.15	8	31	75	32	.3	2300
JUNE 12...	1.4	.18	0.05	10	29	10	7.0	.8	2300
JULY 23...	2.2	.19	.10	6	33	15	<1.0	.4	1500
AUG. 27...	2.5	.10	.10	10	35	15	4.0	1.1	36
SEPT. 25...	2.5	.05	.10	10	34	30	2.0	.1	91

## SAVANNAH RIVER BASIN

02187500 SAVANNAH RIVER NEAR IVA, S.C.--Continued

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CACO3	PH	DIS- SOLVED OXYGEN
FEB.						
27...	1030	296	7	11	6.7	11.8
MAR.						
27...	1130	13900	10	11	7.1	13.5
APR.						
29...	0945	182	13	12	6.3	10.9
MAY						
15...	0915	454	11	11	6.2	10.9
JUNE						
12...	1000	496	--	16	7.0	10.9
JULY						
23...	0920	255	13	12	6.2	11.2
AUG.						
27...	1045	225	15	12	6.1	10.4
SEPT.						
25...	0840	264	14	12	6.2	10.0

02197000 SAVANNAH RIVER AT AUGUSTA, GA.

LOCATION.--Lat 33°22'25", long 81°56'35", Richmond County, at gaging station at New Savannah Bluff lock and dam, 0.2 mile upstream from Butler Creek, 12 miles downstream from Augusta, and at mile 203.

DRAINAGE AREA.--7,508 sq mi, including that of Butler Creek.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB.									
19...	9.0	.33	<.05	2.5	1.3	4.7	.9	.50	3.0
MAR.									
18...	9.5	.60	.07	2.6	.9	5.5	1.3	<.10	3.0
APR.									
22...	10	.45	<.05	3.3	1.0	1.2	1.2	<.10	<2.0
MAY									
06...	8.3	.80	<.05	2.6	1.0	5.0	1.2	.20	<2.0
JUNE									
17...	11	.55	.06	3.2	1.4	3.2	1.3	.10	<2.0
JULY									
15...	7.5	.75	.07	2.8	1.2	6.0	1.1	.10	4.0
AUG.									
12...	9.1	.37	.06	3.2	1.1	7.3	1.4	.25	<2.0
SEPT.									
09...	10	<.10	.05	2.6	1.1	5.5	1.3	<.10	<2.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA, MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB.									
19...	6.0	.20	.15	16	59	40	13	2.3	43000
MAR.									
18...	3.5	.18	.15	14	50	95	13	1.3	43000
APR.									
22...	3.5	.20	.30	12	46	70	5.0	1.1	9300
MAY									
06...	4.2	.16	.10	20	46	55	33	.6	4300
JUNE									
17...	2.0	.17	.10	14	50	45	13	.9	4300
JULY									
15...	3.0	.22	.10	12	55	120	19	1.0	930
AUG.									
12...	4.0	.32	.23	10	48	25	13	1.4	2300
SEPT.									
09...	3.0	.18	.05	10	51	15	8.0	1.5	15000

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CACO3	PH	DIS- SOLVED OXYGEN
FEB.						
19...	1555	5960	7	26	7.1	12.7
MAR.						
18...	1445	6600	11	18	7.5	12.4
APR.						
22...	1445	7710	14	16	7.5	--
MAY						
06...	1330	7440	16	17	7.1	--
JUNE						
17...	1430	7210	20	18	6.9	--
JULY						
15...	1400	6970	22	22	6.8	--
AUG.						
12...	1400	7090	21	18	6.5	--
SEPT.						
09...	1430	6590	22	18	7.3	--



02197300 UPPER THREE RUNS NEAR NEW ELLENTON, S.C.  
(Hydrologic bench-mark station)

LOCATION.--Lat 33°23'05", long 81°37'00", Aiken County, at gaging station at bridge on U.S. Highway 278, 0.4 mile upstream from Johnson Fork Creek, 4.6 miles southeast of New Ellenton.

DRAINAGE AREA.--87 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: July 1966 to September 1968.  
Sediment records: October 1967 to September 1968 (periodic).

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED ALUM- INUM (AL)	DIS- SOLVED IRON (FE)	DIS- SOLVED MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	CAR- BONATE (C03)
NOV.											
02...	154	7.9	--	.06	.00	1.2	.6	1.2	.5	3	0
DEC.											
01...	117	8.2	--	.05	--	.6	.3	1.0	.2	3	0
JAN.											
02...	142	6.8	--	.06	.00	1.4	.5	1.0	.4	2	0
FEB.											
02...	107	7.2	.1	.29	.02	.2	.2	1.1	.2	3	0
29...	132	.4	.2	.44	.04	.5	.3	1.1	.2	3	0
APR.											
02...	96	5.9	.1	.29	.05	.2	.3	1.2	.2	3	0
MAY											
06...	91	6.5	.1	.34	.02	.3	.3	1.2	.2	2	0
JUNE											
05...	89	6.7	.1	.36	.01	.1	.2	1.3	.1	2	0
JULY											
03...	85	7.0	.2	.04	.01	.1	.2	1.4	.1	3	0
AUG.											
05...	84	7.2	.1	.40	.00	.2	.3	1.3	.2	2	0
29...	83	7.2	.0	.29	.05	.3	.3	1.3	.2	2	0

DATE	SULFATE (S04)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- TENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
NOV.											
02...	.8	2.9	.1	.3	17	19	6	4	16	5.3	15
DEC.											
01...	.4	2.1	.2	.5	15	15	2	0	13	5.7	5
JAN.											
02...	.4	2.3	.0	.7	15	20	6	4	15	5.5	10
FEB.											
02...	.4	2.2	.1	.0	13	17	2	0	13	5.3	3
29...	1.2	2.6	.1	.0	8	12	2	0	15	5.4	6
APR.											
02...	.4	2.4	.1	.0	12	15	2	0	13	5.6	5
MAY											
06...	1.6	2.2	.2	.1	14	17	2	0	15	5.2	5
JUNE											
05...	.4	2.5	.0	.7	13	13	1	0	13	5.6	4
JULY											
03...	.6	2.6	.0	.3	14	14	1	0	13	5.5	5
AUG.											
05...	.6	2.1	.0	.2	14	13	2	0	13	4.8	3
29...	.6	1.7	.0	.9	--	12	2	0	13	5.2	5

## PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

STATION 100					STATION 101				
DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
NOV 2, 1967	1110	154	11	4.6	MAY 6.....	0930	91	12	2.9
DEC 1.....	1015	117	4	1.3	JUN 5.....	0930	89	16	3.8
JAN 2, 1968	1115	142	10	3.8	JUL 3.....	0900	85	10	2.3
FEB 2.....	1030	107	8	2.3	AUG 5.....	1100	84	8	1.8
FRB 29.....	1000	132	32	11	AUG 29.....	1020	83	10	2.2
APR 2.....	1015	96	5	1.3					

## SAVANNAH RIVER HASIN

02197500 SAVANNAH RIVER AT BURTONS FERRY BRIDGE, NEAR MILLHAVEN, GA.

LOCATION.--Lat 32°56'20", long 81°30'10", Screven County, at gaging station on downstream side of left pier of drawspan of bridge on U.S. Highway 301, 2 miles downstream from Rocky Creek, 9 miles east of Millhaven, and at mile 129.2.

DRAINAGE AREA.--8,650 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.  
Water temperatures: January 1956 to September 1968.

EXTREMES.--1967-68:

Water temperatures: Maximum, 26.0°C on several days during August; minimum, 5.0°C Jan. 15-17.

Period of record:

Water temperatures: Maximum, 30.0°C Aug. 25, 1959; minimum, 4.0°C Feb. 19, 20, 1958.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MANGANESE (MN)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	AMMONIA NITROGEN (N)	SULFATE (SO <sub>4</sub> )
FEB. 20...	8.5	.40	<.05	3.7	1.4	7.6	1.0	.35	5.0
MAR. 19...	8.0	.90	<.05	2.9	1.0	8.0	1.7	.50	3.0
APR. 23...	13	.70	<.05	3.8	1.0	10	1.2	<.10	6.0
MAY 07...	10	1.0	.05	3.6	1.1	7.5	1.2	.30	<2.0
JUNE 18...	12	.50	.05	7.8	1.7	6.6	1.8	.20	2.0
JULY 16...	10	.95	.05	3.8	1.1	8.0	1.2	.10	2.0
AUG. 13...	10	.55	<.05	4.5	1.1	9.0	1.6	.10	2.0
SEPT. 10...	10	.38	.05	3.9	1.1	8.0	1.4	.10	2.0

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO <sub>4</sub> )	HARDNESS (CA, MG)	SPECTROPHOTOMETRIC CONDUCTANCE (MICRO-MHOS)	COLOR	TURBIDITY	BIOCHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
FEB. 20...	8.0	<.10	.17	14	73	45	14	--	430
MAR. 19...	6.0	.56	.25	16	72	95	24	1.3	430
APR. 23...	5.5	.40	.25	14	67	85	20	.9	430
MAY 07...	10	.33	.20	12	69	95	48	.9	2300
JUNE 18...	4.0	.16	.20	26	88	45	17	1.7	30
JULY 16...	4.5	.40	.17	12	64	65	24	.8	930
AUG. 13...	7.0	.32	.16	14	60	42	15	.6	230
SEPT. 10...	7.0	.37	.20	14	66	30	7.5	.8	36

DATE	TIME	DISCHARGE (CFS)	TEMPERATURE (DEG C)	ALKALINITY AS CaCO <sub>3</sub>	PH	DISSOLVED OXYGEN
FEB. 20...	0800	7930	8	21	7.2	12.5
MAR. 19...	0730	8270	12	29	7.1	9.6
APR. 23...	0630	9780	18	19	7.1	9.2
MAY 07...	0700	7950	--	11	7.1	9.6
JUNE 18...	0700	15500	22	34	7.1	5.9
JULY 16...	0700	7880	23	19	7.0	8.0
AUG. 13...	0700	7710	24	20	7.0	--
SEPT. 10...	0700	7530	22	34	7.1	8.3

## 02197500 SAVANNAH RIVER AT BURTONS FERRY BRIDGE, NEAR MILLHAVEN, GA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																																	AVER-	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE			
OCTOBER																																			
MAXIMUM	21	19	19	20	20	21	21	21	21	20	20	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	18	19			
MINIMUM	19	19	19	19	19	19	21	21	19	19	19	20	19	19	19	19	19	19	19	19	19	19	18	18	19	19	19	19	19	18	18	19			
NOVEMBER																																			
MAXIMUM	17	17	17	17	17	17	16	14	14	14	13	14	14	14	14	14	14	14	14	14	14	13	13	13	13	14	14	14	13	13	13	--	14		
MINIMUM	17	17	17	17	17	16	14	14	14	13	13	13	14	14	14	14	14	14	14	14	14	13	13	13	13	13	13	13	13	13	13	13	--	14	
DECEMBER																																			
MAXIMUM	13	13	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	11	10	10	10	10	10	--	12		
MINIMUM	13	13	13	13	13	12	12	12	12	12	12	12	12	12	12	11	11	12	12	12	12	12	12	12	12	11	10	10	10	10	10	9	--	12	
JANUARY																																			
MAXIMUM	10	10	10	10	10	10	9	9	9	9	8	8	8	7	6	6	5	5	5	6	6	6	7	7	7	7	8	8	7	7	7	8	--	7	
MINIMUM	10	10	10	10	10	10	9	9	9	8	8	8	8	7	6	6	5	5	5	6	6	6	7	7	7	7	8	7	7	7	7	7	--	7	
FEBRUARY																																			
MAXIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	8	8	8	9	9	--	8		
MINIMUM	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	8	8	8	8	9	--	8		
MARCH																																			
MAXIMUM	9	9	9	9	9	9	10	10	10	11	11	11	11	11	11	11	11	11	11	11	12	12	13	13	13	13	12	12	12	12	13	13	13	11	
MINIMUM	9	8	8	9	9	9	9	9	9	9	10	11	11	11	11	11	11	11	11	11	11	12	12	13	13	13	12	12	12	12	13	13	13	11	
APRIL																																			
MAXIMUM	14	14	15	15	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	17	17	17	18	18	17	17	18	17	17	--	16		
MINIMUM	13	14	14	15	15	16	15	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	17	17	17	17	17	17	17	17	17	--	16		
MAY																																			
MAXIMUM	17	17	17	18	18	18	18	18	18	18	18	18	19	19	19	20	20	20	20	20	20	20	20	20	20	20	20	20	19	19	19	19	19		
MINIMUM	17	17	17	17	17	17	18	18	18	18	18	18	18	18	18	19	19	19	20	20	20	20	20	20	20	20	20	20	19	19	19	19	19		
JUNE																																			
MAXIMUM	19	19	19	20	20	20	20	20	20	19	19	21	21	18	18	19	19	20	20	20	20	20	20	20	20	20	21	22	22	22	22	--	20		
MINIMUM	19	19	19	19	20	20	20	20	20	19	19	19	19	18	18	18	18	19	19	20	20	20	20	20	20	20	20	20	20	21	22	22	22	--	20
JULY																																			
MAXIMUM	23	23	23	23	23	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23	23	23	24	24	24	24	25	25	23		
MINIMUM	22	23	23	23	23	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	23		
AUGUST																																			
MAXIMUM	25	25	25	25	26	26	26	26	26	26	26	26	25	25	24	24	24	24	24	24	24	25	26	26	26	25	25	25	25	24	23	23	25		
MINIMUM	25	25	24	24	25	26	26	26	26	26	26	25	25	24	24	24	24	24	24	24	24	24	25	26	26	25	25	25	25	24	23	23	25		
SEPTEMBER																																			
MAXIMUM	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	--	23		
MINIMUM	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	--	23	

## 02198500 SAVANNAH RIVER NEAR CLYO, GA.

(International Hydrological Decade River Station)

LOCATION.--Lat 32°31'30", long 81°15'45", Effingham County, at gaging station on downstream side of center pier of drawspan of bridge on Seaboard Coast Line Railroad, 3 miles north of Clio and at mile 65.

DRAINAGE AREA.--9,850 sq mi.

PERIOD OF RECORD.--Chemical analyses: May 1938 to April 1939, October 1964 to September 1968.  
Water temperatures: May 1938 to April 1939.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO <sub>4</sub> )
FEB.									
15...	8.9	--	--	4.5	1.4	7.4	1.1	--	5.6
20...	9.0	.40	<.05	3.7	1.4	7.2	1.3	.25	6.0
MAR.									
16...	8.2	--	--	5.9	1.3	7.7	1.0	--	5.6
19...	8.0	1.1	<.05	4.4	1.1	7.0	1.7	.35	3.0
APR.									
15...	9.1	--	--	5.1	1.1	6.2	1.0	--	4.4
23...	13	.60	<.05	3.8	1.0	3.8	1.4	<.10	5.0
MAY									
07...	10	1.1	<.05	4.3	1.1	--	1.3	.20	3.0
20...	9.5	--	--	3.8	1.4	8.0	1.2	--	5.6
JUNE									
17...	10	--	--	3.4	1.0	5.2	1.2	--	4.0
18...	11	1.0	<.05	4.4	1.4	5.4	1.5	<.10	4.0
JULY									
12...	10	--	--	3.9	1.0	6.4	1.1	--	4.6
16...	11	.95	.05	4.3	1.2	6.8	1.3	.10	<2.0
AUG.									
13...	10	.55	<.05	4.4	1.1	7.5	1.8	<.10	<2.0
15...	10	--	--	4.1	1.1	6.7	1.2	--	3.6
SEPT.									
10...	11	.48	.07	3.9	1.1	7.7	1.4	<.10	<2.0
17...	10	--	--	3.9	1.0	7.6	1.0	--	4.2

## SAVANNAH RIVER BASIN

02198500 SAVANNAH RIVER NEAR CLYO, GA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, OCTOBER 1967 TO SEPTEMBER 1968

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO4)	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	COLOR	TURBIDITY	BIO-CHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
FEB.									
15...	6.5	--	--	16	68	5	--	--	--
20...	8.0	<.10	.30	15	70	45	21	1.1	430
MAR.									
18...	6.8	--	--	20	73	20	--	--	--
19...	6.0	.23	.27	18	72	105	29	1.0	2300
APR.									
15...	5.4	--	--	18	66	10	--	--	--
23...	5.5	.50	.20	--	62	70	20	.6	150
MAY									
07...	--	.39	.30	14	69	110	37	.8	430
20...	6.2	--	--	16	69	10	--	--	--
JUNE									
17...	4.2	--	--	13	53	5	--	--	--
18...	5.0	.33	.20	24	57	70	24	.6	930
JULY									
12...	5.6	--	--	14	60	5	--	--	--
16...	4.5	.40	.35	14	68	50	33	.9	230
AUG.									
13...	7.0	.39	.20	12	62	30	21	.8	150
15...	6.0	--	--	14	63	10	--	--	--
SEPT.									
10...	7.5	.42	.20	14	67	30	11	.8	36
17...	6.2	--	--	14	63	10	--	--	--

DATE	TIME	DISCHARGE (CFS)	TEMPERATURE (DEG C)	ALKALINITY AS CaCO3	PH	DISSOLVED OXYGEN
FEB.						
20...	1040	8880	8	17	7.0	10.7
MAR.						
19...	1030	9000	12	19	7.0	10.0
APR.						
23...	0930	11600	18	20	7.1	9.3
MAY						
07...	1030	9140	19	20	7.0	7.4
JUNE						
18...	1030	15300	22	18	6.9	8.1
JULY						
16...	0930	9740	23	20	7.1	9.3
AUG.						
13...	1030	9340	24	20	7.2	9.5
SEPT.						
10...	1030	7820	24	20	7.0	8.5

## OGEECHEE RIVER BASIN

02202500 OGEECHEE RIVER NEAR EDEN, GA.

LOCATION.--Lat 32°10', long 81°25', Effingham County, at gaging station on right bank 600 ft downstream from bridge on U.S. Highways 25, 80, and 280, 2 miles west of Eden, 2 miles upstream from Seaboard Coast Line Railroad bridge, and 3 miles upstream from Black Creek.

DRAINAGE AREA.--2,650 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN-GANESE (MN)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	AMMONIA NITROGEN (N)	SULFATE (SC4)
FEB.									
20...	9.5	.37	<.05	5.2	.7	2.7	.6	.35	2.0
MAR.									
15...	5.5	.40	<.05	5.6	.9	3.0	1.0	.40	2.0
APR.									
23...	12	.85	<.05	9.9	1.0	5.0	.8	.20	2.0
MAY									
07...	8.8	.90	.05	9.6	1.2	7.0	1.7	.10	<2.0
JUNE									
18...	12	1.1	<.05	7.2	1.0	3.6	.7	<.20	2.0
JULY									
16...	12	.55	<.05	7.6	.8	5.0	.7	.15	7.0
AUG.									
13...	12	.58	.05	11	.9	11	1.0	.20	2.0
SEPT.									
10...	10	.22	.05	11	1.0	13	1.1	.10	2.0

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO4)	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	COLOR	TURBIDITY	BIO-CHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
FEB.									
20...	8.0	<.10	.04	17	56	40	8	.3	<30
MAR.									
19...	7.0	.10	.05	16	69	55	12	1.1	<30
APR.									
23...	6.0	.12	.10	24	80	70	10	.9	36
MAY									
07...	7.0	<.02	.10	26	86	55	32	.3	<30
JUNE									
18...	4.0	.14	.15	22	65	70	17	.2	30
JULY									
16...	4.5	.09	.15	18	68	65	20	1.0	<30
AUG.									
13...	--	.09	.10	28	125	42	6.0	.3	91
SEPT.									
10...	7.5	.07	.10	46	117	15	1.5	.3	150

## OGEECHEE RIVER BASIN

87

02202500 OGECHIEE RIVER NEAR EDEN, GA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CACD3	PH	DIS- SOLVED OXYGEN
FEB. 20...	1300	1440	7	16	6.9	12.4
MAR. 19...	1230	1430	14	22	7.2	--
APR. 23...	1230	1000	22	28	7.2	9.1
MAY 07...	1330	722	21	40	7.6	--
JUNE 18...	1200	1090	26	43	7.3	8.6
JULY 16...	1330	779	28	20	7.3	--
AUG. 13...	1230	515	29	40	7.6	--
SEPT. 10...	1300	363	27	49	7.7	--

02203000 CANOOCHEE RIVER NEAR CLAXTON, GA.

LOCATION.--Lat 32°11'05", long 81°53'25", Evans County, at gaging station on right bank 400 ft upstream from bridge on State Highway 73, 2 miles northeast of Claxton, and 10 miles upstream from Lotts Creek.

DRAINAGE AREA.--555 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MNI)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB. 20...	9.5	.30	<.05	1.0	.7	11	.7	.60	<2.0
MAR. 19...	6.5	.50	<.05	1.1	.7	11	1.0	.70	<2.0
APR. 23...	9.5	.75	<.05	1.8	.8	14	1.5	.70	4.0
MAY 07...	8.0	1.0	.05	1.8	.8	18	1.3	.40	<2.0
JUNE 18...	9.0	.90	<.05	1.8	1.0	18	1.3	.70	2.0
JULY 16...	9.7	1.4	.05	1.7	.9	11	1.0	1.1	--
AUG. 13...	9.8	1.2	<.05	2.0	.9	14	1.4	1.4	<2.0
SEPT. 10...	12	1.5	<.05	2.4	1.0	20	1.8	.65	<2.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 20...	13	<.10	.09	6	68	--	14	.5	91
MAR. 19...	13	.11	.07	12	67	130	24	1.1	<30
APR. 23...	21	.26	.60	10	110	180	30	1.4	36
MAY 07...	20	.12	.50	6	101	220	48	1.0	36
JUNE 18...	18	.25	.30	16	103	230	39	.7	91
JULY 16...	10	.26	.15	6	70	233	50	1.0	230
AUG. 13...	12	.02	.23	8	65	205	39	1.0	4300
SEPT. 10...	20	.30	1.1	10	106	260	4.0	1.2	930

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CACD3	PH	DIS- SOLVED OXYGEN
FEB. 20...	1420	84	7	14	6.8	12.2
MAR. 19...	1415	231	14	11	6.9	11.1
APR. 23...	1400	25	23	25	6.8	5.9
MAY 07...	1330	22	20	22	7.0	7.4
JUNE 18...	1400	45	26	20	6.8	6.6
JULY 16...	1500	149	27	9	6.4	7.4
AUG. 13...	1430	92	27	9	6.6	--
SEPT. 10...	1515	7.1	27	23	7.0	7.1

## ALTAHAMA RIVER BASIN

02212600 FALLING CREEK NEAR JULIETTE, GA.  
(Hydrologic bench-mark station)

LOCATION.--Lat 33°06', long 83°43', Jones County, at gaging station on left bank 100 ft upstream from highway bridge, 4 miles above Caney Creek, and 5.1 miles east of Juliette.

DRAINAGE AREA.--72.2 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968,  
Water temperatures: August 1965 to September 1968.

EXTREMES.--1967-68:

Water temperatures: Maximum, 28.0°C Aug. 23; minimum, 2.0°C in January and (or) February.

Period of record:

Water temperatures: Maximum, 31.0°C July 28, 1966; minimum, 2.0°C in January and (or) February 1968.

REMARKS.--Recorder stopped Jan. 15 to Feb. 19, Sept. 20-30; range in temperature Jan. 15 to Feb. 19, 2.0°C to 11.0°C and for Sept. 20-30, 23.0°C to 28.0°C.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SILICA (SI02)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	SULFATE (SO4)	CHLO- RIDE (CL)	PHOS- PHATE (PC4)	TOTAL RESI- DUE
OCT. 04...	21	12	5.8	8.3	1.6	.8	4.0	.03	88
NOV. 09...	18	12	5.4	7.6	2.0	4.0	4.5	.06	84
DEC. 21...	16	8.1	4.4	5.8	1.3	3.2	3.0	.03	74
JAN. 26...	--	--	--	--	--	--	--	--	--
MAR. 12...	13	8.0	4.1	5.0	1.0	5.6	4.0	.00	--
JUNE 12...	18	13	6.1	7.2	1.1	.2	3.0	.00	--
JULY 30...	20	12	5.8	7.4	1.6	.0	3.0	.03	--
AUG. 20...	20	13	6.0	8.7	1.8	.0	4.0	.05	--
SEPT. 25...	19	13	6.0	10	2.0	.4	4.0	.00	--

DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG)	ALKA- LINITY AS CAC03	SPECI- FIC COND- UCTANCE (MICRO- MH0S)	PH	COLOR	BIO- CHEM- ICAL OXYGEN DEMAND
OCT. 04...	88	93	54	64	139	7.0	5	1.6
NOV. 09...	84	88	52	57	133	7.1	20	1.4
DEC. 21...	74	68	38	42	105	6.4	15	--
JAN. 26...	--	--	--	--	--	--	--	1.9
MAR. 12...	72	66	37	41	95	6.8	50	1.8
JUNE 12...	84	91	58	67	138	7.3	15	.7
JULY 30...	--	89	54	64	135	6.5	5	.5
AUG. 20...	--	95	57	67	142	6.8	5	.5
SEPT. 25...	--	97	57	68	149	6.8	5	.4

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINITY AS CAC03	PH	DIS- SOLVED OXYGEN
OCT. 04...	1130	5.4	14	64	7.0	--
NOV. 09...	0920	14	5	57	7.1	13.8
DEC. 21...	0930	53	14	42	6.4	12.1
JAN. 26...	1000	261	3	--	--	12.4
MAR. 12...	1030	232	13	41	6.8	--
JUNE 12...	1345	15	24	67	7.3	9.0
JULY 30...	0930	3.0	22	64	6.5	8.7
AUG. 20...	0945	2.3	24	67	6.8	8.5
SEPT. 25...	0900	25	17	68	6.8	9.4

# ALTAMAHA RIVER BASIN

89

## 02212600 FALLING CREEK NEAR JULIETTE, GA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															AVER-		
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	14	15	16	16	17	17	17	18	18	18	17	15	15	16	17	17	16	14	13	13	13	14	16	17	14	12	12	12	12	13	15			
MINIMUM	12	12	13	14	14	14	16	17	18	17	14	13	12	13	14	16	14	12	10	10	11	12	15	12	11	11	9	10	12					
NOVEMBER																																		
MAXIMUM	14	15	14	13	11	8	7	7	7	7	8	10	10	11	11	9	8	9	8	7	7	7	9	10	12	12	11	11	9	9	--			
MINIMUM	13	14	12	11	8	7	5	4	4	4	6	7	8	9	9	7	6	7	6	7	7	7	9	10	12	11	11	8	7	7	--			
DECEMBER																																		
MAXIMUM	8	9	9	9	7	9	10	11	12	14	14	14	12	11	13	13	12	14	16	16	16	14	9	8	8	8	8	8	7	7	11			
MINIMUM	7	7	9	7	6	6	8	9	11	12	14	12	10	9	11	12	11	12	14	15	16	13	9	7	7	7	6	5	7	6	5	9		
JANUARY																																		
MAXIMUM	7	7	8	9	9	7	7	6	5	5	5	4	4	4	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	7	7	7	8	7	6	6	5	4	4	5	4	3	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEBRUARY																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	7	6	5	7	7	7	8	8	7	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	5	3	4	4	4	5	6	6	6	--	--	
MARCH																																		
MAXIMUM	7	7	9	8	8	9	11	11	12	14	13	14	9	11	11	12	13	13	14	16	17	17	15	12	12	13	14	15	15	16	17	12		
MINIMUM	5	4	7	5	5	7	7	7	9	10	12	12	6	8	8	11	11	11	11	12	13	14	12	10	9	10	11	12	13	14	15	10		
APRIL																																		
MAXIMUM	17	17	15	16	16	17	16	17	18	18	16	16	16	16	16	17	17	17	18	18	19	19	19	18	17	16	16	16	16	--				
MINIMUM	16	15	14	13	16	15	16	14	16	17	15	14	14	15	16	15	14	16	17	18	18	17	17	15	14	14	16	16	15	--				
MAY																																		
MAXIMUM	16	17	17	17	17	17	16	16	16	16	16	17	19	19	19	19	19	19	19	20	20	18	17	18	19	20	20	21	21	19	18	19	18	
MINIMUM	16	16	16	16	16	14	14	16	16	16	16	17	18	19	19	19	19	19	19	18	17	16	16	17	19	19	19	19	17	17	17	17	17	
JUNE																																		
MAXIMUM	19	21	21	21	21	21	19	19	21	22	22	22	22	21	21	21	21	22	24	24	26	26	26	26	26	26	26	25	23	23	24	--		
MINIMUM	18	19	19	20	20	19	18	18	19	20	21	21	20	19	18	19	21	21	21	23	22	23	25	24	24	24	24	23	19	19	20	--		
JULY																																		
MAXIMUM	26	26	26	24	24	24	24	24	24	24	23	23	23	24	24	24	24	24	24	25	24	24	25	24	24	25	26	26	26	25	26	25	26	
MINIMUM	22	23	23	23	23	23	22	22	22	22	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	24	24	23	23	
AUGUST																																		
MAXIMUM	25	26	25	26	26	26	26	26	26	24	24	24	24	23	24	24	25	24	26	27	27	27	27	27	28	27	26	26	24	23	22	21	20	
MINIMUM	23	23	23	23	23	23	23	24	24	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24	24	23	23	21	22	18	18	19	
SEPTEMBER																																		
MAXIMUM	19	21	22	22	23	24	23	22	24	23	22	21	21	21	20	20	21	21	27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	19	18	19	20	21	22	20	20	21	20	19	19	17	17	17	18	20	21	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## 02213000 OCMULGEE RIVER AT MACON, GA.

LOCATION.--lat 32°50'19", long 83°37'14". Bibb County, at gaging station at downstream end of center pier of Fifth Street Bridge in Macon, 1.5 miles upstream from Walnut Creek and at mile 205.0.

DRAINAGE AREA.--2,240 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

### CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
MAR. 12...	12	2.8	<.05	3.8	1.2	4.2	1.8	.10	<2.0
APR. 10...	11	1.8	.10	3.7	1.1	6.0	1.8	<.10	2.0
JUNE 12...	7.0	.75	.05	4.5	1.4	5.5	2.1	.10	2.0
JULY 17...	12	.80	.06	4.3	1.7	6.8	2.1	<.10	3.0
AUG. 13...	10	.48	.05	5.0	1.6	10	3.4	<.10	4.0
SEPT. 30...	9.8	--	--	5.9	1.7	9.4	2.7	--	4.0
DATE	CHLD- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARO- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
MAR. 12...	5.0	.75	.10	16	59	320	144	2.4	4300
APR. 10...	4.0	.50	.20	12	49	160	60	.7	230
JUNE 12...	3.6	.62	.20	18	60	45	24	.7	150
JULY 17...	4.0	.54	.20	18	68	30	20	1.3	930
AUG. 13...	6.5	.60	.28	16	74	30	13	.8	4300
SEPT. 30...	7.5	--	--	22	93	5	--	--	--
DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINIT- Y AS CAC03	PH	DIS- SOLVED OXYGEN			
MAR. 12...	1240	6450	12	16	6.5	8.3			
APR. 10...	0900	3770	17	11	6.0	9.4			
JUNE 12...	1235	2920	24	18	6.8	--			
JULY 17...	1530	1680	28	22	7.3	--			
AUG. 13...	0900	1060	26	21	7.1	--			
SEPT. 30...	1600	746	--	26	6.5	--			

## ALTAMAHA RIVER BASIN

## 02215500 OCMULGEE RIVER AT LUMBER CITY, GA.

LOCATION.--Lat 31°55', long 82°40', Telfair County, at gaging station near left bank on downstream end of pier of bridge on U.S. Highway 341 at Lumber City, 500 ft downstream from Southern Railway bridge, 1 mile upstream from Little Ocmulgee River, and 12 miles upstream from confluence with Oconee River.

DRAINAGE AREA.--5,180 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968									
DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB. 19...	11	.50	<.05	7.5	1.8	4.7	.8	.60	2.0
MAR. 18...	10	1.3	<.05	7.0	1.3	5.8	1.4	.10	4.0
APR. 22...	10	1.0	<.05	8.2	1.5	5.0	1.6	<.10	<2.0
MAY 06...	6.0	1.0	.05	8.6	1.5	7.0	1.2	.10	2.0
JUNE 17...	12	1.1	.05	6.5	1.6	--	2.0	.10	5.0
JULY 15...	7.5	1.3	.09	10	1.5	6.4	1.5	.10	5.0
AUG. 12...	10	.55	<.10	12	1.6	8.8	2.6	.10	3.0
SEPT. 09...	11	.38	.11	15	1.7	9.2	2.1	.90	6.0
DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA, MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 19...	7.0	.40	.25	28	90	55	17	1.8	930
MAR. 18...	5.0	.40	.35	24	78	130	34	1.3	<30
APR. 22...	4.5	.50	.10	26	76	80	25	1.1	36
MAY 06...	5.0	.14	.30	30	81	20	45	1.4	36
JUNE 17...	4.5	.32	.25	22	84	70	34	.4	430
JULY 15...	4.0	.36	.20	28	94	70	33	1.2	230
AUG. 12...	5.5	.20	.15	34	96	25	24	1.7	9300
SEPT. 09...	6.0	.21	.13	42	145	15	24	1.9	36

## 02217500 MIDDLE OCONEE RIVER NEAR ATHENS, GA.

LOCATION.--Lat 33°57'00", long 83°25'40", Clarke County, at gaging station on left bank 0.5 mile upstream from U.S. Highway 29, 2 miles west of Athens, and 5 miles upstream from Barber Creek.

DRAINAGE AREA.--398 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968									
DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB. 27...	14	.45	<.05	2.3	1.0	3.7	1.0	.13	<2.0
MAR. 27...	11	.80	.05	3.0	1.1	2.9	1.2	.10	3.0
APR. 29...	14	1.2	.05	--	1.0	3.3	1.2	<.10	<2.0
MAY 15...	13	2.9	.09	3.0	.8	2.7	1.8	<.10	<2.0
JUNE 11...	8.7	1.7	.05	2.9	1.1	--	1.6	.60	<2.0
JULY 23...	16	1.3	.06	2.2	.8	--	1.6	--	<2.0
AUG. 27...	15	1.4	<.05	3.7	1.5	5.0	2.2	.10	<2.0



ALTAMAHA RIVER BASIN

91

02217500 MIDDLE OCONEE RIVER NEAR ATHENS, GA.--Continued  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PD4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 27...	4.0	.50	.25	12	45	25	20	1.3	230
MAR. 27...	2.5	.48	<.10	12	39	15	21	1.6	4300
APR. 29...	2.7	.70	.10	12	42	70	35	1.8	4600
MAY 15...	3.0	.80	.20	12	45	80	105	3.4	4300
JUNE 11...	2.1	.56	.25	16	52	70	43	1.4	750
JULY 23...	2.0	.68	1.6	10	70	55	23	1.1	2300
AUG. 27...	.5	.98	.15	22	68	34	33	1.6	210

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINITY AS CACO3	PH	DIS- SOLVED OXYGEN
FEB. 27...	1415	488	8	16	--	11.5
MAR. 27...	0900	631	11	18	7.2	11.8
APR. 29...	1900	610	15	18	7.1	9.8
MAY 15...	1645	642	19	17	6.3	8.8
JUNE 11...	0600	505	25	18	7.3	8.2
JULY 23...	1630	202	27	25	7.0	8.8
AUG. 27...	0830	435	22	20	6.7	8.2

02223000 OCONEE RIVER AT MILLEDGEVILLE, GA.

LOCATION.--Lat 33°05', long 83°13', Baldwin County, at gaging station on right bank at city of Milledgeville Water Works intake structure, at Milledgeville, 0.5 mile upstream from bridge on State Highway 24, 3.8 miles downstream from Sinclair Dam of Georgia Power Co., and at mile 145.2.

DRAINAGE AREA.--2,950 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	SILICA (SIO2)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
MAR. 12...	14	.76	<.05	3.5	1.0	3.8	1.6	<.10	<2.0
JUNE 12...	9.0	.60	.30	4.3	1.6	5.0	1.7	.30	2.0
JULY 17...	15	.70	1.2	4.2	1.9	4.8	1.6	.10	3.0
AUG. 14...	15	2.0	.15	4.5	1.6	4.5	2.6	.12	2.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PD4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
MAR. 12...	4.0	.30	.10	12	51	105	21	.4	<30
JUNE 12...	2.1	.32	.10	20	56	45	24	.2	930
JULY 17...	3.0	.12	.15	20	64	35	19	.4	36
AUG. 14...	4.0	.19	.15	16	63	130	63	1.0	930

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINITY AS CACO3	PH	DIS- SOLVED OXYGEN
MAR. 12...	1315	6030	9	16	6.4	10.7
JUNE 12...	1100	590	22	21	6.7	6.6
JULY 17...	1010	360	26	23	6.5	6.4
AUG. 14...	1100	340	27	26	6.6	8.0

## ALTAMAHA RIVER BASIN

## 02223500 OCONEE RIVER AT DUBLIN, GA.

LOCATION.--Lat 32°32', long 82°54', Laurens County, at gaging station near left bank on downstream end of pier of bridge on U.S. Highway 80 at Dublin, and at mile 77.9.

DRAINAGE AREA.--4,400 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968									
DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB. 19...	12	.75	.10	6.3	1.8	3.8	1.3	.60	2.0
MAR. 18...	12	.90	.06	3.8	1.1	4.0	1.4	<.10	7.0
APR. 22...	17	.95	.12	6.8	1.6	12	2.9	.20	2.0
MAY 06...	8.8	1.3	.05	6.0	1.5	5.5	1.5	.30	4.0
JUNE 17...	14	.85	<.05	5.0	1.7	3.6	1.8	<.10	5.0
JULY 15...	11	1.4	.06	5.2	1.6	5.4	1.5	.10	3.0
AUG. 12...	14	.72	.05	7.2	1.7	8.8	2.2	.10	5.0
SEPT. 09...	17	.64	.05	10	2.0	11	2.9	.10	13
DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 19...	6.0	.40	.80	28	75	--	45	2.7	93000
MAR. 18...	4.5	.34	.27	14	54	80	33	3.8	150000
APR. 22...	5.5	.40	.70	20	94	100	35	3.1	21000
MAY 06...	4.8	.28	.30	28	60	55	40	1.3	93000
JUNE 17...	3.5	.38	.25	18	68	55	24	.7	43000
JULY 15...	4.0	.28	.15	18	69	70	34	1.8	93000
AUG. 12...	4.5	.32	.18	18	77	45	29	1.1	230000
SEPT. 09...	8.0	.25	.88	36	142	15	62	5.1	4600000
DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKAL- INITY AS CAC03	PH	DISS- OLVED OXYGEN			
FEB. 19...	1245	1620	7	25	7.0	11.1			
MAR. 18...	0945	9840	12	19	7.1	10.6			
APR. 22...	0945	2480	20	40	8.9	8.6			
MAY 06...	0930	2940	18	22	7.2	9.6			
JUNE 17...	0945	2360	25	24	7.2	9.0			
JULY 15...	0930	4290	26	23	7.2	9.3			
AUG. 12...	2200	1070	27	27	7.4	8.9			
SEPT. 09...	1030	517	26	36	7.4	8.3			

## 02225500 OHOOPEE RIVER NEAR REIDSVILLE, GA.

LOCATION.--Lat 32°04', long 82°11', Tattnall County, at gaging station on downstream side of pier near center of span of bridge on State Highway 56, 0.5 mile downstream from Brazells Creek, 1.5 miles downstream from Rocky Creek, 3.5 miles west of Reidsville, 6 miles downstream from Pendleton Creek, and 14 miles upstream from mouth.

DRAINAGE AREA.--1,110 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968									
DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB. 20...	11	.35	<.05	3.0	.6	3.1	.6	.45	2.0
MAR. 19...	9.0	.40	<.05	2.9	.7	4.0	.8	.65	2.0
APR. 23...	13	.65	<.05	7.0	.8	4.5	1.1	.40	2.0
MAY 07...	10	.90	<.05	8.6	.8	3.0	1.8	.20	<2.0
JUNE 18...	12	.65	.05	5.1	.8	6.6	1.8	.20	2.0
JULY 16...	11	1.2	.25	3.4	.8	4.5	.8	.90	4.0
AUG. 13...	9.2	1.0	.05	3.4	.5	2.2	.5	1.0	<2.0
SEPT. 10...	8.5	.18	<.05	3.6	.6	2.4	.7	.45	<2.0

ALTAMAHA RIVER BASIN

93

02225500 OHOOPEE RIVER NEAR REIDSVILLE, GA.--Continued  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO4)	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	COLOR	TURBIDITY	BIOCHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
FEB. 20...	8.0	<.02	.04	12	43	50	12	1.0	36
MAR. 19...	8.0	.10	.10	14	50	90	15	1.2	91
APR. 23...	6.0	.10	.05	20	66	70	10	.9	36
MAY 07...	7.0	<.02	<.10	22	67	70	24	.8	230
JUNE 18...	5.0	.12	.15	18	51	70	14	--	91
JULY 16...	6.0	.17	.15	10	49	133	36	1.0	210
AUG. 13...	4.5	.12	.09	10	35	95	19	.6	930
SEPT. 10...	5.5	.10	<.10	10	40	70	3.0	.7	36

DATE	TIME	DISCHARGE (CFS)	TEMPERATURE (DEG C)	ALKALINITY AS CaCO3	PH
FEB. 20...	1540	376	8	5	6.7
MAR. 19...	1530	532	14	9	6.8
APR. 23...	1615	112	24	21	7.2
MAY 07...	1530	63	21	24	7.4
JUNE 18...	1530	130	27	16	7.0
JULY 16...	1630	640	27	7	6.0
AUG. 13...	1630	64	28	9	6.7
SEPT. 10...	1700	69	27	9	6.9

02226000 ALTAMAHA RIVER AT DOCTORSTOWN, GA.

LOCATION.--Lat 31°39', long 81°50', Wayne County, at gaging station on right bank 60 ft downstream from Seaboard Coast Line Railroad bridge at Doctortown, 4.5 miles northeast of Jesup, and at mile 59.4.

DRAINAGE AREA.--13,600 sq mi.

PERIOD OF RECORD.--Chemical analyses: September 1967 to September 1968.

Water temperatures: November 1967 to September 1968.

EXTREMES.--November 1967 to September 1968:

Water temperatures: Maximum, 33.0°C Aug. 22-26; minimum, 6.0°C several days in January.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, SEPTEMBER 1967

DATE	SILICA (SiO2)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	SULFATE (SO4)	CHLORIDE (CL)
SEPT. 17...	13	11	1.7	10	1.7	8.8	8.0
27...	13	10	1.8	16	2.3	11	12

DATE	PHOSPHATE (PO4)	DISSOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA, MG)	ALKALINITY AS CaCO3	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH	COLOR
SEPT. 17...	.02	80	34	40	124	6.7	25
27...	--	92	32	43	155	6.7	20

DATE	TIME	DISCHARGE (CFS)	TEMPERATURE (DEG C)	ALKALINITY AS CaCO3	PH
SEPT. 17...	1800	6890	25	40	6.7
27...	1545	4700	25	43	6.7

## ALTAHAHA RIVER BASIN

02226000 ALTAHAHA RIVER AT DOCTORTOWN, GA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	CHARGE (CFS)	TEM- PERA- TURE (DEG C)	ALKA- LITY AS CAC03	PH	DIS- SOLVED OXYGEN					
OCT.											
25...	0715	4060	19	--	--	--					
NOV.											
27...	1210	4840	18	--	--	--					
JAN.											
23...	1230	23300	4	--	--	--					
30...	1000	21100	8	--	--	--					
FEB.											
21...	0805	10400	8	26	7.8	12.2					
26...	1520	8460	8	--	--	--					
MAR.											
20...	0800	12400	14	23	7.8	--					
27...	1405	19600	15	--	--	--					
APR.											
24...	1500	9080	--	29	7.4	--					
25...	1000	8620	22	--	--	--					
MAY											
08...	0800	8480	--	31	7.9	7.7					
27...	1025	8170	26	--	--	--					
JUNE											
19...	0800	8340	27	30	7.6	8.5					
24...	1100	5740	--	--	--	--					
JULY											
17...	0800	8300	29	29	7.4	8.0					
25...	1000	7100	29	--	--	--					
AUG.											
14...	0800	5560	29	36	7.8	--					
26...	1030	3670	--	--	--	--					
SEPT.											
11...	--	2990	28	64	9.3	7.5					
24...	1130	2300	27	--	--	--					

DATE	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESID- UE AT 180 C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA, MG)	ALKA- LITY AS CAC03	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
OCT.											
25...	.12	90	93	34	43	152	6.7	40	--	--	--
NOV.											
27...	.15	66	71	29	33	108	6.8	10	--	--	--
JAN.											
23...	.06	62	50	15	15	72	6.8	60	--	--	--
30...	1.1	66	53	17	19	79	7.0	50	--	--	--
FEB.											
21...	.17	--	--	23	--	89	--	80	29	1.2	2300
26...	.09	74	66	25	26	103	6.9	--	--	--	--
MAR.											
20...	.20	--	--	20	--	84	--	190	33	1.2	91
27...	.04	65	52	17	19	82	6.4	30	--	--	--
APR.											
24...	.30	--	--	24	--	102	--	85	40	1.9	430
25...	.05	81	73	28	33	115	6.9	50	--	--	--
MAY											
08...	.30	--	--	22	--	93	--	80	36	2.5	73
27...	.07	69	69	24	29	112	6.6	15	--	--	--
JUNE											
19...	.20	--	--	24	--	97	--	70	32	.6	36
24...	.16	99	97	34	49	158	6.8	0	--	--	--
JULY											
17...	.25	--	--	28	--	112	--	65	37	2.1	230
25...	.02	82	80	26	34	125	6.6	30	--	--	--
AUG.											
14...	.29	--	--	--	--	130	--	45	56	2.0	<10
26...	.07	116	105	42	54	187	6.8	15	--	--	--
SEPT.											
11...	.20	--	--	44	--	224	--	55	17	4.0	<30
24...	.13	179	170	52	75	279	7.2	40	--	--	--



## SATILLA RIVER BASIN

02226500 SATILLA RIVER NEAR WAYCROSS, GA.

LOCATION.--Lat 31°14', long 82°19', Ware County, at gaging station on downstream end of pier near center of span of bridge on State Highway 38, 3 miles northeast of Waycross, and 16 miles upstream from Alabama River.

DRAINAGE AREA.--1,200 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO <sub>4</sub> )
FEB. 21...	7.0	0.30	0.05	1.4	1.5	7.0	1.4	0.60	5.0
MAR. 20...	7.0	.60	.06	1.2	.8	4.0	1.3	1.2	3.0
APR. 24...	9.0	.75	.05	1.4	.8	5.0	.9	.60	4.0
MAY 08...	6.2	.80	.05	2.0	1.1	7.7	1.3	.60	2.0
JUNE 19...	8.2	1.0	.05	1.7	1.1	5.2	1.0	1.1	2.0
JULY 17...	8.5	1.4	.06	1.9	1.0	7.3	1.4	1.5	2.0
AUG. 14...	8.0	1.0	.05	2.0	.9	--	1.5	.83	2.0
SEPT. 11...	8.0	1.1	.05	2.4	1.1	7.0	1.3	.70	2.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO <sub>4</sub> )	HARD- NESS (CA,MG)	SPEC- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 21...	15	0.10	0.07	13	59	90	15	0.7	30
MAR. 20...	8.0	.16	.10	14	51	187	34	1.0	30
APR. 24...	10	.21	.25	8	50	95	30	1.5	36
MAY 08...	16	.10	.40	24	61	120	26	.9	230
JUNE 19...	8.0	.27	.10	10	47	155	33	.7	30
JULY 17...	10	.26	.20	12	35	155	42	2.6	91
AUG. 14...	10	.15	.13	8	49	140	32	.7	91
SEPT. 11...	11	.19	.25	14	56	155	12	1.0	930

DATE	TIME	DIS- CHARGE (CFS)	TEM- PERA- TURE (DEG C)	ALKA- LINITTY AS CACO <sub>3</sub>	PH	DIS- SOLVED OXYGEN
FEB. 21...	1230	82	11	7	6.4	11.5
MAR. 20...	1215	1570	16	1	4.9	--
APR. 24...	1330	44	25	7	6.2	7.9
MAY 08...	1330	100	21	6	6.3	9.0
JUNE 19...	1230	150	27	4	5.7	6.6
JULY 17...	1430	431	29	5	5.6	7.2
AUG. 14...	1230	215	27	5	6.0	8.3
SEPT. 11...	1330	136	27	6	6.1	7.5

02228000 SATILLA RIVER AT ATKINSON, GA.

LOCATION.--Lat 31°13', long 81°52', Brantley County, at gaging station on left bank 25 ft upstream from bridge on U.S. Highway 84, 400 ft downstream from Seaboard Coast Line Railroad bridge, and 1 mile west of Atkinson.

DRAINAGE AREA.--2,790 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO <sub>4</sub> )
FEB. 21...	8.5	.27	<.05	1.7	1.2	6.2	1.5	.70	<2.0
MAR. 20...	7.0	.60	.08	1.1	.8	3.0	1.4	1.0	2.0
APR. 24...	8.5	.60	<.05	2.4	1.0	5.0	.8	.60	5.0
MAY 08...	5.5	.70	<.05	2.0	1.3	7.0	1.3	.40	<2.0
JUNE 19...	8.7	1.3	.05	1.6	1.1	3.7	1.0	1.3	<2.0
JULY 17...	7.7	1.1	.05	2.0	1.1	6.0	.9	1.9	<2.0
AUG. 14...	7.3	.88	.05	1.9	1.0	8.5	1.4	.70	3.0
SEPT. 11...	7.8	.96	<.05	1.9	1.0	7.5	1.1	.80	<2.0

## 97

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO4)	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR	TURBIDITY	BIOCHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
FEB. 21...	13	.40	.32	16	54	130	20	1.0	230
MAR. 20...	9.0	.16	.10	14	52	190	43	1.7	36
APR. 24...	11	.19	.50	10	59	130	30	1.5	<30
MAY 08...	13	.10	.50	10	57	125	32	1.8	36
JUNE 19...	9.0	.20	.10	10	50	290	50	--	430
JULY 17...	7.5	.26	.25	12	51	190	40	1.4	<30
AUG. 14...	11	.16	.31	8	57	150	32	.9	36
SEPT. 11...	11	.22	.35	10	51	155	6.0	1.3	<30

DATE	TIME	DIS-CHARGE (CFS)	TEMP-ERATURE (DEG C)	ALKALINITY AS CaCO3	PH	DIS-SOLVED OXYGEN
FEB.						
21...	1030	320	10	6	6.4	10.4
MAR.						
20...	1000	2570	16	<1	4.7	--
APR.						
24...	1030	163	25	8	--	8.6
MAY						
08...	1030	168	22	9	6.7	9.4
JUNE						
19...	1030	1900	27	2	4.7	5.9
JULY						
17...	1030	788	29	4	5.4	7.5
AUG.						
14...	1030	462	29	5	6.1	--
SEPT.						
11...	1115	396	28	5	6.0	7.7

02231000 ST. MARYS RIVER NEAR MACCLENNY, FLA.

DRAINAGE AREA.--700 sq mi, approximately (includes part of watershed in Okefenokee Swamp, which is indeterminate).

PERIOD OF RECORD.--Chemical analyses: March 1965 to September 1968.

Water temperatures: March 1965 to September 1968.

**EXTREMES.--1967-68:**

Specific conductance: Maximum daily, 94 micromhos Nov. 28, 29; minimum daily, 27 micromhos Sept. 2.

pH: Maximum daily, 7.5 Dec. 8; minimum daily, 4.5 July 29.

Color: Maximum daily, 320 units on June 18, Sept. 16; minimum daily, 50 units several days during November and December.

Water temperatures: Maximum daily, 29.0°C June 29, July 1, 3; minimum daily, 6.0°C Jan. 17, 19-21.

Period of record:

Specific conductance: Maximum daily, 94 micromhos June 21, Nov. 28, 29, 1967; minimum daily, 26 micromhos Mar. 15, July 2, 1966.

pH (August 1965 to September 1968): Maximum daily, 7.8 Nov. 1, 1966; minimum daily, 4.2 Sept. 4, 21, 1967.

Color (July 1965 to September 1968): Maximum daily, 400 units several days during July, August 1965 and April 1966; minimum daily, 50 units several days during May, June, November and December 1967.

Water temperatures: Maximum, 31.0°C July 28, 1966; minimum, 6.0°C Jan. 21, 1966, Jan. 17, 19-21, 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

## ST. MARYS RIVER BASIN

02231000 ST. MARYS RIVER NEAR MACLENNY, FLA.--Continued  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE NOV.	FLUORIDE (F)	NITRATE (NO3)	ORTHO PHOSPHATE (PO4)	SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH	COLOR	DIS-SOLVED OXYGEN	PERCENT SATURATION
15...	.2	.4	.06	46	60	26	1	80	6.5	80	--	--
JAN.												
03...	.1	.2	.07	28	69	10	4	45	6.8	180	--	--
31...	--	--	--	--	--	--	--	49	6.4	160	--	--
FEB.												
15...	.3	.5	8.0	33	71	14	6	53	6.4	140	--	--
29...	--	--	--	--	--	--	--	50	5.4	140	--	--
MAR.												
26...	.2	.8	.02	32	72	14	6	50	5.9	220	--	--
31...	--	--	--	--	--	--	--	56	6.6	160	--	--
APR.												
30...	--	--	--	--	--	--	--	79	7.2	80	--	--
30...	.2	.5	--	54	63	36	0	96	6.7	60	8.0	92
MAY												
30...	--	--	--	--	--	--	--	59	6.6	200	--	--
31...	--	--	--	--	--	--	--	61	6.9	--	--	--
JUNE												
14...	.4	.6	--	31	88	21	10	58	6.3	240	--	--
JULY												
31...	--	--	.06	--	--	--	--	44	--	280	--	--
AUG.												
31...	--	1.7	.01	--	--	--	--	34	4.8	180	--	--
SEPT.												
30...	--	--	--	--	--	--	--	33	6.5	240	--	--

DAY	OCT	NOV	COLOR DEC (UNITS)	JAN	FEB	MAR	1967 APR	OCTOBER 1968 MAY	JUNE	JULY	AUG	SEP
1	200	80	50	140	140	140	100	70	100	140	220	200
2	200	80	50	160	140	120	100	60	100	110	220	200
3	200	70	50	200	160	120	120	80	100	120	270	190
4	200	80	50	160	140	140	120	80	100	110	220	200
5	160	100	50	160	140	140	120	80	80	100	200	200
6	160	80	50	160	140	140	120	80	80	90	180	240
7	160	80	50	160	160	140	140	80	120	110	240	280
8	120	80	50	160	140	140	140	80	160	100	240	280
9	120	80	50	180	140	140	140	80	200	120	240	280
10	160	80	50	180	140	140	140	80	200	180	260	240
11	200	80	80	180	160	140	140	100	280	180	220	240
12	160	80	180	140	140	140	120	80	180	260	240	200
13	160	80	200	180	140	140	120	80	200	180	240	280
14	200	110	200	180	120	160	140	80	200	200	220	280
15	160	70	200	200	120	160	140	80	240	220	240	280
16	140	60	200	200	100	160	120	80	280	200	280	320
17	160	60	200	200	120	160	140	100	280	220	240	280
18	160	60	200	200	160	160	120	80	320	220	240	240
19	160	60	200	160	100	160	120	100	280	200	200	200
20	160	60	240	160	100	160	120	100	240	180	220	200
21	120	50	200	160	120	160	100	100	240	180	220	240
22	120	50	180	160	100	160	120	100	200	200	240	200
23	100	50	180	160	120	160	100	100	200	160	220	200
24	100	60	160	160	120	160	100	100	200	160	220	200
25	100	60	160	160	140	160	100	80	200	200	240	240
26	100	60	160	160	140	160	100	80	280	160	200	240
27	100	50	160	160	140	160	100	80	200	220	240	200
28	100	60	120	160	140	160	80	120	200	240	200	240
29	80	50	120	160	140	160	70	120	200	200	200	200
30	90	50	120	160	--	160	80	140	200	240	180	240
31	90	--	120	160	--	160	--	120	--	280	180	--
AVERAGE	143	69	129	169	131	150	115	91	198	174	223	235

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP
1	19	16	17	17	16	9	19	21	20	29	26	25
2	19	20	16	16	16	8	20	21	24	24	26	23
3	20	20	--	17	11	12	20	21	23	29	24	23
4	20	21	13	17	11	10	19	20	23	27	24	23
5	20	15	16	16	17	10	21	24	25	26	25	22
6	21	15	13	11	17	12	21	19	23	25	25	24
7	22	16	17	11	8	10	20	20	21	24	25	23
8	22	12	18	10	11	10	20	20	20	25	26	25
9	22	11	17	9	14	14	22	20	23	25	26	23
10	21	14	17	16	8	13	22	21	24	24	26	25
11	20	14	22	16	8	11	22	24	22	23	28	24
12	19	16	18	15	11	15	19	24	24	24	27	24
13	18	12	18	7	11	12	19	24	24	24	21	25
14	20	14	17	11	8	10	19	25	24	25	26	23
15	19	14	18	11	16	9	20	24	25	24	27	22
16	21	14	18	11	10	15	19	20	23	26	25	22
17	21	13	20	6	11	12	20	25	23	26	28	24
18	21	14	19	13	11	12	18	24	26	26	28	24
19	19	14	17	6	11	13	20	18	23	26	25	24
20	19	9	17	6	9	13	22	22	25	26	26	24
21	20	15	18	6	11	11	22	22	24	26	26	24
22	17	13	18	11	12	14	22	20	24	28	25	24
23	20	17	20	16	12	20	22	20	25	26	28	23
24	18	16	11	16	9	13	23	23	28	26	26	23
25	19	18	14	14	7	12	21	24	26	25	27	23
26	17	23	11	10	8	12	21	24	28	20	28	23
27	17	20	7	11	9	12	20	20	27	25	27	24
28	17	19	16	10	9	12	22	25	26	26	25	24
29	17	18	16	16	13	12	21	22	29	27	22	24
30	17	18	11	11	--	18	22	18	28	26	20	23
31	17	--	15	10	--	20	--	25	--	26	21	--



## ST. MARYS RIVER BASIN

99

02231000 ST. MARYS RIVER NEAR MACLENNY, FLA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	54	77	86	49	43	47	57	88	63	62	43	28
2.....	56	76	91	43	46	46	53	82	66	63	42	27
3.....	56	73	85	43	49	47	54	80	69	67	40	30
4.....	59	75	86	40	48	43	57	79	73	68	43	31
5.....	58	81	80	43	53	47	57	71	77	69	41	32
6.....	59	76	84	42	51	47	56	64	77	69	40	32
7.....	62	77	84	40	46	48	60	76	45	55	43	33
8.....	62	77	84	42	49	46	62	63	44	59	43	33
9.....	62	77	85	41	49	49	61	62	44	53	40	39
10.....	63	78	84	41	46	47	61	62	47	46	40	33
11.....	56	78	63	41	46	47	62	67	47	46	43	35
12.....	54	76	56	50	46	45	64	67	52	44	40	36
13.....	58	78	46	43	46	45	64	66	42	44	39	36
14.....	58	72	62	43	46	47	63	66	44	42	42	35
15.....	68	85	57	43	48	47	65	70	45	43	44	36
16.....	61	84	48	43	51	43	66	58	44	43	43	39
17.....	61	84	52	43	49	46	66	55	45	43	43	35
18.....	60	84	45	42	50	46	66	62	55	43	41	35
19.....	66	84	44	44	48	46	66	62	48	44	43	33
20.....	63	88	46	44	46	46	66	66	45	43	40	34
21.....	65	89	46	44	46	46	68	69	47	45	43	33
22.....	67	88	46	42	48	46	69	70	46	49	41	35
23.....	66	83	45	44	46	46	74	74	50	47	40	38
24.....	67	88	44	45	43	49	79	74	50	44	39	33
25.....	67	87	48	43	47	49	84	74	52	40	37	36
26.....	70	86	43	44	47	47	81	74	53	35	37	34
27.....	72	87	44	48	51	52	79	61	53	39	38	36
28.....	75	94	43	48	44	53	80	58	58	42	38	35
29.....	75	94	45	49	50	56	78	65	58	44	39	37
30.....	73	93	45	49	--	56	79	57	59	44	36	33
31.....	73	--	46	49	--	56	--	61	--	44	34	--
AVERAGE	63	82	60	44	47	47	66	67	53	49	40	34

PH (UNITS), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	6.3	6.9	7.1	5.4	6.1	5.8	6.4	6.9	7.1	6.8	4.8	5.2
2.....	6.7	6.8	6.9	5.4	6.5	5.8	6.7	7.0	6.9	6.5	4.8	5.1
3.....	6.7	6.7	7.2	5.4	6.4	5.9	6.9	7.0	7.0	6.9	4.9	5.0
4.....	6.7	6.9	7.4	5.1	6.4	6.1	7.2	7.0	7.0	6.9	5.1	4.9
5.....	6.7	6.8	7.4	4.9	6.4	6.0	6.5	6.8	7.0	6.8	4.9	5.0
6.....	6.6	6.8	7.1	4.9	6.6	6.3	7.0	6.9	7.0	6.9	5.0	4.9
7.....	6.9	6.7	7.1	4.7	6.5	6.3	7.1	6.9	6.8	6.7	4.7	4.9
8.....	7.0	6.9	7.5	4.9	6.4	5.9	7.1	6.7	6.1	6.6	4.7	5.0
9.....	6.8	6.9	7.3	5.1	6.4	6.2	7.1	6.6	5.2	6.5	4.8	4.6
10.....	7.0	6.9	7.4	5.0	6.2	6.4	7.1	6.7	5.0	6.0	4.8	4.8
11.....	7.1	6.8	7.4	5.2	6.3	6.5	7.1	6.9	4.9	5.8	5.1	4.8
12.....	6.9	6.9	5.8	5.4	6.2	6.6	7.1	6.8	4.8	5.5	5.2	4.7
13.....	6.8	6.9	5.9	5.4	6.2	6.1	6.7	6.9	5.1	5.3	5.2	4.7
14.....	6.8	6.9	5.3	5.4	6.2	5.9	6.8	6.9	4.9	5.2	5.0	4.8
15.....	6.9	6.8	5.5	5.4	6.2	5.6	6.9	6.9	4.9	5.3	4.7	4.8
16.....	7.0	6.9	5.6	5.5	6.4	5.6	7.1	6.9	5.0	5.2	4.7	4.9
17.....	6.9	7.0	5.3	5.5	6.4	5.5	7.0	6.9	5.1	5.3	4.7	4.9
18.....	7.0	6.9	5.4	5.6	6.3	5.5	7.0	6.9	5.5	5.4	4.8	5.1
19.....	6.9	6.9	5.4	5.7	6.4	5.6	7.1	6.8	5.2	5.4	4.7	5.2
20.....	6.9	6.8	5.4	5.9	6.2	5.8	7.2	6.9	5.4	5.7	4.7	5.2
21.....	6.9	7.0	5.6	5.8	6.3	5.8	7.1	7.1	5.5	5.7	4.8	5.2
22.....	6.9	7.0	5.6	6.0	6.2	6.0	7.2	7.1	5.7	5.8	4.7	5.4
23.....	7.0	7.0	5.6	6.1	6.2	6.0	7.2	7.1	5.6	6.0	4.8	5.5
24.....	7.0	6.8	5.6	6.2	6.0	6.2	7.2	6.9	5.8	6.0	4.8	5.6
25.....	7.0	6.9	6.1	6.0	5.6	6.4	7.2	6.9	6.1	5.0	5.1	5.6
26.....	7.1	6.8	5.8	6.4	5.4	6.3	7.2	7.0	6.3	4.8	5.2	5.8
27.....	7.0	7.0	6.4	5.8	5.4	6.5	7.1	7.1	6.5	4.6	5.4	6.2
28.....	7.0	7.0	6.4	6.2	5.4	6.5	7.0	6.9	6.3	4.6	5.6	6.2
29.....	7.0	7.0	6.0	6.3	5.4	6.5	7.2	6.9	6.5	4.5	5.4	6.4
30.....	7.1	6.8	6.0	6.3	--	6.6	7.2	6.8	6.6	4.6	4.9	6.5
31.....	7.1	--	5.8	6.4	--	6.6	--	6.9	--	--	4.8	--
AVERAGE	6.8	6.8	6.2	5.5	6.1	6.0	7.0	6.9	5.8	5.7	4.9	5.2

## ST. MARYS RIVER BASIN

02231253 ST. MARYS RIVER NEAR GROSS, FLA.

LOCATION.--Lat 30°44'29", long 81°41'17", Nassau County, conductivity recorder at gaging station at Florida-Georgia State line near center of span on downstream side of bridge on U.S. Highway 17, 1.8 miles downstream from Little St. Marys River, 2.1 miles north of Gross, and 21.4 miles upstream from mouth.

DRAINAGE AREA.--1,360 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: April 1966 to September 1968.

## EXTREMES.--1967-68:

Specific conductance: Maximum daily, 25,000 micromhos Dec. 2; minimum daily, 45 micromhos Sept. 8-12.

Period of record:

Specific conductance: Maximum daily, 29,000 micromhos May 23-26, 1967; minimum daily, 20 micromhos Oct. 4, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TEMP- ERATURE (DEG C)	SILICA (SI02)	OIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.											
02...	23	--	--	--	--	--	--	--	--	--	174
17...	23	--	--	--	--	--	--	--	--	--	1460
NOV.											
13...	21	--	--	--	--	--	--	--	--	--	6200
17...	17	--	--	--	--	--	--	--	--	--	6700
DEC.											
05...	16	5.8	.11	84	227	--	1930	61	28	475	3460
19...	18	--	--	--	--	--	--	--	--	--	48
JAN.											
02...	13	--	--	--	--	--	--	--	--	--	1200
16...	11	--	--	--	--	--	--	--	--	--	308
FEB.											
13...	10	--	--	--	--	--	--	--	--	--	1260
29...	11	--	--	--	--	--	--	--	--	--	110
MAR.											
13...	--	--	--	--	--	--	--	--	--	--	103
26...	--	--	--	--	--	--	--	--	--	--	36
APR.											
10...	22	--	--	--	--	--	--	--	--	--	780
29...	24	3.1	.06	124	364	2.4	2960	114	52	761	5450
30...	23	--	--	--	--	--	--	--	--	--	2300
MAY											
14...	25	--	--	--	--	--	--	--	--	--	3000
28...	25	--	--	--	--	--	--	--	--	--	3000
JUNE											
10...	25	--	--	--	--	--	--	--	--	--	20
26...	29	--	--	--	--	--	--	--	--	--	27
JULY											
12...	29	--	--	--	--	--	--	--	--	--	435
26...	30	--	--	--	--	--	--	--	--	--	240
AUG.											
13...	29	--	--	--	--	--	--	--	--	--	18
SEPT.											
04...	25	--	--	--	--	--	--	--	--	--	8.0
18...	25	--	--	--	--	--	--	--	--	--	7.0

DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	OIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
OCT.											
02...	--	--	--	--	--	--	655	--	--	--	--
17...	--	--	--	--	--	--	4900	--	--	--	--
NOV.											
13...	--	--	--	--	--	--	18000	--	--	--	--
17...	--	--	--	--	--	--	19000	--	--	--	--
DEC.											
05...	.5	.0	.00	6260	1140	1120	11200	6.7	90	--	--
19...	--	--	--	--	--	--	1530	6.7	100	--	--
JAN.											
02...	--	--	--	--	--	--	3790	6.9	110	--	--
16...	--	--	--	--	--	--	1000	6.3	140	--	--
FEB.											
13...	--	--	--	--	--	--	4230	--	--	--	--
29...	--	--	--	--	--	--	432	--	--	--	--
MAR.											
13...	--	--	--	--	--	--	422	--	--	--	--
26...	--	--	--	--	--	--	170	--	--	--	--
APR.											
10...	--	--	--	--	--	--	2520	--	--	--	--
29...	.6	.1	--	9810	1810	1770	16400	6.8	70	7.2	85
30...	--	--	--	--	--	--	7520	--	--	--	--
MAY											
14...	--	--	--	--	--	--	9500	--	--	--	--
29...	--	--	--	--	--	--	9500	--	--	--	--
JUNE											
10...	--	--	--	--	--	--	98	--	--	--	--
24...	--	--	--	--	--	--	120	--	--	--	--
JULY											
12...	--	--	--	--	--	--	1390	--	--	--	--
26...	--	--	--	--	--	--	820	--	--	--	--
AUG.											
13...	--	--	--	--	--	--	87	--	--	--	--
SEPT.											
04...	--	--	--	--	--	--	75	75.0	120	--	--
18...	--	--	--	--	--	--	47	--	--	--	--

## ST. MARYS RIVER BASIN

101

02231253 ST. MARYS RIVER NEAR GROSS, FLA.--Continued  
SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	16500	4800	22500	7800	---	---	8500	830	700	150
2	---	---	17000	5300	25000	10700	---	---	8500	1100	1250	175
3	3000	590	18000	5480	22000	10000	---	---	7540	900	1300	175
4	3000	800	17500	5400	22000	8600	---	---	7500	1000	2010	190
5	3000	900	17000	5000	23000	10000	---	---	8250	1100	2200	175
6	3000	900	16500	5000	22500	10500	---	---	8500	850	1600	140
7	3000	900	17500	5200	22500	10500	---	---	6750	950	1400	150
8	3000	1180	17400	5800	22000	10500	---	---	5000	500	2500	200
9	3000	1500	16000	5700	21000	10000	---	---	5500	500	2220	190
10	3000	800	15500	5500	21000	10000	---	---	2600	375	1900	180
11	3000	725	16500	5500	19000	7200	---	---	3400	280	2100	180
12	3000	800	16500	5700	9500	3000	---	---	5550	375	3300	175
13	3000	975	16500	5600	10500	2300	---	---	5000	400	1120	180
14	3000	1600	17500	5000	10000	2000	---	---	5500	350	3200	200
15	3000	1910	18000	6500	10000	1400	---	---	5500	400	3400	275
16	3000	2500	20000	7500	11500	1200	5500	200	5250	320	3400	200
17	3000	2750	20000	8800	11000	1350	1800	200	6000	430	2500	200
18	3000	1600	18500	7200	9300	1000	2200	200	6000	450	2100	190
19	3000	1380	18000	6400	6750	600	2200	230	6500	600	1600	180
20	3000	1590	18500	7000	7000	600	2020	250	7200	450	1700	175
21	10500	1780	19000	7300	8500	725	2180	250	3500	380	1550	180
22	10000	1600	18500	7000	7200	800	2150	250	6750	400	1500	180
23	11100	1880	16000	6200	---	---	2580	230	8400	600	600	180
24	11300	2080	17000	6900	---	---	2800	220	9000	1100	1000	175
25	10400	2030	16000	6200	---	---	3300	200	6250	550	1600	200
26	10600	1950	17200	6400	---	---	4600	225	5900	400	2200	200
27	10700	2100	17500	6900	---	---	5250	400	6000	400	2800	2400
28	12200	2200	19000	6700	---	---	6000	450	5000	400	3400	300
29	13000	2600	20200	8500	---	---	6400	500	4300	160	3400	300
30	14200	3500	22000	9500	---	---	5500	550	---	---	3600	300
31	15000	4500	---	---	---	---	7000	620	---	---	4000	310
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4000	300	17800	6750	13000	2100	---	---	---	---	220	80
2	4700	420	---	---	13000	2120	---	---	---	---	105	62
3	6000	500	---	---	13700	2180	---	---	---	---	72	55
4	5000	480	---	---	17000	4000	---	---	---	---	50	50
5	3600	400	17000	6200	20000	---	---	---	---	---	50	49
6	2600	400	18200	6400	---	---	---	---	---	---	50	47
7	5600	750	19000	8500	---	---	---	---	---	---	47	47
8	6400	600	19500	8500	---	---	---	---	---	---	47	45
9	6500	625	19000	8600	---	---	---	---	---	---	45	45
10	---	---	20000	7250	280	125	---	---	---	---	45	45
11	---	---	21000	7200	250	100	---	---	---	---	45	45
12	---	---	21000	6600	150	100	---	---	---	---	47	45
13	---	---	20000	6000	---	---	---	---	---	---	48	47
14	---	---	19500	7250	---	---	---	---	---	---	40	49
15	---	---	21000	7500	160	120	---	---	---	---	50	50
16	---	---	20000	7500	150	120	---	---	---	---	50	49
17	---	---	19000	7000	150	120	---	---	---	---	49	48
18	---	---	17500	6500	175	100	---	---	---	---	58	48
19	---	---	16800	6250	200	125	---	---	---	---	65	54
20	---	---	15500	5600	275	150	---	---	---	---	80	60
21	---	---	17500	6000	325	160	---	---	---	---	140	60
22	---	---	18800	6500	390	190	---	---	1000	70	394	65
23	---	---	18000	6900	420	175	---	---	1000	75	800	70
24	---	---	19000	7000	---	200	---	---	70	1150	950	70
25	---	---	20000	7000	---	---	---	---	1200	80	840	70
26	---	---	20000	7000	---	---	---	---	1370	88	753	70
27	---	---	20000	5000	---	---	---	---	1700	90	300	70
28	---	---	17000	5250	---	---	---	---	3000	145	1000	70
29	---	---	15000	3400	---	---	---	---	3000	1100	1150	75
30	---	---	11000	1800	---	---	---	---	3000	750	1150	80
31	---	---	13000	2100	---	---	---	---	1100	180	---	---

## ST. JOHNS RIVER BASIN

02231600 JANE GREEN CREEK NEAR DEER PARK, FLA.

LOCATION.--Lat 28°04'27", long 80°53'18", Osceola County, at gaging station near right bank of leftmost of five channels on downstream side of bridge on county road, 1.2 miles southeast of Deer Park, 2 miles downstream from confluence of Crabgrass and Bull Creeks, and 5.8 miles upstream from mouth.

DRAINAGE AREA.--248 sq mi.

PERIOD OF RECORD.--Chemical analyses: September 1963 to June 1968 (discontinued).

Water temperatures: October 1964 to June 1968 (discontinued).

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 261 micromhos July 1, 1965; minimum daily, 64 micromhos Aug. 13, 1965.

Water temperatures (1964-67): Maximum, 87°F June 3, 1965; minimum, 50°F Jan. 17, 1965.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, OCTOBER 1967 TO JUNE 1968

DATE	DIS- CHARGE (CF5)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POTAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (SO4)	CHLOR- IDE (CL)
NOV.												
01...	8.4	22	6.1	.24	14	1.6	---	12	.8	31	.4	26
DEC.												
16...	2.0	23	4.0	.03	17	2.1	---	15	.8	29	1.6	34
JAN.												
30...	2.8	18	3.3	.04	18	2.3	---	19	.2	29	.8	46
MAR.												
27...	1.2	18	1.9	.08	18	2.5	---	20	.3	34	1.6	48
APR.												
30...	---	24	.0	.09	26	2.8	.06	26	1.3	48	.8	64
SEPT.												
10...	---	26	7.0	.17	15	2.0	---	10	.6	40	.4	20

## ST. JOHNS RIVER BASIN

02231600 JANE GREEN CREEK NEAR DEER PARK, FLA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO JUNE 1968

				DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESIDUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION																					
DATE	FLUO- RIDE (%)	NITRATE (NO3)																															
NOV. 01...	.2	.4	77	130	42	16	142	6.4	240	--	--																						
DEC. 22...	.6	.1	89	141	51	27	180	6.5	180	--	--																						
JAN. 30...	.2	1.1	105	143	54	30	213	6.5	100	--	--																						
MAR. 27...	.1	1.0	110	164	56	28	222	6.8	80	--	--																						
APR. 30...	.2	1.0	146	225	76	37	293	7.0	70	4.6	54																						
SEPT. 10...	.3	.4	76	129	46	12	134	6.5	160	--	--																						
SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968																																	
DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER																					
1.....	--	--	--	210	--	--	225	--	59	--	--	--																					
2.....	120	--	--	210	--	--	225	--	--	--	--	--																					
3.....	118	--	--	202	--	--	210	--	--	--	--	--																					
4.....	117	--	--	190	--	--	225	--	--	--	--	--																					
5.....	115	--	--	210	--	--	225	--	--	--	--	--																					
6.....	119	--	--	210	--	--	229	--	--	--	--	--																					
7.....	115	--	--	210	--	--	230	--	59	--	--	--																					
8.....	115	--	--	210	--	--	210	--	59	--	--	--																					
9.....	115	--	--	210	--	--	245	--	72	--	--	--																					
10.....	117	--	--	210	--	--	239	--	74	--	--	--																					
11.....	117	--	--	202	--	--	225	--	72	--	--	--																					
12.....	117	--	--	209	--	--	239	--	72	--	--	--																					
13.....	121	--	--	209	--	--	239	--	73	--	--	--																					
14.....	122	--	--	195	--	--	260	--	73	--	--	--																					
15.....	124	--	--	200	--	--	230	--	73	--	--	--																					
16.....	122	--	--	200	--	--	249	--	73	--	--	--																					
17.....	122	--	--	209	--	--	250	--	76	--	--	--																					
18.....	124	--	--	201	--	--	239	--	70	--	--	--																					
19.....	122	--	--	201	--	--	239	--	70	--	--	--																					
20.....	123	--	--	199	--	--	260	--	59	--	--	--																					
21.....	126	--	--	210	--	--	260	--	62	--	--	--																					
22.....	125	--	--	201	--	--	--	--	66	--	--	--																					
23.....	134	--	--	209	--	--	--	--	66	--	--	--																					
24.....	134	--	--	209	--	--	--	--	75	--	--	--																					
25.....	135	--	--	210	--	--	--	--	75	--	--	--																					
26.....	138	--	--	210	--	--	--	--	75	--	--	--																					
27.....	138	--	--	210	--	--	--	--	79	--	--	--																					
28.....	139	--	--	210	--	--	--	--	79	--	--	--																					
29.....	141	--	--	--	--	--	--	--	80	--	--	--																					
30.....	137	--	--	210	--	--	--	--	74	--	--	--																					
31.....	139	--	--	210	--	--	--	--	--	--	--	--																					
AVERAGE	125	--	--	206	--	--	--	--	70	--	--	--																					
TEMPERATURE (°C) OF WATER, OCTOBER 1967 TO JUNE 1968																																	
	MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER..	--	24	25	24	23	24	24	26	26	25	27	24	23	24	23	23	25	26	24	21	22	--	23	22	22	24	24	26	23	24	23	24	24
NOVEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DECEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JANUARY..	--	25	26	20	22	20	20	21	18	18	20	20	18	17	14	16	15	14	15	14	18	19	17	18	18	14	--	13	13	--	18	18	18
FEBRUARY.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MARCH....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL.....	22	22	23	24	24	25	26	27	22	22	23	21	21	21	22	22	21	26	27	24	22	--	--	--	--	--	--	--	--	--	--	--	--
MAY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE.....	24	--	--	--	--	--	25	25	28	27	26	28	30	28	25	25	25	28	28	25	28	28	28	28	25	25	25	28	27	28	28	--	27
JULY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## ST. JOHNS RIVER BASIN

103

02232400 ST. JOHNS RIVER NEAR COCOA, FLA.

LOCATION.--Lat 28°22'10", long 80°52'22", Brevard County, at gaging station near right bank on downstream side of bridge on State Highway 520, 0.7 mile downstream from outlet of Lake Poinsett, 8.8 miles west of Cocoa, and 232 miles upstream from mouth.

DRAINAGE AREA.--1,331 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1968.

Water temperatures: October 1953 to September 1960, July 1964 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 2,890 micromhos Feb. 27; minimum daily, 42 micromhos July 3.

Water temperatures: Maximum, 32.0°C July 25, Aug. 15, 17, 24, Sept. 6; minimum, 12.0°C Jan. 17.

Period of record:

Dissolved solids (1953-60): Maximum, 998 mg/l July 11-20, 1956; minimum, 68 mg/l Mar. 17, 18, 1960.

Hardness (1953-60): Maximum, 194 mg/l June 11-20, 1956; minimum, 16 mg/l Mar. 17, 18, 1960.

Specific conductance: Maximum daily, 3,500 micromhos June 27, 30, July 2, 1962; minimum daily, 40 micromhos Aug. 27, 1964.

Water temperatures: Maximum, 35.0°C Aug. 9, 1956; minimum, 8.0°C Jan. 9-12, 1956, Feb. 5, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)
NOV.												
C1...	--	23	7.5	.20	29	7.0	--	50	1.2	54	19	101
DEC.												
14...	177	22	2.1	.01	63	17	--	128	3.5	50	67	260
JAN.												
21...	128	18	1.7	.05	80	29	--	169	5.1	92	106	347
MAR.												
27...	124	18	.3	.05	105	43	--	275	8.4	122	150	580
MAY												
01...	47	25	.2	.12	130	48	8.2	316	9.9	140	160	650
JUNE												
11...	2800	30	2.2	.08	58	20	3.2	132	5.0	58	87	278
JULY												
31...	--	--	--	--	--	--	--	--	--	--	--	--
AUG.												
30...	--	29	--	--	--	--	--	--	--	--	--	--
31...	--	27	--	--	--	--	--	--	--	--	--	--
SEPT.												
10...	--	29	7.4	.25	24	5.6	--	35	1.3	44	14	72
30...	--	29	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (SUM OF CCNSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
NOV.												
C1...	.3	1.5	--	244	315	102	57	462	6.7	240	--	--
DEC.												
14...	.7	1.2	--	568	621	227	186	1060	7.6	160	--	--
JAN.												
21...	.5	.9	--	784	942	319	244	1480	7.7	70	--	--
MAR.												
27...	.3	1.9	--	1220	--	439	339	2260	7.6	60	--	--
MAY												
01...	.5	.0	.11	1390	--	532	417	2520	7.3	50	8.8	105
JUNE												
11...	.3	.9	.26	616	767	230	182	1180	7.1	60	--	--
JULY												
31...	--	.8	.20	--	--	--	--	260	--	--	--	--
AUG.												
30...	--	1.2	.04	--	--	--	--	410	--	--	--	--
31...	--	2.9	.24	--	--	--	--	310	--	--	--	--
SEPT.												
10...	.5	2.0	--	184	262	83	47	241	6.8	220	--	--
30...	--	1.2	.04	--	--	--	--	410	--	--	--	--

## 02232400 ST. JOHNS RIVER NEAR COCOA, FLA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	439	492	799	1200	1400	2830	2100	2380	325	320	265	290
2.....	448	498	780	1100	1350	2800	1920	2400	325	290	230	310
3.....	448	480	610	1100	1350	2420	2100	2380	285	42	250	290
4...33	433	520	690	1100	1390	2230	2400	2400	280	210	210	310
5.....	416	550	670	1100	1410	2130	2100	2510	320	290	239	290
6.....	410	540	750	1100	1490	2100	2100	2410	325	270	239	309
7.....	393	545	720	1200	1500	1940	2100	2410	325	270	239	319
8...93	4193	510	720	1500	2000	2900	2300	2350	335	270	230	310
9.....	403	525	890	1190	1500	1920	2150	2450	335	270	219	345
10.....	405	540	810	1300	1500	1870	2100	2450	960	270	222	320
11.....	415	560	780	1200	1500	1920	2200	2520	445	290	240	320
12.....	412	560	720	1200	1500	1910	2400	2600	420	280	230	340
13.....	425	560	740	1190	1500	1960	2200	2420	335	270	240	330
14.....	455	550	760	1200	1550	1960	2250	2390	320	270	245	410
15.....	460	565	780	1300	1500	1920	2250	2390	610	250	245	440
16.....	455	565	810	1200	1600	1930	2090	2400	640	250	249	385
17.....	460	550	840	1310	1520	1900	2210	2400	770	260	270	440
18.....	455	595	810	1200	1590	1990	2250	2510	800	260	266	435
19.....	458	585	840	1200	1590	2020	2250	2420	360	250	260	390
20.....	448	585	790	1290	1590	2000	2250	2780	420	260	260	390
21.....	445	605	900	1290	1590	2070	2310	2780	440	260	271	390
22.....	448	575	880	1290	1590	1970	2300	2420	525	250	250	435
23.....	472	600	1000	1290	1600	1950	2450	2470	450	260	250	400
24.....	471	600	1000	1350	2200	2370	2450	2480	350	250	240	400
25.....	472	565	1100	1300	1600	2020	2310	2420	370	270	240	440
26.....	473	570	1100	1300	1800	1930	2250	2530	350	250	230	410
27.....	462	630	1100	1300	2890	2010	2400	2570	350	230	240	420
28.....	464	630	1150	1300	1650	2090	2390	2580	950	245	270	410
29.....	700	757	1150	1300	2200	2090	2250	2800	380	240	270	410
30.....	455	700	1150	1500	---	2090	2350	2450	230	270	240	410
31.....	452	--	1150	1350	--	2130	--	2890	--	260	310	--

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	24	23	24	24	25	24	24	26	28	28	29	29	27	27	28	30	28	27	27	27	28	28	27	27	26	27	27	27	24	24	24	26
NOVEMBER..	23	24	23	22	24	23	21	21	20	19	22	23	23	24	22	22	24	24	23	26	24	23	24	23	23	24	21	22	21	22	--	22
DECEMBER..	23	21	21	22	19	20	20	20	--	21	19	19	21	21	23	23	24	24	25	24	22	20	16	17	17	18	18	17	17	18	20	22
JANUARY..	19	21	21	21	18	22	19	18	19	21	21	18	17	15	17	14	12	15	19	17	18	18	17	15	13	14	16	16	17	18	17	
FEBRUARY..	19	20	20	17	19	16	17	14	14	13	14	15	15	17	17	15	15	17	15	18	16	15	14	13	15	15	15	--	--	--	--	
MARCH....	13	14	16	17	16	17	17	18	18	20	14	13	18	18	17	17	15	19	21	23	24	25	19	18	20	20	21	20	22	23	24	
APRIL.....	25	26	26	27	26	28	28	29	29	29	29	22	26	27	25	25	25	28	26	28	29	28	28	28	26	25	28	29	26	26	--	
MAY.....	29	27	28	28	26	26	27	29	28	28	28	29	22	26	30	28	28	29	28	28	28	28	28	28	28	28	28	29	29	29	29	
JUNE.....	29	29	29	28	29	28	26	26	28	29	29	29	29	29	29	30	28	29	29	29	28	28	28	28	29	29	29	29	28	28	--	
JULY.....	29	29	30	29	29	29	--	29	28	28	28	29	29	29	29	29	29	29	30	31	30	30	32	30	32	30	31	30	31	30	31	
AUG.....	31	29	29	30	31	29	30	30	30	30	29	29	31	30	32	32	30	31	31	30	31	31	30	32	31	31	29	28	28	26	27	
SEPTEMBER..	29	29	29	30	31	32	29	30	29	30	29	29	27	27	28	28	28	27	28	28	27	28	28	28	28	28	28	28	29	--	--	

02232500 ST. JOHNS RIVER NEAR CHRISTMAS, FLA.

LOCATION.--Lat 28°32'35", long 80°56'40", Orange County, at gaging station on left bank about 150 feet downstream from bridge on State Highway 50, 1.7 miles downstream from Tootoosahatchee Creek, 2 miles upstream from Lake Cone, 4.5 miles east of Christmas, and 209 miles upstream from mouth.

DRAINAGE AREA.--1,512 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1954 to September 1958, June 1962 to March 1963, October 1964 to September 1968.  
Water temperatures: June 1965 to September 1968.

**EXTREMES.--1967-68:**

Specific conductance: Maximum daily, 3,820 micromhos May 17; minimum daily, 230 micromhos July 16.

Water temperatures: Maximum, 32.0°C July 24; minimum, 10.0°C Feb. 18, 27.

Period of record:

Specific conductance: Maximum daily, 4,800 micromhos July 1, 1962; minimum daily, 112 micromhos July 1, 1966.

Water temperatures: Maximum, 34.0°C Sept. 2, 1965; minimum, 3.0°C Jan. 30, 1967.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

## ST. JOHNS RIVER BASIN

105

02232500 ST. JOHNS RIVER NEAR CHRISTMAS, FLA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (ND3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
NOV. 02....	.4	1.4	---	400	492	142	94	750	6.7	240	---	---
DEC. 19....	.4	1.0	---	872	957	307	248	1670	6.9	120	---	---
FEB. 01....	.5	.6	---	1010	1170	372	292	1900	7.7	80	---	---
MAR. 28....	.2	1.9	---	1580	---	516	398	2850	7.5	60	---	---
MAY 01....	.6	.1	.07	1550	---	552	432	2840	7.7	50	8.9	114
JUNE 12....	.2	1.0	.43	343	438	124	98	670	6.6	140	---	---
JULY 31....	---	.9	.38	---	---	---	---	310	---	---	---	---
AUG. 31....	---	2.5	.17	---	---	---	---	399	---	---	---	---
SEPT. 11....	.4	1.0	---	306	412	111	72	570	6.7	200	---	---
30....	---	1.4	.10	---	---	---	---	790	---	---	---	---

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	620	790	1000	1600	---	2810	---	2900	3800	250	270	520
2.....	580	760	1000	1690	1850	---	2610	2820	3750	320	560	540
3.....	605	752	1000	1600	---	3280	2590	2820	3700	260	299	520
4.....	625	750	1000	1600	1800	2700	2670	---	2900	260	265	520
5.....	630	753	1000	1600	1800	2700	2640	---	---	270	270	505
6.....	630	820	1150	1700	1800	2750	---	3000	269	320	260	510
7.....	630	820	1150	1700	1800	2550	2560	3110	240	300	265	510
8.....	625	840	990	1700	1900	---	2590	3090	319	330	280	510
9.....	---	875	1090	---	1900	---	---	3200	420	360	309	500
10.....	630	860	1100	1510	1900	---	---	3200	378	320	320	490
11.....	620	852	1290	1700	1800	2450	2590	3190	478	240	310	520
12.....	625	840	1400	1710	1800	---	2600	3090	670	245	340	540
13.....	630	820	1950	1680	1870	---	2660	3100	820	270	346	540
14.....	650	850	1750	1700	1900	3100	2710	2900	830	250	380	600
15.....	660	840	1900	1750	1900	---	2750	3360	740	240	380	700
16.....	660	840	1700	1690	1900	---	2770	---	660	230	380	720
17.....	675	850	1700	1790	---	3000	2800	3820	---	270	375	700
18.....	690	850	1700	1700	2100	2900	2770	---	600	310	370	690
19.....	690	850	1600	1600	2050	2810	2800	3750	550	310	370	760
20.....	700	860	1520	1750	2200	2500	2780	3710	500	260	375	630
21.....	720	860	1520	1750	2590	3100	2820	3750	460	300	520	620
22.....	730	850	1520	1700	2100	2700	2850	---	360	300	400	630
23.....	740	850	1490	1700	2500	---	2790	3600	408	320	400	640
24.....	730	860	1490	1700	2400	2600	---	3600	365	310	380	640
25.....	---	880	1590	1700	2700	---	2750	3510	390	360	395	780
26.....	740	890	1700	1700	2800	---	2660	3480	360	290	480	740
27.....	720	900	1700	1700	2750	2800	---	3410	382	350	520	820
28.....	740	920	1600	---	2800	---	2810	3340	312	260	430	840
29.....	740	940	1520	1700	2700	2800	---	3380	370	302	460	820
30.....	755	1000	1650	2000	---	---	---	3400	318	270	460	790
31.....	750	---	---	---	---	2700	---	3600	---	310	399	---
AVERAGE	673	848	1420	1690	2140	---	---	3310	905	286	374	628

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE
OCTOBER..	26	23	24	25	24	24	23	25	---	24	24	24	26	23	25	24	24	23	22	23	22	23	23	---	23	22	23	23	22	23	23	23
NOVEMBER..	23	21	23	23	21	18	17	17	18	20	20	19	20	20	20	19	21	20	19	20	17	20	21	22	24	24	20	21	20	---	20	20
DECEMBER..	21	21	17	18	19	18	20	21	22	18	23	22	24	28	28	24	24	23	24	23	23	16	18	16	16	16	16	10	---	---	---	---
JANUARY..	17	21	21	23	21	21	18	20	---	21	20	18	18	14	13	13	14	16	17	18	17	20	18	16	14	16	16	---	16	18	---	17
FEBRUARY..	---	19	---	17	18	17	16	13	12	13	13	13	12	16	17	---	10	14	14	16	13	16	11	14	14	10	13	---	---	---	---	14
MARCH.....	11	---	16	14	18	14	18	---	---	20	12	---	16	---	17	18	22	21	21	21	24	---	---	---	---	---	19	---	21	---	---	---
APRIL.....	---	23	24	24	---	24	25	---	23	24	28	23	25	24	26	24	24	25	26	30	27	29	---	24	24	---	25	26	---	---	---	25
MAY.....	28	28	27	---	---	27	25	25	24	25	26	27	26	25	---	28	---	29	30	---	---	27	29	28	26	29	24	45	28	27	---	26
JUNE.....	28	28	27	25	---	23	26	25	28	25	27	26	25	20	27	26	---	26	27	29	28	30	29	30	25	27	26	26	29	29	---	26
JULY.....	27	30	27	30	27	28	30	28	25	28	29	26	27	29	29	25	27	---	30	29	27	30	---	32	27	29	25	29	30	31	30	28
AUGUST.....	27	25	28	21	29	31	25	29	21	25	30	27	27	30	27	27	30	26	30	30	24	30	30	24	30	25	27	---	27	24	30	27
SEPTEMBER	25	20	26	30	31	26	30	31	25	30	26	30	22	30	24	24	24	29	30	30	28	30	24	28	31	27	27	---	---	---	---	21

## 02235000 WEKIVA RIVER NEAR SANFORD, FLA.

LOCATION.--lat 28°48'54", long 81°25'10". Seminole County, at gaging station near right bank at downstream side of bridge on State Highway 46, 4.5 miles downstream from Little Wekiva River, 9 miles west of Sanford, and 6.7 miles upstream from mouth.

DRAINAGE AREA.--189 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1964 to July 1968 (discontinued).

Water temperatures: October 1965 to July 1968 (discontinued).

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 510 micromhos June 8; minimum daily, 200 micromhos July 30.

Water temperatures: Maximum, 30.0°C July 24; minimum, 15.0°C Jan. 15, 16, Feb. 8, 19, 25.

Period of record:

Specific conductance: Maximum daily, 755 micromhos June 27, 1967; minimum daily, 63 micromhos Aug. 1, 1966.

Water temperatures: Maximum, 31.0°C July 28, 1965, Sept. 3, 1966, May 27, 1967; minimum, 12.0°C Feb. 6, 20, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NESIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.												
30...	203	22	8.9	.01	30	8.3	--	6.9	1.3	116	16	13
DEC.												
12...	288	22	10	.03	32	8.7	--	9.4	1.8	108	23	19
JAN.												
25...	216	18	7.7	.02	34	10	--	8.9	.7	119	22	15
MAR.												
25...	213	16	8.6	.02	34	9.9	--	9.0	.8	126	28	16
APR.												
29...	200	25	8.4	.01	31	8.7	.26	6.9	.6	130	16	11
JUNE												
11...	430	26	8.1	.10	51	13	.66	25	1.6	80	104	45
SEPT.												
C9...	--	26	8.2	.05	30	8.1	--	11	1.1	94	26	19
30...	420	25	10	.10	31	8.2	--	14	.6	96	24	28

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
OCT.												
30...	.3	1.9	--	144	138	109	14	258	7.1	25	--	--
DEC.												
12...	.4	1.0	--	158	161	116	27	282	7.2	30	--	--
JAN.												
25...	.2	2.5	--	160	157	126	28	280	7.6	15	--	--
MAR.												
25...	.2	.7	--	169	168	126	23	328	7.6	15	--	--
APR.												
25...	.2	.4	.19	147	145	114	7	260	7.3	5	6.8	81
JUNE												
11...	.3	2.0	.50	288	354	182	116	482	7.3	120	--	--
SEPT.												
C9...	.4	1.3	--	151	182	108	32	259	7.1	120	--	--
30...	.5	.1	--	164	198	111	33	271	6.8	140	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	300	250	260	250	260	336	265	255	210	310	--	--
2.....	273	230	250	250	260	335	260	--	225	280	--	--
3.....	271	250	260	240	249	332	250	--	300	260	--	--
4.....	270	250	250	250	259	395	247	260	270	500	--	--
5.....	273	250	261	250	270	385	245	260	270	325	--	--
6.....	258	250	259	250	240	300	247	258	510	310	--	--
7.....	258	250	259	250	270	395	263	260	305	210	--	--
8.....	256	250	260	250	270	395	252	--	270	215	--	--
9.....	254	250	290	255	260	395	265	--	470	210	--	--
10.....	252	230	260	260	260	398	255	--	290	260	--	--
11.....	253	266	280	255	250	410	250	260	310	215	--	--
12.....	245	230	280	230	250	328	255	260	295	202	--	--
13.....	245	250	270	252	259	322	275	--	290	230	--	--
14.....	245	250	250	250	270	322	260	258	360	230	--	--
15.....	245	240	270	250	270	325	250	--	330	220	--	--
16.....	245	245	265	230	270	328	254	--	280	220	--	--
17.....	252	250	265	250	280	318	240	--	--	230	--	--
18.....	250	245	281	250	280	328	250	--	--	--	--	--
19.....	250	265	281	250	290	318	244	--	--	--	--	--
20.....	250	260	265	260	260	322	250	255	--	--	--	--
21.....	250	240	260	260	401	315	252	255	--	--	--	--
22.....	252	250	260	260	350	330	242	--	--	--	--	--
23.....	252	260	240	260	400	252	252	--	350	--	--	--
24.....	253	250	390	260	399	262	244	--	280	230	--	--
25.....	254	255	270	260	399	262	252	--	240	205	--	--
26.....	252	240	260	260	370	262	250	253	330	211	--	--
27.....	254	245	280	250	370	258	260	--	--	202	--	--
28.....	253	235	260	250	360	325	252	--	--	230	--	--
29.....	253	260	270	260	330	262	260	--	--	219	--	--
30.....	255	240	280	250	--	268	250	--	--	200	--	--
31.....	255	--	260	250	--	262	--	--	--	--	--	--
AVERAGE	255	247	268	252	297	321	253	--	--	246	--	--



## ST. JOHNS RIVER BASIN

107

## 02235000 WEKIVA RIVER NEAR SANFORD, FLA.--Continued

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	24	24	25	25	25	25	25	26	26	25	24	24	24	24	24	24	23	23	22	22	22	22	22	22	23	23	24	23	23	23	23	
NOVEMBER..	23	23	22	22	18	19	18	18	19	20	20	21	21	21	20	20	21	20	19	18	18	21	22	23	23	23	23	21	21	--	--	20
DECEMBER..	21	21	20	20	20	19	20	21	21	21	20	22	21	22	23	23	23	23	24	23	18	19	18	19	18	19	18	19	20	21	--	20
JANUARY..	21	20	20	20	19	19	19	18	18	18	18	17	16	15	15	17	17	17	18	18	18	18	18	19	20	20	20	20	20	20	20	18
FEBRUARY..	20	20	19	19	18	17	15	16	17	18	17	17	16	16	16	15	16	17	17	17	16	16	15	16	17	17	17	--	--	--	--	16
MARCH....	17	17	18	18	18	17	18	20	22	23	22	22	22	21	21	21	22	21	21	21	22	20	19	20	21	21	22	23	24	24	20	20
APRIL.....	26	27	27	26	27	26	25	27	27	26	26	27	26	21	25	24	25	27	27	27	27	27	28	27	27	24	25	26	27	28	--	26
MAY.....	26	--	--	26	24	25	25	--	--	26	25	--	27	--	--	--	--	--	--	27	26	--	--	--	--	26	--	--	--	--	--	--
JUNE.....	27	27	27	25	27	23	25	27	27	26	26	26	26	26	26	25	--	--	--	--	--	--	--	28	30	28	26	--	--	--	--	--
JULY.....	28	28	27	28	28	28	28	28	28	26	27	27	28	28	28	28	27	--	--	--	--	--	--	--	30	29	28	27	29	29	--	--
AUGUST....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## 02238500 OKLAHAWA RIVER AT MOSS BLUFF, FLA.

LOCATION.--Lat 29°04'50", long 81°52'50", Marion County, at gaging station 25 feet upstream from old channel, 50 feet upstream from highway bridge about 600 feet downstream from hydro-electric powerplant, and 0.4 mile southwest of Moss Bluff.

DRAINAGE AREA.--910 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: November 1963 to September 1968.

Water temperatures: November 1963 to September 1968.

## EXTREMES.--1967-68:

Specific conductance: Maximum daily, 360 micromhos June 16; minimum daily, 159 micromhos June 5.

Water temperatures: Maximum, 32.0°C July 29; minimum, 12.0°C on several days during January and February.

## Period of record:

Specific conductance: Maximum daily, 535 micromhos Aug. 8, 1967; minimum daily, 60 micromhos July 21, 1964.

Water temperatures: Maximum, 32.0°C July 29, 1968; minimum, 9.0°C on several days during January and February 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFD)	TEMP- ERATURE (°C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
NOV.												
21...	--	17	8.5	.05	28	9.1	--	15	3.3	118	12	23
JAN.												
05...	119	19	5.1	.04	27	8.9	--	15	3.3	114	12	22
FEB.												
12...	--	12	3.8	.03	28	7.7	--	15	3.3	112	11	21
APR.												
01...	--	19	.6	.05	32	9.5	--	16	3.7	134	13	24
30...	6.9	25	1.7	.05	34	10	.14	16	3.8	136	15	28
JUNE												
21...	197	28	3.7	.08	28	8.2	--	14	3.3	120	9.6	22
JULY												
17...	659	30	8.1	.10	32	9.3	--	10	2.3	80	41	16
31...	--	30	--	--	--	--	--	--	--	--	--	--
AUG.												
21...	--	27	--	--	--	--	--	--	--	--	--	--
SEPT.												
16...	--	27	9.5	.12	38	12	--	12	5.1	110	49	22
18...	--	27	--	--	--	--	--	--	--	--	--	21
30...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
NOV.												
21...	.3	.6	--	158	171	108	11	272	7.2	30	--	--
JAN.												
05...	.4	1.6	--	151	182	104	10	268	7.1	45	--	--
FEB.												
13...	.4	1.1	--	146	174	102	10	273	7.2	50	--	--
APR.												
01...	.4	.4	--	166	199	119	9	295	7.0	50	--	--
30...	.4	1.3	.08	177	218	126	14	324	7.3	10	7.2	86
JUNE												
21...	.4	1.1	--	179	--	104	6	268	7.1	100	--	--
JULY												
17...	.4	.8	--	159	228	118	53	272	6.5	140	--	--
31...	--	.9	.13	--	--	--	--	270	--	--	--	--
AUG.												
31...	--	1.6	.08	--	--	--	--	219	--	--	--	--
SEPT.												
16...	.5	1.8	--	204	327	144	54	344	7.3	130	--	--
18...	--	1.4	.19	--	--	140	--	290	8.4	100	--	--
30...	--	--	.10	--	--	--	--	245	--	--	--	--

## SPECIFIC CONDUCTANCE (MICROMHDS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

**AVER-**

## 02244005 OKLAWAHA RIVER AT STATE HIGHWAY 19, NEAR SALT SPRINGS, FLA.

water temperatures: October 1962 to September 1968.

Water temperatures: Maximum, 30.0°C July 29, 30, Sept. 27, 29; minimum, 12.0°C Jan. 28.

Water temperatures: Maximum, 32.0°C July 6, Aug. 1, 2, 1965; minimum, 8.0°C Dec. 17, 1962.

[illegible]

## 02244005 OKLAWAHA RIVER AT STATE HIGHWAY 19, NEAR SALT SPRINGS, FLA.--Continued

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
NOV. 13...	.6	--	383	393	218	84	680	7.5	10	--	--
DEC. 27...	.2	--	380	401	217	86	561	7.4	10	--	--
JAN. 31...	--	--	--	--	--	--	720	--	5	--	--
FEB. 23...	1.3	--	393	402	224	95	720	7.8	10	--	--
MAR. 29...	--	--	--	--	--	--	670	--	15	--	--
APR. 30...	--	--	--	--	--	--	680	--	20	--	--
MAY 30...	--	--	--	--	--	--	660	--	5	--	--
JUNE 13...	.6	.13	408	435	230	99	740	7.8	10	8.2	94
JULY 30...	--	--	--	--	--	--	690	--	10	--	--
AUG. 13...	.4	--	432	476	251	140	760	7.7	30	--	--
SEPT. 30...	--	--	--	--	--	--	550	--	100	--	--
OCT. 31...	.8	.13	--	--	--	--	389	--	160	--	--
NOV. 31...	1.4	.13	--	--	--	--	300	--	160	--	--
DEC. 24...	1.2	--	--	--	150	--	395	--	100	--	--
JAN. 30...	--	--	--	--	--	--	370	--	100	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	525	680	650	670	640	700	640	740	720	--	410	--
2.....	525	675	620	630	710	680	640	730	700	560	400	200
3.....	530	670	680	620	710	700	640	730	710	540	410	160
4.....	530	665	620	660	708	700	640	740	710	550	--	160
5.....	560	670	620	680	670	710	670	730	740	520	410	180
6.....	560	670	630	630	700	700	630	730	760	--	410	199
7.....	600	680	630	640	670	720	630	730	800	--	--	--
8.....	600	670	670	640	710	720	630	740	750	450	400	250
9.....	600	680	640	640	660	710	685	740	750	420	400	275
10.....	560	670	--	700	699	700	630	730	770	374	410	289
11.....	600	675	620	690	650	690	685	730	760	365	--	290
12.....	600	680	630	630	710	650	640	720	750	392	420	--
13.....	600	680	690	630	710	670	679	720	750	342	430	299
14.....	625	695	630	630	681	660	640	720	740	--	430	310
15.....	625	670	600	630	699	660	680	710	670	322	--	--
16.....	625	690	600	630	710	640	680	700	630	321	425	340
17.....	640	675	600	630	710	640	690	690	650	319	425	315
18.....	650	680	650	670	690	670	670	690	680	322	--	315
19.....	650	700	610	650	720	680	640	690	670	332	440	319
20.....	650	700	620	710	690	670	690	700	670	343	440	330
21.....	650	700	610	710	670	680	690	710	640	--	440	330
22.....	650	650	610	710	640	680	690	720	640	354	--	--
23.....	650	650	610	649	705	690	710	720	640	342	--	350
24.....	675	680	615	700	690	--	650	720	610	334	450	350
25.....	675	665	615	690	690	690	650	720	605	329	456	360
26.....	675	680	620	679	670	680	675	710	610	328	--	365
27.....	675	700	650	659	685	700	645	720	610	324	460	370
28.....	675	630	630	675	700	700	645	700	610	--	450	--
29.....	675	700	610	649	670	680	710	700	580	354	--	399
30.....	675	700	581	649	--	680	660	690	550	370	340	370
31.....	675	--	610	720	--	680	--	690	--	389	300	--
AVERAGE	619	679	625	661	688	684	661	716	682	382	--	296

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER..	22	21	23	23	23	24	24	25	25	23	23	22	22	22	22	22	23	21	20	21	21	21	22	22	22	21	22	21	22	21	22	22
NOVEMBER..	22	22	22	22	20	18	17	18	17	19	19	20	20	19	20	20	19	20	20	20	20	21	22	23	26	22	21	21	21	21	21	20
DECEMBER..	21	20	20	18	19	19	20	19	20	--	21	21	20	21	22	22	21	21	22	22	19	17	17	17	18	17	17	17	17	17	17	19
JANUARY..	18	20	21	21	20	18	19	18	18	20	19	18	17	17	15	14	15	17	18	18	18	18	18	18	16	15	16	12	18	19	20	17
FEBRUARY..	20	20	20	19	18	18	17	16	15	15	16	16	16	17	17	17	13	17	16	16	17	17	16	16	15	16	17	17	--	--	--	16
MARCH....	16	16	17	17	17	17	19	20	20	22	22	20	19	19	20	20	21	21	22	23	21	--	19	20	21	21	22	23	23	19	19	19
APRIL.....	22	23	23	23	24	24	24	24	25	24	23	23	24	23	24	24	25	25	28	26	25	26	26	26	26	24	25	25	25	25	25	24
MAY.....	25	24	25	26	25	25	24	25	24	25	26	25	27	27	27	27	27	28	27	27	26	25	26	26	26	25	26	24	26	27	25	25
JUNE.....	27	28	26	25	24	24	25	26	27	27	27	27	28	28	27	27	26	26	26	28	28	28	28	28	28	28	27	27	28	--	--	26
JULY.....	--	26	27	27	26	--	--	27	27	26	25	26	27	--	28	28	28	28	28	28	--	28	28	29	28	29	29	--	30	30	29	27
AUGUST....	29	28	28	--	27	28	--	29	28	28	--	28	28	--	28	28	--	28	29	--	--	28	27	--	27	26	--	24	25	--	--	26
SEPTEMBER	--	27	27	27	28	26	--	26	27	27	--	26	25	--	26	26	26	27	27	27	--	26	26	26	26	30	--	30	26	--	--	26



## LAKE OKKECHOBBE AND THE EVERGLADES BASINS

111

02256500 FISHEATING CREEK AT PALMDALE, FLA.--Continued  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 100 C)	HARD- NESS (CAL/MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
OCT.												
C5...	.2	.3	--	60	103	24	14	117	6.9	160	--	--
NOV.												
16...	.6	.4	--	78	122	33	18	152	6.0	240	--	--
JAN.												
C6...	.3	.8	--	209	244	85	68	405	6.7	90	--	--
FEB.												
26...	.3	.4	--	248	313	99	71	459	6.7	70	--	--
29...	--	.5	.32	--	--	--	--	460	--	--	--	--
MAR.												
31...	--	.1	.11	--	--	--	--	504	--	--	--	--
APR.												
30...	--	.6	.33	--	--	--	--	580	--	--	--	--
MAY												
C6...	.3	1.1	.28	315	407	110	80	620	6.8	50	10.0	12
27...	.2	2.8	--	52	86	23	13	100	6.2	140	--	--
31...	--	2.0	.63	--	--	--	--	305	--	--	--	--
JUNE												
30...	--	3.1	.66	--	--	--	--	81	--	--	--	--
JULY												
22...	.2	1.6	--	45	110	21	14	79	5.9	320	--	--
31...	--	3.2	83	--	--	--	--	89	--	--	--	--
AUG.												
31...	--	3.0	.62	--	--	--	--	81	--	--	--	--
SEPT.												
11...	.3	1.5	--	41	80	20	12	78	5.9	160	--	--
30...	--	--	.63	--	--	--	--	144	--	--	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	97	137	150	275	470	481	525	600	--	88	87	90
2.....	87	146	150	275	440	502	511	600	--	87	85	88
3.....	87	132	150	280	450	502	535	600	170	88	85	89
4.....	121	135	195	290	449	500	525	585	170	85	97	91
5.....	114	136	150	300	460	500	530	585	120	80	105	90
6.....	116	138	160	320	430	499	485	590	150	85	93	91
7.....	112	139	160	370	430	499	490	600	180	80	96	91
8.....	105	140	170	390	460	460	530	600	150	87	110	91
9.....	100	144	150	540	460	502	539	600	120	82	119	90
10.....	95	145	160	540	460	500	540	580	120	82	120	93
11.....	95	147	150	550	430	499	510	580	120	81	109	77
12.....	104	147	140	630	455	498	545	540	91	77	120	78
13.....	108	146	150	770	455	499	545	540	78	76	120	80
14.....	108	150	150	770	425	499	540	540	77	76	115	124
15.....	115	150	160	740	460	498	540	540	79	76	115	125
16.....	119	147	230	799	460	490	555	540	82	76	115	126
17.....	121	149	190	799	460	491	555	545	84	77	115	126
18.....	117	151	200	750	460	490	555	540	84	74	115	117
19.....	117	152	200	599	455	478	550	469	82	74	110	112
20.....	117	154	200	749	455	502	560	469	82	75	119	111
21.....	118	154	190	620	429	502	570	350	81	76	110	126
22.....	118	154	180	620	460	502	552	375	84	78	110	113
23.....	118	156	169	590	469	503	560	270	77	80	77	110
24.....	118	155	150	490	455	503	575	270	81	79	110	133
25.....	120	154	240	530	450	503	575	196	83	79	100	139
26.....	123	160	240	550	450	503	580	195	81	80	110	142
27.....	123	159	250	490	460	504	580	87	81	82	110	139
28.....	123	158	250	489	450	504	575	204	74	85	100	139
29.....	125	159	240	510	460	504	575	339	77	84	100	144
30.....	123	159	260	480	--	505	580	280	81	85	99	144
31.....	126	--	280	480	--	504	--	305	--	69	81	--
AVERAGE	112	148	186	535	451	497	546	455	101	80	106	110

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER..	23	25	24	24	23	23	25	23	24	24	24	23	23	23	24	24	23	23	22	21	23	22	21	21	22	24	26	24	24	24	23	
NOVEMBER..	24	26	27	22	22	20	19	21	21	18	20	20	20	21	23	24	24	23	22	20	19	24	20	21	21	22	24	26	24	24	21	23
DECEMBER..	21	20	21	18	18	19	21	23	20	20	20	21	20	20	22	22	21	21	19	19	20	20	21	16	17	16	16	15	17	18	19	17
JANUARY..	20	19	19	19	20	19	21	20	18	19	18	18	17	15	15	16	16	15	15	16	16	16	15	15	19	19	20	20	20	20	19	
FEBRUARY..	16	18	17	17	16	16	15	16	18	18	19	17	17	18	17	16	17	18	17	14	15	15	16	18	18	14	14	14	--	--	16	
MARCH.....	19	21	21	22	22	19	18	18	17	19	19	24	21	18	19	20	21	21	25	25	22	20	19	19	19	18	18	19	19	21	22	20
APRIL.....	21	22	23	23	26	25	24	23	24	24	23	21	26	24	24	24	24	24	24	24	25	24	24	24	24	24	24	23	23	24	--	23
MAY.....	23	23	24	29	24	28	29	24	24	24	25	25	24	29	29	25	26	28	25	25	24	28	26	24	25	24	24	23	24	28	25	
JUNE.....	--	--	25	25	26	27	27	27	25	25	24	26	28	24	25	25	24	27	28	25	25	25	26	25	28	27	25	25	26	26	--	25
JULY.....	27	25	25	26	25	25	26	26	25	25	26	27	29	29	25	26	26	26	26	25	26	26	27	29	29	27	27	27	28	28	26	
AUGUST...	28	27	27	28	28	29	29	29	28	29	29	29	29	29	29	29	29	28	29	29	29	29	29	29	29	27	26	26	26	29	29	
SEPTEMBER	28	28	27	27	29	29	27	27	27	27	29	29	27	26	27	27	29	29	29	27	30	27	28	29	29	29	27	27	27	29	--	27

## LAKE OKEECHOBEE AND THE EVERGLADES BASINS

02273000 KISSIMMEE RIVER AT S-65E, NEAR OKEECHOBEE, FLA.

LOCATION.--Lat 27°13'34", long 80°57'44", Okeechobee County, at gaging station on left bank in downstream lock control house at lock and control structure 65E, 1.8 miles downstream from State Highway 70, about 8.5 miles west of Okeechobee, and 16 miles upstream from mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.  
Water temperatures: October 1967 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 200 micromhos May 23; minimum daily, 77 micromhos July 14.  
Water temperatures: Maximum, 31.0°C July 29, 30; minimum, 14.0°C March 1, 2.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SI02)	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	STRONTIUM (SR)	SODIUM (NA)	PO-TAS-SIUM (K)	BICARBONATE (HC03)	SULFATE (SO4)	CHLORIDE (CL)
NOV.												
17...	300	21	2.6	.06	11	2.6	--	10	.9	29	13	16
17...	300	21	2.8	.04	12	2.7	--	10	1.0	28	14	16
JAN.												
31...	208	19	1.9	.13	17	3.5	--	12	1.2	43	16	19
FEB.												
26...	200	16	1.5	.04	18	4.0	.19	13	1.2	52	18	22
25...	--	15	--	--	--	--	--	--	--	--	--	--
MAR.												
31...	--	19	--	--	--	--	--	--	--	--	--	--
APR.												
16...	100	25	1.1	.06	17	3.7	.11	12	1.0	47	18	20
30...	--	25	--	--	--	--	--	--	--	--	--	--
MAY												
31...	--	26	--	--	--	--	--	--	--	--	--	--
JUNE												
11...	1200	28	--	--	--	--	--	--	--	--	--	--
11...	1200	28	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
JULY												
22...	66CC	31	3.9	.41	8.2	2.1	--	7.0	.7	21	8.8	11
31...	--	--	--	--	--	--	--	--	--	--	--	--
AUG.												
31...	--	28	--	--	--	--	--	--	--	--	--	--
SEPT.												
11...	--	30	2.3	.10	22	2.5	--	8.1	.5	64	10	12
30...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	DIS-SOLVED OXYGEN	PERCENT SATURATION
NOV.												
17...	.6	.1	--	71	98	38	14	129	6.9	120	--	--
17...	.3	.4	--	73	108	41	18	139	6.4	100	--	--
JAN.												
21...	.2	1.4	--	93	120	57	22	172	6.7	80	--	--
FEB.												
26...	.3	1.0	.05	105	132	62	19	182	6.7	60	--	--
25...	--	1.6	.12	--	--	--	--	180	--	--	--	--
MAR.												
31...	--	.3	.08	--	--	--	--	169	--	--	--	--
APR.												
16...	.2	.5	.07	97	123	58	19	173	6.7	60	8.6	102
30...	--	.0	.11	--	--	--	--	178	--	--	--	--
MAY												
31...	--	1.8	.05	--	--	--	--	180	--	--	--	--
JUNE												
11...	--	--	--	--	--	--	--	140	--	--	--	--
11...	--	--	--	--	--	--	--	152	--	--	--	--
30...	--	1.9	.34	--	--	--	--	118	--	--	--	--
JULY												
22...	.2	.5	--	53	86	29	12	94	6.2	160	--	--
31...	--	.8	.11	--	--	--	--	130	--	--	--	--
AUG.												
31...	--	1.1	.12	--	--	--	--	110	--	--	--	--
SEPT.												
11...	.3	1.2	--	91	119	66	13	162	7.0	100	--	--
30...	--	--	--	--	--	--	--	125	--	--	--	--

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVERAGE
OCTOBER..	26	25	24	24	25	25	24	24	25	24	24	24	24	24	23	24	24	23	22	23	23	23	23	23	24	23	23	23	23	23	23	23
NOVEMBER..	23	23	23	23	23	22	21	21	20	20	20	21	20	19	20	20	20	21	20	20	19	19	20	21	21	21	22	22	21	--	--	20
DECEMBER..	21	21	21	19	20	20	20	20	20	20	21	21	22	22	22	22	22	22	22	22	22	22	21	22	17	20	18	18	18	17	18	20
JANUARY...	21	18	18	18	19	19	19	19	19	19	18	18	18	17	17	17	17	17	17	17	17	17	17	17	18	16	15	16	16	16	--	17
FEBRUARY...	17	17	18	18	17	18	16	15	15	15	16	16	16	15	15	17	16	17	16	17	16	16	16	16	16	15	15	15	15	--	--	16
MARCH....	14	14	15	15	15	16	16	16	16	17	18	18	18	17	18	18	19	19	19	19	19	19	18	17	18	18	18	19	19	19	17	17
APRIL.....	20	20	20	20	21	22	22	22	22	22	23	22	22	23	23	24	23	23	23	24	25	25	25	25	25	25	25	24	25	25	--	22
MAY.....	24	24	25	25	24	24	24	24	24	24	24	25	25	25	25	26	26	27	27	27	27	26	26	26	26	26	26	26	26	26	26	25
JUNE.....	26	26	26	26	25	25	25	26	26	27	27	28	28	28	28	28	27	27	27	27	27	28	28	29	30	30	29	28	28	28	--	27
JULY.....	28	28	28	28	28	27	27	26	27	28	28	29	29	29	29	29	29	29	29	29	29	29	29	29	30	30	30	30	31	31	--	28
AUGUST...*	30	30	30	29	29	29	29	29	29	28	29	29	29	30	30	30	30	30	30	30	30	30	30	30	30	30	29	29	28	28	28	29
SEPTEMBER	29	28	28	28	29	29	29	29	29	29	29	29	29	27	27	26	27	27	27	28	28	27	27	28	27	27	27	27	27	27	--	27

## 02273000 KISSINMEE RIVER AT S-65E. NEAR OKEECHOBEE. FLA.--Continued

02273200 CANAL 41A ABOVE S-68 AT LAKE ISTOKPOGA, NEAR LAKE PLACID, FLA.

LOCATION.--27°19'55", long 81°15'05", Highlands County, at gaging station 33 feet from right bank, 350 feet upstream from structure 68 at Lake Istokpoga, and 7.5 miles northeast of town of Lake Placid.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Chemical analyses: September 1963 to September 1968.  
Water temperatures: October 1963 to September 1968.

**EXTREMES, --1967-68:**

Specific conductance: Maximum daily, 182 micromhos June 1; minimum daily, 77 micromhos on several days during August and September.

Water temperatures: Maximum, 33.0°C Aug. 19, 21, 22; minimum, 14.0°C on several days during January to March.

Period of record:

Specific conductance: Maximum daily, 182 micromhos June 1, 1968; minimum daily, 60 micromhos Oct. 14, 1966.  
Water temperatures: Maximum, 33.0°C Aug. 4, 1964, Aug. 19, 21, 22, 1968; minimum, 10.0°C Feb. 3-5, 1966.

Water temperatures: Maximum, 33.0°C Aug. 4, 1964, Aug. 19, 21, 22, 1968; minimum, 10.0°C Feb. 3-5, 1966.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

## LAKE OKEECHOBEE AND THE EVERGLADES AREA

02273200 CANAL 41A ABOVE S-68 AT LAKE ISTOKPOGA, NEAR LAKE PLACID, FLA.--Continued  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PD4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
OCT.												
13....	.5	.2	--	69	90	34	23	125	5.9	75	--	--
14....												
27....	.6	.2	--	69	95	34	24	125	5.9	75	--	--
JAN.												
15....	.0	1.1	--	70	91	35	24	128	6.2	80	--	--
FEB.												
25....	--	.7	.14	--	--	--	--	130	--	--	--	--
MAR.												
08....	.1	.6	--	73	97	38	24	130	6.5	50	--	--
31....	--	.3	.02	--	--	--	--	140	--	--	--	--
APR.												
18....	.2	.0	.05	80	103	42	31	148	6.4	60	11.0	137
30....	--	1.0	.50	--	--	--	--	146	--	--	--	--
MAY												
31....	--	1.1	.05	--	--	--	--	151	--	--	--	--
JUNE												
17....	.3	.2	--	69	90	35	24	128	66.0	45	--	--
30....	--	.8	.11	--	--	--	--	129	--	--	--	--
JULY												
30....	.2	.6	--	50	100	26	18	89	6.2	250	--	--
31....	--	.6	.16	--	--	--	--	95	--	--	--	--
AUG.												
31....	--	1.5	.12	--	--	--	--	77	--	--	--	--
SEPT.												
17....	.3	.8	--	50	77	23	16	87	5.9	100	--	--
30....	--	.7	.06	--	--	--	--	78	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	123	126	120	121	120	133	140	151	182	120	81	81
2.....	124	124	120	121	120	130	138	151	161	120	92	81
3.....	127	122	120	110	120	135	138	158	151	115	94	81
4.....	127	122	120	112	120	133	138	158	139	120	92	83
5.....	126	122	120	110	110	135	140	153	136	120	94	83
6.....	126	127	120	120	119	135	142	155	132	120	91	82
7.....	123	123	119	115	119	133	135	155	133	116	91	78
8.....	124	125	129	115	129	133	139	155	131	110	91	78
9.....	123	122	129	115	129	133	138	149	132	108	89	78
10.....	120	122	129	120	129	130	140	149	128	108	83	78
11.....	123	122	120	120	129	134	140	149	129	105	83	79
12.....	122	123	120	115	129	133	140	152	131	109	83	79
13.....	122	122	120	110	129	133	141	151	128	110	83	79
14.....	124	122	120	110	129	133	140	156	130	111	83	79
15.....	122	123	120	110	129	136	141	152	132	110	85	79
16.....	122	123	120	115	129	128	145	154	130	100	82	79
17.....	123	123	120	110	129	133	143	157	129	105	84	79
18.....	121	123	120	110	119	131	142	157	130	105	84	77
19.....	121	122	120	115	120	135	144	157	128	100	83	77
20.....	129	125	120	120	119	135	141	157	128	100	85	77
21.....	122	124	120	115	130	133	145	157	128	102	84	77
22.....	122	123	120	115	120	136	147	159	127	102	82	79
23.....	122	123	120	120	125	135	146	159	128	115	84	79
24.....	124	124	120	110	129	135	149	159	125	115	84	79
25.....	124	123	120	120	120	135	148	149	128	109	77	79
26.....	121	126	120	120	129	137	145	151	127	97	77	79
27.....	121	124	121	120	129	138	148	151	128	95	77	78
28.....	122	125	120	120	129	139	150	150	128	92	79	78
29.....	123	125	121	120	130	139	148	150	127	87	77	78
30.....	121	125	120	120	--	140	146	150	129	89	78	78
31.....	122	--	120	115	--	140	--	151	--	95	77	--
AVERAGE	123	123	120	115	125	134	142	153	133	106	84	79

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER..	26	26	26	26	26	26	28	28	26	26	27	27	26	26	24	26	26	25	23	23	22	23	23	23	24	23	24	24	24	24	24	24
NOVEMBER.	24	24	24	23	22	20	19	18	18	18	18	19	19	19	19	20	20	20	20	20	20	19	20	20	20	21	22	23	23	--	20	20
DECEMBER.	22	22	21	20	20	20	20	20	19	19	19	20	21	22	22	23	23	22	23	22	23	24	23	20	18	17	18	18	17	18	18	20
JANUARY..	18	18	18	18	18	19	19	18	19	19	19	18	18	18	17	17	16	16	16	16	17	17	18	18	16	14	14	16	17	17	17	17
FEBRUARY.	18	18	18	19	19	19	18	15	14	16	16	16	16	17	18	18	18	16	16	16	16	16	16	14	14	15	15	16	--	--	16	16
MARCH....	14	14	14	16	16	16	16	16	17	18	18	20	18	18	18	18	18	19	20	21	21	21	21	21	18	18	19	19	20	20	21	18
APRIL.....	21	21	22	24	26	26	28	27	27	26	25	24	24	24	24	25	26	27	27	28	28	27	29	28	27	27	27	27	28	--	--	25
MAY.....	28	28	28	27	28	27	27	26	24	24	26	27	26	27	28	29	30	31	30	31	29	28	29	27	28	27	28	28	28	29	30	27
JUNE.....	30	29	26	25	24	25	28	27	28	29	29	28	29	28	28	28	28	28	28	28	29	28	29	28	28	29	28	29	28	29	--	28
JULY.....	30	29	28	28	28	29	28	28	27	28	29	30	29	29	29	29	29	29	29	29	--	32	30	29	30	30	30	31	32	30	30	29
AUGUST...	30	30	28	28	28	29	29	31	31	31	30	31	30	30	30	29	31	30	31	30	32	33	33	32	32	31	30	29	29	28	28	29
SEPTEMBER	30	31	30	--	31	30	30	31	30	29	28	28	--	29	30	--	29	30	31	30	29	28	27	30	28	27	27	28	29	--	--	29



## 02274500 TAYLOR CREEK ABOVE OKEECHOBEE, FLA.

LOCATION.--Lat 27°17'03", long 80°49'20". Okeechobee County, at gaging station near center of channel on downstream side of county bridge, 0.8 mile downstream from small tributary canal, 2.8 miles north of Okeechobee, and 7.6 miles upstream from mouth.

DRAINAGE AREA.--98.7 sq mi.

PERIOD OF RECORD.--Chemical analyses: July 1964 to September 1968.

Water temperatures: July 1964 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 3,200 micromhos Feb. 12; minimum daily, 94 micromhos July 4.

Water temperatures: Maximum, 33.0°C Aug. 21, 24; minimum, 15.0°C Feb. 28.

Period of record:

Specific conductance: Maximum daily, 3,200 micromhos Feb. 12, 1968; minimum daily, 84 micromhos Aug. 30, 1967.

Water temperatures: Maximum, 34.0°C July 12, 1964, Aug. 1, 1967; minimum, 12.0°C Feb. 4, 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SiO2)	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	STRONTIUM (SR)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	SULFATE (SO4)	CHLORIDE (CL)
NOV.												
17...	16	22	8.7	.02	77	31	--	190	8.5	136	124	360
JAN.												
18...	--	21	8.7	.03	86	25	--	133	7.0	176	95	251
FEB.												
26...	13	17	6.3	.07	110	34	8.4	211	8.3	197	144	402
29...	--	16	--	--	--	--	--	--	--	--	--	--
MAR.												
31...	--	23	--	--	--	--	--	--	--	--	--	--
APR.												
16...	5.2	26	5.8	.04	120	43	14	270	8.2	195	190	484
30...	--	27	--	--	--	--	--	--	--	--	--	--
MAY												
31...	--	29	--	--	--	--	--	--	--	--	--	--
JUNE												
30...	--	28	--	--	--	--	--	--	--	--	--	--
JULY												
22...	645	27	6.0	.15	12	2.2	--	7.7	2.5	36	8.0	14
31...	--	30	--	--	--	--	--	--	--	--	--	--
AUG.												
31...	--	29	--	--	--	--	--	--	--	--	--	--
SEPT.												
11...	185	27	5.7	.18	24	5.0	--	25	2.8	44	31	49
30...	--	--	--	--	--	--	--	--	--	--	--	--

CATE	FLUCTUATION (F)	NITRATE (NO3)	PHOSPHATE (PD4)	DIS-SOLVED SOLIDS (TSS OF CONSTITUENTS)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA+MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	DIS-SOLVED OXYGEN	PERCENT SATURATION
NOV.												
17...	.7	2.5	--	869	920	320	208	1600	7.4	80	--	--
JAN.												
18...	.5	4.2	--	697	786	318	174	1280	7.6	60	--	--
FEB.												
26...	.4	1.1	1.1	1020	1070	424	262	1800	7.4	45	--	--
29...	--	2.5	1.9	--	--	--	--	1190	--	--	--	--
MAR.												
31...	--	1.7	1.4	--	--	--	--	1800	--	--	--	--
APR.												
16...	.6	1.1	2.0	1230	--	492	332	2220	7.3	40	7.7	94
30...	--	.0	2.8	--	--	--	--	1580	--	--	--	--
MAY												
31...	--	3.9	3.0	--	--	--	--	83	--	--	--	--
JUNE												
30...	--	2.7	2.2	--	--	--	--	--	--	--	--	--
JULY												
22...	.2	1.5	--	72	102	39	10	122	6.5	220	--	--
31...	--	4.0	1.2	--	--	--	--	290	--	30	--	--
AUG.												
31...	--	1.8	.77	--	--	--	--	340	--	--	--	--
SEPT.												
11...	.5	1.3	--	166	221	80	44	297	6.6	200	--	--
30...	--	--	1.7	--	--	--	--	330	--	--	--	--

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVERAGE
OCTOBER..	26	24	25	26	26	26	26	26	24	--	26	26	25	24	24	27	28	27	25	27	23	--	26	26	24	26	25	22	25	25	28	25
NOVEMBER.	27	30	25	25	24	23	21	20	20	20	20	21	23	20	21	25	23	23	21	22	22	23	24	24	25	26	25	23	24	--	23	23
DECEMBER.	25	23	23	21	21	21	23	22	22	26	24	25	25	25	24	20	24	24	24	23	23	22	20	20	20	20	20	20	18	20	19	22
JANUARY..	--	--	--	--	--	--	--	--	21	22	20	18	17	16	17	18	18	19	19	19	19	19	19	19	19	17	16	17	18	20	--	--
FEBRUARY..	21	23	22	22	21	20	20	18	16	16	19	20	20	18	16	17	18	20	19	18	18	17	17	17	18	19	18	15	16	--	--	18
MARCH....	16	16	19	19	19	20	18	19	20	22	23	22	22	22	22	23	23	23	22	23	23	23	23	23	23	23	23	23	23	23	23	20
APRIL....	23	25	26	24	25	26	27	28	--	--	--	23	22	22	23	30	31	31	30	29	30	30	30	30	25	25	25	29	27	27	--	26
MAY.....	28	29	29	27	26	28	28	27	27	26	30	30	32	27	27	27	27	28	26	25	25	29	28	28	27	27	27	27	28	29	29	29
JUNE.....	28	28	26	25	25	24	28	29	28	29	29	29	28	28	25	27	28	28	25	27	28	30	31	31	31	30	29	27	28	28	--	28
JULY.....	28	26	29	29	28	28	29	28	29	30	31	30	28	28	29	29	28	30	29	27	27	27	28	30	30	31	31	32	31	30	30	29
AUGUST...	31	30	30	29	31	31	31	30	31	31	31	31	31	31	31	31	32	32	32	32	32	31	33	31	30	29	29	30	30	29	30	29
SEPTEMBER	30	30	30	30	29	29	31	30	29	28	28	28	27	28	29	29	28	28	28	28	28	28	--	--	27	28	28	25	28	28	--	28

## LAKE OKEECHOBEE AND THE EVERGLADES BASINS

02274500 TAYLOR CREEK ABOVE OKEECHOBEE, FLA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	334	314	1400	--	2700	1800	1870	1500	960	155	320	405
2.....	273	199	1200	--	2610	1290	1850	1540	810	150	309	290
3.....	268	600	1600	--	2950	1280	1850	1580	920	125	299	430
4.....	332	610	1400	--	2500	1280	1900	1620	317	94	430	542
5.....	332	600	1500	--	2800	1180	1920	1800	206	99	275	595
6.....	398	610	1500	--	2700	1170	1920	1800	206	95	465	810
7.....	400	710	1600	--	2790	1150	1790	1780	258	95	319	580
8.....	335	705	1600	1250	2790	1150	1810	1710	173	120	320	815
9.....	332	770	1500	1200	2520	1150	1930	1720	262	110	360	520
10.....	403	1030	1400	1200	2900	1120	2010	1720	197	130	300	270
11.....	404	1070	1400	1200	3100	1200	1880	1520	116	120	300	250
12.....	406	1070	1400	1300	3200	1350	1810	1550	115	131	260	381
13.....	462	1070	1500	1300	3100	1350	1810	1490	208	170	260	350
14.....	468	1170	1000	1590	3100	1250	1810	1450	104	170	260	350
15.....	465	1590	1000	1550	2900	1240	1810	820	112	185	260	350
16.....	540	1300	1000	1890	2750	1220	2250	1430	110	185	505	260
17.....	540	1470	980	1890	2990	1070	2290	1440	183	160	230	360
18.....	550	1440	1150	1890	2390	1090	2270	1430	182	185	220	225
19.....	810	1250	1150	1830	2510	1750	2290	1430	254	190	270	220
20.....	510	1720	1190	1830	2350	1100	2290	1440	218	105	215	235
21.....	650	1310	1105	1800	2390	1070	2210	1600	191	100	235	235
22.....	705	1350	1200	2000	1790	1780	2100	1600	247	190	270	215
23.....	195	1670	1250	2100	1790	1480	2080	1420	242	140	195	--
24.....	197	1750	1200	1700	1790	1480	2190	1420	117	130	260	--
25.....	197	1790	1250	1700	1720	1480	2010	1430	172	175	350	220
26.....	197	1450	1290	2100	1600	1470	2010	1420	207	175	290	210
27.....	197	1650	1400	2100	1190	1750	2000	1600	171	185	560	220
28.....	650	1670	1400	2300	1290	1760	1980	1450	169	255	420	320
29.....	205	1790	1200	2390	1190	1760	1420	960	168	250	785	325
30.....	310	1660	1300	2300	--	1760	1580	950	--	270	385	330
31.....	315	--	1300	1390	--	1800	--	830	--	290	340	--
AVERAGE	383	1180	1300	1740	2430	1380	1960	1470	261	160	325	367

02277000 ST. LUCIE CANAL AT LOCK, NEAR STUART, FLA.

LOCATION.--Lat 27°06'39", long 80°17'06", Martin County, at gaging station at upstream end of right lock wall, 6.3 miles southwest of Stuart.

PERIOD OF RECORD.--Chemical analyses: October 1960 to September 1962, July 1964 to September 1968.  
Water temperatures: July 1964 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 3,900 micromhos Feb. 13; minimum daily, 282 micromhos Nov. 6.  
Water temperatures: Maximum, 31.0°C Aug. 13; minimum, 14.0°C Mar. 1, 2.

Period of record:

Specific conductance: Maximum daily, 5,040 micromhos June 10, 1967; minimum daily, 225 micromhos July 1, 1966.

Water temperatures: Maximum, 31.0°C Aug. 19, 1964 and Aug. 13, 1968; minimum, 13.0°C Jan. 31, 1966.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	TEMPERATURE (°C)	SILICA (SiO <sub>2</sub> )	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	STRONTIUM (SR)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )
FEB.											72
07...	30	18	8.9	.01	72	25	--	144	6.8	222	--
29...	--	--	--	--	--	--	--	--	--	--	--
MAR.											48
20...	--	21	8.2	.03	78	14	--	58	3.0	240	--
31...	--	20	--	--	--	--	--	--	--	--	--
APR.											--
30...	--	--	--	--	--	--	--	--	--	--	--
MAY											--
31...	--	27	--	--	--	--	--	--	--	--	--
JUNE											39
19...	25	26	6.6	.06	47	10	--	33	3.3	146	--
30...	--	28	--	--	--	--	--	--	--	--	--
JULY											27
24...	--	30	1.9	.04	37	7.4	.50	24	2.3	116	--
31...	--	30	--	--	--	--	--	--	--	--	--
AUG.											--
31...	--	29	--	--	--	--	--	--	--	--	--
SEPT.											--
30...	--	--	--	--	--	--	--	--	--	--	--
DATE	CHLORIDE (CL)	FLUORIDE (F)	NITRATE (NO <sub>3</sub> )	PHOSPHATE (PO <sub>4</sub> )	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS-SOLVED IRON (FE)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR
FEB.											40
07...	250	.4	.0	--	688	776	332	150	1250	7.5	--
29...	--	--	.4	.02	--	--	--	--	750	--	--
MAR.											40
20...	101	.5	.8	--	430	452	252	55	740	7.8	--
31...	--	--	.0	.13	--	--	--	--	730	--	--
APR.											--
30...	--	--	.0	.08	--	--	--	--	1300	--	--
MAY											--
31...	--	--	.0	.17	--	--	--	--	740	--	--
JUNE											80
19...	52	.3	1.7	--	265	296	158	38	468	7.1	--
30...	--	--	.40	--	--	--	--	--	490	--	--
JULY											80
24...	39	.3	.1	--	197	218	124	28	345	7.4	--
31...	--	--	1.5	.25	--	--	--	--	340	--	--
AUG.											--
31...	--	--	.6	.05	--	--	--	--	410	--	--
SEPT.											--
30...	--	--	--	.27	--	--	--	--	410	--	--

## 117

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968												
DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	560	300	470	699	810	820	1210	840	1020	480	341	420
2.....	250	290	710	540	780	750	1230	810	750	480	380	350
3.....	560	275	510	1200	930	1300	830	950	670	460	330	389
4.....	540	270	640	730	870	1440	734	900	640	460	350	381
5.....	525	265	530	790	800	730	1190	1000	620	448	315	381
6.....	520	262	490	730	820	720	880	870	620	429	299	381
7.....	505	265	510	730	690	770	1130	1310	600	400	320	390
8.....	490	270	535	860	750	810	938	1000	520	339	340	381
9.....	450	272	590	720	830	800	795	1100	433	295	330	389
10.....	420	278	589	800	750	1300	1340	2150	372	355	370	389
11.....	410	282	580	660	950	830	964	870	378	384	410	409
12.....	378	290	640	690	1100	810	790	900	375	350	410	435
13.....	368	298	650	770	3900	770	725	870	348	411	460	415
14.....	364	308	640	720	785	830	918	2200	332	450	449	570
15.....	352	320	650	700	690	760	672	1140	315	380	435	409
16.....	346	338	690	730	690	780	735	860	308	379	399	400
17.....	344	432	700	1900	720	780	714	1480	308	364	390	400
18.....	342	382	640	960	740	820	816	840	442	388	410	400
19.....	342	388	790	730	720	720	745	2320	415	343	385	405
20.....	349	410	670	660	1200	780	906	760	460	319	365	410
21.....	342	430	640	690	770	740	1130	750	438	320	395	435
22.....	347	420	650	650	760	750	740	770	470	315	340	460
23.....	352	462	1100	630	750	730	765	750	520	344	380	431
24.....	350	870	680	770	735	800	795	740	540	328	350	431
25.....	352	590	630	725	760	810	785	840	540	342	410	431
26.....	357	492	650	720	790	780	918	720	520	349	402	431
27.....	358	480	670	1200	820	730	990	710	458	360	405	430
28.....	343	486	630	650	730	720	755	790	492	371	405	430
29.....	336	498	690	730	750	790	735	710	490	370	400	445
30.....	320	540	700	670	--	780	1300	810	490	342	400	410
31.....	310	--	700	850	--	730	--	740	--	340	410	--
AVERAGE	402	382	638	799	915	829	891	1040	496	377	379	415

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE
OCTOBER...	27	26	25	25	26	25	24	24	24	25	24	25	24	24	24	24	22	23	24	24	24	24	23	23	26	24	24	24	24	24	24	24
NOVEMBER...	23	24	24	23	22	22	21	21	21	21	21	21	20	21	21	21	21	20	20	20	20	20	20	20	22	22	22	22	22	22	--	21
DECEMBER...	23	22	23	20	22	21	21	21	21	21	22	22	22	23	23	22	22	21	23	23	23	23	22	19	19	19	19	19	18	18	18	21
JANUARY...	19	19	19	19	21	21	20	21	21	21	21	20	19	18	17	17	18	18	18	17	17	17	17	18	18	16	17	18	18	18	18	18
FEBRUARY...	18	19	19	18	18	17	17	16	15	16	17	17	17	16	16	17	18	18	19	18	17	17	18	18	16	16	17	16	17	--	17	17
MARCH....	14	16	16	17	16	16	16	18	18	19	19	20	18	19	20	18	19	20	19	19	20	21	19	19	19	19	20	20	19	20	18	18
APRIL.....	21	22	22	23	23	24	24	24	24	24	23	23	22	22	23	23	24	24	24	24	24	24	24	26	26	26	26	26	26	--	23	23
MAY.....	25	25	26	26	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
JUNE.....	27	28	26	26	26	25	26	27	27	27	27	27	28	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	26	26	26
JULY.....	27	27	28	28	27	27	27	27	27	27	27	29	30	29	29	29	30	28	29	29	29	29	29	29	28	28	29	30	30	30	30	28
AUGUST....	30	27	28	28	28	28	28	28	29	29	29	30	31	30	30	30	29	30	30	30	30	30	30	30	30	30	30	30	30	29	29	29
SEPTEMBE...	29	29	29	30	30	30	29	29	29	29	29	29	28	27	27	27	28	28	28	28	28	28	28	28	26	27	27	26	27	--	28	28

LOCATION.--Lat 26°51'50", long 80°37'55", Palm Beach County, at gaging station on right bank in hurricane gate structure 5 at Lake Okeechobee, 200 ft upstream from bridge on U.S. Highway 441 at Canal Point.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1954, October 1957 to September 1958, October 1960 to September 1961, July 1964 to September 1968.  
Water temperatures: July 1964 to September 1968.

Specific conductance: Maximum daily, 1,980 micromhos Sept. 12; minimum daily, 360 micromhos Aug. 30, 31.  
Water temperatures: Maximum, 32.0°C Aug. 11-13, 16-19; minimum, 12.0°C Feb. 8-10.

Period of record:

Specific conductance: Maximum daily, 2,800 micromhos Oct. 24, 1964; minimum daily, 300 micromhos Aug. 24, 1966.  
Water temperatures: Maximum, 32.0°C Aug. 6, 1964 and on several days during August 1968; minimum, 11.0°C Jan. 30, 31, 1966.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

## LAKE OKEECHOBEE AND THE EVERGLADES BASINS

02278000 WEST PALM BEACH CANAL AT HGS-5, AT CANAL POINT, FLA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (MG/L)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	DIS-SOLVED OXYGEN	PERCENT SATURATION
NOV.												
01...	1.0	8.5	--	774	796	246	0	1320	7.9	70	--	--
DEC.												
04...	.5	1.0	--	329	370	200	49	590	7.3	35	--	--
JAN.												
03...	.5	1.3	--	356	392	198	50	610	7.4	40	--	--
FEB.												
01...	.5	1.5	--	359	390	204	53	640	7.9	40	--	--
MAR.												
31...	--	.8	.00	--	--	--	--	590	--	--	--	--
APR.												
01...	.5	1.3	--	354	373	207	59	620	7.4	30	--	--
30...	--	1.0	.08	--	--	--	--	565	--	--	--	--
MAY												
02...	.5	1.3	.05	367	397	212	54	639	7.8	30	5.4	66
31...	--	.1	.53	--	--	--	--	888	--	--	--	--
JUNE												
30...	--	3.5	.32	--	--	--	--	855	--	--	--	--
JULY												
01...	.4	2.6	--	462	507	236	51	810	7.3	60	--	--
31...	--	1.5	.32	--	--	--	--	400	--	--	--	--
AUG.												
01...	.4	.5	--	283	307	37	37	480	7.3	55	--	--
31...	--	.9	.12	--	--	--	--	360	--	--	--	--
SEPT.												
30...	--	--	--	--	--	--	--	1700	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS AS 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	645	830	570	530	610	545	570	627	920	640	370	460
2.....	645	1000	580	540	620	585	599	628	770	780	410	455
3.....	675	975	580	570	600	590	599	628	770	800	410	450
4.....	675	690	560	580	600	545	585	628	730	730	410	469
5.....	675	690	555	565	610	580	550	628	760	1350	401	460
6.....	680	690	562	540	610	540	550	631	720	1750	430	750
7.....	710	690	562	580	610	575	550	631	1600	1590	430	896
8.....	1040	700	560	550	560	540	579	718	1420	1100	430	1326
9.....	800	695	575	580	560	549	600	633	1720	1220	460	1341
10.....	1010	670	590	600	580	580	585	678	1700	975	450	1380
11.....	1060	620	610	560	600	580	570	859	1780	1500	485	1390
12.....	1270	620	610	580	600	580	600	693	1350	1100	485	1980
13.....	1340	620	579	580	605	580	590	701	1620	1290	460	1810
14.....	1110	620	580	540	590	590	595	711	1610	925	460	1960
15.....	1500	620	585	570	600	580	559	751	1200	975	460	1236
16.....	1000	650	585	600	600	595	560	767	1270	685	430	950
17.....	1290	640	585	610	610	590	610	733	1410	1620	430	845
18.....	1510	640	580	615	600	590	572	711	1110	1700	380	948
19.....	1520	610	580	615	600	590	600	691	1420	1400	380	1020
20.....	1250	610	580	610	550	550	590	698	1780	1720	380	1070
21.....	1240	620	590	550	595	570	570	670	1200	1120	380	1010
22.....	1250	620	590	590	610	580	570	664	1710	1250	380	967
23.....	800	620	600	620	560	590	600	663	1700	810	390	774
24.....	800	620	589	610	590	585	580	663	1500	810	390	1310
25.....	800	620	600	610	580	555	569	663	1320	690	390	741
26.....	1090	620	600	610	560	570	560	582	1520	599	390	710
27.....	1330	620	600	610	599	610	600	632	1150	470	380	1379
28.....	1350	620	600	630	620	555	610	679	960	430	390	1840
29.....	1150	580	610	630	620	570	590	712	1950	430	375	1690
30.....	955	570	610	620	--	590	565	1070	855	375	360	1700
31.....	985	--	610	620	--	590	--	888	--	400	360	--
AVERAGE	1040	666	586	587	594	574	580	697	1320	1010	410	1100

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																																
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE	
OCTOBER..	26	26	26	25	25	26	24	23	26	24	24	25	24	24	24	26	24	23	23	24	24	24	24	24	24	24	24	24	24	24	24	24	
NOVEMBER..	24	24	24	24	23	22	21	20	19	19	19	20	20	20	21	21	21	21	21	21	21	22	22	23	23	23	23	24	24	--	21	21	
DECEMBER..	23	23	23	21	21	21	20	20	19	19	20	20	20	20	20	21	21	21	21	21	21	21	21	21	21	19	18	19	19	17	17	17	20
JANUARY..	19	19	19	21	21	21	20	21	--	20	20	20	19	19	19	18	17	17	17	18	18	18	19	19	18	16	14	16	16	17	15	18	18
FEBRUARY..	18	18	20	19	19	18	14	12	12	13	13	14	14	16	16	16	16	16	14	16	17	18	18	16	16	16	15	17	--	--	--	15	
MARCH....	14	13	14	16	18	16	16	17	12	19	20	19	19	19	19	19	19	20	21	21	21	21	21	21	21	18	18	18	19	19	21	22	18
APRIL.....	22	22	21	20	26	26	26	26	25	24	24	25	24	24	24	24	24	24	24	24	24	25	26	27	27	26	27	27	27	27	--	24	
MAY.....	26	26	25	27	26	27	25	25	--	25	26	26	27	28	28	27	28	28	28	28	28	28	28	28	28	28	27	27	27	27	26	26	
JUNE.....	27	27	27	26	26	26	26	26	26	26	26	27	27	28	27	27	27	27	27	27	26	27	27	27	28	28	29	29	27	27	28	--	26
JULY.....	28	28	27	27	26	27	27	27	27	27	27	27	26	26	27	27	28	28	28	28	28	28	28	28	28	28	29	29	31	30	30	30	27
AUGUST....	30	30	29	29	30	30	--	29	31	32	32	32	31	31	32	32	32	32	31	30	31	31	31	31	31	31	31	30	30	30	30	30	30
SEPTEMBER	30	30	30	30	30	30	29	29	28	29	28	29	27	27	28	28	28	28	28	28	28	28	28	28	28	27	27	27	27	27	27	--	28

## LAKE OKEECHOBEE AND THE EVERGLADES BASINS

119

02280500 HILLSBORO CANAL BELOW HGS-4, NEAR SOUTH BAY, FLA.

LOCATION.--Lat 26°42'00", long 80°42'45", Palm Beach County, at gaging station 15 ft from south bank, 200 ft downstream from North New River Canal, 1,000 ft downstream from hurricane gate structure 4 and pump structure 2 at Lake Okeechobee, and 2.5 miles north of South Bay.

PERIOD OF RECORD.--Chemical analyses: October 1957 to September 1958, October 1959 to September 1962, August 1964 to September 1968.

Water temperatures: August 1964 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 2,100 micromhos June 1; minimum daily, 560 micromhos Jan. 24.

Water temperatures: Maximum, 29.0°C on many days during November to May and July to September; minimum, 14.0°C Jan. 25, 26, Feb. 8, Mar. 2.

Period of record:

Specific conductance: Maximum daily, 2,280 micromhos Aug. 17, 19, 21, 1966; minimum daily, 118 micromhos Dec. 19, 1965.

Water temperatures: Maximum, 33.0°C on several days during June to August 1967; minimum, 14.0°C Jan. 18, 19, 1965, Jan. 25, 26, Feb. 8, Mar. 2, 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
NOV.												
01...	--	26	16	.03	66	17	--	110	4.5	268	39	140
DEC.												
05...	--	23	6.9	.02	53	16	--	46	3.4	180	50	69
JAN.												
05...	--	20	8.5	.00	58	17	--	50	3.0	192	53	74
FEB.												
02...	--	20	6.7	.02	54	16	--	50	2.8	184	50	71
29...	--	16	--	--	--	--	--	--	--	--	--	--
MAR.												
31...	--	22	--	--	--	--	--	--	--	--	--	--
APR.												
01...	305	22	6.2	.02	60	19	--	60	3.7	204	60	92
30...	--	27	--	--	--	--	--	--	--	--	--	--
MAY												
03...	229	25	6.2	.02	57	17	1.1	56	3.3	188	52	86
31...	--	26	--	--	--	--	--	--	--	--	--	--
JUNE												
30...	--	28	--	--	--	--	--	--	--	--	--	--
JULY												
02...	--	27	32	.05	142	62	--	160	9.2	536	192	208
31...	--	29	--	--	--	--	--	--	--	--	--	--
AUG.												
02...	--	29	19	.03	114	38	2.9	102	5.6	392	122	148
31...	--	28	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SOP OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHCS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
NOV.												
01...	1.0	2.7	--	528	577	234	14	950	7.5	60	--	--
DEC.												
05...	.5	3.5	--	337	374	198	50	600	7.7	40	--	--
JAN.												
05...	.5	2.3	--	361	388	214	56	645	7.8	45	--	--
FEB.												
02...	.5	1.7	--	344	375	200	49	610	7.9	40	--	--
29...	--	9.3	.88	--	--	--	--	1210	--	--	--	--
MAR.												
31...	--	.4	.11	--	--	--	--	700	--	--	--	--
APR.												
01...	.5	.8	--	402	429	228	61	710	7.4	40	--	--
30...	--	.6	.10	--	--	--	--	680	27.0	--	--	--
MAY												
03...	.5	1.9	.03	374	421	214	60	658	7.7	20	4.7	56
31...	--	2.8	.89	--	--	--	--	1630	--	--	--	--
JUNE												
30...	--	--	.33	--	--	--	--	1710	--	--	--	--
JULY												
02...	1.2	1.5	--	1070	1230	610	170	1720	7.6	200	--	--
31...	--	3.7	.07	--	--	--	--	1200	--	--	--	--
AUG.												
02...	.8	1.9	--	747	823	444	124	1170	7.6	140	--	--
31...	--	2.1	.29	--	--	--	--	1200	--	--	--	--

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER..	27	26	26	26	26	27	27	27	26	26	26	26	27	27	26	26	27	26	26	24	24	26	24	26	24	24	24	23	24	26	26	25
NOVEMBER.	31	29	28	29	29	28	26	26	26	26	26	26	24	24	23	23	22	21	22	21	22	21	22	21	22	22	23	23	22	--	24	24
DECEMBER.	24	23	22	21	21	20	20	21	22	22	21	21	22	21	22	22	22	21	21	21	21	22	21	20	20	20	20	19	18	18	18	20
JANUARY..	20	19	21	21	19	20	20	19	18	19	21	19	20	19	18	18	19	18	19	19	18	18	17	14	14	16	18	18	19	19	18	18
FEBRUARY.	19	18	19	20	20	18	14	15	16	16	17	17	18	18	19	20	20	19	18	17	16	16	15	15	15	16	18	20	16	--	17	17
MARCH....	16	14	16	18	20	19	18	19	21	21	22	23	21	19	19	20	21	21	21	19	20	21	20	21	21	21	21	22	21	22	22	19
APRIL.....	22	23	24	24	24	23	24	25	25	26	26	26	27	27	26	26	27	27	28	28	28	27	28	28	28	28	28	28	28	27	--	26
MAY.....	28	29	28	27	27	27	24	24	24	26	26	28	28	29	29	28	27	27	28	27	27	28	27	26	26	26	26	27	28	26	27	27
JUNE.....	26	26	26	25	25	--	27	26	26	27	28	28	28	28	27	28	28	28	--	28	28	27	28	28	27	27	27	28	28	28	--	27
JULY.....	27	26	26	27	28	27	27	28	27	26	28	28	28	28	28	28	28	28	27	27	28	28	28	28	28	28	28	28	28	29	29	27
AUGUST...	29	28	29	28	28	29	29	29	28	28	29	29	28	28	28	28	28	28	28	29	29	28	29	29	29	29	28	28	29	29	28	28
SEPTEMBER	29	29	29	29	28	29	28	28	29	28	29	28	28	28	28	28	28	27	28	28	28	28	28	28	27	28	28	28	27	27	--	28









## 02285000 NORTH NEW RIVER CANAL NEAR FORT LAUDERDALE, FLA.

LOCATION.--Lat 26°05'39", long 80°13'48", Broward County, at gaging station on right bank 20 ft upstream from lock and dam on State Highway 84 and 6 miles southwest of Fort Lauderdale.

PERIOD OF RECORD.--Chemical analyses: August 1964 to September 1968.  
Water temperatures: August 1964 to September 1968.

## EXTREMES.--1967-68:

Specific conductance: Maximum daily, 768 micromhos Apr. 14, 15; minimum daily, 470 micromhos Aug. 12, 13.  
Water temperatures: Maximum, 30.0°C Sept. 14; minimum, 14.0°C Jan. 27, Mar. 2.

## Period of record:

Specific conductance: Maximum daily, 995 micromhos May 29-31, 1967; minimum daily, 332 micromhos June 20, 1967.  
Water temperatures: Maximum, 31.0°C July 7, 1965; minimum, 13.0°C Jan. 31, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SI02)	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	STRONTIUM (SR)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	SULFATE (SO4)	CHLORIDE (CL)
NOV.												
10....	.50	23	9.5	.03	75	8.2	--	43	1.5	260	.8	63
FEB.												
02....	--	20	8.2	.03	79	11	--	52	1.1	284	.8	77
MAR.												
25....	--	21	5.6	.03	80	11	--	57	1.4	292	1.2	91
APR.												
29....	.00	28	4.3	.06	56	14	1.2	60	2.0	240	1.5	92
JULY												
03....	--	28	11	.04	60	10	--	45	1.9	220	14	67
31....	--	29	--	--	--	--	--	--	--	--	--	--
AUG.												
31....	--	28	--	--	--	--	--	--	--	--	--	--
SEPT.												
30....	--	29	--	--	--	--	--	--	--	--	--	--

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (RESIDUE OF CONSTITUENTS)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	DIS-SOLVED OXYGEN	PERCENT SATURATION
NOV.												
10....	.8	2.6	--	332	323	220	7	610	7.6	70	--	--
FEB.												
02....	.5	2.9	--	373	412	242	9	680	7.9	70	--	--
MAR.												
25....	.4	1.6	--	393	426	244	4	710	7.9	60	--	--
APR.												
25....	.5	.8	.04	350	394	198	1	640	7.8	60	5.1	65
JULY												
03....	.5	.8	--	318	361	190	10	570	7.7	80	--	--
31....	--	--	.02	--	--	--	--	640	--	--	--	--
AUG.												
31....	--	1.8	.01	--	--	--	--	525	--	--	--	--
SEPT.												
30....	--	--	.02	--	--	--	--	580	--	--	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	--	602	610	640	660	670	695	660	550	570	550	560
2.....	--	590	560	640	660	670	695	650	540	570	550	550
3.....	610	600	580	570	610	670	683	650	540	570	550	570
4.....	615	580	560	579	610	620	690	650	--	570	550	570
5.....	610	600	610	610	620	670	683	660	530	570	550	570
6.....	580	580	610	580	659	680	688	650	550	570	575	570
7.....	500	600	570	580	650	670	688	650	560	548	575	570
8.....	490	600	620	590	610	660	688	640	580	548	530	580
9.....	510	600	620	590	650	660	663	630	580	535	530	580
10.....	550	595	570	595	600	670	688	610	580	540	510	570
11.....	550	590	600	581	600	660	658	630	570	545	510	570
12.....	555	600	610	575	600	660	715	500	580	545	470	570
13.....	560	600	550	630	639	640	745	500	580	548	470	570
14.....	575	595	610	550	665	670	768	504	570	550	486	570
15.....	590	600	610	550	659	640	768	506	590	550	495	570
16.....	590	605	615	580	615	660	713	600	580	550	495	540
17.....	590	605	610	610	675	650	655	630	590	550	500	580
18.....	595	620	580	640	635	650	688	640	570	560	500	570
19.....	590	609	590	630	630	650	625	640	600	560	510	560
20.....	590	610	650	570	615	650	635	650	600	600	510	570
21.....	595	615	630	580	600	650	630	630	498	590	510	570
22.....	595	615	620	610	580	650	635	620	500	590	510	560
23.....	595	615	580	645	590	660	640	620	510	600	540	580
24.....	525	615	660	610	590	640	645	510	510	610	510	580
25.....	560	615	640	610	580	670	645	500	520	615	510	580
26.....	570	620	640	610	620	680	645	550	520	620	510	570
27.....	580	620	580	639	610	670	650	550	540	630	510	570
28.....	590	620	640	610	610	680	645	540	540	630	510	570
29.....	595	620	630	650	610	670	655	570	550	635	525	570
30.....	590	615	630	610	--	680	655	570	560	640	530	580
31.....	590	--	630	610	--	680	--	560	--	640	525	--
AVERAGE	572	605	606	602	622	661	675	595	554	579	519	569



## 00286400 MIAMI CANAL AT HGS-3 AND S-3, AT LAKE HARBOR, FLA.

LOCATION.--Lat 26°41'55, long 80°48'25, Palm Beach County, at gaging station at hurricane gate structure 3 and pump structure 3 at Lake Okeechobee, 0.4 mile upstream from U.S. Highway 27, in Lake Harbor.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1968.  
Water temperatures: January to September 1968.

## EXTREMES.--1967-68:

Specific conductance: Maximum daily, 1,520 micromhos June 23; minimum daily, 510 micromhos Feb. 12.  
Water temperatures: Maximum, 30.0°C June 13, 24, Aug. 16, 31, Sept. 30; minimum, 7.0°C Feb. 15.

## Period of record:

Specific conductance: Maximum daily, 1,520 micromhos June 23, 1968; minimum daily, 500 micromhos May 3, 1965.  
Water temperatures: Maximum, 30.0°C June 13, 24, Aug. 16, 31, Sept. 30, 1968; minimum, 7.0°C Feb. 15, 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF)	TEMP- ERATURE (°C)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)
NOV...	--	25	17	.07	111	26	--	95	3.2	380	70	135
DEC...	--	22	8.1	.02	54	16	--	51	3.1	186	50	77
JAN...	--	21	9.4	.00	56	19	--	59	3.1	200	53	82
O4...	--	27	10	.12	120	23	--	46	4.4	352	84	80
FEB...	--	20	8.6	.02	57	19	--	54	3.0	197	56	80
25...	--	11	--	--	--	--	--	--	--	--	--	--
MAR...	--	15	--	--	--	--	--	--	--	--	--	--
APR...	--	23	5.7	.02	58	19	1.1	60	3.4	198	55	88
16...	403	28	--	--	--	--	--	--	--	--	--	--
30...	--	27	6.7	.02	46	17	1.1	57	3.4	164	59	86
PAY...	221	--	--	--	--	--	--	--	--	--	--	--
01...	--	26	--	--	--	--	--	--	--	--	--	--
31...	--	28	--	--	--	--	--	--	--	--	--	--
JUNE...	--	30	12	.04	131	27	2.1	63	5.3	370	110	102
01...	.00	30	--	--	--	--	--	--	--	--	--	--
21...	--	26	--	--	--	--	--	--	--	--	--	--
SEPT...	--	26	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESIDUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATU- RATION
NOV...	--	--	--	651	752	384	72	1060	7.8	160	--	--
01...	.7	3.6	--	354	386	200	47	635	7.3	40	--	--
OCT...	--	2.1	--	383	429	218	54	700	7.7	45	--	--
JAN...	.5	2.2	--	554	673	394	105	920	7.4	200	--	--
O4...	.6	13	--	377	410	220	58	655	8.1	40	--	--
07...	.6	--	--	--	--	--	--	930	--	--	--	--
FEB...	.5	2.0	16	--	--	--	--	--	--	--	--	--
25...	--	3.7	--	--	--	--	--	--	--	--	--	--
MAR...	--	1.6	.00	--	--	--	--	810	--	--	--	--
31...	--	.6	.03	389	419	224	62	680	7.4	30	--	--
APR...	.5	.0	.08	--	--	--	--	650	--	--	--	--
16...	--	1.6	.02	359	395	186	51	634	7.5	20	53.0	65
30...	--	.3	.07	--	--	--	--	878	--	--	--	--
PAY...	--	--	.45	--	--	--	--	840	--	--	--	--
01...	--	6.6	.28	--	--	--	--	950	--	--	--	--
31...	--	3.1	--	638	718	440	138	999	7.6	160	--	--
JUNE...	.7	--	--	--	--	--	--	1210	--	--	--	--
01...	--	--	.04	--	--	--	--	1110	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
SEPT...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															AVER- AGE	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
NOVEMBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
DECEMBER..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JANUARY...	--	--	--	--	--	--	--	--	--	--	--	24	24	22	22	20	20	19	10	24	13	13	15	17	12	10	10	9	13	22	13	--	
FEBRUARY...	14	15	13	14	13	13	12	11	10	9	10	9	10	10	7	9	12	12	8	9	10	11	12	11	10	11	12	11	11	--	--	--	
MARCH....	9	9	9	10	10	11	10	11	12	14	15	17	14	13	15	14	15	13	15	15	14	15	14	15	12	16	12	15	15	15	15	13	
APRIL.....	17	17	17	17	18	19	19	17	19	20	24	23	22	23	24	25	26	18	27	28	28	28	29	24	26	25	28	28	28	--	--	22	
MAY.....	27	28	29	25	28	28	25	24	25	25	25	26	25	26	25	28	--	--	28	29	28	28	29	28	28	28	28	28	28	28	29	27	26
JUNE.....	25	28	25	25	26	26	28	25	26	28	26	26	30	26	26	26	26	26	26	26	27	27	28	30	29	28	26	24	26	26	--	26	
JULY.....	27	26	27	24	26	26	26	26	26	27	28	26	29	29	28	28	28	28	28	28	26	26	27	27	28	26	27	27	28	27	29	28	27
AUGUST...	28	28	27	28	25	28	29	28	28	28	28	28	28	28	30	28	28	28	28	28	29	27	28	28	28	29	28	28	28	28	30	28	28
SEPTEMBER	28	29	29	29	27	28	26	28	29	28	28	27	25	27	26	25	25	25	28	27	26	25	28	27	26	27	27	30	28	27	26	--	27

02286400 MIAMI CANAL AT HGS-3 AND S-3, AT LAKE HARBOR, FLA.--Continued  
 SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	960	960	540	652	610	860	650	640	960	920	970	1265
2.....	860	980	570	652	560	720	650	650	1060	880	830	1255
3.....	850	860	560	680	555	720	665	671	840	940	1100	1140
4.....	790	880	560	631	570	750	665	671	780	1030	910	1215
5.....	975	960	590	620	560	740	650	660	830	1080	1210	1185
6.....	810	990	560	705	540	760	660	661	880	1080	1310	1225
7.....	875	970	530	690	570	760	670	611	930	770	1350	1255
8.....	900	870	520	680	610	770	670	588	880	1050	1360	1215
9.....	740	970	520	629	600	925	660	583	930	1000	1350	1195
10.....	770	950	540	635	579	1030	660	596	980	880	1250	1225
11.....	865	975	570	650	910	1030	655	586	880	950	1200	1235
12.....	890	970	590	599	510	1030	660	573	940	1380	1200	1175
13.....	750	950	690	565	580	810	660	590	920	880	1200	1030
14.....	850	970	760	599	650	1050	630	728	980	840	1200	1070
15.....	770	980	710	671	610	700	660	650	930	750	1350	1080
16.....	950	940	790	665	590	905	670	650	1020	880	1290	1110
17.....	975	670	830	685	550	840	670	650	1010	820	1250	1120
18.....	900	650	780	650	550	710	660	--	940	860	1250	1205
19.....	910	650	770	600	570	880	660	778	1040	960	1250	1205
20.....	810	660	630	640	660	870	660	973	1040	1020	1240	1415
21.....	840	635	720	670	670	860	615	973	1460	700	1220	1050
22.....	875	670	710	660	820	1100	670	813	1100	820	1220	1490
23.....	920	690	670	690	760	880	675	949	1520	930	1220	1450
24.....	900	675	620	645	749	810	690	737	1220	1020	1220	1490
25.....	900	670	670	615	790	710	670	750	1480	1140	1220	1380
26.....	970	590	710	660	1000	695	670	830	1120	1030	1190	1305
27.....	990	675	670	640	890	710	625	830	1060	1170	1190	1030
28.....	1100	685	630	599	940	690	615	880	1000	1170	1190	1060
29.....	920	590	800	640	930	690	650	875	910	880	1200	1265
30.....	580	580	620	645	--	690	650	936	840	960	1200	1110
31.....	860	--	639	610	--	810	--	878	--	950	1210	--
AVERAGE	884	809	647	644	671	824	657	734	1020	955	1210	1220

## 02287105 MIAMI CANAL AT S-31, NEAR MIAMI, FLA.

LOCATION,--Lat 25°58'00", long 80°27'30", Dade County, 0.5 mile northwest of the intersection of Miami Canal and Dade County line northwest of U.S. Highway 27 in center of canal at S-31, and 21 miles northwest of Miami.

PERIOD OF RECORD,--Chemical analyses: August 1964 to June 1968 (discontinued).

Water temperatures: August 1964 to June 1968 (discontinued).

## EXTREMES,--1967-68:

Specific conductance: Maximum daily, 780 micromhos Jan. 22; minimum daily, 470 micromhos June 10, 12.

Water temperatures: Minimum, 16.0°C Mar. 2.

Period of record:

Specific conductance: Maximum daily, 800 micromhos May 8, 19, 1968; minimum daily, 539 micromhos Oct. 26, 1965.

Water temperatures (1964-65, October 1966 to June 1968): Maximum, 37.0°C on many days during August and September 1965; minimum, 16.0°C Mar. 2, 1965.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER: WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	TEMP- ERATURE (DEG C)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
NOV.												
O2...	--	26	11	.02	72	13	--	47	1.9	276	1.6	67
DEC.												
O1...	--	24	11	.02	75	14	--	48	1.8	280	6.4	73
JAN.												
O2...	--	21	9.9	.03	77	15	--	49	1.2	284	12	71
FEB.												
O2...	--	19	8.5	.02	75	15	--	51	1.4	282	14	73
APR.												
O3...	.00	22	6.5	.04	75	14	--	48	1.7	288	.8	76
MAY												
O6...	--	27	7.6	.13	74	13	.94	48	1.6	286	.5	72
JULY												
O8...	.00	26	11	.03	64	11	--	40	1.7	248	2.4	62
SEPT.												
O3...	--	28	14	.03	70	14	--	57	2.2	278	1.6	84
DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUMP OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NCN- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
NOV.												
O2...	.4	.5	--	349	397	233	7	620	7.7	70	--	--
DEC.												
O1...	.4	.9	--	369	404	244	14	645	7.9	50	--	--
JAN.												
O2...	.5	.8	--	376	411	254	21	680	7.8	60	--	--
FEB.												
O2...	.5	.9	--	378	416	248	17	680	7.7	60	--	--
APR.												
O3...	.4	.3	--	365	395	244	8	670	7.8	50	--	--
MAY												
O6...	.3	1.6	.05	361	380	239	4	650	8.0	50	2.3	28
JULY												
O8...	.3	1.3	--	316	348	204	1	580	7.5	50	--	--
SEPT.												
O3...	.4	.0	--	380	428	232	4	680	7.6	70	--	--

## 02287105 MIAMI CANAL AT S-31, NEAR MIAMI, FLA.—Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), OCTOBER 1967 TO JUNE 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	625	660	599	690	660	--	670	650	580	--	--	--
2.....	625	650	650	680	620	650	650	660	580	--	--	--
3.....	620	650	610	680	650	670	650	660	570	--	--	--
4.....	630	655	650	710	610	670	660	640	540	--	--	--
5.....	620	656	650	699	610	670	670	640	510	--	--	--
6.....	600	655	650	640	610	670	640	--	530	--	--	--
7.....	600	680	670	690	670	670	640	--	520	--	--	--
8.....	595	675	645	690	620	660	670	650	510	--	--	--
9.....	610	660	600	710	610	670	650	--	510	--	--	--
10.....	600	600	630	670	620	650	670	--	470	--	--	--
11.....	590	675	660	700	620	680	675	--	480	--	--	--
12.....	580	650	640	699	610	670	670	560	470	--	--	--
13.....	600	650	640	680	670	660	650	590	580	--	--	--
14.....	600	645	590	650	670	670	660	--	460	--	--	--
15.....	615	640	620	690	610	670	660	560	510	--	--	--
16.....	640	640	620	700	640	650	660	590	520	--	--	--
17.....	630	645	650	690	620	650	650	--	580	--	--	--
18.....	605	650	650	690	640	650	655	--	560	--	--	--
19.....	640	655	615	690	610	650	650	570	570	--	--	--
20.....	645	650	610	680	650	650	625	--	580	--	--	--
21.....	630	660	610	710	640	680	685	590	600	--	--	--
22.....	640	655	640	780	670	650	670	--	610	--	--	--
23.....	650	670	620	700	670	660	650	590	580	--	--	--
24.....	625	670	640	690	610	680	590	--	640	--	--	--
25.....	630	685	650	690	650	660	660	600	610	--	--	--
26.....	600	650	650	675	650	670	660	580	610	--	--	--
27.....	640	675	610	690	650	670	640	560	680	--	--	--
28.....	650	675	640	710	650	670	590	600	590	--	--	--
29.....	620	675	610	715	660	670	640	--	680	--	--	--
30.....	660	675	650	720	--	670	640	--	620	--	--	--
31.....	660	--	660	710	--	640	--	555	--	--	--	--
AVERAGE	621	657	633	694	636	663	650	--	562	--	--	--

TEMPERATURE (°C) OF WATER, OCTOBER 1967 TO JUNE 1968

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	27	25	24	25	26	24	25	24	26	25	25	26	26	26	25	25	26	26	25	24	24	26	26	26	25	25	26	26	26	26	26	25
NOVEMBER.	24	26	24	24	25	25	26	25	25	24	22	25	26	25	22	23	24	25	21	24	25	26	24	22	23	24	24	23	26	--	24	
DECEMBER.	23	23	24	24	24	24	25	24	25	22	23	24	23	24	23	23	24	23	24	24	25	23	25	24	24	21	26	26	25	25	23	
JANUARY..	24	24	25	26	24	26	24	25	24	23	23	24	25	24	24	26	25	24	26	19	24	24	19	24	19	19	19	17	21	21	18	20
FEBRUARY.	21	19	19	25	21	19	19	21	19	19	21	20	21	20	17	18	19	19	18	18	19	18	18	18	18	18	19	19	--	--	19	
MARCH....	--	16	17	19	18	18	18	19	19	19	19	20	20	20	19	19	26	20	19	21	21	21	20	21	20	21	19	20	21	21	20	19
APRIL....	20	21	21	21	18	22	24	23	23	23	24	23	21	21	21	23	24	23	24	24	23	23	23	23	23	24	24	24	25	--	24	--
MAY.....	25	23	24	24	23	--	--	23	--	--	23	--	--	24	23	--	23	25	--	23	--	--	24	--	24	24	24	25	--	--	24	--
JUNE.....	24	24	25	24	23	24	24	24	26	26	24	24	28	28	27	26	31	26	29	31	28	28	31	28	28	27	28	28	28	28	--	26

02287395 MIAMI CANAL EAST OF LEVEE 30, NEAR MIAMI, FLA.  
(Formerly published as 2-2872.00)

LOCATION.--Lat 25°56'28", long 80°26'23", Dade County, at gaging station near center of span on upstream site of bridge on State Highway 27, 200 ft downstream from control structure 32, approximately 200 ft downstream from levee 32, 14.1 miles upstream from salinity control structure, 19.5 miles northwest of Miami, and 19.8 miles upstream from mouth.

PERIOD OF RECORD.--Chemical analyses: November 1958 to September 1968.

Water temperatures: November 1958 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 680 micromhos on several days during March; minimum daily, 285 micromhos Feb. 19.

Water temperatures: Maximum, 29.0°C on many days during July to September; minimum, 16.0°C Mar. 6.

Period of record:

Dissolved solids (1958-67): Maximum, 469 mg/l Jan. 21-31, 1961; minimum, 258 mg/l Jan. 1-10, 1965.

Hardness (1958-67): Maximum, 266 mg/l Feb. 22, 24, 27, 28, 1962; minimum, 154 mg/l Jan. 11-20, 1963.

Specific conductance: Maximum daily, 740 micromhos May 22, 1966; minimum daily, 285 micromhos Feb. 19, 1968.

Water temperatures: Maximum, 37.0°C June 24, 1963 and Aug. 6, 27, 1967; minimum, 16.0°C Jan. 30, 1961, Jan. 27, 1966 and Mar. 6, 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (°C)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POT- AS- SIUM (K)	BICAR- BONATE (HCC <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)
NGV.												
C2...	--	26	8.3	.03	72	9.4	--	38	1.1	256	.4	61
DEC.												
01...	--	24	8.2	.02	72	11	--	41	1.2	268	.4	63
JAN.												
02...	--	21	8.6	.03	77	13	--	46	1.5	278	6.8	73
FEB.												
02...	--	19	8.1	.11	77	12	--	43	.9	282	1.2	65
APR.												
03...	268	21	6.2	.10	79	12	--	45	1.3	288	.0	71
MAY												
06...	312	24	6.5	.18	79	11	.79	44	1.3	286	.5	67
JULY												
08...	--	26	7.0	.22	66	9.4	--	36	1.3	244	6.4	56
ALG.												
31...	--	29	--	--	--	--	--	--	--	--	--	--
SEPT.												
28...	--	--	--	--	--	--	--	--	--	--	--	--
30...	282	28	11	.03	72	10	--	43	1.5	260	4.0	65

## LAKE OKEECHOBEE AND THE EVERGLADES BASINS

02287395 MIAMI CANAL EAST OF LEVEE 30, NEAR MIAMI, FLA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE	FLUO- RIDE (F)	NITRATE (N+3)	PHOS- PHATE (P+4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
NOV.												
C2....	.4	.9	--	318	353	218	8	590	7.6	50	--	--
DEC.												
C1....	.4	.3	--	330	356	224	5	600	8.1	50	--	--
JAN.												
C2....	.4	.5	--	364	384	246	18	650	7.8	50	--	--
FEB.												
C2....	.4	.7	--	347	387	242	10	645	7.8	50	--	--
APR.												
C3....	.3	.7	--	358	382	246	10	640	7.6	50	--	--
MAY												
C6....	.3	.8	.03	352	392	243	8	650	8.0	50	1.0	12
JULY												
C8....	.3	1.1	--	304	335	203	3	550	7.9	50	--	--
AUG.												
C1....	--	1.1	.01	--	--	--	--	550	--	--	--	--
SEPT.												
C2....	--	.8	.00	--	--	--	--	545	--	--	--	--
30....	.4	1.4	--	336	371	221	8	600	7.5	50	--	--

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	600	580	562	580	600	640	630	630	570	460	530	520
2.....	590	580	579	580	590	630	625	640	570	460	500	530
3.....	580	580	520	570	620	630	610	610	530	460	440	530
4.....	575	575	531	570	575	630	610	625	530	460	490	540
5.....	575	580	531	580	600	610	610	600	510	480	490	540
6.....	580	580	561	560	560	640	620	600	530	480	490	559
7.....	580	590	581	590	560	610	562	600	--	460	490	540
8.....	580	580	580	590	610	640	581	600	530	460	500	540
9.....	580	585	580	560	560	670	625	590	510	460	500	520
10.....	565	580	580	550	640	670	620	600	540	460	500	540
11.....	570	585	530	570	570	670	580	600	540	465	500	560
12.....	560	575	571	550	550	680	610	--	460	460	490	525
13.....	575	565	560	590	560	680	630	600	460	460	500	540
14.....	565	565	560	549	580	670	605	600	540	460	480	530
15.....	570	570	535	590	560	670	605	580	520	505	500	--
16.....	565	570	581	580	560	670	631	--	520	490	560	--
17.....	560	580	581	560	580	670	610	600	520	470	519	510
18.....	575	580	530	610	580	670	580	600	--	470	519	540
19.....	575	575	585	590	585	670	620	600	530	510	510	570
20.....	575	580	575	590	560	670	630	580	520	490	510	540
21.....	570	580	575	590	610	670	590	--	520	465	520	580
22.....	570	585	589	590	615	570	581	575	520	480	535	540
23.....	570	575	560	610	610	675	610	585	520	475	510	555
24.....	570	580	545	620	610	680	620	590	520	490	510	540
25.....	565	585	581	615	--	660	570	600	520	520	540	575
26.....	565	585	589	610	--	675	620	600	520	505	510	595
27.....	560	585	579	610	--	675	570	--	510	505	520	580
28.....	560	575	580	610	--	680	615	--	510	520	520	545
29.....	570	575	570	610	610	680	560	575	510	--	--	--
30.....	575	580	550	610	--	670	630	580	--	--	520	--
31.....	575	--	--	610	--	680	--	--	--	--	550	--
AVERAGE	572	578	564	586	574	661	605	598	526	478	506	545

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER..	27	26	26	26	21	22	27	27	26	26	27	27	23	27	27	27	27	27	25	24	26	26	26	26	26	26	26	26	27	26	26	25
NOVEMBER..	25	25	23	22	25	24	21	23	23	24	24	27	27	26	24	26	24	22	24	23	21	24	26	24	24	24	24	24	25	26	--	24
DECEMBER..	24	23	24	24	24	24	24	24	24	24	24	22	22	24	24	24	24	22	22	24	23	24	24	22	24	21	23	23	24	--	23	
JANUARY..	26	23	23	24	26	25	23	22	23	23	26	21	23	21	21	21	22	24	25	21	23	20	22	22	18	22	23	21	21	25	22	
FEBRUARY..	25	23	21	21	22	23	18	--	19	18	21	21	21	21	21	21	20	18	21	18	21	21	21	--	--	--	--	--	--	--	20	
MARCH....	22	21	23	25	21	16	21	23	22	21	21	22	22	21	21	23	22	21	23	19	19	25	26	22	21	21	23	21	21	--	22	
APRIL.....	23	--	24	24	24	23	24	24	24	22	23	22	23	24	24	26	23	26	24	24	24	25	24	24	27	19	27	23	22	24	--	23
MAY.....	23	24	24	22	24	26	23	--	22	26	24	27	24	31	31	--	24	24	20	--	23	24	24	24	--	--	24	24	--	--	24	
JUNE.....	24	24	26	26	28	27	--	27	27	26	26	--	27	26	25	25	31	--	22	31	26	26	--	--	24	24	25	26	--	--	25	
JULY.....	26	26	27	27	27	25	25	27	27	27	27	27	27	27	27	27	28	29	28	28	28	28	28	29	29	29	29	--	--	--	27	
AUGUST....	29	28	28	27	27	27	28	28	29	29	27	27	29	29	29	29	29	29	27	28	28	28	28	26	26	27	27	27	--	--	27	
SEPTEMBER	28	29	29	29	28	28	28	29	27	27	27	28	28	28	--	--	27	28	28	28	27	28	28	28	27	27	27	--	--	--	27	

## 02289030 TAMIAHI CANAL ABOVE S-12B, NEAR MIAMI, FLA.

LOCATION.--Lat 25°45'42", long 80°46'05", Dade County, at gaging station on south bank of Levee 29 Borrow Ditch, 100 ft northwest of control structure 12-B, and 35 miles west of Miami.

PERIOD OF RECORD.--Chemical analyses: August 1964 to June 1968 (discontinued).  
Water temperatures: August 1964 to June 1968 (discontinued).

EXTREMES.--October 1967 to June 1968:

Specific conductance: Maximum daily, 398 micromhos May 5; minimum daily, 180 micromhos June 13, 14.  
Water temperatures: Minimum, 18.0°C on several days during January to March.

Period of record:

Specific conductance: Maximum daily, 716 micromhos Aug. 9, 1965; minimum daily, 221 micromhos Aug. 8, 1967.  
Water temperatures: Maximum, 35.0°C Aug. 6, 1966; minimum, 16.0°C Jan. 31, Feb. 1, 4, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, OCTOBER 1967 TO JUNE 1968

DATE	TEMP- ERATURE (DEG C)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- PHOS- PHORUS (P)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT. 31...	27	5.6	.01	38	2.4	9.2	.8	116	.4	17

DATE	FLUO- RIDE (F)	NITRATE (NO3)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
OCT. 31...	.2	.4	131	161	105	10	230	7.3	20

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), OCTOBER 1967 TO JUNE 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	245	236	250	260	279	298	317	380	200	--	--	--
2.....	245	232	245	270	280	298	316	390	200	--	--	--
3.....	243	231	240	265	270	298	316	390	200	--	--	--
4.....	234	243	250	270	270	290	324	390	215	--	--	--
5.....	234	242	250	280	270	289	316	358	215	--	--	--
6.....	230	243	250	285	280	286	324	394	200	--	--	--
7.....	230	268	250	282	280	292	326	394	200	--	--	--
8.....	222	269	250	285	279	291	324	383	200	--	--	--
9.....	222	269	255	270	290	289	347	380	190	--	--	--
10.....	215	262	250	270	295	285	347	360	190	--	--	--
11.....	215	264	245	260	280	289	344	360	200	--	--	--
12.....	213	262	250	260	290	290	347	360	200	--	--	--
13.....	216	258	250	285	290	285	349	343	180	--	--	--
14.....	215	259	249	280	270	291	352	333	180	--	--	--
15.....	215	259	235	280	270	278	352	337	205	--	--	--
16.....	215	255	250	280	270	285	352	337	225	--	--	--
17.....	215	255	250	280	270	280	352	320	200	--	--	--
18.....	222	255	250	280	260	280	354	320	200	--	--	--
19.....	222	256	250	280	260	286	356	320	200	--	--	--
20.....	222	258	250	270	260	290	362	319	200	--	--	--
21.....	232	255	250	280	260	294	368	319	195	--	--	--
22.....	232	255	270	280	270	300	364	282	210	--	--	--
23.....	232	255	281	280	270	291	376	282	215	--	--	--
24.....	232	255	280	260	279	299	382	282	215	--	--	--
25.....	223	252	280	290	290	302	378	238	230	--	--	--
26.....	223	253	275	290	270	302	376	238	210	--	--	--
27.....	223	250	280	290	281	309	384	223	220	--	--	--
28.....	224	252	265	290	290	302	385	223	210	--	--	--
29.....	228	253	275	290	280	302	386	223	--	--	--	--
30.....	228	252	270	290	--	312	391	223	--	--	--	--
31.....	228	--	280	290	--	310	--	220	--	--	--	--
AVERAGE	225	253	257	278	275	293	352	321	203	--	--	--

## TEMPERATURE (°C) OF WATER, OCTOBER 1967 TO JUNE 1968

	DAY																															AVER- AGE	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	29	28	28	28	27	27	27	29	27	27	28	27	27	28	27	28	27	28	27	26	26	26	27	26	26	28	29	30	30	29	28	28	27
NOVEMBER..	27	27	27	27	27	25	23	22	21	21	21	21	22	23	24	24	23	24	25	25	25	25	24	24	24	24	24	25	25	25	25	24	24
DECEMBER..	25	24	24	23	23	23	22	22	23	23	23	24	24	24	25	25	25	24	24	25	26	25	25	24	24	18	19	19	19	20	20	21	22
JANUARY..	22	22	22	23	23	23	22	22	22	23	23	23	24	23	22	19	19	19	18	18	18	19	20	19	19	19	20	21	21	22	22	21	20
FEBRUARY..	22	23	23	22	21	21	21	19	19	20	21	21	21	22	21	21	22	21	21	21	22	22	21	20	18	19	18	18	18	18	18	18	20
MARCH.....	18	18	19	19	20	20	21	21	20	20	20	21	21	20	20	21	21	22	23	24	24	23	21	21	19	19	20	21	22	22	22	20	
APRIL.....	23	23	23	23	24	24	25	25	25	25	26	24	25	26	26	26	25	25	25	26	27	27	29	30	29	29	28	28	28	28	28	27	25
MAY.....	28	28	28	28	28	27	27	24	24	25	26	26	27	28	29	29	29	29	30	31	30	30	30	28	27	28	29	29	27	28	28	27	29
JUNE.....	27	26	26	25	26	28	29	30	30	29	30	31	31	30	30	27	28	29	29	30	31	31	32	32	32	31	28	27	--	--	--	29	

## LAKE OKEECHOBEE AND THE EVERGLADES BASINS

## 02292000 CALOOSAHATCHEE CANAL AT MOORE HAVEN, FLA.

LOCATION.--Lat 26°50', long 81°05', Glades County, at gaging station on right bank at Moore Haven 0.5 mile downstream from hurricane gate and lock 1 at Lake Okeechobee Outlet and 15 miles upstream from lock 2.

PERIOD OF RECORD.--Chemical analyses: July 1964 to September 1968.  
Water temperatures: July 1964 to September 1968.

**EXTREMES. --1967-68:**

Specific conductance: Maximum daily, 705 micromhos Oct. 29; minimum daily, 305 micromhos Sept. 9.  
Water temperatures: Maximum, 31.0°C on several days during July and August; minimum, 15.0°C Mar.

Period of record:

Specific conductance: Maximum daily, 862 micromhos Mar. 19, 1965; minimum daily, 150 micromhos Sept. 28, 1964.  
Water temperatures: Maximum, 31.0°C on several days during August 1964, 1965, July 1967 and July to August 1968; minimum, 12.0°C Feb. 5, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DISSOLVED SOLIDS (SUP OF CONSTITUENTS)	DISSOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (Ca, Mg)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROHMS)	PH	COLOR	DISSOLVED OXYGEN	PERCENT SATURATION
NOV.												
06....	.4	.9	--	312	390	197	53	540	7.4	120	--	--
DEC.												
04....	.5	.3	--	330	376	196	42	570	7.3	60	--	--
JAN.												
04....	.5	1.9	--	342	377	208	54	580	7.6	50	--	--
FEB.												
02....	.5	1.4	--	361	392	218	57	645	7.6	45	--	--
29....	--	1.7	.05	--	--	--	--	590	--	--	--	--
MAR.												
31....	--	.3	.18	--	--	--	--	600	--	--	--	--
APR.												
02....	.5	.3	--	339	365	198	57	620	7.6	40	--	--
30....	--	.1	.09	--	--	--	--	610	--	--	--	--
MAY												
01....	.5	2.0	.06	362	393	196	58	644	7.6	20	2.3	29
31....	--	.1	1.8	--	--	--	--	601	--	--	--	--
JUNE												
30....	--	3.1	.54	--	--	--	--	570	--	--	--	--
JULY												
01....	.3	1.8	--	156	206	92	33	272	6.8	240	--	--
31....	--	1.4	.14	--	--	--	--	502	--	--	--	--
AUG.												
31....	--	1.6	.14	--	--	--	--	560	--	--	--	--
SEPT.												
30....	--	--	.16	--	--	--	--	322	--	--	--	--

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER.....	26	26	26	26	26	26	26	26	25	25	24	25	25	24	24	24	25	24	21	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
NOVEMBER.....	24	24	24	23	22	22	21	19	19	19	20	20	20	20	19	21	21	21	19	20	20	20	20	20	21	21	21	21	22	21	22	21	21	
DECEMBER.....	--	22	22	21	--	21	21	21	21	21	21	--	22	22	22	23	23	22	23	23	23	22	21	19	19	19	19	18	18	17	18	17	18	
JANUARY.....	18	19	19	20	20	20	20	20	20	20	20	20	20	19	18	18	17	18	18	18	18	18	18	18	18	16	16	17	18	18	18	18	18	
FEBRUARY.....	19	19	19	19	19	19	18	18	17	16	17	17	16	16	16	17	17	17	17	17	17	17	17	17	16	16	17	16	17	16	17	--	17	
MARCH.....	16	15	15	17	17	17	17	17	18	18	19	20	20	20	16	20	20	20	20	20	20	21	22	22	20	20	20	20	20	21	21	22	22	19
APRIL.....	23	23	23	24	24	24	25	25	25	25	26	24	24	25	24	24	25	24	25	25	25	25	25	26	26	26	27	27	26	26	27	--	--	26
MAY.....	26	26	26	26	--	26	26	25	24	24	24	24	25	26	26	26	27	28	29	28	28	28	28	27	27	28	27	27	27	27	27	27	27	24
JUNE.....	28	28	27	26	25	25	26	27	27	27	27	28	28	28	28	28	28	28	28	27	28	29	30	30	30	31	30	28	27	29	--	--	27	
JULY.....	28	28	27	28	28	27	27	27	27	27	28	29	29	30	29	29	30	29	30	30	31	31	31	31	31	31	30	30	30	30	31	30	28	
AUGUST.....	30	30	29	29	28	29	30	30	30	30	29	29	30	29	30	29	30	30	31	31	31	31	31	31	31	30	29	29	29	29	29	29	29	29
SEPTEMBER.....	29	29	29	29	29	30	30	30	30	28	29	28	28	27	27	27	27	28	28	27	27	27	27	27	27	27	27	27	27	27	28	--	--	29







## 02295637 PEACE RIVER AT ZOLFO SPRINGS, FLA.--Continued

PHOSPHATE, IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	6.0	12	14	17	12	12	9.5	11	13	5.1	6.4	5.4
2.....	4.3	16	16	14	10	14	10	11	12	5.3	5.5	6.5
3.....	6.1	16	16	14	10	14	12	14	13	5.2	7.9	6.6
4.....	6.0	16	18	13	12	14	11	14	4.2	4.2	6.7	6.9
5.....	6.6	16	16	13	11	14	11	15	5.4	4.4	6.7	7.1
6.....	7.9	17	15	15	12	13	11	18	5.8	5.4	6.5	3.2
7.....	11	12	14	22	12	14	12	20	5.1	4.3	7.1	4.4
8.....	8.4	14	18	21	11	14	12	13	4.2	4.2	6.7	4.3
9.....	8.7	13	18	14	12	13	12	12	4.2	4.9	7.6	3.4
10.....	8.1	13	20	13	14	13	11	12	5.0	4.7	8.4	4.4
11.....	7.6	14	14	15	12	13	11	14	5.8	5.0	6.1	3.4
12.....	8.1	13	14	17	12	13	10	17	7.0	5.1	6.3	3.7
13.....	7.9	16	12	1	12	13	10	17	7.1	5.7	6.7	3.8
14.....	7.8	18	13	20	13	14	11	14	7.6	5.7	8.6	3.4
15.....	9.0	18	13	21	13	12	10	14	7.2	5.8	8.8	4.4
16.....	8.8	16	13	17	12	13	9.5	16	6.6	5.3	9.3	4.8
17.....	8.8	16	14	14	12	12	10	16	6.6	5.1	10	5.8
18.....	8.8	19	13	21	12	13	10	16	7.1	4.3	7.9	6.7
19.....	9.4	18	14	22	10	13	10	16	7.6	3.9	8.1	7.8
20.....	10	18	14	19	11	14	12	18	7.0	4.0	5.3	8.6
21.....	11	20	13	14	10	13	13	17	6.3	5.4	6.6	9.7
22.....	15	18	13	14	12	14	16	14	5.6	5.4	8.8	9.4
23.....	14	18	14	15	12	15	20	14	6.1	5.1	10	10
24.....	15	16	13	13	12	14	20	15	6.5	6.2	10	11
25.....	13	12	14	14	12	12	20	12	7.2	6.6	11	9.7
26.....	13	14	14	14	12	14	19	12	9.0	6.6	8.6	10
27.....	13	14	12	16	12	14	23	10	8.8	7.0	7.7	10
28.....	14	16	13	14	12	14	16	12	6.6	6.9	5.6	9.9
29.....	32	16	14	12	13	15	13	12	6.4	7.0	5.6	8.8
30.....	12	13	17	14	--	14	13	13	5.5	7.0	5.7	8.4
31.....	11	--	22	12	--	13	--	15	--	6.4	5.9	--
AVERAGE	10	16	15	15	12	13	13	14	7.0	5.4	7.5	6.7

FLUORIDE IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	1.5	2.4	2.2	2.5	2.2	1.9	2.0	2.7	2.0	1.1	1.6	1.1
2.....	2.2	2.6	2.2	2.4	2.1	2.3	1.9	2.7	1.9	1.1	1.2	1.4
3.....	1.7	2.6	2.3	2.4	2.1	2.1	1.9	2.5	1.9	1.1	1.5	1.4
4.....	1.5	2.6	2.7	2.4	2.3	2.2	2.0	2.7	1.9	1.0	1.4	1.5
5.....	1.5	2.4	2.4	2.4	2.2	2.0	2.2	2.6	1.0	1.0	1.4	1.5
6.....	1.6	2.3	2.2	2.7	2.3	2.0	2.0	2.7	1.0	1.1	1.4	.7
7.....	1.6	2.3	2.2	2.6	2.2	1.9	2.1	2.6	1.1	1.0	1.5	.8
8.....	1.7	2.4	2.3	2.7	2.2	1.9	2.2	2.7	1.3	1.0	1.4	.9
9.....	1.9	2.4	2.4	2.6	2.3	1.9	1.9	2.8	.9	1.0	1.5	.7
10.....	1.7	2.3	2.5	2.4	2.5	1.9	2.1	2.7	1.0	1.1	1.5	.8
11.....	1.6	2.5	2.1	2.4	2.3	2.2	2.0	2.7	1.1	1.1	1.5	.7
12.....	1.7	2.5	2.0	2.5	2.5	2.2	2.2	2.7	1.3	1.2	1.4	.8
13.....	1.7	2.7	1.9	2.5	2.6	2.1	2.2	2.8	1.3	1.2	1.4	.8
14.....	1.9	2.7	2.0	2.6	2.6	2.1	2.1	2.7	.1	1.3	1.6	.8
15.....	1.9	2.6	2.1	2.6	2.3	2.2	2.2	2.7	1.2	1.3	1.7	.9
16.....	2.0	2.5	2.1	2.5	2.3	2.3	2.0	2.7	1.2	1.2	1.9	1.0
17.....	2.0	2.6	2.1	2.5	2.3	2.1	2.1	3.0	1.2	1.1	1.8	1.2
18.....	2.0	2.7	2.2	2.6	2.3	2.2	2.0	3.0	1.3	1.0	1.7	1.4
19.....	2.1	2.6	2.2	2.7	2.0	2.3	2.3	3.1	1.3	1.1	1.7	1.5
20.....	2.2	2.8	2.2	2.6	1.9	2.4	2.2	3.1	1.3	1.1	1.7	1.7
21.....	2.3	2.7	2.2	2.5	1.8	2.3	2.0	3.1	1.2	1.2	1.7	1.7
22.....	2.2	2.6	2.1	2.4	2.0	2.4	2.0	3.2	1.1	1.2	1.8	1.8
23.....	2.4	2.6	2.1	2.4	2.0	2.4	2.2	3.2	1.2	1.2	1.9	1.8
24.....	2.4	2.6	2.2	2.4	2.0	2.5	2.2	3.1	1.2	1.2	2.1	1.8
25.....	2.4	2.6	2.2	2.4	1.9	2.4	2.1	2.5	1.8	1.3	2.1	1.7
26.....	2.4	2.5	2.1	2.3	2.0	2.4	2.1	2.5	1.5	1.4	1.8	1.8
27.....	2.4	2.6	2.1	2.5	2.2	2.3	2.6	2.5	1.5	1.5	1.7	1.8
28.....	2.4	2.6	2.1	2.4	2.2	2.3	2.2	2.5	1.3	1.6	1.4	1.8
29.....	4.5	2.6	2.1	2.5	2.3	2.5	2.2	2.7	1.3	1.6	1.4	1.5
30.....	2.6	2.5	2.1	2.4	--	2.4	2.0	2.5	1.1	1.6	1.5	1.6
31.....	2.4	--	2.2	2.4	--	2.3	--	2.7	--	1.6	1.3	--
AVERAGE	2.0	2.5	2.1	2.4	2.2	2.2	2.1	2.7	1.2	1.2	1.5	1.2

## PEACE RIVER BASIN

02295637 PEACE RIVER AT ZOLFO SPRINGS, FLA.--Continued

PH (UNITS), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	7.2	8.0	7.8	7.4	7.9	7.5	7.4	--	7.1	7.4	7.1	7.9
2.....	6.2	7.8	7.9	7.8	7.9	7.5	7.8	--	7.1	7.3	5.6	7.8
3.....	7.0	7.9	7.8	7.6	8.0	7.6	7.7	--	7.2	7.4	6.6	7.9
4.....	7.2	7.7	7.8	7.4	8.0	7.4	7.7	--	7.0	7.5	7.6	7.8
5.....	7.6	7.7	7.7	7.5	8.0	7.5	7.6	--	6.7	7.5	7.6	7.9
6.....	7.4	7.9	7.8	7.5	8.1	7.6	6.5	--	6.6	7.5	7.6	7.7
7.....	7.5	7.9	7.9	7.6	8.1	7.7	7.4	--	6.7	7.5	7.7	7.6
8.....	7.2	8.1	7.8	7.4	8.0	7.7	7.7	--	5.7	7.4	7.8	7.5
9.....	7.5	7.8	7.9	7.7	8.0	7.7	7.8	--	6.0	7.2	7.8	7.6
10.....	7.2	7.9	8.0	7.7	7.9	7.7	7.8	--	6.3	7.3	7.8	7.6
11.....	7.4	7.9	7.6	7.7	7.9	7.6	6.5	--	6.6	7.4	7.8	7.6
12.....	7.4	7.8	7.5	7.5	8.0	7.6	7.4	--	6.8	7.3	7.7	7.6
13.....	7.4	7.8	7.9	7.6	8.0	7.6	7.7	--	6.8	7.4	7.7	7.6
14.....	7.6	7.9	7.8	7.5	8.0	7.5	7.7	--	6.6	7.5	7.8	7.6
15.....	7.6	7.8	7.7	7.5	7.9	7.6	7.7	--	6.7	7.3	7.8	7.6
16.....	7.4	7.9	7.7	7.5	7.9	7.6	7.8	--	6.8	7.3	7.9	7.6
17.....	7.6	7.9	7.8	7.6	7.9	7.5	8.0	--	6.8	7.1	7.9	7.6
18.....	7.6	7.8	7.7	7.6	7.9	7.4	7.9	--	6.8	7.2	7.9	7.6
19.....	7.6	7.8	7.8	7.6	7.9	7.6	7.7	--	6.8	7.2	7.9	7.7
20.....	7.6	7.9	7.8	7.6	7.9	7.5	7.6	--	6.6	7.1	7.9	7.8
21.....	7.6	7.9	7.9	7.7	7.8	7.6	7.7	--	6.7	7.2	7.8	7.8
22.....	7.7	7.9	7.9	7.6	7.9	7.5	7.8	--	6.7	7.2	7.6	7.9
23.....	7.7	7.7	7.9	7.7	7.7	7.7	7.7	--	6.6	7.5	7.8	7.8
24.....	7.6	7.9	7.9	7.6	7.9	7.8	7.8	--	6.6	7.5	7.8	7.8
25.....	7.8	8.1	7.9	7.6	7.8	8.0	7.8	--	6.7	7.5	7.9	7.9
26.....	7.6	8.1	8.1	7.6	7.8	8.0	7.8	--	6.8	7.4	7.9	7.9
27.....	7.7	8.0	8.1	7.6	7.7	7.9	7.7	--	6.8	7.6	8.0	7.8
28.....	7.7	8.0	7.9	7.6	7.7	7.9	7.8	--	6.7	7.7	8.0	7.8
29.....	7.9	8.0	7.9	7.6	7.9	7.8	7.8	--	6.8	7.6	8.0	7.8
30.....	8.0	8.1	7.9	7.7	--	7.8	7.8	--	6.7	7.8	7.8	7.8
31.....	7.8	--	7.7	7.7	--	8.0	--	--	--	7.7	7.8	--
AVERAGE	7.4	7.8	7.8	7.5	7.9	7.6	7.6	--	6.6	7.4	7.6	7.7

TURBIDITY, IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	9.0	4.0	0.0	4.0	1.8	5.2	2.7	2.4	2.5	15	10	9.7
2.....	9.0	4.0	0.0	4.0	1.8	5.2	2.4	1.7	3.2	10	1.2	9.7
3.....	9.0	4.0	0.0	4.0	1.8	5.2	2.4	1.7	2.5	5.8	7.4	9.7
4.....	9.0	4.0	0.0	2.0	1.8	5.2	2.4	1.7	7.5	5.8	7.4	5.3
5.....	9.0	4.0	0.0	2.0	1.8	3.4	1.7	1.7	11	5.8	7.4	9.7
6.....	12	4.0	0.0	4.0	2.0	1.8	.6	2.0	20	5.8	7.4	7.4
7.....	12	4.0	0.0	4.0	2.0	3.4	1.7	1.7	11	5.8	5.3	7.4
8.....	12	4.0	0.0	4.0	1.8	3.0	2.4	1.4	.5	5.8	7.4	5.3
9.....	12	4.0	0.0	4.0	1.8	3.4	1.7	1.4	11	5.8	7.4	5.3
10.....	60	4.0	0.0	4.0	1.8	3.4	1.7	2.4	11	5.8	7.4	16
11.....	20	4.0	4.0	4.0	1.8	5.2	.5	2.7	11	5.8	7.4	5.9
12.....	12	4.0	4.0	4.0	1.8	4.5	1.4	2.7	7.5	5.3	7.4	5.9
13.....	37	4.0	4.0	4.0	1.8	3.4	1.4	1.7	9.2	7.4	5.3	6.0
14.....	12	4.0	4.0	4.0	1.8	3.4	1.7	2.0	7.5	5.3	5.3	6.0
15.....	15	4.0	4.0	4.0	1.8	3.4	1.7	1.7	7.5	7.4	7.4	1.6
16.....	12	4.0	4.0	4.0	1.8	3.4	1.7	2.0	7.5	7.4	9.7	5.3
17.....	12	4.0	0.0	4.0	1.8	4.5	1.7	1.7	7.5	7.4	7.4	5.3
18.....	9.0	4.0	0.0	4.0	1.8	2.4	1.7	2.4	7.5	7.4	7.4	5.3
19.....	12	4.0	0.0	4.0	1.8	2.4	2.4	2.0	7.5	12	5.3	.8
20.....	12	4.0	0.0	4.0	1.8	0	2.4	2.7	9.2	12	5.3	7.4
21.....	12	4.0	0.0	4.0	1.8	3.4	1.4	1.7	7.5	12	3.4	7.4
22.....	9.0	4.0	0.0	4.0	1.8	1.8	1.4	1.4	9.2	20	6.2	7.4
23.....	12	4.0	0.0	4.0	1.8	1.8	1.7	1.7	9.2	12	3.4	7.4
24.....	12	4.0	0.0	4.0	1.8	1.8	7.9	1.7	9.2	12	2.4	7.4
25.....	9.0	4.0	0.0	4.0	1.8	1.8	2.4	3.8	7.5	12	3.4	7.4
26.....	9.0	4.0	0.0	4.0	1.8	3.4	2.0	3.8	7.5	12	3.4	7.4
27.....	3.0	4.0	0.0	4.0	1.8	1.8	2.0	3.4	9.2	12	7.4	6.2
28.....	9.0	4.0	0.0	4.0	1.8	3.4	2.0	3.0	9.2	12	7.4	7.4
29.....	9.0	4.0	0.0	4.0	1.8	3.4	1.7	3.0	9.2	12	8.7	5.3
30.....	9.0	4.0	0.0	2.0	--	1.5	2.0	2.7	9.2	12	7.4	7.4
31.....	3.0	--	4.0	2.0	--	0	--	2.0	--	12	32	--
AVERAGE	13	4.0	0.9	3.7	1.8	3.0	1.9	2.1	8.3	9.3	7.1	6.8

## 02296750 PEACE RIVER AT ARCADIA, FLA.

LOCATION.--Lat 27°13'19", long 81°52'34", De Soto County, at gaging station 500 ft upstream from bridge on State Highway 70, 1.0 mile west of post office in Arcadia, 6.1 miles upstream from Joshua Creek, and 36 miles upstream from mouth.

DRAINAGE AREA.--1,367 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1961 to September 1968.  
Water temperatures: February 1962 to September 1968.

## EXTREMES.--1967-68:

Fluoride: Maximum daily, 3.0 mg/l Oct. 31; minimum daily, 0.4 mg/l June 11.

Phosphate: Maximum daily, 21 mg/l Oct. 31; minimum daily, 2.1 mg/l July 18.

Specific conductance: Maximum daily, 600 micromhos May 2; minimum daily, 60 micromhos July 18.

pH: Maximum daily, 8.3 Mar. 31; minimum daily, 6.5 June 10.

Turbidity: Maximum daily, 20 mg/l Oct. 8; minimum daily, 0 mg/l on many days during November, December and September.

Water temperatures: Maximum, 35.0°C on several days in August; minimum, 15.0°C Feb. 21, 26.

## Period of record:

Dissolved Solids (1961-67): Maximum, 335 mg/l May 11-20, 1967; minimum, 50 mg/l Aug. 21-25, 1963.

Hardness (1961-67): Maximum, 224 mg/l May 11-20, 27, 1967; minimum, 21 mg/l Sept. 20-28, 1962.

Fluoride (1963-68): Maximum daily, 3.9 mg/l Feb. 13 and Apr. 4, 1966; minimum daily, 0.4 mg/l Aug. 9, 10, 1966 and June 11, 1968.

Phosphate (1963-68): Maximum daily, 29 mg/l May 27, 1967; minimum daily, 1.4 mg/l Mar. 14, 1967.

Specific conductance: Maximum daily, 1,750 micromhos Feb. 3, 1963; minimum daily, 45 micromhos Sept. 23, 1962.

pH: Maximum daily, 8.3 Mar. 31, 1968; minimum daily, 5.1 Mar. 1, 1963.

Turbidity (1962-68): Maximum daily, 200 mg/l July 16, 1962; minimum daily, 0 mg/l on several days in

October 1965, August 1966, many days during November, December 1967 and September 1968.

Water temperatures: Maximum, 35.0°C on several days in August 1968; minimum, 9.0°C Feb. 28, 1965.

## TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	9.0	4.0	4.0	4.0	1.8	6.4	1.8	4.5	4.6	6.0	7.5	5.9
2.....	9.0	4.0	0.0	4.0	1.8	2.0	.0	3.7	6.2	4.4	12	5.9
3.....	9.0	4.0	0.0	4.0	1.8	6.4	1.8	6.5	6.2	6.0	7.5	6.3
4.....	9.0	4.0	0.0	4.0	1.8	6.4	1.8	7.8	4.6	5.3	10	6.3
5.....	9.0	4.0	0.0	4.0	1.8	9.2	7.4	5.7	15	5.3	3.4	5.9
6.....	9.0	0.0	0.0	4.0	1.8	10	2.4	3.7	7.4	7.3	13	3.0
7.....	9.0	4.0	0.0	4.0	1.8	7.4	3.5	3.4	8.4	5.3	7.5	3.0
8.....	20	4.0	0.0	4.0	1.8	8.4	3.5	3.7	5.6	5.3	7.5	0.0
9.....	9.0	0.0	0.0	4.0	1.8	10	1.8	.0	5.6	5.3	7.5	5.9
10.....	9.0	4.0	0.0	4.0	1.8	5.6	3.5	7.0	10	7.3	7.5	5.9
11.....	12	4.0	0.0	4.0	1.8	5.6	3.5	4.1	10	5.3	7.5	2.0
12.....	12	4.0	0.0	4.0	1.8	6.4	2.4	5.3	5.6	5.3	7.5	2.0
13.....	9.0	4.0	0.0	4.0	1.8	6.4	3.5	5.3	11	3.4	5.3	2.0
14.....	9.0	4.0	4.0	4.0	1.8	7.4	3.5	7.0	9.4	3.4	5.3	2.0
15.....	9.0	4.0	0.0	4.0	1.8	7.4	3.5	8.3	7.4	3.4	5.3	2.0
16.....	9.0	4.0	4.0	4.0	1.8	5.6	1.8	6.5	9.4	3.4	7.5	2.0
17.....	9.0	4.0	4.0	4.0	1.8	8.4	1.8	7.8	9.4	5.3	5.3	5.9
18.....	9.0	4.0	4.0	4.0	1.8	5.6	1.8	5.0	7.4	5.3	7.5	5.9
19.....	9.0	4.0	4.0	4.0	1.8	5.6	3.5	6.5	7.4	5.3	7.5	5.9
20.....	12	4.0	0.0	4.0	1.8	3.8	3.5	5.3	7.4	7.3	7.5	5.9
21.....	12	4.0	4.0	4.0	1.8	5.6	3.5	5.0	7.4	5.3	7.5	5.9
22.....	9.0	4.0	0.0	4.0	1.8	5.6	1.8	5.7	5.6	5.3	3.4	5.9
23.....	9.0	4.0	0.0	4.0	1.8	9.2	3.5	5.3	10	15	4.5	5.9
24.....	9.0	4.0	0.0	4.0	1.8	6.4	1.8	5.0	5.6	9.7	5.3	5.9
25.....	9.0	4.0	4.0	4.0	1.8	5.6	1.8	4.5	8.4	7.3	7.5	6.2
26.....	12	4.0	4.0	4.0	1.8	5.6	1.8	6.5	5.6	7.3	7.5	5.9
27.....	12	4.0	4.0	4.0	1.8	5.6	2.4	7.4	6.2	9.7	5.3	5.9
28.....	12	4.0	4.0	4.0	1.8	6.4	1.8	5.7	12	9.7	5.3	5.9
29.....	9.0	4.0	4.0	4.0	1.8	5.6	3.5	6.1	8.4	7.3	7.5	5.9
30.....	12	4.0	4.0	2.0	--	3.8	3.5	6.1	6.2	9.7	5.0	6.2
31.....	12	--	4.0	2.0	--	3.8	--	5.7	--	9.7	9.7	--
AVERAGE	10	3.7	1.8	4.0	1.8	6.3	2.7	5.5	7.7	6.4	7.0	4.7

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	26	24	24	26	23	24	24	26	24	24	23	23	26	26	26	24	23	23	22	23	24	23	26	24	32	26	25	25	30	28	25	
NOVEMBER.	26	24	24	25	24	24	22	19	20	20	22	26	22	22	22	23	24	22	23	21	20	21	24	23	24	23	26	23	24	--	23	
DECEMBER.	24	23	22	25	23	26	21	22	22	23	22	24	24	23	23	24	23	24	24	24	22	23	18	20	22	19	18	15	19	15	22	
JANUARY..	19	21	21	23	21	22	23	20	22	22	20	20	16	17	16	18	20	19	20	19	15	15	17	17	18	18	19	15	24	--	20	
FEBRUARY.	21	20	25	21	19	21	20	18	16	17	18	19	18	16	17	19	21	20	17	15	20	19	17	15	18	17	17	--	--	18		
MARCH.....	16	16	18	19	20	18	19	19	21	22	22	24	19	20	20	23	21	24	24	25	21	23	22	22	23	20	23	24	24	25	21	
APRIL.....	25	26	25	27	28	28	30	26	24	26	23	23	23	23	22	24	22	27	28	28	28	30	28	28	28	28	28	25	28	--	26	
MAY.....	28	28	28	28	28	27	26	27	25	28	28	29	28	29	29	31	30	28	30	29	29	29	28	28	28	27	29	29	30	28	28	
JUNE.....	29	28	25	24	25	25	25	27	25	28	28	29	27	28	26	27	25	27	26	28	28	29	28	28	26	26	27	21	21	--	27	
JULY.....	27	25	31	28	26	26	28	25	25	28	25	31	--	28	32	--	33	--	29	--	24	23	24	32	34	34	26	34	--	32	34	
AUGUST....	29	28	33	28	34	34	34	30	33	30	29	30	32	32	34	34	33	35	35	30	--	33	35	35	29	25	25	26	30	31	32	
SEPTEMBER	28	28	29	31	30	28	29	29	28	27	27	26	25	27	27	28	28	28	29	29	27	20	27	28	27	28	27	21	27	--	28	

## PEACE RIVER BASIN

## 02296750 PEACE RIVER AT ARCADIA FLA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- FAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (SO4)	CHLO- RIDE (CL)
OCT.												
01...	--	26	5.8	.11	11	3.8	--	7.7	1.9	21	21	10
20...	--	22	9.2	.06	27	8.9	--	13	1.0	52	54	14
31...	--	28	11	.04	44	13	--	18	1.3	55	94	16
NOV.												
30...	--	24	--	--	--	--	--	--	--	--	--	--
DEC.												
07...	--	21	8.6	.00	59	19	--	22	1.4	90	140	18
13...	--	24	9.3	.02	50	16	--	19	2.3	73	124	18
22...	--	24	9.6	.03	44	15	--	18	2.1	96	96	16
31...	--	19	--	--	--	--	--	--	--	--	--	--
JAN.												
01...	--	19	10	.00	45	15	--	18	1.5	72	108	17
16...	--	17	8.3	.00	57	17	--	22	1.6	81	137	16
31...	--	24	6.2	.00	53	18	--	20	1.4	86	128	16
FEB.												
03...	--	25	5.4	.04	55	18	1.2	21	1.6	91	130	17
04...	--	26	4.5	.01	20	17	--	20	1.5	92	123	17
18...	--	23	6.1	.01	58	18	1.4	20	1.2	90	147	18
29...	--	--	--	--	--	--	--	--	--	--	--	--
MAR.												
01...	--	16	6.6	.20	47	16	--	19	2.0	76	121	19
15...	--	20	5.2	.03	48	16	--	19	1.6	82	112	18
30...	--	24	6.8	.05	61	18	--	20	.9	86	136	17
31...	--	25	--	--	--	--	--	--	--	--	--	--
APR.												
01...	--	25	7.4	.00	58	18	--	23	.9	81	146	17
14...	--	23	3.9	.02	59	19	--	23	1.3	85	154	14
30...	--	28	4.9	.00	68	23	--	24	1.1	77	198	15
MAY												
02...	--	28	4.9	.01	68	23	--	24	.9	82	184	14
14...	--	28	5.9	.01	59	21	--	23	1.0	81	162	16
16...	223	28	5.2	.02	59	19	1.7	20	1.5	78	145	15
28...	--	--	6.7	.04	40	14	--	15	1.8	55	92	15
31...	--	28	--	--	--	--	--	--	--	--	--	--
JUNE												
01...	--	29	8.1	.08	35	13	--	16	2.2	60	76	16
15...	--	28	6.9	.34	11	4.3	--	6.9	2.4	24	21	9.5
27...	--	0	6.9	.27	18	5.1	--	8.1	2.0	46	26	12
30...	--	27	6.9	.31	12	4.6	--	7.1	1.8	24	20	11

DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATU- RATION
OCT.												
01...	.7	.1	3.0	75	111	43	26	132	6.9	180	--	--
20...	1.3	.1	5.3	160	184	104	61	267	7.3	100	--	--
31...	3.0	.2	21	249	283	164	119	398	7.5	50	--	--
NOV.												
30...	2.3	--	12	--	--	--	--	470	7.8	--	--	--
DEC.												
07...	2.3	.0	14	328	342	225	151	493	7.8	30	--	--
13...	1.9	1.0	14	292	307	191	131	461	7.6	30	--	--
22...	1.8	.1	11	261	278	172	93	417	7.2	50	--	--
31...	1.6	--	10	--	--	--	--	390	7.9	--	--	--
JAN.												
01...	2.1	.4	11	264	275	174	115	423	7.6	45	--	--
16...	2.5	.5	15	316	322	212	146	499	7.8	25	--	--
31...	2.2	.0	12	299	306	206	135	451	7.7	20	--	--
FEB.												
03...	.9	.3	12	307	310	212	137	480	7.5	20	--	--
04...	.6	.2	11	292	302	198	123	470	7.6	30	--	--
18...	1.9	.1	12	328	330	220	146	505	7.7	20	--	--
29...	1.4	--	12	--	--	--	--	420	7.4	--	--	--
MAR.												
01...	1.4	.2	9.9	279	282	184	122	445	7.0	30	--	--
15...	1.7	.2	10	272	292	186	119	445	7.1	30	--	--
30...	2.2	.1	12	316	353	226	155	530	7.4	30	--	--
31...	2.1	--	10	--	--	--	--	510	8.3	--	--	--
APR.												
01...	2.0	.0	13	325	340	218	152	475	7.1	5	--	--
14...	2.0	.0	10	329	347	225	155	515	7.6	5	--	--
30...	2.1	.0	16	390	407	264	201	570	7.9	0	--	--
MAY												
02...	1.9	.1	16	377	409	264	197	600	7.4	0	--	--
14...	2.1	.0	15	345	360	234	168	550	7.4	10	--	--
19...	1.8	.2	15	318	342	220	156	510	7.2	10	6.1	77
28...	1.7	.2	11	224	243	158	113	387	7.3	50	--	--
31...	1.7	--	11	--	--	--	--	362	7.3	--	--	--
JUNE												
01...	1.1	.2	8.2	206	233	141	92	350	.6	110	--	--
15...	.5	.7	7.1	116	126	65	25	126	6.7	220	--	--
27...	.8	1.0	3.7	107	149	66	28	171	6.8	240	--	--
30...	.0	2.8	3.4	80	128	49	29	133	6.7	220	--	--

02296750 PEACE RIVER AT ARCADIA FLA.--Continued  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
JULY												
01....	---	27	7.1	.24	11	4.5	---	7.0	1.7	28	18	11
15....	---	28	6.1	.29	8.5	3.5	---	5.2	1.4	24	12	8.0
29....	---	27	5.7	.20	13	4.8	---	7.4	1.2	27	31	8.5
30....	---	30	8.0	.31	20	7.1	---	10	1.3	50	31	11
31....	---	34	--	--	--	--	---	--	--	--	--	--
AUG.												
02....	---	28	4.0	.15	20	7.2	---	11	1.4	51	39	12
03....	---	29	1.8	.20	15	5.4	---	8.2	1.5	33	28	10
21....	---	30	8.7	.11	25	8.6	---	11	1.4	45	56	12
24....	---	32	9.4	.15	22	7.9	---	11	1.1	44	48	12
31....	---	31	--	--	--	--	---	--	--	--	--	--
SEPT.												
02....	---	28	9.2	.07	21	7.2	---	11	1.9	46	40	14
15....	---	27	7.1	.11	11	4.2	---	6.2	1.6	29	20	10
17....	4670	27	6.3	.13	13	4.5	---	7.5	1.7	31	25	10
30....	---	27	9.1	.06	28	9.3	---	13	1.0	59	47	15

DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE NESS	SPECI- FIC COM- POUND UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
JULY												
01....	.6	.6	3.4	76	125	46	23	125	6.5	240	--	--
15....	.4	.7	2.7	58	94	36	16	93	6.4	200	--	--
29....	1.0	.8	3.4	90	115	52	30	140	6.5	160	--	--
30....	1.0	1.9	5.2	117	158	79	38	196	6.9	160	--	--
31....	1.3	--	5.4	--	--	--	--	205	7.2	--	--	--
AUG.												
02....	1.3	.5	4.8	126	163	80	38	218	6.9	140	--	--
03....	1.1	2.0	3.9	93	129	60	32	159	7.1	140	--	--
21....	1.4	2.1	5.4	154	176	98	61	248	7.2	100	--	--
24....	1.4	--	6.5	141	173	88	52	220	7.0	280	--	--
31....	1.1	1.7	4.0	--	--	--	--	190	7.1	--	--	--
SEPT.												
02....	1.0	.9	4.7	134	158	82	45	214	6.7	100	--	--
15....	.6	.1	2.9	78	107	45	21	124	6.3	140	--	--
17....	.9	1.6	1.2	87	112	51	26	137	6.3	100	--	--
30....	1.5	.1	8.0	161	189	109	60	270	7.1	100	--	--

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	130	380	475	400	475	445	475	590	350	110	190	210
2.....	130	380	469	420	480	432	469	600	355	100	209	190
3.....	130	380	480	420	480	430	491	570	359	105	145	210
4.....	140	380	500	410	470	440	450	570	320	105	179	230
5.....	140	400	460	425	449	460	490	560	236	100	154	235
6.....	140	399	509	415	470	470	485	560	180	100	159	235
7.....	140	399	510	415	470	458	532	560	187	110	151	140
8.....	150	399	510	429	490	435	499	560	166	109	181	131
9.....	170	410	500	450	490	450	499	550	136	160	185	150
10.....	179	410	500	460	490	445	500	580	113	92	170	119
11.....	181	410	540	455	485	425	490	580	107	100	185	110
12.....	190	410	480	445	480	432	510	550	113	92	190	110
13.....	190	430	450	419	480	430	515	540	127	92	210	120
14.....	190	430	380	460	480	435	515	550	135	92	180	110
15.....	210	430	395	416	480	445	481	490	126	85	195	110
16.....	230	440	410	470	470	438	510	500	125	97	210	110
17.....	240	455	410	465	485	425	490	500	120	110	220	129
18.....	250	455	390	465	505	440	507	500	124	80	240	140
19.....	250	445	381	479	485	442	489	501	129	86	241	155
20.....	260	450	390	480	470	465	475	502	137	83	231	155
21.....	270	450	405	480	485	462	480	501	142	91	240	170
22.....	280	470	371	480	480	480	510	502	137	100	275	190
23.....	295	470	391	460	460	484	475	502	134	100	210	210
24.....	319	469	409	440	450	492	490	503	137	140	220	235
25.....	340	481	381	470	425	500	490	503	142	130	225	250
26.....	355	500	401	460	440	500	480	497	152	130	235	250
27.....	355	480	410	455	420	510	510	421	148	140	255	250
28.....	360	480	410	415	420	480	539	387	126	150	270	255
29.....	360	499	390	440	420	510	540	402	132	170	240	270
30.....	371	470	390	451	--	530	570	400	133	199	230	270
31.....	390	--	390	451	--	510	--	362	--	205	190	--
AVERAGE	236	435	435	445	468	461	498	512	166	113	205	181

## PEACE RIVER BASIN

02298750 PEACE RIVER AT ARCADIA FLA.--Continued

PHOSPHATE, IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	3.0	11	13	11	14	9.9	13	16	8.2	3.4	5.0	4.7
2.....	2.8	10	12	14	13	10	11	16	8.7	3.1	4.8	4.7
3.....	2.7	10	11	16	12	9.9	13	12	8.3	2.9	4.0	5.0
4.....	2.4	11	13	12	11	9.9	11	13	6.2	2.8	5.5	5.4
5.....	2.4	12	14	10	11	11	9.1	11	3.3	3.0	4.2	5.7
6.....	2.6	12	14	10	10	13	11	11	3.2	2.9	4.3	5.7
7.....	2.6	12	14	10	11	12	12	11	3.8	3.1	4.4	4.0
8.....	3.2	11	14	14	11	12	10	12	3.2	3.2	4.7	4.2
9.....	4.1	10	12	15	12	11	10	14	2.8	2.9	4.6	4.1
10.....	4.1	11	14	17	11	11	10	18	2.2	2.8	4.9	3.1
11.....	4.0	10	16	14	11	11	12	17	2.3	2.8	5.1	3.3
12.....	4.0	11	14	11	12	11	12	13	2.6	2.5	5.1	3.1
13.....	4.2	12	14	12	14	11	11	14	3.0	2.6	5.0	3.1
14.....	4.5	11	10	13	12	10	10	15	3.2	2.6	4.4	2.8
15.....	4.6	14	10	13	12	10	10	14	3.1	2.7	5.1	2.9
16.....	4.8	16	11	15	13	10	11	15	3.1	2.7	5.7	3.2
17.....	5.2	14	11	13	13	9.9	10	14	2.9	2.1	5.9	3.7
18.....	5.3	14	10	16	12	11	10	14	3.0	2.1	6.4	4.2
19.....	5.2	12	12	15	12	9.5	11	14	3.0	2.3	6.5	4.9
20.....	5.3	13	11	14	12	11	10	13	3.5	2.6	5.7	5.5
21.....	5.8	14	11	14	12	11	10	14	4.0	2.9	5.5	6.6
22.....	6.2	16	11	20	10	12	10	14	3.8	3.5	4.5	7.2
23.....	6.6	16	11	13	10	11	8.7	14	3.9	3.5	5.7	7.8
24.....	7.6	12	10	12	10	11	9.6	16	4.0	3.5	6.5	8.1
25.....	8.0	14	12	14	12	11	8.9	15	4.4	3.7	7.0	8.7
26.....	9.8	15	11	12	12	11	9.3	13	4.7	4.0	6.7	8.3
27.....	9.3	12	10	11	10	13	10	11	4.0	4.4	6.8	8.2
28.....	9.5	14	11	11	11	11	14	11	3.2	4.9	5.8	8.0
29.....	9.7	15	10	12	12	11	15	10	3.1	5.1	5.0	8.4
30.....	11	12	10	12	--	12	16	10	3.5	6.2	4.1	8.0
31.....	21	--	10	12	--	10	--	11	--	5.4	4.0	--
AVERAGE	5.9	13	12	13	12	11	11	13	3.9	3.3	5.3	5.4

FLUORIDE, IN PARTS PER MILLION, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	0.7	2.2	1.9	2.1	1.7	1.4	2.0	1.8	1.1	0.8	1.2	1.0
2.....	.8	2.1	1.1	2.1	1.7	1.6	2.1	1.9	1.2	.7	1.2	1.0
3.....	.7	2.0	1.9	2.1	.9	1.5	2.1	1.9	1.1	.7	1.0	1.1
4.....	.7	2.1	2.0	2.1	.6	1.5	2.0	2.1	.5	.7	1.2	1.2
5.....	.7	2.1	2.0	1.8	1.7	1.7	1.9	2.1	.6	.7	1.0	1.3
6.....	.7	2.1	2.2	1.8	1.7	1.8	1.9	2.2	.6	.7	1.0	1.3
7.....	.7	2.1	2.3	1.9	1.7	1.6	2.0	2.1	.6	.7	1.0	.9
8.....	.7	2.0	2.1	2.1	1.8	1.6	1.9	1.9	.6	.7	1.1	.9
9.....	.8	2.0	2.1	2.2	1.8	1.4	1.9	1.8	.5	.7	1.0	.9
10.....	.9	2.0	2.0	2.3	1.3	1.6	1.9	1.8	.5	.6	1.1	.7
11.....	.9	2.0	1.9	2.3	1.8	1.4	2.1	2.1	.4	.6	1.1	.7
12.....	.9	2.1	2.0	2.4	1.7	1.6	2.1	2.1	.5	.6	1.1	.7
13.....	1.0	2.1	1.9	2.2	1.9	1.7	2.0	2.2	.5	.6	1.2	.7
14.....	1.0	2.1	1.6	2.2	1.8	1.7	2.0	2.1	.6	.7	1.0	.7
15.....	1.1	2.1	1.8	2.2	1.9	1.7	2.0	1.9	.5	.7	1.1	.6
16.....	1.1	2.3	1.8	2.5	2.0	1.7	2.2	2.0	.5	.7	1.2	.7
17.....	1.2	2.4	1.9	2.3	1.9	1.7	2.1	2.1	.6	.7	1.4	.8
18.....	1.2	2.4	1.8	2.3	1.9	1.8	1.9	2.1	.6	.5	1.4	1.0
19.....	1.2	2.2	1.8	2.3	1.7	1.7	2.2	2.0	.6	.6	1.4	1.1
20.....	1.3	2.2	1.8	2.3	1.6	2.0	2.0	2.1	.6	.7	1.4	1.2
21.....	1.3	2.4	1.8	2.4	1.7	2.0	2.0	2.1	.7	.6	1.4	1.3
22.....	1.3	2.4	1.8	2.4	1.5	2.0	2.0	2.3	.7	.8	1.1	1.5
23.....	1.5	2.5	1.8	2.3	1.4	2.1	1.9	2.3	.7	.8	1.3	1.5
24.....	1.5	2.4	1.8	2.3	1.3	2.1	2.0	2.3	.7	.9	1.4	1.6
25.....	1.5	2.5	1.8	2.3	1.3	2.1	2.0	2.3	.7	.9	1.7	1.6
26.....	1.6	2.5	1.8	2.2	1.3	2.1	2.0	2.1	.7	1.0	1.6	1.5
27.....	1.6	2.5	1.8	2.1	1.3	2.1	2.1	1.8	.7	1.1	1.7	1.5
28.....	1.7	2.3	1.8	2.1	1.2	2.1	2.0	1.7	.6	1.1	1.5	1.6
29.....	1.7	2.4	1.7	2.2	1.4	2.1	2.0	1.8	.6	1.1	1.5	1.5
30.....	1.9	2.3	1.6	2.2	--	2.2	2.1	1.7	.7	1.3	1.1	1.5
31.....	3.0	--	1.6	2.2	--	2.1	--	1.7	--	1.3	1.1	--
AVERAGE	1.1	2.2	1.8	2.2	1.5	1.7	2.0	2.0	0.6	0.7	1.2	1.1



## 02296750 PEACE RIVER AT ARCADIA FLA.--Continued

PH (UNITS), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	--	7.2	7.5	7.4	7.5	7.3	7.1	7.0	6.8	6.8	6.7	6.6
2.....	--	7.3	7.6	7.5	7.5	7.2	7.4	7.4	7.2	6.8	6.9	7.0
3.....	--	7.3	7.7	7.4	7.4	7.2	7.6	7.4	7.2	6.6	7.1	7.1
4.....	--	7.4	7.8	7.5	7.4	7.1	7.6	7.4	7.1	6.7	6.9	6.9
5.....	--	7.3	7.9	7.8	7.7	7.1	7.7	7.6	7.2	6.7	7.1	7.0
6.....	--	7.2	7.8	7.6	7.5	7.2	7.7	7.3	7.1	6.7	7.1	7.2
7.....	--	7.4	7.8	7.6	7.5	7.2	7.6	7.2	6.8	6.8	6.9	6.8
8.....	--	7.4	7.7	7.4	7.5	7.1	7.6	7.4	6.9	6.9	6.9	6.7
9.....	--	7.3	7.8	7.5	7.5	7.2	7.6	7.4	6.8	6.9	6.7	6.7
10.....	--	7.4	7.7	7.6	7.5	7.2	7.7	7.3	6.5	6.6	7.0	6.7
11.....	--	7.7	7.6	7.5	7.4	7.3	7.6	7.4	6.6	6.6	6.7	6.8
12.....	--	7.5	7.7	7.6	7.5	7.2	7.6	7.4	6.7	6.8	6.8	6.7
13.....	--	7.6	7.7	7.5	7.5	7.3	7.7	7.4	6.7	6.7	6.9	6.7
14.....	--	7.6	7.6	7.6	7.6	7.4	7.6	7.4	6.7	6.7	6.8	6.7
15.....	--	7.6	7.5	7.6	7.4	7.3	7.7	7.4	6.7	6.7	7.1	6.7
16.....	--	7.6	7.6	7.5	7.5	7.3	7.7	7.4	6.8	6.8	7.1	6.7
17.....	--	7.7	7.6	7.5	7.4	7.4	7.7	7.5	6.7	6.9	6.9	6.8
18.....	--	7.7	7.6	7.5	7.6	7.4	8.1	7.4	6.8	6.8	7.0	6.9
19.....	--	7.7	7.7	7.6	7.5	7.4	7.9	7.4	6.7	6.8	7.0	6.9
20.....	--	7.7	7.7	7.6	7.5	7.6	7.9	7.4	6.7	6.7	7.0	6.8
21.....	--	7.6	7.7	7.7	7.3	7.4	8.1	7.3	6.7	6.9	6.9	6.8
22.....	--	7.7	7.7	7.8	7.4	7.4	7.9	7.4	6.7	6.9	6.9	7.0
23.....	--	7.6	7.6	7.7	7.4	7.5	7.7	7.4	6.8	7.0	6.9	7.0
24.....	--	7.9	7.7	7.6	7.4	7.6	7.8	7.4	6.7	6.9	7.0	7.2
25.....	--	7.7	7.7	7.4	7.5	7.6	7.9	7.4	6.7	6.9	6.9	7.0
26.....	--	7.7	7.9	7.6	7.4	7.7	7.9	7.4	6.8	6.9	7.0	7.2
27.....	--	7.6	7.8	7.8	7.5	7.6	7.8	7.3	6.8	7.1	7.1	7.2
28.....	--	7.8	7.9	7.7	7.6	7.8	7.9	7.3	6.8	7.0	7.1	7.2
29.....	--	7.7	7.9	7.7	7.4	8.0	7.8	7.3	6.8	7.1	7.0	7.1
30.....	--	7.8	7.8	7.7	--	8.0	7.9	7.3	6.7	7.1	7.1	7.1
31.....	--	--	7.9	7.7	--	8.3	--	7.3	--	7.2	7.1	--
AVERAGE	--	7.5	7.7	7.5	7.4	7.4	7.7	7.3	6.8	6.8	6.9	6.9

## COASTAL BASINS BETWEEN MYAKKA RIVER AND HILLSBOROUGH RIVER

## 02299950 MANATEE RIVER NEAR MYAKKA HEAD, FLA.

LOCATION.--Lat 27°28'24", long 82°12'41", Manatee County, at gaging station near center span on upstream side of bridge on State Highway 64, 2.0 miles downstream from confluence of North and East Forks Manatee River, 6.4 miles east of State Highway 675, 8.4 miles west of Myakka Head, and 36 miles upstream from mouth.

DRAINAGE AREA.--64.7 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1966 to July 1968 (discontinued).

Water temperatures: October 1966 to July 1968 (discontinued).

## EXTREMES.--1967-68:

Specific conductance: Maximum daily, 161 micromhos May 19; minimum daily, 33 micromhos July 20, 21.

Water temperatures: Minimum 11.0°C Mar. 1.

## Period of record:

Specific conductance (October 1966 to July 1968): Maximum daily, 161 micromhos May 19, 1968; minimum daily, 33 micromhos July 20, 21.

Water temperatures: Minimum 11.0°C Mar. 1, 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, OCTOBER 1967 TO JULY 1968

DATE	DIS- CHARGE (GFS)	TEMP- ERATURE (DEG C)	SILICA (SIO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
NOV.												
13....	--	20	8.0	.15	9.0	4.0	--	4.9	.4	31	4.8	11
MAY												
14....	2.8	23	4.6	.03	10	5.0	.13	5.1	.8	42	7.4	8.0
21....	--	27	--	--	--	--	--	--	--	--	--	--
JUNE												
25....	--	26	5.3	.27	6.2	3.0	--	5.7	1.1	13	1.6	12
JULY												
31....	--	27	--	--	--	--	--	--	--	--	--	--
				DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
NOV.												
13....	.5	.0	--	59	70	39	14	107	6.8	50	--	--
MAY												
14....	.5	.3	.64	63	71	46	12	118	6.8	20	5.3	61
31....	--	1.1	2.1	--	--	--	--	149	--	--	--	--
JUNE												
25....	.6	.1	--	44	97	28	17	79	6.3	240	--	--
JULY												
31....	--	.9	1.7	--	--	--	--	109	--	--	--	--

## COASTAL BASINS BETWEEN MYAKKA RIVER AND HILLSBOROUGH RIVER

02299950 MANATEE RIVER NEAR MYAKKA HEAD, FLA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25° C), OCTOBER 1967 TO JULY 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	76	140	149	109	110	118	110	119	146	53	--	--
2.....	76	135	131	100	120	116	105	121	146	53	--	--
3.....	77	122	129	95	120	114	109	120	133	41	--	--
4.....	78	126	120	98	125	115	105	118	57	43	--	--
5.....	80	116	120	109	120	111	109	112	86	42	--	--
6.....	81	103	110	98	120	104	109	107	112	43	--	--
7.....	76	100	130	109	120	105	109	103	110	48	--	--
8.....	78	102	130	109	120	114	109	105	114	43	--	--
9.....	79	104	130	98	110	114	109	115	113	44	--	--
10.....	74	101	125	109	110	114	109	120	115	38	--	--
11.....	74	103	110	109	110	116	109	128	108	41	--	--
12.....	78	102	130	105	110	115	102	125	106	50	--	--
13.....	81	102	120	101	110	112	109	106	111	44	--	--
14.....	84	102	120	101	110	109	109	106	104	43	--	--
15.....	84	102	130	110	100	114	105	124	104	46	--	--
16.....	86	102	120	100	100	111	109	150	110	43	--	--
17.....	88	101	120	110	109	113	109	157	105	39	--	--
18.....	90	105	120	110	110	113	105	157	83	44	--	--
19.....	93	104	120	110	110	116	119	161	87	42	--	--
20.....	89	104	110	120	110	115	109	152	72	33	--	--
21.....	91	106	110	102	112	117	109	149	70	33	--	--
22.....	90	107	119	109	110	110	109	144	75	38	--	--
23.....	92	107	119	110	102	115	110	157	77	38	--	--
24.....	101	110	110	100	102	115	125	133	78	44	--	--
25.....	96	116	110	110	110	115	125	120	79	53	--	--
26.....	95	136	110	110	110	112	111	123	77	49	--	--
27.....	95	138	105	110	115	115	119	131	54	54	--	--
28.....	96	144	105	110	115	115	111	146	55	59	--	--
29.....	124	141	105	110	115	118	110	144	57	55	--	--
30.....	123	139	105	102	--	116	105	147	58	62	--	--
31.....	--	--	105	119	--	119	--	149	--	169	--	--
AVERAGE	87	114	118	106	111	113	110	130	93	47	--	--

TEMPERATURE (C°) OF WATER, OCTOBER 1967 TO JULY 1968

[illegible]

## 02300500 LITTLE MANATEE RIVER NEAR WIMAUMA, FLA.

LOCATION.--Lat 27°40'15, long 82°21'10, Hillsborough County, at gaging station on left bank 25 ft downstream from bridge on U.S. Highway 301, 1.5 miles upstream from Cypress Creek, 4 miles southwest of Wimauma, and 15 miles upstream from mouth.

DRAINAGE AREA.--149 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1956 to September 1968.

Water temperatures: October 1956 to September 1957.

**EXTRENES, --1967-68:**

Specific conductance: Maximum daily, 245 micromhos May 5, 6; minimum daily, 31 micromhos Aug. 22.

Period of record:

Dissolved solids (1956-57): Maximum, 88 mg/l Mar. 1-10, 1957; minimum, 36 mg/l Dec. 1-10, 1956.

Hardness (1956-57): Maximum, 24 mg/l Jan. 11-20, 21-31, Feb. 1-10, 11-20, 1957; minimum, 9 mg/l

Specific conductance (1956-57, 1967-68): Maximum daily, 245 micromhos May 5, 6, 1968; minimum daily, 31 micromhos

Aug. 22, 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]





CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (P)	NITRATE (NO3)	PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS-SOLVED SOLIDS (RESIDUE AT 180°C)	HARDNESS (CA,MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	DIS-SOLVED OXYGEN	PERCENT SATURATION
OCT. 02...	3.1	--	--	--	--	--	--	201	6.6	80	--	--
JAN. 08...	5.0	--	--	--	--	--	--	380	--	--	--	--
FEB. 12...	4.7	--	--	--	--	--	--	390	--	--	--	--
MAR. 19...	4.3	--	--	--	--	--	--	385	--	--	--	--
APR. 27...	4.3	0.4	21	224	232	116	96	368	7.0	30	11.0	129
JUNE 05...	2.4	--	--	--	--	--	--	212	--	--	--	--
30...	2.7	--	2.7	--	--	--	--	140	--	--	--	--
JULY 07...	2.1	--	10	--	--	--	--	152	--	--	--	--
14...	2.5	--	10	--	--	--	--	180	--	--	--	--
21...	3.3	--	17	--	--	--	--	160	--	--	--	--
23...	4.8	--	--	--	--	--	--	220	--	--	--	--
29...	4.3	--	31	--	--	--	--	182	--	--	--	--
AUG. 04...	5.1	--	35	--	--	--	--	209	--	--	--	--
11...	5.5	--	37	--	--	--	--	231	--	--	--	--
19...	5.4	1.3	33	--	--	--	--	205	--	--	--	--
25...	--	--	38	--	--	--	--	317	--	--	--	--
SEPT. 03...	2.8	--	26	--	--	--	--	199	--	--	--	--
08...	2.5	--	16	--	--	--	--	230	--	--	--	--
09...	2.7	1	--	109	128	48	35	152	6.1	140	--	--
17...	2.5	--	15	--	--	--	--	150	--	--	--	--
22...	2.0	--	36	--	--	--	--	210	--	--	--	--

LOCATION.--Lat 27°52'19", long 82°12'41", Hillsborough County, at gaging station near center of span on downstream side of bridge on Marvina Road, 1.1 miles northeast of Lithia (Station), 2 miles upstream from Little Fishhawk Creek, 4.3 miles west of Lithia, and 24 miles upstream from mouth.

PERIOD OF RECORD.--Chemical analyses: November 1956 to September 1958, October 1963 to September 1968.  
Water temperatures: October 1957 to September 1958, October 1963 to September 1968.

1955--1967--68:  
 Fluoride: Maximum daily, 26 mg/l Jan. 12; minimum daily, 2.7 mg/l July 6.  
 Phosphate: Maximum daily, 155 mg/l Apr. 10; minimum daily, 19 mg/l July 6.  
 Specific conductance: Maximum daily, 920 micromhos Feb 23; minimum daily, 185 micromhos July 6.  
 pH: Maximum daily, 6.7 on several days during January and July; minimum daily, 4.2 Mar. 16.  
 Turbidity: Maximum daily, 100 mg/l May 30; minimum daily, 0 mg/l on several days during November and December.  
 Water temperatures: Maximum, 29°C July 27, Aug. 6, 8; minimum, 11.0°C Nov. 20.

Dissolved solids (1957-58): Maximum, 659 mg/l June 11-22, 1958; minimum, 134 mg/l Oct. 1-10, 1957.  
Hardness (1957-58): Maximum, 370 mg/l June 11-22, 1958; minimum, 68 mg/l Oct. 1-10, 1957.  
pH (1964-68): Maximum daily, 30 mg/l Aug. 16, 1965; minimum daily, 2.7 mg/l Aug. 14, 1967, July 6, 1968.  
Sesquiphosphate (1964-68): Maximum daily, 308 mg/l Apr. 27, 1967; minimum daily, 13 mg/l Feb. 5, 1965.  
Specific conductance (1957-58, 1963-68): Maximum daily, 1,110 microhm/cm Apr. 3, 1967; minimum daily, 150 microhm Jan. 12, 1964.  
pH (1964-68): Maximum daily, 7.2 June 1, 1965; minimum daily, 4.2 Mar. 16, 1968.  
Turbidity (1964-68): Maximum daily, 108 mg/l June 23, 1967; minimum daily, 0 mg/l June 7, 1967, and on several days during November and December, 1967.  
Water temperatures (1957-58, 1963-68): Maximum, 31.0°C June 13, 1964; minimum, 9.0°C Jan. 27, Feb. 1 & 6, 1968.

[illegible]

## COASTAL BASINS BETWEEN MYAKKA RIVER AND HILLSBOROUGH RIVER

## 02301500 ALFIA RIVER AT LITHIA, FLA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO <sub>3</sub> )	PHOSPHATE (PO <sub>4</sub> )	DISSOLVED SOLIDS (SOLIDS) (RESIDUE AT 180 C)	DISSOLVED SOLIDS (SOLIDS) (RESIDUE AT 180 C)	HARDNESS (CA+MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	DISSOLVED OXYGEN	PERCENT SATURATION
OCT. 31....	14	--	--	--	--	--	--	740	5.8	--	--	--
NOV. 27....	15	26	--	565	550	258	256	740	5.2	40	--	--
31....	22	--	--	--	--	--	--	720	5.2	--	--	--
DEC. 31....	16	--	--	--	--	--	--	640	6.2	--	--	--
JAN. 31....	24	--	--	--	--	--	--	720	6.4	--	--	--
FEB. 24....	1.9	5.3	--	415	395	202	165	590	6.4	50	--	--
29....	17	--	--	--	--	--	--	860	4.9	--	--	--
MAR. 31....	18	--	--	--	--	--	--	710	6.0	--	--	--
APR. 22....	21	3.2	133	629	706	306	304	860	5.0	20	5.9	68
30....	23	--	--	--	--	--	--	720	6.6	--	--	--
MAY 31....	16	--	--	--	--	--	--	843	5.8	--	--	--
JUNE 03....	16	11	--	576	576	267	264	1460	5.5	50	--	--
30....	6.6	--	--	--	--	--	--	329	6.3	--	--	--
JULY 23....	7.3	6.1	--	348	364	148	141	448	5.9	120	--	--
31....	9.0	--	86	--	--	--	--	450	6.3	--	--	--
AUG. 31....	5.7	7.7	52	--	--	--	--	440	6.3	--	--	--
SEPT. 05....	2.4	2.5	--	225	233	107	96	317	6.2	70	--	--
30....	8.2	--	--	--	--	--	--	410	6.4	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	460	750	650	699	730	855	779	678	880	320	450	--
2.....	460	740	640	680	720	825	745	703	825	320	470	--
3.....	490	720	635	740	690	820	720	663	790	290	500	450
4.....	560	730	650	740	780	780	740	663	690	265	505	485
5.....	581	730	650	720	799	810	750	703	332	210	470	500
6.....	610	760	650	720	730	800	770	710	458	165	500	465
7.....	519	820	660	750	740	749	760	672	600	225	540	295
8.....	482	820	650	770	805	630	770	740	610	275	625	295
9.....	459	780	610	770	810	690	740	772	610	312	610	295
10.....	459	780	610	745	720	710	810	720	640	205	640	295
11.....	480	780	620	700	720	790	750	743	680	231	625	320
12.....	550	790	570	720	731	779	670	693	510	270	575	310
13.....	559	779	530	680	670	729	670	420	525	285	575	245
14.....	581	779	540	720	740	699	660	471	455	310	565	230
15.....	642	765	740	710	770	750	670	561	370	336	410	225
16.....	620	790	680	670	730	749	670	575	475	335	510	300
17.....	600	710	670	670	710	761	670	619	540	210	475	320
18.....	609	780	670	680	780	750	680	615	555	195	470	340
19.....	599	800	680	630	680	739	730	607	437	195	540	340
20.....	605	785	620	670	660	760	760	580	430	220	550	350
21.....	651	830	620	655	685	720	810	637	410	260	660	330
22.....	640	810	640	660	800	700	810	647	460	240	660	380
23.....	690	780	650	680	920	730	699	730	498	270	720	400
24.....	640	760	710	670	790	745	790	856	505	210	675	415
25.....	690	729	690	635	780	720	710	778	520	340	600	410
26.....	690	715	690	680	895	700	750	638	483	340	570	410
27.....	630	699	695	750	895	689	720	638	448	410	600	410
28.....	690	670	650	740	860	741	700	659	391	390	295	390
29.....	599	710	630	720	860	710	645	828	382	390	288	435
30.....	599	720	659	720	--	770	720	822	329	410	340	410
31.....	740	--	640	720	--	710	--	843	--	450	440	--
AVERAGE	588	760	645	703	765	745	728	676	526	287	529	358

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															AVER-	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE-	
OCTOBER...	24	23	24	24	23	23	23	25	23	23	23	21	22	21	23	23	22	21	21	20	21	22	22	22	22	22	22	22	21	22	22	22	
NOVEMBER...	22	23	22	21	18	18	17	16	17	18	18	20	19	19	17	19	18	11	16	17	12	16	22	21	22	22	20	21	--	--	--	18	
DECEMBER...	21	20	20	17	18	18	18	20	20	21	21	20	21	22	21	22	22	21	21	22	21	22	21	20	17	15	16	15	17	16	16	14	19
JANUARY...	17	18	19	20	19	18	18	18	18	20	20	18	16	15	14	14	13	15	16	16	14	16	15	14	13	15	14	13	15	16	17	17	16
FEBRUARY...	17	13	19	17	18	17	16	14	13	13	15	15	13	14	14	16	16	15	14	14	14	16	15	14	13	15	14	13	15	14	--	--	15
MARCH.....	13	14	13	14	16	15	14	17	17	18	21	22	20	17	17	18	20	19	19	19	20	22	20	18	17	17	16	18	20	19	19	17	15
APRIL.....	21	20	21	23	26	24	24	25	24	24	23	24	24	22	21	22	21	22	23	23	25	25	25	25	25	25	23	16	26	27	25	--	23
MAY.....	26	23	26	24	24	27	24	24	24	24	26	27	25	26	28	27	28	27	25	27	25	25	25	25	26	26	26	27	26	27	27	26	25
JUNE.....	26	28	26	25	24	24	24	25	26	27	26	27	26	25	26	25	25	25	25	25	26	27	27	28	28	27	27	26	26	26	--	26	
JULY.....	26	27	26	26	25	25	25	26	25	25	27	27	27	27	26	25	25	26	26	26	26	26	26	26	26	26	26	28	28	28	28	26	26
AUGUST....	28	27	28	27	27	29	27	29	28	27	28	27	28	27	27	27	27	28	28	28	28	28	28	28	28	28	27	27	24	24	25	27	27
SEPTEMBER..	--	--	--	27	28	27	27	27	28	28	27	26	26	25	25	24	25	26	25	25	26	25	26	25	26	25	26	26	26	26	27	--	26

## 02301500 ALAFIA RIVER AT LITHIA, FLA.--Continued

FLUORIDE, IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968												
DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	7.6	14	14	21	16	14	16	22	14	5.6	9.0	--
2.....	7.7	14	15	24	17	14	15	22	17	6.1	10	--
3.....	8.6	13	16	23	13	13	16	21	16	5.5	9.8	6.2
4.....	9.7	13	15	20	17	15	19	22	14	4.3	10	9.6
5.....	10	11	14	24	17	15	18	21	5.4	3.5	9.1	7.4
6.....	11	13	14	23	14	15	20	20	9.0	2.7	9.7	7.3
7.....	8.6	14	15	24	16	15	21	19	7.1	3.7	10	4.9
8.....	10	13	14	24	18	12	23	20	7.9	4.3	14	5.3
9.....	8.8	13	14	25	17	13	20	22	9.0	5.2	13	4.5
10.....	8.5	14	14	23	16	16	19	23	11	3.4	12	4.5
11.....	9.2	16	17	23	18	17	22	22	12	4.1	12	4.6
12.....	10	17	11	26	14	15	22	21	10	5.1	11	5.1
13.....	10	14	11	23	14	14	23	12	10	5.3	10	2.9
14.....	13	16	11	24	16	13	22	12	9.0	5.3	13	3.4
15.....	13	16	12	21	17	14	20	12	6.8	5.7	7.7	4.2
16.....	14	17	11	22	14	14	18	14	8.9	5.8	11	4.3
17.....	12	16	12	21	16	15	20	14	9.2	3.7	9.4	4.9
18.....	11	17	12	16	17	14	21	14	10	3.2	9.4	5.3
19.....	11	19	12	17	13	13	20	14	9.1	4.4	12	5.1
20.....	11	18	12	16	13	14	23	15	8.2	4.0	11	5.6
21.....	13	19	12	17	13	13	21	15	7.5	4.2	11	5.8
22.....	13	18	12	17	17	14	21	15	9.4	4.3	12	5.9
23.....	14	18	12	19	17	14	19	15	9.1	6.1	12	6.7
24.....	15	18	13	19	13	14	23	16	10	6.6	12	7.1
25.....	18	18	14	17	13	17	23	15	10	6.4	11	6.3
26.....	19	18	14	21	16	15	23	12	11	7.0	11	6.8
27.....	17	17	16	22	17	13	21	12	9.9	7.3	11	6.8
28.....	16	18	15	24	17	17	21	14	8.9	7.7	4.4	6.8
29.....	16	22	13	25	17	15	23	14	7.9	8.2	4.5	8.2
30.....	16	22	14	23	--	19	23	15	6.6	8.2	5.6	8.2
31.....	14	--	16	24	--	18	--	16	--	9.0	5.7	--
AVERAGE	12	16	13	22	16	15	21	17	9.7	5.3	10	5.8

## PHOSPHATE, IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	64	120	108	110	105	113	105	109	97	39	94	--
2.....	60	112	109	119	102	121	100	103	87	39	86	--
3.....	65	104	107	119	90	122	103	115	85	35	92	65
4.....	80	109	109	110	103	125	120	116	81	31	87	74
5.....	88	112	104	104	113	120	133	112	27	25	77	77
6.....	94	110	104	108	100	119	140	111	50	19	87	75
7.....	76	111	109	120	106	100	140	104	38	24	97	48
8.....	67	105	104	124	128	98	146	123	47	31	110	51
9.....	68	96	97	114	125	113	146	134	60	39	108	62
10.....	66	105	102	120	121	124	155	131	70	22	110	44
11.....	74	105	101	125	115	118	144	123	83	30	109	45
12.....	81	110	86	114	100	105	125	111	65	34	137	42
13.....	81	111	77	109	96	95	122	63	66	36	108	28
14.....	84	115	96	114	111	96	124	67	53	40	100	25
15.....	102	122	100	116	114	100	118	79	39	43	72	33
16.....	100	126	92	110	106	100	112	81	49	41	99	41
17.....	94	126	93	110	109	101	114	84	61	22	87	46
18.....	94	131	92	92	132	100	132	85	62	20	86	48
19.....	92	135	92	85	100	101	127	84	51	27	103	49
20.....	94	135	94	84	101	103	149	77	53	26	98	48
21.....	104	148	92	86	106	97	149	89	48	30	107	49
22.....	106	131	96	82	122	95	151	80	54	36	110	53
23.....	111	122	99	91	109	100	114	83	66	48	109	67
24.....	104	113	105	91	92	108	129	82	77	51	105	66
25.....	106	100	115	85	95	113	121	81	80	59	96	64
26.....	102	102	116	107	121	102	122	62	76	63	93	68
27.....	101	101	120	114	107	105	110	65	65	70	99	65
28.....	102	99	106	107	105	114	109	73	55	72	37	72
29.....	104	101	99	107	113	114	102	83	47	77	36	79
30.....	116	107	105	108	--	110	107	85	40	81	46	79
31.....	94	--	107	117	--	107	--	89	--	78	51	--
AVERAGE	89	114	101	107	109	108	126	93	61	42	91	55

## COASTAL BASINS BETWEEN MYAKKA RIVER AND HILLSBOROUGH RIVER

## 02301500 ALPIA RIVER AT LITHIA, FLA.--Continued

PH (UNITS), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	5.5	5.8	4.9	6.2	6.4	4.8	6.2	6.3	5.0	6.7	6.5	--
2.....	5.4	5.8	5.4	6.0	6.4	4.9	6.4	6.4	5.1	6.5	6.2	--
3.....	5.3	5.8	5.5	5.9	6.6	4.7	6.5	6.4	5.3	6.5	6.1	6.5
4.....	4.7	5.7	5.6	6.0	6.4	4.8	6.2	6.3	5.9	6.6	6.0	6.3
5.....	4.7	5.7	5.8	6.2	6.0	4.8	5.9	6.3	6.6	6.6	6.1	6.3
6.....	4.6	5.4	5.6	6.1	6.0	4.8	5.7	6.3	6.1	6.7	6.0	6.3
7.....	5.7	5.0	5.7	5.9	5.2	4.9	5.5	6.2	5.6	6.7	5.6	6.3
8.....	5.7	5.1	5.8	5.4	4.7	5.5	5.5	6.1	5.1	6.5	5.2	6.3
9.....	5.8	5.5	6.2	6.0	4.9	5.1	5.5	6.0	4.9	6.6	5.1	6.2
10.....	5.9	5.1	6.2	6.1	4.9	4.9	5.6	5.8	4.7	6.5	5.1	6.4
11.....	5.3	5.0	6.2	6.3	4.9	4.9	5.5	5.8	4.7	6.5	5.1	6.5
12.....	5.2	4.8	6.2	6.3	5.1	4.8	6.0	5.9	4.8	6.4	5.7	6.5
13.....	5.2	4.8	6.3	6.3	5.4	5.1	6.3	6.2	5.1	6.4	5.8	6.3
14.....	5.0	4.8	5.9	6.4	5.0	4.9	6.2	6.3	5.8	6.3	5.8	6.4
15.....	4.7	4.7	5.3	6.5	4.9	5.1	6.3	6.0	6.2	6.5	6.0	6.2
16.....	4.8	4.7	5.9	6.5	4.9	4.2	6.4	5.9	6.2	6.4	6.1	6.3
17.....	5.5	5.9	6.0	6.6	5.0	5.7	6.5	5.7	6.0	6.6	6.1	6.3
18.....	5.8	4.8	6.1	6.6	4.9	5.0	6.2	5.8	5.6	6.6	6.0	6.3
19.....	5.9	4.6	6.3	6.7	5.4	5.2	6.2	5.9	5.6	6.7	6.0	6.4
20.....	5.8	4.6	6.3	6.7	5.5	5.2	6.1	5.9	5.8	6.6	5.9	6.4
21.....	5.6	5.9	6.3	6.7	5.6	5.5	5.8	6.1	5.8	6.6	5.1	6.5
22.....	5.6	4.8	6.3	6.7	5.0	6.1	5.5	6.1	5.4	6.4	5.1	6.6
23.....	5.2	4.7	6.4	6.6	4.9	5.9	6.2	6.0	5.2	6.4	5.0	6.4
24.....	5.4	4.7	6.3	6.7	5.4	5.5	6.1	6.0	5.0	6.2	5.3	6.4
25.....	5.6	4.9	6.1	6.6	5.4	5.5	6.1	5.9	5.0	6.4	5.8	6.5
26.....	5.6	4.9	6.1	6.5	4.7	6.0	6.2	6.1	5.2	6.4	5.9	6.5
27.....	5.6	4.9	6.0	6.4	5.0	6.2	6.3	6.2	5.9	6.2	5.8	6.4
28.....	5.6	5.4	6.3	6.3	5.2	6.0	6.4	6.1	6.2	6.2	6.2	6.4
29.....	5.8	5.2	6.3	6.4	4.9	6.0	6.5	6.0	6.2	6.2	6.3	6.4
30.....	5.7	5.2	6.1	6.4	--	6.0	6.6	5.8	6.3	6.2	6.1	6.4
31.....	5.8	--	6.2	6.4	--	6.0	--	5.8	--	6.3	6.3	--
AVERAGE	5.4	5.1	5.9	6.3	5.3	5.2	6.0	6.0	5.5	6.4	5.7	6.3

## TURBIDITY, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	20	35	0.0	5.0	2.5	5.2	9.7	8.4	4.4	10	10	--
2.....	12	13	0.0	10	2.5	5.2	15	12	4.4	10	15	--
3.....	35	13	0.0	9.0	2.5	3.4	1.8	2.2	1.6	15	3.4	5.9
4.....	12	13	0.0	5.0	2.5	9.7	7.4	11	2.0	10	1.7	5.9
5.....	20	4.0	0.0	5.0	2.5	7.4	5.2	5.6	3.2	10	3.4	20
6.....	12	4.0	0.0	4.0	2.5	3.4	9.7	18	13	10	5.3	6.3
7.....	12	4.0	0.0	5.0	2.5	11	5.2	17	7.5	15	15	20
8.....	35	4.0	0.0	4.0	2.5	9.7	5.2	13	1.8	20	15	2.0
9.....	12	4.0	0.0	4.0	2.5	5.2	5.2	24	9.2	15	3.4	20
10.....	12	0.0	6.0	4.0	2.5	1.8	9.7	11	32	15	20	10
11.....	20	4.0	4.0	4.0	2.5	1.8	5.2	13	32	15	5.3	5.9
12.....	20	0.0	6.0	4.0	2.5	3.4	9.7	19	43	10	5.3	10
13.....	35	4.0	13	4.0	2.5	3.4	3.5	45	7.5	12	7.4	6.3
14.....	12	23	4.0	4.0	2.5	3.4	1.8	26	20	12	9.7	10
15.....	9.0	4.0	13	5.0	2.5	1.8	1.8	69	20	10	15	20
16.....	12	4.0	13	4.0	5.2	3.4	1.8	13	13	12	15	60
17.....	20	4.0	0.0	4.0	2.5	3.4	1.8	29	13	20	10	32
18.....	3.0	4.0	4.0	4.0	5.2	3.4	1.8	74	13	20	10	20
19.....	3.0	4.0	13	2.0	7.4	3.4	1.8	26	13	15	10	32
20.....	3.0	4.0	4.0	4.0	7.4	1.8	3.5	18	32	10	15	5.9
21.....	3.0	23	13	4.0	7.4	1.8	7.4	18	20	15	10	16
22.....	3.0	4.0	4.0	4.0	5.2	1.8	12	15	32	10	15	16
23.....	3.0	4.0	4.0	2.0	7.4	1.8	12	15	20	15	10	6.3
24.....	3.0	4.0	4.0	2.0	7.4	1.8	12	14	20	15	10	20
25.....	12	4.0	4.0	2.0	9.7	1.8	3.5	17	7.5	20	7.4	10
26.....	3.0	4.0	4.0	2.0	9.7	1.8	15	12	7.5	20	7.4	20
27.....	20	4.0	4.0	2.0	7.4	1.8	3.5	26	7.5	20	10	16
28.....	3.0	4.0	4.0	2.0	7.4	1.8	12	29	13	20	10	10
29.....	3.0	23	4.0	2.0	9.7	1.8	5.2	19	13	20	20	20
30.....	12	4.0	4.0	4.0	--	1.8	3.5	100	13	20	20	10
31.....	12	--	4.0	4.0	--	1.8	--	14	--	32	10	--
AVERAGE	13	7.5	4.2	4.0	4.7	3.5	6.4	24	15	15	10	16



## 147

LOCATION.--Lat 27°52'00", long 82°13'50", Hillsborough County, at gaging station 500 ft upstream from Alafia River and 5.5 miles northwest of Lithia.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

				DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)		DIS-SOLVED SOLIDS (RESIDUE AT 180°C)		NON-CARBONATE HARDNESS		SPECIFIC CONDUCTANCE (MICROMHOS)				PERCENT SATURATION	
DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO3)								PH	COLOR	DIS-SOLVED OXYGEN		
APR.															
23...	0.5	7.2	0.16	247	254	182	77	400	7.5	5	4.6	54			
23...	.6	6.0	.03	242	257	183	80	400	7.2	0	3.8	45			
JULY															
05...	1.4	--	10	--	--	--	--	325	--	--	--	--			
12...	2.3	--	16	--	--	--	--	325	--	--	--	--			
19...	1.1	--	4.7	--	--	--	--	355	--	--	--	--			
23...	.4	--	--	--	--	--	--	433	--	--	--	--			
26...	.4	--	.29	--	--	--	--	410	--	--	--	--			
AUG.															
01...	.4	--	.39	--	--	--	--	440	--	--	--	--			
08...	.5	--	.20	--	--	--	--	420	--	--	--	--			
15...	.4	--	.20	--	--	--	--	425	--	--	--	--			
23...	.4	--	.21	--	--	--	--	410	--	--	--	--			
28...	.3	6.2	.26	--	--	--	--	405	--	--	--	--			
SEPT.															
05...	.3	--	.09	--	--	--	--	410	--	--	--	--			
09...	.5	6.6	--	271	283	197	92	429	7.1	0	--	--			
13...	.3	--	.00	--	--	--	--	370	--	--	--	--			
20...	.3	--	.03	--	--	--	--	410	--	--	--	--			
28...	.3	--	.03	--	--	--	--	440	--	--	--	--			

## 02302100 BIG DITCH NEAR CRYSTAL SPRINGS, FLA.

**DRAINAGE AREA.**--1.6 sq mi, approximately.

**PERIOD OF RECORD.**--Chemical analyses: March 1965 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]



## 149

FLUORIDE, IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

PHOSPHATE, IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

## HILLSBOROUGH RIVER BASIN

02302100 BIG DITCH NEAR CRYSTAL SPRINGS, FLA.--Continued

PH (UNITS), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968												
DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	--	--	--	--	--	--	--	--	--	--	--	--
2.....	--	--	--	6.6	--	--	7.5	--	--	6.8	--	--
3.....	4.9	--	--	--	--	--	--	--	--	--	--	--
4.....	--	--	--	--	--	--	--	--	--	--	--	--
5.....	--	--	6.3	--	--	7.3	--	--	6.8	--	--	--
6.....	--	--	--	--	6.7	--	--	--	--	--	7.5	--
7.....	--	7.3	--	--	--	--	--	7.3	--	--	--	--
8.....	--	--	--	--	--	--	--	--	--	--	--	--
9.....	--	--	--	6.8	--	--	7.6	--	--	5.9	--	--
10.....	5.2	--	--	--	--	--	--	--	--	--	--	--
11.....	--	--	--	--	--	--	--	--	7.1	--	--	--
12.....	--	--	6.8	--	--	7.7	--	--	--	--	--	--
13.....	--	--	--	--	5.5	--	--	--	--	--	8.0	--
14.....	--	7.2	--	--	--	--	--	7.5	--	--	--	--
15.....	--	--	--	--	--	--	--	--	--	--	--	--
16.....	--	--	--	7.5	--	--	7.7	--	--	6.1	--	--
17.....	6.3	--	--	--	--	--	--	--	--	--	--	--
18.....	--	--	--	--	--	--	--	--	6.9	--	--	--
19.....	--	--	7.5	--	--	7.4	--	--	--	--	--	--
20.....	--	--	--	--	6.0	--	--	--	--	--	7.7	--
21.....	--	7.5	--	--	--	--	--	7.6	--	--	--	--
22.....	--	--	--	--	--	--	--	--	--	--	--	--
23.....	--	--	--	7.2	--	--	7.4	--	--	6.1	--	--
24.....	6.9	--	--	--	--	--	--	--	--	--	--	--
25.....	--	--	--	--	--	--	--	--	6.3	--	--	--
26.....	--	--	7.2	--	--	7.5	--	--	--	--	--	--
27.....	--	--	--	--	7.4	--	--	6.7	--	--	7.3	--
28.....	--	6.6	--	--	--	--	--	--	--	--	--	--
29.....	--	--	--	--	--	--	--	--	--	--	--	--
30.....	--	--	--	7.3	--	--	7.4	--	--	7.1	--	--
31.....	7.1	--	--	--	--	--	--	--	--	--	--	--
AVERAGE	--	--	--	--	--	--	--	--	--	--	--	--

02303400 CYPRESS CREEK NEAR SAN ANTONIO, FLA.

LOCATION.--Lat 28°19'25", long 82°23'03", Pasco County, at gaging station at center on downstream side of box culverts on State Highway 52, 3.3 miles downstream from Bee Tree Branch, 6.8 miles west of San Antonio 12 miles west of Dade City, and 25 miles upstream from mouth.

DRAINAGE AREA.--56 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1963 to September 1968.

Water temperatures: October 1963 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 325 micromhos Nov. 28; minimum daily, 65 micromhos Sept. 15, 16.

Water temperatures: Maximum, 32.0°C July 26; minimum, 12.0°C Jan. 14, 25.

Period of record:

Specific conductance: Maximum daily, 341 micromhos Apr. 5, 1967; minimum daily, 43 micromhos Sept. 12, 1966.

Water temperatures: Maximum, 32.0°C July 26, 1968; minimum, 7.0°C Dec. 18, 1963.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (SO4)
FEB.											
28...	--	13	--	--	--	--	--	--	--	128	--
MAY											
22...	.00	23	1.1	.01	54	4.5	.08	5.9	2.8	196	.8
JUNE											
30...	--	30	--	--	--	--	--	--	--	--	--
JULY											
10...	--	25	7.1	.15	18	2.2	--	5.3	1.5	48	8.4
31...	--	30	--	--	--	--	--	--	--	--	--
AUG.											
31...	--	--	--	--	--	--	--	--	--	--	--
SEPT.											
04...	24	28	4.5	.10	11	1.9	--	4.2	.5	27	1.2
30...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)	PH	COLOR
FEB.											
28...	--	--	--	--	--	--	124	19	259	7.7	80
MAY											
22...	95	.4	2.2	.06	178	182	153	0	319	7.3	20
JUNE											
30...	--	--	--	--	--	--	--	--	169	--	--
JULY											
10...	10	.3	.3	--	77	125	54	14	129	6.7	200
31...	--	--	--	.49	--	--	--	--	106	--	--
AUG.											
31...	--	--	2.6	.13	--	--	--	--	73	--	--
SEPT.											
04...	10	.3	.1	--	47	91	36	14	87	5.9	160
30...	--	--	--	.13	--	--	--	--	130	--	--

## HILLSBOROUGH RIVER BASIN

151

02303400 CYPRESS CREEK NEAR SAN ANTONIO, FLA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	170	270	310	290	309	265	300	309	298	156	92	78
2.....	169	266	320	275	309	259	297	307	298	156	42	78
3.....	172	270	310	270	309	255	291	309	255	136	44	78
4.....	172	270	290	290	309	249	297	309	250	136	94	83
5.....	138	250	290	275	309	250	297	310	193	130	90	83
6.....	172	255	290	290	315	259	294	309	193	131	90	88
7.....	172	278	300	290	300	260	291	311	211	--	90	88
8.....	135	270	290	305	315	260	300	311	211	--	96	88
9.....	165	280	290	280	300	269	293	315	219	--	96	90
10.....	168	282	310	310	315	240	--	315	--	--	96	92
11.....	188	278	270	310	320	240	290	317	222	134	101	92
12.....	188	278	270	310	305	199	292	315	--	134	101	97
13.....	192	285	270	295	290	215	289	300	219	139	97	73
14.....	192	285	290	310	310	210	287	300	219	139	97	71
15.....	188	298	295	310	315	290	293	308	197	144	95	65
16.....	180	298	295	290	315	219	--	309	197	142	95	65
17.....	208	300	280	290	310	219	290	309	200	140	97	75
18.....	204	300	290	290	319	230	289	309	212	140	98	75
19.....	200	303	299	320	300	230	290	310	190	125	98	75
20.....	200	310	290	310	310	259	290	310	190	126	105	75
21.....	200	310	310	310	290	255	293	311	199	105	110	81
22.....	230	310	290	310	290	250	295	311	201	108	120	88
23.....	225	310	305	310	270	240	296	--	210	80	120	88
24.....	232	308	290	300	270	240	293	--	210	82	120	89
25.....	232	318	290	310	260	270	300	--	--	88	120	93
26.....	238	320	290	300	260	260	301	--	213	97	120	93
27.....	228	322	250	310	260	260	300	301	--	98	110	98
28.....	248	325	230	309	240	270	302	301	137	96	110	97
29.....	245	320	290	300	260	300	305	290	170	101	72	120
30.....	240	320	275	300	--	270	307	288	169	102	72	130
31.....	242	--	275	310	--	279	--	292	--	106	73	--
AVERAGE	197	292	288	299	297	249	295	306	210	121	98	86

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY

DAY																															AVER-	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE
OCTOBER....	24	24	24	24	27	24	25	26	26	26	26	24	22	26	24	24	20	20	21	21	23	22	23	22	23	22	23	21	22	21	21	23
NOVEMBER....	23	24	23	21	20	19	20	19	18	19	21	22	19	20	19	20	19	20	19	18	19	21	22	22	24	20	21	21	21	21	20	
DECEMBER....	23	20	18	16	18	19	19	20	22	21	20	21	21	23	22	23	22	23	22	21	21	15	17	15	19	15	16	18	19	19	19	
JANUARY....	19	20	22	20	18	20	19	20	19	18	19	13	15	12	13	14	13	14	18	16	16	15	15	12	14	14	17	19	18	19	16	
FEBRUARY....	20	21	18	19	20	19	16	15	14	13	19	17	14	15	17	16	15	16	17	16	14	16	15	16	15	15	--	--	--	--	16	
MARCH.....	15	14	17	16	20	15	19	20	23	20	25	15	19	18	19	22	22	20	25	20	--	22	24	20	20	20	25	25	18	--	20	
APRIL.....	20	25	25	26	25	25	25	25	--	24	24	24	24	--	27	27	27	26	28	29	27	27	26	24	27	28	27	28	--	--	25	
MAY.....	27	28	28	25	29	29	25	25	26	25	28	29	29	29	29	29	28	29	29	29	--	--	--	--	29	29	29	29	29	29	28	
JUNE.....	29	29	25	30	24	25	30	29	30	--	30	--	30	29	29	30	29	28	29	30	30	30	30	30	30	30	30	30	30	30	29	
JULY.....	30	29	30	29	29	28	--	--	--	30	30	30	30	29	30	29	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
AUGUST....	30	29	30	29	28	29	30	30	30	30	29	30	29	30	29	30	29	30	29	29	29	29	29	29	29	29	29	29	29	29	29	
SEPTEMBER	30	30	30	30	30	30	29	30	29	30	29	29	28	24	29	28	29	29	29	29	29	29	29	29	29	29	29	29	29	29	28	

## COASTAL BASINS BETWEEN HILLSBOROUGH RIVER AND WITHLACOOCHIE RIVER

02307000 ROCKY CREEK NEAR SULPHUR SPRINGS, FLA.

LOCATION.--Lat 28°02'23", long 82°34'31", Hillsborough County, at gaging station on left bank 100 ft upstream from Seaboard Railway bridge, 2.5 miles downstream from Brushy Creek, 7.7 miles northwest of Sulphur Springs post office, and 6.1 miles upstream from mouth.

DRAINAGE AREA.--35 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March 1965 to September 1968.  
Water temperatures: October 1967 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 240 micromhos Oct. 16; minimum daily, 61 micromhos Aug. 4.  
Water temperatures: Maximum, 32.0°C Aug. 24; minimum, 15.0°C on several days during February, March, and April.

Period of record:

Specific conductance: Maximum daily, 240 micromhos Oct. 16, 1967; minimum daily, 61 micromhos Aug. 4, 1968.  
Water temperatures: Maximum, 32.0°C Aug. 24, 1968; minimum, 15.0°C on several days during February to April 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

CATE JAN.	DIS- SOLVED (CFE)	TEMP- ERATURE (DEG C)	SILICA (SI(C2))	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	NE- SIUM (MG)	STRO- NIUM (SR)	SODIUM (NA)	PC- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
24...	--	16	--	--	--	--	--	--	--	--	--	--
25...	1.7	26	3.5	.02	26	2.8	.05	7.9	.4	91	4.8	14
26...	--	21	9.5	.13	16	3.8	--	9.5	4.7	28	25	18
27...	10	26	4.4	.06	11	2.2	--	7.4	2.5	26	9.6	13
28...	425	26	3.4	.06	5.3	1.4	--	4.4	2.2	12	8.8	7.5
CATE JAN.	FLUC- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CON- TINUED)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
24...	--	--	--	--	--	--	--	189	--	--	--	--
25...	.2	1.0	.06	106	113	76	1	192	7.0	25	5.7	70
26...	.3	.6	--	102	143	56	32	173	6.5	160	--	--
27...	.2	.0	--	64	87	37	15	114	6.4	100	--	--
28...	.5	.2	--	40	60	19	9	68	6.2	120	--	--



## 02307479 LAKE TARPON NEAR TARPON SPRINGS, FLA.--Continued

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DISSOLVED SOLIDS	HARDNESS (CAL/MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE	PH	COLOR	DISSOLVED OXYGEN	PERCENT SATURATION
				(SUM OF CONSTITUENTS)			(MICROMHOS)				
PAY 27...	.6	.3	.02	12000	2280	2270	19800	6.1	10	6.9	85
JULY 17...	.6	.2	---	10200	1950	1950	17000	4.9	30	---	---
31...	---	---	.12	---	---	---	17000	---	---	---	---
AUG. 29...	---	.0	.07	---	---	---	15000	---	---	---	---
30...	---	.0	.47	---	---	---	7300	---	---	---	---
SEPT. 03...	.5	.6	---	8470	1600	1590	14200	5.8	50	---	---
30...	---	.0	.47	---	---	---	7300	---	---	---	---

## SPECIFIC CONDUCTANCE (MICROMHDS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	10900	11400	13000	13500	14200	15300	17000	18200	19500	18200	15800	15000
2.....	10700	11700	13000	13500	13900	15400	17000	18200	19500	17100	15300	13100
3.....	10800	11800	13000	13500	14900	15400	16900	--	18600	18200	15000	12000
4.....	10800	11500	13000	14000	15300	15300	17500	--	18500	17900	14600	12000
5.....	10900	11700	13000	14000	13500	15400	17000	18000	19200	18500	14900	12000
6.....	10900	11800	13000	13500	14000	15500	17000	18300	19800	18500	15800	13000
7.....	10900	11900	13000	13500	14000	15500	17000	18500	19500	17900	16000	13000
8.....	11100	12000	13000	14000	13100	15300	17000	18200	19500	17900	15600	13000
9.....	11000	12000	13000	14000	13900	15200	17000	18300	19500	17900	14800	13000
10.....	11200	11900	12900	14000	13900	15500	17000	18600	19500	17500	15100	13500
11.....	10900	11600	13100	14000	13900	15500	16900	18700	19500	17500	14500	12500
12.....	11100	11700	13100	14000	14900	15400	17000	18400	19400	17500	14500	11500
13.....	11100	11900	13100	14000	14000	15700	17000	18900	19400	14500	14500	10900
14.....	11100	11900	13500	14000	13500	16200	17000	19000	19500	16500	15600	9990
15.....	11200	12000	13100	14000	14500	15800	17000	19000	--	17100	15200	10900
16.....	11100	11700	13100	14000	13500	15400	17000	19000	19800	18800	15800	12500
17.....	11300	12000	13100	13900	15000	15900	17100	19000	19800	16900	15200	9400
18.....	11300	12000	13100	14000	13500	15800	17100	19000	19900	16100	15200	10000
19.....	11100	12200	13500	13500	13100	15900	17200	19000	19900	15100	15200	8900
20.....	11400	12000	13500	13900	14900	15700	17200	19100	19800	16500	15500	8150
21.....	11400	12200	13500	14000	13900	15900	17200	19200	19600	15900	14900	8450
22.....	11500	12300	13900	14000	14900	16200	17500	19200	--	15900	15100	8450
23.....	11400	12400	13900	14000	14900	16700	17300	19800	19500	15900	14900	7800
24.....	11300	12700	13900	14000	15000	16700	17500	19500	19500	15000	15000	7800
25.....	11400	12800	13900	13900	13900	16700	17900	19500	19500	15000	16900	7800
26.....	11400	12900	13900	13400	13900	16700	17900	19200	19400	16100	15000	8990
27.....	11500	12900	13900	14000	15000	16700	17200	19500	19200	16900	15000	9000
28.....	11500	13000	14000	14000	15000	16600	17500	19500	19200	16500	15000	9400
29.....	11500	13200	14000	14000	15000	16800	18000	19700	19200	15100	15000	7850
30.....	11300	13200	13900	14000	--	16200	18000	19800	18900	16500	--	7300
31.....	11400	--	13900	14000	--	16700	--	19900	--	17000	--	--
AVERAGE	11160	12130	13380	13860	14110	15900	17210	18990	19490	16790	15080	10600

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

## COASTAL BASINS BETWEEN HILLSBOROUGH RIVER AND WITHLACOCHEE RIVER

## 02310000 ANCLOTE RIVER NEAR ELPERS, FLA.

LOCATION.--Lat 28°12'50", long 82°40'00", Pasco County, at gaging station on left bank 40 ft downstream from bridge on State Highway 54, 3.5 miles east of Elfers, and 16 miles upstream from mouth.

DRAINAGE AREA.--72.5 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1962 to September 1968.

Water temperatures: October 1962 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 440 micromhos July 2, 4; minimum daily, 45 micromhos Aug. 31.

pH: Maximum daily, 7.5 Dec. 8, 1967; minimum daily, 4.5 July 29, 1968.

Water temperatures: Maximum, 29.0°C on several days from May to September; minimum, 10.0°C Mar. 19.

Period of record:

Specific conductance: Maximum daily, 440 micromhos July 2, 4, 1968; minimum daily, 16 micromhos Dec. 31, 1963.

pH (1967-68): Maximum daily, 7.5 Dec. 8, 1967; minimum daily, 4.5 July 29, 1968.

Water temperatures: Maximum, 29.0°C on several days from May to September 1968; minimum, 7.0°C Jan. 16, 1964, Feb. 1, 2, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
MAY												
27...	2.9	27	9.0	.03	73	6.0	.31	8.2	.8	232	15	14
JULY												
17...	--	25	4.2	.15	9.0	1.2	--	4.9	1.0	22	5.6	9.0
31...	--	27	--	--	--	--	--	--	--	--	--	--
AUG.												
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEPT.												
05...	250	28	4.1	.28	9.2	1.2	--	4.0	1.0	20	.8	8.0

DATE	FLUD- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
MAY												
27...	.3	.2	.09	241	--	207	17	426	8.1	10	7.2	88
JULY												
17...	.3	.2	--	47	86	28	10	146	6.3	240	--	--
31...	--	1.1	.18	--	--	--	--	120	--	--	--	--
AUG.												
31...	--	1.6	.01	--	--	--	--	45	--	--	--	--
SEPT.												
05...	.3	.2	--	39	69	28	12	69	6.5	200	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	208	400	400	350	330	329	359	410	370	412	105	48
2.....	208	400	360	340	310	323	374	412	370	440	105	60
3.....	212	390	390	360	310	331	371	360	360	410	105	62
4.....	222	390	390	330	350	331	373	210	350	440	100	52
5.....	250	400	390	350	350	335	373	410	350	394	110	60
6.....	250	410	359	350	340	337	384	410	370	388	110	60
7.....	261	402	390	360	359	339	386	415	360	205	130	63
8.....	274	410	350	360	359	330	391	415	370	102	180	61
9.....	282	410	390	360	340	300	397	410	380	105	130	61
10.....	284	390	360	370	369	268	391	410	360	105	220	64
11.....	290	410	360	370	369	269	405	415	190	88	110	61
12.....	292	410	360	370	359	229	391	410	370	95	110	50
13.....	305	400	360	370	350	211	405	--	190	93	185	60
14.....	328	400	400	380	379	200	403	--	340	100	195	58
15.....	338	390	400	380	379	199	409	415	360	83	172	50
16.....	348	400	380	380	349	200	415	--	360	59	189	52
17.....	348	370	350	375	379	216	392	410	360	200	150	65
18.....	345	400	365	380	355	218	415	415	370	64	150	55
19.....	347	390	390	360	370	238	402	411	395	63	110	57
20.....	368	400	390	390	385	240	400	--	370	62	120	63
21.....	377	410	370	380	310	332	410	415	360	74	110	70
22.....	380	410	400	380	285	333	412	412	420	72	190	75
23.....	385	380	400	380	280	332	407	415	360	71	140	80
24.....	392	390	380	380	280	328	407	415	370	109	92	80
25.....	390	410	370	355	280	325	408	410	370	83	120	90
26.....	395	410	390	390	310	332	403	417	350	110	92	98
27.....	397	390	400	350	290	332	406	412	340	104	55	98
28.....	398	400	390	320	300	333	414	412	370	109	56	94
29.....	400	380	380	310	370	341	410	415	199	110	47	120
30.....	398	410	390	375	--	334	399	--	360	110	50	115
31.....	400	--	390	340	--	334	--	410	--	120	45	--
AVERAGE	326	398	380	360	337	293	397	402	348	160	121	69



## PH (UNITS), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

PH (UNITS), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	6.3	6.9	7.1	5.4	6.1	5.8	6.4	6.9	7.1	6.8	4.8	5.2
2.....	6.7	6.8	6.9	5.4	6.5	5.8	6.7	7.0	6.5	6.5	4.8	5.1
3.....	6.6	6.7	7.2	5.4	6.4	5.8	7.0	6.9	7.0	6.9	4.5	5.0
4.....	6.7	6.8	7.4	5.1	6.1	7.2	7.0	7.0	6.9	6.9	5.1	4.9
5.....	6.7	6.8	7.4	4.9	6.4	6.0	6.5	6.8	7.0	6.8	4.9	5.0
6.....	6.6	6.8	7.1	4.9	6.6	6.3	7.0	6.9	7.0	6.9	5.0	4.9
7.....	6.9	6.7	7.1	4.7	6.5	6.3	7.1	6.9	6.8	6.7	4.7	4.9
8.....	7.0	6.9	7.5	4.9	6.9	6.9	7.1	6.9	6.9	7.1	5.0	5.0
9.....	6.8	6.9	7.3	5.1	6.4	6.2	7.1	6.6	5.2	6.5	4.8	4.6
10.....	7.0	6.9	7.4	5.0	6.2	6.4	7.1	6.7	5.0	6.0	4.8	4.8
11.....	7.1	6.8	7.4	5.2	6.3	6.5	7.1	6.9	4.9	5.8	5.1	4.8
12.....	6.9	6.9	5.8	5.4	6.2	6.6	6.8	6.8	5.5	5.2	5.2	4.7
13.....	6.8	6.9	5.9	5.4	6.2	6.5	6.7	6.9	5.1	5.3	5.2	4.7
14.....	6.8	6.9	5.3	5.4	6.2	5.8	6.8	6.9	4.9	5.2	5.0	4.8
15.....	6.9	6.8	5.5	5.4	6.2	5.6	6.9	6.9	4.9	5.3	4.7	4.8
16.....	7.0	6.9	5.6	5.5	6.4	5.6	7.1	6.9	5.0	5.2	4.7	4.9
17.....	6.9	6.9	5.3	5.5	6.4	5.5	7.0	6.9	5.1	5.3	4.7	4.9
18.....	7.0	6.9	5.4	5.6	6.3	5.5	7.0	6.9	5.4	5.4	4.8	5.1
19.....	6.9	6.9	5.4	5.7	6.4	5.6	7.1	6.8	5.2	5.4	4.7	5.2
20.....	6.9	6.8	5.4	5.9	6.4	5.8	7.2	6.9	5.4	5.7	4.7	5.2
21.....	6.9	7.0	5.6	5.8	6.3	5.8	7.1	7.1	5.5	5.7	4.8	5.2
22.....	6.9	7.0	5.6	6.0	6.2	6.0	7.2	7.1	5.7	5.8	4.7	5.4
23.....	7.0	7.0	5.6	6.1	6.2	6.0	7.2	7.1	5.6	6.0	4.8	5.5
24.....	7.0	6.8	5.6	6.2	6.0	6.2	7.2	6.9	5.8	6.0	4.8	5.6
25.....	7.0	6.9	6.1	6.0	5.6	6.4	7.2	6.9	6.1	5.0	5.1	5.6
26.....	7.1	6.8	5.8	6.4	5.4	6.3	7.2	7.0	6.3	4.8	5.2	5.8
27.....	7.0	7.0	6.4	5.8	5.4	6.5	7.1	7.1	6.5	4.6	5.4	6.2
28.....	7.0	7.0	6.4	6.2	5.4	6.5	7.0	6.9	6.3	4.6	5.6	6.2
29.....	7.0	7.0	6.0	6.3	5.4	6.5	7.2	6.9	6.5	4.5	5.4	6.4
30.....	7.1	6.8	6.0	6.3	--	6.6	7.2	6.8	6.6	4.6	4.9	6.5
31.....	7.1	--	5.8	6.4	--	6.6	--	6.9	--	--	4.8	--
AVERAGE	6.8	6.8	6.2	5.5	6.1	6.0	7.0	6.9	5.8	5.7	4.9	5.2

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	22	22	23	23	23	23	23	23	24	22	22	23	23	23	23	22	22	21	22	22	23	23	23	23	23	22	22	23	23	23	22	22
NOVEMBER.	22	23	23	21	20	19	19	19	20	20	20	21	21	21	21	20	19	17	18	19	20	21	22	22	22	21	21	22	--	--	20	
DECEMBER.	22	23	22	22	22	23	23	23	24	20	22	23	23	24	24	25	23	23	23	23	23	18	15	18	19	19	19	19	19	19	20	21
JANUARY..	20	20	20	21	20	20	20	19	20	21	20	19	19	19	18	18	19	18	18	19	18	18	18	19	19	18	15	16	15	17	19	18
FEBRUARY.	19	20	20	19	18	18	16	16	17	18	18	17	17	18	18	19	18	17	16	16	17	12	11	16	16	16	16	15	--	--	17	
MARCH....	15	14	15	15	15	17	18	18	20	20	20	22	19	17	17	18	19	19	19	19	19	19	19	20	18	20	18	21	21	--	21	
APRIL.....	22	23	25	25	24	22	24	24	25	25	22	24	22	25	20	22	24	25	23	25	25	28	28	26	24	23	25	26	25	--	24	
MAY.....	21	22	23	20	20	25	25	25	25	25	26	--	--	--	--	26	20	25	--	26	26	25	26	26	29	28	25	--	26	24		
JUNE.....	26	26	27	27	26	27	25	28	26	28	24	25	27	25	25	24	29	27	25	28	25	25	27	28	28	25	25	28	28	26	--	26
JULY.....	26	28	24	28	28	28	28	29	24	29	29	25	24	29	29	25	25	28	26	25	27	27	27	27	27	27	27	27	27	27	26	26
AUGUST...	26	24	27	22	25	29	29	27	27	27	27	28	23	28	27	27	28	29	28	25	28	26	28	27	27	27	26	25	28	26	--	26
SEPTEMBER	25	28	26	28	28	27	28	28	27	25	25	27	25	27	28	28	27	24	28	25	25	25	29	27	25	26	24	28	27	29	--	26

.....

LOCATION.--Lat 28°14'14", long 82°41'38", Pasco County, in center of stream 0.5 mile downstream from bridge on Trouble Creek Road, and 0.5 mile southeast of New Port Richey.

PERIOD OF RECORD.--Chemical analyses: January 1963 to September 1968.

water temperatures: January 1963 to September 1968.

**EXTREMES, --1967-68:**

Specific conductance: Maximum daily, 830 micromhos May 28; minimum daily, 150 micromhos July 19.

Water temperatures: Maximum, 27.0°C on several days from June to August; minimum, 10.0°C Mar. 1.

Period of record:

Specific conductance: Maximum daily, 1,400 micromhos June 2, 1967; minimum daily, 58 micromhos Aug. 2, 1965.

Water temperatures: Maximum, 28.0°C July 5, Aug. 8, 1963; minimum, 8.0°C Jan. 15, 1964.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]



## WITHLACOOCHIE RIVER BASIN

157

02310800 WITHLACOOCHIE RIVER NEAR EVA, FLA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	CHLORIDE (CL)	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR
NOV. 19...	15	.2	.3	--	56	113	35	17	89	6.0	320
JAN. 18...	15	.2	.6	--	61	111	44	14	107	6.9	240
FEB. 15...	15	.3	.5	--	87	132	68	10	170	6.9	200
MAR. 29...	16	.2	1.1	--	69	117	48	9	129	6.7	100
MAY 02...	19	.2	1.9	.25	96	148	70	9	177	6.7	120
JUNE 05...	12	.2	2.1	.06	41	89	22	15	79	6.0	160
18...	18	.5	.9	--	71	198	36	36	152	4.5	320
JULY 31...	--	--	1.4	.13	--	--	--	--	78	--	--
AUG. 01...	12	.3	1.2	--	30	168	12	12	78	4.2	800
31...	--	--	6.1	.11	--	--	--	--	63	--	--
SEPT. 20...	9.5	.3	.1	--	23	115	9	9	61	4.3	400
30...	--	--	--	.12	--	--	--	--	54	--	--

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	72	69	110	85	155	100	142	165	170	98	82	53
2.....	80	70	102	91	155	93	144	165	83	92	80	54
3.....	74	68	110	93	130	94	150	165	160	98	80	54
4.....	81	73	110	96	142	93	147	165	132	99	75	56
5.....	80	68	110	96	165	96	147	169	78	95	77	56
6.....	80	71	99	95	140	93	152	165	87	91	77	56
7.....	79	77	110	110	150	93	159	171	99	90	75	59
8.....	81	73	120	109	160	87	150	170	108	91	77	56
9.....	79	73	120	100	120	96	155	170	--	92	78	56
10.....	80	74	125	100	110	79	150	170	108	84	77	58
11.....	78	77	125	100	165	85	155	170	100	84	76	58
12.....	79	79	90	85	110	71	150	170	99	79	77	58
13.....	73	--	94	90	160	82	158	160	95	78	78	60
14.....	71	72	--	110	162	77	153	160	89	78	66	58
15.....	79	80	--	110	83	77	152	160	93	80	67	61
16.....	76	85	97	110	94	79	155	160	97	82	69	51
17.....	77	90	98	120	120	79	159	140	97	81	55	56
18.....	76	87	98	120	115	84	160	140	96	65	69	58
19.....	75	89	86	120	90	86	161	150	92	61	59	58
20.....	75	88	98	130	155	86	162	150	96	64	64	56
21.....	73	89	90	130	110	95	163	150	111	--	66	56
22.....	74	91	96	120	115	110	163	140	112	--	67	56
23.....	75	108	100	130	115	100	167	140	110	--	68	56
24.....	71	--	100	140	95	100	165	140	109	--	69	56
25.....	75	106	105	130	83	100	169	140	123	--	67	56
26.....	73	96	105	130	88	110	170	180	126	--	68	56
27.....	73	97	110	130	90	110	168	180	--	110	70	56
28.....	73	--	115	150	89	110	171	160	121	--	60	55
29.....	72	108	87	140	96	110	168	150	--	79	63	57
30.....	71	108	98	140	--	115	170	140	114	72	61	54
31.....	70	--	98	140	--	129	--	140	--	78	63	--
AVERAGE	75	83	103	114	122	94	157	157	107	84	70	56

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE
OCTOBER..	26	24	24	24	23	23	23	24	23	23	24	21	23	23	24	24	23	22	20	18	21	21	21	21	22	21	19	19	23	19	22	22
NOVEMBER.	22	21	21	21	17	22	18	14	15	17	19	--	20	19	17	21	20	18	16	19	15	20	--	22	21	21	--	20	19	--	19	19
DECEMBER.	18	20	20	14	17	11	14	19	19	22	22	21	--	--	22	22	23	22	23	21	21	17	18	17	15	--	20	18	19	19	19	
JANUARY..	20	20	18	20	20	19	15	16	17	19	12	16	18	12	12	15	15	14	15	15	15	18	17	13	11	17	15	16	17	18	16	
FEBRUARY.	18	18	17	19	17	17	16	12	17	17	16	17	16	14	14	15	16	14	13	14	15	15	10	14	14	13	11	--	--	--	15	
MARCH....	11	12	10	11	14	14	14	15	17	19	20	21	17	17	17	17	19	17	18	17	19	20	16	17	17	17	19	17	19	17	20	16
APRIL.....	21	20	20	22	23	23	24	23	21	19	22	21	20	22	22	23	24	25	24	25	--	--	22	22	22	24	24	--	--	--	22	24
MAY.....	23	24	23	23	23	25	23	22	23	24	24	25	25	25	25	24	24	22	22	23	24	24	24	23	21	25	26	26	24	23	23	
JUNE.....	23	24	23	24	24	22	23	--	25	26	27	26	23	25	25	25	25	25	26	27	25	26	26	27	25	26	27	26	--	26	--	24
JULY.....	26	27	26	26	27	25	27	27	24	26	25	26	25	26	26	26	26	25	26	25	--	--	--	--	--	--	26	--	26	27	28	--
AUGUST...	25	26	26	26	27	26	26	26	26	26	26	26	26	26	27	27	26	26	27	28	27	27	27	26	26	25	27	26	26	26	26	
SEPTEMBER	27	27	26	25	26	26	25	26	26	25	25	25	25	25	26	25	26	26	25	25	24	25	24	25	25	25	25	25	26	--	25	

## 02311500 WITHLACOCHEE RIVER NEAR DADE CITY, FLA.

LOCATION.--Lat 28°21'08", long 82°07'34", Pasco County, at gaging station near left bank on downstream side of Lanier Bridge on River Road, 4 miles east of Dade City and 110 miles upstream from mouth.

DRAINAGE AREA.--390 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: July to September 1968.  
Water temperatures: July 1966 to September 1968.

## EXTREMES.--1967-68:

Specific conductance: Maximum daily, 259 micromhos May 31; minimum daily, 45 micromhos Sept. 17, 18.  
Water temperatures: Maximum, 28.0°C on several days during July and August; minimum, 12.0°C on several days during January and February.

## Period of record:

Specific conductance (July 1966 to September 1968): Maximum daily, 259 micromhos May 31, 1967; minimum daily, 45 micromhos Sept. 17, 18, 1968.  
Water temperatures: Maximum, 31.0°C Aug. 24, 1967; minimum, 9.0°C Feb. 26, 1967.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968												
DATE	DIS- CHARGE (CF5)	TEMP- ERATURE (CEG C)	SILICA (SIG2)	DIS- SOLVED IRON (IFE)	CAL- CIUM (ICA)	MAG- NE- SIUM (MG)	STRON- TIUM (SRI)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (MCG3)	SULFATE (S04)	CHLO- RIDE (CL)
NOV.												
14...	9.4	18	7.1	.14	15	1.9	--	6.8	.3	39	2.4	15
JAN.												
04...	5.7	15	--	--	--	--	--	--	--	--	--	--
FEB.												
16...	2.1	13	2.5	.11	28	2.9	--	9.9	.9	86	.8	20
APR.												
04...	2.4	19	1.0	.10	27	3.0	--	11	.9	82	.4	23
25...	.20	24	.6	.05	27	2.8	.05	11	.6	81	.8	24
JUNE												
15...	756	25	4.2	.29	10	1.5	--	5.0	.9	22	1.6	9.0
JULY												
25...	--	27	4.2	.38	8.4	1.3	--	4.4	.7	15	.8	8.5
31...	--	26	--	--	--	--	--	--	--	--	--	--
AUG.												
31...	--	25	--	--	--	--	--	--	--	--	--	--
SEPT.												
30...	--	25	--	--	--	--	--	--	--	--	--	--
DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
NOV.												
14...	--	.1	--	68	114	46	14	114	6.7	140	--	--
JAN.												
04...	--	--	--	--	--	--	--	160	--	--	--	--
FEB.												
16...	.2	.3	--	108	132	82	11	195	7.5	80	--	--
APR.												
04...	.2	.3	--	107	139	80	13	210	7.0	100	--	--
29...	.2	1.6	.03	109	141	79	13	212	7.0	60	6.5	76
JUNE												
19...	.5	1.1	--	45	112	31	13	82	6.2	320	--	--
JULY												
25...	.5	1.3	--	38	115	26	14	67	6.2	400	--	--
31...	--	1.0	.43	--	--	--	--	66	--	--	--	--
AUG.												
31...	--	3.2	.14	--	--	--	--	54	--	--	--	--
SEPT.												
30...	--	--	.23	--	--	--	--	49	--	--	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	--	102	121	180	185	210	200	211	220	70	65	51
2.....	85	108	130	179	182	210	200	210	215	69	62	47
3.....	91	104	140	172	182	210	200	209	190	67	63	45
4.....	77	105	129	180	172	210	190	205	180	67	62	51
5.....	69	105	140	180	175	210	195	208	160	67	62	51
6.....	64	110	130	180	180	190	190	206	145	67	63	53
7.....	61	107	140	180	180	190	190	208	120	67	64	52
8.....	60	106	140	180	182	210	180	208	84	70	62	51
9.....	62	114	130	189	175	200	190	209	86	70	62	51
10.....	60	108	142	189	190	200	199	208	83	70	62	51
11.....	60	110	150	189	190	200	199	202	89	67	64	51
12.....	62	112	150	170	190	200	199	202	93	67	65	49
13.....	67	114	150	180	190	210	200	202	93	65	66	48
14.....	68	116	150	180	190	210	200	200	98	65	67	48
15.....	70	116	140	180	199	210	200	202	91	65	68	52
16.....	73	118	150	180	180	200	195	200	89	65	70	46
17.....	76	120	155	180	190	200	200	201	87	65	71	45
18.....	76	120	155	180	190	200	190	200	76	64	70	45
19.....	77	125	150	175	190	180	190	200	76	62	67	46
20.....	79	123	160	190	180	199	121	205	71	60	63	48
21.....	82	128	160	200	180	199	121	202	70	58	74	46
22.....	85	126	150	180	210	191	121	202	76	58	62	49
23.....	86	128	150	180	210	191	121	206	71	63	--	46
24.....	88	130	150	200	205	191	121	209	71	65	62	52
25.....	89	132	160	180	205	180	189	194	70	64	64	48
26.....	91	136	160	180	210	200	200	192	70	68	58	49
27.....	92	136	150	200	195	190	190	192	70	65	56	49
28.....	93	135	150	190	210	200	200	192	69	65	56	52
29.....	94	135	160	190	195	200	200	190	68	65	63	52
30.....	94	136	170	185	--	200	200	211	67	65	56	49
31.....	97	--	160	200	--	200	--	259	--	66	54	--
AVERAGE	77	118	147	183	190	199	183	204	101	65	63	49

## WITHLACOOCHIE RIVER BASIN

159

02311500 WITHLACOOCHIE RIVER NEAR DADE CITY, FLA.--Continued  
TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															AVER- AGE	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	22	22	22	22	22	23	22	22	21	21	20	21	27	20	20	21	19	20	18	18	18	20	20	20	19	22	18	19	22	20	--	18
NOVEMBER..	21	22	22	20	19	17	17	15	14	15	16	17	18	17	18	17	18	17	17	15	16	18	18	19	21	23	21	19	20	--	--	18	
DECEMBER..	21	19	20	16	16	17	17	18	18	19	21	19	20	21	21	21	21	21	21	21	21	21	18	21	16	15	14	17	15	16	17	18	
JANUARY..	16	17	18	18	18	18	17	16	16	17	18	17	17	16	16	15	12	13	16	14	14	14	14	14	15	14	12	12	13	15	16	16	15
FEBRUARY..	17	18	17	15	16	16	15	12	12	13	13	12	13	12	13	15	13	14	14	13	13	15	15	14	14	12	13	14	13	--	--	14	
MARCH....	14	14	14	13	14	15	14	14	17	17	19	22	19	15	16	16	18	20	19	18	19	22	22	15	15	17	18	18	21	21	18	17	
APRIL.....	19	18	24	24	24	23	23	23	23	24	24	23	23	22	21	22	22	23	23	24	24	24	24	23	23	23	24	24	--	--	22		
MAY.....	23	23	24	24	24	23	24	23	24	25	25	25	24	26	25	26	26	26	26	27	25	25	26	25	26	25	25	26	25	27	24	24	
JUNE.....	24	25	25	24	24	23	24	25	23	25	25	26	26	25	24	23	24	25	24	25	25	25	25	26	26	27	26	26	25	26	25	--	24
JULY.....	26	25	25	25	25	25	25	25	25	25	25	26	26	25	25	25	24	25	25	25	25	25	25	25	25	25	25	27	28	28	27	26	25
AUGUST....	27	26	26	26	25	26	27	27	27	27	27	26	27	26	26	27	26	26	26	27	27	--	--	27	28	28	27	28	28	25	25	26	
SEPTEMBER	25	25	25	26	26	27	27	26	26	25	25	25	24	23	24	25	25	25	25	25	25	25	24	25	25	25	25	25	25	25	--	--	25

02312200 LITTLE WITHLACOOCHIE RIVER AT REDELL, FLA.

LOCATION.--Lat 28°34'21", long 82°09'20", Hernando County, at gaging station near center of span on downstream side of bridge on U.S. Highway 301, 0.2 mile north of Redell and 3.5 miles upstream from mouth.

DRAINAGE AREA.--160 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1963 to December 1967 (discontinued).

Water temperatures: October 1963 to December 1967 (discontinued).

EXTREMES.--October to December 1967:

Specific conductance: Maximum daily, 490 micromhos Dec. 26; minimum daily, 80 micromhos Oct. 23.

Period of record:

Specific conductance: Maximum daily, 490 micromhos Dec. 26, 1967; minimum daily, 50 micromhos Sept. 17, 1964.

Water temperatures: Maximum, 31.0°C June 30, 1965; minimum, 9.0°C Jan. 15, 1964, Jan. 18, 1965.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, OCTOBER 1967 TO DECEMBER 1967

CATE	CIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
APR. 30...	2.5	26	7.1	.03	82	2.3	.01	6.4	.2	252	.8	14

CATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF INRESI- TUENTS)	DIS- SOLVED SOLIDS DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
APR. 30...	.2	1.2	.09	238	243	214	7	421	7.6	5	5.8	71

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), OCTOBER 1967 TO DECEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	DAY	OCTOBER	NOVEMBER	DECEMBER
1	82	230	--	17	147	370	400
2	86	260	431	18	134	325	400
3	88	258	410	19	158	280	400
4	84	328	430	20	144	430	--
5	96	318	430	21	155	402	410
6	90	310	390	22	115	412	410
7	95	310	421	23	80	410	--
8	93	292	--	24	88	428	410
9	102	320	429	25	137	428	480
10	--	--	429	26	233	422	490
11	103	325	--	27	--	420	410
12	116	358	370	28	248	435	410
13	119	368	390	29	158	--	370
14	126	368	321	30	--	430	--
15	120	345	--	31	248	--	360
16	159	--	339				
				AVERAGE	128	354	405

TEMPERATURE (°C) OF WATER, OCTOBER 1967 TO DECEMBER 1967

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

LOCATION.--Lat 28°59'19", long 82°20'59", Marion County, at gaging station near right bank on downstream side on State Highway 200, 4.5 miles northeast of Holder, Citrus County, and 38 miles upstream from mouth.

PERIOD OF RECORD.--Chemical analyses: January 1950 to December 1951, September 1954 to October 1955, October 1962 to September 1968.

Water temperatures: January 1950 to December 1951, October 1962 to September 1968.

EXTREMES, --1967-68:  
Specific conductance: Maximum daily, 370 micromhos Mar. 13; minimum daily, 120 micromhos Aug. 29.  
Water temperatures: Maximum, 31.0°C July 28; minimum, 10.0°C Jan. 16, 17.

Period of record:  
Dissolved solids (1950-51): Maximum, 275 mg/l July 11-20, 1950; minimum, 119 mg/l Sept. 21-30, 1950.  
Hardness (1950-51): Maximum, 191 mg/l July 11-20, 1950; minimum, 63 mg/l Sept. 21-30, 1950.  
Specific conductance: Maximum daily, 575 micromhos Aug. 9, 1963; minimum daily, 120 micromhos Aug. 29, 1968.  
Water temperatures: Maximum, 33.0°C July 17, 1950; minimum, 6.0°C Jan. 31, 1966.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DISSOLVED SOLIDS (SUP OF CONSTITUENTS)	DISSOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA,MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	DISSOLVED OXYGEN	PERCENT SATURATION
Oct. 6	.2	.1	--	131	172	108	16	220	7.1	140	--	--
Nov. 13	.3	.4	--	179	204	145	27	290	7.6	50	--	--
Jan. 5	.2	.5	--	197	216	170	37	353	7.6	20	--	--
Feb. 20	.1	.5	--	206	209	180	48	350	7.8	20	--	--
Apr. 05	.3	.7	--	199	207	168	40	343	7.3	30	--	--
May 13	.2	.5	.00	181	206	155	34	312	7.7	10	7.4	88
June 21	.2	.7	--	206	226	166	59	358	7.4	20	--	--
July 29	.3	1.0	--	105	157	83	19	179	6.9	240	--	--
Aug. 31	--	.9	.27	--	--	--	--	169	--	--	--	--
Sept. 31	--	1.4	.14	--	--	--	--	150	--	--	--	--
Sept. 23	--	1.7	.10	--	--	84	--	170	--	160	--	--
Sept. 30	--	--	.13	--	--	--	--	150	--	--	--	--

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

WITHLACOCOCHEE RIVER BASIN

161

02313000 WITHLACOCOCHEE RIVER NEAR HOLDER, FLA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	202	266	299	325	310	360	320	319	280	278	150	135
2.....	207	262	305	325	310	340	320	320	280	279	145	149
3.....	211	260	310	305	330	330	310	315	330	271	140	151
4.....	217	270	290	325	310	330	310	310	300	255	140	151
5.....	220	271	282	310	310	325	210	309	335	243	146	155
6.....	222	271	310	336	340	340	309	310	280	256	146	151
7.....	228	272	280	339	310	325	320	309	330	258	156	151
8.....	232	280	310	329	310	325	310	300	330	250	156	151
9.....	236	290	310	310	310	350	320	310	320	246	156	150
10.....	236	295	305	--	310	339	300	310	310	--	155	145
11.....	240	291	315	340	339	340	329	310	310	212	152	140
12.....	242	290	315	320	310	350	319	300	310	221	152	135
13.....	241	290	330	310	310	370	329	305	325	218	150	139
14.....	242	291	300	335	315	340	329	302	325	212	150	139
15.....	243	289	310	310	310	350	305	302	320	220	145	140
16.....	243	290	320	310	310	360	302	304	310	210	149	145
17.....	240	294	320	320	305	340	320	250	320	210	151	145
18.....	243	296	320	310	305	345	310	310	310	209	145	159
19.....	240	298	300	310	305	345	310	309	310	212	150	140
20.....	234	300	300	305	320	339	290	310	345	212	155	145
21.....	232	304	325	305	320	329	290	309	345	210	155	149
22.....	234	304	315	305	320	329	309	309	--	205	155	145
23.....	231	304	300	305	320	320	290	309	--	195	155	149
24.....	232	305	300	330	320	320	290	309	330	190	155	145
25.....	232	308	300	340	340	335	290	300	330	187	155	149
26.....	237	308	310	320	355	310	290	300	330	181	155	149
27.....	247	309	325	330	340	310	285	300	310	178	152	149
28.....	247	310	325	320	340	310	285	302	290	172	152	149
29.....	245	312	325	340	345	305	285	305	265	168	150	149
30.....	248	311	325	340	--	305	300	300	270	162	140	150
31.....	248	--	300	325	--	299	--	300	--	169	156	--
AVERAGE	233	291	309	320	319	332	302	305	312	216	149	147

02313100 RAINBOW SPRINGS NEAR DUNNELLON, FLA.

LOCATION,--Lat 29°06'08", long 82°26'18", Marion County, at gaging station at head of springs, 4 miles northeast of Dunnellon and 5.8 miles upstream from mouth.

PERIOD OF RECORD,--Chemical analyses: August 1964 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	CHLORIDE (CL)	NITRATE (NO3)	ORTHO PHOSPHATE (PO4)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH	COLOR
NOV.										
27...	--	23	3.0	--	--	74	--	150	--	0
DEC.										
25...	--	23	4.0	--	--	78	--	158	--	5
JAN.										
29...	--	--	4.0	--	--	81	82	161	--	5
FEB.										
26...	--	23	4.0	--	--	84	--	156	--	5
MAR.										
24...	--	23	3.0	--	--	74	--	120	--	0
APR.										
29...	--	23	4.0	--	--	--	--	166	--	0
MAY										
15...	--	23	3.0	--	--	73	--	140	--	5
31...	--	23	3.5	--	--	--	94	168	--	5
JUNE										
24...	--	--	4.5	--	--	90	--	146	--	0
JULY										
29...	--	23	3.0	--	.02	78	--	165	--	0
AUG.										
26...	--	23	3.0	.0	--	68	--	125	--	0
SEPT.										
19...	--	23	4.0	1.4	.00	64	--	120	7.1	0
27...	856	24	--	--	--	--	--	160	--	--
30...	--	--	4.0	--	--	72	--	130	--	5

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVERAGE
OCTOBER...	--	23	--	--	--	--	--	--	23	--	--	--	--	--	--	23	--	--	--	--	--	--	23	--	--	--	--	--	--	23	--	--
NOVEMBER...	--	--	--	--	--	23	--	--	--	--	23	--	--	--	--	--	--	--	23	--	--	--	--	--	--	--	23	--	--	--	--	--
DECEMBER...	--	--	--	23	--	--	--	--	--	--	23	--	--	--	--	--	--	23	--	--	--	--	--	--	--	--	23	--	--	--	--	--
JANUARY...	23	--	--	--	--	--	23	--	--	--	--	--	23	--	--	--	--	--	--	--	23	--	--	--	--	--	--	--	23	--	--	--
FEBRUARY...	--	--	--	23	--	--	--	--	--	23	--	--	--	--	--	--	--	23	--	--	--	--	--	--	--	23	--	--	--	--	--	--
MARCH.....	--	--	23	--	--	--	--	--	23	--	--	--	--	--	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL.....	23	--	--	--	--	--	23	--	--	--	--	23	--	--	--	--	--	--	--	--	23	--	--	--	--	--	--	23	--	--	--	--
MAY.....	--	--	--	23	--	--	--	--	--	23	--	--	--	--	--	--	--	23	--	--	--	--	--	--	--	--	23	--	--	--	--	--
JUNE.....	--	--	23	--	--	--	--	--	23	--	--	--	--	--	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY.....	23	--	--	--	--	--	23	--	--	--	--	23	--	--	--	--	--	--	--	--	23	--	--	--	--	--	--	--	23	--	--	--
AUGUST...	--	--	--	23	--	--	--	--	--	23	--	--	--	--	--	--	--	23	--	--	--	--	--	--	--	--	23	--	--	--	--	--
SEPTEMBER	--	23	--	--	--	--	23	--	--	--	--	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23	--	--	--

## WITHLACOCHEE RIVER BASIN

02313100 RAINBOW SPRINGS NEAR DUNNELLO, FLA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	--	--	--	150	--	--	145	--	--	175	--	--
2.....	140	--	--	--	--	--	--	--	--	--	--	130
3.....	--	--	--	--	--	--	--	--	168	--	--	--
4.....	--	--	140	--	--	130	--	--	--	--	--	--
5.....	--	--	--	--	164	--	--	--	--	--	150	--
6.....	--	142	--	--	--	--	--	169	--	--	--	--
7.....	--	--	--	--	--	--	--	--	--	138	--	--
8.....	--	--	--	166	--	--	163	--	--	--	--	--
9.....	160	--	--	--	--	--	--	--	--	--	--	130
10.....	--	--	--	--	--	--	--	--	168	--	--	--
11.....	--	--	170	--	--	125	--	--	--	--	--	--
12.....	--	150	--	--	141	--	--	--	--	--	120	--
13.....	--	--	--	--	--	--	--	162	--	--	--	--
14.....	--	--	--	--	--	--	--	--	--	--	--	--
15.....	--	--	--	123	--	--	168	--	--	162	--	--
16.....	140	--	--	--	--	--	--	--	--	--	--	140
17.....	--	--	--	--	--	--	--	--	171	--	--	--
18.....	--	--	140	--	--	139	--	--	--	--	129	--
19.....	--	--	--	--	150	--	--	--	--	--	--	--
20.....	--	150	--	--	--	--	--	168	--	--	--	--
21.....	--	--	--	--	--	--	--	--	--	--	--	--
22.....	--	--	--	143	--	--	163	--	--	165	--	--
23.....	160	--	--	--	--	--	--	--	--	--	--	130
24.....	--	--	--	--	--	120	--	--	146	--	--	--
25.....	--	--	158	--	--	--	--	--	--	--	--	--
26.....	--	--	--	--	156	--	--	--	--	--	125	--
27.....	--	150	--	--	--	--	--	168	--	--	--	--
28.....	--	--	--	--	--	--	--	--	--	--	--	--
29.....	--	--	--	161	--	--	166	--	--	165	--	--
30.....	140	--	--	--	--	--	--	--	--	--	--	130
31.....	--	--	--	--	--	--	--	--	--	--	--	--
AVERAGE	--	--	--	--	--	--	--	--	--	--	--	--

## SUWANNEE RIVER BASIN

02314500 SUWANNEE RIVER AT FARGO, GA.

LOCATION.--Lat 30°41', long 82°34', Clinch County, at gaging station on downstream side of right bank pier of bridge on U.S. Highway 441 at Fargo, 4 miles upstream from Suwannee Creek and 12 miles downstream from Mixons Ferry damsite.

DRAINAGE AREA.--About 1,260 sq mi (includes part of watershed in Okefenokee Swamp, which is indeterminate).

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB.									
13....	3.8	.10	<.10	.6	.6	3.2	.2	1.8	<2.0
MAR.									
12....	2.8	.18	<.05	1.3	.7	3.0	.1	2.0	<2.0
APR.									
16....	2.0	.35	.05	1.8	1.1	4.5	.3	1.3	<2.0
30....	2.0	.40	<.05	2.0	1.5	4.0	.3	2.0	<2.0
JUNE									
04....	2.5	.55	<.05	.9	.8	3.8	.3	2.2	<2.0
JULY									
09....	3.0	.50	<.05	1.0	.7	2.8	.2	1.6	<2.0
AUG.									
06....	2.6	.75	.06	1.1	.5	3.0	.2	1.6	<2.0
SEPT.									
03....	4.5	.50	<.05	.9	.6	2.5	.2	1.1	2.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB.									
13....	8.0	.30	.06	10	51	190	42	.7	<30
MAR.									
12....	9.0	.15	.10	12	50	165	23	.7	<30
APR.									
16....	11	.20	.10	12	40	230	35	.7	36
30....	15	.28	.20	20	41	220	35	1.2	36
JUNE									
04....	9.0	.30	<.10	6	44	290	50	.7	<30
JULY									
09....	6.0	.34	<.10	12	47	290	50	.5	9300
AUG.									
06....	7.0	.36	.27	10	50	290	68	.8	930
SEPT.									
03....	5.5	.27	.10	8	48	290	51	.8	230



SUWANNEE RIVER BASIN

163

02314500 SUWANNEE RIVER AT FARGO, GA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CaCO3	PH	DIS- SOLVED OXYGEN
FEB. 13...	0940	123	8	--	4.2	11.0
MAR. 12...	0710	126	17	--	4.3	9.5
APR. 16...	0630	30	20	--	4.5	6.2
30...	0700	25	23	<1	4.7	7.1
JUNE 04...	0700	23	27	--	4.2	8.4
JULY 09...	0700	59	26	--	4.4	6.7
AUG. 06...	0700	124	27	--	4.2	--
SEPT. 03...	0715	471	24	--	4.3	7.2

02317500 ALAPAHA RIVER AT STATENVILLE, GA.

LOCATION.--Lat 30°42', long 83°01', Echols County, at gaging station at downstream side of left bank pier of bridge on State Highway 94, 0.2 mile west of Statenville.

DRAINAGE AREA.--1,400 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN- GANESE (MNI)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB. 13...	10	.10	<.10	1.0	.7	4.0	.6	.60	<2.0
MAR. 12...	7.3	.24	<.05	2.9	.8	4.2	.5	.25	<2.0
APR. 16...	5.2	.55	<.05	2.1	.9	3.9	.6	.40	<2.0
30...	6.0	.60	<.05	2.6	1.0	3.0	.5	.50	<2.0
JUNE 04...	4.7	.40	<.05	1.0	.7	3.7	.6	.70	<2.0
JULY 09...	5.5	.85	<.05	2.1	1.0	2.7	.5	.30	<2.0
AUG. 06...	6.0	.93	.05	2.3	1.1	3.0	.6	.40	<2.0
SEPT. 03...	5.5	1.0	<.05	2.0	1.0	3.5	.6	.65	<2.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 13...	10	.02	.45	10	42	70	17	.6	36
MAR. 12...	10	.06	.10	10	42	50	4.0	.6	30
APR. 16...	11	<.10	.35	14	39	60	15	.5	30
30...	7.5	.14	.40	14	30	70	15	.5	230
JUNE 04...	6.0	.12	.30	8	33	45	12	.6	<30
JULY 09...	5.0	.14	.55	10	35	95	17	.7	230
AUG. 06...	5.0	.24	.65	12	42	150	30	1.1	930
SEPT. 03...	7.0	.12	.30	10	37	115	21	.5	30

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CaCO3	PH	DIS- SOLVED OXYGEN
FEB. 13...	1100	285	8	3	6.2	--
MAR. 12...	0915	291	17	5	6.2	9.5
APR. 16...	0830	156	20	5	6.5	--
30...	0930	106	22	6	6.6	--
JUNE 04...	0900	174	27	6	6.5	--
JULY 09...	0900	76	26	8	6.7	--
AUG. 06...	0930	148	26	7	6.4	--
SEPT. 03...	1015	109	23	7	6.6	8.8

## SUWANNEE RIVER BASIN

02319000 WITHLACOCHEE RIVER NEAR PINETTA, FLA.

LOCATION.--Lat 30°35'43", long 83°15'35", Madison County, at gaging station on right bank 30 ft downstream from highway bridge, 0.1 mile downstream from small tributary, 0.3 mile west of Bellville, 5.6 miles east of Pinetta, and 22 miles upstream from mouth.

DRAINAGE AREA.--2,120 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: November 1962 to September 1968.  
Water temperatures: October 1963 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 480 micromhos Nov. 24; minimum daily, 100 micromhos Mar. 23, 24.  
Water temperatures: Maximum, 34.0°C Aug. 17; minimum, 11.0°C Jan. 15-17, 31, Feb. 25.

Period of record:

Specific conductance: Maximum daily, 480 micromhos Nov. 24, 1967; minimum daily, 18 micromhos Dec. 10, 1964.  
Water temperatures: Maximum, 34.0°C Aug. 17, 1968; minimum, 4.0°C Feb. 3, 4, 8, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	TEMP- ERATURE (DEG C)	SILICA (15102)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
GCT.												
21...	--	19	15	.08	37	6.4	--	50	1.7	244	17	9.0
DEC.												
15...	171	20	15	.12	31	5.9	--	40	2.0	182	18	11
JAN.												
30...	258	14	13	.15	21	4.4	--	35	1.6	142	16	13
MAR.												
68C...	68C	15	10	.39	9.5	2.3	--	16	1.6	57	10	12
APR.												
30...	260	23	10	.04	35	5.7	.10	21	1.2	152	20	8.0
JUNE												
12...	309	24	12	.37	18	3.9	--	28	1.4	106	17	10
JULY												
22C...	22C	27	11	.13	19	4.0	--	30	1.6	114	20	11
31...	--	32	--	--	--	--	--	--	--	--	--	--
AUG.												
31...	--	24	--	--	--	--	--	--	--	--	--	--
SEPT.												
10...	--	25	12	.09	29	5.8	--	48	2.5	182	24	14
30...	--	24	--	--	--	--	--	--	--	--	--	--

DATE	FLUD- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CCNSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HAR- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
GCT.												
21...	.8	1.6	--	244	291	119	0	424	7.3	400	--	--
DEC.												
15...	3.6	.8	--	217	232	102	0	360	7.3	200	--	--
JAN.												
30...	.7	1.2	--	176	190	70	0	291	7.6	160	--	--
MAR.												
26...	1.0	1.2	--	90	122	33	0	143	6.7	140	--	--
APR.												
30...	.6	1.4	.64	178	188	111	0	310	7.5	80	4.0	46
JUNE												
12...	1.4	1.2	--	145	159	61	0	238	6.9	120	--	--
JULY												
24...	.7	.7	--	154	176	64	0	250	7.0	120	--	--
31...	--	1.2	1.0	--	--	--	--	--	--	--	--	--
AUG.												
31...	--	1.1	.70	--	--	--	--	350	--	--	--	--
SEPT.												
10...	.6	2.3	--	228	257	96	0	386	7.6	240	--	--
30...	--	--	.86	--	--	--	--	430	--	--	--	--

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	22	19	22	21	22	22	23	22	23	21	22	21	22	20	21	21	22	20	21	19	18	20	18	19	20	18	19	20	18	19	20	20
NOVEMBER.	20	21	17	18	19	16	18	14	16	15	17	17	18	16	17	16	17	17	17	17	14	16	14	16	18	17	21	22	18	17	16	--
DECEMBER.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JANUARY..	15	13	16	17	14	13	15	13	14	13	14	13	12	13	11	11	11	12	12	13	13	12	12	13	12	13	12	13	12	13	12	12
FEBRUARY.	12	14	14	14	13	14	13	14	12	13	12	13	12	13	12	13	13	12	12	12	12	13	12	12	11	13	12	13	12	--	--	12
MARCH....	15	15	16	16	16	16	17	17	17	17	19	21	21	19	18	17	18	19	19	19	19	19	20	19	19	19	17	19	19	20	21	18
APRIL....	22	21	19	21	22	23	24	23	21	23	24	23	21	23	22	21	23	24	23	25	23	24	25	26	24	24	25	23	25	22	--	22
MAY.....	24	22	24	23	24	22	24	23	23	24	24	22	25	22	25	26	27	24	27	25	25	27	26	24	25	26	25	27	25	27	26	23
JUNE.....	26	27	27	25	26	28	25	27	26	25	28	25	28	26	24	27	29	27	28	26	26	28	28	26	29	27	27	30	28	27	29	--
JULY.....	25	27	28	26	26	28	27	26	27	25	27	25	26	28	28	25	28	26	30	27	28	26	30	28	26	29	29	26	30	32	32	27
AUGUST...	30	29	30	28	25	31	28	29	30	30	28	29	32	29	32	29	34	29	32	29	32	28	32	28	30	21	26	26	24	28	28	28
SEPTEMBER	24	27	25	28	27	24	26	28	27	25	25	27	26	24	23	26	26	24	25	26	25	27	25	23	25	27	25	29	26	24	--	25



## SUWANNEE RIVER BASIN

02320500 SUWANNEE RIVER AT BRANFORD, FLA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	DIS-SOLVED OXYGEN	PERCENT SATURATION
OCT. 31....	--	--	--	--	--	--	--	320	--	40	--	--
NOV. 03....	.4	2.2	--	187	184	158	17	323	7.6	40	--	--
NOV. 30....	--	--	--	--	--	--	--	330	--	30	--	--
DEC. 01....	.4	.4	--	170	187	146	20	382	7.3	50	--	--
DEC. 31....	--	--	--	--	--	--	--	279	--	60	--	--
JAN. 21....	--	--	--	--	--	--	--	250	--	70	--	--
FEB. 02....	.4	1.7	--	154	155	128	21	267	7.7	60	--	--
MAR. 29....	.4	1.4	--	135	149	104	10	228	7.0	90	--	--
APR. 31....	--	--	--	--	--	--	--	230	--	70	--	--
MAY 30....	--	--	--	--	--	--	--	300	--	20	--	--
JUN. 03....	.4	2.5	.32	180	187	154	19	311	7.6	10	8.6	98
JUN. 31....	--	--	--	--	--	--	--	311	--	30	--	--
JULY 17....	.4	1.0	--	155	163	122	6	265	7.4	70	--	--
AUG. 26....	.5	.3	--	166	172	142	21	295	7.2	30	--	--
SEP. 21....	--	.8	.40	--	--	--	--	288	--	--	--	--
SEP. 31....	--	1.0	.44	--	--	--	--	260	--	90	--	--
OCT. 11....	.3	.6	--	149	165	126	14	268	8.0	60	--	--
OCT. 30....	--	--	--	--	--	--	--	250	--	80	--	--

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	303	325	310	265	250	235	245	311	290	298	290	235
2.....	--	318	320	279	250	250	247	311	290	300	487	225
3.....	300	322	320	249	250	235	251	310	280	297	490	230
4.....	304	320	315	265	240	260	255	310	270	300	290	235
5.....	305	325	--	265	241	250	259	309	285	300	293	230
6.....	308	325	330	240	240	240	263	309	270	300	292	240
7.....	308	325	309	225	240	260	265	298	260	305	295	240
8.....	310	327	300	215	249	260	267	296	250	305	297	230
9.....	308	328	310	215	249	260	270	292	240	300	292	230
10.....	310	328	320	215	269	250	275	291	245	297	290	230
11.....	312	322	380	215	269	250	277	291	240	300	280	230
12.....	310	325	395	215	240	260	280	290	240	300	279	255
13.....	310	322	310	215	240	260	282	291	240	300	280	240
14.....	310	322	290	215	249	260	284	--	245	305	280	240
15.....	310	322	320	210	255	260	285	299	240	305	280	230
16.....	312	322	290	210	249	260	283	300	240	297	285	215
17.....	312	322	290	210	250	260	288	301	260	285	280	215
18.....	312	325	300	210	250	250	292	302	260	289	480	219
19.....	312	325	270	210	265	250	295	305	260	289	238	238
20.....	310	328	290	220	250	230	293	305	260	285	259	235
21.....	310	328	260	220	250	220	293	308	260	282	265	235
22.....	312	328	290	220	250	205	293	309	260	299	465	235
23.....	312	328	270	220	249	190	295	310	260	290	265	245
24.....	312	328	270	220	249	185	293	312	270	295	265	245
25.....	312	328	270	220	260	190	300	310	270	290	250	249
26.....	315	328	250	220	260	190	302	310	270	289	252	249
27.....	315	330	250	225	249	195	295	310	270	288	450	249
28.....	315	330	250	225	249	215	304	311	270	290	250	245
29.....	318	330	279	225	269	215	305	310	270	285	253	249
30.....	320	330	270	225	--	230	300	310	270	285	260	250
31.....	320	--	279	250	--	230	--	311	--	288	260	--
AVERAGE	310	325	296	226	251	235	280	304	261	294	274	236

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															AVER-	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER..	22	--	22	22	22	22	23	24	23	22	21	21	20	22	22	22	22	20	19	19	26	21	21	22	20	19	19	21	21	21		21	
NOVEMBER..	21	21	20	20	19	17	17	17	18	18	19	18	19	18	19	18	19	18	17	18	20	21	21	22	22	19	19	19	--	--	--		19
DECEMBER..	19	19	19	17	--	19	18	19	19	20	20	21	20	19	20	21	21	21	22	21	21	21	17	14	16	17	16	18	17	16	18		18
JANUARY..	18	19	19	19	18	18	18	16	16	18	18	16	16	14	14	14	14	15	15	17	16	17	16	15	14	15	16	17	17	18		16	
FEBRUARY..	18	17	18	18	17	17	16	14	14	15	16	15	15	15	17	17	17	18	16	17	18	17	16	17	16	17	16	18	--	--		16	
MARCH.....	16	17	18	17	17	17	18	18	20	21	21	19	19	19	20	20	20	22	20	21	19	20	21	19	20	19	16	20	21	22			19
APRIL.....	22	22	22	23	23	24	24	24	24	24	23	23	22	24	20	23	24	24	24	26	26	20	26	25	26	24	24	25	24	--	--		23
MAY.....	24	24	25	26	25	24	24	24	24	25	25	27	26	--	27	26	27	28	28	25	25	25	26	27	26	26	27	26	26	25	26		25
JUNE.....	27	28	27	27	27	25	25	26	27	27	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	--	--		27
JULY.....	28	28	29	27	26	26	26	26	27	27	26	27	27	29	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28		27	
AUGUST....	28	30	28	28	28	30	30	30	30	29	--	30	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	25		25
SEPTEMBER	25	26	26	26	27	27	28	28	28	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	26	26	26	26	26	26		26	

## 167

COLOR, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	40	30	20	50	60	60	40	20	20	20	30	60
2.....	--	30	20	50	--	50	40	20	20	20	45	70
3.....	40	20	10	50	--	50	40	20	20	20	25	70
4.....	40	30	15	60	--	60	40	20	25	20	20	70
5.....	40	30	--	80	--	60	40	20	25	20	20	70
6.....	40	20	15	80	--	60	40	20	40	10	20	60
7.....	40	25	10	100	--	60	40	20	40	20	25	50
8.....	40	20	10	120	--	50	30	30	20	60	60	60
9.....	40	20	10	100	--	50	37	40	40	15	20	70
10.....	35	20	10	100	--	50	40	40	40	10	25	100
11.....	30	20	10	100	--	60	40	40	40	10	40	60
12.....	30	20	10	100	--	40	40	40	45	20	45	80
13.....	40	20	10	120	--	50	40	40	50	15	30	60
14.....	40	20	10	120	--	50	40	--	60	20	40	60
15.....	30	20	10	120	50	50	40	40	70	30	40	80
16.....	35	20	20	120	--	50	40	40	70	30	40	100
17.....	40	30	20	120	50	50	30	30	50	40	40	100
18.....	30	20	30	120	--	50	35	30	50	40	45	100
19.....	40	30	30	120	--	50	30	30	50	45	55	100
20.....	40	30	30	120	--	60	30	30	60	45	60	100
21.....	40	20	35	100	--	70	30	30	60	45	60	100
22.....	30	20	35	100	--	70	30	20	50	40	60	80
23.....	30	20	35	80	--	80	30	20	50	30	60	80
24.....	30	30	50	80	--	80	30	20	50	30	80	80
25.....	30	30	50	80	--	100	25	20	50	30	100	80
26.....	30	30	60	80	--	100	20	20	50	40	100	80
27.....	40	20	60	80	--	100	25	20	45	40	100	80
28.....	40	25	60	80	--	80	20	20	45	40	100	80
29.....	40	30	60	80	--	70	20	20	30	35	90	80
30.....	40	30	60	80	--	70	20	30	40	45	80	80
31.....	40	--	60	70	--	70	--	30	--	30	90	--
AVERAGE	36	24	29	92	--	63	33	27	44	28	51	78

LOCATION.--Lat 29°55'18", long 82°25'35", Alachua County, at gaging station near center of span on downstream side of bridge on State Highway 23, 0.5 mile south of Worthington Springs, Union County, and 0.8 mile downstream from New River.

PERIOD OF RECORD.--Chemical analyses: July 1957 to September 1960, October 1963 to September 1968.  
Water temperatures: July 1957 to September 1968.

Specific conductance: Maximum daily, 200 micromhos May 25; minimum daily, 31 micromhos Aug. 31.  
Water temperatures: Maximum, 29.0°C June 15, 27, Aug. 16, 17, 22; minimum 7.0°C Jan. 26.

Dissolved solids (1957-60): Maximum, 124 mg/l July 21-31, 1960; minimum, 53 mg/l Mar. 18-22, 1960.  
Hardness (1957-60): Maximum, 40 mg/l Dec. 1959, June 11-20, 1960; minimum, 12 mg/l Mar. 18-22, 1960.

Hardness (1957-60): Maximum, 40 mg/l Dec. 1959, June 11-20, 1960; minimum, 12 mg/l Mar. 18-22, 1960.  
Specific conductance: Maximum daily, 210 micromhos May 29, 1965; minimum daily, 31 micromhos Aug. 31, 1968.  
Water temperatures: Maximum, 32.0°C July 7, 1962; minimum, 4.0°C Feb. 19, 1958.

DATE	DIS-CHARGE (CFS)	TEMP-ERATURE (DEG C)	SILICA (SI O2)	DIS-SOLVED IRON (FE)	CAL-CIUM (CA)	MAG-NE-SIUM (MG)	STRON-TIUM (SR)	SODIUM (NA)	POT-ASSIUM (K)	BICAR-BONATE (HCO3)	SULFATE (SO4)	COLORIDE (CL)
NOV. 01...	--	21	7.0	.11	16	5.6	--	7.5	.7	68	13	9.5
DEC. 20...	130	21	11	.11	22	7.4	--	7.7	1.4	82	14	12
JAN. 31...	786	15	6.7	.16	12	5.1	--	7.7	.7	43	12	12
MAR. 27...	56	18	6.7	.14	21	8.0	--	8.1	.8	90	12	12
MAY 02...	7.4	25	3.0	.05	17	7.4	.06	10	1.1	79	12	14
JUNE 13...	103	25	5.8	.16	11	4.2	.00	7.4	1.4	45	11	10
JULY 25...	373	28	6.1	.53	7.9	2.6	--	6.4	.6	10	14	9.2
AUG. 31...	--	27	--	--	--	--	--	--	--	--	--	--
SEPT. 04...	--	23	--	--	--	--	--	--	--	--	--	--
30...	--	27	3.1	.26	3.2	1.1	--	8.4	2.5	14	.0	13

## SUWANNEE RIVER BASIN

02321500 SANTA FE RIVER AT WORTHINGTON SPRINGS, FLA.--Continued  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUC- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
NOV. CL...	.3	.4	--	93	104	63	7	168	6.4	75	--	--
DEC. 20...	.4	.8	--	117	145	86	19	198	6.8	120	--	--
JAN. 31...	.3	.7	--	78	103	51	16	137	7.0	120	--	--
FEB. 27...	.3	1.6	--	115	135	86	12	198	7.5	120	--	--
MAY CL...	.3	.6	1.3	106	111	73	8	200	7.2	40	11.0	131
JUNE 13...	.5	1.4	--	75	113	45	8	128	6.5	140	--	--
JULY 25...	.4	.2	--	53	121	0	0	82	5.6	280	--	--
AUG. 31...	--	.7	.98	--	--	--	--	87	--	--	--	--
SEPT. 14...	--	2.7	.45	--	--	--	--	31	--	--	--	--
30...	.2	.3	--	39	100	12	1	75	6.0	320	--	--
	--	.40	--	--	--	--	--	69	--	--	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	99	136	150	91	120	141	140	190	180	116	64	56
2.....	99	138	160	95	129	132	140	191	190	108	74	42
3.....	100	135	160	86	140	132	150	191	190	106	65	45
4.....	103	142	160	99	--	135	150	192	190	106	49	45
5.....	103	145	165	92	131	135	150	180	--	108	52	47
6.....	104	145	165	90	135	135	140	168	160	108	54	50
7.....	107	145	165	92	120	135	140	180	150	112	54	52
8.....	109	143	170	95	125	136	149	180	190	116	--	52
9.....	110	143	--	96	120	139	149	182	160	112	56	52
10.....	110	142	150	97	120	142	152	188	160	105	56	54
11.....	112	143	120	110	130	115	149	186	130	128	56	55
12.....	113	146	150	100	135	123	155	180	130	122	56	55
13.....	112	150	120	99	135	113	--	175	110	118	58	53
14.....	112	150	120	99	135	112	155	172	110	101	62	53
15.....	112	152	120	109	125	115	155	176	100	92	62	48
16.....	113	155	120	109	131	120	161	185	93	86	54	53
17.....	114	155	129	109	130	123	161	190	92	85	53	52
18.....	117	156	129	109	131	124	158	190	92	63	57	54
19.....	118	158	129	109	121	125	158	189	88	83	55	56
20.....	119	160	129	119	130	126	171	192	88	84	56	57
21.....	121	160	129	110	130	127	160	190	97	--	56	62
22.....	123	160	130	110	120	133	175	191	95	83	58	60
23.....	123	160	125	110	120	132	180	198	97	86	61	62
24.....	123	160	130	110	120	134	170	199	100	82	62	62
25.....	125	160	130	110	129	135	170	200	100	82	63	--
26.....	127	165	131	115	125	137	185	192	110	74	64	--
27.....	131	162	125	115	129	140	182	192	110	70	66	65
28.....	131	162	87	115	129	140	182	190	110	74	66	68
29.....	133	162	92	119	129	145	170	178	110	80	57	67
30.....	134	162	92	119	--	--	182	187	120	77	37	69
31.....	135	--	92	119	--	149	--	150	--	87	31	--
AVERAGE	115	151	132	105	127	131	159	186	126	95	57	55

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY																																	AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	21	21	22	22	23	25	24	24	24	23	23	21	21	21	21	21	22	22	19	18	18	21	21	21	21	19	19	18	17	20	20	21	
NOVEMBER..	21	21	19	18	16	12	13	14	12	16	18	17	17	14	17	14	14	14	12	13	17	18	20	20	21	19	18	18	17	18	16	18	
DECEMBER..	18	18	17	14	14	16	16	16	--	17	19	18	17	19	19	19	18	18	21	20	21	20	14	12	13	12	16	14	12	12	16		
JANUARY..	14	16	16	18	14	14	14	13	13	15	14	12	10	8	8	8	8	10	12	12	12	13	12	9	7	9	12	14	14	15	12		
FEBRUARY..	16	16	14	--	15	13	12	10	10	10	10	10	10	9	10	10	13	13	11	10	11	12	13	11	9	10	11	11	13	--	--	11	
MARCH.....	11	11	14	12	15	13	13	13	15	15	16	15	17	15	15	16	17	17	--	18	20	--	19	16	18	18	18	19	20	--	21	16	
APRIL.....	21	21	21	22	21	22	22	23	25	25	22	--	24	23	23	23	24	24	25	26	26	25	26	25	26	25	22	22	24	23	26	--	
MAY.....	27	25	23	23	24	21	23	21	23	23	24	26	28	28	27	28	27	27	27	25	26	26	25	25	26	25	25	26	26	25	23	26	25
JUNE.....	25	27	26	25	--	22	25	26	26	22	--	22	22	27	27	27	27	27	26	27	27	27	27	28	27	27	28	27	29	28	27	--	
JULY.....	28	28	28	27	26	27	28	28	27	25	25	26	28	27	26	27	27	27	28	--	27	27	27	27	27	27	27	28	28	27	27	27	
AUGUST.....	28	27	26	25	26	27	28	--	28	28	27	28	27	27	27	29	29	27	28	28	28	28	28	28	28	27	26	24	23	23	26		
SEPTEMBER	25	25	25	26	26	27	27	26	26	26	26	26	25	24	25	24	25	26	26	26	25	25	25	--	--	--	25	25	25	25	--	26	

02327100 SOPCHOPPY RIVER NEAR SOPCHOPPY, FLA.  
(Hydrologic bench-mark station)

LOCATION.--Lat 30°07'45", long 84°29'40", Wakulla County, temperature recorder at gaging station near left bank on downstream side of bridge on U.S. Forest Road 346-A, 4.7 miles north of Sopchoppy, 5.2 miles upstream from Duval Branch, and 24 miles upstream from mouth.

DRAINAGE AREA.--97.9 sq mi, approximately.

PERIOD OF RECORD.--Water temperatures: June 1964 to September 1968.

## EXTREMES.--1967-68:

Water temperatures: Maximum, 31.0°C May 16, 17; minimum, 11.0°C on many days during January to March.

Period of record:

Water temperatures: Maximum, 32.0°C June 3, 1965; minimum, 4.0°C Jan. 31, Feb. 1, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	DISS- OLVED MAN- GANESE (MN)	TOTAL CHRO- MIUM (CR)	COPPER (CU)	LEAD (PB)	ZINC (ZN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)
OCT.											
25....	5.0	19	9.6	.50	--	--	--	--	--	43	4.0
NOV.											
22....	3.0	10	9.6	.04	--	--	--	--	--	32	3.2
DEC.											
14....	84	15	6.5	.29	--	--	--	--	--	3.4	.8
JAN.											
10....	179	14	6.8	.27	--	--	--	--	--	1.6	.5
FEB.											
07....	97	8	5.7	.26	--	--	--	--	--	2.2	.5
MAR.											
14....	138	10	4.7	.23	--	.00	.01	.00	.00	1.6	.7
APR.											
11....	27	21	5.3	.28	--	--	--	--	--	5.2	.7
MAY											
23....	1.5	26	4.3	.05	.00	--	--	--	--	49	4.8
29....	2.8	20	4.2	.10	.00	--	--	--	--	37	3.9
JUNE											
21....	1.5	26	5.3	.08	.00	--	--	--	--	46	4.6
JULY											
25....	27	25	5.3	.37	--	--	--	--	--	6.1	.8
AUG.											
16....	15	25	5.9	.32	--	--	--	--	--	9.2	1.2
SEPT.											
26....	79	23	5.7	.49	--	--	--	--	--	3.0	.5

DATE	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	LITHIUM (LI)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS ISUM OF CONSTI- TUENTS)
OCT.											
25....	--	2.7	.4	--	145	2.8	6.0	.2	.0	.13	140
NOV.											
22....	--	2.5	.4	--	108	4.8	5.0	.2	.0	.17	111
DEC.											
14....	--	2.4	.1	--	2	.8	4.5	1.5	.4	.18	22
JAN.											
10....	--	2.2	.1	--	0	.8	4.5	.4	.2	.04	17
FEB.											
07....	--	2.1	.1	--	0	.0	4.5	.4	.0	.12	16
MAR.											
14....	.08	1.9	.0	.00	0	4.8	5.0	.2	1.2	.03	20
APR.											
11....	--	1.8	.1	--	10	3.6	4.8	.3	.5	.08	27
MAY											
23....	.12	2.9	.4	--	172	.4	5.0	.2	.4	.12	153
29....	.08	2.5	.4	--	131	.6	4.5	.2	.5	.15	119
JUNE											
21....	.12	2.7	.4	--	158	.8	5.0	.3	.4	.14	144
JULY											
25....	--	1.8	.2	--	8	.8	4.0	.2	.7	.07	24
AUG.											
16....	--	1.8	.1	--	18	.3	4.8	.2	.7	.05	36
SEPT.											
26....	--	1.9	.1	--	0	.4	4.8	.7	.3	.04	18

DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	ALKA- LINITY AS CAC03	SPECI- FIC COND- UCTANCE (MICRO- MHUS)	pH	COLOR	COLI- FORM (COL- ONIES PER 100 ML)	BIO- CHEM- ICAL OXYGEN DEMAND	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
OCT.											
25....	143	124	5	119	239	7.5	30	560	.3	--	--
NOV.											
22....	122	93	4	89	182	7.1	100	640	.7	--	--
DEC.											
14....	73	12	10	2	47	6.6	200	--	--	--	--
JAN.											
10....	75	6	6	0	43	4.2	280	1300	1.1	--	--
FEB.											
07....	67	8	8	0	38	4.5	240	410	.6	--	--
MAR.											
14....	70	7	7	0	41	4.3	240	1300	.4	--	--
APR.											
11....	72	16	8	8	37	6.0	240	3600	1.2	--	--
MAY											
23....	164	142	1	141	278	7.9	30	--	--	5.9	72
29....	131	109	2	107	217	7.3	30	3600	1.4	7.0	76
JUNE											
21....	153	134	4	130	262	7.5	25	2400	1.1	5.3	65
JULY											
29....	98	18	12	7	38	5.6	240	2100	1.4	7.3	87
AUG.											
16....	88	28	13	15	50	6.1	240	2800	.8	6.1	73
SEPT.											
26....	97	10	10	0	41	4.5	360	930	.5	--	--

A URANIUM ug/l .4, RADIUM PC/l .3, GROSS  $\alpha$  UG/l, GROSS  $\beta$  PC/l 3.7.

## COASTAL BASINS BETWEEN AUCILLA RIVER AND OCHLOCKNEE RIVER

## 02372100 SOPCHOPPY RIVER NEAR SOPCHOPPY, FLA.--Continued

PESTICIDE AND HERBICIDE ANALYSES IN MICROGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	ENDRIN	HEPTA- CHLOR	LINDANE	ALDRIN	DDD	DDE	DDT	DI- ELDRIN	2,4-D	2,4,5-T	SILVER																					
FEB. 07...	.00	.00	.00	.00	.00	.00	.00	.00	--	--	--																					
JUNE 21...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00																					
TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968																																
	DAY																															
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER																																
MAXIMUM	22	21	20	20	20	20	20	21	21	20	19	18	18	18	18	18	19	19	19	18	17	17	--	--	--	--	--	--	--	--	18	--
MINIMUM	21	21	19	19	19	20	20	20	20	19	18	18	18	18	18	18	19	18	17	17	17	--	--	--	--	--	--	--	--	--	18	--
NOVEMBER																																
MAXIMUM	18	18	17	16	15	14	14	13	13	13	13	14	14	14	14	14	14	14	15	14	14	15	17	18	19	19	19	18	17	--	--	15
MINIMUM	18	17	17	16	14	13	13	13	13	13	13	13	14	14	14	14	14	14	13	13	14	15	17	18	19	18	17	--	--	14	--	14
DECEMBER																																
MAXIMUM	17	17	17	17	16	15	16	16	16	17	17	17	17	17	17	17	17	18	18	19	19	19	19	16	14	13	13	12	13	13	13	16
MINIMUM	17	17	17	16	15	14	15	16	16	16	17	17	17	17	17	17	17	18	18	19	19	19	16	14	13	13	12	12	13	12	15	
JANUARY																																
MAXIMUM	12	12	13	14	14	14	13	13	12	13	13	13	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
MINIMUM	12	12	12	13	13	14	13	13	12	12	12	13	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
FEBRUARY																																
MAXIMUM	12	13	13	13	11	11	11	11	11	11	11	11	12	12	11	11	11	11	11	11	11	11	11	11	11	12	12	12	--	--	11	--
MINIMUM	12	12	13	13	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	12	11	12	--	--	11
MARCH																																
MAXIMUM	12	12	12	12	12	12	12	14	15	16	17	17	16	14	15	16	16	16	17	18	18	17	17	15	16	18	18	18	19	19	15	--
MINIMUM	12	12	12	12	12	11	11	12	14	15	16	16	14	13	14	15	15	16	16	17	18	18	17	14	13	14	16	17	17	18	18	14
APRIL																																
MAXIMUM	20	21	22	22	22	22	23	23	23	23	24	23	22	23	24	24	23	24	26	28	28	27	27	26	26	24	25	26	27	--	23	--
MINIMUM	19	20	21	22	22	21	22	22	23	23	23	21	21	21	23	22	22	22	23	24	25	25	22	22	23	24	25	24	24	--	22	--
MAY																																
MAXIMUM	26	26	27	26	25	25	26	26	26	26	28	29	30	30	31	31	30	29	29	28	28	27	27	26	26	26	25	26	27	--	27	--
MINIMUM	23	22	23	23	22	22	22	24	24	25	26	28	27	28	28	28	28	27	25	24	26	24	26	25	24	25	24	23	24	24	--	24
JUNE																																
MAXIMUM	28	29	29	29	29	28	28	29	30	29	27	28	28	29	29	29	29	29	30	29	28	28	29	29	29	29	29	29	29	--	28	--
MINIMUM	25	27	27	27	27	26	27	26	27	28	27	25	26	27	27	27	27	28	27	27	28	27	27	27	27	27	27	27	27	--	26	--
JULY																																
MAXIMUM	29	29	29	28	26	24	25	25	25	25	26	--	--	--	--	26	26	25	25	24	25	26	26	26	26	26	26	27	27	28	28	26
MINIMUM	27	27	26	24	24	24	25	25	24	24	24	--	--	--	26	25	24	24	24	24	24	25	25	26	26	26	26	26	27	27	25	--
AUGUST																																
MAXIMUM	28	28	28	28	27	27	27	27	27	27	27	26	26	26	26	26	26	26	27	27	27	27	27	27	27	27	27	26	26	25	24	26
MINIMUM	27	27	27	27	26	26	27	27	27	27	27	26	26	26	26	26	26	26	27	27	27	27	27	27	27	27	27	26	24	24	24	26
SEPTEMBER																																
MAXIMUM	24	24	24	24	24	25	26	26	26	26	25	25	26	26	25	24	23	23	24	24	24	24	24	24	24	24	24	24	24	--	24	--
MINIMUM	24	24	24	24	24	25	26	26	26	25	24	24	24	24	24	23	23	23	24	24	24	23	23	23	24	23	23	23	24	23	--	23

## OCHLOCKNEE RIVER BASIN

## 02327500 OCHLOCKNEE RIVER NEAR THOMASVILLE, GA.

LOCATION.--Lat 30°52', long 84°03', Thomas County, at gaging station on downstream side of left bank pier of bridge on U.S. Highway 84, 2 miles upstream from Seaboard Coast Line Railroad bridge, 4 miles upstream from Barnett's Creek, 5 miles northwest of Thomasville, and 6 miles downstream from Little Ochlocknee River.

DRAINAGE AREA.--550 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL (IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB. 13...	9.0	.50	<.10	6.1	2.2	10	1.9	1.0	4.0
MAR. 12...	7.0	1.3	<.05	3.2	1.2	8.3	1.3	.50	<2.0
APR. 16...	10	1.4	.06	11	5.4	16	2.0	1.8	10
JUNE 30...	9.5	1.4	<.05	1.8	3.4	11	1.8	.70	6.0
JULY 04...	8.7	1.4	<.05	2.6	1.2	5.5	1.3	1.0	<2.0
AUG. 09...	8.0	1.4	<.05	6.0	2.7	12	1.8	.70	7.0
SEPT. 06...	11	1.5	<.05	8.0	3.6	20	2.2	1.4	14
SEPT. 03...	9.3	1.4	<.05	6.2	2.6	10	2.3	.40	22
DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 13...	15	.50	1.1	22	100	60	16	1.7	1500
MAR. 12...	10	.05	.65	16	63	125	62	2.9	4300
APR. 16...	22	1.0	2.7	54	178	120	20	2.1	2100
JUNE 30...	15	.52	.50	30	122	130	35	2.2	930
JULY 04...	8.0	.22	.95	12	55	165	33	1.7	9300
AUG. 09...	15	.90	2.0	24	120	105	21	3.0	91
SEPT. 06...	17	.44	3.1	34	174	82	19	3.3	930
SEPT. 03...	12	.44	1.6	28	128	125	29	1.9	91



CHOCLOCKONEE RIVER BASIN

171

02327500 CHOCLOCKONEE RIVER NEAR THOMASVILLE, GA.--Continued  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CACO3	PH	DIS- SOLVED OXYGEN
FEB. 13....	1400	106	8	13	7.0	11.7
MAR. 12....	1315	512	17	10	6.6	8.2
APR. 16....	1130	65	20	45	7.0	4.0
30....	1130	151	21	26	6.7	5.3
JUNE 04....	1130	434	24	10	6.5	9.4
09....	1200	46	27	22	6.8	6.2
AUG. 06....	1200	36	27	33	6.9	5.3
SEPT. 03....	1315	75	24	21	6.9	6.6

02329000 CHOCLOCKONEE RIVER NEAR HAVANA, FLA.

LOCATION.--Lat 30°33'14", long 84°23'03", Leon County, at gaging station near left bank on downstream side of down-stream bridge on divided U.S. Highway 27, 0.8 mile upstream from Seaboard Coast Line Railroad bridge, 4 miles downstream from Mill Creek, 5 miles southeast of Havana, and 94 miles upstream from mouth.

DRAINAGE AREA.--1,140 sq mi, approximately (revised).

PERIOD OF RECORD.--Chemical analyses: October 1962 to September 1968.  
Water temperatures: October 1962 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 521 micromhos Aug. 31; minimum daily, 61 micromhos July 20.  
Water temperatures: Maximum, 28.0°C on several days during June, July and August; minimum, 6.0°C Jan. 17.

Period of record:  
Specific conductance: Maximum daily, 775 micromhos Nov. 15, 1962; minimum daily, 20 micromhos Dec. 8, 1964.  
pH (1966-67): Maximum daily, 7.9 Nov. 24, 1967; minimum daily, 6.8 July 8, 1967.  
Water temperatures: Maximum, 29.0°C Aug. 11, 1963, June 21, 1964; minimum, 1.0°C Dec. 26, 1963.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO2)	OIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NES- IUM (MG)	STRA- TUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)
OCT. 02....	1020	56	23	--	--	--	--	--	--	--	--	--
NOV. 13....	1000	77	20	6.7	.02	8.5	3.6	--	16	1.6	38	0
FEB. 05....	0850	207	10	7.0	.07	5.5	2.4	--	11	1.2	25	0
MAR. 27....	1230	458	16	8.5	.57	3.6	1.9	--	8.9	1.2	14	C
31....	0730	--	17	--	--	--	--	--	--	--	--	--
APR. 30....	1800	--	21	--	--	--	--	--	--	--	--	--
MAY 22....	0830	95	22	4.6	.03	6.5	3.7	.00	15	1.6	40	--
31....	0600	--	24	--	--	--	--	--	--	--	--	--
JULY 18....	--	402	27	--	--	--	--	--	--	--	--	--
18....	1015	402	27	6.6	.21	2.6	1.3	--	9.5	1.5	6	--
31....	1800	--	27	--	--	--	--	--	--	--	--	--
AUG. 30....	0615	--	--	--	--	--	--	--	--	--	--	--
31....	1900	--	24	--	--	--	--	--	--	--	--	--
SEPT. 11....	1000	--	26	5.3	.15	7.2	3.3	--	14	2.0	32	--
30....	0615	--	--	--	--	--	--	--	--	--	--	--
DATE	SULFATE (SO4)	CHLOR- IDE (CL)	FLUOR- IDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	COLOR	SPECI- FIC CON- CENTRA- TION (MICRO- MG/L)	DIS- SOLVED OXYGEN
OCT. 02....	--	--	--	--	--	--	--	--	--	--	140	--
NOV. 13....	11	22	.2	.1	--	89	102	36	5	30	161	--
FEB. 05....	7.2	15	.2	.3	--	62	70	24	3	30	110	--
MAR. 27....	5.6	15	.2	1.7	--	54	64	17	6	60	88	--
31....	--	--	--	--	--	--	--	--	--	--	95	--
APR. 30....	--	--	--	--	--	--	--	--	--	--	105	--
MAY 22....	7.8	19	.3	1.0	--	79	77	31	0	10	145	7.6
31....	--	--	--	--	--	--	--	--	--	--	110	--
JULY 18....	--	--	--	--	--	--	--	--	--	--	--	--
18....	6.4	14	.2	.3	--	46	67	12	7	50	85	--
31....	--	--	--	4.0	1.2	--	--	--	--	--	145	--
AUG. 30....	--	--	--	.8	.80	--	--	--	--	--	170	--
31....	--	--	--	2.6	.87	--	--	--	--	--	521	--
SEPT. 11....	11	18	.4	.5	--	78	86	32	6	30	140	--
30....	--	--	--	.8	.80	--	--	--	--	--	170	--

## OCHLOCKNEE RIVER BASIN

## 02329000 OCHLOCKNEE RIVER NEAR HAVANA, FLA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	153	169	180	410	110	96	94	140	111	80	145	110
2.....	142	110	180	280	100	87	94	190	171	82	150	96
3.....	152	140	180	110	93	93	95	130	143	97	145	96
4.....	160	152	165	90	96	97	84	150	96	99	131	100
5.....	168	238	190	130	100	103	90	160	71	94	121	120
6.....	175	240	170	110	110	87	84	--	78	92	125	120
7.....	172	137	182	87	100	85	87	--	67	100	121	125
8.....	172	144	185	105	119	91	96	120	67	104	121	130
9.....	172	162	170	110	86	87	110	130	65	125	159	130
10.....	174	160	150	110	120	97	110	130	69	131	159	130
11.....	188	152	110	100	84	103	115	120	90	167	130	120
12.....	190	147	92	98	76	103	95	120	94	199	145	130
13.....	180	157	120	120	92	87	110	97	110	209	125	140
14.....	295	163	390	120	78	99	100	120	99	172	179	150
15.....	418	159	175	100	84	192	109	140	104	139	160	199
16.....	230	158	120	100	87	151	110	135	106	362	140	210
17.....	192	152	129	98	81	118	110	135	111	102	120	150
18.....	197	170	110	98	88	68	110	140	128	73	290	155
19.....	206	180	130	98	91	65	119	140	121	63	355	155
20.....	180	187	150	95	91	65	119	150	80	61	170	155
21.....	182	182	140	100	99	67	119	150	69	74	235	155
22.....	178	200	125	110	100	68	111	150	69	95	160	170
23.....	172	219	120	102	100	77	119	190	76	85	165	170
24.....	172	205	120	102	86	83	119	220	80	95	170	170
25.....	167	213	120	119	82	85	130	--	96	105	160	198
26.....	165	194	130	100	87	86	140	150	103	104	155	180
27.....	170	206	130	95	89	87	130	92	109	142	160	180
28.....	173	200	130	100	100	90	71	--	117	105	130	180
29.....	165	200	120	110	83	78	75	110	146	129	140	180
30.....	191	191	110	110	--	86	105	190	95	139	205	170
31.....	165	--	170	110	--	95	--	110	--	145	561	--
AVERAGE	189	170	151	120	93	92	104	141	97	121	172	149

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DAY																															AVER- AGE
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER..	18	17	18	19	19	20	19	21	21	19	19	18	18	18	17	20	18	18	17	16	17	16	16	17	18	17	20	16	14	16	18	18
NOVEMBER..	18	17	16	16	13	12	11	9	9	9	10	11	12	13	14	12	12	13	12	10	10	11	16	16	18	18	19	18	14	--	13	13
DECEMBER..	15	16	16	12	12	13	13	13	17	18	16	14	15	17	17	12	17	18	18	18	14	12	10	10	10	13	11	10	11	10	11	14
JANUARY..	13	12	13	15	13	13	14	11	12	14	13	11	10	9	8	7	6	7	13	8	9	10	11	9	8	8	8	9	9	11	10	
FEBRUARY..	12	14	12	10	10	11	10	8	8	8	8	7	8	8	8	9	8	8	9	8	8	8	9	8	8	8	8	10	--	--	9	
MARCH....	8	8	10	9	8	11	10	11	12	14	16	18	13	12	14	15	15	14	14	14	15	17	12	11	13	13	14	15	15	15	17	13
APRIL.....	18	18	19	20	21	20	21	21	22	21	21	19	19	20	21	20	21	21	22	23	23	23	24	19	20	21	19	21	21	--	21	
MAY.....	20	20	20	21	22	--	--	22	21	22	23	24	24	24	25	25	25	25	24	23	22	23	23	--	25	25	--	23	22	24	23	
JUNE.....	24	24	24	24	24	23	24	25	25	26	26	26	26	26	26	26	27	26	27	27	26	26	26	26	26	26	26	26	26	--	26	
JULY.....	27	27	27	27	26	26	26	26	25	25	25	26	26	26	26	27	26	26	26	26	26	26	25	26	27	27	27	27	28	28	27	26
AUGUST....	28	26	27	28	27	26	26	27	27	28	27	26	26	26	26	27	28	27	28	27	28	28	27	28	28	28	27	26	24	24	24	27
SEPTEMBER	24	23	24	24	25	26	26	27	26	25	25	25	25	25	24	24	24	24	24	24	24	23	23	23	24	24	24	24	--	--	24	

## APALACHICOLA RIVER BASIN

## 02331000 CHATTAHOOCHEE RIVER NEAR LEAF, GA.

LOCATION.--Lat 34°35', long 83°38', Habersham County, at gaging station on left bank 700 ft upstream from bridge on State Highway 115, 1.5 miles east of Leaf, 2.5 miles downstream from Blue Creek, 3 miles upstream from Soque River, 7.5 miles southeast of Cleveland, and at mile 405.6.

DRAINAGE AREA.--150 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PG- TAS- SIUM (P)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB. 27...	9.5	.15	.05	.9	.3	1.4	.6	.10	<2.0
MAR. 27...	8.2	.17	<.05	.8	.2	1.2	.6	.10	<2.0
APR. 29...	9.5	.30	<.05	1.1	.2	1.4	.7	<.10	<.0
MAY 15...	9.0	.25	<.05	1.0	.3	1.1	1.0	<.10	<2.0
JUNE 12...	6.5	.45	<.05	1.0	.4	1.6	.7	<.10	<.0
JULY 23...	10	.50	<.05	1.1	.4	1.7	.9	.20	<2.0
AUG. 27...	10	.42	<.05	.9	.4	1.7	.9	<.10	<2.0
SEPT. 29...	10	.38	<.05	1.5	.5	1.7	.9	<.10	<2.0

## APALACHICOLA RIVER BASIN

173

## 02331000 CHATTAHOOCHEE RIVER NEAR LEAF, GA.--Continued

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO <sub>4</sub> )	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICRO- MHOS)	COLOR	TURBIDITY	BIOCHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
FEB. 27...	2.0	.07	.13	4	19	5	9.0	.8	140
MAR. 27...	1.5	.11	.10	10	16	5	8.0	.3	150
APR. 29...	1.5	.20	.10	6	18	30	10	.5	2400
MAY 15...	1.0	.26	.15	4	20	50	14	.5	2300
JUNE 12...	.5	.16	.10	10	19	45	21	.4	2300
JULY 23...	.6	.14	.18	6	21	35	11	.5	2300
SEPT. 25...	1.5	.05	.80	7	23	22	8.3	1.7	930

DATE	TIME	DISCHARGE (CFS)	TEMPERATURE (DEG C)	ALKALINITY AS CaCO <sub>3</sub>	PH	DISSOLVED OXYGEN
FEB. 27...	1500	420	6	8	--	12.3
MAR. 27...	1515	540	12	8	6.4	11.4
APR. 29...	1500	470	13	9	7.6	10.6
MAY 15...	1345	475	17	8	7.1	10.0
JUNE 12...	1530	355	22	9	7.2	9.3
JULY 23...	1330	219	23	10	7.2	10.0
AUG. 27...	1645	140	23	9	6.8	9.2
SEPT. 25...	1630	193	19	10	7.4	--

## 02331600 CHATTAHOOCHEE RIVER NEAR CORNELIA, GA.

LOCATION.--Lat 34°33', long 83°37', White County, at gaging station at Duncans Bridge on county road, 1 mile downstream from Soque River, 6 miles northwest of Cornelia, and at mile 401.5.

DRAINAGE AREA.--315 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MANGANESE (MN)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	AMMONIA NITROGEN (N)	SULFATE (SO <sub>4</sub> )
FEB. 27...	9.5	.18	.05	.9	.4	1.3	.6	.10	<2.0
MAR. 27...	8.0	.34	.05	1.2	.3	1.3	.7	.10	<2.0
APR. 29...	9.5	.40	.05	1.1	.3	1.5	.8	.10	<2.0
MAY 15...	8.7	.65	.05	1.0	.3	1.2	1.1	.10	<2.0
JUNE 12...	6.5	3.2	.05	1.4	.6	2.0	1.8	.10	<2.0
JULY 23...	9.8	.70	.05	1.2	.5	1.2	.9	.10	<2.0
AUG. 27...	9.8	.52	.05	1.4	.5	2.7	1.2	.10	2.5
SEPT. 25...	10	.57	.05	1.5	.5	1.7	.8	.10	2.0

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO <sub>4</sub> )	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICRO- MHOS)	COLOR	TURBIDITY	BIOCHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
FEB. 27...	3.0	.09	--	6	19	15	10	.8	91
MAR. 27...	1.0	.12	.10	7	18	15	13	.6	72
APR. 29...	1.5	.20	.10	8	18	30	10	.7	2400
MAY 15...	2.0	.18	.15	4	20	80	28	.5	2300
JUNE 12...	1.2	.42	.25	18	22	155	140	1.1	9300
JULY 23...	.6	.16	.15	6	23	30	13	.4	9300
AUG. 27...	4.0	.10	.10	10	28	55	12	1.2	1500
SEPT. 25...	1.0	.05	1.0	8	24	22	9.3	.2	430

## APALACHICOLA RIVER BASIN

02331600 CHATTAHOOCHEE RIVER NEAR CORNELIA, GA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINITY AS CaCO3	PH	DIS- SOLVED OXYGEN
FEB. 27...	1630	1720	6	7	--	12.1
MAR. 27...	--	937	12	9	6.3	12.5
APR. 29...	1630	879	14	10	7.0	10.4
MAY 15...	1444	929	18	9	7.3	9.4
JUNE 12...	1700	--	23	8	6.8	8.5
JULY 23...	1420	469	23	10	7.1	9.6
AUG. 27...	1830	316	24	10	6.8	9.1
SEPT. 25...	1715	343	19	10	7.2	10.9

02335500 CHATTAHOOCHEE RIVER NEAR ROSWELL, GA.

LOCATION.--Lat 34°00', long 84°20', Fulton County, at gaging station on right bank 1.5 miles upstream from Big Creek and bridge on U.S. Highway 19, and 2 miles southeast of Roswell.

DRAINAGE AREA.--1,230 sq mi.

PERIOD OF RECORD.--Water temperatures: July 1967 to September 1968.

EXTREMES -- 1967-68:

Water temperatures: Maximum, 21.0°C June 10; minimum, 4.0°C Jan. 8, 10, 11, 14.

REMARKS.--Recorder stopped July 16-22, Sept. 12-30, 1968.

TEMPERATURE (°C) OF WATER, JULY TO SEPTEMBER 1967

	MONTH	DAY																															AVER- AGE
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
JULY																																	
MAXIMUM		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	18	19	20
MINIMUM																													14	13	16	13	
AUGUST																																	
MAXIMUM		17	16	16	15	17	19	20	16	14	15	16	16	18	18	16	16	16	17	17	18	17	17	17	18	18	16	16	15	15	15	15	
MINIMUM		12	12	12	12	12	11	12	12	12	12	12	12	12	15	12	12	12	12	12	12	12	12	12	14	12	12	13	14	12	13	17	
SEPTEMBER																																	
MAXIMUM		14	15	14	13	14	14	15	14	16	17	13	15	16	16	16	16	16	16	16	16	16	16	16	17	16	16	14	13	12	--	15	
MINIMUM		3	3	13	13	12	12	13	13	13	13	13	13	13	13	13	16	13	16	14	16	14	16	14	16	14	12	13	13	13	12	--	13

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
OCTOBER																																		
MAXIMUM	16	15	16	16	16	16	16	16	15	12	16	13	16	13	16	17	17	16	16	15	15	16	16	16	17	16	16	16	14	15	15	16		
MINIMUM	12	12	14	14	14	14	14	14	15	12	16	13	16	13	16	15	15	12	14	13	13	15	13	12	14	16	14	14	14	11	14	13		
NOVEMBER																																		
MAXIMUM	15	14	15	15	12	10	12	14	14	14	13	13	13	13	13	12	12	12	13	13	13	13	13	13	11	12	12	12	12	--	13			
MINIMUM	13	14	13	13	13	10	8	8	10	11	11	11	11	11	12	11	11	10	11	11	9	12	12	12	12	11	11	11	11	11	12	--	11	
DECEMBER																																		
MAXIMUM	12	12	9	11	11	11	11	11	11	12	12	12	11	10	11	11	11	9	11	11	12	12	11	10	9	8	9	9	9	8	8	8	10	
MINIMUM	11	9	8	7	10	11	11	11	11	11	11	11	9	9	10	10	11	8	9	11	11	10	8	8	7	8	8	8	8	7	7	9	9	
JANUARY																																		
MAXIMUM	8	8	8	8	8	8	6	7	7	7	6	6	6	6	6	6	6	7	6	6	6	6	7	7	6	6	6	6	6	7	7	7	7	
MINIMUM	7	8	8	8	7	6	5	4	6	4	4	4	5	5	4	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	
FEBRUARY																																		
MAXIMUM	7	7	7	7	7	7	6	6	6	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	--	--	--	6	
MINIMUM	7	7	6	6	6	7	6	6	6	7	7	7	6	6	6	6	6	6	6	5	5	6	6	6	6	6	6	6	6	6	--	--	--	6
MARCH																																		
MAXIMUM	6	6	7	7	5	7	7	7	7	7	10	10	9	9	8	7	7	7	9	10	8	8	8	7	7	7	8	7	8	7	7	9	12	8
MINIMUM	6	6	6	5	5	5	6	6	6	7	7	7	7	7	7	7	7	8	7	7	7	7	7	7	6	7	7	7	7	7	7	7	9	7
APRIL																																		
MAXIMUM	13	12	7	9	9	9	11	10	9	7	8	8	8	8	10	12	9	9	9	9	11	14	15	13	12	11	11	13	12	13	--	--	11	
MINIMUM	10	7	6	7	8	7	9	9	9	6	6	6	6	6	8	7	6	6	6	7	9	11	13	9	9	8	9	9	11	9	10	--	8	
MAY																																		
MAXIMUM	13	13	12	12	15	16	12	12	12	10	12	12	15	18	13	13	16	14	14	18	17	13	13	14	14	14	17	19	13	13	14	14	14	14
MINIMUM	10	10	10	9	12	12	10	10	10	10	10	10	12	14	10	10	10	11	11	14	14	10	10	11	11	11	15	15	11	11	11	11	11	11
JUNE																																		
MAXIMUM	15	18	20	19	16	15	15	14	14	21	19	16	16	15	14	19	19	15	14	14	14	16	18	20	16	14	14	14	14	16	--	16		
MINIMUM	11	14	16	12	12	12	12	11	12	17	11	11	11	11	11	11	14	15	11	11	11	11	11	13	16	11	11	11	11	11	13	--	12	
JULY																																		
MAXIMUM	19	14	13	13	14	13	14	16	16	12	13	13	13	13	13	--	--	--	--	--	--	--	--	--	17	14	13	13	15	15	17	15	13	--
MINIMUM	11	10	11	11	11	11	13	14	12	12	11	12	12	13	13	--	--	--	--	--	--	--	--	13	12	12	12	13	13	15	12	12	--	--
AUGUST																																		
MAXIMUM	13	13	13	15	16	14	14	14	14	14	14	14	12	12	13	13	13	16	17	13	13	13	14	14	14	14	19	13	14	13	13	12	14	14
MINIMUM	11	11	11	13	12	11	11	11	11	11	12	12	11	11	11	11	11	13	11	11	11	11	11	11	12	11	11	11	11	11	11	11	11	11
SEPTEMBER																																		
MAXIMUM	13	16	17	12	12	14	13	13	13	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	11	13	11	11	11	11	11	15	11	13	11	13	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## APALACHICOLA RIVER BASIN

175

## 02337000 SWEETWATER CREEK NEAR AUSTELL, GA.

LOCATION.--Lat 33°46', long 84°37', Douglas County, at gaging station on right bank 100 ft upstream from bridge on Interstate Highway 20, 400 ft upstream from Blair Bridge, 3 miles southeast of Austell, and 5.5 miles upstream from mouth.

DRAINAGE AREA.--246 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO <sub>4</sub> )
FEB. 27...	14	.67	1.3	3.0	1.7	4.3	.7	.25	2.0
APR. 08...	10	2.1	.08	3.5	1.1	2.6	1.3	.60	2.0
MAY 27...	11	4.8	.20	4.4	2.0	3.0	1.8	.60	3.0
JULY 01...	18	.70	3.0	15	2.8	14	1.6	1.4	56
30...	17	1.2	.05	5.9	1.8	7.5	1.4	.12	<2.0
AUG. 26...	13	1.7	<.05	4.5	1.6	7.5	2.4	<1.0	4.0
SEPT. 23...	17	.89	.06	5.7	1.8	7.8	1.6	.10	4.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO <sub>4</sub> )	HARO- NESS (CA,MG)	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 27...	5.0	.36	.25	12	57	30	18	1.8	430
APR. 08...	3.5	.30	.30	14	44	170	60	1.3	7500
MAY 27...	3.5	.48	.34	12	48	175	102	5.0	23000
JULY 01...	6.0	.22	.20	44	160	45	26	>12	<30
30...	5.5	.40	.27	22	83	70	29	1.2	9300
AUG. 26...	8.3	.26	.57	16	79	185	62	2.2	7500
SEPT. 23...	2.5	.56	.35	22	87	37	10	--	--

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINITY AS CaCO <sub>3</sub>	PH	DIS- SOLVED OXYGEN
FEB. 27...	1120	223	6	18	5.9	12.2
APR. 08...	1130	1170	17	13	8.8	9.7
MAY 27...	--	930	--	21	6.3	8.4
JULY 01...	1000	95	23	18	5.9	5.5
30...	1100	110	24	23	6.5	7.8
AUG. 26...	0940	134	25	16	6.5	6.5
SEPT. 23...	1030	287	19	21	5.9	8.5

## 02337170 CHATTAHOOCHEE RIVER NEAR FAIRBURN, GA.

LOCATION.--Lat 33°39'24", long 84°40'25", Fulton County, at gaging station at bridge on State Highways 74 and 92, 1.4 miles downstream from Deep Creek, 8.5 miles northwest of Fairburn, and at mile 281.8.

DRAINAGE AREA.--2,060 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO <sub>4</sub> )
FEB. 27...	8.0	.34	.05	2.5	.5	4.3	1.2	.65	<2.0
APR. 08...	9.5	1.9	.05	5.0	1.5	4.8	1.9	1.2	6.0
MAY 06...	9.0	.90	<.05	5.4	1.4	5.8	1.7	.80	4.0
JUNE 03...	10	1.8	.05	8.2	1.4	6.0	2.4	1.0	2.0
JULY 01...	8.0	.85	.05	6.2	1.3	6.8	2.2	1.6	6.0
31...	7.0	1.3	<.05	4.5	1.0	9.0	1.8	1.2	3.0
AUG. 26...	7.8	.94	<.05	3.9	1.2	11	2.3	1.0	4.0
SEPT. 23...	8.3	.59	.05	3.9	1.1	6.7	1.8	1.5	4.0

## APALACHICOLA RIVER BASIN

02337170 CHATTAHOOCHEE RIVER NEAR FAIRBURN, GA.--Continued

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO <sub>4</sub> )	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	COLOR	TURBIDITY	BIOCHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
FEB. 27...	5.0	.20	.63	10	52	25	20	6.2	2400000
APR. 08...	4.5	.40	.80	24	64	120	50	3.9	230000
MAY 06...	7.0	.27	.60	14	74	55	24	2.6	4300
JUNE 03...	4.5	.40	1.1	22	93	85	40	3.2	43000
JULY 01...	4.5	.32	1.7	20	87	45	17	3.6	29000
31...	4.0	.37	1.4	18	76	55	46	3.3	750000
AUG. 26...	6.0	.26	1.1	18	82	95	26	2.7	93000
SEPT. 23...	6.0	.26	1.5	14	77	30	10	--	--

DATE	TIME	DISCHARGE (CFS)	TEMPERATURE (DEG C)	ALKALINITY AS CaCO <sub>3</sub>	PH	DIS-SOLVED OXYGEN
FEB. 27...	1300	4780	9	16	5.9	10.4
APR. 08...	1315	4280	16	19	6.2	7.8
MAY 06...	1030	3010	17	10	6.3	8.1
JUNE 03...	1045	1880	22	31	6.4	5.0
JULY 01...	1200	1240	26	21	6.6	3.2
31...	1140	1740	23	21	6.5	3.8
AUG. 26...	1115	1290	26	20	6.4	3.7
SEPT. 23...	1520	1140	22	16	5.8	4.3

02338000 CHATTAHOOCHEE RIVER NEAR WHITESBURG, GA.

LOCATION.--Lat 33°29', long 84°54', Carroll County, at gaging station at bridge on State Highway 16, 1.2 miles southeast of Whitesburg, 1.5 miles downstream from Cedar Creek, 2 miles downstream from Snake Creek, and at mile 260.0.

DRAINAGE AREA.--2,430 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (Fe)	MANGANESE (Mn)	CALCIUM (Ca)	MAGNESIUM (Mg)	SODIUM (Na)	POTASSIUM (K)	AMMONIA NITROGEN (N)	SULFATE (SO <sub>4</sub> )
FEB. 27...	8.3	.40	<.05	2.8	1.2	4.3	1.3	.13	3.0
APR. 09...	9.0	1.7	.08	3.5	1.2	3.5	1.6	.60	2.0
MAY 08...	9.8	1.8	<.05	5.0	1.3	4.0	1.6	.30	<2.0
JUNE 03...	11	1.6	<.05	4.1	1.1	3.8	1.6	.70	<2.0
JULY 01...	8.5	.80	<.05	4.0	1.2	6.8	2.0	.90	4.0
31...	6.3	1.5	<.05	3.3	.7	--	1.4	.17	7.0
AUG. 26...	7.0	.42	<.05	3.4	1.1	5.2	1.8	<.10	2.0
SEPT. 23...	8.0	.62	.05	3.5	.9	--	1.5	.30	3.0

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO <sub>4</sub> )	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	COLOR	TURBIDITY	BIOCHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
FEB. 27...	5.0	.38	.67	12	58	25	20	6.4	430000
APR. 09...	4.5	.46	.55	20	50	110	35	2.4	2300
MAY 08...	6.0	.51	.30	--	62	120	56	1.1	1500
JUNE 03...	4.5	.55	.75	12	62	95	55	2.3	3900
JULY 01...	4.5	.42	1.0	18	75	45	15	2.1	23000
31...	2.4	.50	.85	14	49	45	56	2.2	93000
AUG. 26...	4.5	.52	.60	18	57	35	17	2.9	9300
SEPT. 23...	3.5	.46	.55	12	53	25	13	--	--

## APALACHICOLA RIVER BASIN

177

## 02338000 CHATTAHOOCHEE RIVER NEAR WHITESBURG, GA.--Continued

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CAC03	PH	DIS- SOLVED OXYGEN
FEB. 27...	1630	4690	11	18	6.5	12.4
APR. 09...	0845	5090	16	16	6.0	7.8
MAY 08...	1345	1330	18	21	6.3	7.6
JUNE 03...	1600	2460	23	18	6.3	8.1
JULY 01...	1315	1600	26	18	6.4	5.6
31...	1245	2780	22	12	6.4	6.4
AUG. 26...	1230	1970	24	11	6.4	6.3
SEPT. 23...	1645	1820	23	8	5.8	7.8

## 02339500 CHATTAHOOCHEE RIVER AT WEST POINT, GA.

LOCATION.--Lat 32°53', long 85°11', Troup County, at gaging station on right bank just downstream from Oseligee Creek at West Point, 1 mile upstream from bridge on U.S. Highway 29 and at mile 198.9.

DRAINAGE AREA.--3,550 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)	CHLO- RIDE (CL)
FEB. 22...	--	--	--	--	--	--	--	20	--	--	3.4
MAR. 14...	9.0	4.6	.07	2.5	.7	2.0	1.4	--	10	3.0	2.5
APR. 04...	--	--	--	--	--	--	--	18	--	--	4.4
06...	--	--	--	--	--	--	--	12	--	--	1.8
10...	11	1.2	.45	3.3	1.2	3.0	1.3	--	.30	2.0	5.0
18...	--	--	--	--	--	--	--	10	--	--	1.6
MAY 07...	10	1.0	.05	3.8	1.1	--	1.2	--	.10	4.0	7.0
17...	--	--	--	--	--	--	--	14	--	--	.8
JUNE 26...	--	--	--	--	--	--	--	22	--	--	4.0
JULY 01...	8.0	.75	.05	3.7	1.1	6.0	1.4	--	.10	4.0	3.0
AUG. 01...	9.0	2.0	.05	4.8	1.3	8.0	2.1	--	.30	2.0	4.2
07...	--	--	--	--	--	--	--	22	--	--	2.4
27...	10	4.1	.10	3.2	1.1	3.5	2.0	--	.15	2.0	2.8
SEPT. 11...	--	--	--	--	--	--	--	16	--	--	2.0
24...	7.5	.53	.05	3.3	.9	5.8	1.5	--	.10	2.0	4.0

DATE	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	ALKA- LITY AS CAC03	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 22...	--	--	15	0	16	61	7.3	--	--	--	--
MAR. 14...	.03	.11	12	--	--	35	--	380	125	1.2	1500
APR. 04...	--	--	16	1	15	63	7.4	--	--	--	--
06...	--	--	15	5	10	40	7.1	--	--	--	--
10...	.50	.25	20	--	--	46	--	140	40	1.2	24000
18...	--	--	12	4	8	49	6.6	--	--	--	--
MAY 07...	.53	.20	14	--	--	57	--	45	26	1.4	230000
17...	--	--	12	1	11	46	7.3	--	--	--	--
JUNE 26...	--	--	18	0	18	67	7.3	--	--	--	--
JULY 01...	.62	.50	18	--	--	55	--	45	17	.8	150
AUG. 01...	.80	1.0	14	--	--	75	--	83	68	--	930
07...	--	--	18	0	18	59	7.2	--	--	--	--
27...	.24	.38	16	--	--	45	--	220	125	3.0	4300
SEPT. 11...	--	--	12	0	13	50	7.3	--	--	--	--
24...	.34	.90	12	--	--	57	--	25	10	--	--

## APALACHICOLA RIVER BASIN

## 02339500 CHATTAHOOCHEE RIVER AT WEST POINT, GA.--Continued

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CAC03	PH	DIS- SOLVED OXYGEN
FEB.						
22...	1525	6380	8	--	--	--
MAR.						
14...	1030	25500	12	13	6.2	8.7
APR.						
04...	1600	4230	18	--	--	--
06...	--	--	14	--	--	--
10...	0900	6870	17	13	6.7	8.4
18...	0900	9080	18	--	--	--
MAY						
07...	1840	3840	18	15	6.3	--
17...	1400	9760	27	--	--	--
JUNE						
04...	1600	3390	25	16	6.2	--
26...	1470	3270	27	--	--	--
JULY						
01...	1745	2400	26	15	6.8	--
AUG.						
01...	0830	3780	27	20	6.1	7.5
07...	1045	3170	28	--	--	--
27...	0925	3140	23	11	6.3	8.3
SEPT.						
11...	1515	3040	23	--	--	--
24...	1015	2440	22	13	6.4	--

## 02341500 CHATTAHOOCHEE RIVER AT COLUMBUS, GA.

LOCATION.--Lat 32°27'45", long 84°59'45", Muscogee County, at gaging station on downstream side of center pier of Central of Georgia Railway bridge at Columbus, 0.5 mile downstream from Eagle and Phenix Dam, 1.2 miles downstream from City Mills Dam, 2.6 miles downstream from North Highlands Dam, 3.3 miles downstream from Oliver Dam, 17.5 miles downstream from Bartlett's Ferry Dam, and at mile 159.9.

DRAINAGE AREA.--4,670 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)	CHLO- RIDE (CL)
FEB.											
14...	9.3	.35	<10	3.5	1.0	5.0	1.6	--	.10	2.0	5.0
MAR.											
13...	8.5	2.8	.16	2.5	.7	3.0	1.8	--	.10	<2.0	3.5
APR.											
17...	9.5	1.1	.07	3.2	1.0	5.8	1.6	--	.10	<2.0	5.0
MAY											
01...	8.5	.40	.05	3.6	1.2	6.0	1.4	--	<10	<2.0	5.0
JUNE											
05...	9.8	.45	.06	3.7	1.5	8.0	1.8	--	.10	4.0	4.0
JULY											
10...	7.8	.50	.10	4.0	1.2	7.5	1.6	--	.10	2.0	4.0
22...	--	--	--	--	--	--	--	24	--	--	2.4
AUG.											
07...	8.3	.67	.10	4.0	1.2	10	1.8	--	.28	3.0	5.2
SEPT.											
03...	--	--	--	--	--	--	--	26	--	--	2.8
04...	7.0	.50	.10	3.6	1.1	6.7	1.8	--	<10	4.0	5.0
11...	--	--	--	--	--	--	--	22	--	--	2.4

DATE	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA, MG)	ALKA- LITY AS CAC03	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPH)
FEB.										
14...	.30	.30	16	--	58	--	45	21	1.4	23000
MAR.										
13...	.17	.18	14	--	46	--	140	130	2.0	91
APR.										
17...	.60	.35	14	--	50	--	70	30	.9	21000
MAY										
01...	.40	.30	14	--	60	--	30	10	1.3	110000
JUNE										
05...	.32	.25	16	--	66	--	30	35	2.4	2300
JULY										
10...	.36	.10	16	23	69	--	<10	19	1.2	23000
22...	--	--	14	20	63	6.2	--	--	--	--
AUG.										
07...	.30	.42	14	--	74	--	30	25	2.1	43000
SEPT.										
03...	--	--	14	21	69	7.4	--	--	--	--
04...	.41	.15	12	--	71	--	15	15	2.0	23000
11...	--	--	12	18	65	6.8	--	--	--	--



## APALACHICOLA RIVER BASIN

179

## 02341500 CHATTAHOOCHEE RIVER AT COLUMBUS, GA.--Continued

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	TIME	TEMP- ERATURE (DEG C)	ALKA- LINITY AS CaCO3	PH	DIS- SOLVED OXYGEN
FEB. 14...	1200	8	18	7.3	--
MAR. 13...	1345	13	15	7.3	11.6
APR. 17...	1330	18	18	--	--
MAY 01...	1330	19	21	7.6	--
JUNE 05...	1330	26	23	7.4	--
JULY 10...	1400	27	23	--	--
22...	1210	27	--	--	--
AUG. 07...	1430	29	21	7.6	--
SEPT. 03...	1130	26	--	--	--
04...	1415	26	20	7.2	8.6
11...	1200	22	--	--	--

## 02344000 CHATTAHOOCHEE RIVER AT ALAGA, ALA.

LOCATION.--Lat 31°07', long 85°03', Houston County, at gaging station on U.S. Highway 84, 0.5 mile downstream from Seaboard Coast Line Railroad bridge, 0.5 mile south of Alaga, and at mile 34.4.

DRAINAGE AREA.--8,340 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved by U.S. Geological Survey, Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB. 13...	9.0	.20	<.10	3.8	.8	4.0	1.5	.60	2.C
MAR. 12...	7.0	.56	<.05	4.1	.9	4.2	1.3	<.10	<2.0
APR. 16...	6.5	.75	.07	5.0	1.2	4.8	1.3	<.10	3.0
30...	8.0	.60	.07	6.0	1.5	6.5	1.2	.30	4.C
JUNE 04...	6.5	.45	.05	5.4	1.1	5.9	1.4	.20	4.C
JULY 09...	7.C	.50	.09	6.0	1.2	7.5	1.8	.20	4.C
AUG. 06...	7.8	.67	.12	6.1	1.2	9.2	1.8	.60	4.C
SEPT. 03...	7.5	.30	.11	5.8	1.2	8.0	1.8	<.10	5.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (PPA)
FEB. 13...	5.0	.50	.25	14	52	70	24	1.9	150
MAR. 12...	4.0	.34	.22	16	56	65	23	1.7	2300
APR. 16...	5.0	.20	.25	20	55	120	30	1.3	2300
30...	4.5	.36	.10	22	79	25	25	1.4	2300
JUNE 04...	3.5	.28	.10	18	66	30	17	1.2	150
JULY 09...	5.0	.18	.15	18	75	45	15	2.5	4300
AUG. 06...	5.5	.16	.30	20	91	55	17	2.1	290
SEPT. 03...	5.0	.09	.15	18	81	25	18	2.3	230

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINITY AS CaCO3	PH	DIS- SOLVED OXYGEN
FEB. 13...	1615	14100	8	--	7.1	--
MAR. 12...	1545	21800	13	18	7.3	--
APR. 16...	1600	13500	19	21	7.1	9.1
30...	1630	10800	20	23	7.1	--
JUNE 04...	1400	9290	25	25	7.0	--
JULY 09...	1600	3960	27	28	7.4	--
AUG. 06...	1600	7280	28	31	7.4	--
SEPT. 03...	1530	6280	27	25	7.4	--

## APALACHICOLA RIVER BASIN

02344500 FLINT RIVER NEAR GRIFFIN, GA.

LOCATION.--Lat 33°14', long 84°26', Spalding County, at gaging station at downstream side of bridge on State Highway 16, 1.5 miles downstream from Shoal Creek, 5.5 miles upstream from Line Creek, 10 miles west of Griffin, and at mile 304.4.

DRAINAGE AREA.--272 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB.									
27...	12	.89	.06	3.0	1.2	8.6	1.4	.35	3.C
APR.									
09...	9.0	2.0	.10	3.5	1.1	8.0	1.6	.20	2.C
MAY									
06...	14	1.8	.05	7.2	1.6	7.8	1.6	.10	<2.C
JUNE									
04...	15	1.9	.15	5.4	1.4	8.5	1.9	.10	<2.C
JULY									
01...	16	1.1	.08	5.8	1.6	15	2.4	.20	4.C
31...	16	1.3	.18	6.2	1.6	16	2.3	<10	7.C
AUG.									
26...	16	1.4	.42	6.4	1.6	13	3.1	<.10	8.C
SEPT.									
25...	16	1.4	.28	6.0	1.6	15	2.8	.20	6.0

DATE	CHLOR- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (PPA)
FEB.									
27...	8.0	.46	.58	12	78	45	30	2.4	<30
APR.									
09...	4.2	.22	.15	--	53	190	45	1.1	<30
MAY									
06...	8.0	.82	.40	18	81	95	30	.8	91
JUNE									
04...	5.0	.58	.55	20	82	95	34	.5	430
JULY									
01...	9.0	.80	.20	26	110	55	21	.9	36
31...	9.2	.78	.28	20	108	87	28	.8	430
AUG.									
26...	9.0	.70	.30	30	--	100	30	1.1	73
SEPT.									
25...	14	.70	.50	22	120	80	22	.3	--

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINITV AS CAC03	PH	DIS- SOLVED OXYGEN
FEB.						
27...	1630	207	8	23	6.6	11.5
APR.						
09...	1300	658	--	21	6.1	8.2
MAY						
06...	1500	220	18	28	7.8	8.6
JUNE						
04...	1530	234	22	20	6.5	8.9
JULY						
01...	1515	112	27	33	7.0	6.8
31...	1545	133	26	33	6.8	7.4
AUG.						
26...	1400	89	28	28	6.9	6.6
SEPT.						
25...	1440	81	23	28	6.5	--

02347500 FLINT RIVER NEAR CULLODEN, GA.

LOCATION.--Lat 32°43'17", long 84°13'57", Upson County, at gaging station on left bank at bridge on U.S. Highway 19, 4 miles upstream from Auchumpsee Creek, 5 miles downstream from Swift Creek, 13 miles southwest of Culloden, and at mile 238.4.

DRAINAGE AREA.--1,850 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SC4)
MAR.									
15...	5.5	5.2	.05	1.3	.4	1.5	2.2	<.10	2.0
APR.									
09...	8.5	2.5	.05	2.7	.8	3.6	1.5	<.10	<2.0
MAY									
07...	12	1.8	.05	3.4	1.1	7.0	1.2	.20	<2.0
JULY									
02...	13	.90	<.05	4.3	1.6	6.2	1.6	.20	2.0
31...	11	.86	<.05	3.9	1.3	9.5	1.7	.17	<2.0
AUG.									
27...	13	.90	<.05	3.9	1.5	9.7	2.4	<.10	2.0
SEPT.									
25...	13	.85	.10	3.9	1.4	9.3	2.2	.10	<2.0

## APALACHICOLA RIVER BASIN

181

02347500 FLINT RIVER NEAR CULLODEN, GA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO <sub>4</sub> )	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
MAR. 15...	1.5	.09	.08	10	25	440	240	1.8	2300
APR. 09...	3.5	.17	.10	10	40	320	80	1.0	150
MAY 07...	5.0	.24	.10	16	51	95	39	.2	93000
JULY 02...	3.0	.24	.10	18	70	60	15	.2	4300
31...	3.1	.14	.15	14	75	55	23	.8	43000
AUG. 27...	5.0	.19	.15	18	78	45	17	1.3	4300
SEPT. 25...	5.0	.16	.10	16	80	30	17	.7	15000

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINITY AS CAC03	PH	DIS- SOLVED OXYGEN
MAR. 15...	1415	29100	13		6.0	10.5
APR. 09...	1600	4960	18	13	6.3	--
MAY 07...	1330	1440	19	15	7.7	--
JULY 02...	0950	542	28	25	6.8	7.5
31...	1805	550	30	28	7.2	7.1
AUG. 27...	0700	435	25	31	6.9	8.1
SEPT. 25...	0820	490	20	28	6.3	9.0

02349500 FLINT RIVER AT MONTEZUMA, GA.

LOCATION.--Lat 32°17'53", long 84°02'38", Macon County, at gaging station near left bank downstream end of pier of bridge on State Highways 26 and 49, 1,000 ft upstream from Central of Georgia Railway bridge, 1,400 ft upstream from Seaboard Coast Line Railroad bridge, just upstream from Buck Creek, 1 mile west of Montezuma, and at mile 180.8.

DRAINAGE AREA.--2,900 sq mi, includes that of Buck Creek.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SC <sub>4</sub> )
FEB. 14...	11	.85	.10	1.2	.8	3.9	1.6	.50	<2.0
MAR. 13...	9.3	9.1	.05	2.2	.5	2.8	2.2	.10	<2.0
APR. 17...	11	1.3	.05	3.2	.9	4.5	1.7	.30	<2.0
MAY 01...	10	1.1	.05	3.3	1.1	4.8	1.4	.10	<2.0
JUNE 05...	12	1.3	.06	3.2	1.2	5.5	1.5	.10	<2.0
JULY 10...	11	1.6	.07	2.6	1.0	4.8	1.4	.25	2.0
AUG. 07...	10	1.1	.05	2.8	1.0	8.5	1.7	.10	<2.0
SEPT. 04...	9.8	1.1	.06	3.3	1.0	7.5	1.5	.10	2.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO <sub>4</sub> )	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
FEB. 14...	5.0	.15	.17	12	43	55	20	1.7	<30
MAR. 13...	3.5	.08	.40	14	37	700	300	2.4	210
APR. 17...	7.0	.30	.10	12	51	95	25	1.3	1500
MAY 01...	6.5	.32	.20	14	51	55	30	1.0	4300
JUNE 05...	3.5	.22	.20	12	53	55	70	.9	1200
JULY 10...	3.0	.36	.20	10	45	55	46	.2	2300
AUG. 07...	6.2	.17	.14	12	66	35	26	1.9	150
SEPT. 04...	5.0	.16	.15	12	67	45	17	1.4	73

## APALACHICOLA RIVER BASIN

02349500 FLINT RIVER AT MONTEZUMA, GA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CaCO3	PH
FEB.					
14...	1500	2680	8	--	7.2
MAR.					
13...	1630	6150	13	11	7.0
APR.					
17...	1630	3270	20	16	7.9
MAY					
01...	1630	3080	20	18	7.1
JUNE					
05...	1630	1870	27	20	7.2
JULY					
10...	1600	2260	27	15	6.9
AUG.					
07...	1700	1280	29	22	7.4
SEPT.					
04...	1700	875	26	22	7.4

02352500 FLINT RIVER AT ALBANY, GA.

LOCATION.--Lat 31°36', long 84°09', Dougherty County, at gaging station on right bank at downstream side of Georgia Northern Railway bridge in Albany and at mile 103.4.

DRAINAGE AREA.--5,310 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
FEB.									
14...	9.5	.60	<.10	4.2	.8	3.1	1.2	.50	<2.0
MAR.									
13...	7.7	.52	<.05	6.3	.8	6.0	.8	<.10	3.0
APR.									
17...	9.2	.90	.07	5.2	.9	3.7	1.2	.25	<2.0
MAY									
01...	8.0	.80	.05	6.2	1.1	7.0	1.0	<.10	<2.0
JUNE									
05...	10	.70	.06	4.9	1.0	3.9	1.2	.10	<2.0
JULY									
10...	10	.60	1.1	5.1	.9	4.2	1.1	<.10	<2.0
AUG.									
07...	10	.60	.06	7.2	1.0	4.8	1.1	<.10	<2.0
SEPT.									
04...	10	.50	.07	6.5	1.0	5.0	1.1	<.10	3.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA, MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (PPM)
FEB.									
14...	5.0	.15	.15	16	50	55	13	.9	91
MAR.									
13...	4.0	.12	.05	20	60	30	13	.7	36
APR.									
17...	6.0	.14	.10	16	51	45	15	--	36
MAY									
01...	5.5	.18	.10	16	54	55	15	.8	110
JUNE									
05...	3.0	.20	.10	14	53	30	20	.7	<30
JULY									
10...	3.0	.16	.10	16	54	10	12	.3	2300
AUG.									
07...	4.8	.15	.10	20	70	25	13	.8	930
SEPT.									
04...	3.5	.15	.10	22	61	30	11	1.0	36

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CaCO3	PH	DIS- SOLVED OXYGEN
FEB.						
14...	0830	2410	8	10	7.3	--
MAR.						
13...	1030	6370	12	25	7.6	11.0
APR.						
17...	0945	3930	20	20	7.0	9.0
MAY						
01...	0930	3620	21	21	7.1	8.8
JUNE						
05...	1030	3880	27	21	7.3	7.8
JULY						
10...	1000	4020	27	20	7.2	8.3
AUG.						
07...	1030	1710	29	24	7.1	--
SEPT.						
04...	1030	765	26	26	7.3	8.2

## 02353000 FLINT RIVER AT NEWTON, GA.

LOCATION.--Lat 31°18', long 84°20', Baker County, at gaging station on downstream side of bridge on State Highway 37 at Newton, 1 mile downstream from Cooleswahee Creek and at mile 72.4.

DRAINAGE AREA.--5,740 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SC4)
FEB.									
14...	9.3	.85	<.10	7.4	.8	3.1	1.0	.30	<2.0
MAR.									
13...	7.4	.64	<.05	10	.8	3.0	.8	.20	<2.0
APR.									
17...	10	.50	<.05	12	1.0	3.9	1.1	.20	<2.0
MAY									
01...	9.0	.70	<.05	9.8	1.0	4.0	1.0	<.10	<2.0
JUNE									
05...	10	.50	<.05	9.6	1.0	3.9	1.0	<.10	<2.0
JULY									
10...	10	.60	.60	7.0	.9	3.5	1.1	.15	<2.0
AUG.									
07...	9.1	.50	.05	16	.9	5.8	1.0	.20	2.0
SEPT.									
04...	8.5	.50	<.05	22	.9	5.0	.8	<.10	4.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO <sub>4</sub> )	HARD- NESS (CA, MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL DEMANO	FECAL COLI- FORM (MPN)
FEB.									
14...	5.0	.24	.20	28	73	55	10	.7	7500
MAR.									
13...	4.5	.20	.10	30	78	43	11	1.1	110
APR.									
17...	7.0	.55	.15	34	78	30	10	.6	4300
MAY									
01...	6.0	.34	.20	28	76	55	15	.9	9300
JUNE									
05...	3.5	.34	.20	26	72	30	25	--	930
JULY									
10...	4.0	.30	.10	20	64	10	11	.5	2300
AUG.									
07...	4.8	.69	.23	40	121	30	8.0	.7	2300
SEPT.									
04...	4.0	.32	.20	54	137	15	3.0	.4	36

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINITY AS CACO <sub>3</sub>	PH	DIS- SOLVED OXYGEN
FEB.						
14...	0800	5300	8	36	7.4	12.0
MAR.						
13...	0830	7080	13	30	7.4	9.8
APR.						
17...	0730	4650	20	36	7.4	7.8
MAY						
01...	0700	4750	21	33	7.3	7.7
JUNE						
05...	0745	3660	27	31	7.4	6.6
JULY						
10...	0800	4800	27	25	7.2	6.5
AUG.						
07...	0800	2360	28	46	7.4	6.0
SEPT.						
04...	0730	1360	25	58	7.7	7.9

## 02356000 FLINT RIVER AT BAINBRIDGE, GA.

LOCATION.--Lat 30°55', long 84°34', Decatur County, at auxiliary gage at gaging station on downstream end of right major pier of Decatur County Memorial Bridge on U.S. Highway 84 at Bainbridge, 0.2 mile downstream from Seaboard Coast Line Railroad bridge, at mile 29.0, and 29.2 miles upstream from Jim Woodruff Dam.

DRAINAGE AREA.--7,570 sq mi.

PERIOD OF RECORD.--Chemical analyses: February to September 1968.

REMARKS.--Field determination of water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SC4)
FEB.									
13...	9.0	.20	<.10	18	.7	4.0	1.3	.50	2.0
MAR.									
12...	7.5	.40	<.05	11	.8	3.5	.8	.10	<2.0
APR.									
16...	7.7	.55	.06	15	1.1	4.0	.9	.10	<2.0
30...	8.5	.70	<.05	16	1.3	4.0	.9	.40	<2.0
JUNE									
04...	9.5	.55	<.05	15	.8	4.7	1.0	.20	<2.0
JULY									
09...	9.0	.20	<.05	19	.9	4.2	1.0	.20	<2.0
AUG.									
06...	8.1	.40	.05	20	.9	7.2	1.0	.20	<2.0
SEPT.									
03...	9.3	.20	.05	24	1.0	6.2	1.0	.10	3.0

## APALACHICOLA RIVER BASIN

02356000 FLINT RIVER AT BAINBRIDGE, GA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, FEBRUARY TO SEPTEMBER 1968

	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO4)	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICROPHOS)	COLOR	TURBIDITY	BIOCHEMICAL OXYGEN DEMAND	FECAL COLIFORM (PPM)
FEB. 13...	6.0	.15	.17	44	118	40	10	2.6	430000
MAR. 12...	5.0	.28	.10	32	88	15	7.0	1.3	4300
APR. 16...	5.0	.30	.20	36	87	25	10	.7	390000
30...	4.5	.72	.30	50	95	60	15	1.1	230000
JUNE 04...	4.0	.09	.20	38	99	15	12	1.2	2400000
JULY 09...	4.6	.60	.80	44	125	30	6.0	1.6	930000
AUG. 06...	5.0	.80	.30	48	137	15	7.0	1.8	93000
SEPT. 03...	7.0	.40	.25	62	160	15	7.0	1.3	43000
	DATE	TIME	TEMPERATURE (DEG C)	ALKALINITY AS CaCO3	PH	DIS- SOLVED OXYGEN			
FEB. 13...	1730	11	56	7.6	10.7				
MAR. 12...	1730	15	36	7.5	--				
APR. 16...	1330	22	36	7.4	7.9				
30...	1430	22	41	7.4	8.4				
JUNE 04...	1700	27	44	8.0	7.2				
JULY 09...	1400	28	53	7.7	--				
AUG. 06...	1400	28	58	7.9	--				
SEPT. 03...	1730	26	66	7.8	8.3				

02358000 APALACHICOLA RIVER AT CHATTAHOOCHEE, FLA.

LOCATION.--Lat 30°42'03", long 84°51'33", Jackson County, at gaging station on downstream side of right main pier of bridge on U.S. Highway 90, 0.6 mile downstream from Jim Woodruff Dam, 0.6 mile upstream from Mosquito Creek, 1 mile west of Chattahoochee, Gadsden County, and 108 miles upstream from mouth.

DRAINAGE AREA.--17,200 sq mi, approximately (revised).

PERIOD OF RECORD.--Chemical analyses: November 1962 to September 1968.

Water temperatures: November 1962 to September 1968.

Period of record:

Specific conductance: Maximum daily, 220 micromhos Nov. 10, 1962; minimum daily, 41 micromhos Mar. 10, 12, 1966.

Water temperatures: Maximum, 32.0°C Aug. 8, 1963; minimum, 7.0°C Jan. 16, 1965, Jan. 30, Feb. 2, 4, 1966.

REMARKS.--No temperature data available Oct. 1 to Jan. 14, May to September.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DISSOLVED CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SiO2)	DISSOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	STRONTIUM (SR)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	SULFATE (SO4)	CHLORIDE (CL)
OCT. 13...	--	23	8.1	.06	8.4	1.1	--	4.7	1.2	37	3.6	3.5
NOV. 07...	--	17	8.8	.02	11	1.0	--	4.3	1.4	40	3.2	3.8
DEC. 14...	--	15	7.3	.01	5.6	1.0	--	5.3	1.6	25	4.0	3.0
JAN. 12...	35000	8	8.7	.07	5.0	1.0	--	4.0	1.4	22	4.0	3.0
FEB. 20...	15900	10	7.1	.08	9.5	1.0	--	4.3	1.0	36	3.6	3.2
MAR. 15...	45600	13	9.2	.18	4.4	.9	--	4.6	1.2	21	4.8	3.2
22...	36400	19	6.2	.02	5.6	1.1	--	4.9	1.2	26	5.6	3.5
APR. 06...	30000	19	5.5	.01	8.3	.9	--	4.2	1.2	30	4.0	2.8
JUNE 03...	14000	27	5.7	.01	9.8	1.1	.00	5.1	1.1	39	4.0	4.0
14...	11700	26	5.0	.08	7.1	1.2	.00	6.0	1.4	33	2.8	3.0
JULY 11...	11600	26	6.6	.00	13	1.3	--	5.5	1.2	54	4.0	3.5
25...	--	26	5.4	.01	9.8	1.2	--	5.3	1.3	42	4.8	3.5
AUG. 15...	10500	25	6.9	.06	9.5	1.3	--	6.6	1.5	44	.0	6.5
SEPT. 24...	8560	24	5.9	.01	16	1.3	--	6.1	1.3	60	5.6	4.5
27...	9230	27	6.1	.03	14	1.3	--	7.0	1.4	54	5.6	5.5

## 02358000 APALACHICOLA RIVER AT CHATTAHOOCHEE, FLA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUN OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPEC I- FIC CAND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATU- RATION
CATE												
EC3...	.1	.0	--	49	56	26	0	78	6.5	20	--	--
ACV...												
07...	.2	.4	--	54	53	32	0	88	6.6	10	--	--
DEC...												
14...	.1	.7	--	41	39	18	0	71	6.4	5	--	--
JAN...												
12...	.1	1.3	--	40	38	16	0	58	6.5	30	--	--
FEB...												
20...	.1	.5	--	48	43	28	0	78	7.0	10	--	--
MAR...												
15...	.2	.9	--	40	41	14	0	57	6.7	25	--	--
22...	.2	.4	--	42	38	18	0	68	6.4	20	--	--
APR...												
08...	.2	.1	--	42	40	24	0	73	6.2	5	--	--
JUNE...												
03...	.2	.1	.06	50	52	29	0	86	6.7	10	6.7	83
14...	.2	.2	--	43	51	22	0	80	6.5	0	--	--
JULY...												
11...	.2	.1	--	62	62	38	0	103	6.4	5	--	--
29...	.2	.0	.02	53	56	30	0	88	6.7	10	--	--
AUG...												
15...	.1	1.4	.01	56	60	29	0	94	6.6	10	--	--
SEPT...												
24...	.2	.6	.14	72	75	46	0	121	7.3	5	--	--
27...	.1	.1	--	68	68	40	0	114	6.9	10	--	--

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	JANUARY	FEBRUARY	MARCH	APRIL	DAY	JANUARY	FEBRUARY	MARCH	APRIL
1	--	62	95	72	17	57	78	70	73
2	--	62	69	65	18	54	75	76	78
3	--	61	82	70	19	56	73	68	76
4	--	61	68	76	20	57	76	67	76
5	--	67	77	76	21	55	63	67	76
6	--	76	83	76	22	59	63	67	75
7	--	66	74	77	23	57	80	67	74
8	--	70	71	71	24	59	88	65	75
9	--	70	80	78	25	57	88	65	76
10	--	96	83	76	26	59	88	67	76
11	--	66	82	75	27	57	88	65	75
12	--	61	75	76	28	60	88	68	78
13	--	63	69	70	29	62	83	68	75
14	--	63	61	75	30	61	--	67	76
15	58	66	57	74	31	61	--	67	--
16	55	78	70	73					

AVERAGE.....	--	72	71	74
--------------	----	----	----	----

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
JANUARY..	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	7	9	10	9	9	10	10	10	10	9	9	9	10	10	10	10	--	--
FEBRUARY.	11	11	11	11	11	11	11	11	9	9	9	9	8	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	--	--	9
MARCH....	10	10	10	10	10	10	11	12	13	13	13	15	13	12	13	14	15	15	16	16	16	15	13	14	15	14	16	14	17	17	13	--	--
APRIL....	17	18	18	18	19	19	20	21	21	21	22	22	22	23	23	23	24	24	25	25	24	23	23	23	23	22	22	22	22	22	--	--	21

PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT DISCHARGE AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968  
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET;  
S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

## APALACHICOLA RIVER BASIN

02359000 CHIPOLA RIVER NEAR ALTHA, FLA.

LOCATION.--Lat 30°32'02, long 85°09'55, Calhoun County, at gaging station on right bank on downstream side of bridge on State Highway 274, 0.9 mile downstream from Holliman Branch, 3.5 miles southwest of Altha, and 54 miles upstream from mouth.

DRAINAGE AREA.--781 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1962 to September 1968.

Water temperatures: October 1962 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 210 micromhos on several days during April and May; minimum daily, 130 micromhos Dec. 18.

Water temperatures: Maximum, 27.0°C June 10-12; minimum, 12.0°C Jan. 18, 20.

Period of record:

Specific conductance: Maximum daily, 258 micromhos June 1, 1966; minimum daily, 52 micromhos May 6, 1964.

Water temperatures: Maximum, 28.0°C July 16, 1964; minimum, 7.0°C Jan. 18, 1964.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SID2)	IRON (IFE)	CALCIUM (CA)	MAGNESIUM (MG)	STRONTIUM (SR)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	SULFATE (SO4)	CHLORIDE (CL)
CCT.												
26...	--	19	6.6	.00	34	4.7	--	2.7	.5	120	.4	5.0
DEC.												
07...	656	15	6.8	.00	31	4.1	--	3.6	.5	114	.4	6.0
JAN.												
24...	1100	10	6.0	.02	28	3.4	--	3.9	.4	97	.0	7.5
FEB.												
28...	955	14	3.5	.00	30	3.5	--	4.0	.4	105	1.2	7.0
APR.												
11...	720	22	6.2	.00	33	4.1	--	3.5	.6	117	.0	5.5
JUNE												
06...	541	25	9.0	.01	33	4.5	.00	2.8	.4	119	.0	5.5
AUG.												
01...	456	25	6.8	.01	33	5.1	--	2.4	.7	118	1.6	6.0
31...	--	24	--	--	--	--	--	--	--	--	--	--

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	DIS-SOLVED OXYGEN	PERCENT SATURATION
CCT.												
26...	.2	1.4	--	114	110	104	6	208	7.2	5	--	--
DEC.												
07...	.1	.4	--	109	110	94	0	206	7.0	10	--	--
JAN.												
24...	.1	.9	--	98	100	84	4	182	7.6	10	--	--
FEB.												
28...	.2	.9	--	103	107	90	4	192	7.4	10	--	--
APR.												
11...	.1	.8	--	112	115	100	4	205	6.8	0	--	--
JUNE												
06...	.1	1.1	.04	115	111	101	3	206	7.4	0	8.1	96
AUG.												
01...	.1	.3	--	114	113	104	7	195	7.0	0	--	--
31...	--	1.2	.14	--	--	--	--	181	--	--	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	--	200	200	--	189	170	180	200	185	198	180	--
2.....	206	190	200	135	170	--	190	200	--	180	195	--
3.....	202	200	--	135	170	--	190	203	191	180	170	175
4.....	200	190	185	149	--	190	190	195	195	--	--	190
5.....	200	--	180	140	170	170	199	--	195	180	170	190
6.....	192	142	180	159	175	170	190	205	197	180	180	190
7.....	197	142	199	--	180	190	--	210	200	--	180	170
8.....	--	158	--	150	178	190	195	203	--	180	180	--
9.....	200	162	--	149	180	190	200	205	--	198	191	170
10.....	194	168	--	152	170	--	200	204	202	180	170	190
11.....	200	--	180	160	--	199	200	--	200	180	--	190
12.....	200	--	140	149	170	170	210	--	195	175	189	190
13.....	200	180	150	150	180	150	--	200	200	--	189	190
14.....	200	182	155	--	185	150	--	202	203	--	189	--
15.....	--	185	155	150	190	150	205	209	200	189	189	--
16.....	192	188	130	150	180	150	205	210	--	179	180	190
17.....	192	190	--	150	190	--	200	200	201	190	180	190
18.....	198	190	131	150	--	150	200	196	--	190	--	190
19.....	195	--	140	160	180	170	200	--	196	180	180	180
20.....	200	192	150	155	190	180	199	205	200	190	180	180
21.....	200	190	159	--	190	180	199	209	202	--	180	180
22.....	--	190	175	160	--	180	201	210	--	175	180	--
23.....	202	--	170	175	180	170	210	210	--	170	180	180
24.....	200	192	--	175	180	--	210	210	202	180	195	180
25.....	198	192	--	170	--	190	210	--	197	180	--	180
26.....	207	--	--	162	180	180	--	--	196	205	199	180
27.....	200	198	--	175	190	180	--	210	196	180	179	180
28.....	209	198	130	--	--	180	--	210	197	--	175	180
29.....	--	200	130	175	170	190	190	207	193	190	179	--
30.....	--	200	130	180	--	--	185	--	--	198	--	190
31.....	200	--	--	180	--	--	--	193	--	198	181	--
AVERAGE	199	184	--	157	--	174	198	204	--	184	182	--



## APALACHICOLA RIVER BASIN

187

02359000 CHIPOLA RIVER NEAR ALTHA, FLA.--Continued  
 TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

## DAY

	DAY																																
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE	
OCTOBER..	--	22	23	22	23	23	--	--	23	29	23	24	--	23	23	22	22	21	--	22	23	23	22	22	24	--	--	22	22				
NOVEMBER.	21	21	19	--	--	--	19	19	17	--	--	--	19	17	16	--	18	--	19	19	19	--	19	19	--	19	19	19	--	--	22	22	
DECEMBER.	19	20	--	18	18	17	18	18	--	--	18	18	18	18	19	19	--	19	19	19	18	13	--	--	--	--	--	14	14	12	--	--	
JANUARY..	--	14	--	16	14	14	--	14	14	16	15	13	13	--	13	13	12	13	12	--	14	14	14	--	13	13	--	14	14	--	--		
FEBRUARY.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MARCH.....	13	--	--	14	14	14	15	16	17	--	17	18	18	18	19	--	19	19	19	19	19	--	18	18	18	19	19	--	--	--			
APRIL.....	24	21	22	23	22	22	--	23	23	23	23	--	--	23	23	23	23	23	24	23	24	23	24	23	23	--	--	--	--	--	--		
MAY.....	24	24	23	--	23	23	24	24	--	--	25	25	25	26	26	--	25	24	24	24	--	--	25	25	26	--	24	--	--	--	--		
JUNE.....	26	--	26	26	26	26	--	--	27	27	26	26	26	--	26	26	26	26	--	--	26	26	26	26	26	--	26	26	26	--	--		
JULY.....	26	26	26	--	25	24	--	24	24	24	24	--	--	24	24	24	--	24	24	--	--	26	26	26	26	26	26	--	26	26	--		
AUGUST....	26	25	24	--	24	24	24	25	--	25	25	25	25	--	26	25	26	26	26	26	--	26	26	26	26	26	--	26	26	25	25	--	
SEPTEMBER	--	--	25	26	26	26	25	--	25	25	25	24	--	--	25	24	24	24	24	--	--	24	24	24	24	24	--	24	--	--	--		

## CHOCTAWHATCHEE RIVER BASIN

02361000 CHOCTAWHATCHEE RIVER NEAR NEWTON, ALA.

LOCATION.--Lat 31°20'30", long 85°36'43", in SE $\frac{1}{4}$  sec.2, T.4 N., R.24 E., Dale County, at gaging station on left bank at downstream side on bridge on State Highway 123, 200 ft downstream from abandoned milldam, 1,500 ft upstream from Hurricane Creek, 0.8 mile north of Newton, and 1 mile downstream from Atlantic Coast Line Railroad bridge.

DRAINAGE AREA.--683 sq mi.

PERIOD OF RECORD.--Chemical analyses: March 1964 to September 1966.  
 Water temperatures: March 1964 to September 1968.

EXTREMES.--1967-68:

Water temperatures: Maximum, 36.0°C July 31; minimum, 2.0°C Jan. 16-18, Feb. 14.

Period of record:

Water temperatures: Maximum, 36.0°C July 31; minimum, freezing point Jan. 30, 31, 1966.

REMARKS.--Recorder stopped June 5 to July 4.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968  
 (CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

## DAY

		DAY																															AVER- AGE
MONTH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER																																	
MAXIMUM	19	21	21	22	23	23	24	22	22	21	19	18	19	19	21	22	21	18	17	16	16	16	18	20	19	17	15	15	14	15	18	19	
MINIMUM	13	13	15	16	16	14	18	19	21	18	17	16	15	15	16	18	18	16	13	11	11	12	14	17	17	13	12	12	10	13	15	14	
NOVEMBER																																	
MAXIMUM	18	16	15	14	13	11	8	8	8	8	10	12	12	13	13	12	11	12	11	9	8	12	13	16	17	18	19	17	13	14	--	12	
MINIMUM	16	15	13	13	10	8	6	6	6	5	5	7	8	9	11	11	8	7	9	8	6	7	8	12	13	16	16	17	13	11	11	--	10
DECEMBER																																	
MAXIMUM	14	13	13	11	9	10	11	12	14	16	16	16	14	13	15	15	15	17	19	19	18	14	9	7	6	6	8	8	8	9	12		
MINIMUM	11	11	11	8	6	8	9	11	12	14	16	16	14	12	11	13	15	13	15	17	18	18	14	9	6	5	4	4	6	7	6	7	10
JANUARY																																	
MAXIMUM	10	11	13	13	13	9	9	8	8	11	11	9	7	6	4	4	4	5	7	8	9	10	11	11	8	7	6	8	10	12	12	8	
MINIMUM	9	10	11	13	9	8	8	7	8	8	9	7	6	3	3	2	2	2	4	5	7	7	9	8	7	4	4	4	7	9	11	6	
FEBRUARY																																	
MAXIMUM	14	14	13	10	9	9	9	6	6	6	7	6	6	6	6	6	6	6	7	8	7	6	6	7	7	6	7	7	8	8	--	7	
MINIMUM	12	13	9	7	7	8	6	4	4	3	6	3	3	2	5	4	4	4	3	3	5	6	5	4	3	4	6	5	7	--	--	5	
MARCH																																	
MAXIMUM	7	8	10	9	9	11	11	12	13	17	17	18	17	13	12	13	16	16	18	19	19	14	11	11	12	14	16	18	19	21	21	14	
MINIMUM	4	4	7	6	6	9	7	8	8	13	16	17	13	10	11	12	13	12	13	14	16	14	11	8	7	9	12	14	16	17	18	11	
APRIL																																	
MAXIMUM	23	23	23	23	23	23	24	24	24	22	21	21	21	23	22	22	24	25	25	27	27	27	27	26	22	22	22	19	20	22	--	23	
MINIMUM	21	20	20	21	23	19	19	21	21	21	18	16	16	18	19	17	18	19	21	22	22	22	22	23	20	16	17	18	17	19	18	--	19
MAY																																	
MAXIMUM	23	24	25	24	24	23	24	26	26	26	27	27	30	31	31	33	31	31	29	27	26	27	28	31	29	26	26	26	26	27	28	27	22
MINIMUM	18	19	20	21	20	18	18	21	21	21	23	24	26	27	28	28	26	24	23	21	20	21	23	24	24	24	23	23	22	22	24	22	24
JUNE																																	
MAXIMUM	29	30	31	32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	25	26	26	27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JULY																																	
MAXIMUM	--	--	--	--	--	28	28	28	28	27	26	27	27	27	28	31	31	31	31	28	31	32	32	32	31	32	33	34	34	34	36	36	30
MINIMUM	--	--	--	--	--	24	25	24	24	24	24	24	25	24	24	25	26	26	26	24	25	26	26	26	25	26	26	27	27	26	26	27	25
AUGUST																																	
MAXIMUM	33	33	33	34	33	30	33	33	32	34	32	29	27	26	29	31	33	33	32	33	33	31	33	32	33	31	32	29	32	27	27	31	25
MINIMUM	27	25	26	26	27	25	26	26	26	26	27	26	25	24	23	25	26	26	27	27	27	27	26	27	26	26	26	25	25	22	22	22	31
SEPTEMBER																																	
MAXIMUM	28	28	28	31	31	31	31	30	31	31	28	27	31	32	31	32	31	23	26	27	28	28	28	27	27	27	26	26	26	26	26	--	28
MINIMUM	22	21	21	22	23	24	23	21	21	18	17	14	14	17	20	21	21	22	24	24	24	22	20	18	20	20	18	20	18	21	19	--	20

## CHOCTAWHATCHEE RIVER BASIN

02365500 CHOCTAWHATCHEE RIVER AT CARYVILLE, FLA.

LOCATION.--Lat 30°46'32", long 85°49'40", at gaging station in Holmes County, near right bank on downstream side of bridge on U.S. Highway 90, 300 ft downstream from Louisville and Nashville Railroad bridge, 0.8 mile west of Caryville, Washington County, 1.8 miles downstream from Wrights Creek, and 64 miles upstream from mouth.

DRAINAGE AREA.--3,499 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1962 to September 1968.

Water temperatures: October 1962 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum daily, 129 micromhos July 4; minimum daily, 32 micromhos Dec. 11.

Water temperatures: Maximum, 28.0°C on many days during June, July and August; minimum, 7.0°C Jan. 18.

Period of record:

Specific conductance: Maximum daily, 266 micromhos Apr. 14, 1963; minimum daily, 22 micromhos Dec. 1, 1962.

Water temperatures: Maximum, 32.0°C June 11, 1963; minimum, 4.0°C Jan. 31, Feb. 1, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE CCT.	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POT- AS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
23....	--	19	9.1	.04	15	1.6	--	3.4	.9	52	.4	10
DEC.												
C5....	4110	10	7.8	.04	7.9	1.1	--	3.0	1.0	28	.4	4.0
JAN.												
22....	4580	11	7.5	.09	7.4	1.0	--	2.6	.6	26	.0	4.0
FEB.												
26....	3980	8	6.4	.15	8.3	1.0	--	2.7	.5	28	.8	4.2
APR.												
C8....	2800	22	7.1	.17	11	1.3	--	2.8	.7	40	.0	3.5
JUNE												
C4....	1930	27	7.7	.02	12	1.3	.00	3.0	.8	46	.0	4.5
JULY												
25....	1050	26	7.3	.01	16	1.8	--	3.4	.9	58	2.0	4.0
31....	--	27	--	--	--	--	--	--	--	--	--	--
AUG.												
31....	--	24	--	--	--	--	--	--	--	--	--	--
SEPT.												
3C....	--	--	--	--	--	--	--	--	--	--	--	--

DATE OCT.	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (S04) CONSTI- TUENTS	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
2....	.1	.8	--	67	65	44	1	105	6.8	10	--	--
DEC.												
C5....	.0	.4	--	40	47	24	1	69	6.3	20	--	--
JAN.												
22....	.1	.9	--	37	35	22	1	62	6.7	20	--	--
FEB.												
26....	.2	.5	--	39	44	24	1	62	6.7	40	--	--
APR.												
C8....	.1	.3	--	47	48	33	0	82	5.9	10	--	--
JUNE												
C4....	.1	.7	.02	53	52	36	0	87	6.7	5	6.2	76
JULY												
25....	.1	.8	--	65	66	48	0	111	6.8	5	--	--
31....	--	--	.05	--	--	--	--	115	--	--	--	--
AUG.												
31....	--	.7	.10	--	--	--	--	95	--	--	--	--
SEPT.												
30....	--	--	.07	--	--	--	--	117	--	--	--	--

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	117	59	81	43	62	67	66	62	76	122	117	108
2.....	119	41	82	44	63	62	66	61	80	122	117	115
3.....	116	37	82	42	59	61	64	68	88	125	115	115
4.....	117	37	76	42	62	64	65	76	88	129	114	118
5.....	117	38	64	42	57	66	65	84	92	122	111	119
6.....	117	39	55	42	59	66	67	86	95	105	110	121
7.....	110	45	59	42	65	69	70	86	102	100	116	121
8.....	123	49	65	46	67	70	70	90	107	89	109	117
9.....	109	56	65	42	63	72	70	83	109	94	105	116
10.....	55	58	60	48	65	72	71	97	110	100	103	118
11.....	55	63	32	43	66	63	71	100	122	102	100	124
12.....	67	66	36	35	69	52	71	103	116	97	101	123
13.....	66	69	35	38	69	49	76	102	120	93	104	124
14.....	76	74	35	38	71	43	74	100	119	89	105	126
15.....	85	72	35	41	66	40	75	102	119	86	130	124
16.....	89	76	37	47	66	40	74	102	121	88	87	126
17.....	94	90	49	45	69	40	74	104	123	82	80	122
18.....	99	81	48	48	61	41	67	105	125	90	76	123
19.....	99	83	50	50	63	45	74	105	122	93	89	108
20.....	100	83	53	56	54	51	75	100	106	65	93	95
21.....	101	87	56	55	57	56	76	97	102	84	93	83
22.....	104	84	59	53	57	64	82	96	104	85	97	75
23.....	104	83	64	53	61	65	82	97	103	64	86	83
24.....	104	83	63	55	62	63	82	98	103	91	80	92
25.....	107	81	63	55	57	57	81	108	98	90	94	101
26.....	105	80	67	53	58	58	83	104	103	93	97	106
27.....	97	80	67	52	59	62	85	94	110	98	94	109
28.....	94	82	66	55	64	66	72	72	102	103	90	113
29.....	84	77	64	60	65	67	72	61	118	107	93	115
30.....	98	87	45	56	--	72	60	62	119	112	87	117
31.....	95	--	41	62	--	72	--	65	--	115	95	--
AVERAGE	97	68	56	47	62	59	72	89	107	98	96	111

## CHOCTAWHATCHEE RIVER BASIN

189

02365500 CHOCTAWHATCHEE RIVER AT CARYVILLE, FLA.--Continued  
TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

## DAY

	DAY																															AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE
OCTOBER..	18	21	20	19	20	21	22	22	20	19	20	18	18	18	19	21	19	17	16	16	17	18	17	17	18	17	16	15	16	18	18	14
NOVEMBER..	17	16	15	15	14	13	12	11	12	11	11	13	13	14	14	13	13	14	13	12	12	14	14	17	17	18	19	18	16	15	--	14
DECEMBER..	16	16	17	16	13	13	13	14	16	16	19	16	17	16	18	19	16	20	18	19	19	19	18	15	12	12	12	12	10	9	13	15
JANUARY..	13	11	13	16	13	12	14	10	10	12	11	12	10	10	9	11	10	7	8	11	9	11	11	12	12	11	10	9	11	12	12	11
FEBRUARY..	13	15	16	14	13	13	11	10	10	11	10	11	9	9	10	11	11	9	12	9	10	9	10	9	11	10	11	10	11	--	--	10
MARCH.....	11	10	11	11	13	12	12	12	13	16	17	19	15	15	13	16	14	15	15	16	18	17	16	14	13	13	14	16	17	17	18	14
APRIL.....	20	20	21	21	22	21	21	21	21	22	21	19	20	20	21	19	21	21	22	23	24	24	26	24	20	21	21	--	22	20	--	21
MAY.....	20	21	21	22	22	20	20	22	22	22	23	24	24	25	26	25	26	26	26	25	25	25	25	25	25	25	26	26	25	25	23	23
JUNE.....	26	27	27	27	27	27	27	27	27	27	27	28	28	28	28	28	28	28	28	28	28	28	28	27	27	27	27	28	28	--	27	27
JULY.....	28	28	28	28	28	27	27	27	28	28	27	27	27	27	27	27	--	26	26	26	26	26	27	27	28	27	28	27	28	27	27	27
AUGUST....	28	28	27	26	26	--	26	27	27	28	27	27	26	25	26	27	27	26	27	27	27	27	27	27	26	25	24	24	24	24	24	24
SEPTEMBER	24	24	25	24	26	26	25	25	25	25	24	23	24	24	24	24	24	24	25	25	25	24	23	23	23	24	24	23	23	23	--	24

## YELLOW RIVER BASIN

## 02368000 YELLOW RIVER AT MILLIGAN, FLA.

LOCATION.--Lat 30°45'10", long 86°37'45", at gaging station near right bank on upstream side of old bridge on U.S. Highway 90, 0.5 mile east of Milligan, Okaloosa County, 0.5 mile upstream from Trammel Creek, 6.8 miles upstream from Shoal River, and 40 miles upstream from mouth.

DRAINAGE AREA.--624 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1962 to September 1968.

Water temperatures: October 1962 to September 1968.

## EXTREMES.--1967-68:

Specific conductance: Maximum daily, 96 micromhos Feb. 8; minimum daily, 24 micromhos Feb. 6.

Water temperatures: Maximum, 30.0°C on several days during June, July and August; minimum, 7.0°C Dec. 25, 26, Feb. 10.

## Period of record:

Specific conductance: Maximum daily, 96 micromhos Feb. 8, 1968; minimum daily, 13 micromhos Apr. 28, 1964.

Water temperatures: Maximum, 30.0°C on several days during June, July and August, 1968; minimum, 3.0°C Dec. 14, 1962.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	TEMP- ERATURE (DEG C)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CA- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
DEC.	2330	14	6.1	.14	2.5	.7	--	2.0	.6	6	.8	4.0
JAN.	769	11	6.9	.11	6.1	1.2	--	2.2	.3	24	.0	3.8
APR.	32	21	5.7	.10	17	2.1	.34	2.4	.4	70	.0	3.5
MAY	830	15	6.5	.19	5.5	1.0	--	2.1	.5	18	.0	3.0
JUNE	193	26	5.3	.07	12	2.2	--	2.6	.4	48	.0	2.8
JULY	--	21	--	--	--	--	--	--	--	--	--	--
AUG.	211	25	5.6	.02	9.2	1.7	--	2.5	.5	38	.8	3.5
SEPT.	--	20	--	--	--	--	--	--	--	--	--	--
30...	--	18	--	--	--	--	--	--	--	--	--	--
DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTIT- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)	PH	COLOR	DIS- SOLVED OXYGEN	PER- CENT SATUR- ATION
DEC.	.0	.1	--	20	60	9	4	33	5.7	80	--	--
JAN.	.1	.4	--	33	33	20	0	54	6.6	25	--	--
APR.	.1	1.0	.05	67	68	52	0	110	7.0	15	6.7	74
MAY	.2	.7	--	29	34	18	2	48	6.0	10	--	--
JUNE	.1	.1	--	50	53	39	0	92	6.0	5	--	--
JULY	--	.3	.04	--	--	--	--	82	--	--	--	--
AUG.	.1	.0	--	43	46	30	0	74	6.7	10	--	--
SEPT.	--	.7	.05	--	--	--	--	69	--	--	--	--
30...	--	--	.02	--	--	--	--	62	--	--	--	--

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

## DAY

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER..	21	19	20	19	16	18	19	20	22	21	22	21	23	23	22	22	22	22	21	21	17	16	16	15	15	18	16	15	15	18	19	19
NOVEMBER..	18	17	17	16	13	16	11	17	13	17	16	17	15	15	14	14	15	16	18	17	18	17	18	18	19	20	17	17	17	--	14	
DECEMBER..	16	17	14	14	17	18	13	16	17	16	18	20	20	16	--	--	--	--	--	--	--	--	--	18	16	10	7	7	9	11	9	10
JANUARY..	12	12	13	13	11	11	12	11	13	14	12	10	10	8	8	8	8	9	11	11	12	11	12	10	10	10	10	10	14	15	11	
FEBRUARY..	15	16	15	15	13	14	12	10	9	7	8	8	8	9	8	8	9	10	12	8	9	10	10	10	10	10	10	10	--	--	10	
MARCH.....	10	10	10	11	12	12	14	14	15	15	14	14	14	14	15	15	15	21	21	20	18	11	12	12	19	19	20	21	21	22	15	
APRIL.....	22	20	18	21	20	18	21	20	21	21	18	20	21	21	19	20	20	21	20	21	19	21	22	22	21	18	18	20	18	--	20	
MAY.....	21	20	19	21	18	20	19	21	20	19	21	19	20	21	24	26	21	21	21	19	21	18	21	21	19	20	18	21	21	20	21	20
JUNE.....	21	23	24	25	24	21	24	20	26	26	24	26	21	23	21	20	24	26	21	24	26	21	24	21	19	21	21	24	21	28	30	23
JULY.....	30	21	18	18	18	28	21	18	17	21	20	18	19	28	21	18	28	21	18	21	20	21	21	30	20	21	28	30	20	21	22	22
AUGUST....	19	21	18	20	20	21	21	21	20	18	18	30	25	21	20	30	25	21	25	21	20	18	21	21	20	18	21	21	18	20	20	20
SEPTEMBER	20	20	20	21	21	20	19	21	21	20	18	18	20	21	17	18	18	21	18	18	20	18	21	18	20	20	18	21	18	--	19	19



ESCAMBIA RIVER BASIN

191

02371500 CONECUH RIVER AT BRANTLEY, ALA.

LOCATION.--Lat 31°34', long 86°15', in SE $\frac{1}{4}$  sec.16 T.7 N., R.18 E., Crenshaw County, at gaging station on left bank at downstream side of bridge on U.S. Highway 331 and State Highway 52, 0.5 mile downstream from Moody Mill Creek, and 0.8 mile southeast of Brantley.

DRAINAGE AREA.--492 sq mi.

PERIOD OF RECORD.--Chemical analyses: March 1964 to September 1968.  
Water temperatures: March 1964 to September 1968.

EXTREMES.--1967-68:

Dissolved solids: Maximum, 99 mg/l Sept. 1-30; minimum, 32 mg/l Dec. 10-20.  
Hardness: Maximum, 80 mg/l June 11-20, 1968; minimum, 15 mg/l Dec. 10-20.  
Specific conductance: Maximum daily, 206 micromhos Sept. 13; minimum daily, 40 micromhos Dec. 11.  
Water temperatures: Maximum, 29.0°C Aug. 24; minimum, 5.0°C Jan. 16-19.

Period of record:

Dissolved solids: Maximum, 99 mg/l Sept. 1-30, 1968; minimum, 19 mg/l Mar. 1-10, 1966.  
Hardness: Maximum, 80 mg/l June 11-20, 1968; minimum, 9 mg/l Mar. 1-10, 1966.  
Specific conductance: Maximum daily, 206 micromhos Sept. 13, 1968; minimum daily, 25 micromhos Mar. 5, 1966.  
Water temperatures: Maximum, 29.0°C June 20, 21, 1964, Aug. 24, 1968; minimum, 2.0°C Jan. 31, Feb. 1, 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SI02)	TOTAL IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	CAR- BONATE (C03)	SULFAT (S04)	CHLO- RIDE (CL)
OCT.											
01-10	59	10	.03	24	1.0	2.8	1.3	77	0	.6	4.0
11-16	86	8.6	.13	16	1.2	2.8	1.5	52	0	1.8	4.5
17-27	61	8.9	.09	22	5.0	2.9	1.4	70	0	.8	4.2
28...	67	--	--	--	--	--	--	69	0	1.2	4.5
29-30	68	--	--	--	--	--	--	66	0	1.0	4.2
31...	223	--	--	--	--	--	--	32	0	1.6	3.8
NOV.											
01-10	563	7.8	.14	8.4	.3	4.4	1.1	25	0	5.4	4.9
11-20	160	8.9	.06	14	.0	2.5	.9	42	0	1.0	5.2
21-30	155	8.8	.07	13	.6	3.5	.7	44	0	1.6	4.7
DEC.											
01-09	254	8.0	.25	10	.2	4.4	.8	33	0	.8	5.1
10-20	1070	6.1	.30	5.3	.4	2.8	1.1	19	0	3.2	3.8
21-31	619	7.9	.34	8.6	.4	4.5	.7	26	0	4.4	5.2
JAN.											
01-10	932	7.1	.35	6.8	.0	4.2	.6	20	0	4.0	5.8
11-20	675	7.4	.30	7.7	.7	4.5	.6	22	0	4.6	5.2
21-31	511	7.0	.36	9.4	.1	4.5	.5	25	0	4.2	5.9
FEB.											
01-10	366	7.9	.21	8.9	1.4	2.9	.6	29	0	3.2	6.3
11-20	327	7.5	.39	9.6	1.0	2.9	.5	32	0	1.4	5.6
21-29	323	8.1	.39	9.0	.9	4.0	.4	30	0	3.8	5.9
APR.											
01-15	298	7.8	.33	11	1.1	2.6	2.5	40	0	2.4	2.9
16-21	298	7.2	.45	11	.6	3.2	2.4	38	0	2.6	3.8
22-30	215	7.6	.50	13	1.1	4.4	2.6	46	0	4.0	3.3
MAY											
01-10	162	8.7	.22	14	1.2	3.3	1.2	52	0	.8	3.8
11-20	103	9.0	.11	19	.6	3.0	1.2	63	0	2.0	3.3
21-31	210	7.8	.32	10	1.2	2.7	1.3	34	0	2.8	2.4
JUNE											
01-05	112	8.9	.06	15	.6	2.2	.3	50	0	2.8	2.7
06-10	61	7.1	.02	22	1.2	3.3	.2	74	0	4.2	3.0
11-20	44	10	.00	30	1.2	2.2	.3	96	0	2.2	3.0
21-30	56	10	.00	24	1.2	2.2	.4	78	0	2.4	3.1
JULY											
01-13	60	9.7	.00	22	.7	2.0	.3	70	0	2.2	2.8
14-19	72	9.3	.01	20	.5	1.9	.3	64	0	2.0	2.4
20-26	77	9.9	.04	18	.7	2.7	.3	58	0	3.0	3.3
27-31	55	8.1	.02	23	1.1	2.4	.3	76	0	2.4	3.1
AUG.											
01-03	67	9.7	.00	21	.9	3.1	.6	67	0	1.6	3.2
04-10	107	8.5	.10	13	.6	2.7	.6	39	0	3.4	2.2
11-20	53	9.9	.00	24	1.7	2.9	.5	78	0	1.6	3.0
21-31	48	10	.00	25	.6	3.2	.4	80	0	2.8	2.8
SEPT.											
01-30	37	9.9	.00	29	1.6	3.2	.6	95	0	2.8	3.8
WTD. AVG.											
TIME	--	7.6	.27	10	.6	3.6	.9	33	0	3.3	4.5
WTD. AVG.											
TONS	249	8.6	.16	16	1.0	3.2	.9	53	0	2.6	4.0
PER DAY											
	--	5.2	.18	6.9	.4	2.4	.6	22	0	2.2	3.0

## ESCAMBIA RIVER BASIN

02371500 CONE CREEK RIVER AT BRANTLEY, ALA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (TONS PER DAY)	DIS- SOLVED SOLIDS (TONS PER -AG-FT)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	
OCT.												
01-10	.0	.1	82	13.1	.11	64	1	.2	143	7.0	5	
11-16	.0	.1	63	14.6	.09	45	2	.2	104	7.0	20	
17-27	.0	.1	79	13.0	.11	57	0	.1	130	7.1	10	
28--	--	--	--	--	--	58	1	.2	132	6.8	--	
29-30	--	--	--	--	--	58	4	--	126	6.7	--	
31...	--	--	--	--	--	30	4	--	70	6.6	--	
NOV.												
01-10	.2	.6	45	68.4	.06	22	1	.4	63	6.9	40	
11-20	.0	.4	54	23.3	.07	35	1	.2	89	7.2	20	
21-30	.0	.2	56	23.4	.08	35	0	.3	89	7.4	15	
DEC.												
01-09	.0	.3	46	31.5	.06	26	0	.4	73	7.0	30	
10-20	.0	.5	32	92.4	.04	15	0	.3	45	6.8	40	
21-31	.0	.5	46	76.9	.06	23	2	.4	64	6.8	60	
JAN.												
01-10	.0	.4	38	95.6	.05	17	1	.4	56	6.7	50	
11-20	.0	.7	43	78.4	.06	22	4	.4	61	6.8	50	
21-31	.0	.2	44	60.7	.06	24	3	.4	64	6.8	50	
FEB.												
01-10	.0	.3	46	45.5	.06	28	4	.2	71	6.7	30	
11-20	.0	.5	45	39.7	.06	28	2	.2	78	6.6	40	
21-29	.0	.4	48	41.9	.07	26	1	.3	71	6.8	30	
APR.												
01-15	.1	.7	51	41.0	.07	32	0	.2	87	7.3	50	
16-21	.1	.7	52	36.2	.07	30	0	.3	89	7.2	80	
22-30	.1	.8	60	34.8	.08	37	0	.3	100	7.5	80	
MAY												
01-10	.1	1.0	60	26.2	.08	40	0	.2	104	7.6	40	
11-20	.0	.9	70	19.5	.10	50	0	.2	123	7.5	30	
21-31	.1	.9	47	26.6	.06	30	2	.2	77	7.4	80	
JUNE												
01-05	.1	.7	58	17.5	.08	40	0	.2	100	7.5	30	
06-10	.1	.5	77	12.7	.10	60	0	.2	142	7.4	20	
11-20	.1	.6	97	11.5	.13	80	1	.1	172	7.6	20	
21-30	.1	.7	82	12.4	.11	65	1	.1	144	7.9	20	
JULY												
01-13	.1	.7	74	12.0	.10	58	1	.1	133	7.6	20	
14-19	.1	.7	69	13.4	.09	52	0	.1	120	7.6	20	
20-26	.1	1.3	68	14.1	.09	48	0	.2	114	7.5	30	
27-31	.1	1.4	79	11.7	.11	62	0	.1	141	7.9	20	
AUG.												
01-03	.1	.8	74	13.4	.10	56	1	.2	124	7.5	--	
04-10	.1	1.0	51	14.7	.07	35	3	.2	83	7.4	40	
11-20	.1	1.3	83	11.9	.11	67	3	.2	145	7.3	10	
21-31	.1	1.2	85	11.0	.12	65	0	.2	147	7.0	10	
SEPT.												
01-20	.1	.8	99	9.89	.13	79	1	.2	171	7.3	10	
WTD. AVG. TIME	.0	.5	48	--	--	28	1	--	74	7.0	--	
WTD. AVG. TONS PER DAY	.1	.6	63	--	--	44	1	.2	106	7.2	--	
	.0	.4	--	--	--	--	--	--	--	--	--	
SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968												
DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	--	--	--	55	--	--	--	80	79	--	137	174
2.....	--	--	90	54	--	--	--	81	89	--	119	177
3.....	--	--	80	52	--	--	--	84	101	--	123	182
4.....	--	--	80	51	--	--	--	90	109	--	68	185
5.....	142	--	58	52	68	--	--	96	117	159	68	189
6.....	142	49	63	52	68	--	--	103	122	147	85	192
7.....	147	54	65	51	71	--	--	108	130	120	85	196
8.....	141	61	69	54	73	--	76	110	137	120	94	199
9.....	142	69	73	56	76	--	76	115	150	125	87	200
10.....	147	76	41	56	78	--	80	119	151	138	92	199
11.....	117	80	40	57	80	--	84	120	156	149	122	203
12.....	81	83	42	56	80	--	88	125	158	135	--	205
13.....	80	85	41	55	79	--	89	126	164	135	134	206
14.....	87	87	41	58	79	--	84	128	170	112	141	203
15.....	119	89	43	58	77	--	84	123	174	111	145	204
16.....	119	91	43	60	76	--	83	122	173	118	154	200
17.....	125	91	--	63	69	--	83	123	177	127	150	194
18.....	129	92	47	66	69	--	82	130	179	134	155	128
19.....	132	92	53	68	66	--	82	129	180	145	154	163
20.....	134	93	58	68	66	--	83	119	176	121	155	167
21.....	134	94	62	68	67	--	82	55	144	105	153	147
22.....	131	94	63	70	74	--	96	60	168	105	148	127
23.....	131	94	69	70	60	--	100	61	167	125	148	126
24.....	131	95	63	58	73	--	100	72	140	124	137	127
25.....	126	92	63	58	74	--	106	84	129	116	136	135
26.....	127	92	62	58	72	--	99	95	129	116	142	146
27.....	130	87	66	58	73	--	91	96	133	133	138	155
28.....	168	77	62	61	74	--	78	93	142	147	117	163
29.....	50	80	56	65	75	--	87	81	149	148	147	175
30.....	60	84	57	69	--	--	81	71	149	158	157	175
31.....	70	--	57	72	--	--	--	72	--	144	157	--
AVERAGE	120	81	59	59	73	--	--	99	144	130	128	174

02371500 CONECUH RIVER AT BRANTLEY, ALA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968  
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)  
DAY

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE
OCTOBER																																
MAXIMUM	14	14	14	15	16	16	16	16	16	15	14	14	14	15	16	16	15	14	12	12	13	13	15	16	14	12	13	12	13	14	14	
MINIMUM	12	12	12	13	13	14	15	16	13	14	13	12	13	14	14	15	14	12	11	11	12	12	13	14	12	11	12	11	12	13	12	12
NOVEMBER																																
MAXIMUM	14	13	13	12	12	11	10	9	9	9	10	11	12	12	12	11	12	11	10	11	12	13	14	15	15	16	15	13	13	--	12	
MINIMUM	13	12	12	12	11	10	9	8	8	8	9	10	11	11	12	11	10	11	10	9	9	11	12	13	14	14	15	13	12	12	--	11
DECEMBER																																
MAXIMUM	13	13	13	12	11	10	11	12	12	14	15	15	13	13	14	14	14	15	16	16	16	16	15	12	10	9	8	8	8	7	7	12
MINIMUM	12	12	12	11	9	9	10	11	12	12	14	13	12	13	13	14	13	14	15	16	16	15	12	10	9	8	8	8	7	7	7	11
JANUARY																																
MAXIMUM	8	8	9	10	10	9	9	8	7	8	9	8	8	7	6	6	5	5	6	6	7	8	9	9	8	7	7	7	8	9	11	7
MINIMUM	7	8	8	9	8	8	7	7	7	8	8	7	6	6	5	5	5	6	6	7	8	9	8	7	7	7	7	7	8	9	11	7
FEBRUARY																																
MAXIMUM	12	13	12	12	11	11	10	9	8	8	8	8	8	7	7	7	7	7	7	7	8	8	8	8	8	8	9	9	9	--	--	8
MINIMUM	11	12	11	11	11	10	9	8	8	8	8	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	9	9	9	--	--	8
MARCH																																
MAXIMUM	9	8	9	9	9	10	11	11	13	14	15	17	17	14	13	13	14	14	16	17	17	14	12	12	12	12	13	14	16	17	18	13
MINIMUM	8	8	8	8	8	9	9	10	11	13	14	15	14	13	13	13	13	14	14	16	14	12	12	11	11	11	12	13	14	16	17	12
APRIL																																
MAXIMUM	19	19	20	20	19	19	19	19	19	19	19	19	18	18	18	19	19	20	21	22	22	22	22	22	22	22	22	22	22	22	22	22
MINIMUM	18	18	18	19	19	18	18	18	19	19	18	17	17	18	18	17	17	18	19	19	20	20	21	21	19	17	17	18	18	18	--	16
MAY																																
MAXIMUM	19	19	19	19	19	19	18	19	19	19	21	22	22	23	24	26	25	24	24	23	21	20	21	22	22	22	22	22	21	21	21	21
MINIMUM	18	18	17	18	18	17	17	18	18	18	19	20	21	22	22	23	22	22	22	21	19	19	18	19	21	21	21	21	21	21	21	19
JUNE																																
MAXIMUM	23	24	24	25	25	24	25	25	26	26	26	27	27	27	27	28	27	27	26	26	24	26	26	26	26	26	26	26	26	26	26	25
MINIMUM	21	22	22	23	23	22	22	22	23	23	24	24	24	23	22	22	21	22	24	24	23	23	24	24	25	25	25	25	25	25	25	22
JULY																																
MAXIMUM	27	27	26	25	25	24	25	24	23	24	24	24	24	25	26	26	27	26	25	26	27	26	26	26	27	27	27	28	27	27	27	25
MINIMUM	24	25	24	24	24	24	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24	24	24	24	24	24	25	25	25	25	23
AUGUST																																
MAXIMUM	27	26	26	26	24	27	27	27	26	28	27	27	26	27	27	28	28	27	28	28	27	28	28	29	28	27	27	26	25	24	23	26
MINIMUM	25	24	24	24	24	24	24	25	26	26	26	26	24	23	24	24	26	26	26	26	26	26	26	26	26	26	26	26	25	24	23	22
SEPTEMBER																																
MAXIMUM	24	24	25	26	26	26	25	25	25	24	22	23	23	24	23	24	24	25	24	24	23	24	23	24	23	23	23	23	23	23	23	24
MINIMUM	22	22	23	23	24	24	23	23	23	22	21	19	21	22	22	22	23	23	23	23	23	22	22	22	22	22	22	21	21	21	22	--

MOBILE RIVER BASIN

02380500 COOSAWATTEE RIVER NEAR ELLIJAY, GA.

LOCATION.--Lat 34°41', long 84°31', Gilmer County, at gaging station on right bank 0.5 mile downstream from State Highway 5, 2 miles southwest of Ellijay, and 2.2 miles downstream from confluence of Cartcay and Ellijay Rivers.

DRAINAGE AREA.--238 sq mi.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
MAR. 19...	7.5	.10	<.05	1.0	.3	1.6	.9	<.10	3.0
APR. 16...	7.5	.55	<.05	1.5	.4	1.5	.7	<.10	<2.0
MAY 14...	8.0	.90	.05	1.8	.3	1.3	1.2	.30	<2.0
JUNE 11...	9.2	.75	<.05	1.4	.5	1.5	.9	.30	<2.0
JULY 09...	8.7	.40	<.05	1.5	.5	1.8	.8	.20	<2.0
AUG. 07...	9.5	.70	<.05	1.7	.5	1.4	.9	<.10	<2.0
SEPT. 03...	9.0	.60	<.05	1.6	.5	1.4	1.0	.30	<2.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA+MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)
MAR. 19...	2.0	.16	.10	4	21	45	10	1.9	2300
APR. 16...	4.0	.10	<.10	--	20	30	15	.7	4300
MAY 14...	2.5	.25	.25	10	24	70	55	2.5	23000
JUNE 11...	1.0	.15	.15	6	21	55	32	1.1	4300
JULY 09...	4.0	.14	.20	6	24	15	15	1.6	4300
AUG. 07...	1.0	.20	.87	4	25	25	23	2.2	9300
SEPT. 03...	1.5	.11	.15	8	23	30	15	1.1	93000

## MOBILE RIVER BASIN

02380500 COOSAWATTEE RIVER NEAR ELLIJAY, GA.--Continued  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CAC03	PH	DIS- SOLVED OXYGEN
MAR. 19...	1730	574	13	--	7.0	--
APR. 16...	1630	847	16	7	--	--
MAY 14...	1100	882	17	10	--	9.7
JUNE 11...	0900	462	--	13	6.8	--
JULY 09...	1720	330	20	8	6.9	--
AUG. 07...	1015	310	23	--	--	--
SEPT. 03...	1025	230	19	10	6.8	--

## 02382500 COOSAWATTEE RIVER AT CARTERS, GA.

LOCATION.--Lat 34°36'15", long 84°41'25", Murray County, at gaging station on downstream side of left bank pier of bridge on U.S. Highway 411 at Carters, 200 ft upstream from Louisville and Nashville Railroad bridge, and 0.6 mile downstream from Talking Rock Creek.

DRAINAGE AREA.--531 sq mi.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	SILICA (SI02)	TOTAL IRON (FE)	MANG- NESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
MAR. 20...	8.0	.20	<.05	2.0	.9	1.6	.9	<.10	4.0
APR. 17...	8.2	.50	.05	3.0	.7	1.3	.8	.30	<2.0
MAY 13...	10	1.1	<.05	2.7	.7	1.1	1.2	<.10	<2.0
JUNE 10...	9.5	.40	<.05	2.8	.8	1.7	.8	.10	2.0
JULY 08...	9.6	.50	<.05	3.0	.8	1.3	.9	<.10	<2.0
AUG. 07...	9.7	1.1	<.05	3.5	1.0	1.8	1.1	<.10	<2.0
SEPT. 03...	9.0	1.1	<.05	3.2	1.0	1.4	1.1	<.10	3.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA, MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (PPA)
MAR. 20...	2.0	.10	.10	14	31	15	11	.7	150
APR. 17...	4.0	.02	.10	14	27	15	15	.9	4300
MAY 13...	2.0	.28	.30	14	30	85	50	.7	2300
JUNE 10...	.5	.11	.10	10	30	30	13	.3	150
JULY 08...	1.5	.08	.10	12	32	45	15	.5	150
AUG. 07...	1.4	.22	.30	10	39	35	30	.5	23000
SEPT. 03...	2.5	.13	.15	12	37	55	21	--	150

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CAC03	PH	DIS- SOLVED OXYGEN
MAR. 20...	0945	1280	11	10	6.0	12.7
APR. 17...	0940	1680	12	8	5.9	11.5
MAY 13...	1315	1540	17	11	6.7	9.9
JUNE 10...	1300	992	23	10	7.0	--
JULY 08...	1645	640	24	11	7.5	9.4
AUG. 07...	0900	627	24	10	6.8	9.0
SEPT. 03...	1210	465	22	--	7.1	--



## MOBILE RIVER BASIN

195

## 02385800 HOLLY CREEK NEAR CHATSWORTH, GA.

LOCATION.--Lat 34°43'00", long 84°46'10", Murray County, at gaging station on right bank 100 ft upstream from bridge on county road, 3 miles upstream from Rock Creek, and 3.3 miles south of Chatsworth.

DRAINAGE AREA.--64.9 sq mi.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO <sub>4</sub> )
MAR. 20...	7.0	.30	<.05	2.2	1.0	11	1.3	<.10	3.0
APR. 17...	7.0	.45	<.05	3.1	.9	3.6	.9	.30	<2.0
MAY 13...	9.5	.50	<.05	2.5	.7	1.8	1.1	.20	<2.0
JUNE 10...	8.7	.45	<.05	3.4	.9	2.7	.8	.20	<2.0
JULY 09...	11	.55	<.05	4.8	1.3	30	2.6	<.10	2.0
AUG. 06...	13	1.1	.05	5.0	1.3	22	2.0	.10	4.0
SEPT. 03...	7.5	1.2	.05	5.2	1.4	11	1.7	1.0	4.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO <sub>4</sub> )	HARD- NESS (CA, MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (PPM)
MAR. 20...	13	<.10	.20	16	84	30	12	1.2	7500
APR. 17...	6.0	.02	.15	--	39	15	20	.9	2300
MAY 13...	3.0	.16	.25	10	38	70	30	.7	2300
JUNE 10...	3.0	.13	.25	12	40	30	14	.4	2300
JULY 09...	90	.21	.75	12	215	30	21	1.9	93000
AUG. 06...	14	.20	.60	14	150	30	24	1.9	150000
SEPT. 03...	13	.10	1.2	18	107	42	14	1.6	93000

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (CEG C)	ALKA- LINITY AS CAC03	PH	DIS- SOLVED OXYGEN
MAR. 20...	1130	89	13	13	6.6	--
APR. 17...	0845	164	12	10	6.0	10.9
MAY 13...	1630	291	18	10	6.2	10.2
JUNE 10...	1600	53	25	13	6.8	--
JULY 09...	0845	22	22	18	6.6	6.4
AUG. 06...	1330	22	26	21	6.8	6.7
SEPT. 03...	1330	7.5	23	28	7.0	6.5

## 02387000 CONASAUGA RIVER AT TILTON, GA.

LOCATION.--34°40', long 84°56', Whitfield County, at gaging station on left bank 250 ft downstream from highway bridge, 0.2 mile downstream from Swamp Creek, 0.5 mile northeast of Tilton, and 12 miles upstream from confluence with Coosawattee River.

DRAINAGE AREA.--682 sq mi.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO <sub>4</sub> )
MAR. 20...	5.5	.60	.05	15	4.8	10	1.2	.10	5.0
APR. 17...	7.0	1.3	.07	12	.9	5.2	1.5	.20	6.0
MAY 14...	6.0	1.9	.05	9.6	2.3	1.6	1.9	.50	2.0
JUNE 10...	7.5	.70	.05	17	4.5	3.6	1.3	.20	4.0
JULY 09...	6.7	.60	.06	20	5.5	4.0	1.3	<.10	2.0
AUG. 06...	8.1	1.5	.14	17	4.8	11	1.9	.50	6.0
SEPT. 04...	9.5	.70	.25	27	8.0	20	2.2	1.4	10



## 02388500 OOSTANULA RIVER NEAR ROME, GA.

LOCATION.--Lat 34°18', long 85°08', Floyd County, at gaging station on left bank 1.2 miles upstream from Dry Creek, 4.5 miles north of Rome, 4.5 miles above confluence with Etowah River, and 6.5 miles downstream from Armuchee Creek.

DRAINAGE AREA.--2,120 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NI- TRO- GEN (N)	SULFATE (SC4)
MAR.									
05...	6.0	.26	<.05	14	3.5	4.7	.6	<.10	4.5
26...	6.3	.75	<.05	11	2.5	2.7	1.2	.20	2.0
APR.									
23...	8.0	.60	<.05	11	2.8	4.0	1.1	<.10	8.0
JUNE									
25...	9.0	.76	<.05	11	3.0	6.0	1.1	.10	<2.0
JULY									
22...	8.5	1.1	.05	9.7	2.9	9.5	1.6	.10	2.0
AUG.									
19...	8.1	.65	<.05	16	3.8	12	1.6	<.10	6.0
SEPT.									
18...	8.5	.80	.08	14	4.3	13	1.6	.20	3.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (PPA)
MAR.									
05...	7.0	.13	.17	40	120	15	28	1.0	4300
26...	3.5	.24	.30	36	90	45	12	1.1	9300
APR.									
23...	7.5	.55	.75	32	97	30	30	.9	93000
JUNE									
25...	8.0	.30	.45	42	110	35	19	.8	4300
JULY									
22...	7.8	.38	.58	36	118	55	34	.8	930
AUG.									
19...	16	.35	.73	44	150	30	24	.6	930
SEPT.									
18...	38	.33	.95	54	155	37	17	1.1	530

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKAL- INITY AS CACO3	PH	DIS- SOLVED OXYGEN
MAR.						
05...	1045	2850	6	44	5.9	12.9
26...	1230	6400	11	35	6.4	--
APR.						
23...	1115	3400	18	39	6.7	8.9
JUNE						
25...	0900	1500	25	41	7.2	8.4
JULY						
22...	1555	1520	25	38	7.2	7.4
AUG.						
19...	1500	850	--	38	6.9	7.0
SEPT.						
18...	1135	1100	21	49	6.7	7.4

## 02392000 ETOWAH RIVER AT CANTON, GA.

LOCATION.--Lat 34°14', long 84°30', Cherokee County, at gaging station on left bank 100 ft downstream from bridge on State Highways 5 (Bpur.) and 140 at Canton, 0.8 mile upstream from Canton Creek, and 1.8 miles downstream from Hickory Log Creek.

DRAINAGE AREA.--605 sq mi.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	SILICA (SI02)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NI- TRO- GEN (N)	SULFATE (SO4)
MAR.									
19...	8.0	.80	<.05	3.9	.8	1.5	1.0	<.10	<2.0
APR.									
16...	8.7	.70	<.05	3.0	.8	1.3	.8	<.10	2.0
MAY									
13...	10	.55	<.05	4.1	.6	1.1	.9	.20	<2.0
JUNE									
10...	10	.70	<.05	4.2	.8	1.5	.9	.10	<2.0
JULY									
08...	11	.60	<.05	3.8	.7	1.3	.9	<.10	<2.0
AUG.									
08...	9.7	.57	<.05	6.0	.9	1.7	1.1	<.10	<2.0
SEPT.									
03...	8.8	1.7	.05	5.8	.8	1.3	1.2	.10	2.0

## MOBILE RIVER BASIN

## 02392000 ETOWAH RIVER AT CANTON, GA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO4)	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	COLOR	TURBIDITY	BIO-CHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
MAR. 19...	2.0	.26	.15	16	40	80	25	.1	24000
APR. 16...	3.0	.30	<.10	16	37	30	15	.6	4300
MAY 13...	2.5	.22	.20	12	36	60	25	.3	4300
JUNE 10...	1.5	.19	.15	12	35	30	19	.4	2300
JULY 08...	<.5	.14	.15	12	35	45	20	.7	15000
AUG. 08...	2.0	.15	.21	12	46	30	14	.4	430
SEPT. 03...	1.5	.21	.20	18	44	115	39	.4	15000

DATE	TIME	DISCHARGE (CFS)	TEMPERATURE (DEG C)	ALKALINITY AS CaCO3	PH	DISSOLVED OXYGEN
MAR. 19...	1430	1910	13	17	7.1	10.8
APR. 16...	1300	1860	15	17	6.5	10.7
MAY 13...	--	1420	18	16	6.6	10.5
JUNE 10...	1110	1290	--	13	6.8	--
JULY 08...	1405	770	23	14	7.2	9.4
AUG. 08...	1430	645	27	18	6.8	8.2
SEPT. 03...	0835	688	19	16	7.0	--

## 02394000 ETOWAH RIVER AT ALLATOONA DAM, ABOVE CARTERSVILLE, GA.

LOCATION.--Lat 34°10', long 84°44', Bartow County, at gaging station on right bank 0.8 mile downstream from Allatoona Dam, 2 miles upstream from Nashville, Chattanooga and St. Louis Railway bridge, and 3 miles east of Cartersville.

DRAINAGE AREA.--1,110 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN-GANESE (MN)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	AMMONIA NITROGEN (N)	SULFATE (SO4)
MAR. 04...	9.3	.39	<.05	3.6	.8	1.8	.6	<.10	<2.0
APR. 22...	8.0	.75	.05	3.8	1.0	1.8	1.0	<.10	<2.0
JUNE 25...	8.0	.32	<.05	5.0	.8	1.5	.9	<.10	<2.0
JULY 22...	8.5	.20	.05	4.8	1.0	2.0	1.0	<.10	<2.0
AUG. 19...	7.9	.25	.08	6.5	1.3	2.2	1.0	<.10	<2.0
SEPT. 18...	8.5	.30	.11	--	1.1	2.1	1.1	.30	<2.0

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO4)	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	COLOR	TURBIDITY	BIO-CHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
MAR. 04...	3.0	.25	.08	14	37	80	20	.3	<30
APR. 22...	2.0	.20	<.10	--	38	80	15	.7	230
JUNE 25...	1.0	.13	.10	16	39	15	4.0	.2	36
JULY 22...	1.8	.12	<.10	14	47	10	2.0	.4	<30
AUG. 19...	2.0	.11	.10	16	50	15	8.0	.6	36
SEPT. 18...	6.0	.09	.10	20	56	15	5.0	.9	150

DATE	TIME	DISCHARGE (CFS)	TEMPERATURE (DEG C)	ALKALINITY AS CaCO3	PH
MAR. 04...	1150	4260	6	16	5.7
APR. 22...	1130	4710	12	16	6.6
JUNE 25...	1145	199	22	19	6.8
JULY 22...	1145	227	--	20	6.9
AUG. 19...	1100	--	--	8	6.0
SEPT. 18...	1345	6440	23	21	6.1

## MOBILE RIVER BASIN

199

## 02396000 ETOWAH RIVER AT ROME, GA.

LOCATION.--Lat 34°15', long 85°09', Floyd County, at gaging station on downstream side of center pier of Southern Railway bridge in Rome, 2 miles upstream from confluence with Oostanaula River.

DRAINAGE AREA.--1,810 sq mi approximately.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968									
DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
MAR.									
04....	7.5	.26	<.05	--	7.5	2.6	1.0	--	9.0
25....	9.0	.80	<.05	14	8.5	2.3	1.5	.25	<2.0
APR.									
23....	10	.45	.05	10	6.7	2.8	1.0	<.10	<2.0
JUNE									
25....	9.2	1.2	.06	16	6.4	2.6	1.3	.20	<2.0
JULY									
23....	9.5	.85	.05	14	3.7	--	1.4	.10	3.0
AUG.									
20....	8.0	.30	.06	18	4.0	--	1.3	<.10	3.0
SEPT.									
18....	8.2	.56	.08	11	2.5 SPECI- FIC COND- UCTANCE (MICRO- MHOS)	2.9	1.2	.20	3.0
DATE	CMLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	COLCLR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (MPN)	
MAR.									
04....	5.0	.20	.23	62	140	35	12	1.1	430
25....	2.5	.35	.25	70	130	30	20	2.1	75000
APR.									
23....	5.0	.52	.30	58	113	70	15	2.2	21000
JUNE									
25....	2.0	.70	.35	60	130	30	28	1.2	93000
JULY									
23....	1.6	.26	.95	48	124	15	20	.9	230000
AUG.									
20....	3.0	.15	.15	48	120	15	11	1.3	43000
SEPT.									
18....	6.0	.16	.20	40	97	23	10	1.8	43000

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LINITY AS CaCO <sub>3</sub>	PH	DIS- SOLVED OXYGEN
MAR.						
04...	1615	1150	10	67	--	--
25...	--	2880	12	60	6.5	9.1
APR.						
23...	1200	2230	19	--	6.8	--
JUNE						
25...	0800	2870	23	67	7.1	--
JULY						
23...	1200	1280	24	49	7.8	8.3
AUG.						
20...	1700	710	28	--	6.3	--
SEPT.						
18...	1050	2200	22	46	6.8	8.3

## 02397000 COOSA RIVER NEAR ROME, GA.

LOCATION.--Lat 34°12', long 85°16', Floyd County, at gaging station on left bank attached to shoreward side of lock wall of Mayo Bar lock near upstream end, 1.5 miles southwest of Rome, 7.5 miles downstream from confluence of Oostanaula and Etowah Rivers, and at mile 279.

DRAINAGE AREA.--4,040 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968									
DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO <sub>4</sub> )
MAR.									
04...	6.5	.26	<.05	14	5.0	4.0	.8	<1.0	3.0
27...	7.4	.58	.07	6.1	2.8	2.0	.9	.20	2.5
APR.									
23...	8.5	.40	.05	12	4.5	2.8	1.0	<1.0	<2.0
MAY									
29...	9.7	.60	.10	5.6	3.3	2.5	1.8	.20	6.0
JUNE									
25...	8.5	.84	<.05	14	5.4	4.4	1.2	<1.0	6.0
JULY									
23...	7.0	1.1	.05	14	4.8	4.5	1.5	<1.0	4.0
AUG.									
20...	8.1	.45	.06	--	6.2	4.9	1.4	<1.0	3.0
SEPT.									
18...	8.5	.48	.08	11	2.7	2.5	1.2	.10	<2.0

## MOBILE RIVER BASIN

02397000 COOSA RIVER NEAR ROME, GA.--Continued  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (PPA)
MAR.									
04...	6.0	.18	.13	50	120	30	15	1.0	93000
27...	2.0	.28	.10	30	65	45	19	.8	9300
APR.									
23...	5.5	.44	.25	48	105	15	15	1.0	23000
MAY									
29...	3.0	.38	.40	40	92	140	75	1.7	9300
JUNE									
25...	4.0	.31	.25	60	138	30	14	1.1	4300
JULY									
23...	3.4	.38	.33	50	134	30	26	.6	43000
AUG.									
20...	4.4	.28	.20	58	140	15	16	.7	9300
SEPT.									
18...	7.5	.18	.10	42	93	15	10	1.4	9300

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CAC03	PH	DIS- SOLVED OXYGEN
MAR.						
04...	1150	4200	7	56	6.2	12.5
27...	1430	8700	13	36	6.6	10.9
APR.						
23...	1345	5640	19	49	6.2	9.4
MAY						
29...	0815	10900	17	39	6.2	8.4
JUNE						
25...	1700	3100	25	56	7.3	9.2
JULY						
23...	1700	3100	25	54	7.3	8.8
AUG.						
20...	1500	2920	27	66	7.3	7.9
SEPT.						
18...	0950	4200	22	38	6.6	8.4

## 02397500 CEDAR CREEK NEAR CEDARTOWN, GA.

LOCATION.--Lat 34°04', long 85°19', Polk County, at gaging station on left bank 700 ft downstream from bridge on State Highway 161, 4.5 miles upstream from Lake Creek, and 4.5 miles northwest of Cedartown.

DRAINAGE AREA.--109 sq mi.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, MARCH TO SEPTEMBER 1968

DATE	SILICA (SiO2)	TOTAL IRON (FE)	MAN- GANESE (MN)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO4)
MAR.									
07...	5.0	.26	.13	25	10	7.2	.7	<10	13
25...	6.3	.35	.05	20	9.0	2.9	.7	<10	2.0
APR.									
23...	7.5	.10	.11	20	9.2	4.5	.6	<10	7.0
JUNE									
26...	7.5	.32	.06	30	11	20	1.0	.20	30
JULY									
23...	7.8	.40	.05	28	12	22	.9	.20	23
AUG.									
20...	7.1	.35	.05	35	13	13	.9	.35	8.0
SEPT.									
18...	6.5	.28	.05	31	12	5.2	.9	1.6	2.0

DATE	CHLO- RIDE (CL)	NITRATE (N)	PHOS- PHATE (PO4)	HARD- NESS (CA,MG)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TUR- BID- ITY	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM (PPA)
MAR.									
07...	6.0	.10	.55	100	230	30	17	4.0	230000
25...	17	.33	.15	72	140	45	10	1.1	21000
APR.									
23...	6.0	.40	.20	82	118	30	10	1.6	23000
JUNE									
26...	10	.06	.40	110	250	30	10	2.4	23000
JULY									
23...	18	.16	.45	112	360	50	13	1.8	390000
AUG.									
20...	16	.16	.73	114	290	15	8.0	2.6	430000
SEPT.									
18...	11	.07	.70	124	270	23	2.0	1.6	2300

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKA- LITY AS CAC03	PH	DIS- SOLVED OXYGEN
MAR.						
07...	1030	98	10	138	6.5	9.0
25...	1430	195	12	79	6.7	13.0
APR.						
23...	1520	190	18	87	6.6	9.3
JUNE						
26...	1000	91	22	113	7.1	4.1
JULY						
23...	1900	67	23	115	7.4	7.5
AUG.						
20...	1615	56	24	116	7.4	6.2
SEPT.						
18...	1015	48	19	123	6.7	3.3

LOCATION.--Lat 34°28', long 85°20', Chattooga County, at gaging station on left bank 600 ft downstream from bridge on U.S. Highway 27, 1 mile southeast of Summerville, and 4 miles upstream from Raccoon Creek.

PERIOD OF RECORD.--Chemical analyses: March to September 1968.

REMARKS.--Field determination of discharge, water temperature, alkalinity, pH, and dissolved oxygen by U.S. Geological Survey. Laboratory chemical analyses by Georgia Water Quality Control Board.

DATE	SILICA (SiO <sub>2</sub> )	TOTAL IRON (Fe)	MANGANESE (Mn)	CALCIUM (Ca)	MAGNE- SIUM (Mg)	SODIUM (Na)	POTAS- SIUM (K)	AMMONIA NITRO- GEN (N)	SULFATE (SO <sub>4</sub> )
MAR.									
05...	5.5	.15	.05	22	8.0	66	1.0	.15	5.0
27...	5.4	.17	.08	26	6.0	50	1.3	.40	3.0
APR.									
23...	7.5	.30	.11	18	5.7	40	1.3	.10	4.0
JUNE									
25...	7.8	.32	.06	20	7.0	90	2.5	.20	12
JULY									
23...	8.2	.30	.13	--	7.0	80	2.5	.40	9.0
AUG.									
20...	8.4	.25	.08	32	9.3	92	1.9	.30	12
SEPT.									
18...	9.0	.30	.12	29	9.5	107	3.0	.10	12

DATE	CHLORIDE (CL)	NITRATE (N)	PHOSPHATE (PO <sub>4</sub> )	HARDNESS (CA, MG)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR	TURBIDITY	BIOCHEMICAL OXYGEN DEMAND	FECAL COLIFORM (MPN)
MAR. 05....	12	.05	.42	86	410	65	20	>3.8	<30
MAR. 17....	7.0	.10	.60	80	260	30	14	>5.8	<30
APR. 23....	19	.85	.95	88	310	130	15	5.4	<30
JUNE 25....	2.4	.05	1.0	70	495	65	2.3	>13	<30
JULY 23....	37	.12	.70	70	490	35	15	6.4	<30
AUG. 20....	33	.09	1.3	98	490	45	23	11	51
SEPT. 18....	145	.08	1.6	106	540	55	11	>11	430

DATE	TIME	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	ALKAL- INITY AS CAC03	PH	DIS- SOLVED OXYGEN
MAR.						
05...	1445	179	12	197	10.1	4.9
27...	1700	337	16	138	9.8	6.7
APR.						
23...	0920	280	17	149	9.8	4.4
JUNE						
25...	1515	129	26	228	10.2	1.7
JULY						
23...	1100	127	22	185	10.5	3.3
AUG.						
20...	1100	95	--	200	9.1	--
SEPT.						
18...	0810	82	20	212	9.3	1.7

LOCATION.--Lat 34°01', long 86°00', in NE $\frac{1}{4}$  sec.10, T.12 S., R.6 E., Etowah County, temperature recorder at gaging station near midstream in pier of Etowah County Memorial Bridge on U.S. Highway 431 in Gadsden, 450 ft downstream from Louisville and Nashville Railroad bridge, and 1.5 miles upstream from Big Wills Creek.

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1967.

Water temperatures: October 1962 to September 1968.

**EXTREMES. --1967-68:**

Water temperatures: Maximum, 31.0°C Aug. 12-20; minimum, 5.0°C Jan. 10-22.

Period of record:

Water temperatures: Maximum, 31.0°C Aug. 12, 1963, Aug. 12-20, 1968; minimum, 2.0°C Dec. 27, 28, 1963, Jan. 1-4, 1964.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968  
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER																																	
MAXIMUM	22	20	20	20	20	20	20	20	20	20	20	20	19	18	18	18	18	18	18	18	18	17	17	17	17	17	17	17	16	16	16	18	
MINIMUM	20	20	20	20	20	20	20	20	20	20	20	19	18	18	18	18	18	18	18	18	18	17	17	17	17	17	17	16	16	16	16	18	
NOVEMBER																																	
MAXIMUM	16	15	15	15	14	13	12	12	11	11	10	10	11	11	11	11	11	11	11	11	10	9	9	9	9	9	9	9	9	9	--	11	
MINIMUM	15	15	15	14	13	12	12	11	11	10	10	10	10	11	11	11	11	11	11	11	10	9	9	9	9	9	9	9	9	9	9	--	10
DECEMBER																																	
MAXIMUM	9	9	9	9	8	8	8	8	8	8	9	10	10	10	10	10	10	10	10	10	12	12	12	10	9	9	9	9	8	8	7	7	9
MINIMUM	9	9	9	9	8	8	8	8	8	8	8	9	10	10	10	10	10	10	10	10	10	10	11	12	10	9	9	9	8	7	7	7	9
JANUARY																																	
MAXIMUM	7	7	6	6	6	6	6	6	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	7	7	7	5
MINIMUM	7	6	6	6	6	6	6	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	7	7	7	5
FEBRUARY																																	
MAXIMUM	7	8	9	9	10	10	9	9	8	8	8	8	8	7	7	6	6	6	6	7	7	6	6	6	6	6	6	6	6	6	--	--	7
MINIMUM	7	7	8	9	9	9	9	8	8	8	8	8	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	--	--	--	6

## MOBILE RIVER BASIN

02400500 COOSA RIVER AT GADSDEN, ALA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

TEMPERATURE - 40° F. TO 80° F. - 1950 - 1951																																		
	DAY																															AVER-		
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
MARCH																																		
MAXIMUM	6	6	6	--	--	--	--	--	--	--	--	--	--	--	--	--	11	11	11	11	12	12	13	13	13	12	12	12	12	13	14	--		
MINIMUM	6	6	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	11	11	11	12	12	13	12	12	12	12	12	13	--	--		
APRIL																																		
MAXIMUM	15	15	15	15	14	14	14	15	16	16	16	16	16	16	16	17	17	17	18	18	18	18	19	19	19	19	19	19	18	16	--	16		
MINIMUM	14	15	15	14	14	14	14	15	16	16	16	16	16	16	16	16	17	17	17	18	18	18	18	19	19	19	19	19	18	16	--	16		
MAY																																		
MAXIMUM	18	18	19	19	19	19	19	19	19	19	19	20	20	20	20	21	21	21	21	21	21	21	21	21	21	22	22	22	22	22	22	20		
MINIMUM	18	18	18	19	19	19	19	19	19	19	19	19	20	20	20	20	21	21	21	21	21	21	21	21	21	21	22	22	22	22	22	20		
JUNE																																		
MAXIMUM	23	23	24	24	24	24	25	26	26	26	26	26	26	26	26	27	27	27	27	26	27	26	26	26	26	27	27	27	27	27	--	25		
MINIMUM	22	23	23	24	24	24	25	26	26	26	26	26	26	26	26	26	27	27	27	26	26	26	26	26	26	26	27	27	27	27	--	25		
JULY																																		
MAXIMUM	28	28	29	29	29	29	29	29	29	28	27	26	26	26	26	26	27	27	28	28	28	28	28	28	28	28	28	29	28	28	28	27		
MINIMUM	27	28	26	29	29	29	29	29	28	27	26	26	25	25	25	26	26	27	28	28	28	28	28	28	28	28	28	28	28	28	28	27		
AUGUST																																		
MAXIMUM	28	28	28	28	29	29	29	29	29	29	30	31	31	31	31	31	31	31	31	31	31	30	29	29	29	29	30	30	30	30	30	29		
MINIMUM	28	28	28	28	28	29	29	29	29	29	29	30	31	31	31	31	31	31	31	31	30	29	29	29	29	29	29	30	30	30	30	29		
SEPTEMBER																																		
MAXIMUM	28	28	27	27	26	26	26	26	26	26	26	26	26	25	24	24	25	25	24	23	23	23	23	23	23	23	23	23	23	23	24	--		
MINIMUM	28	27	27	26	26	26	26	26	26	26	26	25	25	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23	23	23	--	24		

02407000 COOSA RIVER AT CHILDERSBURG, ALA.

LOCATION.--Lat 33°17', long 86°22', in NE¼ sec.18, T.20 S., R.3 E., Shelby County, at gaging station near right bank on downstream side of pier of Central of Georgia Railway bridge, 700 ft upstream from bridge on State Highway 38, 0.5 mile downstream from Tallasseehatchee Creek, and 1 mile northwest of Childersburg.

DRAINAGE AREA.--8,390 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: November 1965 to September 1968.

Water temperatures: October 1962 to September 1968.

EXTREMES.--1967-68:

Water temperatures: Maximum, 31.0°C Aug. 9, 17-26; minimum, 4.0°C Jan. 15-20.

Period of record:

Water temperatures: Maximum, 31.0°C Aug. 9, 17-26, 1968; minimum, 3.0°C Jan. 28-30, 1963.

REMARKS.--Streamflow regulated by upstream reservoirs and hydroelectric plants.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIC- CHARGE (CFS)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH
OCT. 02...	12200	54	0	8.2	51	7	140	7.6
NOV. 13...	15300	66	0	5.4	60	6	153	7.6
DEC. 11...	37400	44	0	2.0	46	10	109	7.8
JAN. 17...	54700	43	0	1.0	36	1	100	7.7
MAR. 04...	43400	65	0	6.8	60	7	144	7.8
APR. 15...	57600	44	0	3.8	44	8	100	7.0
SEPT. 12...	10900	84	0	18	78	9	259	7.9



## 02407000 COOSA RIVER AT CHILDERSBURG, ALA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968  
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

DAY

	DAY																															AVER-	
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																	
MAXIMUM	23	23	23	23	22	22	22	22	21	21	21	21	21	21	21	21	21	20	20	20	20	20	20	20	20	19	19	19	19	18	18	20	
MINIMUM	23	22	23	22	22	22	22	21	21	21	21	21	21	21	21	21	21	20	20	20	20	20	20	20	20	19	19	19	19	18	18	20	
NOVEMBER																																	
MAXIMUM	18	17	17	16	16	16	15	14	14	13	13	13	13	13	13	13	12	13	13	13	13	12	12	12	12	12	12	12	12	12	--	13	
MINIMUM	17	17	16	16	16	15	14	14	13	13	13	13	13	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	11	--	13	
DECEMBER																																	
MAXIMUM	11	11	11	11	11	11	10	10	10	11	11	11	11	11	11	11	11	11	11	12	12	12	12	13	12	11	11	11	10	9	9	8	
MINIMUM	11	11	11	11	11	11	10	10	10	10	11	11	11	11	11	11	11	11	11	11	11	11	12	12	12	12	11	11	11	10	9	8	10
JANUARY																																	
MAXIMUM	8	8	8	7	7	7	7	7	6	6	6	6	6	6	6	5	4	4	4	4	4	5	5	5	6	6	6	6	6	6	6	5	
MINIMUM	8	8	7	7	7	7	7	7	6	6	6	6	6	6	6	5	4	4	4	4	4	4	5	5	5	6	6	6	6	6	6	5	
FEBRUARY																																	
MAXIMUM	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	8	8	8	8	7	7	7	8	8	7	7	--	7	
MINIMUM	7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	--	7	
MARCH																																	
MAXIMUM	7	7	7	8	8	8	8	8	8	10	10	10	11	11	12	12	12	12	12	13	13	13	13	13	13	13	13	13	13	13	14	10	
MINIMUM	6	7	7	7	8	8	8	8	8	8	9	9	10	11	11	11	11	12	12	12	12	12	12	13	13	13	13	13	13	13	13	10	
APRIL																																	
MAXIMUM	14	15	15	15	15	16	16	16	16	16	17	17	17	17	17	17	17	18	18	18	18	18	18	18	19	19	19	19	19	19	--	17	
MINIMUM	13	14	15	15	14	15	16	16	16	16	16	16	17	17	17	17	17	17	17	17	17	17	18	18	18	18	18	18	18	19	19	--	16
MAY																																	
MAXIMUM	20	20	21	20	21	21	21	21	21	21	21	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	23	24	24	24	23	23	
MINIMUM	19	19	20	20	20	20	20	20	20	20	20	21	21	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	23	22	22	23	
JUNE																																	
MAXIMUM	23	24	24	25	25	25	25	25	25	26	26	26	26	27	27	27	26	26	26	26	27	27	27	26	27	27	27	26	27	27	--	25	
MINIMUM	22	22	23	23	24	24	24	24	24	24	24	24	24	24	25	25	26	26	24	25	25	26	26	26	26	26	26	26	26	26	25	--	24
JULY																																	
MAXIMUM	27	28	28	27	27	27	27	27	27	26	26	26	26	26	27	27	27	27	27	27	27	27	27	27	27	27	28	28	29	26	26	28	
MINIMUM	26	27	27	26	26	27	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	27	27	27	28	28	28	28	26	26
AUGUST																																	
MAXIMUM	29	29	28	29	30	29	29	30	31	30	30	30	29	29	29	30	31	31	31	31	31	31	31	31	31	31	31	30	29	29	28	29	
MINIMUM	28	28	28	28	29	29	29	29	30	30	30	30	29	29	28	28	29	30	30	30	30	30	30	30	30	30	29	29	29	28	28	27	28
SEPTEMBER																																	
MAXIMUM	28	28	28	28	28	28	28	28	28	28	28	28	27	27	27	27	27	26	26	26	26	26	26	26	27	27	26	26	26	26	--	27	
MINIMUM	27	27	27	27	28	28	27	26	27	27	27	27	27	27	27	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	--	26

## 02423000 ALABAMA RIVER AT SELMA, ALA.

LOCATION.--Lat 32°24'20", long 87°01'07", in SE 1/4 sec.36, T.17 N., R.10 E., Dallas County, temperature recorder at gaging station in first pier from right bank of Edmond Pettus Bridge on U.S. Highway 80 in Selma and 1 mile upstream from Valley Creek.

DRAINAGE AREA.--17,100 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1967.

Water temperatures: October 1965 to November 1966, June 1962 to September 1968. June to September 1962, unpublished.

EXTREMES.--1967-68:

Water temperatures: Maximum, 20.0°C Aug. 21, 22; minimum, 7.0°C Jan. 15-31.

Period of record:

Water temperatures: Maximum, 30.0°C Aug. 6, 1963, Aug. 16-19, 1966; minimum, 6.0°C Jan. 29 to Feb. 1, 1963, Jan. 2-5, 16-20, 1964.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLD- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH
DEC.								
04...	45500	63	0	3.6	48	0	119	7.9
JAN.								
09...	73100	36	0	7.0	45	15	104	7.8
FEB.								
20...	13800	36	0	6.2	35	5	98	7.7
APR.								
02...	18600	48	0	4.6	42	3	112	7.6

## MOBILE RIVER BASIN

02423000 ALABAMA RIVER AT SELMA, ALA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968  
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

	DAY																																AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE	
OCTOBER																																	
MAXIMUM	22	22	22	23	23	23	23	23	23	23	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	--	--	--	22	
MINIMUM	22	22	22	22	23	23	23	23	23	23	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	--	--	--	22	
NOVEMBER																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
DECEMBER																																	
MAXIMUM	--	--	--	12	12	12	11	11	11	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	11	11	11	
MINIMUM	--	--	--	12	12	11	11	11	11	11	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	11	11	11	
JANUARY																																	
MAXIMUM	11	11	11	11	11	11	11	10	10	9	9	9	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8		
MINIMUM	11	11	11	11	11	11	10	10	9	9	9	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8		
FEBRUARY																																	
MAXIMUM	8	8	8	8	8	9	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	--	--		
MINIMUM	8	8	8	8	8	8	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	--	--		
MARCH																																	
MAXIMUM	8	8	8	9	9	9	9	9	10	12	12	12	12	12	12	12	12	12	12	13	13	13	13	13	12	12	12	12	12	13	13		
MINIMUM	8	8	8	8	9	9	9	9	10	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	13	13		
APRIL																																	
MAXIMUM	15	15	15	16	16	16	15	15	15	16	16	16	16	16	16	16	16	17	17	17	17	17	17	17	17	18	18	18	18	18	--		
MINIMUM	13	15	15	15	16	15	15	15	15	16	16	16	16	16	16	16	16	16	17	17	17	17	17	17	17	18	16	17	17	18	--		
MAY																																	
MAXIMUM	18	18	18	18	18	18	18	18	19	20	20	20	21	22	22	22	22	22	21	21	21	21	21	21	21	21	22	22	22	22	22	20	
MINIMUM	18	18	18	18	18	18	18	18	18	19	20	20	20	21	21	22	22	22	21	21	21	21	21	21	21	21	21	22	22	22	21	20	
JUNE																																	
MAXIMUM	23	24	24	25	25	25	25	25	25	26	27	27	27	26	25	26	26	26	26	26	26	26	26	25	25	25	26	26	27	27	26	--	
MINIMUM	22	23	23	24	24	25	24	24	24	24	25	26	27	26	24	25	25	25	26	26	26	26	24	24	25	25	24	25	26	26	24	--	
JULY																																	
MAXIMUM	27	28	28	27	27	27	27	27	26	26	26	25	26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	26	27	27	27	27	26	26	26	26	25	24	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AUGUST																																	
MAXIMUM	28	28	27	27	27	27	28	28	28	28	27	27	27	27	28	28	28	28	28	27	29	29	28	28	27	27	27	27	26	26	26		
MINIMUM	28	27	26	26	27	26	26	27	27	27	26	26	27	26	26	27	28	28	27	26	27	27	28	27	27	26	27	26	26	26	25		
SEPTEMBER																																	
MAXIMUM	26	26	26	26	26	27	27	26	26	26	26	26	25	25	25	24	24	24	24	24	24	25	25	25	25	25	25	25	24	24	--		
MINIMUM	25	26	26	26	26	26	26	26	26	26	26	26	24	24	24	24	24	24	24	24	24	24	24	24	25	24	25	24	24	24	--		

## 02429000 LIMESTONE CREEK NEAR MONROEVILLE, ALA.

LOCATION.--Lat 31°34', long 87°21', in NE $\frac{1}{4}$  sec.22, T.7 N., R.7 E., Monroe County, temperature recorder at gaging station near left bank on downstream side of pier of bridge on State Highway 41, 3 miles northwest of Monroeville and 10 miles upstream from mouth.

DRAINAGE AREA.--117 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1967.

Water temperatures: February 1963 to September 1968.

EXTREMES.--1967-68:

Water temperatures: Maximum, 26.0°C June 26, 27; minimum, 5.0°C Jan. 17, Feb. 14, 24.

Period of record:

Water temperatures: Maximum, 27.0°C June 15, 1963, minimum, 2.0°C Jan. 31, 1966.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968  
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

	DAY																																	AVER-
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AGE		
OCTOBER																																		
MAXIMUM	14	15	16	16	17	17	17	18	18	17	16	15	14	15	16	16	17	17	15	13	12	13	14	15	15	14	12	12	12	14	16	15		
MINIMUM	13	14	14	16	16	16	16	17	17	15	15	14	13	14	15	16	16	15	13	12	12	13	14	14	12	12	12	11	12	14	14			
NOVEMBER																																		
MAXIMUM	16	14	13	13	12	10	9	8	8	9	11	12	12	13	13	12	10	11	11	9	11	13	14	16	16	16	16	16	12	14	--	12		
MINIMUM	14	13	12	12	10	9	8	8	8	8	9	11	12	12	12	10	9	10	9	9	9	11	13	14	15	14	16	12	11	12	--	11		
DECEMBER																																		
MAXIMUM	14	13	13	11	9	11	12	13	15	16	16	15	13	14	16	16	14	17	17	17	17	17	13	9	8	8	8	8	8	8	9	12		
MINIMUM	12	12	11	8	8	9	11	12	14	15	15	13	12	12	14	14	13	14	17	17	17	17	13	9	7	7	7	7	8	8	6	7	11	
JANUARY																																		
MAXIMUM	9	10	12	13	13	10	10	9	10	12	12	11	9	8	7	7	6	7	8	8	9	10	10	12	12	8	7	8	9	11	12	13	9	
MINIMUM	9	9	10	12	9	8	9	7	8	10	11	9	8	6	6	6	5	6	7	7	8	9	10	8	7	6	7	7	9	11	12	8		
FEBRUARY																																		
MAXIMUM	14	14	13	11	9	9	9	8	7	8	8	8	6	6	7	7	7	8	7	8	8	8	7	7	7	7	8	9	9	8	--	--	8	
MINIMUM	13	13	11	9	8	9	8	7	6	6	8	6	6	5	6	6	6	7	6	7	8	7	6	5	6	7	8	8	8	--	--	7		
MARCH																																		
MAXIMUM	8	8	11	11	9	11	11	12	14	16	17	17	17	13	12	13	14	14	16	18	18	18	12	10	12	13	14	16	18	19	19	13		
MINIMUM	6	7	8	8	7	9	9	9	12	14	16	17	13	10	10	12	13	12	13	15	16	12	10	8	9	11	12	13	15	17	17	11		
APRIL																																		
MAXIMUM	19	19	19	21	21	17	18	20	20	19	18	18	17	18	19	19	18	19	20	21	21	21	21	21	21	17	17	18	18	18	--	--	17	
MINIMUM	18	18	18	19	17	15	15	16	18	18	16	16	16	17	18	16	16	17	19	19	19	19	21	19	20	17	15	16	17	18	18	--	19	
MAY																																		
MAXIMUM	18	18	18	18	18	18	17	19	19	19	20	21	21	22	23	24	24	23	21	21	19	19	21	21	22	22	22	21	21	22	22			
MINIMUM	17	17	17	18	18	16	16	17	18	18	19	20	21	21	22	23	23	21	21	19	18	18	19	21	21	22	21	21	20	21	22	19		
JUNE																																		
MAXIMUM	22	22	23	23	24	23	22	23	24	24	24	25	25	24	24	25	25	25	24	24	24	24	24	24	24	25	26	26	24	23	23	--	23	
MINIMUM	21	22	22	22	23	22	21	22	22	23	24	24	24	23	23	24	24	23	23	23	23	23	23	23	24	24	25	24	21	22	23	--	22	
JULY																																		
MAXIMUM	24	24	24	24	23	23	23	23	23	23	23	23	23	24	25	24	23	23	23	23	23	23	23	23	23	24	24	24	25	25	25	23		
MINIMUM	23	24	24	23	23	23	22	23	23	22	22	22	23	23	23	22	23	22	22	22	22	22	22	22	23	23	23	23	24	24	24	24	22	
AUGUST																																		
MAXIMUM	25	24	24	24	24	24	24	24	25	25	25	24	24	24	24	24	24	24	24	23	24	24	24	24	24	24	24	24	23	22	21	20	23	
MINIMUM	24	23	23	24	24	23	23	24	24	24	24	23	24	24	23	23	24	23	22	23	24	24	24	24	23	23	23	22	21	19	19	19	22	
SEPTEMBER																																		
MAXIMUM	21	21	21	23	22	22	22	21	21	21	20	19	19	19	18	21	21	22	22	21	22	22	21	20	20	20	21	21	21	19	21	--	21	
MINIMUM	20	20	21	21	22	22	21	20	20	21	19	18	18	19	19	19	21	21	21	20	20	21	21	19	19	20	21	21	18	18	19	--	20	

## MOBILE RIVER BASIN

02429500 ALABAMA RIVER AT CLAIBORNE, ALA.  
(International Hydrological Decade River Station)

LOCATION.--Lat 31°32', long 87°31', in sec.25, T.7 N., R.5 E., Monroe County, at gaging station near left bank on downstream side of pier of bridge on U.S. Highway 84 at Claiborne, 0.5 mile downstream from Limestone Creek and 12 miles west of Monroeville.

DRAINAGE AREA.--22,000 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March 1967 to September 1968.  
Water temperatures: March 1967 to September 1968.

EXTREMES.--1967-68:

Dissolved solids: Maximum, 86 mg/l Sept. 8-14; minimum, 55 mg/l Jan. 1-11, 13-24, 26-30.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	FLUO- RIDE (F)
OCT.											
01-07	19400	11	.00	11	3.0	5.8	1.2	48	0	6.6	5.8
08...	20200	--	--	--	--	--	--	48	0	--	6.4
09-28	16400	11	.00	11	3.0	5.8	1.2	48	0	6.6	5.8
29...	18000	--	--	--	--	--	--	48	0	--	6.4
30-31	30900	--	--	--	--	--	--	40	0	--	4.2
NOV.											
01-02	50200	6.8	.01	11	1.8	4.0	1.5	41	0	6.0	4.7
03-04	53400	9.3	.01	16	2.9	5.0	1.7	58	0	10	5.5
05-09	48900	8.2	.00	13	2.8	5.8	1.3	51	0	4.8	6.5
10...	39800	9.3	.01	16	2.9	5.0	1.7	58	0	10	5.5
11-18	23800	8.2	.00	13	2.8	5.8	1.3	51	0	4.8	6.5
19...	23300	9.3	.01	16	2.9	5.0	1.7	58	0	10	5.5
20-22	19700	8.2	.00	13	2.8	5.8	1.3	51	0	4.8	6.5
23...	14700	6.8	.01	11	1.8	4.0	1.5	41	0	6.0	4.7
24-30	32700	8.2	.00	13	2.8	5.8	1.3	51	0	4.8	6.5
DEC.											
01-02	42000	7.9	.01	14	3.6	6.3	1.4	59	0	7.8	6.1
03-12	50700	8.3	.03	13	1.8	4.6	1.4	49	0	7.4	4.0
13...	69300	7.9	.01	14	3.6	6.3	1.4	59	0	7.8	6.1
14-22	84500	8.3	.03	13	1.8	4.6	1.4	49	0	7.4	4.0
23...	90600	8.0	.04	11	2.3	3.3	1.2	43	0	6.2	3.3
24...	91600	8.3	.03	13	1.8	4.6	1.4	49	0	7.4	4.0
25-31	94500	8.0	.04	11	2.3	3.3	1.2	43	0	6.2	3.3
JAN.											
01-11	82800	7.5	--	11	1.6	3.4	2.5	36	0	7.0	3.3
12...	98100	--	--	--	--	--	--	58	0	--	1.6
13-24	88900	7.5	--	11	1.6	3.4	2.5	36	0	7.0	3.3
25...	77000	--	--	--	--	--	--	58	0	--	1.6
26-30	72400	7.5	--	11	1.6	3.4	2.5	36	0	7.0	3.3
FEB.											
01-29	25900	8.3	--	11	1.3	4.2	2.0	39	0	6.4	4.7
MAR.											
01...	20800	8.6	--	12	2.7	--	--	51	0	7.2	4.0
02...	23500	8.1	--	14	2.7	--	--	49	0	8.2	4.8
03...	24200	7.1	--	17	2.8	--	--	60	0	8.6	5.4
04-11	19500	8.1	--	14	2.7	--	--	49	0	8.2	4.8
12...	33600	8.6	--	12	2.7	--	--	51	0	7.2	4.0
13...	45300	8.1	--	14	2.7	--	--	49	0	8.2	4.8
14-15	66800	7.1	--	17	2.8	--	--	60	0	8.6	5.4
16...	82300	8.1	--	14	2.7	--	--	49	0	8.2	4.8
17-19	74500	8.6	--	12	2.7	--	--	51	0	7.2	4.0
20...	54800	8.1	--	14	2.7	--	--	49	0	8.2	4.8
21-22	42000	7.1	--	17	2.8	--	--	60	0	8.6	5.4
23...	38900	8.1	--	14	2.7	--	--	49	0	8.2	4.8
24...	35200	7.1	--	17	2.8	--	--	60	0	8.6	5.4
25...	35500	8.1	--	14	2.7	--	--	49	0	8.2	4.8
26...	37300	7.1	--	17	2.8	--	--	60	0	8.6	5.4
27-31	30300	8.1	--	14	2.7	--	--	49	0	8.2	4.8
APR.											
01-05	24200	7.9	--	12	3.9	--	--	54	0	7.0	3.2
06...	61900	7.7	--	11	3.0	--	--	42	0	6.4	3.8
07...	78200	--	--	--	--	--	--	76	0	--	2.8
08-12	87600	7.7	--	11	3.0	--	--	42	0	6.4	3.8
13...	66000	7.9	--	12	3.9	--	--	54	0	7.0	3.2
14-30	38500	7.7	--	11	3.0	--	--	42	0	6.4	3.8
MAY											
01-31	35700	8.5	--	11	3.0	--	--	48	0	6.0	3.8
JUNE											
01-28	14500	9.2	--	8.5	4.6	--	--	43	0	7.0	6.0
29...	13700	--	--	10	1.7	--	--	62	0	--	7.0
30...	11400	9.2	--	8.5	4.6	--	--	43	0	7.0	6.0
JULY											
01-05	10700	8.7	--	10	2.7	--	--	44	0	6.2	6.0
06...	10900	--	--	7.0	3.5	--	--	100	0	14.0	7.4
07-19	13400	8.7	--	10	2.7	--	--	44	0	6.2	6.0
20-21	16700	6.8	--	13	2.8	--	--	52	0	7.0	6.0
22-24	13200	8.7	--	10	2.7	--	--	44	0	6.2	6.0
25-27	9610	6.8	--	13	2.8	--	--	52	0	7.0	6.0
28-30	15700	8.7	--	10	2.7	--	--	44	0	6.2	6.0
31...	14400	8.8	--	10	4.9	--	--	48	0	7.4	6.2

## O2429500 ALABAMA RIVER AT CLAIBORNE, ALA.--Continued

## EXTREMES, 1967-68.--Continued:

Hardness: Maximum, 64 mg/l Apr. 7; minimum, 32 mg/l June 29, July 6, Aug. 6, 8, 10, 13, 20, 22, 26, 27.

Specific conductance: Maximum daily, 208 micromhos July 6; minimum daily, 78 micromhos Nov. 1.

Water temperatures: Maximum, 28.0°C July 28; minimum, 4.0°C Jan. 17, 18, Feb. 24, 25, Mar. 1.

## Period of record:

Dissolved solids: Maximum, 87 mg/l Nov. 13, 14, May 1, 7, 12, 13, 20, 21, 1967; minimum, 47 mg/l Mar. 7-31, 1968.

Hardness: Maximum, 68 mg/l Mar. 10, 1967; minimum, 30 mg/l Feb. 28, Sept. 18, 1968.

Specific conductance: Maximum daily, 208 micromhos July 6, 1968; minimum daily, 66 micromhos Mar. 10, 1968.

Water temperatures: Maximum, 28.0°C July 14-16, 1968; minimum, 4.0°C Jan. 17, 18, Feb. 24, 25, Mar. 1, 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	NITRATE (NO3)	DIS- SOLVED SOLIDS (TONS) CONSTI- TUENTS	DIS- SOLVED SOLIDS (TONS) DAY	DIS- SOLVED SOLIDS (TONS) AC-FT	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	SECUM PLUS PC- 145- SILM (N&K)
OCT.											
01-07	.5	68	3600	.09	40	1	.4	110	6.8	5	--
08...	--	--	--	--	49	10	--	128	7.1	--	--
09-29	.5	68	3010	.09	40	1	.4	110	6.8	5	--
29...	--	--	--	--	49	10	--	128	7.1	--	--
30-31	--	--	--	--	38	5	--	97	7.0	--	--
NOV.											
01-02	.2	56	7590	.08	35	1	.3	94	6.8	15	--
03-04	.0	80	11500	.11	52	4	.3	132	6.8	5	--
05-09	.1	68	8980	.09	44	2	.4	117	7.0	5	--
10...	.0	80	8600	.11	52	4	.3	132	6.8	5	--
11-18	.1	68	4370	.09	44	2	.4	117	7.0	5	--
19...	.0	80	5030	.11	52	4	.3	132	6.8	5	--
20-22	.1	68	3620	.09	44	2	.4	117	7.0	5	--
23...	.2	56	2220	.08	35	1	.3	94	6.8	15	--
24-30	.1	68	6000	.09	44	2	.4	117	7.0	5	--
DEC.											
01-02	.0	76	8620	.10	50	2	.4	128	6.9	5	--
03-12	.1	64	8760	.09	40	0	.3	109	6.8	5	--
13...	.0	76	13400	.10	50	2	.4	128	6.9	5	--
14-22	.1	64	14660	.09	40	0	.3	109	6.8	5	--
23...	.1	56	13700	.08	37	2	.4	94	6.6	10	--
24...	.1	64	15800	.09	40	0	.3	109	6.8	5	--
25-31	.1	56	14300	.08	37	2	.2	94	6.6	10	--
JAN.											
01-11	.1	55	12300	.07	34	4	.3	91	6.4	10	--
12...	--	--	--	--	50	2	--	103	7.2	--	--
13-24	.1	55	13200	.07	34	4	.3	91	6.4	10	--
25...	--	--	--	--	50	2	--	103	7.2	--	--
26-30	.1	55	10800	.07	34	4	.3	91	6.4	10	--
FEB.											
01-29	.1	57	3990	.08	33	1	.3	97	6.5	10	--
MAR.											
01...	.0	66	3710	.09	41	0	.4	100	7.0	5	6.4
02...	.0	66	4190	.09	46	6	.3	114	6.9	5	4.4
03...	.0	76	4970	.10	54	5	.3	133	7.1	5	5.5
04-11	.0	66	3480	.09	46	6	.3	114	6.9	5	4.4
12...	.0	66	5550	.09	41	0	.4	100	7.0	5	6.4
13...	.0	66	8070	.09	46	6	.3	114	6.9	5	4.4
14-15	.0	76	13700	.10	54	5	.3	133	7.1	5	5.5
16...	.0	66	14700	.09	46	6	.3	114	6.9	5	4.4
17-19	.0	66	13300	.09	41	0	.4	100	7.0	5	6.4
20...	.0	66	8770	.09	46	6	.3	114	6.9	5	4.4
21-22	.0	76	8620	.10	54	5	.3	133	7.1	5	5.5
23...	.0	66	6930	.09	46	6	.3	114	6.9	5	4.4
24...	.0	76	7220	.10	54	5	.3	133	7.1	5	5.5
25...	.0	66	6330	.09	46	6	.3	114	6.9	5	4.4
26...	.0	76	7650	.10	54	5	.3	133	7.1	5	5.5
27-31	.0	66	5400	.09	46	6	.3	114	6.9	5	4.4
APR.											
01-05	.2	66	4310	.09	46	2	.3	120	7.3	5	4.8
06...	.5	57	9530	.08	40	6	.2	98	7.2	10	3.3
07...	--	--	--	--	64	2	--	159	8.0	--	--
08-12	.5	57	13500	.08	40	6	.2	98	7.2	10	3.3
13...	.2	66	11800	.09	46	2	.3	120	7.3	5	4.8
14-30	.5	57	5930	.08	40	6	.2	98	7.2	10	3.3
MAY											
01-31	.1	62	5980	.08	40	1	.4	99	7.0	5	5.3
JUNE											
01-28	.2	62	2430	.08	40	5	.4	105	7.9	5	5.2
29...	1.8	--	--	--	32	0	--	138	8.1	--	--
30...	.2	62	1910	.08	40	5	.4	105	7.9	5	5.2
JULY											
01-05	.4	63	1820	.09	36	0	.5	110	7.5	10	7.2
06...	1.1	--	4300	.20	32	0	2.4	208	8.2	10	31
07-19	.4	63	2280	.09	36	0	.5	110	7.5	10	7.2
20-21	.2	69	3110	.09	44	1	.5	122	7.5	5	6.9
22-24	.4	63	2250	.09	36	0	.5	110	7.5	10	7.2
25-27	.2	69	1790	.09	44	1	.5	122	7.5	5	6.9
28-30	.4	63	2670	.09	36	0	.5	110	7.5	10	7.2
31...	.5	67	2610	.09	45	6	.3	113	7.3	5	5.2

## MOBILE RIVER BASIN

02429500 ALABAMA RIVER AT CLAIBORNE, ALA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	SILICA (STO2)	TOTAL IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)
AUG.												
01-05	15100	8.8	--	10	4.9	--	--	48	0	7.4	6.2	.1
06...	12400	8.8	--	9.5	2.0	--	--	44	0	6.4	5.6	--
07...	11600	8.8	--	10	4.9	--	--	48	0	7.4	6.2	.1
08...	14500	8.8	--	9.5	2.0	--	--	44	0	6.4	5.6	.1
09...	17900	8.8	--	10	4.9	--	--	48	0	7.4	6.2	.1
10...	19700	8.8	--	9.5	2.0	--	--	44	0	6.4	5.6	.1
11-12	19800	8.8	--	10	4.9	--	--	48	0	7.4	6.2	.1
13...	16300	8.8	--	9.5	2.0	--	--	44	0	6.4	5.6	.1
14-19	13300	8.8	--	10	4.5	--	--	48	0	7.4	6.2	.1
20...	12800	8.8	--	9.5	2.0	--	--	44	0	6.4	5.6	--
21...	12800	8.8	--	10	4.9	--	--	48	0	7.4	6.2	.1
22...	12600	8.8	--	9.5	2.0	--	--	44	0	6.4	5.6	.1
23-25	16000	8.8	--	10	4.9	--	--	48	0	7.4	6.2	.1
26-27	13800	8.8	--	9.5	2.0	--	--	44	0	6.4	5.6	.1
28-30	11800	8.8	--	10	4.9	--	--	48	0	7.4	6.2	.1
31...	11400	7.9	--	12	2.9	--	--	50	0	7.6	6.0	.2
SEPT.												
01...	11300	7.9	--	12	2.9	--	--	50	0	7.6	6.0	.2
02-03	10300	8.4	--	10	2.2	--	--	42	0	5.0	5.8	.2
04...	8020	7.9	--	12	2.9	--	--	50	0	7.6	6.0	.2
05-06	6980	8.4	--	10	2.2	--	--	42	0	5.0	5.8	.2
07...	6820	7.9	--	12	2.9	--	--	50	0	7.6	6.0	.2
08-14	7670	8.6	--	15	3.5	--	--	62	0	8.8	8.4	.2
15-19	6470	7.9	--	12	2.9	--	--	50	0	7.6	6.0	.2
20...	7000	8.0	--	10	2.2	--	--	42	0	5.0	5.8	.2
21-22	7410	7.9	--	12	2.9	--	--	50	0	7.6	6.0	.2
23-25	9530	8.4	--	10	2.2	--	--	42	0	5.0	5.8	.2
26-30	10300	7.9	--	12	2.9	--	--	50	0	7.6	6.0	.2
MTD. AVG. TIME	--	9.3	--	12	2.5	--	--	45	0	6.8	6.4	.1
MTD. AVG. TONS PER DAY	33800	11	--	11	2.8	--	--	46	0	6.7	5.1	.1
DATE	NITRATE (NO3)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (TONS PER DAY)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AC- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	SECURUM PLUS PE-	TAS- SIUM (NA+K)
AUG.												
01-05	.5	67	2730	.09	45	6	.3	113	7.3	5	5.2	
06...	.4	64	2140	.09	32	0	.7	96	7.1	5	8.8	
07...	.5	67	2100	.09	45	6	.3	113	7.3	5	5.0	
08...	.4	64	2510	.09	32	0	.7	96	7.1	5	8.8	
09...	.5	67	3240	.09	45	6	.3	113	7.3	5	5.2	
10...	.4	64	3400	.09	32	0	.7	96	7.1	5	8.8	
11-12	.5	67	3580	.09	45	6	.3	113	7.3	5	5.2	
13...	.4	64	2820	.09	32	0	.7	96	7.1	5	8.8	
14-19	.5	67	2410	.09	45	6	.3	113	7.3	5	5.2	
20...	.4	64	2210	.09	32	0	.7	96	7.1	5	8.8	
21...	.5	67	2320	.09	45	6	.3	113	7.3	5	5.2	
22...	.4	64	2180	.09	32	0	.7	96	7.1	5	8.8	
23-25	.5	67	2890	.09	45	6	.3	113	7.3	5	5.2	
26-27	.4	64	2390	.09	32	0	.7	96	7.1	5	8.8	
28-30	.5	67	2140	.09	45	6	.3	113	7.3	5	5.2	
31...	1.1	70	2160	.10	42	0	.5	123	7.4	5	7.8	
SEPT.												
01...	1.1	70	2140	.10	42	0	.5	123	7.4	5	7.8	
02-03	1.3	61	1700	.08	34	0	.5	104	7.2	5	7.1	
04...	1.1	70	1520	.10	42	0	.5	123	7.4	5	7.8	
05-06	1.3	61	1150	.08	34	0	.5	104	7.2	5	7.1	
07...	1.1	70	1290	.10	42	0	.5	123	7.4	5	7.8	
08-14	1.1	86	1780	.12	52	1	.6	150	7.2	5	6.9	
15-19	1.1	70	1220	.10	42	0	.5	123	7.4	5	7.8	
20...	1.3	61	1150	.08	34	0	.5	104	7.2	5	7.1	
21-22	1.1	70	1400	.10	42	0	.5	123	7.4	5	7.8	
23-25	1.3	61	1570	.08	34	0	.5	104	7.2	5	7.1	
26-30	1.1	70	1950	.10	42	0	.5	123	7.4	5	7.8	
MTD. AVG. TIME	.2	62	--	--	40	3	--	104	6.9	--	--	
MTD. AVG. TONS PER DAY	.3	64	--	--	40	3	.4	106	7.1	--	--	
PER DAY	18	--	--	--	--	--	--	--	--	--	--	

## 02429500 ALABAMA RIVER AT CLAIBORNE, ALA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	116	78	138	98	84	97	120	109	98	114	112	121
2.....	118	107	138	94	89	105	123	111	--	99	123	101
3.....	115	145	123	95	90	132	115	96	107	98	120	101
4.....	117	143	125	100	89	120	118	106	109	99	117	115
5.....	117	136	123	97	87	110	131	92	98	104	108	103
6.....	121	125	116	100	90	120	106	92	106	208	102	107
7.....	121	122	115	101	92	114	150	91	100	108	113	128
8.....	136	121	115	101	96	118	99	98	110	103	95	150
9.....	115	130	112	91	100	111	109	99	110	95	113	150
10.....	112	137	114	90	97	111	100	96	108	94	105	156
11.....	113	132	116	90	93	115	94	98	110	99	109	154
12.....	116	125	119	102	90	100	94	103	106	107	114	153
13.....	124	125	123	94	90	109	110	113	105	113	103	152
14.....	109	124	120	90	93	139	95	99	108	115	118	143
15.....	127	121	117	92	92	136	96	103	100	113	117	118
16.....	122	116	111	94	99	109	98	106	103	115	114	134
17.....	120	123	117	92	101	104	96	91	113	107	113	123
18.....	116	119	111	91	98	103	94	97	110	103	111	117
19.....	117	138	108	88	99	102	90	100	106	115	114	122
20.....	112	123	105	91	99	122	100	110	107	124	102	106
21.....	128	118	--	89	98	130	97	97	100	120	115	122
22.....	119	113	110	87	98	133	94	94	94	116	95	123
23.....	115	111	100	85	109	114	95	90	105	112	118	111
24.....	108	120	109	85	102	131	89	93	94	117	126	112
25.....	119	130	100	110	103	124	106	99	95	120	113	101
26.....	113	133	100	91	105	130	95	102	94	120	92	132
27.....	130	116	100	86	98	122	100	101	96	119	96	132
28.....	113	120	100	84	109	112	96	102	102	115	112	125
29.....	133	131	100	81	106	113	97	113	136	107	123	130
30.....	99	133	99	83	--	--	107	107	95	111	117	120
31.....	104	--	99	--	--	124	--	109	--	106	117	--
AVERAGE	117	123	112	92	96	117	104	100	104	112	111	125

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	16.0	12.0	9.0	10.0	4.0	16.0	17.0	22.0	27.0	27.0	24.0
2	16.0	14.0	13.0	9.0	11.0	6.0	16.0	17.0	--	27.0	27.0	24.0
3	17.0	14.0	11.0	11.0	10.0	8.0	17.0	18.0	23.0	26.0	27.0	24.0
4	18.0	12.0	6.0	12.0	7.0	6.0	17.0	18.0	23.0	26.0	27.0	25.0
5	19.0	11.0	9.0	8.0	8.0	6.0	16.0	18.0	24.0	26.0	27.0	25.0
6	19.0	11.0	11.0	9.0	9.0	8.0	14.0	16.0	23.0	26.0	27.0	25.0
7	19.0	11.0	12.0	8.0	8.0	8.0	15.0	16.0	22.0	26.0	27.0	25.0
8	21.0	11.0	13.0	6.0	7.0	7.0	16.0	19.0	24.0	26.0	27.0	24.0
9	21.0	11.0	14.0	8.0	7.0	10.0	16.0	19.0	25.0	27.0	27.0	23.0
10	20.0	11.0	14.0	11.0	8.0	13.0	16.0	18.0	25.0	26.0	27.0	24.0
11	18.0	13.0	14.0	9.0	8.0	12.0	16.0	19.0	26.0	26.0	27.0	22.0
12	18.0	14.0	11.0	9.0	5.0	13.0	14.0	21.0	26.0	26.0	26.0	23.0
13	18.0	13.0	11.0	8.0	6.0	11.0	16.0	21.0	26.0	26.0	27.0	22.0
14	18.0	13.0	14.0	6.0	6.0	10.0	17.0	22.0	26.0	26.0	27.0	22.0
15	19.0	13.0	14.0	6.0	7.0	10.0	16.0	23.0	26.0	26.0	27.0	23.0
16	20.0	11.0	12.0	6.0	6.0	12.0	15.0	23.0	27.0	26.0	27.0	23.0
17	19.0	11.0	13.0	4.0	5.0	10.0	14.0	23.0	27.0	26.0	27.0	23.0
18	18.0	13.0	16.0	4.0	6.0	10.0	16.0	22.0	27.0	26.0	27.0	24.0
19	17.0	12.0	16.0	6.0	5.0	11.0	18.0	22.0	26.0	26.0	27.0	21.0
20	16.0	10.0	16.0	6.0	6.0	14.0	18.0	20.0	26.0	26.0	26.0	22.0
21	16.0	12.0	--	6.0	6.0	14.0	18.0	19.0	26.0	26.0	27.0	23.0
22	16.0	14.0	14.0	7.0	5.0	12.0	18.0	19.0	26.0	27.0	27.0	24.0
23	16.0	14.0	10.0	7.0	5.0	11.0	19.0	20.0	25.0	27.0	27.0	22.0
24	17.0	15.0	10.0	6.0	4.0	9.0	17.0	21.0	26.0	27.0	27.0	23.0
25	17.0	14.0	11.0	6.0	4.0	9.0	15.0	22.0	27.0	27.0	27.0	23.0
26	16.0	16.0	10.0	6.0	6.0	9.0	16.0	22.0	27.0	27.0	27.0	24.0
27	14.0	17.0	8.0	6.0	6.0	10.0	19.0	21.0	26.0	27.0	26.0	24.0
28	14.0	13.0	9.0	6.0	7.0	11.0	18.0	21.0	24.0	28.0	26.0	22.0
29	14.0	12.0	9.0	7.0	7.0	13.0	18.0	21.0	25.0	27.0	24.0	23.0
30	16.0	15.0	8.0	8.0	--	--	18.0	22.0	27.0	27.0	23.0	24.0
31	18.0	--	9.0	--	--	15.0	--	23.0	--	27.0	23.0	--
MONTH	17.5	13.0	11.5	7.5	6.5	10.0	16.5	20.0	25.5	26.5	26.5	23.5

## MOBILE RIVER BASIN

## 02449000 TOMBIGBEE RIVER AT GAINESVILLE, ALA.

LOCATION.--Lat 32°49', long 88°09', in SE $\frac{1}{4}$  sec. 2, T.21 N., R.2 W., Sumter County, temperature recorder at gaging station on downstream side of right bank pier of bridge on State Highway 39 at Gainesville, 2 miles downstream from Noxubee River.

DRAINAGE AREA.--8,700 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1967.  
Water temperatures: October 1962 to September 1968.

## EXTREMES.--1967-68:

Water temperatures: Maximum, 30.0°C Aug. 30; minimum, 4.0°C Jan. 11-14.

Period of record:

Water temperatures: Maximum, 33.0°C July 13, 1966; minimum, 2.0°C Feb. 1, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DATE	DIS- CHARGE (CFS)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH																								
	OCT. 18.... 26....	1120 1760	64 49	0 0	8.0 8.2	52 58	0 18	148 140	7.6 7.0																								
TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968 (CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)																																	
	DAY																																
MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVER- AGE	
OCTOBER																																	
MAXIMUM	21	21	21	22	22	22	22	23	22	22	21	21	21	21	21	21	21	21	20	19	18	18	18	18	18	18	17	17	16	16	15	19	
MINIMUM	20	21	21	21	21	22	22	22	22	21	21	20	20	20	20	21	21	21	20	19	18	18	18	18	18	17	17	16	16	15	15	19	
NOVEMBER																																	
MAXIMUM	15	15	13	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	--	--	
MINIMUM	15	13	13	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	--	--	
DECEMBER																																	
MAXIMUM	11	11	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	10	10	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JANUARY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	4	4	4	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	4	4	4	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEBRUARY																																	
MAXIMUM	--	--	--	--	--	--	10	9	8	8	8	7	7	7	6	6	6	6	6	6	6	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	9	8	8	7	7	7	7	6	6	6	6	6	6	6	6	--	--	--	--	--	--	--	--	--	--	--	
MARCH																																	
MAXIMUM	--	7	7	8	8	9	9	11	12	13	14	15	14	14	13	12	11	11	12	13	14	15	15	11	--	--	8	9	12	13	14	16	11
MINIMUM	--	7	7	7	7	8	8	9	11	12	13	14	14	13	12	11	11	11	12	13	14	11	9	--	--	7	8	9	12	13	14	10	10
APRIL																																	
MAXIMUM	17	17	18	18	18	17	17	17	17	17	17	17	18	18	19	19	19	20	21	21	21	21	21	21	21	19	19	19	19	19	--	18	
MINIMUM	16	17	17	18	17	17	17	17	16	17	17	17	17	18	18	19	19	19	20	21	21	21	21	21	21	19	19	19	18	19	--	18	
MAY																																	
MAXIMUM	19	19	19	19	19	19	20	20	21	21	21	21	22	22	22	22	22	22	21	21	21	21	21	21	21	21	21	22	22	22	23	20	
MINIMUM	19	19	19	19	19	19	19	19	20	20	21	21	21	21	22	22	22	22	21	21	21	21	21	21	21	21	21	21	22	22	22	20	
JUNE																																	
MAXIMUM	23	23	24	25	26	26	27	27	28	28	29	29	29	28	28	28	29	29	28	28	27	28	28	28	28	29	29	28	28	29	--	27	
MINIMUM	23	23	24	25	26	26	26	26	27	27	28	28	28	28	28	28	28	28	28	28	27	27	27	27	28	28	28	28	27	27	28	--	
JULY																																	
MAXIMUM	29	29	29	28	28	27	27	26	23	22	22	23	24	24	24	26	26	26	27	27	27	27	27	27	27	27	28	28	28	28	26	26	
MINIMUM	28	28	28	27	27	27	26	23	22	22	22	22	23	24	24	24	26	26	26	26	26	26	27	27	27	27	27	28	28	28	28	25	
AUGUST																																	
MAXIMUM	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	27	27	28	28	28	29	30	29	29	29	29	28	28	27	26	25	27	
MINIMUM	28	28	28	28	28	28	27	27	28	28	28	28	28	28	28	27	27	26	26	27	27	27	27	27	28	28	28	27	26	25	24	27	
SEPTEMBER																																	
MAXIMUM	26	26	26	26	26	25	26	26	25	25	24	24	23	23	23	23	23	23	23	23	23	23	24	24	24	24	24	24	24	24	--	24	
MINIMUM	25	25	25	25	25	23	25	25	25	24	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	--	

02450250 SIPSEY FORK NEAR GRAYSON, ALA.

(Hydrologic bench-mark, pesticide, and radiochemical station)

LOCATION.--Lat 34°17'07", long 87°23'56", in N $\frac{1}{2}$  sec. 8, T.9 S., R.8 W., Winston County, at gaging station 0.1 mile downstream from bridge on Cranial Road, 0.5 mile downstream from Borden Creek, 4.5 miles west of Grayson, and 14 miles northeast of Hayleville.

DRAINAGE AREA.--91.3 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1966 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	FLUO- RIDE (F)
NOV.												
08...	46	7.6	.23	21	.9	1.2	.3	62	0	3.6	3.4	.0
DEC.												
JAN...	446	8.0	.22	12	2.2	2.0	.4	44	0	3.0	3.0	.0
JAN.												
12...	730	6.2	.18	10	1.2	.9	.2	30	0	4.2	1.0	.0
FEB.												
06...	115	6.8	.12	14	.7	1.1	.3	40	0	3.4	1.8	.1
MAR.												
05...	64	--	.11	15	1.8	--	--	48	0	3.8	1.4	.0
APR.												
02...	115	--	.26	12	3.6	--	--	54	0	1.8	1.8	.1
30...	171	6.3	.24	14	.2	--	--	44	0	3.6	.6	.0
JUNE												
10...	17	7.4	.22	16	1.0	--	--	52	0	2.6	.8	.0
28...	6.1	5.9	.24	16	.5	--	--	50	0	3.6	.4	.0
JULY												
31...	7.1	5.6	.28	16	2.7	--	--	65	0	3.2	.6	.1
SEPT.												
04...	3.2	7.3	.41	14	2.2	--	--	55	0	3.4	.6	.1



## 02450250 SIPSEY FORK NEAR GRAYSON, ALA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	NITRATE (NO3)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (TOMS PER AC-FT)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR	COLI- FORM (COL- ONIES PER 100 ML)	SODIUM PLUS PO- TAS- SIUM (NA+K)
NOV. 08...	.1	60	.08	56	5	120	7.0	8	--	--	--
DEC. 04...	.1	45	.06	39	3	85	7.3	10	--	--	--
JAN. 12...	.1	33	.04	30	5	64	7.3	9	--	102	--
FEB. 06...	.0	41	.06	38	5	87	7.3	8	--	72	--
MAR. 05...	.1	46	.06	45	0	98	7.5	6	0	25	.3
APR. 02...	.3	49	.07	45	0	80	7.3	12	0	600	2.0
MAY 30...	.0	49		36	0	79	7.3	21	0	2000	2.3
JUNE 10...	.0	55	.10	44	1	93	7.2	22	5	1000	1.1
JULY 28...	.0	53		42	1	89	7.2	21	5	80	1.5
AUG. 31...	.1	64	.08	51	0	93	7.3	23	5	105	3.2
SEPT. 04...	.4	58	.07	44	5	92	7.1	21	5	85	2.8

DATE	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	DIS- SOLVED OXYGEN
FIELD ANALYSES					
NOV. 08...	46	122	7.6	8	12.5
DEC. 04...	446	90	--	10	11.4
JAN. 12...	730	70	8.0	9	11.1
FEB. 06...	115	95	7.9	8	11.7
MAR. 05...	64	100	8.1	6	12.4
APR. 02...	115	80	8.0	12	10.4
MAY 30...	171	77	8.3	21	5.1
JUNE 10...	17	87	7.8	22	8.3
JULY 28...	6.1	88	7.7	21	6.7
AUG. 31...	7.1	93	7.6	23	10.0
SEPT. 04...	3.2	82	7.6	21	7.0

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
NOV 8, 1967	1405	59	1	.16	MAY 14.....	1400	2510	292	1980
JAN 12, 1968	1000	730	24	47	MAY 14.....	1500	2580	289	2010
APR 2.....	1020	123	16	5.3	MAY 14.....	1600	2540	202	1390
MAY 11.....	2055	1500	389	1370	MAY 14.....	1700	2460	169	1120
MAY 13.....	1400	604	48	78	JUL 31.....	0940	7.0	2	.04
MAY 13.....	1500	587	76	120	SEP 4.....	1030	1.7	2	.01
MAY 14.....	1300	2340	354	2240					

PESTICIDE ANALYSES IN MICROGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	ALDRIN	DDO	DDE	DDT	ELDRIN	ENDRIN	HEPTACHLOR	LINDANE	2,4-D	2,4,5-T	SILVEX
NOV. 08...	.00	.00	.00	.00	.00	.00	.00	.00			
MAY 13...	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DISSOLVED URANIUM ( $\mu$ g/l)	DISSOLVED RADIUM ( $\mu$ g/l)	DISSOLVED GROSS $\alpha$ ( $\mu$ g U/l)	DISSOLVED GROSS $\beta$ ( $\mu$ g/l)	SUSPENDED GROSS $\alpha$ ( $\mu$ g/l)	SUSPENDED GROSS $\beta$ ( $\mu$ g/l)	SUSPENDED SEDIMENTS ( $\mu$ g/l)
NOV. 08...	<.1	<.1	1.0	1.8	.8	1.7	1
MAY 13...	<.4	<.1	.6	1.1	2.6	<.4	9

## MOBILE RIVER BASIN

02465000 BLACK WARRIOR RIVER AT TUSCALOOSA, ALA.

LOCATION.--Lat 33°12'50", long 87°34'25", in SW $\frac{1}{4}$  sec.15, T.21 S., R.10 W., Tuscaloosa County, at gaging station near right bank on downstream side of pier of bridge on U.S. Highway 82 in Tuscaloosa, 0.2 mile upstream from Gulf Mobile and Ohio Railroad bridge and 0.8 mile upstream from Oliver Lock and Dam.

DRAINAGE AREA.--4,828 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1968.  
Water temperatures: November 1960 to September 1968.

## EXTREMES.--1967-68:

Dissolved solids: Maximum, 145 mg/l Aug. 10-16; minimum, 49 mg/l Jan. 13-17.  
Hardness: Maximum, 82 mg/l Aug. 1-16; minimum, 24 mg/l Jan. 13-17.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SI02)	TOTAL IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SC4)	CHLOR- IDE (CL)	FLUOR- IDE (F)
OCT.												
01-31	2310	6.9	.00	8.3	4.7	11	1.8	27	0	36	4.5	.1
NOV.												
01-10	5260	6.1	.00	11	3.8	12	2.0	26	0	40	4.7	.2
11-30	4960	5.8	.00	14	4.6	16	2.4	30	0	52	5.1	.3
DEC.												
01-09	16400	6.9	.04	12	4.6	12	2.1	30	0	43	4.6	.2
09-11	20000	7.3	.00	9.5	3.5	9.4	1.5	26	0	31	3.6	.1
12-13	27800	6.4	.02	8.3	2.7	8.8	1.3	21	0	29	3.4	.0
14...	21100	7.3	.00	9.5	3.5	9.4	1.5	26	0	31	3.6	.1
15-17	35400	6.4	.02	8.3	2.7	8.8	1.3	21	0	29	3.4	.0
18...	22300	7.3	.00	9.5	3.5	9.4	1.5	26	0	31	3.6	.1
19-31	39000	6.4	.02	8.3	2.7	8.8	1.3	21	0	29	3.4	.0
JAN.												
01-02	22600	7.0	.00	7.9	2.5	5.6	3.2	18	0	22	4.0	.1
03...	22600	6.9	.01	9.6	2.4	6.4	3.2	22	0	25	4.0	.1
04-06	30300	7.0	.00	7.9	2.5	5.6	3.2	18	0	22	4.0	.1
07-08	35800	6.9	.01	9.6	2.4	6.4	3.2	22	0	25	4.0	.1
09...	28700	7.0	.00	7.9	2.5	5.6	3.2	18	0	22	4.0	.1
10...	92100	6.9	.01	9.6	2.4	6.4	3.2	22	0	25	4.0	.1
11-12	16600	7.0	.00	7.9	2.5	5.6	3.2	18	0	22	4.0	.1
13-17	31600	5.6	.01	5.1	2.7	3.8	3.1	14	0	18	3.2	.1
18-29	17200	7.0	.00	7.9	2.5	5.6	3.2	18	0	22	4.0	.1
30-31	11800	6.9	.01	9.6	2.4	6.4	3.2	22	0	25	4.0	.1
FEB.												
01-23	5850	6.2	.00	8.4	3.2	6.1	3.1	20	0	24	4.1	.1
24-29	4420	5.9	.00	9.3	3.6	8.4	3.3	25	0	33	3.6	.2
MAR.												
01-03	4780	7.5	--	9.5	4.9	--	--	22	0	34	2.8	.1
04-05	3370	7.6	--	8.5	4.1	--	--	25	0	30	3.2	.1
06-08	2790	7.5	--	9.5	4.9	--	--	22	0	34	2.8	.1
09-10	3660	7.6	--	8.5	4.1	--	--	25	0	30	3.2	.1
11-12	23800	7.5	--	9.5	4.9	--	--	22	0	34	2.8	.1
13...	21700	7.6	--	8.5	4.1	--	--	25	0	30	3.2	.1
14-16	11000	7.5	--	9.5	4.9	--	--	22	0	34	2.8	.1
17-23	9090	7.8	--	14	5.6	--	--	24	0	51	4.0	.2
24-25	21000	7.6	--	8.5	4.1	--	--	25	0	30	3.2	.1
26-29	12500	7.5	--	9.5	4.9	--	--	22	0	34	2.8	.1
30-31	5240	7.6	--	8.5	4.1	--	--	25	0	30	3.2	.1
APR.												
01-05	14300	7.2	--	8.0	4.4	--	--	26	0	27	2.4	.1
06-10	13600	7.7	--	7.0	3.0	--	--	19	0	22	2.0	.1
11-12	11000	7.2	--	8.0	4.4	--	--	26	0	27	2.4	.1
13-18	9180	8.2	--	10	4.6	--	--	25	0	31	3.0	.1
19-30	7890	7.2	--	8.0	4.4	--	--	26	0	27	2.4	.1
MAY												
01-05	8110	7.3	--	8.0	3.4	--	--	24	0	24	2.0	.1
06-14	6210	8.7	--	10	4.6	--	--	28	0	31	2.8	.1
15...	32100	7.3	--	8.0	3.4	--	--	24	0	24	2.0	.1
16-19	26400	8.7	--	10	4.6	--	--	28	0	31	2.8	.1
20-31	6920	7.3	--	8.0	3.4	--	--	24	0	24	2.0	.1
JUNE												
01-20	2450	8.1	--	5.5	5.9	--	--	28	0	23	2.2	.1
21-30	1810	7.5	--	9.0	4.0	--	--	27	0	27	2.4	.1
JULY												
01-09	3430	7.1	--	10	3.9	--	--	26	0	31	2.6	.3
10-15	5900	6.5	--	7.5	3.7	--	--	18	0	28	2.2	.2
16-26	3170	7.1	--	10	3.9	--	--	26	0	31	2.6	.3
27-31	2410	5.4	--	12	3.9	--	--	26	0	37	3.4	.4
AUG.												
01-05	3380	8.1	--	12	6.8	--	--	35	0	44	2.6	.2
06-09	5380	9.3	--	16	7.3	--	--	37	0	56	4.0	.3
10-16	3520	9.8	--	18	9.0	--	--	45	0	62	5.0	.3
17-21	3240	9.3	--	16	7.3	--	--	37	0	56	4.0	.3
22-31	2390	8.1	--	12	6.8	--	--	35	0	44	2.8	.2
SEPT.												
01-07	3140	6.8	--	12	9.7	--	--	34	0	42	3.4	.2
08-17	1790	6.6	--	10	5.1	--	--	36	0	36	2.8	.3
18-30	1660	5.6	--	10	5.6	--	--	32	0	39	2.6	.2
MTD. AVG. TIME	--	7.0	--	9.0	3.6	--	--	23	0	30	3.5	.1
MTD. AVG. TONS PER DAY	9410	7.1	--	9.7	4.5	--	--	26	0	33	3.4	.2
	--	177	--	229	92	--	--	587	0	756	88	2.7

## EXTREMES, 1967-68.--Continued:

Specific conductance: Maximum daily, 245 micromhos Aug. 15; minimum daily, 78 micromhos Jan. 14.  
Water temperatures: Maximum, 29.0°C July 1, 18, 27-29, 31, Aug. 1-3, 5, 10-12, 14, 18, 19; minimum, 7.0°C Jan. 13-27. Mar. 1, 2.

Period of record:

Dissolved solids (1966-68): Maximum, 145 mg/l Aug. 10-16, 1968; minimum, 49 mg/l Jan. 13-17, 1968.

Hardness (1966-68): Maximum, 82 mg/l Aug. 10-16, 1968; minimum, 24 mg/l Jan. 13-17, 1968.

Specific conductance (1966-68): Maximum daily, 245 micromhos Aug. 15, 1968; minimum daily, 78 micromhos

Water temperatures: Maximum, 35.0°C Aug. 6, 1963; minimum, 5.0°C Jan. 30, 31, Dec. 25, 1963, Jan. 31, Feb. 1, 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		DIS- SOLVED SOLIDS (SUM OF CONSTITU- TENTS)	DIS- SOLVED SOLIDS (TONS PER DAY)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	SCDIUM PLUS PO- TAS- SIUM (NA+K)
	DATE	NITRATE (NO3)									
OCT.											
01-31 NOV.	2.7	89	555	.12	40	18	.8	136	6.8	10	--
01-10	4.6	97	1380	.13	43	22	.9	149	6.8	5	--
11-30	5.5	121	1620	.16	54	29	.8	184	6.8	5	--
DEC.											
01-08	3.4	104	4660	.14	49	24	.7	159	6.8	5	--
01-11	1.9	81	4370	.11	38	17	.7	122	6.8	5	--
12-13	2.0	81	5400	.12	32	15	.7	107	6.7	5	--
14...	1.9	81	4620	.11	38	17	.7	122	6.8	5	--
15-17	2.0	72	6880	.10	32	15	.7	107	6.7	5	--
18...	1.9	81	4880	.11	38	17	.7	122	6.8	5	--
19-31	2.0	72	7580	.10	32	15	.7	107	6.7	5	--
JAN.											
01-02	.7	62	3780	.08	30	15	.4	99	6.2	10	--
03...	.1	69	4210	.09	34	16	.5	114	6.3	20	--
04-06	.7	62	5070	.08	30	15	.4	99	6.2	10	--
07-08	.1	69	6670	.09	34	16	.5	114	6.3	20	--
09...	.7	62	4800	.08	30	15	.4	99	6.2	10	--
10...	.1	69	17200	.09	34	16	.5	114	6.3	20	--
11-12	.7	62	12800	.08	30	15	.4	99	6.2	10	--
13-17	.1	49	4180	.07	24	13	.3	82	6.0	10	--
18-29	.7	62	2880	.08	30	15	.4	99	6.2	10	--
30-31	.1	69	2200	.09	34	16	.5	114	6.3	20	--
FEB.											
01-23	1.9	67	1060	.09	34	18	.5	118	6.6	10	--
24-29	.6	80	955	.11	38	17	.6	140	6.3	10	--
MAR.											
01-03	2.8	80	1030	.11	44	26	.5	133	6.7	0	7.4
04-05	1.1	76	692	.10	38	17	.6	120	6.7	5	8.9
06-08	2.8	80	603	.11	44	26	.5	133	6.7	0	7.4
09-10	1.1	76	751	.10	38	17	.6	120	6.7	5	8.9
11-12	2.8	90	5140	.11	44	26	.5	133	6.7	0	7.4
13-17	1.1	76	6450	.10	38	17	.6	120	6.7	5	8.9
14-16	2.8	90	2380	.11	44	26	.5	133	6.7	0	7.4
17-23	3.7	109	2680	.15	58	38	.6	182	6.7	5	11
24-25	1.1	76	4310	.10	38	17	.6	120	6.7	5	8.9
26-29	2.8	90	2700	.11	44	26	.5	133	6.7	0	7.4
30-31	1.1	76	1080	.10	38	17	.6	120	6.7	5	8.9
APR.											
01-75	2.2	72	2780	.10	38	17	.5	114	6.9	5	7.7
06-10	1.4	58	2130	.08	30	14	.5	99	6.8	5	5.9
11-12	2.2	72	2140	.10	38	17	.5	114	6.9	5	7.7
13-18	2.2	78	1930	.11	44	26	.5	127	6.9	5	7.4
19-30	2.2	72	1530	.10	38	17	.5	114	6.9	5	7.7
MAY											
01-05	2.0	66	1450	.09	34	14	.5	104	7.0	5	7.1
06-14	3.1	83	1390	.11	44	21	.5	133	7.2	5	8.3
15...	2.0	66	5720	.09	34	14	.5	104	7.0	5	7.1
17-19	3.1	83	5920	.11	44	21	.5	133	7.2	5	8.3
20-31	2.0	66	1230	.09	34	14	.5	104	7.0	5	7.1
JUNE											
01-20	.6	65	430	.09	38	15	.5	103	7.1	5	5.9
21-30	.8	71	347	.10	39	17	.4	118	7.0	5	7.2
JULY											
01-09	2.3	79	732	.11	41	20	.6	138	7.0	5	8.7
10-15	2.2	66	1050	.09	39	24	.5	113	6.9	10	7.1
16-26	2.3	79	676	.11	41	20	.6	138	7.0	5	8.7
27-31	3.1	88	573	.12	46	25	.6	154	7.0	5	10
AUG.											
01-05	3.8	106	967	.14	58	29	.6	180	7.3	5	11
06-09	4.3	128	1860	.17	70	40	.7	216	7.3	5	13
10-16	4.8	145	1780	.20	82	45	.7	239	6.9	5	14
17-21	4.3	128	1120	.17	70	40	.7	216	7.3	5	13
22-31	3.8	106	684	.14	58	29	.6	180	7.3	5	11
SEPT.											
01-07	2.3	98	831	.13	70	42	.2	170	7.4	5	4.1
08-17	.6	91	440	.12	46	16	.8	150	7.4	10	12
18-30	1.7	92	412	.13	48	22	.7	159	7.3	5	11
WTD. AVG.	1.9	76	--	--	38	19	--	121	6.7	--	--
TIME											
WTD. AVG.	2.3	84	--	--	43	21	.6	136	6.9	--	--
TONS											
PER DAY	49	--	--	--	--	--	--	--	--	--	--

## MOBILE RIVER BASIN

02465000 BLACK WARRIOR RIVER AT TUSCALOOSA, ALA.--Continued

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	FLUO- RIDE (F)
ANALYSES OF ADDITIONAL SAMPLES												
OCT.												
05...	1160	--	--	--	--	--	--	24	0	--	5.4	--
25...	5050	--	--	--	--	--	--	26	0	--	4.4	--
NOV.												
09...	2330	--	--	--	--	--	--	28	0	--	3.6	--
DEC.												
14...	13300	--	--	--	--	--	--	18	0	--	2.2	--
JAN.												
11...	82000	--	--	--	--	--	--	16	0	--	2.0	--
24...	21100	--	--	--	--	--	--	18	0	--	1.8	--
FEB.												
26...	3080	--	--	--	--	--	--	22	0	--	2.2	--
SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968												
DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	138	155	188	97	123	129	109	111	100	127	167	172
2.....	136	151	183	104	120	130	123	111	102	130	175	186
3.....	143	150	197	110	119	130	119	119	98	144	179	177
4.....	135	149	178	--	122	110	111	115	100	136	188	176
5.....	145	151	170	102	113	124	104	118	106	139	199	167
6.....	140	153	158	108	119	136	88	137	111	140	203	165
7.....	136	159	163	115	120	133	93	134	110	137	212	155
8.....	148	162	158	120	119	134	99	136	97	140	228	148
9.....	144	168	146	107	117	124	101	136	93	139	232	142
10.....	141	173	139	112	117	123	101	140	97	109	241	139
11.....	144	183	135	98	112	133	114	141	97	116	242	150
12.....	144	182	98	95	114	134	126	136	93	105	241	153
13.....	145	181	113	82	117	112	133	135	94	120	241	168
14.....	144	178	107	78	117	129	132	134	95	117	240	164
15.....	146	183	133	82	115	146	132	112	95	111	245	163
16.....	144	199	106	85	122	140	139	--	101	146	239	156
17.....	152	194	112	85	114	179	134	133	100	129	223	159
18.....	150	192	113	90	118	175	129	134	106	137	223	168
19.....	148	190	136	96	115	193	123	124	108	126	223	162
20.....	149	194	120	97	121	178	112	118	109	140	215	158
21.....	141	220	118	101	118	193	112	112	110	139	207	158
22.....	139	195	117	102	123	190	107	103	114	131	188	158
23.....	146	207	92	99	133	178	112	103	109	139	190	159
24.....	145	211	112	99	140	126	111	103	112	141	178	158
25.....	145	210	107	97	137	124	110	104	112	140	181	158
26.....	142	210	97	95	144	132	111	104	116	137	176	158
27.....	145	206	95	97	148	131	111	98	115	150	177	160
28.....	147	210	99	95	142	130	113	106	119	150	190	164
29.....	145	206	100	96	145	127	117	99	124	151	191	166
30.....	146	205	97	115	--	126	121	101	128	155	174	167
31.....	147	--	102	121	--	114	--	105	--	164	176	--
AVERAGE	143	184	128	99	123	140	114	118	105	135	205	161



## MOBILE RIVER BASIN

02470040 TOMBIGBEE RIVER NEAR JACKSON, ALA.  
(International Hydrological Decade River Station)

LOCATION.--Lat 31°31', long 87°56', in sec.1, T.6 N., R.1 E., Clarke County, at gaging station on downstream side of bridge near midstream on U.S. Highway 43, 1 mile west of Jackson, 2.5 miles upstream from Southern Railroad bridge, 5 miles upstream from Bassett Creek, and 8.3 miles downstream from lock 1.

DRAINAGE AREA.--19,000 sq mi, approximately, downstream from gaging station.

PERIOD OF RECORD.--Chemical analyses: March 1966 to September 1968.

Water temperatures: October 1962 to September 1968.

EXTREMES.--1967-68:

Dissolved solids: Maximum, 131 mg/l Sept. 8, 21-30; minimum, 49 mg/l Mar. 21, 24, 28-31.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	TOTAL IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	FLUO- RIDE (F)
DEC.												
01-30	4930	12	.10	15	4.3	16	2.0	45	0	25	20	.1
31...	25800	--	--	--	--	--	--	46	0	--	17	--
NOV.												
01...	28000	--	--	--	--	--	--	46	0	--	30	--
02...	29000	9.3	.01	16	2.9	11	2.2	47	0	19	14	.1
03-06	18700	7.9	.09	14	1.7	7.7	1.9	38	0	16	9.9	.3
07-28	10400	9.3	.01	16	2.9	11	2.2	47	0	19	14	.1
29-30	14400	8.1	.04	16	3.2	8.3	2.2	45	0	23	9.3	.1
DEC.												
01-03	27300	8.1	.04	16	3.2	8.3	2.2	45	0	23	9.3	.1
04...	44300	7.3	.00	19	4.0	9.8	2.5	55	0	29	10.3	.2
05...	51800	8.1	.04	16	3.2	8.3	2.2	45	0	23	9.3	.1
06-07	48100	7.3	.00	19	4.0	9.8	2.5	55	0	29	10	.2
08-11	41200	8.1	.04	16	3.2	8.3	2.2	45	0	23	9.3	.1
12-13	58600	7.5	.05	16	2.4	6.3	2.3	45	0	19	6.9	.2
14...	66900	8.1	.04	16	3.2	8.3	2.2	45	0	23	9.3	.1
15...	72700	7.5	.05	16	2.4	6.3	2.3	45	0	19	6.9	.2
16-27	100000	7.5	.06	13	1.3	4.3	1.8	37	0	14	4.0	.1
28-30	122000	6.7	.08	10	1.7	3.7	1.7	33	0	12	3.4	.0
31...	124000	7.3	.02	12	1.0	3.6	2.9	32	0	11	4.3	.1
JAN.												
01-05	123000	7.3	.02	12	1.0	3.6	2.9	32	0	11	4.3	.1
06-13	102000	9.8	.02	14	1.2	4.6	2.8	36	0	14	5.3	.2
14-16	105000	7.3	.02	12	1.0	3.6	2.9	32	0	11	4.3	.1
17-25	118000	6.4	.04	9.5	1.0	3.3	2.4	26	0	11	2.8	.1
26-30	79400	7.3	.02	12	1.0	3.6	2.9	32	0	11	4.3	.1
31...	38900	8.8	.02	14	1.2	4.6	2.8	36	0	14	5.3	.2
FEB.												
01-12	23100	9.3	.05	14	1.9	6.3	2.6	40	0	14	6.9	.1
13-29	15800	9.3	.02	16	1.2	8.6	2.6	43	0	16	10	.2
MAR.												
01-06	28500	8.2	--	16	2.0	--	--	40	0	16	7.0	.1
07-11	16800	9.5	--	18	2.2	--	--	48	0	14	8.4	.1
12-15	46800	8.2	--	16	2.0	--	--	40	0	16	7.0	.1
16...	52100	9.5	--	18	2.2	--	--	48	0	14	8.4	.1
17-20	39500	8.2	--	16	2.0	--	--	40	0	16	7.0	.1
21...	29100	4.6	--	13	2.1	--	--	37	0	6.2	4.0	.1
22-23	36200	8.2	--	16	2.0	--	--	40	0	16	7.0	.1
24...	48200	4.6	--	13	2.1	--	--	37	0	6.2	4.0	.1
25-27	62300	8.2	--	16	2.0	--	--	40	0	16	7.0	.1
28-31	63800	4.6	--	13	2.1	--	--	37	0	6.2	4.0	.1
APR.												
01-04	39300	8.5	--	14	1.2	--	--	40	0	13	4.0	.1
05-07	66400	8.5	--	15	2.1	--	--	48	0	13	4.2	.1
08...	77300	8.3	--	17	2.1	--	--	50	0	6.6	7.0	.1
09-10	70700	8.5	--	15	2.1	--	--	48	0	13	4.2	.1
11-13	59000	8.5	--	14	1.2	--	--	40	0	13	4.0	.1
14-24	32800	8.5	--	15	2.1	--	--	48	0	13	4.2	.1
25-30	26800	8.3	--	17	2.1	--	--	50	0	6.6	7.0	.1
MAY												
01-05	40700	11	--	17	2.1	--	--	54	0	14	6.0	.1
06...	23300	9.4	--	13	2.3	--	--	42	0	12	5.6	.1
07-20	29400	11	--	17	2.1	--	--	54	0	14	6.0	.1
21-31	46600	9.4	--	13	2.3	--	--	42	0	12	5.6	.1
JUNE												
01...	15100	--	--	14	3.2	--	--	46	0	--	4.6	.1
02-10	8810	10	--	12	4.9	--	--	55	0	11	6.6	.1
11-20	6920	9.4	--	17	2.8	--	--	52	0	15	13	.1
21...	3500	--	--	16	3.9	--	--	50	0	--	21	.2
22-30	5090	9.4	--	17	2.8	--	--	52	0	15	13	.1

## MOBILE RIVER BASIN

217

02470040 TOMBIGBEE RIVER NEAR JACKSON, ALA.--Continued

## EXTREMES, 1967-68.--Continued:

Hardness: Maximum, 67 mg/l Sept. 12-20; minimum, 28 mg/l Jan. 17-25.

Specific conductance: Maximum daily, 240 micromhos Sept. 25; minimum daily, 77 micromhos Jan. 23.

Water temperatures: Maximum, 32.0°C Aug. 11; minimum, 8.0°C Jan. 13-27. 29.

## Period of record:

Dissolved solids: Maximum, 136 mg/l Sept. 14, 15, 25, 1966; minimum, 49 mg/l Mar. 21, 24, 28-31, 1968.

Hardness: Maximum, 68 mg/l Sept. 14, 15, 25, 1966 and Aug. 5, 1967; minimum, 28 mg/l Jan. 17-25, 1968.

Specific conductance: Maximum daily, 240 micromhos Sept. 25, 1968; minimum daily, 77 micromhos Jan. 23, 1968.

Water temperatures: Maximum, 32.0°C Aug. 11, 1968; minimum, 6.0°C on several days during January 1964 and February 1966.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	NITRATE (NO3)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (TONS PER DAY)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARO- NESS (CA,MG)	NON- CAR- BONATE HARO- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)	PH	COLOR	SODIUM PLUS PC- TAS- SIUM (NA+K)
OCT.											
01-30	.6	117	1560	.16	55	18	.9	203	6.6	15	--
31...	--	--	--	--	52	14	--	185	7.5	--	--
NOV.											
01...	--	--	--	--	54	16	--	224	7.4	--	--
02...	.6	98	7670	.13	52	13	.7	169	6.8	15	--
03-06	.4	79	3990	.11	42	11	.5	131	6.7	15	--
07-28	.6	98	2750	.13	52	13	.7	169	6.8	15	--
29-30	1.0	93	3620	.13	53	16	.5	161	6.6	15	--
DEC.											
01-03	1.0	93	6860	.13	53	16	.5	161	6.6	15	--
04...	1.2	110	13200	.15	64	19	.5	192	6.8	15	--
05...	1.0	93	13000	.13	53	16	.5	161	6.6	15	--
06-07	1.2	110	14300	.15	64	19	.5	192	6.8	15	--
08-11	1.0	93	10300	.13	53	16	.5	161	6.6	15	--
12-13	.4	83	13100	.11	50	13	.4	139	6.7	15	--
14...	1.0	93	16800	.13	53	16	.5	161	6.6	15	--
15...	.4	83	16300	.11	50	13	.4	139	6.7	15	--
16-27	.2	64	17300	.09	38	8	.3	105	6.4	15	--
28-30	.2	55	18100	.07	32	5	.3	88	6.7	15	--
31...	.1	58	19400	.08	34	8	.3	99	6.6	10	--
JAN.											
01-05	.1	58	19300	.08	34	8	.3	99	6.6	10	--
06-13	.1	69	19000	.09	40	10	.3	114	6.6	10	--
14-16	.1	58	16400	.08	34	8	.3	99	6.6	10	--
17-25	.1	50	15900	.07	28	7	.3	81	6.6	10	--
26-30	.1	58	12400	.08	34	8	.3	99	6.6	10	--
31...	.1	69	7250	.09	40	10	.3	114	6.6	10	--
FEB.											
01-12	.1	75	4680	.10	43	10	.4	127	6.7	10	--
13-29	.6	86	3670	.12	45	10	.6	152	6.7	10	--
MAR.											
01-06	.2	75	5770	.10	48	15	.3	129	6.7	5	5.3
07-11	.0	82	3720	.11	54	15	.3	147	6.7	5	5.6
12-15	.2	75	9480	.10	48	15	.3	129	6.7	5	5.3
16...	.0	82	11500	.11	54	15	.3	147	6.7	5	5.6
17-20	.2	75	8000	.10	48	15	.3	129	6.7	5	5.3
21...	.0	49	3850	.07	41	11	.0	108	6.7	10	.7
22-23	.2	75	7330	.10	48	15	.3	129	6.7	5	5.3
24...	.0	49	6380	.07	41	11	.0	108	6.7	10	.7
25-27	.2	75	12600	.10	48	15	.3	129	6.7	5	5.3
28-31	.0	49	8440	.07	41	11	.0	108	6.7	10	.7
APR.											
01-04	.5	67	7110	.09	40	7	.4	106	7.2	20	5.9
05-07	1.2	74	13300	.10	46	7	.4	119	7.2	20	6.4
08...	1.2	71	14800	.10	51	10	.2	141	7.2	10	3.6
09-10	1.2	74	14100	.10	46	7	.4	119	7.2	20	6.4
11-13	.5	67	10700	.09	40	7	.4	106	7.2	20	5.9
14-24	1.2	74	6550	.10	46	7	.4	119	7.2	20	6.4
25-30	1.2	71	5140	.10	51	10	.2	141	7.2	10	3.6
MAY											
01-05	1.4	87	9560	.12	51	7	.5	132	7.4	20	8.1
06...	1.1	71	4470	.10	42	8	.4	107	7.2	--	6.5
07-20	1.4	87	6910	.12	51	7	.5	132	7.4	20	8.1
21-31	1.1	71	8930	.10	42	8	.4	107	7.2	--	6.5
JUNE											
01...	.9	--	--	--	48	10	--	109	7.4	--	--
02-10	.7	80	1900	.11	50	5	.5	128	7.8	30	7.6
11-20	.4	95	1780	.13	54	11	.7	156	7.3	20	11
21...	1.2	--	--	--	56	15	--	160	8.1	--	--
22-30	.4	95	1310	.13	54	11	.7	156	7.3	20	11

## 02470040 TOMBIGBEE RIVER NEAR JACKSON, ALA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SI02)	TOTAL IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)	FLUO- RIDE (F)
JULY												
01-05	3510	10	--	16	2.7	--	--	48	0	15	11	.2
06-12	18800	11	--	18	1.5	--	--	49	0	16	15	.2
13-14	38600	10	--	16	2.7	--	--	48	0	15	11	.2
15-23	12100	6.7	--	16	1.0	--	--	43	0	11	4.8	.2
24-29	8150	10	--	16	2.7	--	--	48	0	15	11	.2
30...	5210	11	--	18	1.5	--	--	49	0	16	15	.2
31...	5450	8.1	--	15	3.3	--	--	43	0	19	12	.3
AUG.												
01-16	7970	8.1	--	15	3.3	--	--	43	0	19	12	.3
17...	11600	7.5	--	--	--	--	--	39	0	18	29	.2
18-29	7990	8.1	--	15	3.3	--	--	43	0	19	12	.3
30-31	2780	9.9	--	16	4.4	--	--	46	0	21	13	.2
SEPT.												
01-07	5820	9.9	--	16	4.4	--	--	46	0	21	13	.2
08...	9080	9.3	--	18	4.1	--	--	54	0	33	18	.3
09-11	5590	9.9	--	16	4.4	--	--	46	0	21	13	.2
12-20	3340	9.4	--	18	5.4	--	--	52	0	24	13	.3
21-30	3760	9.3	--	18	4.1	--	--	54	0	33	18	.3
MTD. AVG. TIME	--	8.2	--	14	1.8	--	--	40	0	14	6.3	.1
MTD. AVG. TONS	31100	9.0	--	15	2.6	--	--	45	0	17	10	.1
PER DAY	--	689	--	1170	154	--	--	3340	0	1180	526	10

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	206	224	159	92	117	143	101	144	104	147	152	167
2.....	210	167	165	93	126	133	102	139	124	151	153	161
3.....	215	156	177	95	125	131	108	144	116	155	153	158
4.....	211	127	203	98	129	132	107	132	120	152	152	156
5.....	218	128	178	105	125	126	110	123	124	151	154	164
6.....	209	155	206	109	128	136	122	118	129	166	153	176
7.....	217	164	192	115	122	145	124	124	133	171	161	179
8.....	213	171	178	115	129	150	142	133	134	166	160	228
9.....	209	176	165	114	126	153	117	129	135	164	160	184
10.....	207	176	167	112	138	144	109	135	139	167	166	180
11.....	223	173	158	111	142	147	108	133	147	185	158	184
12.....	218	174	152	114	140	143	106	128	151	165	155	194
13.....	223	173	141	119	152	136	106	131	163	148	157	195
14.....	220	183	175	103	157	137	109	137	156	147	157	196
15.....	224	177	148	95	161	126	120	138	156	114	159	194
16.....	227	192	110	91	152	147	119	123	156	113	167	190
17.....	234	197	109	86	159	136	112	125	152	112	209	191
18.....	226	197	111	84	154	132	112	133	155	111	150	194
19.....	228	190	113	84	155	125	113	145	165	111	151	192
20.....	225	191	108	81	152	119	114	129	156	121	149	198
21.....	235	188	110	78	154	116	118	116	181	120	155	209
22.....	219	187	113	78	151	123	129	112	162	122	147	218
23.....	207	187	112	77	151	125	131	113	162	128	158	227
24.....	211	189	111	78	149	114	133	107	152	132	157	237
25.....	207	190	112	81	153	122	138	113	146	135	160	240
26.....	214	190	107	90	149	140	142	100	153	146	163	233
27.....	220	180	96	105	156	130	140	103	152	146	160	222
28.....	212	172	96	107	155	108	142	105	153	153	166	223
29.....	223	163	92	105	155	106	144	105	162	157	166	217
30.....	220	157	93	108	--	105	145	100	158	161	166	216
31.....	189	--	93	115	--	102	--	102	--	153	173	--
AVERAGE	216	176	137	98	143	130	120	123	146	144	159	197





PASCAGOULA RIVER BASIN  
02479000 PASCAGOULA RIVER AT MERRILL, MISS.  
(International Hydrological Decade River Station)

LOCATION.--Lat 30°58'40", long 88°43'35" in SW $\frac{1}{4}$  sec.18, T.1 S., R.7 W., St. Stephens meridian, George County, at gaging station at bridge on highway between Merrill and Avent, 0.5 mile downstream from confluence of Leaf and Chickasawhay Rivers, and 0.5 mile west of Merrill.

DRAINAGE AREA.--6,600 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: January 1966 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968											
DATE	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	FLUO- RIDE (F)
OCT.											
11...	1230	11	0.01	4.4	1.7	52	1.2	18	4.6	8.2	0.2
NOV.											
01...	5300	7.6	.15	4.0	1.0	8.3	1.5	10	4.6	15	.1
DEC.											
04...	1770	11	.01	6.4	.7	17	1.3	17	7.4	26	.1
JAN.											
08...	1790	9.3	.11	6.9	1.2	9.0	1.0	15	5.0	18	.0
JAN.											
31...	6210	10	.11	7.9	1.3	12	1.2	19	6.2	23	.0
MAR.											
05...	7230	10	.07	6.7	1.3	23	1.4	18	5.0	37	.1
APR.											
01...	7230	8.6	.04	6.0	1.2	8.0	1.4	15	6.2	16	.1
MAY											
03...	11800	8.9	.11	6.3	1.0	21	1.5	18	4.4	35	.1
JUNE											
06...	2180	10	.12	7.1	1.5	58	1.4	20	9.0	90	.1
JULY											
03...	1620	8.7	.01	8.4	1.5	120	2.0	17	13	187	.2
AUG.											
01...	1160	9.9	.01	4.4	.2	34	1.2	16	8.2	48	.1
SEPT.											
04...	1060	8.7	.01	5.6	1.2	68	1.7	14	9.0	107	.2
DATE	NITRATE (NO <sub>3</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECIFIC CON- DUCTANCE (MICRO- MHOS AT 25°C)	PH	COLOR				
OCT.											
11...	0.3	190	18	3	314	6.2	20				
NOV.											
01...	.1	64	14	6	74	5.7	40				
DEC.											
04...	.3	82	19	5	133	6.3	15				
JAN.											
08...	.3	74	22	10	95	6.0	10				
JAN.											
31...	.4	90	25	9	126	6.0	15				
MAR.											
05...	.3	110	22	7	177	6.3	30				
APR.											
01...	.3	66	20	8	95	6.1	20				
MAY											
03	.0	104	20	5	165	6.3	40				
JUNE											
06...	.1	208	24	8	378	6.5	30				
JULY											
03...	.3	356	27	13	692	6.3	15				
AUG.											
01...	.3	114	12	0	208	6.1	15				
SEPT.											
04...	.3	214	19	8	420	5.9	20				

02479155 CYPRESS CREEK NEAR JANICE, MISS.  
(Hydrologic bench-mark station)

LOCATION.--Lat 31°01'30", long 89°01'00", in NW $\frac{1}{4}$  sec.29, T.1 N., R.10 W., St. Stephens meridian, center of stream at bridge on State Highway 29, 1.2 miles east of Janice.

DRAINAGE AREA.--52.2 sq mi.

PERIOD OF RECORD.--Chemical analyses: December 1966 to September 1968.

REMARKS.--Pesticide and radiochemical samples are collected twice a year at high and low flow at this station.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968											
DATE	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	FLUO- RIDE (F)
OCT.											
10...	7.4	11	0.01	1.0	0.6	2.6	0.4	9	0.0	2.5	0.0
NOV.											
28...	11	14	.27	1.0	.4	2.2	.6	3	.2	4.2	.0
JAN.											
08...	89	8.8	.07	1.1	.3	1.8	.1	3	.8	3.0	.0
FEB.											
14...	26	11	.11	.8	.2	2.2	.2	4	.2	3.2	.0
MAR.											
06...	32	12	.14	1.1	.5	2.0	.3	5	.4	3.6	.0
APR.											
04...	21	11	.13	.8	.0	3.0	.5	5	.4	3.0	.1
MAY											
03...	20	11	.14	.9	.4	2.2	.7	4	.6	3.0	.0
JUNE											
06...	7	9.6	.14	1.6	.0	2.9	.8	6	.8	4.4	.0
JULY											
03...	6.2	8.5	.00	.9	.2	2.3	.6	6	.4	3.8	.0
AUG.											
01...	5.0	8.0	.08	1.2	.5	2.0	.1	6	1.4	3.1	.0
SEPT.											
04	5.0	10	.00	1.6	.0	2.0	.6	4	.2	3.2	.0

## PASCAGOULA RIVER BASIN

221

02479155 CYPRESS CREEK NEAR JANICE, MISS.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	NITRATE (NO3)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECIFIC CON- DUCTANCE (MICRO- MHOS AT 25°C)	COLOR	PH
OCT.							
10...	0.4	27	5	0	19	20	6.4
NOV.							
28...	.3	35	4	2	21	30	5.6
JAN.							
08...	.4	30	4	2	22	50	5.6
FEB.							
14...	.1	28	3	0	20	30	5.8
MAR.							
06...	.0	33	5	3	22	30	5.5
APR.							
04...	.7	33	2	0	24	40	6.0
MAY							
03...	.6	38	4	1	22	60	5.8
JUNE							
06...	.1	28	4	0	22	40	6.0
JULY							
03...	.4	32	3	0	21	30	5.9
AUG.							
01...	.0	28	5	0	23	30	6.1
SEPT.							
04...	.4	27	4	1	20	20	5.9

## PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT DISCHARGE JANUARY 1968

DATE	TIME (24 HOUR)	DISCHARGE (CFS)	SEDIMENT CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS PER DAY)
JAN. 19. 1968	1320	3430	205	1900
JAN. 19.....	1345	3310	131	1170
JAN. 19.....	1500	2900	148	1160
JAN. 19.....	1610	2540	129	885
JAN. 19.....	1705	2200	120	713
JAN. 19.....	1810	1890	246	1260
JAN. 19.....	1910	1600	239	1030
JAN. 19.....	2020	1320	177	631
JAN. 19.....	2140	1070	184	532
JAN. 19.....	2400	813	193	424
JAN. 20.....	0845	470	190	241
JAN. 20.....	1300	374	187	189
JAN. 20.....	1715	301	127	103
JAN. 21.....	1540	172	56	26

## PEARL RIVER BASIN

02483000 TUSCOLAMETA CREEK AT WALNUT GROVE, MISS.

LOCATION.--Lat 32°35', long 89°28', in NW¼ sec.34, T.9 N., R.8 E., Choctaw meridian, Leake County, at bridge on State Highway 35, 0.4 mile southwest of Walnut Grove.

DRAINAGE AREA.--411 sq mi (combined drainage for all channels).

PERIOD OF RECORD.--Chemical analyses: October 1966 to April 1968 (discontinued).

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	--	--	89	73	76	71	103	77	71	70	79	76	87	72
2	--	--	73	64	160	52	161	103	74	72	81	76	95	81
3	--	--	66	59	81	57	250	140	74	73	83	81	100	95
4	--	--	61	59	65	59	150	130	74	72	84	82	100	71
5	--	--	63	61	65	61	180	150	73	72	86	84	73	70
6	--	--	65	63	70	65	195	154	73	72	90	86	71	69
7	--	--	68	65	80	70	154	129	74	73	91	90	76	70
8	--	--	71	68	92	80	227	128	76	74	93	90	78	75
9	--	--	73	71	99	86	260	228	76	76	93	92	81	75
10	--	--	74	72	121	63	--	--	76	75	93	91	85	81
11	--	--	75	74	85	62	--	--	75	75	91	65	86	84
12	--	--	76	74	84	63	--	--	75	74	65	57	88	86
13	--	--	76	75	93	84	--	--	74	74	63	57	92	88
14	--	--	77	75	120	92	71	68	74	73	63	63	127	72
15	--	--	78	77	119	74	70	68	75	70	67	63	123	112
16	--	--	78	74	74	55	70	68	69	66	73	68	112	111
17	--	--	80	79	55	43	73	70	66	65	73	73	111	109
18	55	53	81	80	48	42	74	72	65	65	73	72	110	110
19	59	52	81	79	56	46	75	74	65	65	72	72	132	86
20	73	48	79	77	61	56	75	75	67	65	73	72	135	100
21	--	--	78	76	71	57	75	74	68	67	73	73	170	135
22	--	--	76	73	61	54	74	71	67	66	73	73	238	155
23	85	58	76	72	58	54	70	56	67	67	74	74	300	185
24	88	75	74	72	53	52	58	55	67	66	74	73	--	--
25	95	88	73	72	57	52	58	57	66	66	72	72	--	--
26	99	94	74	72	64	56	57	56	68	66	73	72	--	--
27	102	99	74	73	63	63	60	57	70	67	73	72	--	--
28	101	91	74	73	64	63	61	60	77	70	74	73	--	--
29	91	87	73	72	67	64	64	62	95	77	74	73	--	--
30	95	88	77	73	74	64	65	63	--	--	73	73	--	--
31	95	89	--	--	81	74	70	65	--	--	73	73	--	--

## PEARL RIVER BASIN

02488500 PEARL RIVER NEAR MONTICELLO, MISS.

LOCATION.--Lat 31°33', long 90°05', in SW $\frac{1}{4}$  sec.23, T.7 N., R.21 W., St. Stephens meridian, Lawrence County, at gaging station at bridge on U.S. Highway 84, 1.0 miles east of Monticello, 2.5 miles upstream from Halls Creek, and 3 miles upstream from Silver Creek.

DRAINAGE AREA.--5,040 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: April 1965 to September 1968.  
Water temperatures: November 1965 to September 1968.

## EXTREMES.--1967-68:

Specific conductance: Maximum, 181 micromhos Sept. 11; minimum, 42 micromhos Jan. 30, 31.  
Water temperatures: Maximum, 32.0°C July 27; minimum, 6.0°C Jan. 14-24.

## Period of record:

Specific conductance: Maximum, 181 micromhos Sept. 11, 1968; minimum, 22 micromhos June 17, 1967.  
Water temperatures: Maximum, 32.0°C July 15, 29, 1966, July 27, 1968; minimum, 6.0°C Feb. 1, 1966, Jan. 14-24, 1968.

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	80	77	85	80	80	75	65	64	47	43	69	63
2	77	74	94	83	79	74	63	62	54	47	76	69
3	124	79	96	87	79	76	64	62	65	54	78	72
4	140	124	100	85	77	72	62	55	75	65	72	66
5	153	141	108	97	87	77	57	55	75	70	66	64
6	149	113	98	80	108	84	61	57	65	60	69	62
7	118	108	81	77	107	75	55	51	60	57	70	63
8	119	105	77	74	81	75	63	54	57	55	63	62
9	105	96	74	72	76	72	54	52	64	54	64	63
10	96	90	74	73	75	69	52	48	65	64	70	64
11	90	85	74	72	70	69	49	48	67	64	73	70
12	85	81	80	74	75	68	50	46	70	67	73	57
13	83	82	88	80	85	73	53	49	70	68	65	57
14	86	82	109	89	85	75	53	51	69	68	61	57
15	87	84	123	110	76	44	51	49	68	63	62	58
16	90	87	123	106	65	51	49	49	65	63	62	60
17	85	81	110	100	68	58	49	49	74	65	60	59
18	85	79	118	110	66	66	50	49	85	73	60	57
19	86	80	110	96	66	64	58	50	80	80	59	57
20	80	76	96	92	70	66	48	46	79	73	60	56
21	83	77	91	90	70	70	46	46	77	73	68	60
22	88	82	90	89	67	64	46	46	78	76	70	58
23	90	89	89	85	76	67	44	43	76	74	59	53
24	90	89	93	90	77	73	53	43	74	73	59	55
25	100	90	100	93	74	72	67	53	73	71	57	56
26	104	101	101	100	72	68	66	65	71	68	58	56
27	105	104	100	83	68	66	65	59	74	71	59	57
28	105	102	79	77	66	64	59	51	76	74	61	59
29	102	95	79	77	64	63	51	45	76	63	61	61
30	95	90	78	74	63	63	45	42	--	--	66	61
31	90	85	--	--	65	64	43	42	--	--	66	64

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	64	58	93	85	82	78	138	122	119	115	173	172
2	57	57	88	85	81	80	122	118	118	114	172	160
3	56	56	87	85	83	74	118	110	129	119	163	160
4	61	56	85	75	74	70	110	78	130	129	178	163
5	64	60	75	75	73	70	105	80	132	130	180	140
6	74	64	75	71	79	74	105	100	141	132	140	135
7	74	65	71	71	69	68	125	105	143	142	138	137
8	65	64	75	72	80	78	130	125	150	142	160	137
9	64	53	84	75	85	80	130	125	150	134	170	160
10	60	56	86	83	81	80	130	125	140	132	180	170
11	61	59	82	65	90	85	148	130	140	136	181	179
12	63	61	78	65	89	89	148	138	146	118	148	142
13	67	63	75	75	90	89	160	149	119	96	160	148
14	70	63	75	75	95	90	151	125	119	101	168	160
15	62	60	76	75	95	95	125	115	118	115	168	168
16	60	57	76	75	95	94	123	117	113	107	168	160
17	58	57	76	76	92	91	131	120	107	102	160	150
18	65	57	76	75	118	92	130	128	111	101	150	115
19	69	66	75	75	180	107	131	129	110	101	115	102
20	70	69	75	75	170	98	132	127	130	110	110	108
21	70	69	75	75	115	80	130	127	120	110	115	110
22	70	66	75	75	105	100	138	130	129	111	125	115
23	70	67	75	70	118	90	133	128	140	128	125	125
24	68	67	70	69	120	95	130	122	132	121	130	125
25	87	68	70	64	115	110	122	109	160	122	130	122
26	102	87	67	64	117	112	110	108	165	155	122	110
27	103	102	74	63	122	115	130	110	154	153	110	110
28	118	103	90	66	122	120	136	123	160	153	118	110
29	118	95	63	63	120	118	132	130	171	160	115	110
30	95	78	74	70	135	120	130	129	176	170	120	115
31	--	--	78	70	--	--	128	120	177	174	--	--

02488500 PEARL RIVER NEAR MONTICELLO, MISS.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968  
(RECORDER WITH TEMPERATURE ATTACHMENT, CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19	19	16	16	13	12	9	8	9	8	8	8
2	20	19	16	14	14	13	9	9	9	8	8	8
3	21	19	14	14	14	13	9	9	10	9	8	8
4	21	20	14	13	13	11	9	9	10	10	9	8
5	22	21	13	12	12	12	9	9	10	10	9	9
6	22	21	12	12	12	12	9	9	10	10	9	9
7	22	21	11	11	12	12	9	9	10	10	9	9
8	22	22	11	11	12	12	9	8	10	10	9	9
9	22	21	11	11	12	12	8	7	10	10	11	9
10	20	19	11	11	12	12	8	8	10	9	13	11
11	19	19	12	11	12	12	8	8	9	9	14	13
12	19	19	13	12	12	12	8	7	9	9	14	14
13	19	18	14	13	12	12	7	7	9	9	14	14
14	20	19	14	14	13	12	7	6	9	9	14	13
15	20	19	14	14	14	13	6	6	9	9	13	13
16	20	20	14	13	14	13	6	6	9	8	13	12
17	20	18	13	13	13	13	6	6	8	8	13	12
18	18	17	13	13	13	13	6	6	8	8	13	13
19	17	17	13	13	13	13	6	6	8	8	14	13
20	17	16	13	12	14	13	6	6	9	8	14	14
21	17	16	12	12	14	14	6	6	9	9	15	14
22	17	16	13	12	14	14	6	6	9	8	15	12
23	17	16	14	13	14	14	6	6	8	8	12	11
24	18	17	14	14	14	13	7	6	8	8	11	10
25	18	18	14	14	13	12	7	7	8	8	11	10
26	18	17	14	14	12	12	8	7	8	8	11	11
27	17	16	15	14	12	12	8	8	8	8	12	11
28	17	16	15	13	12	11	8	8	8	8	14	12
29	16	16	13	12	11	10	8	7	8	8	14	14
30	16	16	13	12	10	9	8	8	--	--	14	14
31	16	16	--	--	9	9	8	8	--	--	14	14
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14	14	21	20	--	--	29	29	31	30	27	27
2	14	14	21	21	--	--	29	29	30	30	27	27
3	16	14	21	21	--	--	29	29	29	29	27	26
4	16	16	--	--	--	--	29	28	30	29	26	26
5	16	16	--	--	--	--	28	28	31	30	26	26
6	16	16	--	--	--	--	28	28	30	29	26	26
7	16	16	--	--	--	--	29	28	29	29	26	26
8	16	16	--	--	--	--	29	28	30	29	27	26
9	17	17	--	--	--	--	29	28	31	30	27	26
10	16	16	--	--	--	--	29	28	31	31	26	26
11	16	16	--	--	--	--	29	29	31	30	26	26
12	16	16	--	--	--	--	29	29	30	29	26	26
13	17	16	--	--	--	--	29	29	29	28	26	26
14	18	17	--	--	--	--	29	28	28	28	26	25
15	18	18	--	--	--	--	28	28	28	28	25	25
16	18	18	--	--	--	--	29	28	28	27	25	25
17	18	18	--	--	--	--	29	28	29	28	25	25
18	19	18	--	--	29	29	30	29	30	28	25	24
19	20	19	--	--	29	29	31	30	30	29	25	24
20	21	20	--	--	29	28	31	31	30	29	25	24
21	--	--	--	--	28	27	31	31	31	30	25	25
22	--	--	--	--	27	27	31	29	31	30	26	25
23	--	--	23	23	27	26	29	29	31	30	26	26
24	--	--	24	23	27	26	29	29	31	30	26	26
25	--	--	24	24	28	27	31	29	31	30	26	26
26	--	--	24	24	28	27	31	30	30	29	26	26
27	--	--	24	23	27	27	32	31	29	28	26	24
28	--	--	23	23	28	27	31	31	28	27	24	24
29	--	--	--	--	28	27	31	31	27	27	24	24
30	20	20	--	--	29	28	31	31	27	27	25	24
31	--	--	--	--	--	--	31	30	27	27	--	--

## PEARL RIVER BASIN

02469500 PEARL RIVER NEAR BOGALUSA, LA.

LOCATION.--Lat 30°47'35", long 89°49'15", Washington Parish, at gaging station at bridge on State Highway 10, 2 miles east of Bogalusa and 2 miles upstream from Bogue Lusa Creek.

DRAINAGE AREA.--6,630 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: November 1962 to September 1968.

Water temperatures: November 1962 to September 1968.

Sediment records: April 1967 to September 1968.

## EXTREMES.--1967-68:

Specific conductance: Maximum daily, 107 micromhos July 20; minimum daily, 38 micromhos Dec. 17.

Water temperatures: Maximum, 31.0°C on several days in July and August; minimum, 7.0°C on several days in January and February.

Sediment concentrations (April to September 1967): Maximum daily, 515 mg/l May 7; minimum daily, 7 mg/l Sept. 28, 29, 30.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	FLUO- RIDE (F)
OCT.											
10...	1430	9.0	0.04	2.5	1.4	7.8	1.8	11	5.6	12	0.1
NOV.											
10...	1520	11	.00	3.3	1.4	7.8	.8	14	5.0	11	.1
DEC.											
22...	18000	7.8	.11	3.8	1.1	6.4	.5	9	9.4	6.9	.0
JAN.											
04...	30500	7.6	.25	3.4	1.6	3.6	.4	6	10	5.9	.0
FEB.											
07...	7300	9.3	.02	4.9	.9	7.0	.7	14	8.6	7.9	.0
FEB.											
29...	5320	9.5	.00	4.2	1.3	7.1	.7	10	10	8.8	.1
APR.											
02...	14400	8.4	.25	4.6	.6	6.5	.5	7	12	7.3	.0
APR.											
29...	5500	11	.05	5.2	1.0	5.9	1.2	16	8.8	7.2	.1
JUNE											
13...	2920	7.3	.07	3.5	1.5	7.1	1.0	12	3.8	12	.0
JULY											
18...	2100	8.4	.08	5.0	1.3	8.0	.8	26	7.8	8.0	.1
AUG.											
28...	2110	17	.00	3.1	1.3	8.5	2.3	20	8.6	7.9	.1

DATE	NITRATE (NO <sub>3</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	DIS- SOLVED SOLIDS SUM OF CONSTITU- ENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECIFIC CON- DUCTANCE (MICRO- MHOS)	TEM- PERA- TURE (°C)	COLOR	PH
OCT.									
10...	0.1	49	45	12	3	69	--	10	6.3
NOV.									
10...	.5	55	48	14	1	75	--	15	6.8
DEC.									
22...	.3	55	40	14	8	61	--	50	6.2
JAN.									
04...	.2	63	36	15	10	58	--	50	5.8
FEB.									
07...	.1	55	46	16	5	68	11	20	5.8
FEB.									
29...	.1	53	47	16	8	70	4	20	5.7
APR.									
02...	.1	54	43	14	8	63	20	60	5.9
APR.									
29...	1.3	56	50	17	4	74	21	30	6.2
JUNE									
13...	.1	52	42	15	5	75	28	30	6.2
JULY									
18...	.3	63	53	18	0	86	29	30	6.8
AUG.									
28...	.2	57	59	13	0	76	--	20	6.4

## 02489500 PEARL RIVER NEAR BOGALUSA, LA.--Continued

## EXTREMES, 1967-68.--Continued:

Sediment loads (April to September 1967): Maximum daily, 32,700 tons June 5; minimum daily, 30 tons Sept. 27.  
 Sediment concentrations (1967-68): Maximum daily, 522 mg/l Dec. 17; minimum daily, 3 mg/l Nov. 1, 2, 14.  
 Sediment loads (1967-68): Maximum daily, 25,000 tons Jan. 3; minimum daily, 12 tons Nov. 14.

## Period of record:

Dissolved solids (1962-67): Maximum, 117 mg/l Sept. 9-12, 1965; minimum, 32 mg/l Apr. 21-30, May 1-10, 1963, Apr. 20-25, 1966.  
 Hardness (1962-67): Maximum, 67 mg/l Feb. 9-11, 1966; minimum, 5 mg/l Sept. 9-15, Oct. 1-20, Nov. 11-20, 1963.  
 Specific conductance: Maximum daily, 180 micromhos Sept. 10, 1965; minimum daily, 31 micromhos Feb. 15-17, 1966.  
 Water temperatures: Maximum, 34.0°C July 14, 1967; minimum, 2.0°C Dec. 21, 1963.

REMARKS.--When discharge is greater than 11,300 cfs, there are 5 overflow channels. On these days sediment concentrations in the overflow channels are computed as 10 percent of the concentration in the main channel. This is used as a basis for computing total concentration and load.

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	86	74	62	45	68	57	58	--	70	80	73
2	66	79	75	66	43	69	63	70	--	70	78	69
3	65	101	71	61	42	65	59	69	--	68	84	68
4	63	79	67	60	48	72	56	67	71	73	80	67
5	63	70	66	60	57	84	53	72	71	72	89	69
6	64	66	68	54	63	77	53	62	72	76	78	72
7	64	74	67	55	69	70	56	60	--	83	73	72
8	64	79	67	55	73	63	61	62	--	74	69	68
9	63	78	75	60	66	65	61	61	--	69	73	75
10	64	73	76	59	59	63	59	61	--	72	68	81
11	66	70	68	53	55	65	54	65	--	45	69	77
12	64	77	65	48	60	65	53	65	--	79	70	76
13	65	73	60	47	64	69	57	57	77	81	70	79
14	64	72	61	48	67	66	56	64	69	72	68	78
15	65	68	67	49	65	58	59	58	60	81	68	81
16	65	64	73	51	63	61	59	53	62	74	66	88
17	63	62	38	48	71	59	56	51	64	82	74	78
18	68	50	48	69	62	55	59	66	66	86	71	59
19	71	63	61	44	67	60	52	62	68	84	65	71
20	67	65	57	48	69	60	54	59	72	107	69	86
21	67	68	57	47	74	56	60	67	71	70	70	89
22	66	73	61	45	78	59	63	64	68	73	71	87
23	68	60	62	45	71	62	62	62	79	71	67	78
24	66	78	59	46	70	50	59	60	100	79	79	76
25	66	72	66	46	79	49	58	60	64	75	73	77
26	67	76	74	47	77	53	55	63	58	62	73	76
27	64	70	69	59	77	54	58	62	67	73	70	79
28	64	69	68	63	69	56	61	59	69	72	70	82
29	67	68	66	61	68	55	65	61	68	78	72	86
30	66	70	62	59	--	57	79	66	73	69	75	90
31	64	--	61	49	--	58	--	65	--	70	79	--
AVERAGE	65	73	65	53	65	62	58	62	--	75	73	77

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	20	19	8	12	9	16	20	--	30	30	28
2	22	18	18	9	13	9	17	21	--	30	31	28
3	23	17	16	11	11	9	17	21	--	30	31	28
4	25	14	13	9	12	10	17	20	28	29	29	28
5	23	13	14	9	12	10	16	21	28	29	29	27
6	22	13	16	11	12	11	17	21	--	29	30	26
7	24	14	16	9	11	11	17	21	--	29	30	28
8	24	14	16	7	9	10	17	21	--	29	30	26
9	23	14	17	7	10	11	17	22	--	29	32	27
10	24	15	17	8	9	13	17	22	--	30	31	27
11	23	17	16	8	9	14	18	22	--	30	31	26
12	22	17	16	7	9	13	18	22	--	29	30	26
13	23	14	16	7	9	12	17	22	28	27	28	26
14	23	15	16	7	9	11	18	22	27	28	28	27
15	23	14	16	7	8	13	19	22	27	29	28	26
16	22	14	13	7	8	13	19	23	--	30	30	26
17	21	13	14	8	8	10	19	23	--	30	31	25
18	21	16	17	8	8	11	19	23	--	29	30	25
19	19	16	17	9	9	13	19	24	--	30	30	26
20	19	15	17	7	9	16	20	24	28	29	31	26
21	20	17	17	8	11	15	20	24	29	29	31	27
22	20	17	16	8	8	13	20	24	27	28	30	26
23	21	18	14	9	7	12	20	24	28	27	31	29
24	22	19	13	7	7	12	20	24	29	29	29	25
25	21	18	13	8	8	11	20	24	28	29	30	27
26	20	19	12	10	9	11	20	25	28	30	29	27
27	20	18	11	11	8	14	20	24	29	32	29	26
28	18	16	9	11	10	13	18	24	29	30	29	25
29	19	17	9	12	9	14	21	25	29	31	28	25
30	19	19	9	12	--	15	21	25	30	30	28	25
31	17	--	8	13	--	15	--	27	--	31	27	--
AVERAGE	21	16	15	9	9	12	18	23	--	29	30	26

## PEARL RIVER BASIN

02489500 PEARL RIVER NEAR BOGALUSA, LA.--Continued

## SUSPENDED SEDIMENT, APRIL TO SEPTEMBER 1967

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CON- CENTRA- TION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CON- CENTRA- TION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CON- CENTRA- TION (MG/L)	LOAD (TONS)
1	4330	60	E 701	2180	25	147	8990	95	2310
2	4090	45	E 496	4500	488	S 5930	9780	105	2770
3	3570	35	E 337	13400	412	S 14900	11200	146	4410
4	3230	28	E 244	15200	263	10800	12500	184	6210
5	3230	29	E 253	18400	415	20600	13300	235	8440
6	3290	31	E 275	22100	498	29700	12800	190	6550
7	3290	27	E 240	23500	515	32700	10700	127	3670
8	3090	26	E 217	24600	486	32300	8000	100	2160
9	2890	25	E 195	24600	431	28400	5790	88	1380
10	2760	24	E 179	22100	305	18200	4600	71	882
11	2630	23	163	17500	209	9890	3710	59	591
12	2440	22	145	12800	165	5710	3500	50	472
13	2370	22	141	9780	150	3960	3230	45	392
14	3530	105	S 1000	7690	130	2700	3090	41	342
15	8850	118	S 2820	5950	100	1610	2890	39	304
16	9460	175	S 4470	4790	75	970	2760	38	283
17	8540	144	3320	4170	57	642	2630	37	263
18	7300	97	1910	4010	49	531	2500	36	243
19	5290	68	971	4010	52	563	2370	25	160
20	4510	54	658	4090	56	618	2250	20	122
21	4090	48	530	3860	51	532	2180	20	118
22	3570	45	434	3570	47	453	2310	21	131
23	3360	43	390	3500	43	406	2180	20	118
24	3090	37	309	4010	58	S 628	2060	19	106
25	2830	31	237	8160	208	S 4580	2000	18	97
26	2630	34	241	10100	300	S 8180	1940	17	89
27	2570	35	243	10100	159	4340	1880	15	76
28	2370	29	186	9950	125	3360	1880	14	71
29	2370	31	198	9620	115	2990	1820	14	69
30	2250	26	158	9300	112	2810	1880	16	81
31	--	--	--	8990	105	2550	--	--	--
TOTAL	86810	--	21661	326530	--	251900	146720	--	42910
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CON- CENTRA- TION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CON- CENTRA- TION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CON- CENTRA- TION (MG/L)	LOAD (TONS)
1	2120	18	103	2890	39	304	3090	39	325
2	2060	19	106	2500	29	196	2830	28	214
3	2000	20	108	2310	26	162	2700	23	168
4	2000	20	108	2180	24	141	2630	22	156
5	2000	19	103	2120	22	126	2570	22	153
6	2000	18	97	2060	20	111	2570	21	146
7	1940	18	94	2060	19	106	2700	20	146
8	2180	20	118	2000	19	103	2830	21	160
9	2250	28	170	1940	18	94	2890	24	187
10	2630	33	234	1940	18	94	2960	26	208
11	3020	33	269	1940	19	100	2890	21	164
12	2960	39	312	1820	17	84	2700	17	124
13	3570	48	463	1760	13	62	2440	17	112
14	3860	54	563	1700	12	55	2310	17	106
15	3940	52	553	1640	12	53	2180	14	82
16	3860	43	448	1700	13	60	2120	13	74
17	3640	41	403	1760	14	67	2000	12	65
18	4330	59	690	1760	11	52	1880	12	61
19	5190	78	1090	1700	11	50	1760	11	52
20	6060	94	1540	1820	12	59	1760	10	48
21	6660	91	1640	1880	13	66	1700	8	37
22	6060	70	1150	1940	12	63	1700	8	37
23	4990	60	808	1940	12	63	1700	8	37
24	4990	58	781	1940	16	84	1640	8	35
25	4690	56	709	2060	18	100	1580	8	34
26	4010	51	552	2180	23	135	1580	8	34
27	3360	43	390	2440	27	178	1580	7	30
28	2960	36	288	2830	38	S 290	1640	7	31
29	2570	31	215	3780	80	S 816	1700	10	46
30	2440	30	198	3940	66	S 702	1640	7	31
31	2830	39	298	3570	50	482	--	--	--
TOTAL	107170	--	14601	68100	--	5058	66270	--	3103

E ESTIMATED.

S COMPUTED BY SUBDIVIDING DAY.



## PEARL RIVER BASIN

02489500 PEARL RIVER NEAR BOGALUSA, LA.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	1640	7	31	1880	3	15	1820	7	34
2	1700	6	28	2060	3	17	1880	9	46
3	1700	6	28	2250	8	49	2060	10	56
4	1580	5	21	2440	9	59	2250	20	122
5	1520	6	25	2370	9	58	2310	20	125
6	1520	11	45	2120	8	46	2760	19	142
7	1460	10	39	1880	5	25	2960	25	200
8	1460	10	39	1700	5	23	2960	26	208
9	1460	10	39	1580	6	26	3230	50	436
10	1430	9	35	1520	6	25	4600	55	E 685
11	1400	8	30	1520	5	21	7040	121	E 2310
12	1400	8	30	1460	4	16	7970	113	2430
13	1400	9	34	1460	4	16	7560	98	2000
14	1400	9	34	1520	3	12	7300	84	1660
15	1400	9	34	1520	4	16	7430	86	1730
16	1460	15	59	1520	4	16	10400	406	E 11400
17	1520	14	57	1520	5	21	15600	522	E 22000
18	1580	12	64	1520	5	21	18400	333	16600
19	1640	10	44	1460	5	20	18900	268	13700
20	1700	13	60	1430	5	19	18400	237	11800
21	1760	16	76	1430	4	15	18000	205	9970
22	1700	14	64	1430	4	15	18000	197	9560
23	1580	13	55	1430	4	15	19400	200	10500
24	1520	13	53	1430	4	15	20000	201	10800
25	1460	13	51	1580	4	17	20000	205	11100
26	1460	12	47	1760	5	24	20600	205	11400
27	1460	12	47	1820	9	44	21300	207	11900
28	1430	11	42	1820	10	49	22600	203	12400
29	1430	10	39	1820	9	44	23500	205	13000
30	1520	12	49	1820	8	39	24600	201	13400
31	1640	8	35	---	---	---	25100	204	13800
TOTAL	47330	--	1321	51070	--	798	378930	--	215510
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	27600	207	15400	12800	204	7050	5950	27	434
2	29800	269	21700	13300	105	3790	6780	42	E 772
3	31300	295	25000	13300	67	2410	7970	95	E 2040
4	30500	278	22900	12300	54	1780	7970	63	1360
5	28300	236	18000	10500	57	1620	7690	63	1310
6	25700	193	13400	8540	79	1820	7560	50	1020
7	22600	175	10700	7430	81	1620	7560	46	939
8	21300	160	9210	6910	72	1340	7560	52	1060
9	20600	140	7820	6660	54	971	7430	50	1000
10	20000	139	7520	6660	45	809	7300	43	848
11	20600	150	8360	6540	39	689	7040	46	874
12	21300	184	10600	6180	33	551	5950	48	881
13	23000	194	12000	5620	33	501	5950	36	578
14	24600	197	13100	4990	31	418	6250	68	1510
15	25700	199	13800	4790	28	362	10300	212	5900
16	26300	210	14900	4600	29	360	10800	234	6820
17	27000	191	13900	4330	30	351	11000	193	5730
18	26300	181	12900	4690	35	463	11000	S 136	4040
19	26300	171	12100	5840	41	646	10300	S 70	1950
20	26300	173	12300	6180	29	484	10100	58	1580
21	26300	180	12800	5620	26	395	10300	78	2170
22	27000	180	13100	5190	24	336	11300	89	2530
23	27000	182	13300	4990	24	323	13900	142	5340
24	27000	188	13700	4990	24	323	16300	219	9660
25	25700	197	13700	5190	23	322	17500	286	13500
26	23500	207	13100	5100	22	314	18400	420	20900
27	20600	219	12200	5190	21	294	18400	437	21700
28	17500	201	9490	4890	21	277	17800	248	11900
29	14500	160	6280	5190	27	378	17500	176	8320
30	12800	170	5880	---	---	---	17100	131	6050
31	12500	225	7600	---	---	---	16700	110	4960
TOTAL	739500	--	396760	198700	--	30980	339660	--	147570

E ESTIMATED.

S COMPUTED BY SUBDIVIDING DAY.

## 02489500 PEARL RIVER NEAR BOGALUSA, LA.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	16700	123	5560	8390	126	2850	8390	336	S 7620
2	16700	124	5600	11000	S 196	5820	6420	82	1420
3	16700	101	4570	11200	169	5110	4890	71	937
4	16300	87	3850	11000	136	4040	4690	78	988
5	16700	115	5170	11400	124	3810	4600	72	894
6	18000	147	7140	11800	125	3990	4330	59	690
7	18000	146	7110	11800	115	3670	4090	55	607
8	18000	96	4680	11200	97	2930	3710	54	541
9	18000	86	4180	10300	90	2500	3430	51	472
10	17500	91	4320	8840	89	2120	3160	49	418
11	17500	82	3870	7300	85	1680	2960	48	384
12	18900	83	4250	7560	91	S 1860	2830	45	344
13	19400	110	5740	10100	177	S 4830	3020	46	375
14	20600	113	6290	12100	172	5630	2960	29	232
15	21300	112	6450	13900	187	7030	2630	28	199
16	21300	111	6360	15600	154	6500	2570	32	222
17	20600	109	6080	16700	141	6360	2440	34	224
18	20000	100	5390	17500	126	5940	2370	31	198
19	19400	91	4770	17100	109	5040	2310	28	175
20	18000	90	4360	15200	98	4020	2440	31	204
21	15900	90	3860	13900	97	3640	2700	36	262
22	12500	94	3110	13000	106	3720	3230	42	366
23	10500	87	2470	12800	94	4090	3570	50	481
24	9620	80	2080	12100	98	3200	3640	45	442
25	9300	72	1810	10500	85	2410	3290	38	338
26	8690	63	1480	9300	84	2110	3020	35	285
27	6660	55	989	8690	84	1970	2700	28	204
28	5290	70	1000	7830	84	1780	2440	25	185
29	5620	120	1820	7300	87	1710	2180	21	124
30	7560	104	2120	8390	95	S 2160	2120	17	97
31	--	--	--	8990	267	6480	--	--	--
TOTAL	461240	--	126480	352790	--	119000	103130	--	19908
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	2120	16	92	2250	26	158	1640	17	75
2	2120	16	92	2060	29	161	1580	16	68
3	2060	16	89	1940	25	131	1580	16	68
4	2120	18	103	1880	22	112	1580	17	73
5	2250	22	134	1820	21	103	1820	17	84
6	2700	46	335	1760	20	95	2000	19	103
7	3020	37	302	1700	18	83	2120	22	126
8	2760	31	231	1760	17	81	2060	24	133
9	2370	30	192	1760	16	76	2000	22	119
10	2250	24	146	1820	14	69	1820	17	84
11	2120	21	120	1760	14	67	1700	14	64
12	2060	20	111	1700	15	69	1640	12	53
13	2000	20	108	2000	20	108	1580	12	51
14	1940	19	100	2630	41	291	1580	12	51
15	1820	18	88	2830	38	290	1520	13	53
16	2000	20	108	2630	36	256	1700	15	69
17	2180	22	129	2630	35	249	2060	24	133
18	2250	22	134	2700	37	270	3090	80	667
19	2250	19	115	2900	55	431	3360	60	544
20	2120	24	137	3090	49	409	2960	41	328
21	1940	24	126	3020	51	416	2700	35	255
22	1940	21	110	2630	40	284	2370	34	218
23	2310	29	181	2570	38	264	2180	30	177
24	2830	38	290	2700	40	292	2060	25	139
25	2890	32	250	2700	38	277	2060	23	128
26	2500	27	182	2500	33	223	2060	22	122
27	2310	26	162	2440	30	198	2060	22	122
28	2310	26	162	2440	29	191	2250	24	146
29	2440	26	171	2180	32	188	2500	31	209
30	2960	44	352	1940	25	131	2500	30	202
31	2630	28	199	1700	19	87	--	--	--
TOTAL	71570	--	5047	70500	--	6058	62130	--	4646
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									2876550
TOTAL LOAD FOR YEAR (TONS)									1074078

S COMPUTED BY SUBDIVIDING DAY.

02490500 BOGUE CHITTO NEAR TYLERTOWN, MISS.

LOCATION.--Lat 31°11', long 90°17', in SE $\frac{1}{4}$  sec.34, T.3 N., R.9 E., Washington meridian, Pike County, at gaging station near right bank on downstream side of bridge on U.S. Highway 98, 9 miles northwest of Tylertown.

DRAINAGE AREA.--502 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

EXTREMES.--1967-68:

Specific conductance: Maximum, 131 micromhos Aug. 23; minimum, 29 micromhos Dec. 15.

## SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM
1....	--	--	59	59	51	51	62	61	61	60	108	78
2....	--	--	59	59	52	51	69	62	61	61	108	80
3....	--	--	60	59	52	51	79	69	62	61	81	75
4....	--	--	60	60	52	51	79	72	90	64	80	71
5....	--	--	60	60	53	51	71	71	90	79	72	71
6....	--	--	60	60	53	52	71	71	80	69	71	70
7....	--	--	60	60	53	52	71	71	69	59	70	68
8....	--	--	60	54	53	71	70	60	59	59	69	67
9....	--	--	60	60	57	54	70	70	60	59	68	68
10....	--	--	59	58	57	56	70	70	60	59	68	68
11....	--	--	58	58	70	56	70	63	60	59	69	67
12....	--	--	57	57	117	61	63	62	60	59	67	67
13....	--	--	55	55	97	82	63	62	59	59	101	67
14....	--	--	54	54	83	76	63	62	59	59	80	70
15....	--	--	53	53	78	29	62	61	60	59	70	70
16....	--	--	53	53	58	57	61	61	60	59	70	70
17....	88	83	53	53	34	30	62	61	60	60	71	70
18....	106	88	53	53	49	30	62	60	60	60	70	70
19....	129	101	53	53	58	49	60	60	60	59	70	70
20....	129	79	54	54	63	59	60	60	61	60	72	70
21....	79	70	55	54	65	60	60	60	61	60	72	71
22....	70	68	56	55	66	57	60	60	62	61	73	62
23....	69	64	58	57	58	49	60	59	68	62	76	62
24....	66	61	59	59	50	49	60	59	68	67	71	62
25....	61	60	59	58	50	49	60	60	68	67	61	61
26....	60	60	58	58	53	50	69	60	68	67	61	60
27....	60	60	56	55	54	53	69	68	68	66	61	60
28....	60	60	54	53	53	53	68	67	68	67	62	61
29....	60	59	52	51	56	54	67	64	80	68	68	62
30....	60	59	51	50	63	62	63	62	--	--	68	67
31....	59	59	--	--	61	58	61	60	--	--	68	68

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM
1....	69	68	90	75	80	70	68	59	68	61	59	57
2....	70	70	80	70	75	65	64	60	65	64	58	58
3....	79	70	72	70	72	62	80	69	60	58	58	58
4....	77	70	72	69	72	62	88	80	60	58	62	56
5....	83	70	70	69	72	62	126	80	59	52	55	54
6....	90	70	69	67	72	62	70	65	53	52	60	54
7....	89	71	69	62	72	62	70	60	59	52	60	59
8....	71	69	71	62	72	62	80	70	59	58	60	60
9....	88	50	86	71	72	64	90	82	59	53	63	60
10....	50	48	86	63	72	64	55	50	59	53	69	62
11....	49	47	89	63	62	62	59	57	59	57	63	62
12....	52	47	97	72	62	62	60	59	58	57	68	62
13....	58	52	62	58	58	50	60	60	59	56	65	60
14....	61	56	71	58	59	54	60	60	59	59	60	58
15....	73	60	72	68	60	59	62	60	59	59	58	58
16....	63	59	70	65	60	60	61	61	59	58	58	58
17....	61	59	70	64	60	60	61	61	88	59	60	55
18....	61	59	64	58	60	59	60	60	120	88	58	54
19....	66	60	70	56	60	59	60	60	130	120	68	54
20....	65	64	91	70	60	60	60	60	110	69	88	68
21....	64	62	83	79	65	60	60	59	69	62	88	70
22....	62	62	80	79	68	65	59	59	110	62	70	65
23....	62	62	80	78	70	68	59	59	131	65	67	65
24....	63	62	80	78	70	62	70	59	67	50	67	66
25....	71	63	78	77	62	62	88	70	60	52	66	62
26....	89	71	78	70	62	60	80	60	60	55	64	62
27....	89	70	72	68	70	60	64	60	56	54	64	62
28....	70	70	72	68	78	70	65	64	58	56	64	60
29....	70	70	72	68	78	70	64	62	59	57	60	58
30....	75	70	78	68	70	65	61	61	58	58	58	58
31....	--	--	80	70	--	--	61	61	59	58	--	--

## ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS

## PERQUIMANS RIVER BASIN

02043902 PERQUIMANS RIVER ABOVE SUTTON CREEK, NEAR HERTFORD, N.C.

LOCATION.--Lat 36°10'00", long 76°25'10", Perquimans County, 1.8 miles upstream from Sutton Creek and 3.2 miles southeast of Hertford.

DRAINAGE AREA.--130 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)
JULY 24... 24...A	1600 1600	2.9 --	.09 --	8.8 --	19 --	154 --	14 --	21 --	0 --	46 --	280 --
DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JULY 24... 24...A	.2 --	.7 --	.04 --	571 --	.78 --	100 --	82 --	6.7 --	966 --	6.6 6.6	90 --
DATE	TIME	ALKA- LINITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)						
JULY 24... 24...A		17 --	.10 --	-- 5.2	30 30						
A FIELD DETERMINATION.											

## CHOWAN RIVER BASIN

02053652 CHOWAN RIVER NEAR EDENHOUSE, N.C.

LOCATION.--Lat 36°02'48", long 76°41'48", Bertie County, at bridge on U.S. Highway 17, 1 mile northeast of Edenhouse, and 3.8 miles downstream from Rockyhook Creek.

DRAINAGE AREA.--4,871 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1957 to September 1968.

Water temperatures: October 1957 to September 1967.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (PG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)
JULY 25... 25...A	0845 0845	3.7 --	.03 --	6.1 --	1.1 --	8.5 --	1.8 --	22 --	0 --	6.6 --	10 --
DATE	FLUC- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JULY 25... 25...A	.2 --	.4 --	.00 --	65 --	.05 --	20 --	2 --	.8 --	84 --	6.7 7.4	40 --
DATE	TIME	ALKA- LINITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)						
JULY 25... 25...A		18 --	.10 --	-- .2	28 28						
A FIELD DETERMINATION.											

## ROANOKE RIVER BASIN

02074002 SMITH RIVER NEAR SPRAY, N.C.

LOCATION.--36°31'15", long 79°45'10", Rockingham County, at bridge on Secondary Road 1714, 0.5 mile southwest of town hall in Spray, and 3.0 miles upstream from mouth.

DRAINAGE AREA.--539 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- SOLVED IRON (FE)	SILICA (SiO <sub>2</sub> )	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)
JUNE 20... 20...A	1207 1207	665 666	10 --	.07 --	5.2 --	2.4 --	13 --	1.4 --	33 --	0 --	6.4 --

## 231

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

DATE	ALKALINITY AS CaCO3	METHYLENE BLUE ACTIVE SUB- STANCE	DISSOLVED OXYGEN	TEMPERATURE (DEG C)
JUNE				
20...	27	.02	--	22
20...A	—	--	8.0	22

02074218 DAN RIVER NEAR MAYFIELD, N.C.

**DRAINAGE AREA.**--1,780 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

CATE	FLUO-RIDE (F)	NITRATE (N(13))	ORTHOPHOSPHATE (P(04))	DISSOLVED SILICATES (HSI- DUE AT 180 C)	DISSOLVED SILICATES (TIONS PER AC-FET)	DISSOLVED SILICATES (TIONS PER DAY)	NON-CARBONATE HARDNESS (CA,MG)	SODIUM AD-SORPTION RATIO	SPECIFIC CONDUC-TANCE (MICRO-MHOS)	PH	COLOR
June 20... 20...A	.1 --	.8 --	.15 --	63 --	.09 --	-- --	19 --	0 --	.6 73	6.6 6.5	80 --
Aug. 27... 27...A	.4 --	.4 --	.36 --	80 --	.11 --	131 --	23 --	0 --	1.4 120	6.2 7.4	10 --

DATE	ALKALINITY AS CaCO3	METHYLENE BLUE ACTIVE SUB- STANCE	DISS- OLVED OXYGEN	TEMP- ERATURE (DEG C)
JUNE				
20...	21	.03	--	24
20...A	--	--	7.8	24
AUG.				
27...	28	.11	--	29
27...A	--	--	5.5	29

#### 1 FIELD DETERMINATION.

02080482 ROANOKE RIVER NEAR ROANOKE RAPIDS, N.C.

LOCATION.--Lat 36°29'10", long 77°37'40", Halifax County, at bridge on State Highway 48 at Roanoke Rapids and 3.5 miles upstream from Chockoyotte Creek.

**DRAINAGE AREA.**--8,410 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]



ROANOKE RIVER BASIN

239

02081022 ROANOKE RIVER NEAR OAK CITY, N.C.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHCS)	PH	COLOR
JULY 01... 01...A SEPT. 23... 23...A	.1 -- -- -- --	.3 -- -- -- --	.04 -- -- -- --	71 -- -- -- --	.10 -- -- -- --	-- -- -- 518 --	34 -- -- -- --	0 -- -- -- --	.7 -- -- -- --	113 -- -- -- --	6.7 7.3 -- -- --	10 -- -- -- -- 5

DATE	ALKA- LINITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JULY 01... 01...A SEPT. 23... 23...A	36 32 -- 46 --	-- -- -- -- --	.05 5.7 -- -- 6.0	29 29 -- 24 24

A FIELD DETERMINATION.

02081141 ROANOKE RIVER NEAR SANS SOUCI, N.C.

LOCATION.--Lat 35°53'51", long 76°43'49", Bertie County, at bridge on State Highway 45, 2.4 miles upstream from Conaby Creek, 4 miles southeast of Sans Souci, and 4.1 miles upstream from mouth.

DRAINAGE AREA.--9,330 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLOR- IDE (CL)
JULY 01... 01...A SEPT. 19... 19...A	1730 1730 1350 1350	6.1 -- 7.7 --	.05 -- .02 --	9.5 -- 11 --	2.1 -- 3.6 --	11 -- 18 --	2.0 -- 4.4 --	41 -- 62 --	0 -- 0 --	10 -- 14 --	10 -- 15 --

DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHCS)	PH	COLOR
JULY 01... 01...A SEPT. 19... 19...A	.1 -- -- -- --	.2 -- -- -- --	-- -- -- -- --	74 -- -- 105 --	.10 -- -- .14 --	32 -- -- 42 --	0 -- -- 0 --	.8 -- -- 1.2 --	115 -- -- 158 --	6.6 7.2 -- -- 6.6 7.7	10 -- -- 20 --

DATE	ALKA- LINITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JULY 01... 01...A SEPT. 19... 19...A	34 -- -- 51 --	-- -- -- -- --	.04 5.4 -- -- 4.6	30 30 -- 24 24

A FIELD DETERMINATION.

ALBEMARLE SOUND

02081155 (revised) ALBEMARLE SOUND NEAR EDENTON, N.C.

LOCATION (revised).--Lat 36°59'13", long 76°30'14", Chowan County, at drawbridge on State Highway 32, 5.1 miles east of Norfolk Southern Railroad and 7.8 miles southeast of Edenton.

DRAINAGE AREA.--14,800 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1957 to September 1968.  
Water temperatures: October 1957 to September 1967.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLOR- IDE (CL)
JULY 25... 25...A	0810 0810	4.8 --	.05 --	2.1 --	3.4 --	19 --	2.6 --	20 --	0 --	12 --	27 --

## ALBEMARLE SOUND

02081155 (revised) ALBEMARLE SOUND NEAR EDENTON, N.C.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO3)	ORTHO- PHOS- PHATE (PO4)	DI-SOLVED SOLIDS (RESIDUE AT 180 C)	DI-SOLVED SOLIDS (TONS AC-FT)	HARD- NESS (CA,MG)	NON-CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECIFIC CONDUCTANCE (MICRO- MHOS)	PH	CLOR
JULY 25...	2	3	02	92	13	19	2	1.9	137	6.7	46
25...A	--	--	--	--	--	--	--	--	--	7.1	--
				ALKA- LINITY AS CACD3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)				
JULY 25...				16	10		27				
25...A				--	--	8.8	27				
				A FIELD DETERMINATION.							

PAMLICO RIVER BASIN

02082526 TAR RIVER AT ROCKY MOUNT, N.C.

LOCATION.--Lat 35°57'08", long 77°49'08", Nash County, at bridge on U.S. Highway 64, 0.8 mile upstream from Stony Creek, and 1.8 miles west of Rocky Mount.

**DRAINAGE AREA.**--800 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS-CHARGE (CFS)	SILICA (SI02)	DIS-SOLVED IRON (PPM)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)
JUNE 20... 20...A	1730 1730	503 500	9.3 --	.53 --	4.0 --	1.6 --	3.4 --	1.3 --	16 --	0 --	6.4 --	3.5 --
DATE	FLUO- RIDE (F)	NITRATE (ND3)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	
JUNE 20... 20...A	.2 --	1.2 --	65 --	.09 --	87 --	16 --	4 --	.4 --	53 --	6.3 9.9	120 --	
					ALKA- LINITY AS CACD3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)				
JUNE 20... 20...A				13	14	.10	6.3	24				
A FIELD DETERMINATION.												

02084356 TRANTERS CREEK NEAR LATHAM, N.C.

LOCATION.--Lat 35°36'19", long 77°38'30", Beaufort County, at Atlantic Coast Line Railroad bridge, 0.4 mile west of Latham.

DRAINAGE AREA.--224 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	POTAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)
JUNE 20....	1500	8.6	.90	4.0	1.0	4.6	1.2	10	0	6.4	6.6
20....A	1500	--	--	--	--	--	--	--	--	--	--
SEPT. 19....	1150	11	.02	5.0	1.1	5.7	1.3	9	0	11	7.8
19....A	1150	--	--	--	--	--	--	--	--	--	--
DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JUNE 20....	.2	3.2	.10	82	.11	14	6	.5	60	5.8	160
20....A	--	--	--	--	--	--	--	--	--	6.0	--
SEPT. 19....	.3	.6	.00	79	.11	17	10	.6	68	5.7	60
19....A	--	--	--	--	--	--	--	--	--	6.6	--
DATE	ALKAL- INITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMPER- ATURE (DEG C)							
JUNE 20....	8	.00	--	24							
20....A	11	--	3.4	24							
SEPT. 19....	7	--	--	26							
19....A	--	--	2.5	26							
A FIELD DETERMINATION.											



## 235

LOCATION.--Lat 35°32'33", long 77°03'43", Beaufort County, at bridge on U.S. Highway 17 at Washington, 0.7 mile downstream from Kennedy Creek.

**DRAINAGE AREA.**--3,080 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1961 to September 1968.  
Water temperatures: October 1961 to September 1967.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

		SILICA (SIO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	POTAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)
DATE	TIME										
JUNE 20... 20...A	1425 1425	9.8 --	.55 --	4.7 --	1.6 --	6.5 --	1.6 --	17 --	0 --	9.6 --	7.8 --
	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	OIS- SOLVED SOLIDS (RESIDUE AT 180 C)	OIS- SOLVED SOLIDS (TONS PER AC-FE)	HARD- NESS (CA,MG)	NON-CAR- BONATE HARD- NESS	SODIUM AD- SORP-TION RATIO	SPECIF- IC CON- DUCTANCE (MICRO-MHOS)	PH	COLOR
JUNE 20... 20...A	.2 --	1.2 --	.33 --	81 --	.11 --	18 --	4 --	.7 --	74 --	6.3 5.8	110 --

DATE	ALKALINITY AS CACO3	METHYLENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
------	------------------------	---	--------------------------	-----------------------------

JUNE				
20...	14	.00	--	27
20...A	--	--	5.2	27

### A FIELD DETERMINATION.

## NEUSE RIVER BASIN

02087182 NEUSE RIVER AT FALLS, N.C.

LOCATION.--Lat 35°56'27", long 78°34'57", Wake County, at bridge on Secondary Road 2000 at Falls, and downstream from Honeycutt Creek.

DRAINAGE AREA.--770 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1953 to September 1954, November 1960 to September 1968.  
Water temperatures: October 1953 to September 1954, November 1960 to September 1967.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

DATE	ALKALINITY AS CACO3	METHYLENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
------	------------------------	---	--------------------------	-----------------------------

JUNE			
19...	29	.13	7.5
19...A	--	--	7.5
SEPT.			
12...	46	.11	--
12...A	--	--	10.0
A FIELD DETERMINATION.			

02087500 NEUSE RIVER NEAR CLAYTON, N.C.

LOCATION (revised).--Lat 35°38'50", long 78°24'21", Johnston County, at gaging station on left bank at bridge on State Highway 42, 2.3 miles upstream from Mill Creek, and 3 miles east of Clayton.

**DRAINAGE AREA.**--1,140 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1943 to September 1944, October 1955 to February 1956, November 1963 to September 1968.

Water temperatures: October 1943 to September 1944, October 1955 to February 1956.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

## NEUSE RIVER BASIN

02087500 NEUSE RIVER NEAR CLAYTON, N.C.--Continued

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JUNE 19...	.2	4.5	1.8	90	.12	66	28	2	1.0	113	6.5	15
19...A	--	--	--	--	--	--	--	--	--	--	6.3	--

DATE	ALKA- LITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JUNE 19...	26	.09	--	22
19...A	--	--	4.3	22

A FIELD DETERMINATION.

02091764 CONTENTNEA CREEK AT GRIFFON, N.C.

LOCATION.--Lat 35°22'00", long 77°26'30", Pitt County, at bridge on State Highway 11, 0.5 mile southwest of Griffon and 4.7 miles upstream from mouth.

DRAINAGE AREA.--980 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLOR- IDE (CL)
SEPT. 19...	1310	6.4	.00	6.7	1.6	12	2.7	28	0	7.6	15
19...A	1310	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
SEPT. 19...	.3	.9	.58	81	.11	23	0	1.1	108	6.2	10
19...A	--	--	--	--	--	--	--	--	--	7.2	--

DATE	ALKA- LITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
SEPT. 19...	23	.08	--	28
19...A	--	--	6.2	28

A FIELD DETERMINATION.

02092162 NEUSE RIVER AT NEW BERN, N.C.

LOCATION.--Lat 35°06'42", long 77°01'37", Craven County, at bridge on U.S. Highway 17 at New Bern and 0.9 mile upstream from Trent River.

DRAINAGE AREA.--4,470 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1968.

Water temperatures: October 1966 to September 1967.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLOR- IDE (CL)
SEPT. 19...	0700	5.5	.00	103	300	2800	100	70	0	600	4500
19...A	0700	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
SEPT. 19...	.4	.54	2700	11	1490	1430	32	10900	6.7	10
19...A	--	--	--	--	--	--	--	--	6.8	--

DATE	ALKA- LITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
SEPT. 19...	57	.13	--	22
19...A	--	--	6.7	22

A FIELD DETERMINATION.

## NEUSE RIVER BASIN

237

02092554 TRENT RIVER AT POLLOCKSVILLE, N.C.

LOCATION (revised).--Lat 35°00'35", long 77°13'10", Jones County, at bridge on U.S. Highway 17, and 0.2 mile north-east of Pollocksville.

DRAINAGE (revised).--370 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: January 1955 to November 1958, October 1961 to September 1968.  
Water temperatures: January 1955 to November 1958, October 1961 to September 1967.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLOR- IDE (CL)
SEPT. 18...	1445	7.4	.06	33	1.1	6.9	1.4	90	0	10	8.4
18...A	1445	--	--	--	--	--	--	--	--	--	--

DATE	FLUOR- IDE (F)	NITRATE (NO <sub>3</sub> )	ORTHOPHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TCNS PER AC-FT)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
SEPT. 18...	.2	.8	.60	127	.17	87	12	.3	171	7.2	50
18...A	--	--	--	--	--	--	--	--	--	6.7	--

DATE	ALKALINITY AS CaCO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
SEPT. 18...	74	.11	--	27
18...A	--	--	4.5	27

A FIELD DETERMINATION.

## WHITE OAK RIVER BASIN

02092744 WHITE OAK RIVER AT STELLA, N.C.

LOCATION.--Lat 34°46'28", long 77°09'14", Carteret County, at bridge 0.2 mile west of Stella, 1.0 mile upstream from Webb Creek.

DRAINAGE AREA.--216 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLOR- IDE (CL)
JULY 15...	1405	5.3	.11	26	21	191	9.2	35	0	62	320
15...A	1405	--	--	--	--	--	--	--	--	--	--
SEPT. 18...	1400	4.9	.02	123	336	2800	126	69	0	708	4900
18...A	1400	--	--	--	--	--	--	--	--	--	--

DATE	FLUOR- IDE (F)	NITRATE (NO <sub>3</sub> )	ORTHOPHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TCNS PER AC-FT)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JULY 15...	.2	.7	.05	737	1.00	152	123	6.8	1200	6.6	50
15...A	--	--	--	--	--	--	--	--	--	6.5	--
SEPT. 18...	.2	--	.39	9800	13.3	169	164	30	12600	6.6	110
18...A	--	--	--	--	--	--	--	--	--	6.7	--

DATE	ALKALINITY AS CaCO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JULY 15...	29	.03	--	30
15...A	--	--	9.2	30
SEPT. 18...	57	.69	--	26
18...A	--	--	5.8	26

A FIELD DETERMINATION.

## NEW RIVER BASIN

02093032 NEW RIVER AT JACKSONVILLE, N.C.

LOCATION.--Lat 34°45'13", long 77°26'06", Onslow County, at bridge on U.S. Highway 17 at Jacksonville and 0.3 mile downstream from Deep Gully Creek.

DRAINAGE AREA.--160 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1960 to September 1961, October 1967 to September 1968.  
Water temperatures: October 1960 to September 1961.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1960 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLOR- IDE (CL)
JULY											
15...	1145	5.9	.07	55	105	900	30	31	0	232	1550
15...A	1145	--	--	--	--	--	--	--	--	--	--
SEPT.											
18...	1130	3.6	.02	216	618	5450	270	107	0	2540	9250
18...A	1130	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	ORTHO PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JULY											
15...	.3	.5	.57	3090	4.2C	570	544	16	4520	7.4	50
15...A	--	--	--	--	--	--	--	--	--	7.1	--
SEPT.											
18...	.7	--	.94	17500	23.8	3080	2990	43	19800	6.5	15
18...A	--	--	--	--	--	--	--	--	--	7.2	--

DATE	ALKA- LINITY AS CACO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JULY				
15...	25	.08	--	30
15...A	--	--	8.0	30
SEPT.				
18...	88	.59	--	23
18...A	--	--	3.8	23

A FIELD DETERMINATION.

02093197 NEW RIVER NEAR SNEEDS FERRY, N.C.

LOCATION.--Lat 34°34'41", long 77°24'58", Onslow County, at drawbridge on State Highway 172, 1.9 miles north of Sneeds Ferry, and 5.1 miles upstream from mouth.

DRAINAGE AREA.--430 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLOR- IDE (CL)
JULY											
15...	1500	1.8	.02	317	849	8250	284	113	0	2190	14500
15...A	1500	--	--	--	--	--	--	--	--	--	--
SEPT.											
18...	1030	1.2	.00	327	1000	8420	391	123	0	2120	15700
18...A	1030	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	ORTHO PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JULY											
15...	1.5	.0	.13	27700	37	428	419	55	30600	7.0	10
15...A	--	--	--	--	--	--	--	--	--	7.9	--
SEPT.											
18...	1.2	--	.27	--	--	--	--	52	--	6.7	--
18...A	--	--	--	--	--	--	--	--	--	7.7	--

DATE	ALKA- LINITY AS CACO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JULY				
15...	93	.39	--	30
15...A	--	--	10.0	30
SEPT.				
18...	101	.80	--	--
18...A	--	--	7.6	--

A FIELD DETERMINATION.

## CAPE FEAR RIVER BASIN

239

02097000 HAW RIVER NEAR PITTSBORO, N.C.

LOCATION.--Lat 35°42'07", long 79°05'12", Chatham County, at gaging station on left bank 100 ft upstream from Robeson Creek, 1,000 ft downstream from bridge on Secondary Road 1443, 2 miles downstream from bridge on U.S. Highway 64, and 5 miles east of Pittsboro.

DRAINAGE AREA.--1,310 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS-CHARGE (CFS)	SILICA (SI02)	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	CARBONATE (CO3)	SULFATE (SO4)	CHLORIDE (CL)
JUNE 19...	0900	464	14	.05	8.7	2.8	28	2.8	56	0	16	24
19...A	0900	464	--	--	--	--	--	--	--	--	--	--

DATE	FLUORIDE (F)	NITRATE (NO3)	ORTHOPHOSPHATE (PO4)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	DIS-SOLVED SOLIDS (TDS PER AC-FT)	DIS-SOLVED SOLIDS (TDS PER DAY)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR
JUNE 19...	.4	2.6	1.2	139	.19	174	33	0	2.1	194	6.9	20
19...A	--	--	--	--	--	--	--	--	--	--	7.2	--

DATE	ALKALINITY AS CaCO3	METHYLENE BLUE ACTIVE SUBSTANCE	DIS-SOLVED OXYGEN	TEMPERATURE (DEG C)
JUNE 19...	46	.18	7.7	23
19...A	--	--	7.7	23

A FIELD DETERMINATION.

02102049 DEEP RIVER AT U.S. HIGHWAY 1, AT MONCURE, N.C.

LOCATION.--Lat 35°37'09", long 79°05'38", Chatham County, at bridge on U.S. Highway 1, 1 mile west of Moncure, 1.2 miles downstream from gaging station, and 3 miles upstream from Haw River.

DRAINAGE AREA (revised).--1,420 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1943 to September 1944, October 1955 to September 1956, October 1961 to September 1968.

Water temperatures: October 1943 to September 1944, October 1955 to September 1956, October 1961 to September 1967.

REMARKS.--No appreciable inflow between sampling point and gaging station at Moncure except during periods of heavy local runoff.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS-CHARGE (CFS)	SILICA (SI02)	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	CARBONATE (CO3)	SULFATE (SO4)	CHLORIDE (CL)
JUNE 19...	1230	770	10	.07	5.4	3.0	9.6	1.8	26	0	7.6	10
19...A	1230	770	--	--	--	--	--	--	--	--	--	--

DATE	FLUORIDE (F)	NITRATE (NO3)	ORTHOPHOSPHATE (PO4)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	DIS-SOLVED SOLIDS (TDS PER AC-FT)	DIS-SOLVED SOLIDS (TDS PER DAY)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR
JUNE 19...	.2	2.2	.57	104	.14	216	26	4	.8	103	6.7	75
19...A	--	--	--	--	--	--	--	--	--	--	6.9	--

DATE	ALKALINITY AS CaCO3	METHYLENE BLUE ACTIVE SUBSTANCE	DIS-SOLVED OXYGEN
JUNE 19...	21	.09	--
19...A	--	--	8.2

A FIELD DETERMINATION.

## CAPE FEAR RIVER BASIN

## 02102500 CAPE FEAR RIVER AT LILLINGTON, N.C.

LOCATION.--Lat 35°24'30", long 78°48'48", Harnett County, at gaging station near right bank of downstream bridge on U.S. Highway 401, 1,800 ft downstream from Norfolk Southern Railroad bridge, 0.5 mile north of Lillington, 1 mile downstream from Neal Creek, and at mile 178.

DRAINAGE AREA.--3,440 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: November 1944 to October 1945, October 1954 to September 1955, November 1960 to September 1968.

Water temperatures: November 1944 to October 1945, October 1954 to September 1955, June 1959 to September 1967.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIC2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CC3)	SULFATE (SC4)	CHLO- RIDE (CL)
JUNE 19... 19...A	1430 1430	767 767	12 --	.36 --	5.5 --	2.2 --	12 --	2.2 --	31 --	C --	8.8 --	11 --
DATE	FLUO- RIDE (F)	NITRATE (NO3)	DRTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC CON- DUCTANCE (MICRO- MHCS)	PH	CHLOR
JUNE 19... 19...A	.2 --	2.5 --	.73 --	98 --	.13 --	203 --	22 --	0 --	1.1 --	113 --	6.7 6.2	100 --
DATE	TIME	ALKA- LITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)							
JUNE 19... 19...A	25 --	.00 --	-- --	25 6.9	25							
A FIELD DETERMINATION.												

A FIELD DETERMINATION.

## 02104000 CAPE FEAR RIVER AT FAYETTEVILLE, N.C.

LOCATION.--Lat 35°02'49", long 78°51'36", Cumberland County, at bridge on Person Street at Fayetteville, 0.3 mile downstream from Cross Creek, and at mile 145.

DRAINAGE AREA.--4,370 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1948 to September 1949, October 1964 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SIO2)	DIS- SCLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SC4)	CHLC- RIDE (CL)
JUNE 19... 19...A SEPT. 17... 17...A	1545 1545 0830 0830	10 -- 10 --	.07 -- .00 --	5.9 -- 7.2 --	2.6 -- 2.2 --	12 -- 29 --	1.9 -- 4.9 --	26 -- 47 --	0 -- 0 --	8.4 -- 16 --	11 -- 27 --
DATE	FLUO- RIDE (F)	NITRATE (NO3)	CRTHC PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SCLIDS (TONS AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BCNATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC CONO- DUCTANCE (MICRO- MHOS)	PH	CLCLR
JUNE 19... 19...A SEPT. 17... 17...A	.3 -- -- --	3.0 -- -- --	1.1 -- 2.9 --	53 -- 125 --	.13 -- .17 --	26 -- 27 --	4 -- 0 --	1.0 -- 2.4 --	110 -- 177 --	6.6 5.7 6.4 7.8	70 -- 15 --
DATE	ALKA- LINITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)							
JUNE 19... 19...A SEPT. 17... 17...A	21 -- -- 39 --	.06 -- -- .08 --	-- -- -- --	27 5.7 -- 20 20							

A FIELD DETERMINATION.

## CAPE FEAR RIVER BASIN

241

02105771 CAPE FEAR RIVER NEAR ACME, N.C.

LOCATION.--Lat 35°23'48", long 78°16'05", Bladen County, at bridge on State Highway 141, 0.8 mile downstream from Natmore Creek, and 6.1 miles northwest of Acme, Columbus County.

DRAINAGE AREA.--5,230 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1956 to September 1968.  
Water temperatures: October 1956 to September 1961.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)
SEPT. 18... 18...A	0830 0830	7.9 --	.02 --	5.1 --	1.9 --	15 --	2.4 --	28 --	0 --	11 --	16 --
DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (IONS PER AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
SEPT. 18... 18...A	.4 --	1.9 --	.15 --	95 --	.13 --	21 --	0 --	1.4 --	115 --	6.2 6.2	20 --
				ALKA- LINITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)				
SEPT. 18... 18...A				23 --	.10 --	-- 6.4	24 24				
A FIELD DETERMINATION.											

A FIELD DETERMINATION.

## WACCAMAW RIVER BASIN

02109500 WACCAMAW RIVER AT FREELAND, N.C.

LOCATION.--Lat 34°05'43", long 78°32'56", Brunswick County, at gaging station on left bank 150 ft downstream from New Britton bridge on State Highway 130, 1 mile southwest of Freeland, 7 miles downstream from Juniper Creek, and 117 miles upstream from mouth in Winyah Bay.

DRAINAGE AREA.--706 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1950 to September 1951, October 1956 to September 1962, October 1967 to September 1968.  
Water temperatures: October 1950 to September 1951, June 1960 to September 1961, October 1962 to September 1967.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS-CHARGE (CFS)	SILICA (SiO2)	DIS-SOLVED IRON (FE)	CAL-CIUM (CA)	MAG-NE-SIUM (MG)	SODIUM (NA)	PO-TAS-SIUM (K)	BICAR-BONATE (HCO3)	CAR-BONATE (CC3)	SULFATE (SO4)	CHLO-RIDE (CL)
JULY 16...	1030	375	4.2	.49	4.2	2.0	16	.9	3	0	11	28
	FLUC-RIDE (F)	NITRATE (NO3)	DRTHD PHCS-PHATE (PO4)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C)	DIS-SOLVED SOLIDS (TIONS PER AC-FT)	DIS-SOLVED SOLIDS (TIONS PER DAY)	HARD-NESS (CA,MG)	NON-CAR-BONATE HARD-NESS	SODIUM AD-SORP-TION RATIO	SPECI-FIC CON-DUCTANCE (MICRO-MHCS)	PH	COLOR
JULY 16...	.2	.7	.01	121	.16	123	19	16	1.6	121	5.0	120
				DATE	ALKA-LINITY AS CaCO3	METHY-LENE BLUE ACTIVE SUB-STANCE	DIS-SOLVED OXYGEN	TEMP-ERATURE (DEG C)				
				JULY 16...	2	.20	4.7	30				

## PEE DEE RIVER BASIN

02112000 YADKIN RIVER AT WILKESBORO, N.C.

LOCATION.--Lat 36°09'09", long 81°08'45", Wilkes County, at gaging station on right bank 150 ft upstream from bridge on U.S. Highway 421A, between North Wilkesboro and Wilkesboro, 150 ft downstream from Reddies River, 0.5 mile northeast of Wilkesboro, and 382 miles upstream from mouth of Pee Dee River in Winyah Bay.

DRAINAGE AREA.--493 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1947 to September 1948, October 1961 to September 1962, October 1967 to September 1968.  
Water temperatures: October 1947 to September 1948, October 1957 to September 1967.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)
AUG. 27... 27...A	1700 1700	210 210	12 ---	.03 ---	2.7 ---	.7 ---	2.7 ---	.4 ---	14 ---	0 ---	1.6 ---	1.8 ---

## PEE DEE RIVER BASIN

02112000 YADKIN RIVER AT WILKESBORO, N.C.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TENS PER AC-FT)	DIS- SOLVED SOLIDS (TENS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRE- MHCS)	PH	COLOR
AUG. 27... 27...A	.1 --	.9 --	.00 --	29 --	.04 --	16 --	10 --	0 --	.4 --	35 --	6.3 7.2	5 --

METHY- LENE ALKA- LITY AS CACO3						DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
AUG. 27... 27...A A FIELD DETERMINATION.	11 --	.01 --	-- --	23 23			

02115051 YADKIN RIVER AT DONNAHA, N.C.

LOCATION.--Lat 36°12'52", long 80°25'57", Forsyth County, at bridge on State Highway 67, 0.8 mile south of Donnah, and 3.5 miles upstream from Fries Creek.

DRAINAGE AREA.--1,650 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SC4)	CHLO- RIDE (CL)
JUNE 17... AUG. 20... 20...A SEPT. 09... 09...A	1600 1100 1100 1340 1340	1760 1220 1220 953 953	12 -- -- 11 --	.00 .02 -- .02 --	3.1 3.0 -- 3.0 --	1.7 .9 -- .7 --	2.6 3.5 -- 4.7 --	.9 1.2 -- 1.3 --	16 17 -- 16 --	0 0 -- 0 --	2.8 3.2 -- 2.0 --	2.8 2.6 -- 4.6 --

DATE	FLUO- RIDE (F)	NITRATE (NO3)	CRTHC PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TENS PER AC-FT)	DIS- SOLVED SOLIDS (TENS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRE- MHCS)	PH	COLOR
JUNE 17... AUG. 20... 20...A SEPT. 09... 09...A	.1 -- -- 0 -- --	.8 -- -- .3 -- --	.00 -- -- .01 -- --	39 -- -- 32 -- --	.05 -- -- .04 -- --	185 -- -- 82 -- --	15 11 -- 10 -- --	2 0 -- 0 -- --	.3 .5 -- .6 -- --	35 40 -- 44 42 --	6.3 5.6 6.9 5.8 8.2 --	5 5 -- 5 -- --

METHY- LENE ALKA- LITY AS CACO3						DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
JUNE 17... AUG. 20... 20...A SEPT. 09... 09...A	13 --	.03 --	-- -- --	27 27			

A FIELD DETERMINATION.

02120668 SOUTH YADKIN RIVER NEAR FRANKLIN, N.C.

LOCATION.--Lat 35°46'36", long 80°30'24", Davie County, at bridge on U.S. Highway 601, 1.5 miles downstream from Third Creek, and 4 miles north of Franklin.

DRAINAGE AREA.--760 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CC3)	SULFATE (SC4)	CHLO- RIDE (CL)
JUNE 17... 17...A AUG. 21... 21...A SEPT. 09... 09...A	1630 1630 1200 1200 1100 1100	-- -- 307 307 235 235	12 -- 16 -- 16 --	.02 -- .00 -- .00 --	3.7 -- 4.5 -- 4.6 --	1.8 -- 1.9 -- 1.9 --	5.3 -- 18 -- 18 --	1.5 -- 2.7 -- 3.1 --	24 -- 52 -- 56 --	0 0 0 0 0 --	2.8 -- 6.8 -- 6.0 --	2.4 -- 9.6 -- 6.6 --





## PEE DEE RIVER BASIN

## 02126000 ROCKY RIVER NEAR NORWOOD, N.C.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968.

DATE	FLUO- RIDE (F)	NITRATE (NO3)	CRTHO PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JUNE 18... 18...A	.1 --	4.2 --	.57 --	204 --	.28 --	788 --	34 --	0 --	2.6 --	218 --	6.9 7.0	55 --

METHY-  
LENE  
BLUE  
ACTIVE  
SUB-  
STANCE

ALKA-  
LINITY  
AS  
CACO3

DIS-  
SOLVED  
OXYGEN

TEMP-  
ERATURE  
(DEG C)

JUNE  
18... 65  
18...A --

.10  
--

7.1  
23

A FIELD DETERMINATION.

## 02129000 PEE DEE RIVER NEAR ROCKINGHAM, N.C.

LOCATION.--Lat 34°56'46", long 79°52'11", Richmond County, at gaging station on left bank at bridge on U.S. Highway 74, 2.5 miles upstream from Falling Creek, 3.3 miles downstream from Blewett Falls hydroelectric plant, 6 miles west of Rockingham, and 192 miles upstream from mouth in Winyah Bay.

DRAINAGE AREA.--6,870 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1946 to September 1948, October 1957 to September 1968.  
Water temperatures: October 1946 to September 1948, October 1957 to September 1967.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHL- ORIDE (CL)
JUNE 18... 18...A	1230 1230	4900 4900	10 --	.04 --	4.9 --	2.0 --	7.8 --	1.7 --	27 --	0 --	7.2 --	6.0 --

DATE	FLUO- RIDE (F)	NITRATE (NO3)	CRTHO PHOS- PHATE (PC4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JUNE 18... 18...A	.1 --	2.1 --	.03 --	66 --	.09 --	873 --	20 --	0 --	.8 --	81 --	6.5 6.6	25 --

METHY-  
LENE  
BLUE  
ACTIVE  
SUB-  
STANCE

ALKA-  
LINITY  
AS  
CACO3

DIS-  
SOLVED  
OXYGEN

TEMP-  
ERATURE  
(DEG C)

JUNE  
18... 22  
18...A --

.00  
--

6.2  
25

A FIELD DETERMINATION.

## 02134138 LUMBER RIVER AT WATER INTAKE, AT LUMBERTON, N.C.

LOCATION.--Lat 34°37'58", long 79°01'40", Robeson County, 0.5 mile downstream from Raft Swamp, and 2 miles north-west of Lumberton.

DRAINAGE AREA.--674 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHL- ORIDE (CL)
JULY 16... SEPT. 17... 17...A	1400 1330 1330	-- 87 87	5.6 5.4 --	.13 .04 --	1.3 1.0 --	.5 .6 --	7.5 22 --	.8 1.4 --	6 11 --	0 0 --	5.8 6.6 --	9.2 26 --

DATE	FLUO- RIDE (F)	NITRATE (NO3)	CRTHO PHOS- PHATE (PC4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JULY 16... SEPT. 17... 17...A	.1 .1 --	.7 .4 --	.05 .17 --	48 72 --	.07 .10 --	-- 16 --	5 5 --	0 0 --	1.4 4.3 --	50 110 --	6.1 6.3 5.3	30 30 --

02134138 LUMBER RIVER AT WATER INTAKE, AT LUMBERTON, N.C.--Continued  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	ALKA- LINITY AS CACO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JULY 16...	5	.10	5.8	29
SEPT. 17...	9	.14	--	23
17...A	--	--	8.4	23

A FIELD DETERMINATION.

02134500 LUMBER RIVER AT BOARDMAN, N.C.

LOCATION.--Lat 34°26'32", long 78°57'38", Robeson County, at gaging station on right bank 50 ft downstream from bridge on U.S. Highway 74, 1 mile downstream from Seaboard Coast Line Railroad bridge at Boardman, 1.5 miles downstream from Big Swamp, and 40.5 miles upstream from mouth.

DRAINAGE AREA.--1,220 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1946 to September 1947, October 1956 to September 1957, October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS-CHARGE (CFS)	SILICA (SiO2)	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	CARBONATE (CO3)	SULFATE (SO4)	CHLORIDE (CL)
JULY 16...	1230	502	8.1	.09	2.7	1.2	9.5	.9	5	0	10	10
DATE	FLUORIDE (F)	NITRATE (NO3)	ORTHO PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	HARDNESS (CA,MG)	NON-CARBONATE HARDNESS	SODIUM ADSORPTION RATIO	SPECIFIC CAPTANCE (MICROMHCS)	PH	COLOR
JULY 16...	.1	.9	.13	65	.09	88	12	8	1.2	68	5.5	50

DATE	ALKA- LINITY AS CACO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JULY 16...	4	.05	5.0	28

SANTEE RIVER BASIN

02138000 CATAWBA RIVER NEAR MARION, N.C.

LOCATION.--Lat 35°42'26", long 82°02'00", McDowell County, at gaging station on right bank 15 ft downstream from bridge on U.S. Highway 221, 0.2 mile downstream from Tom Creek, and 2.2 miles northwest of Marion.

DRAINAGE AREA.--171 sq mi (including area of small tributary which enters above control).

PERIOD OF RECORD.--Chemical analyses: October 1943 to September 1946, October 1967 to September 1968.  
 Water temperatures: October 1943 to September 1946.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS-CHARGE (CFS)	SILICA (SiO2)	DIS-SOLVED IRON (FE)	CAL-CIUM (CA)	MAG-NE-SIUM (MG)	SODIUM (NA)	PO-TAS-SIUM (K)	BICAR-BONATE (HCO3)	CAR-BONATE (CO3)	SULFATE (SO4)	CHLO-RIDE (CL)
MAY 28...	1640	346	10	.00	2.4	1.1	9.2	.6	22	0	2.4	8.0
28...A	1640	346	--	--	--	--	--	--	--	--	--	--
AUG. 28...	0900	120	12	.04	3.0	1.2	17	.6	27	0	3.2	19
28...A	0900	120	--	--	--	--	--	--	--	--	--	--
DATE	FLUC-RIDE (F)	NITRATE (NO3)	ORTH-OPHOS-PHATE (PO4)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	DIS-SOLVED SOLIDS (TCAS PER AC-FT)	DIS-SOLVED SOLIDS (TOMS PER DAY)	HARD-NESS (CA,MG)	NON-CAR-BONATE HARD-NESS	SODIUM ADSORP-TION RATIO	SPECI-FIC CAPAC-ITANCE (MICRO-MHCS)	PH	COLOR
MAY 28...	.1	.7	.15	55	.07	51	11	0	1.2	65	6.3	5
28...A	--	--	--	--	--	--	--	--	--	--	6.6	--
AUG. 28...	.1	.3	.00	66	.05	21	13	0	2.1	103	6.4	5
28...A	--	--	--	--	--	--	--	--	--	--	7.2	--
DATE	TIME	ALKA-LINITY AS CaCO3	METHY-LENE BLUE ACTIVE SUB-STANCE	DIS-SOLVED OXYGEN	TEMP-ERATURE (DEG C)							
MAY 28...	18	.01	--	16								
28...A	--	--	--	8.8	16							
AUG. 28...	22	.00	--	19								
28...A	--	--	--	7.6	19							
A FIELD DETERMINATION.												

A FIELD DETERMINATION.

## SANTÉE RIVER BASIN

02139282 CATAWBA RIVER AT MORGANTON, N.C.

LOCATION.--Lat 35°44'58", long 81°42'20", Burke County, at bridge on State Highway 181, 0.8 mile downstream from Silver Creek, and 1 mile northwest of Morganton.

DRAINAGE AREA.--593 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHL- RIDE (CL)
JUNE 26...	1330	1340	9.3	.03	2.4	1.4	7.5	1.0	20	0	2.6	7.0
SEPT. 20...	0940	278	11	.03	3.2	1.3	7.9	2.3	22	0	3.6	8.0
20...A	0940	278	--	--	--	--	--	--	--	--	--	--

DATE	FLUC- RIDE (F)	NITRATE (NO <sub>3</sub> )	ORTH- PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHCS)	PH	COLOR
JUNE 26...	.1	.2	.04	47	.06	170	12	0	1.0	58	6.7	5
SEPT. 20...	.2	.2	.00	51	.07	38	13	0	.9	65	6.2	5
20...A	--	--	--	--	--	--	--	--	--	--	6.6	--

DATE	ALKA- LINEITY AS CaCO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JUNE 26...	16	.04	7.0	17
SEPT. 20...	18	.23	--	18
20...A	--	--	3.2	18

A FIELD DETERMINATION.

02141500 CATAWBA RIVER AT RHODISS, N.C.

LOCATION.--Lat 35°46'22", long 81°26'14", Caldwell County, at bridge on Rhodiss Road at Rhodiss, 0.2 mile downstream from Rhodiss Dam, and 242 miles upstream from mouth of Wateree River.

DRAINAGE AREA.--1,090 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHL- RIDE (CL)
SEPT. 17...	1445	10	.02	3.0	1.0	8.9	1.2	19	0	3.2	6.2
17...A	1445	--	--	--	--	--	--	--	--	--	--

DATE	FLUC- RIDE (F)	NITRATE (NO <sub>3</sub> )	ORTH- PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHCS)	PH	COLOR
SEPT. 17...	.2	.8	.00	51	.07	12	0	1.1	66	6.1	5
17...A	--	--	--	--	--	--	--	--	70	6.5	--

DATE	ALKA- LINEITY AS CaCO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
SEPT. 17...	16	.07	--	20
17...A	--	--	1.9	20

A FIELD DETERMINATION.

## 02149377 BROAD RIVER NEAR RUTHERFORDTON, N.C.

LOCATION.--Lat 35°17'28", long 81°59'36", Rutherford County, at bridge on Secondary Road 1005, 0.2 mile downstream from Cleghorn Creek, and 5.8 miles south of Rutherfordton.

DRAINAGE AREA.--270 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CCO <sub>3</sub> )	SULFATE (SC <sub>4</sub> )	CHLO- RIDE (CL)
JUNE 25...	1620	483	15	.02	3.0	1.0	2.4	1.0	18	0	2.4	1.4
SEPT. 18...	1530	178	17	.00	3.8	.9	5.0	1.0	23	0	1.2	2.8
18...A	1530	178	--	--	--	--	--	--	--	--	--	--

DATE	FLUC- RIDE (F)	NITRATE (NO <sub>3</sub> )	ORTHO PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TCONS AC-FT)	DIS- SOLVED SOLIDS (TCONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION KATIG	SPECI- FIC COND- UCTANCE (MICRO- MHCS)	PH	CLCR
JUNE 25...	.1	.3	.07	38	.05	49	12	0	.3	37	6.5	15
SEPT. 18...	.0	.3	.09	46	.06	22	13	0	.6	50	6.1	5
18...A	--	--	--	--	--	--	--	--	--	52	6.7	--

DATE	ALKA- LINITY AS CaCO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JUNE 25...	15	.10	8.5	23
SEPT. 18...	19	.08	--	18
18...A	--	--	3.2	18

## A FIELD DETERMINATION.

## 02150062 GREEN RIVER NEAR GREEN RIVER, N.C.

LOCATION.--Lat 35°15'36", long 81°59'02", Polk County, at bridge on Secondary Road 1302, 1 mile upstream from mouth, and 4 miles east of Green River.

DRAINAGE AREA.--240 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CCO <sub>3</sub> )	SULFATE (SC <sub>4</sub> )	CHLO- RIDE (CL)
JUNE 28...	1015	177	12	.02	2.7	.8	2.5	.8	16	0	1.2	1.6
SEPT. 19...	1440	--	16	.00	2.4	1.1	3.3	.9	18	0	.2	2.2

DATE	FLUC- RIDE (F)	NITRATE (NO <sub>3</sub> )	ORTHO PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TCONS PER AC-FT)	DIS- SOLVED SOLIDS (TCONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIG	SPECI- FIC COND- UCTANCE (MICRO- MHCS)	PH	CLCR
JUNE 28...	.1	.4	.02	35	.05	16	10	0	.3	34	6.3	5
SEPT. 19...	.0	.2	.00	38	.05	--	10	0	.4	37	6.2	5

DATE	ALKA- LINITY AS CaCO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	TEMP- ERATURE (DEG C)
JUNE 28...	13	.30	20
SEPT. 19...	15	.12	18

## SANTEE RIVER BASIN

## 02151000 SECOND BROAD RIVER AT CLIFFSIDE, N.C.

LOCATION.--Lat 35°14'08", long 81°45'37", Rutherford County, at gaging station on left bank 0.2 mile downstream from dam at Cliffside Mills, at Cliffside, and 1.3 miles upstream from mouth.

DRAINAGE AREA.--211 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1948 to September 1949, October 1956 to September 1960, October 1967 to September 1968.

Water temperatures: October 1948 to September 1949, October 1956 to September 1960.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIC- CHARGE (CFS)	SILICA (SIC2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)
MAY												
28...	1415	396	15	.00	3.3	1.6	3.8	1.1	22	C	1.6	4.6
28...A	1415	396	--	--	--	--	--	--	--	--	--	--
AUG.												
28...	1100	42	22	.04	4.3	1.9	22	3.6	63	C	4.0	5.6
28...A	1100	42	--	--	--	--	--	--	--	--	--	--
DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHOPHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TNS PER AC-FT)	DIS- SOLVED SOLIDS (TNS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
MAY												
28...	.0	.7	.05	54	.07	57	14	0	.4	55	6.3	5
28...A	--	--	--	--	--	--	--	--	--	--	6.5	--
AUG.												
28...	.2	2.2	.51	111	.15	12	19	0	2.2	135	6.5	10
28...A	--	--	--	--	--	--	--	--	--	--	9.9	--

DATE	ALKAL- LINEITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
MAY				
28...	18	.03	--	18
28...A	--	--	8.6	18
AUG.				
28...	52	.08	--	24
28...A	--	--	6.4	24

A FIELD DETERMINATION.

## 02152596 FIRST BROAD RIVER NEAR EARL, N.C.

LOCATION.--Lat 35°13'03", long 81°36'38", Cleveland County, at bridge on Secondary Road 1140, 3 miles upstream from mouth, and 4.8 miles northeast of Earl.

DRAINAGE AREA.--292 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIC- CHARGE (CFS)	SILICA (SIC2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	CHLO- RIDE (CL)
JUNE												
25...	1020	241	11	.04	2.9	1.4	6.4	1.9	19	0	3.0	6.8
25...A	1430	144	12	.00	3.5	.7	10	1.8	23	0	2.4	10
18...	1430	144	--	--	--	--	--	--	--	--	--	--
DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHOPHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (TNS PER AC-FT)	DIS- SOLVED SOLIDS (TNS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JUNE												
25...	.2	.2	--	46	.06	29	12	0	.8	60	6.0	5
25...A	.0	.3	.29	55	.07	21	12	0	1.3	73	6.0	10
18...	--	--	--	--	--	--	--	--	--	--	6.7	--
18...A	--	--	--	--	--	--	--	--	--	--	--	--

DATE	ALKAL- LINEITY AS CACO3	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JUNE				
25...	16	.10	9.5	23
25...A	19	.13	--	20
18...	--	--	2.9	20
18...A	--	--	--	--

A FIELD DETERMINATION.

## SANTÉE RIVER BASIN

249

02152622 BROAD RIVER NEAR EARL, N.C.

LOCATION.--Lat 35°10'48", long 81°37'06", Cleveland County, at Ellis Ferry, 2 miles downstream from First Broad River, and 5 miles west of Earl.

DRAINAGE AREA.--1,270 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)
JULY												
25...	1135	1650	--	.02	2.7	1.2	5.0	1.1	19	0	2.0	5.0
25...A	1135	1650	--	--	--	--	--	--	--	--	--	--
SEPT.												
16...	1530	883	13	.02	3.0	.9	5.4	1.4	19	0	2.4	5.2
16...A	1530	883	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	DRTHO PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUCE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JULY												
25...	.1	.6	.02	41	.06	183	12	0	.6	48	6.0	5
25...A	--	--	--	--	--	--	--	--	--	52	5.8	--
SEPT.												
16...	.2	.2	.00	46	.06	105	11	0	.7	50	5.8	0
16...A	--	--	--	--	--	--	--	--	--	52	6.4	--

DATE	ALKA- LINITY AS CaCO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JULY				
25...	16	.03	--	27
25...A	--	--	5.0	27
SEPT.				
16...	16	.08	--	23
16...A	--	--	3.7	23
A FIELD DETERMINATION.				

02153456 BUFFALO CREEK NEAR GROVER, N.C.

LOCATION.--Lat 35°10'16", 81°31'04", Cleveland County, at bridge on State Highway 198, 0.1 mile upstream from North Carolina-South Carolina State line, and 4 miles west of Grover.

DRAINAGE AREA.--170 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)
JUNE												
25...	1250	137	13	.03	4.5	1.6	15	3.1	23	0	7.2	19
SEPT.												
18...	1100	60	15	.00	4.6	1.0	15	2.1	27	0	3.6	18
18...A	1100	60	--	--	--	--	--	--	--	--	--	--

DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	DRTHO PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUCE AT 180 C)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG)	NON- CAR- BONATE NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR
JUNE												
25...	.1	.3	.03	76	.10	28	18	0	1.5	108	6.3	15
SEPT.												
18...	.0	.2	.01	76	.10	12	16	0	1.7	106	6.3	5
18...A	--	--	--	--	--	--	--	--	--	--	7.3	--

DATE	ALKA- LINITY AS CaCO <sub>3</sub>	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JUNE				
25...	19	.11	9.0	23
SEPT.				
18...	22	.02	--	18
18...A	--	--	3.9	18
A FIELD DETERMINATION.				

## SANTÉE RIVER BASIN

02154020 NORTH PACOLET RIVER NEAR SANDY PLAINS, N.C.

LOCATION.--Lat 35°12'58", long 82°10'52", Polk County, at bridge on Secondary Road 1517, 1.2 miles downstream from Horse Creek, and 5.6 miles southwest of Sandy Plains.

DRAINAGE AREA.--44.8 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	CAR- BONATE (CC3)	SULFATE (SC4)	CHL- RIDE (CL)
JUNE 28...	1230	64	14	.01	4.2	1.8	8.0	1.1	26	0	5.2	5.3
SEPT. 19...	1100	51	15	.04	4.2	.9	15	1.8	42	0	5.6	5.0
19...A	1100	51	--	--	--	--	--	--	--	--	--	--
DATE	FLUO- RIDE (F)	NITRATE (NO3)	ORTHO- PHOS- PHATE (PD4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (ITCS PER AC-FT)	DIS- SOLVED SOLIDS (TOMS PER OAY)	HARD- NESS (CA, MG)	NON- CAR- BONATE AD- SORP- TION RATIO	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHCS)	PH	COLOR
JUNE 28...	.1	.1	.00	55	.07	9.50	18	0	.8	65	6.3	5
SEPT. 19...	.3	.3	.37	75	.10	10.3	14	0	1.7	97	6.4	10
19...A	--	--	--	--	--	--	--	--	--	--	7.8	--

DATE	ALKAL- INITY AS CAC03	METHY- LENE BLUE ACTIVE SUB- STANCE	DIS- SOLVED OXYGEN	TEMP- ERATURE (DEG C)
JUNE 28...	21	--	--	20
SEPT. 19...	34	.02	--	17
19...A	--	--	3.7	17

A FIELD DETERMINATION.

## NORTH NEWPORT RIVER BASIN

02203559 PEACOCK CREEK NEAR MCINTOSH, GA.

LOCATION.--Lat 31°48'49", long 81°31'13", Liberty County, at gaging station on upstream side of bridge on dirt road, 0.4 mile southwest of U.S. Highway 82 and 0.9 mile south of McIntosh.

DRAINAGE AREA.--33.0 sq mi.

PERIOD OF RECORD.--Chemical analyses: September 1966 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

					DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR
DATE	SULFATE (SO4)	CHLORIDE (CL)	NITRATE (NO3)	PHOSPHATE (PO4)			
OCT. 27...	12	23	2.2	23	--	75	70
NOV. 29...	10	24	1.0	18	--	368	110
SEPT. 14...	14	--	--	--	271	330	--
				TEMP- ERATURE (DEG C)	PH		
		DATE	TIME				
		OCT. 27...	1335	16	7.0		
		NOV. 29...	1130	13	6.7		

02203566 RICEBORO CREEK NEAR RICEBORO, GA.

LOCATION.--Lat 31°45'16", long 81°27'38", Liberty County, at gaging station on north side of stream, 0.4 mile north-  
west of the Riceboro and Barrington Ferry Road, 2.4 miles northwest of Riceboro.

PERIOD OF RECORD.--Chemical analyses: September 1966 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SULFATE (SO4)	CHL- RIDE (CL)	NITRATE (NC3)	PHOS- PHATE (PD4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR
OCT. 26...	354	2850	2.4	.30	--	9200	60
27...	57	620	1.5	.19	--	2150	110
NOV. 28...	181	1520	4.7	.14	--	5200	100
29...	846	6050	3.9	.17	--	10800	50
SEPT. 14...	--	--	--	--	164	180	--



## NORTH NEWPORT RIVER BASIN

251

02203566 RICEBORO CREEK NEAR RICEBORO, GA.--Continued

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	TEMP- ERATURE (DEG C)	PH
OCT.			
26...	1830	21	7.9
27...	1255	16	6.8
NOV.			
28...	1505	--	6.5
29...	1055	--	6.6

02203570 RICEBORO CREEK AT RICEBORO, GA.

LOCATION.--Lat 31°44'43", long 81°25'37", Liberty County, at gaging station 0.1 mile downstream from Seaboard Coast Line Railroad bridge, 0.5 mile northeast of Riceboro.

DRAINAGE AREA.--31.7 sq mi.

PERIOD OF RECORD.--Chemical analyses: September 1966 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SULFATE (SO4)	CHLC- RIDE (CL)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR
OCT.							
26...	740	5800	5.5	.26	--	10700	70
27...	576	4600	5.8	.25	--	10400	60
NOV.							
28...	840	6700	7.3	.16	--	20300	50
29...	1270	10100	6.7	.18	--	20900	50
SEPT.							
14...	232	--	--	--	3390	5420	--

DATE	TIME	TEMP- ERATURE (DEG C)	PH
OCT.			
26...	1655	21	7.1
27...	1230	19	7.0
NOV.			
28...	1420	17	6.7
29...	0915	16	6.8

02203574 NORTH NEWPORT RIVER NEAR SEABROOK, GA.

LOCATION.--Lat 31°42'10", long 81°19'54", Liberty County, 2.5 miles south of Seabrook, 6.5 miles southeast of Riceboro, and at mile 14.5.

DRAINAGE AREA.--144 sq mi.

PERIOD OF RECORD.--Chemical analyses: September 1966 to September 1968.

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SULFATE (SO4)	CHLC- RIDE (CL)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR
OCT.								
26...	1610	12800	8.7	.19	--	--	34200	40
27...	1540	11500	4.8	--	.23	--	31200	50
NOV.								
28...	1800	13800	9.1	--	.19	--	38100	40
29...	1940	15100	7.9	--	.12	--	41200	20
SEPT.								
14...	1610	--	--	--	--	24600	32900	--

DATE	TIME	TEMP- ERATURE (DEG C)	PH
OCT.			
26...	1630	21	7.5
27...	1135	20	7.5
NOV.			
28...	1320	18	7.0
29...	0845	17	7.1

## NORTH NEWPORT RIVER BASIN

## 02203576 CROSS TIDE CREEK NEAR HALFMOON LANDING, GA.

LOCATION.--Lat 31°41'34", long 81°16'23", Liberty County, at gaging station 2.2 miles southwest of Halfmoon Landing and 6 miles east of U.S. Highway 17.

DRAINAGE AREA.--0.93 sq mi (only local drainage channels considered).

PERIOD OF RECORD.--Chemical analyses: September 1966 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	COLOR	TIME	TEMP- ERATURE (DEG C)	PH
OCT.								
26...	1710	13400	--	35500	40	1620	21	7.5
27...	163C	12400	--	33500	40	1125	20	7.5
NOV.								
28...	2010	14400	--	39000	40	1305	18	7.0
29...	201C	15600	--	42000	20	0830	17	7.3
SEPT.								
14...	1800	--	28400	36000	--			

## 02203578 NORTH NEWPORT RIVER AT HALFMOON LANDING, GA.

LOCATION.--Lat 31°40'39", long 81°18'05", Liberty County, at gaging station on dock of Halfmoon Landing and at mile 9.9.

DRAINAGE AREA.--157 sq mi.

PERIOD OF RECORD.--Chemical analyses: September 1966 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	COLOR	TIME	TEMP- ERATURE (DEG C)	PH
OCT.								
26...	1910	14500	--	38000	20	1445	21	7.4
27...	167C	12700	--	33500	40	1000	21	7.6
NOV.								
28...	1860	14600	--	40000	40	1125	18	7.0
29...	213C	16300	--	44500	20	0655	17	7.3
SEPT.								
14...	1800	--	26600	36500	--			

## 02203580 SOUTH NEWPORT CUT NEAR HALFMOON LANDING, GA.

LOCATION.--Lat 31°39'25", long 81°17'18", Liberty County, 3 miles south of Halfmoon Landing and 10.5 miles east of U.S. Highway 17.

DRAINAGE AREA.--0.87 sq mi (only local drainage channels considered).

PERIOD OF RECORD.--Chemical analyses: September 1966 to November 1967 (discontinued).

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, OCTOBER TO NOVEMBER 1967

DATE	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	COLOR	TIME	TEMP- ERATURE (DEG C)	PH
OCT.							
26...	193C	14800	39000	20	1550	21	7.5
27...	1750	13200	35000	40	1050	20	7.5
NOV.							
28...	2060	15200	41200	20	1225	18	7.2
29...	2270	16500	44500	20	0755	17	7.3

## 02203584 NORTH NEWPORT RIVER NEAR HARRIS NECK, GA.

LOCATION.--Lat 31°39'35", long 81°12'22", Liberty County, 2 miles northeast of Harris Neck, 2.5 miles downstream from the division of North Newport and Timmons Rivers, and at mile 4.5.

DRAINAGE AREA.--7.0 sq mi.

PERIOD OF RECORD.--Chemical analyses: September 1966 to November 1967 (discontinued).

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, OCTOBER TO NOVEMBER 1967

DATE	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	COLOR	TIME	TEMP- ERATURE (DEG C)	PH
OCT.							
26...	2040	15800	40100	20	1540	21	7.5
27...	1960	14700	39000	30	1040	20	7.1
NOV.							
28...	2140	16000	42800	20	1210	18	7.2
29...	2220	17600	46100	10	0740	17	7.3

## NORTH NEWPORT RIVER BASIN

253

## 02203585 TIMMONS RIVER NEAR YELLOW BLUFF, GA.

LOCATION.--Lat 31°40'37", long 81°13'09", Liberty County, 0.5 mile downstream from the division of North Newport and Timmons Rivers, 2.5 miles southwest of Yellow Bluff, and at mile 5.5.

DRAINAGE AREA.--161 sq mi.

PERIOD OF RECORD.--Chemical analyses: September 1966 to September 1968.

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	CIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TIME	TEMP- ERATURE (DEG C)	PH
OCT.								
26...	1970	15900	--	41500	20	1520	21	7.4
27...	1990	15000	--	38500	20	1015	20	7.7
NOV.								
28...	2110	15800	--	42800	20	1140	18	7.1
29...	2160	17400	--	46600	10	0715	17	7.5
SEPT.								
14...	2140	--	31800	42100	--			

## 02203586 NORTH NEWPORT RIVER NEAR ST. CATHERINES SOUND, GA.

LOCATION.--Lat 31°41'00", long 81°11'42", Liberty County, just upstream from Vandyke Creek, 1.5 miles upstream from confluence with Midway River, and at mile 3.0.

DRAINAGE AREA.--170 sq mi.

PERIOD OF RECORD.--Chemical analyses: September 1966 to November 1967 (discontinued).

## CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, OCTOBER TO NOVEMBER 1967

DATE	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TIME	TEMP- ERATURE (DEG C)	PH
OCT.							
26...	2150	16500	43000	15	1530	21	7.4
27...	2100	15700	38200	20	1030	20	7.6
NOV.							
28...	2120	16300	44200	20	1155	18	7.3
29...	2210	17900	47200	10	0725	16	7.6

## SOUTH NEWPORT RIVER BASIN

## 02203594 SOUTH NEWPORT RIVER NEAR SOUTH NEWPORT, GA.

LOCATION.--Lat 31°39'35", long 81°19'08", Liberty County, 1 mile upstream from the confluence of South Newport River, South Hampton Creek, Cross Tide Creek, and Newport Cut, and at the Liberty, McIntosh County line.

DRAINAGE AREA.--118 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1966 to November 1967 (discontinued).

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, OCTOBER TO NOVEMBER 1967

DATE	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TIME	TEMP- ERATURE (DEG C)	PH
OCT.							
26...	1710	13300	35500	40	1610	21	7.5
27...	1590	12300	33000	40	1110	20	7.4
NOV.							
28...	1880	14600	39900	40	1250	18	7.1
29...	2070	16200	42900	20	0820	17	7.4

## 02203596 SOUTH NEWPORT RIVER NEAR HARRIS NECK, GA.

LOCATION.--Lat 31°39'05", long 81°17'21", Liberty County, 1 mile downstream from the confluence of South Newport River, Hampton Creek, Cross Tide Creek and South Newport Cut, and at the Liberty, McIntosh County line.

DRAINAGE AREA.--126 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1966 to November 1967 (discontinued).

## CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, OCTOBER TO NOVEMBER 1967

DATE	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	COLOR	TIME	TEMP- ERATURE (DEG C)	PH
OCT.							
26...	1920	14600	38200	20	1600	21	7.5
27...	1710	13200	35000	40	1100	20	7.5
NOV.							
28...	1950	15200	40800	30	1240	18	7.3
29...	2200	16900	44500	20	0805	17	7.4

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN VIRGINIA  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLU- RIDE (CL)
JAMES RIVER BASIN										
02010000 BOLAR SPRING AT BOLAR VA (LAT 38 13 05 LONG 079 40 40)										
JUNE, 1968 19...	--	8.9	.00	57	6.5	1.8	2.0	188	74	1.7
02010500 MUKEY RUN SPRING NEAR WARM SPRINGS VA (LAT 38 06 25 LONG 079 45 05)										
JUNE, 1968 19...	--	4.8	--	17	2.8	.4	.4	61	1.8	1.3
02011500 BACK CREEK NEAR MOUNTAIN GROVE VA (LAT 38 04 10 LONG 079 53 50)										
JUNE, 1968 18...	--	5.0	.02	11	1.9	1.1	.8	38	6.8	1.6
02012000 FALLING SPRING CREEK NEAR FALLING SPRING VA (LAT 37 52 05 LONG 079 55 45)										
JULY, 1968 10...	--	15	.04	127	29	4.6	18	198	274	4.6
02013000 DUNLAP CREEK NEAR COVINGTON VA (LAT 37 48 10 LONG 080 02 50)										
JULY, 1968 10...	19	6.5	.03	56	12	4.8	1.6	138	77	7.7
02014000 POTTS CREEK NEAR COVINGTON VA (LAT 37 43 44 LONG 080 02 33)										
JULY, 1968 10...	--	3.9	.02	26	4.0	1.8	1.6	85	11	2.9
02014500 SMITH CREEK AB OLD DAM NR CLIFTON FORGE VA (LAT 37 51 10 LONG 079 50 50)										
JULY, 1968 10...	--	4.2	.03	19	2.9	.7	.8	64	6.4	1.6
02015500 TUART SPRING NEAR MCDOWELL VA (LAT 38 29 15 LONG 079 26 05)										
JUNE, 1968 19...	--	5.6	.00	41	4.1	.9	.4	132	4.2	1.9
02016500 JAMES RIVER AT LICK RUN VA (LAT 37 46 25 LONG 079 47 05)										
JULY, 1968 10...	--	5.5	.16	54	5.6	46	3.9	111	72	70
02017000 MEADOW CREEK AT NEWCASTLE VA (LAT 37 29 35 LONG 080 06 35)										
JULY, 1968 11...	--	5.1	.05	46	8.0	1.4	.8	170	3.4	2.6
02017500 JOHNS CREEK AT NEWCASTLE VA (LAT 37 30 20 LONG 080 06 25)										
JULY, 1968 11...	--	3.3	.03	14	3.5	1.4	1.2	52	5.6	1.7
02018500 CATAWBA CREEK NEAR CATAWBA VA (LAT 37 28 05 LONG 080 00 20)										
JULY, 1968 11...	5.5	6.0	.05	46	17	1.4	1.6	208	13	4.2
02022000 KARNES SPRING NEAR BUCHANAN VA (LAT 37 35 55 LONG 079 40 50)										
JUNE, 1968 17...	--	6.1	.01	44	5.7	.9	.4	152	7.4	2.1
02020500 CALFPASTURE R ABOVE MILL CREEK AT GOSHEN VA (LAT 37 59 15 LONG 079 29 40)										
JUNE, 1968 20...	59	4.1	.01	6.0	2.4	1.1	.8	84	7.4	2.0
02021500 MAURY RIVER AT ROCKBRIDGE BATHS VA (LAT 37 54 25 LONG 079 25 20)										
JUNE, 1968 20...	110	4.2	.01	12	3.3	1.6	.8	41	8.8	1.7
02022000 BIG SPRING AT KERFS CREEK VA (LAT 37 50 50 LONG 079 28 30)										
JULY, 1968 11...	--	6.4	.04	73	11	1.6	1.6	262	7.2	3.6
02022500 KERFS CREEK NEAR LEXINGTON VA (LAT 37 49 35 LONG 079 25 35)										
JUNE, 1968 20...	10	5.3	.00	56	9.5	1.8	.8	203	9.2	2.9
02023500 SOUTH RIVER NEAR RIVERSIDE VA (LAT 37 47 00 LONG 079 21 35)										
JUNE, 1968 20...	30	6.8	.00	27	7.5	1.4	1.2	112	3.4	3.1
02027500 PINEY RIVER AT PINEY RIVER VA (LAT 37 42 10 LONG 079 01 40)										
JUNE, 1968 17...	84	6.9	.02	2.4	.8	1.1	.4	10	3.6	1.3
02031500 NORTH FORK MOORMANS RIVER NEAR WHITEHALL VA (LAT 38 08 25 LONG 078 45 05)										
JULY, 1968 16...	--	9.6	.02	3.6	1.2	1.4	.8	18	1.4	1.6

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN VIRGINIA

255

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PD4)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	COLOR
JAMES RIVER BASIN										
02010000 BOLAR SPRING AT BOLAR VA (LAT 38 05 LONG 079 40 40)										
JUNE, 1968 19...	.2	1.7	.04	207	160	26	355	7.6	18	5
02010500 MUDDY RUN SPRING NEAR WARM SPRINGS VA (LAT 38 04 25 LONG 079 45 05)										
JUNE, 1968 18...	.0	.4	.03	69	54	4	104	7.5	11	15
02011500 BACK CREEK NEAR MOUNTAIN GROVE VA (LAT 38 04 10 LONG 079 53 50)										
JUNE, 1968 18...	.0	.7	.02	59	36	5	78	7.4	18	8
02012000 FALLING SPRING CREEK NEAR FALLING SPRING VA (LAT 37 52 05 LONG 079 56 45)										
JULY, 1968 10...	1.0	1.1	.00	589	436	274	820	7.6	20	0
02013000 GUNLAP CREEK NEAR COVINGTON VA (LAT 37 48 10 LONG 080 02 50)										
JULY, 1968 10...	.1	.3	.00	240	189	76	402	7.9	21	5
02014000 POTTS CREEK NEAR COVINGTON VA (LAT 37 43 44 LONG 080 02 33)										
JULY, 1968 10...	.2	.7	.00	94	80	10	169	7.7	21	5
02014500 SMITH CREEK AB OLD DAM NR CLIFTON FORGE VA (LAT 37 51 10 LONG 079 50 50)										
JULY, 1968 10...	.2	.0	.00	69	59	6	112	7.4	21	3
02015500 STUART SPRING NEAR MCDOWELL VA (LAT 38 29 15 LONG 079 26 05)										
JUNE, 1968 19...	.2	2.0	.04	133	119	11	213	7.9	13	0
02016500 JAMES RIVER AT LICK RUN VA (LAT 37 46 25 LONG 079 47 05)										
JULY, 1968 10...	.3	2.3	.24	341	157	66	410	7.9	24	100
02017000 MEADOW CREEK AT NEWCASTLE VA (LAT 37 29 35 LONG 080 06 35)										
JULY, 1968 11...	.1	2.0	.21	159	147	8	296	7.9	16	5
02017500 JOHNS CREEK AT NEWCASTLE VA (LAT 37 30 20 LONG 080 06 25)										
JULY, 1968 11...	.2	.0	.00	55	49	6	102	7.6	22	7
02018500 CATAWBA CREEK NEAR CATAWBA VA (LAT 37 28 05 LONG 080 00 20)										
JULY, 1968 11...	.2	.5	.07	185	186	10	355	8.3	18	5
02020000 KARNES SPRING NEAR BUCHANAN VA (LAT 37 35 55 LONG 079 40 50)										
JUNE, 1968 17...	.0	1.1	.06	143	134	9	255	7.9	12	5
02020500 CALFPASTURE R ABOVE MILL CREEK AT GUSHEN VA (LAT 37 59 15 LONG 079 29 40)										
JUNE, 1968 20...	.0	.3	.01	40	25	5	57	7.6	22	3
02021500 MAURY RIVER AT ROCKBRIDGE BATHS VA (LAT 37 54 26 LONG 079 25 20)										
JUNE, 1968 20...	.3	.4	.00	60	44	10	90	7.5	22	5
02022000 BIG SPRING AT KERRS CREEK VA (LAT 37 50 50 LONG 079 28 30)										
JULY, 1968 11...	.1	3.1	.00	222	224	9	410	8.0	13	3
02022500 KERRS CREEK NEAR LEXINGTON VA (LAT 37 49 35 LONG 079 26 35)										
JUNE, 1968 20...	.4	1.0	.01	195	180	13	330	8.1	20	5
02023500 SOUTH RIVER NEAR RIVERSIDE VA (LAT 37 47 00 LONG 079 21 35)										
JUNE, 1968 20...	.0	1.0	.00	114	98	6	188	8.1	19	5
02027500 PINEY RIVER AT PINEY RIVER VA (LAT 37 42 10 LONG 079 01 40)										
JUNE, 1968 17...	.2	.4	.02	31	10	2	24	6.2	17	8
02031500 NORTH FORK MCORMANS RIVER NEAR WHITEHALL VA (LAT 38 08 25 LONG 078 45 05)										
JULY, 1968 16...	.0	.3	.04	35	14	0	38	7.0	21	5

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN VIRGINIA  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (S04)	CHL- RIDE (CL)
JAMES RIVER BASIN--CONTINUED										
JULY, 1968	02032500	SOUTH FORK RIVANNA RIVER NEAR EARLYSVILLE VA (LAT 38 07 30 LONG 78 31 05)								
15...	--	10	6.9	5.0	1.3	3.4	2.0	23	2.6	4.7
JUNE, 1968	02034000	PIVANNA RIVER AT PALMYRA VA (LAT 37 51 28 LONG 078 15 58)								
16... 150	--	7.1	6.7	6.2	2.3	4.6	1.6	24	6.0	5.8
JUNE, 1968	02042500	CHICKAHUMINY RIVER NEAR PROVIDENCE FORGE VA (LAT 37 26 10 LONG 077 03 43)								
07... 67	--	8.4	5.0	6.8	1.6	5.9	2.7	24	11	14
JULY 19...	12	5.7	4.6	8.6	1.8	6.2	2.3	34	4.0	11
SEP. 06...	2.5	5.5	3.4	5.2	3.2	11	3.1	36	17	13
DISMAL SWAMP BASIN										
APR., 1968	02043500	CYPRESS SWAMP AT CYPRESS CHAPEL VA (LAT 36 37 30 LONG 076 36 10)								
12...	--	4.2	3.2	6.8	1.3	4.1	1.8	15	7.8	8.5
CHOWAN RIVER BASIN										
APR., 1968	02044000	NETTWAY RIVER NEAR BURKEVILLE VA (LAT 37 04 40 LONG 078 11 50)								
11...	--	20	5.0	7.0	3.2	5.0	1.6	40	5.8	3.7
APR., 1968	02045500	NETTWAY RIVER NEAR STONY CREEK VA (LAT 36 54 00 LONG 077 24 00)								
11... 310	12	22	6.2	2.2	5.3	1.6	34	5.6	4.5	
APR., 1968	02047000	NETTWAY RIVER NEAR SEBRELL VA (LAT 36 46 13 LONG 077 09 59)								
11... 106	8.1	6.7	6.4	3.3	4.1	1.6	24	7.0	5.1	
APR., 1968	02049500	BLACKWATER RIVER NEAR FRANKLIN VA (LAT 36 45 45 LONG 076 53 55)								
11... 770	1.7	2.5	8.6	1.7	3.9	1.6	24	6.4	8.8	
APR., 1968	02051000	NORTH MEHERRIN RIVER NEAR LUNENBURG VA (LAT 36 59 50 LONG 078 21 00)								
11...	--	18	11	7.0	3.4	4.8	1.2	41	5.6	3.7
ROANOKE RIVER BASIN										
MAR., 1968	02054500	ROANOKE RIVER AT LAFAYETTE VA (LAT 37 14 10 LONG 080 12 30)								
24... 350	6.7	6.3	27	11	2.8	1.2	120	14	4.7	
MAR., 1968	02055000	ROANOKE RIVER AT ROANOKE VA (LAT 37 15 30 LONG 079 56 20)								
24... 520	5.8	6.5	26	11	2.8	1.6	123	14	5.4	
MAR., 1968	02059500	GOOSE CREEK NEAR HUDDLESTON VA (LAT 37 10 20 LONG 079 31 15)								
24... 150	12	2.0	10	4.0	3.2	1.6	42	12	2.6	
MAR., 1968	02061500	BIG OTTER RIVER NEAR EVINGTON VA (LAT 37 12 30 LONG 079 18 14)								
24... 302	12	1.2	4.2	1.9	3.7	1.2	23	3.6	4.7	
MAR., 1968	02064000	FALLING RIVER NEAR NARUNA VA (LAT 37 07 36 LONG 078 57 36)								
24... 170	12	1.0	4.8	2.2	3.9	1.2	26	3.6	3.5	
MAR., 1968	02065500	CUB CREEK AT PHENIX VA (LAT 37 04 45 LONG 078 45 50)								
24... 107	15	1.5	4.4	2.3	4.6	1.8	27	5.2	3.4	
MAR., 1968	02070000	NORTH MAYO RIVER NEAR SPENCER VA (LAT 36 34 05 LONG 079 59 15)								
23... 113	14	6.7	4.0	1.7	3.0	1.8	24	2.4	2.4	
MAR., 1968	02072500	SMITH RIVER AT BASSETT VA (LAT 36 46 15 LONG 080 00 00)								
23... 68	0.5	1.0	3.6	2.6	2.3	1.8	24	3.4	4.2	
MAR., 1968	02073000	SMITH RIVER AT MARTINSVILLE VA (LAT 36 39 45 LONG 079 52 55)								
23... 36	10	1.1	5.8	2.2	8.7	1.6	34	7.4	5.7	
MAR., 1968	02075000	DAN RIVER AT DANVILLE VA (LAT 36 35 15 LONG 079 22 55)								
23... 2130	14	1.1	4.8	1.7	13	1.6	27	6.6	1.6	
MAR., 1968	02077000	BANISTER RIVER AT HALIFAX VA (LAT 36 46 35 LONG 078 54 58)								
23... 658	12	1.4	4.2	1.7	4.6	1.2	22	5.2	4.0	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN VIRGINIA  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

257

DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	PHOS- PHATE (PO <sub>4</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	CULUK
JAMES RIVER BASIN--CONTINUED										
02032500	SOUTH FORK RIVANNA RIVER NEAR EARLYSVILLE VA (LAT 38 07 30 LONG 078 31 05)									
JULY, 1968										
16...	.1	1.0	.11	41	18	0	60	7.0	28	25
02034000	RIVANNA RIVER AT PALMYRA VA (LAT 37 51 28 LONG 078 15 58)									
JUNE, 1968										
16...	.5	3.6	.68	61	25	5	77	7.3	26	16
02042500	CHICKAHMINY RIVER NEAR PROVIDENCE FORGE VA (LAT 37 26 10 LONG 077 03 40)									
JUNE, 1968										
07...	.2	2.3	.38	69	25	5	102	6.8	19	56
JULY										
16...	.1	1.1	.44	70	29	1	98	7.1	24	45
SEP.										
06...	.1	.6	.30	88	36	6	133	7.0	22	33
DISMAL RIVER BASIN										
02043500	CYPRESS SWAMP AT CYPRESS CHAPEL VA (LAT 36 37 30 LONG 076 36 10)									
APR., 1968										
12...	.2	1.5	.08	62	22	10	68	6.5	16	70
CHOWAN RIVER BASIN										
02044000	NOTTOWAY RIVER NEAR BURKEVILLE VA (LAT 37 04 40 LONG 078 11 50)									
APR., 1968										
11...	.0	.5	.04	74	30	0	89	7.0	14	35
02045500	NOTTOWAY RIVER NEAR STONY CREEK VA (LAT 36 54 00 LONG 077 24 00)									
APR., 1968										
11...	.0	.6	.12	64	24	0	78	6.9	14	30
02047000	NOTTOWAY RIVER NEAR SEBRELL VA (LAT 36 46 13 LONG 077 09 50)									
APR., 1968										
11...	.1	1.0	.03	61	22	2	66	6.9	16	50
02049500	BLACKWATER RIVER NEAR FRANKLIN VA (LAT 36 45 45 LONG 076 53 55)									
APR., 1968										
11...	.1	1.4	.11	67	28	8	82	6.8	16	80
02051000	NORTH MEHERRIN RIVER NEAR LUNENBURG VA (LAT 36 59 50 LONG 078 21 00)									
APR., 1968										
11...	.1	.5	.03	69	32	0	88	7.2	14	30
ROANOKE RIVER BASIN										
02054500	ROANOKE RIVER AT LAFAYETTE VA (LAT 37 14 10 LONG 080 12 30)									
MAR., 1968										
24...	.1	1.6	.03	126	112	14	225	8.0	4	8
02055000	ROANOKE RIVER AT ROANOKE VA (LAT 37 15 30 LONG 079 56 20)									
MAR., 1968										
24...	.2	1.8	.05	132	115	14	235	7.9	7	6
02059500	GOOSE CREEK NEAR HUDDLESTON VA (LAT 37 10 20 LONG 079 31 15)									
MAR., 1968										
24...	.1	.8	.04	72	42	8	102	7.5	9	26
02061500	BIG OTTER RIVER NEAR EVINGTON VA (LAT 37 12 30 LONG 079 18 14)									
MAR., 1968										
24...	.1	1.0	.06	51	18	0	50	6.9	10	40
02064000	FALLING RIVER NEAR NARUNA VA (LAT 37 07 36 LONG 078 57 36)									
MAR., 1968										
24...	.2	.4	.04	52	21	0	56	7.0	10	15
02065500	CUB CREEK AT PHENIX VA (LAT 37 04 45 LONG 078 45 50)									
MAR., 1968										
24...	.0	.5	.02	52	20	0	56	6.9	10	15
02070000	NORTH MAYO RIVER NEAR SPENCER VA (LAT 36 34 05 LONG 079 59 15)									
MAR., 1968										
23...	.1	.7	.04	47	17	0	42	7.1	12	8
02072500	SMITH RIVER AT BASSETT VA (LAT 36 46 15 LONG 080 00 00)									
MAR., 1968										
23...	.0	.3	.00	44	20	0	46	7.4	9	31
02073000	SMITH RIVER AT MARTINSVILLE VA (LAT 36 39 45 LONG 079 52 55)									
MAR., 1968										
23...	.2	.4	.27	64	22	0	88	6.9	14	6
02075000	DAN RIVER AT DANVILLE VA (LAT 36 35 15 LONG 079 22 55)									
MAR., 1968										
23...	.0	.8	.20	77	19	0	96	7.2	15	20
02077000	BANISTER RIVER AT HALIFAX VA (LAT 36 46 35 LONG 078 54 58)									
MAR., 1968										
23...	.1	.7	.01	51	17	0	52	6.8	13	18

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA AND GEORGIA  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	P3- TAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (S04)	CHLO- RIDE (CL)
ST. MARYS RIVER BASIN												
APR., 1968 30...	20	22	3.6	.35	1.3	.7	.00	3.9	.5	0	.0	8.0
02230000 TURKEY CREEK AT MACLENNY FLA (LAT 30 16 05 LONG 082 07 201)												
APR., 1968 30...	1.2	21	13	.09	3.5	1.6	.00	4.9	1.0	16	.0	9.0
02230500 S PRONG ST MARYS RIVER NR GLEN ST MARY FLA (LAT 30 16 40 LONG 082 08 401)												
APR., 1968 30...	7.3	23	7.7	.15	8.7	3.0	.00	8.6	1.3	45	2.3	13
02231100 ST MARYS RIVER NR ST GEORGE FLA (LAT 30 44 29 LONG 081 41 171)												
APR., 1968 29...	44	26	5.2	.16	7.8	3.4	.07	5.0	.6	41	.8	8.5
02231250 LITTLE ST MARYS RIVER NR HILLIARD FLA (LAT 30 43 55 LONG 081 53 351)												
APR., 1968 29...	.00	26	1.2	.20	5.5	2.0	.01	12	1.6	18	.7	17
COASTAL BASINS BETWEEN ST. MARYS RIVER AND ST. JOHNS RIVER												
NDV., 1967 16...	2.4	13	7.8	.06	8.4	2.9	--	4.0	.2	38	.0	8.2
JAN., 1968 04...	--	15	--	--	--	--	--	--	--	--	--	--
FEB. 15...	--	7	--	--	--	--	--	--	--	--	--	--
MAR. 28...	--	12	--	--	--	--	--	--	--	--	--	--
MAY 01...	6.2	17	8.1	.12	8.4	2.7	.01	4.4	.4	36	.0	8.0
JUNE 11...	--	25	--	--	--	--	--	--	--	--	--	--
ST. JOHNS RIVER BASIN												
APR., 1968 18...	.50	22	16	.02	55	16	3.0	76	2.1	140	28	158
02231400 BLUE CYPRESS LAKE NR FELLSMERE FLA (LAT 27 43 34 LONG 080 46 321)												
APR., 1968 18...	--	31	1.3	.03	23	4.2	.44	27	1.1	68	7.2	57
02231450 ST JOHNS HEADWATERS NR KENANSVILLE FLA (LAT 27 49 19 LONG 080 48 431)												
APR., 1968 18...	--	25	13	.04	92	40	12	128	4.6	160	158	275
02232100 LAKE WASHINGTON NEAR EAU GALLIE FLA (LAT 28 08 50 LONG 080 44 101)												
APR., 1968 30...	--	29	1.0	.08	64	14	2.2	80	2.3	108	46	190
02232200 WOLF CREEK NEAR DEER PARK FLA (LAT 28 12 55 LONG 080 54 031)												
APR., 1968 30...	.00	27	1.6	.02	35	2.6	.19	14	1.5	124	.1	26
02233200 LITTLE ECNLOCKHATCHEE RIVER NR UNION PARK (LAT 28 31 29 LONG 081 14 391)												
APR., 1968 29...	1.6	23	7.1	.09	15	2.8	.03	20	.4	54	13	20
02233500 ECNLOCKHATCHEE RIVER NR CHULUOTA (LAT 28 40 40 LONG 081 06 511)												
APR., 1968 29...	24	27	11	.07	31	11	.30	82	7.1	77	35	124
02234000 ST JOHNS RIVER AB LK HARNEY NEAR GENEVA, FLA (LAT 28 42 50 LONG 080 02 081)												
APR., 1968 29...	--	28	2.5	.04	125	64	6.0	480	17	132	221	930
02234160 LAKE WINNEMISSETT, NR DELAND, FLA. (LAT 29 01 10 LONG 081 15 061)												
MAY , 1968 02...	--	26	.3	.01	17	8.3	.10	13	9.5	8	73	26
02234500 ST JOHNS RIVER NR SANFORD FLA (LAT 28 50 13 LONG 081 19 281)												
MAY , 1968 02...	--	29	1.6	.04	76	33	2.0	268	8.3	96	131	500
02234900 LAKE HERRICK NR ORLANDO FLA (LAT 28 32 49 LONG 081 29 011)												
OCT., 1967 12...	--	--	1.6	.01	20	11	--	8.2	8.7	24	80	13
02234930 LAKE SHERWOOD NEAR ORLANDO, FLA. (LAT 28 33 11 LONG 081 29 371)												
MAY , 1968 08...	--	24	1.2	.03	26	8.0	.00	11	7.7	80	35	20



## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (FRESH- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
ST. MARYS RIVER BASIN												
APR., 1968		02228500	N PRONG ST MARYS RIVER AT MONIAC GA	(LAT 30 31 00 LONG 082 13 50)								
30...	.1	.9	.13	19	66	6	6	58	4.2	160	7.0	80
TURKEY CREEK AT MACLENNY FLA (LAT 30 16 05 LONG 082 07 20)												
APR., 1968		02230000										
30...	.1	.5	.04	42	53	15	2	61	6.4	70	7.2	80
S PRONG ST MARYS RIVER NR GLEN ST MARY FLA (LAT 30 16 40 LONG 082 08 40)												
APR., 1968		02230500										
30...	.1	1.5	1.1	68	75	34	0	132	6.6	40	7.2	93
ST MARYS RIVER NR ST GEORGE FLA (LAT 30 44 29 LONG 081 41 17)												
APR., 1968		02231100										
29...	.2	.1	.04	52	66	34	0	90	6.8	90	8.5	104
LITTLE ST MARYS RIVER NR HILLIARD FLA (LAT 30 43 55 LONG 081 53 35)												
APR., 1968		02231250										
29...	.2	1.6	.06	51	99	22	7	101	6.2	100	7.3	89
COASTAL BASINS BETWEEN ST. MARYS RIVER AND ST. JOHNS RIVER												
THOMAS CREEK NR CRAWFORD FLA (LAT 30 27 39 LONG 081 49 57)												
NOV., 1967		02231280										
16...	.2	.7	--	52	60	34	2	87	6.8	40	--	--
JAN., 1968												
04...	--	--	--	--	--	--	--	68	--	--	--	--
FEB.												
15...	--	--	--	--	--	--	--	85	--	--	--	--
MAR.												
28...	--	--	--	--	--	--	--	78	--	--	--	--
MAY												
01...	.1	.8	.03	51	62	32	2	93	6.7	60	8.9	92
JUNE												
11...	--	--	--	--	--	--	--	58	--	--	--	--
ST. JOHNS RIVER BASIN												
ST JOHNS HEADWATERS NR VERT BEACH FLA (LAT 27 38 25 LONG 080 40 26)												
APR., 1968		02231350										
18...	.5	5.1	.17	429	506	206	91	770	7.2	80	2.8	32
BLUF CYPRESS LAKE NR FELLSMERE FLA (LAT 27 43 34 LONG 080 46 32)												
APR., 1968		02231400										
18...	.2	1.1	.07	161	218	88	32	302	7.4	80	9.6	123
ST JOHNS HEADWATERS NR KENANSVILLE FLA (LAT 27 49 19 LONG 080 48 43)												
APR., 1968		02231450										
18...	.6	.2	.10	402	858	408	277	1400	7.2	30	1.2	14
LAKE WASHINGTON NEAR EAU GALLIE FLA (LAT 28 09 50 LONG 080 44 10)												
APR., 1968		02232100										
30...	.4	.0	.04	453	605	220	131	865	7.7	60	12.0	154
WOLF CREEK NEAR DEER PARK FLA (LAT 28 12 55 LONG 080 54 03)												
APR., 1968		02232200										
30...	.2	.7	.07	143	156	98	0	262	7.3	40	4.8	59
LITTLE ECONLUCKHATCHEE RIVER NR UNION PARK (LAT 29 31 29 LONG 081 14 39)												
APR., 1968		02233200										
29...	.2	1.4	7.0	114	120	49	5	190	6.8	40	5.9	68
ECONLUCKHATCHEE RIVER NR CHULUOTA (LAT 28 40 40 LONG 081 06 51)												
APR., 1968		02233500										
29...	.9	24	16	380	409	123	60	680	7.1	40	6.3	78
ST JOHNS RIVER AB LK HARNEY NEAR GEVEVA, FLA (LAT 28 42 50 LONG 080 02 08)												
APR., 1968		02234000										
29...	.7	.2	4.1	1910	--	592	474	3420	7.5	50	8.0	101
LAKE WINNEMISSETT, NR DELAND, FLA. (LAT 29 01 10 LONG 081 15 06)												
MAY, 1968		02234160										
02...	.1	1.7	.13	153	179	76	69	272	6.0	5	8.5	104
ST JOHNS RIVER NR SANFORD FLA (LAT 28 50 13 LONG 081 19 28)												
MAY, 1968		02234500										
02...	.4	.4	.66	1070	1200	328	249	1970	7.2	40	12.0	154
ELAKE HERRICK NR ORLANDO FLA (LAT 28 32 49 LONG 081 29 01)												
DEC., 1967		02234900										
12...	.3	.1	--	155	162	95	76	275	6.8	30	--	--
LAKE SHERWOOD NEAR ORLANDO, FLA. (LAT 28 33 11 LONG 081 29 37)												
MAY, 1968		02234930										
08...	.4	4.4	.13	153	170	98	32	279	6.9	0	7.0	82

DATE	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SI02)	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	STRONTIUM (SR)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HC03)	SULFATE (SO4)	CHLORIDE (CL)
ST. JOHNS RIVER BASIN--CONTINUED												
02234935 LAKE JOHN D NR OCOCHEE, FLA.												
OCT., 1967												
19...	--	--	1.1	.00	12	8.1	--	10	7.3	26	43	15
MAY, 1968												
08...	--	25	1.0	.00	13	9.6	.00	11	8.5	30	50	18
02235150 LAKE DORR NEAR ALTONA, FLA. (LAT 29 00 10 LONG 081 38 05)												
APR., 1968												
30...	--	26	2.0	.10	2.0	1.2	.00	6.4	.4	4	5.2	11
02235182 LAKE KATHRYN AT KATHRYN HEIGHTS (LAT 29 00 45 LONG 081 29 46)												
AUG., 1968												
08...	--	20	1.0	.03	1.1	.9	--	4.7	.2	1	3.2	8.5
02235194 LAKE NUKRIS NR PAISLEY (LAT 28 56 20 LONG 081 32 33)												
AUG., 1968												
08...	--	34	10	.25	28	6.3	--	8.3	.5	35	52	16
02235200 BLACKWATER CREEK NR CASSIA FLA (LAT 28 52 40 LONG 081 29 20)												
MAY, 1968												
03...	4.5	23	8.9	.08	40	9.5	.67	7.5	.6	66	71	16
02235341 FISH LAKE NR PINE LAKES, FLA.												
AUG., 1968												
08...	--	32	.5	.02	2.5	2.4	--	6.7	.3	0	19	10
02235500 BLUE SPRINGS NEAR ORANGE CITY FLA (LAT 28 56 38 LONG 081 20 00)												
OCT., 1967												
01... 150		23	--	--	--	--	--	--	--	--	--	--
NOV. 15... 152		22	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
04... 150		24	--	--	--	--	--	--	--	--	--	--
FEB. 20... 150		22	--	--	--	--	--	--	--	--	--	--
APR. 10... --		23	--	--	--	--	--	--	--	--	--	560
MAY 01... 134		23	8.5	.00	64	31	1.1	270	8.8	150	69	495
02235500 BLUE SPRINGS NEAR ORANGE CITY FLA (LAT 28 56 38 LONG 081 20 00)												
JUNE, 1968												
26... 141		23	--	--	--	--	--	--	--	--	--	572
AUG. 21... 160		24	--	--	--	--	--	--	--	--	--	415
02235900 PINE LAKE NR CASSIA FLA (LAT 28 56 10 LONG 081 26 01)												
MAY, 1968												
09... --	--	26	.3	.10	7.1	2.1	.00	6.7	7.0	17	12	12
02236000 ST JOHNS RIVER NEAR DE LAND FLA (LAT 29 00 39 LONG 081 23 21)												
OCT., 1967												
02... 5000		24	7.1	.19	29	12	--	90	3.4	58	37	163
31... --		23	6.2	.14	34	15	--	119	3.7	74	47	220
NOV. 30... --		21	5.1	.07	44	19	--	140	.5	84	58	258
DEC. 29... --		17	7.8	.06	53	24	--	140	.6	108	72	260
JAN., 1968												
30... --		17	4.7	.02	55	23	--	160	6.3	104	55	300
FEB. 27... --		14	4.7	.10	60	24	--	155	5.6	106	86	302
APR. 01... --		26	3.3	.03	66	30	1.5	198	6.5	113	104	378
MAY 02... 862		25	5.0	.02	59	24	1.1	148	5.0	122	74	278
JUNE 26... 9650		20	2.6	.10	34	15	1.0	98	5.5	40	74	182
JULY 31... --		28	6.4	.31	24	8.8	--	57	3.9	56	22	111
AUG. 30... 2530		25	6.4	.20	23	8.0	--	53	2.9	54	25	99
02236095 ALEXANDER SPRINGS NR ASTOR (LAT 29 04 50 LONG 081 34 30)												
JULY, 1968</												

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

281

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 190 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATU- RATION
ST. JOHNS RIVER BASIN--CONTINUED 02234935 LAKE JOHIO NR OCOCHEE, FLA.												
OCT., 1967												
19...	.3	5.8	--	116	123	64	42	215	6.9	10	--	--
MAY, 1968												
08...	.4	8.2	.05	135	162	72	47	242	6.8	0	8.4	100
02235150 LAKE DORR NEAR ALTOONA, FLA. (LAT 29 00 10 LONG 081 38 05)												
APR., 1968												
30...	.1	.6	.18	31	52	10	7	61	5.8	60	7.6	93
02235182 LAKE KATHRYN AT KATHRYN HEIGHTS (LAT 29 00 45 LONG 081 29 46)												
AUG., 1968												
08...	.1	.3	.05	21	32	6	5	42	5.7	0	--	--
02235194 LAKE NORRIS NR PAISLEY (LAT 28 56 20 LONG 081 32 33)												
AUG., 1968												
08...	.3	3.0	.05	142	209	96	67	226	6.9	240	--	--
02235200 BLACKWATER CREEK NR CASSIA FLA (LAT 28 52 40 LONG 081 29 20)												
MAY, 1968												
03...	.3	1.5	.09	189	219	140	86	311	7.2	80	6.2	71
02235341 FISH LAKE NR PINE LAKES, FLA.												
AUG., 1968												
08...	.1	.2	.20	42	51	16	16	93	4.5	5	--	--
02235500 BLUE SPRINGS NEAR ORANGE CITY FLA (LAT 28 56 38 LONG 081 20 00)												
OCT., 1967												
01...	--	--	--	--	--	--	--	2510	--	--	--	--
NOV.												
15...	--	--	--	--	--	--	--	2200	--	--	--	--
JAN., 1968												
04...	--	--	--	--	--	--	--	1820	--	--	--	--
FEB.												
20...	--	--	--	--	--	--	--	2100	--	--	--	--
APR.												
10...	--	--	--	--	--	--	--	2130	--	--	--	--
MAY												
01...	.3	.0	.26	1020	1110	288	165	1890	7.5	0	2.3	26
02235500 BLUE SPRINGS NEAR ORANGE CITY FLA (LAT 28 56 38 LONG 081 20 00)												
JUNE, 1968												
26...	--	--	--	--	--	--	--	2200	--	--	--	--
AUG.												
21...	--	--	--	--	--	--	--	1600	--	--	--	--
02235900 PINE LAKE NR CASSIA FLA (LAT 28 56 10 LONG 081 26 01)												
MAY, 1968												
09...	.1	1.0	.09	51	72	26	12	96	6.4	50	9.4	115
02236000 ST JOHNS RIVER NEAR DE LAND FLA (LAT 29 00 39 LONG 081 23 21)												
OCT., 1967												
02...	.3	1.8	--	373	441	122	74	710	6.6	220	--	--
31...	.4	.7	2.0	481	558	146	86	925	7.6	160	--	--
NOV.												
30...	1.3	1.0	.15	568	623	199	119	1090	7.0	100	--	--
DEC.												
29...	1.4	1.9	.38	614	616	230	142	1130	7.2	50	--	--
JAN., 1968												
30...	.4	.4	--	656	718	232	146	1270	7.7	60	--	--
FEB.												
27...	.0	1.2	--	691	719	249	161	1290	7.4	--	--	--
APR.												
01...	.3	.4	--	844	904	290	197	1590	7.0	40	--	--
MAY												
02...	.2	.0	.32	654	759	247	147	1260	7.6	20	7.1	85
JUNE												
26...	.4	1.7	.77	434	535	148	115	820	6.6	140	--	--
JULY												
31...	.3	.7	.56	262	332	96	50	480	6.7	240	--	--
AUG.												
30...	.2	.8	.48	244	299	90	46	450	6.7	200	--	--
02236095 ALEXANDER SPRINGS NR ASTOR (LAT 29 04 50 LONG 081 34 30)												
JULY, 1968												
11...	--	--	--	--	--	--	--	1000	--	--	--	--
02236110 PONCE DE LEON SPRINGS NR DE LAND FLA (LAT 29 08 02 LONG 081 21 47)												
OCT., 1967												
03...	--	--	--	--	--	--	--	760	8.4	--	--	--
NOV.												
14...	--	--	--	--	--	--	--	590	--	--	--	--
JAN., 1968												
03...	--	--	--	--	--	--	--	510	--	--	--	--
19...	--	--	--	--	--	--	--	520	--	--	--	--
APR.												
09...	--	--	--	--	--	--	--	432	--	--	--	--
MAY												
01...	.2	.9	.21	217	223	127	19	397	7.6	0	2.9	33
JUNE												
25...	--	--	--	--	--	--	--	550	--	--	--	--
AUG.												
20...	--	--	--	--	--	--	--	560	--	--	--	--



## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOS- PHATE (P74)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	CHLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
ST. JOHNS RIVER BASIN--CONTINUED												
02236120 DEEP CREEK NEAR BARRERVILLE, FLA. (LAT 29 07 47 LONG 081 23 27)												
APR., 1963 30...	.2	1.8	.05	284	413	138	66	560	6.9	120	5.5	65
02236128 LAKE SCHIMMERHORN AT ASTOR PARK (LAT 29 09 10 LONG 081 34 50)												
AUG., 1968 08...	.1	.0	.10	17	27	6	6	45	5.0	0	--	--
02236200 LAKE KERR NR EUREKA FLA (LAT 29 20 10 LONG 091 46 00)												
APR., 1968 30...	.2	1.2	.06	64	69	24	21	120	6.0	0	8.2	93
02236250 LAKE LOWERY NEAR HAINES CITY FLA (LAT 28 06 51 LONG 081 40 17)												
JAN., 1968 02...	--	--	--	--	--	--	--	149	--	--	--	--
MAR. 25...	--	--	--	--	--	--	--	150	--	--	--	--
APR. 30...	.5	1.1	.14	83	120	26	18	167	6.3	50	8.8	111
02236500 BIG CREEK NEAR CLERMONT FLA (LAT 28 26 51 LONG 081 44 25)												
OCT., 1967 02...	--	--	--	--	--	--	--	62	--	--	--	--
03...	--	--	--	--	--	--	--	157	--	--	--	--
NOV. 20...	--	--	--	--	--	--	--	73	--	--	--	--
JAN., 1968 08...	--	--	--	--	--	--	--	74	--	--	--	--
FEB. 15...	--	--	--	--	--	--	--	82	--	--	--	--
MAR. 29...	--	--	--	--	--	--	--	82	--	--	--	--
MAY 02...	.2	1.0	.16	45	78	19	8	88	6.0	140	.4	5
JUNE 17...	--	--	--	--	--	--	--	90	--	--	--	--
SEP. 18...	--	--	--	--	--	--	--	54	--	--	--	--
02236812 -ELAT LAKE NR OAKLAND (LAT 29 29 25 LONG 081 40 25)												
AUG., 1968 06...	.2	.5	.10	38	64	16	14	83	6.9	30	--	--
02236820 LAKE LOUISA NEAR CLERMONT FLA (LAT 28 29 53 LONG 081 44 14)												
NOV., 1967 17...	--	--	--	--	--	--	--	62	--	--	--	--
MAY, 1968 06...	.1	1.1	.07	40	69	14	10	76	5.7	120	7.4	90
02236840 LAKE MINNEHAHA AT CLERMONT FLA (LAT 28 32 40 LONG 081 45 18)												
NOV., 1967 17...	--	--	--	--	--	--	--	62	--	--	--	--
JAN., 1969 04...	--	--	--	--	--	--	--	62	--	--	--	--
13...	--	--	--	--	--	--	--	58	--	--	--	--
FEB. 06...	--	--	--	--	--	--	--	68	--	--	--	--
MAY 20...	--	--	--	--	--	--	--	69	--	--	--	--
MAY 06...	.2	1.1	.05	39	60	14	10	75	5.9	60	8.0	99
JUNE 14...	--	--	--	--	--	--	--	80	--	--	--	--
JULY 25...	--	--	--	--	--	--	--	65	--	--	--	--
SEP. 05...	--	--	--	--	--	--	--	65	--	--	--	--
02236848 GRASSY LAKE NR MINNEOLA (LAT 28 35 44 LONG 081 44 39)												
AUG., 1963 05...	.2	.2	.17	143	157	58	58	265	4.7	0	--	--
02236860 LAKE APOSHAWA NEAR MINNEOLA FLA (LAT 28 36 13 LONG 081 46 35)												
NOV., 1967 17...	--	--	--	--	--	--	--	280	--	--	--	--
FEB., 1968 14...	--	--	--	--	--	--	--	302	--	--	--	--
APR. 02...	--	--	--	--	--	--	--	295	--	--	--	--
MAY 06...	.2	.4	.07	175	223	93	88	323	5.9	0	7.9	96
JUNE 18...	--	--	--	--	--	--	--	292	--	--	--	--
SEP. 18...	--	--	--	--	--	--	--	230	--	--	--	--

**ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA**  
**CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968**

DATE	DIS- CHARGE (GFS)	TEMP- ERATURE (DEG C)	SILICA (SI1I2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POT- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
<b>ST. JOHNS RIVER BASIN--CONTINUED</b>												
<b>02236900 PALATLAKAHA CR AB CHERRY LK ULT NR GROVELAND (LAT 28 35 33 LONG 081 49 21)</b>												
NOV., 1967												
17...	--	20	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
03...	.50	21	--	--	--	--	--	--	--	--	--	--
FEB.												
14...	--	14	--	--	--	--	--	--	--	--	--	--
APR.												
02...	--	25	--	--	--	--	--	--	--	--	--	--
MAY												
06...	.00	27	1.2	.04	4.1	1.5	.00	8.4	.8	4	7.2	16
JUNE												
18...	.00	25	--	--	--	--	--	--	--	--	--	--
SEP.												
19...	28	31	--	--	--	--	--	--	--	--	--	--
<b>02236901 PALATLAKAHA CR BL CH LK ULT NR GROVELAND (LAT 28 35 32 LONG 081 49 21)</b>												
NOV., 1967												
17...	--	21	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
03...	--	21	--	--	--	--	--	--	--	--	--	--
FEB.												
14...	--	14	--	--	--	--	--	--	--	--	--	--
APR.												
02...	--	23	--	--	--	--	--	--	--	--	--	--
MAY												
06...	.00	26	.0	.07	3.7	1.6	.00	9.1	.8	5	7.4	16
JUNE												
18...	--	24	--	--	--	--	--	--	--	--	--	--
<b>02237000 PALATLAKAHA CR NR MASCOTTE FLA (UPPER) (LAT 28 36 56 LONG 081 51 53)</b>												
NOV., 1967												
16...	--	21	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
03...	.50	20	--	--	--	--	--	--	--	--	--	--
FEB.												
14...	--	14	--	--	--	--	--	--	--	--	--	--
APR.												
02...	--	24	--	--	--	--	--	--	--	--	--	--
MAY												
07...	1.2	26	.5	.04	3.3	1.6	.00	8.9	1.2	5	7.4	17
JUNE												
17...	.21	29	1.0	.32	3.2	1.6	--	8.3	1.1	3	7.6	14
SEP.												
18...	30	25	--	--	--	--	--	--	--	--	--	--
<b>02237001 PALATLAKAHA CREEK NR MASCOTTEE LOWER (LAT 28 36 57 LONG 081 51 58)</b>												
NOV., 1967												
16...	--	20	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
03...	--	17	--	--	--	--	--	--	--	--	--	--
FEB.												
14...	--	14	--	--	--	--	--	--	--	--	--	--
APR.												
02...	--	23	--	--	--	--	--	--	--	--	--	--
MAY												
07...	1.2	26	.3	.04	3.7	1.5	.00	8.8	1.2	6	8.0	17
JUNE												
17...	.21	31	--	--	--	--	--	--	--	--	--	--
SEP.												
19...	34	28	--	--	--	--	--	--	--	--	--	--
<b>02237147 TURKEY LAKE NEAR YALAHUA, FLA. (LAT 28 42 05 LONG 081 51 20)</b>												
AUG., 1968												
09...	--	31	.5	.01	3.7	3.6	--	14	3.6	10	14	26
<b>02237293 PALATLAKAHA CREEK AT STRUCTURE 4-1 NR OKAHUMPKA (LAT 28 44 29 LONG 081 52 22)</b>												
SEP., 1968												
18...	--	29	.5	.26	3.0	1.5	--	6.6	.7	7	6.0	12
<b>02237370 CHURCH LAKE NEAR MASCOTTE FLA (LAT 28 38 37 LONG 081 50 28)</b>												
AUG., 1968												
06...	--	28	.8	.00	9.7	7.9	--	27	4.3	4	58	38
<b>02237490 PITTS POND NR OKAHUMPKA (LAT 28 43 25 LONG 081 52 04)</b>												
MAY, 1968												
09...	--	25	1.5	.12	4.8	3.4	.02	10	.6	150	4.8	22
<b>02237501 LAKE BRIGHT NR OKAHUMPKA (LAT 28 43 06 LONG 081 54 41)</b>												
AUG., 1968												
06...	--	32	1.7	.02	2.4	1.7	--	9.9	.9	0	10	18

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO <sub>3</sub> )	PHOS- PHATE (P <sub>14</sub> )	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 150 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
ST. JOHNS RIVER BASIN--CONTINUED												
02236900 PALATLAKAHA CR AB CHERRY LK DLT NR GROVELAND (LAT 28 35 33 LONG 081 49 21)												
NOV., 1967												
17...	--	--	--	--	--	--	--	71	--	--	--	--
JAN., 1968												
03...	--	--	--	--	--	--	--	74	--	--	--	--
FEB.												
14...	--	--	--	--	--	--	--	78	--	--	--	--
APR.												
02...	--	--	--	--	--	--	--	76	--	--	--	--
MAY												
06...	.1	.4	.05	41	63	14	11	82	5.8	30	7.3	90
JUNE												
18...	--	--	--	--	--	--	--	80	--	--	--	--
SEP.												
19...	--	--	--	--	--	--	--	--	--	--	--	--
02236901 PALATLAKAHA CR BL CH LK DLT NR GROVELAND (LAT 28 35 32 LONG 081 49 21)												
NOV., 1967												
17...	--	--	--	--	--	--	--	72	--	--	--	--
JAN., 1968												
03...	--	--	--	--	--	--	--	76	--	--	--	--
FEB.												
14...	--	--	--	--	--	--	--	79	--	--	--	--
APR.												
02...	--	--	--	--	--	--	--	74	--	--	--	--
MAY												
06...	.2	1.0	.04	41	66	16	12	84	5.9	30	--	--
JUNE												
18...	--	--	--	--	--	--	--	80	--	--	--	--
02237000 PALATLAKAHA CR NR MASCOTTE FLA (UPPER) (LAT 28 36 56 LONG 081 51 53)												
NOV., 1967												
17...	--	--	--	--	--	--	--	79	--	--	--	--
JAN., 1968												
03...	--	--	--	--	--	--	--	77	--	--	--	--
FEB.												
14...	--	--	--	--	--	--	--	84	--	--	--	--
APR.												
02...	--	--	--	--	--	--	--	79	--	--	--	--
MAY												
07...	.2	1.5	.04	44	64	14	10	88	5.8	30	6.8	83
JUNE												
17...	.2	.9	--	39	54	14	12	83	5.8	30	--	--
SEP.												
19...	--	--	--	--	--	--	--	87	--	--	--	--
02237001 PALATLAKAHA CREEK NR MASCOTTEE LOWER (LAT 28 36 57 LONG 081 51 58)												
NOV., 1967												
16...	--	--	--	--	--	--	--	79	--	--	--	--
JAN., 1968												
03...	--	--	--	--	--	--	--	88	--	--	--	--
FEB.												
14...	--	--	--	--	--	--	--	86	--	--	--	--
APR.												
02...	--	--	--	--	--	--	--	76	--	--	--	--
MAY												
07...	.2	.7	.04	44	71	15	10	88	6.0	30	7.2	88
JUNE												
17...	--	--	--	--	--	--	--	92	--	--	--	--
SEP.												
19...	--	--	--	--	--	--	--	78	--	--	--	--
02237147 TURKEY LAKE NEAR YALAHUA, FLA. (LAT 28 42 05 LONG 081 51 20)												
AUG., 1968												
09...	.2	.5	.06	71	92	24	16	134	6.1	10	--	--
02237293 PALATLAKAHA CREEK AT STRUCTURE M-1 NR OKAHUMPKA (LAT 28 44 29 LONG 081 52 22)												
SEP., 1968												
18...	.2	.3	--	34	55	14	8	69	6.1	45	--	--
02237370 CHURCH LAKE NEAR MASCOTTE FLA (LAT 28 38 37 LONG 081 50 28)												
AUG., 1968												
06...	.2	.7	.14	149	161	56	53	292	5.6	0	--	--
02237490 PITTS POND NR OKAHUMPKA (LAT 28 43 25 LONG 081 52 04)												
MAY, 1968												
09...	.2	.6	.09	165	212	134	11	302	7.5	50	8.4	100
02237501 LAKE BRIGHT NR OKAHUMPKA (LAT 28 43 06 LONG 081 54 41)												
AUG., 1968												
06...	.2	.5	.09	45	67	0	0	93	5.4	20	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFPS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POT- AS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
ST. JOHNS RIVER BASIN--CONTINUED												
02237502 PALATLAKAMA CREEK AT HWY 27 NR OKAHUMPKA FLA (LAT 28 44 14 LONG 081 52 15)												
NOV., 1967												
16...	--	20	--	--	--	--	--	--	--	--	--	--
DEC.												
01...	--	21	4.2	.01	8.6	1.6	--	5.3	.5	30	2.4	9.0
JAN., 1968												
03...	.66	19	1.2	.08	8.4	1.8	--	6.0	.8	28	1.7	10
FEB.												
14...	--	14	1.3	.03	8.7	1.8	--	7.0	.9	32	.4	11
APR.												
03...	--	23	1.3	.26	7.9	1.9	--	7.7	1.9	28	5.2	15
MAY												
07...	.07	22	2.2	.02	12	1.8	.00	5.0	1.0	46	1.8	11
JUNE												
17...	3.0	27	2.0	.07	6.9	1.9	--	7.7	1.0	18	6.0	14
JULY												
29...	--	31	3.5	.02	7.6	1.6	--	5.9	.6	24	3.2	9.8
02237517 LAKE MELTON NR ASTATULA (LAT 28 45 00 LONG 081 43 20)												
AUG., 1968												
04...	--	30	1.0	.00	1.7	1.8	--	6.8	.9	0	9.6	12
02237520 LAKE HARRIS AT LAFESBURG FLA (LAT 28 48 16 LONG 081 52 27)												
NOV., 1967												
14...	--	20	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
03...	--	19	--	--	--	--	--	--	--	--	--	--
FEB.												
12...	--	13	--	--	--	--	--	--	--	--	--	--
APR.												
03...	--	23	--	--	--	--	--	--	--	--	--	--
29...	--	28	1.0	.07	31	6.0	.06	9.2	1.8	120	7.1	19
JUNE												
19...	--	28	--	--	--	--	--	--	--	--	--	--
02237540 JOHNS LAKE AT OKLANU FLA (LAT 28 32 46 LONG 081 37 44)												
DEC., 1967												
01...	--	22	--	--	6.7	--	--	--	--	6	--	--
JAN., 1968												
04...	--	21	--	--	--	--	--	--	--	--	--	--
MAR.												
29...	--	24	--	--	--	--	--	--	--	--	--	--
02237561 LAKE FLORENCE AT MONTVERDE FLA (LAT 28 35 56 LONG 081 40 44)												
MAY, 1968												
09...	--	25	.5	.00	14	6.6	.00	8.4	1.9	70	6.4	16
02237600 LAKE APOPKA AT WINTER GARDEN FLA (LAT 28 34 36 LONG 081 35 13)												
NOV., 1967												
22...	--	20	--	--	--	--	--	--	--	--	--	--
FEB., 1968												
16...	--	15	--	--	--	--	--	--	--	--	--	--
MAY												
04...	--	23	3.6	.03	30	18	.09	19	7.1	148	22	36
SEP.												
19...	--	30	--	--	--	--	--	--	--	--	--	--
02237660 LAKE FRANCIS NR PLYMOUTH FLA (LAT 28 42 06 LONG 081 32 26)												
OCT., 1967												
04...	--	25	--	--	--	--	--	--	--	--	--	--
NOV.												
07...	--	25	--	--	--	--	--	--	--	--	--	--
DEC.												
15...	--	22	--	--	--	--	--	--	--	--	--	--
FEB., 1968												
01...	--	20	--	--	--	--	--	--	--	--	--	--
MAR.												
29...	--	21	--	--	--	--	--	--	--	--	--	--
MAY												
01...	--	30	1.5	.02	9.0	3.7	.07	9.9	2.6	3	31	20
JUNE												
12...	--	32	--	--	--	--	--	--	--	--	--	--
JULY												
26...	--	37	--	--	--	--	--	--	--	--	--	--
SEP.												
11...	--	31	--	--	--	--	--	--	--	--	--	--
02237700 APOPKA-BEAUCLAIR CANAL NR ASTATULA FLA (LAT 28 43 20 LONG 081 41 06)												
NOV., 1967												
13...	--	18	11	.05	40	17	--	18	6.3	172	21	32
JAN., 1968												
09...	.43	20	11	.02	49	19	--	17	9.0	205	20	32
FEB.												
13...	--	12	8.3	.00	56	20	--	21	12	232	27	39
13...	--	15	--	--	--	--	--	--	--	--	--	--
MAR.												
29...	--	19	1.9	.03	51	19	--	18	7.4	215	27	36
MAY												
07...	.30	27	3.9	.06	43	18	.13	18	5.5	192	19	36
JUNE												
10...	327	27	7.1	.04	36	17	--	17	6.2	166	24	32
JULY												
18...	320	29	7.3	.04	34	15	--	15	8.1	135	23	28
SEP.												
18...	349	28	9.3	.09	36	15	--	15	5.9	154	23	27



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

.287

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (P34)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS-SOLVED SOLIDS (RESIDUE AT 130 C)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICRO-MHS)	PH	COLOR	DISSOLVED OXYGEN	PERCENT SATURATION
ST. JOHNS RIVER BASIN--CONITUED												
02237502 PALATLAKA CREEK AT HWY 27 NR OKAHUMPKA FLA (LAT 28 44 14 LONG 081 52 15)												
NOV., 1967												
16...	--	--	--	--	--	--	--	81	--	--	--	--
DEC.												
01...	.2	.4	--	47	56	28	4	93	6.6	10	--	--
JAN., 1968												
03...	.0	.4	--	44	58	28	6	98	6.7	20	--	--
FEB.												
14...	.2	.2	--	48	68	29	3	92	6.6	20	--	--
APR.												
03...	.2	.1	--	55	66	28	5	109	6.4	40	--	--
MAY												
07...	.1	.5	.03	58	69	38	0	111	6.8	10	6.7	76
JUNE												
17...	.2	.4	--	66	--	25	10	97	6.4	40	--	--
JULY												
29...	.1	1.0	--	45	56	26	6	82	6.5	25	--	--
02237517 LAKE MELTON NR ASTATULA (LAT 28 45 00 LONG 081 43 20)												
AUG., 1968												
04...	.1	.3	.04	34	41	12	12	72	5.4	0	--	--
02237520 LAKE HARRIS AT LEESBURG FLA (LAT 28 48 16 LONG 081 52 27)												
NOV., 1967												
14...	--	--	--	--	--	--	--	220	--	--	--	--
JAN., 1968												
03...	--	--	--	--	--	--	--	235	--	--	--	--
FEB.												
12...	--	--	--	--	--	--	--	240	--	--	--	--
APR.												
03...	--	--	--	--	--	--	--	215	--	--	--	--
29...	.3	1.2	.11	136	160	102	4	250	7.3	10	8.2	104
JUNE												
19...	--	--	--	--	--	--	--	242	--	--	--	--
02237540 JOHNS LAKE AT OAKLAND FLA (LAT 28 32 46 LONG 081 37 44)												
DEC., 1967												
01...	--	--	--	--	--	--	--	217	6.1	--	--	--
JAN., 1968												
04...	--	--	--	--	--	--	--	210	--	--	--	--
MAR.												
28...	--	--	--	--	--	--	--	230	--	--	--	--
02237561 LAKE FLORENCE AT MONTVERDE FLA (LAT 28 35 56 LONG 081 40 44)												
MAY, 1968												
09...	.3	1.6	.08	90	100	62	5	175	7.0	10	7.4	88
02237600 LAKE APOPKA AT WINTER GARDEN FLA (LAT 28 34 36 LONG 081 35 13)												
NOV., 1967												
22...	--	--	--	--	--	--	--	379	--	--	--	--
FEB., 1968												
16...	--	--	--	--	--	--	--	398	--	--	--	--
MAY												
08...	.3	1.1	.73	210	294	149	29	380	7.5	70	10.0	115
SEP.												
19...	--	--	--	--	--	--	--	300	--	--	--	--
02237660 LAKE FRANCIS NR PLYMOUTH FLA (LAT 28 42 06 LONG 081 32 26)												
OCT., 1967												
04...	--	--	--	--	--	--	--	80	--	--	--	--
NOV.												
02...	--	--	--	--	--	--	--	89	--	--	--	--
DEC.												
15...	--	--	--	--	--	--	--	98	--	--	--	--
FEB., 1968												
01...	--	--	--	--	--	--	--	112	--	--	--	--
MAR.												
28...	--	--	--	--	--	--	--	115	--	--	--	--
MAY												
01...	.2	2.2	.14	82	99	38	36	160	4.8	20	8.7	114
JUNE												
12...	--	--	--	--	--	--	--	132	--	--	--	--
JULY												
26...	--	--	--	--	--	--	--	85	--	--	--	--
SEP.												
11...	--	--	--	--	--	--	--	66	--	--	--	--
02237700 APOPKA-BEAUCLAIR CANAL NR ASTATULA FLA (LAT 28 43 20 LONG 081 41 06)												
NOV., 1967												
13...	.8	3.7	--	235	283	170	29	390	7.2	50	--	--
JAN., 1968												
09...	.8	3.4	--	267	307	200	25	460	7.5	80	--	--
FEB.												
13...	1.1	2.7	--	304	363	222	32	530	7.6	100	--	--
MAR.												
13...	--	--	--	--	--	--	--	502	--	--	--	--
29...	.8	3.9	--	272	332	205	29	455	7.2	80	--	--
MAY												
07...	.8	3.8	.50	243	299	182	24	425	7.5	50	8.2	101
JUNE												
19...	.7	2.5	--	225	281	160	24	380	6.9	50	--	--
JULY												
18...	.6	3.4	--	203	254	146	35	353	6.7	90	--	--
SEP.												
18...	.6	1.5	--	210	276	152	26	305	7.6	50	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
ST. JOHNS RIVER BASIN--CONTINUED												
02237701 APOPKA-BEAUCLAIR CANAL NR ASTATULA FLA LOWER (LAT 28 43 20 LONG 081 41 06)												
NOV., 1967												
13...	--	21	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
09...	--	20	--	--	--	--	--	--	--	--	--	--
FEB.												
13...	--	15	--	--	--	--	--	--	--	--	--	--
MAR.												
29...	--	19	--	--	--	--	--	--	--	--	--	--
MAY												
07...	.30	26	3.8	.03	44	18	.16	18	5.8	188	19	34
JUNE												
19...	327	27	--	--	--	--	--	--	--	--	--	--
JULY												
18...	320	30	--	--	--	--	--	--	--	--	--	--
SEP.												
18...	--	28	9.3	.09	36	15	--	15	5.9	154	23	27
02237800 LAKE DORA AT MOUNT DORA FLA (LAT 28 47 40 LONG 081 38 40)												
NOV., 1967												
13...	--	20	--	--	--	--	--	--	--	--	--	--
FEB., 1968												
12...	--	13	--	--	--	--	--	--	--	--	--	--
APR.												
02...	--	21	--	--	--	--	--	--	--	--	--	--
30...	--	27	.8	.05	41	16	.10	18	7.1	168	23	38
JUNE												
19...	--	29	--	--	--	--	--	--	--	--	--	--
JULY												
18...	--	30	--	--	--	--	--	--	--	--	--	--
SEP.												
17...	--	28	--	--	--	--	--	--	--	--	--	--
02237802 DORA CANAL AT TAVARES (LAT 28 48 30 LONG 081 44 30)												
NOV., 1967												
14...	--	22	--	--	--	--	--	--	--	--	--	--
FEB., 1968												
12...	--	11	--	--	--	--	--	--	--	--	--	--
MAR.												
29...	--	19	--	--	--	--	--	--	--	--	--	--
MAY												
07...	.00	24	.1	.10	36	12	.14	15	5.1	144	16	29
24...	.54	26	--	--	--	--	--	--	--	--	--	--
JUNE												
19...	249	27	--	--	--	--	--	--	--	--	--	--
JULY												
18...	403	24	--	--	--	--	--	--	--	--	--	--
02237835 LAKE SWATARA NEAR EUSTIS FLA (LAT 29 51 57 LONG 081 38 38)												
AUG., 1968												
04...	--	29	3.2	.04	5.2	7.0	--	11	7.4	18	26	23
02237859 LAKE MARY AT UMATILLA FLA (LAT 28 55 29 LONG 081 40 41)												
AUG., 1968												
04...	--	34	1.8	.03	14	13	--	26	8.3	68	39	39
02237900 LAKE EUSTIS AT EUSTIS FLA (LAT 28 50 50 LONG 081 41 50)												
NOV., 1967												
13...	--	20	--	--	--	--	--	--	--	--	--	--
FEB., 1968												
12...	--	13	--	--	--	--	--	--	--	--	--	--
APR.												
07...	--	21	--	--	--	--	--	--	--	--	--	--
30...	--	27	.4	.04	33	9.4	.12	14	3.7	130	1.2	25
JUNE												
19...	--	27	--	--	--	--	--	--	--	--	--	--
JULY												
19...	--	30	--	--	--	--	--	--	--	--	--	--
SEP.												
17...	--	27	--	--	--	--	--	--	--	--	--	--
02238000 HAINES CREEK AT LISBON FLA (UPPER) (LAT 25 52 20 LONG 081 46 50)												
NOV., 1967												
16...	--	18	--	--	--	--	--	--	--	--	--	--
DEC.												
01...	.82	20	1.4	.09	30	9.3	--	14	3.7	114	12	23
JAN., 1968												
10...	.42	18	1.3	.04	29	9.1	--	13	3.4	117	11	23
FEB.												
12...	--	13	1.1	.00	32	9.0	--	13	3.2	124	9.2	21
APR.												
01...	--	22	.5	.04	30	9.2	--	13	3.4	126	12	24
29...	3.0	26	.0	.02	32	9.5	.05	13	3.5	136	9.0	26
JUNE												
20...	.241	24	1.0	.03	33	9.0	--	12	3.4	120	12	23
JULY												
19...	.857	30	1.2	.01	30	9.8	--	13	3.8	118	12	23
SEP.												
20...	.645	24	1.3	.03	27	10	--	13	4.5	118	15	24

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

269

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- XIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
ST. JOHNS RIVER BASIN--CONTINUED												
02237701 APOPKA-BEAUCLAIR CANAL NR ASTATULA FLA LOWER (LAT 28 43 20 LONG 081 41 06)												
NOV., 1967												
13...	--	--	--	--	--	--	--	320	--	--	--	--
JAN., 1968												
09...	--	--	--	--	--	--	--	415	--	--	--	--
FEB.												
13...	--	--	--	--	--	--	--	502	--	--	--	--
MAR.												
29...	--	--	--	--	--	--	--	450	--	--	--	--
MAY												
07...	.8	1.8	.55	738	311	184	30	430	7.3	60	6.8	83
JUNE												
19...	--	--	--	--	--	--	--	380	--	--	--	--
JULY												
18...	--	--	--	--	--	--	--	340	--	--	--	--
SEP.												
18...	.6	1.5	--	210	276	152	26	372	7.6	50	--	--
02237800 LAKE DORA AT MOUNT DORA FLA (LAT 28 47 40 LONG 081 38 40)												
NOV., 1967												
13...	--	--	--	--	--	--	--	360	--	--	--	--
FEB., 1968												
12...	--	--	--	--	--	--	--	392	--	--	--	--
APR.												
02...	--	--	--	--	--	--	--	395	--	--	--	--
30...	.9	3.0	.26	231	294	168	30	410	7.9	30	1.0	123
JUNE												
19...	--	--	--	--	--	--	--	362	--	--	--	--
JULY												
18...	--	--	--	--	--	--	--	355	--	--	--	--
SEP.												
17...	--	--	--	--	--	--	--	330	--	--	--	--
02237802 DORA CANAL AT TAVARES (LAT 28 48 30 LONG 081 44 30)												
NOV., 1967												
14...	--	--	--	--	--	--	--	260	--	--	--	--
FEB., 1968												
12...	--	--	--	--	--	--	--	290	--	--	--	--
MAR.												
29...	--	--	--	--	--	--	--	290	--	--	--	--
MAY												
09...	.6	.8	.25	186	242	142	24	341	8.0	25	9.2	108
24...	--	--	--	--	--	--	--	308	--	--	--	--
JUNE												
19...	--	--	--	--	--	--	--	365	--	--	--	--
JULY												
18...	--	--	--	--	--	--	--	355	--	--	--	--
02237835 LAKE SWATARA NEAR EUSTIS FLA (LAT 28 51 57 LONG 081 38 38)												
AUG., 1968												
08...	.2	.6	.09	93	114	42	27	162	6.3	30	--	--
02237859 LAKE MARY AT UMATILLA FLA (LAT 28 55 29 LONG 081 40 41)												
AUG., 1968												
08...	.5	.3	.09	175	212	88	32	336	7.0	20	--	--
02237900 LAKE EUSTIS AT EUSTIS FLA (LAT 28 50 50 LONG 081 41 50)												
NOV., 1967												
13...	--	--	--	--	--	--	--	265	--	--	--	--
FEB., 1968												
12...	--	--	--	--	--	--	--	288	--	--	--	--
APR.												
02...	--	--	--	--	--	--	--	275	--	--	--	--
30...	.2	.5	.16	192	204	121	14	300	7.5	5	8.9	111
JUNE												
19...	--	--	--	--	--	--	--	282	--	--	--	--
JULY												
18...	--	--	--	--	--	--	--	290	--	--	--	--
SEP.												
17...	--	--	--	--	--	--	--	265	--	--	--	--
02238000 HAINES CREEK AT LISBON FLA (UPPER) (LAT 25 52 20 LONG 081 46 50)												
NOV., 1967												
16...	--	--	--	--	--	--	--	270	--	--	--	--
DEC.												
01...	.5	2.7	--	193	184	114	20	287	7.0	20	--	--
JAN., 1968												
10...	.2	.9	--	149	196	110	14	273	7.3	20	--	--
FEB.												
12...	.5	.6	--	191	189	116	14	290	7.2	30	--	--
APR.												
01...	.3	.2	--	155	183	113	10	276	6.9	30	--	--
29...	.4	1.6	.10	162	197	119	7	302	7.2	20	4.6	56
JUNE												
20...	.4	2.1	--	188	--	112	14	288	7.1	5	--	--
JULY												
18...	.4	2.0	--	153	181	116	19	285	6.7	5	--	--
SEP.												
20...	.4	.2	--	154	198	108	12	289	7.6	25	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	DIS- CHARGE (CFS)	TEMP- FRATURE (DEG C)	SILICA (SIO2)	PIS- SULYFD IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLN- RIDE (CL)
ST. JOHNS RIVER BASIN--CONTINUED												
02238001 HAINES CREEK AT LISBON FLA LOWER (LAT 28 52 20 LONG 081 46 50)												
NOV., 1967												
16...	--	18	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
10...	--	14	--	--	--	--	--	--	--	--	--	--
FEB.												
12...	--	13	--	--	--	--	--	--	--	--	--	--
APR.												
01...	--	22	--	--	--	--	--	--	--	--	--	--
29...	3.0	26	.0	.04	33	9.6	.11	13	3.4	128	12	25
JUNE												
20...	241	28	--	--	--	--	--	--	--	--	--	--
JULY												
18...	857	30	--	--	--	--	--	--	--	--	--	--
02238020 SILVER LAKE NR LEESBURG (LAT 28 50 15 LONG 081 48 13)												
AUG., 1968												
04...	--	29	2.3	.02	19	8.6	--	38	.9	84	8.8	61
02238030 LADY LAKE NR LADY LAKE (LAT 28 55 00 LONG 081 53 50)												
AUG., 1968												
04...	--	29	.7	.01	2.9	2.3	--	10	1.8	1	12	18
02238170 NICOTTOON LAKE NR ALTOONA FLA (LAT 28 59 22 LONG 081 43 25)												
MAY , 1968												
09...	--	24	.2	.05	1.7	2.4	.00	12	2.3	2	8.8	24
02238180 HOLLY LAKE NR UMATILLA, FLA. (LAT 28 56 11 LONG 081 43 04)												
MAY , 1968												
09...	--	24	1.8	.03	4.2	3.5	.00	16	5.3	23	10	32
02238200 LAKE YALE AT GRAND ISLAND FLA (LAT 28 52 52 LONG 081 42 21)												
OCT., 1967												
31...	--	22	--	--	--	--	--	--	--	--	--	--
NOV.												
30...	--	20	--	--	--	--	--	--	--	--	--	--
DEC.												
29...	--	15	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
30...	--	14	--	--	--	--	--	--	--	--	--	--
FEB.												
29...	--	0	--	--	--	--	--	--	--	--	--	--
MAR.												
29...	--	19	--	--	--	--	--	--	--	--	--	--
APR.												
30...	--	26	2.4	.03	23	8.4	.09	20	3.8	114	3.1	30
MAY												
31...	--	33	--	--	--	--	--	--	--	--	--	--
JUNE												
28...	--	28	--	--	--	--	--	--	--	--	--	--
JULY												
31...	--	29	--	--	--	--	--	--	--	--	--	--
SEP.												
30...	--	28	--	--	--	--	--	--	--	--	--	--
02238204 YALE-GRIFFIN CANAL NR LISBON FLA (LAT 28 55 17 LONG 081 46 26)												
MAY , 1968												
03...	.00	25	.6	.00	24	9.3	.09	20	2.8	128	2.2	29
02238300 LAKE GRIFFIN AT LEESBURG FLA (LAT 28 50 29 LONG 081 52 12)												
NOV., 1967												
14...	--	21	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
03...	--	13	--	--	--	--	--	--	--	--	--	--
FEB.												
12...	--	13	--	--	--	--	--	--	--	--	--	--
APR.												
03...	--	23	--	--	--	--	--	--	--	--	--	--
29...	--	23	.0	.06	28	9.9	.10	16	4.2	128	14	26
JUNE												
18...	--	27	--	--	--	--	--	--	--	--	--	--
SEP.												
17...	--	29	--	--	--	--	--	--	--	--	--	--
02238800 LAKE WEIR AT OKLAWAHA FLA (LAT 29 02 30 LONG 081 55 40)												
OCT., 1967												
31...	--	22	--	--	--	--	--	--	--	--	--	--
NOV.												
30...	--	21	--	--	--	--	--	--	--	--	--	--
DEC.												
29...	--	16	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
30...	--	14	--	--	--	--	--	--	--	--	--	--
FEB.												
29...	--	12	--	--	--	--	--	--	--	--	--	--
MAR.												
29...	--	21	--	--	--	--	--	--	--	--	--	--
APR.												
30...	--	26	.6	.01	3.4	3.4	.00	17	2.3	17	7.2	32
MAY												
31...	--	29	--	--	--	--	--	--	--	--	--	--
JUNE												
28...	--	27	--	--	--	--	--	--	--	--	--	--
JULY												
31...	--	29	--	--	--	--	--	--	--	--	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

271

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	TRATE (M3)	PHOS- PHATE (P14)	DIS- SOLVED SOLIDS (SUM OF DUSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATU- RATION
ST. JOHNS RIVER BASIN--CONTINUED												
02238001 HAINES CREEK AT LISBON FLA LOWER (LAT 28 52 20 LONG 081 46 50)												
NOV., 1967	--	--	--	--	--	--	--	270	--	--	--	--
16...	--	--	--	--	--	--	--	270	--	--	--	--
JAN., 1968	--	--	--	--	--	--	--	260	--	--	--	--
10...	--	--	--	--	--	--	--	260	--	--	--	--
FEB.	--	--	--	--	--	--	--	286	--	--	--	--
12...	--	--	--	--	--	--	--	286	--	--	--	--
APR.	--	--	--	--	--	--	--	270	--	--	--	--
01...	--	--	--	--	--	--	--	270	--	--	--	--
29...	.5	1.2	.14	181	199	122	17	339	7.2	20	4.0	40
JUNE	--	--	--	--	--	--	--	280	--	--	--	--
20...	--	--	--	--	--	--	--	280	--	--	--	--
JULY	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
02238020 SILVER LAKE NR LEESBURG (LAT 28 50 15 LONG 081 48 13)												
AUG., 1968	--	--	--	--	--	--	--	258	7.5	0	--	--
04...	.2	1.1	.15	181	212	83	14	258	7.5	0	--	--
02238030 LADY LAKE NR LADY LAKE (LAT 28 55 00 LONG 081 53 50)												
AUG., 1968	--	--	--	--	--	--	--	98	5.6	5	--	--
04...	.2	.7	.14	48	64	14	13	98	5.6	5	--	--
02238170 NICOTJON LAKE NR ALTJONA FLA (LAT 28 59 22 LONG 081 43 25)												
MAY., 1968	--	--	--	--	--	--	--	110	5.2	30	7.5	88
09...	.2	.6	.05	53	96	14	12	110	5.2	30	7.5	88
02238180 HOLLY LAKE NR UMATILLA, FLA. (LAT 28 56 11 LONG 081 43 04)												
MAY., 1968	--	--	--	--	--	--	--	162	6.6	20	--	--
09...	.2	.7	.02	85	101	25	6	162	6.6	20	--	--
02238200 LAKE YALE AT GRAND ISLAND FLA (LAT 28 52 52 LONG 081 42 21)												
OCT., 1967	--	--	--	--	--	--	--	190	--	--	--	--
31...	--	--	--	--	--	--	--	190	--	--	--	--
NOV.	--	--	--	--	--	--	--	200	--	--	--	--
30...	--	--	--	--	--	--	--	200	--	--	--	--
DEC.	--	--	--	--	--	--	--	210	--	--	--	--
29...	--	--	--	--	--	--	--	210	--	--	--	--
JAN., 1968	--	--	--	--	--	--	--	230	--	--	--	--
30...	--	--	--	--	--	--	--	230	--	--	--	--
FEB.	--	--	--	--	--	--	--	249	--	--	--	--
29...	--	--	--	--	--	--	--	249	--	--	--	--
MAR.	--	--	--	--	--	--	--	106	--	--	--	--
29...	--	--	--	--	--	--	--	106	--	--	--	--
APR.	--	--	--	--	--	--	--	277	7.4	40	7.3	80
30...	.3	2.5	.10	150	173	92	0	277	7.4	40	7.3	80
MAY	--	--	--	--	--	--	--	262	--	--	--	--
31...	--	--	--	--	--	--	--	262	--	--	--	--
JUNE	--	--	--	--	--	--	--	308	--	--	--	--
29...	--	--	--	--	--	--	--	308	--	--	--	--
JULY	--	--	--	--	--	--	--	159	--	--	--	--
31...	--	--	--	--	--	--	--	159	--	--	--	--
SEP.	--	--	--	--	--	--	--	140	--	--	--	--
30...	--	--	--	--	--	--	--	140	--	--	--	--
02238204 YALE-GRIFFIN CANAL NR LISBON FLA (LAT 28 55 17 LONG 081 46 26)												
MAY., 1968	--	--	--	--	--	--	--	283	7.4	5	4.7	55
03...	.2	.8	.07	152	170	99	0	283	7.4	5	4.7	55
02238300 LAKE GRIFFIN AT LEESBURG FLA (LAT 29 50 29 LONG 081 52 12)												
NOV., 1967	--	--	--	--	--	--	--	265	--	--	--	--
14...	--	--	--	--	--	--	--	265	--	--	--	--
JAN., 1968	--	--	--	--	--	--	--	290	--	--	--	--
03...	--	--	--	--	--	--	--	290	--	--	--	--
FEB.	--	--	--	--	--	--	--	310	--	--	--	--
12...	--	--	--	--	--	--	--	310	--	--	--	--
APR.	--	--	--	--	--	--	--	290	--	--	--	--
03...	--	--	--	--	--	--	--	290	--	--	--	--
29...	.4	.6	.54	162	207	110	5	299	7.2	20	10.0	127
JUNE	--	--	--	--	--	--	--	270	--	--	--	--
18...	--	--	--	--	--	--	--	270	--	--	--	--
SEP.	--	--	--	--	--	--	--	240	--	--	--	--
17...	--	--	--	--	--	--	--	240	--	--	--	--
02238800 LAKE WEIR AT OKLAWAHA FLA (LAT 29 02 30 LONG 081 55 40)												
OCT., 1967	--	--	--	--	--	--	--	140	--	--	--	--
31...	--	--	--	--	--	--	--	140	--	--	--	--
NOV.	--	--	--	--	--	--	--	135	--	--	--	--
30...	--	--	--	--	--	--	--	135	--	--	--	--
DEC.	--	--	--	--	--	--	--	130	--	--	--	--
29...	--	--	--	--	--	--	--	130	--	--	--	--
JAN., 1968	--	--	--	--	--	--	--	150	--	--	--	--
30...	--	--	--	--	--	--	--	150	--	--	--	--
FEB.	--	--	--	--	--	--	--	150	--	--	--	--
29...	--	--	--	--	--	--	--	150	--	--	--	--
MAR.	--	--	--	--	--	--	--	106	--	--	--	--
29...	--	--	--	--	--	--	--	106	--	--	--	--
APR.	--	--	--	--	--	--	--	150	6.5	5	7.4	90
30...	.2	1.2	.05	76	99	22	8	150	6.5	5	7.4	90
MAY	--	--	--	--	--	--	--	150	--	--	--	--
31...	--	--	--	--	--	--	--	150	--	--	--	--
JUNE	--	--	--	--	--	--	--	148	--	--	--	--
28...	--	--	--	--	--	--	--	148	--	--	--	--
JULY	--	--	--	--	--	--	--	140	--	--	--	--
31...	--	--	--	--	--	--	--	140	--	--	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	TEMP- ATURE (FEG C)	SILICA (SI32)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POT- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
ST. JOHNS RIVER BASIN--CONTINUED												
02238800 LAKE WEIR AT OKLAHAWA FLA (LAT 29 02 30 LONG 081 55 40)												
SEP., 1968												
30...	--	27	--	--	--	--	--	--	--	--	--	--
02239000 OKLAHAWA RIVER NEAR OCALA FLA (LAT 29 11 00 LONG 081 59 40)												
NOV., 1967												
17...	50	18	--	--	--	--	--	--	--	--	--	--
DEC.												
26...	14	14	--	--	--	--	--	--	--	--	--	--
FEB., 1968												
15...	13	12	--	--	--	--	--	--	--	--	--	--
APR.												
19...	36	24	--	--	--	--	--	--	--	--	--	--
MAY												
07...	6.0	24	2.0	.00	31	10	.11	19	4.6	128	14	30
JUNE												
14...	295	26	--	--	--	--	--	--	--	--	--	--
JULY												
25...	--	20	4.8	.10	33	8.7	--	11	3.1	96	32	21
02239497 SILVER SPRINGS AT SILVER SPRINGS, FLA. (LAT 29 13 00 LONG 082 03 10)												
OCT., 1967												
25...	--	23	--	--	--	--	--	--	--	--	--	8.0
NOV.												
27...	--	24	--	--	--	--	--	--	--	--	--	8.0
DEC.												
29...	--	23	--	--	--	--	--	--	--	--	--	9.0
JAN., 1968												
29...	--	24	--	--	--	--	--	--	--	--	--	9.0
FEB.												
26...	--	24	--	--	--	--	--	--	--	--	--	7.0
MAR.												
19...	--	23	--	--	--	--	--	--	--	--	--	9.5
MAY												
17...	--	23	--	--	--	--	--	--	--	--	--	9.0
SEP.												
20...	--	24	--	--	--	--	--	--	--	--	--	10
02239501 SILVER SPRINGS RUN NR OCALA FLA (LAT 29 12 53 LONG 082 02 29)												
MAY, 1968												
07...	641	23	9.2	.00	68	9.3	.66	5.8	.5	192	47	11
JULY												
18...	--	23	--	--	--	--	--	--	--	--	--	8.0
02240000 OKLAHAWA RIVER NR GUNNER FLA (LAT 29 12 50 LONG 081 59 10)												
NOV., 1967												
17...	--	18	--	--	--	--	--	--	--	--	--	--
APR., 1968												
19...	--	24	--	--	--	--	--	--	--	--	--	--
MAY												
07...	--	24	9.0	.00	67	9.4	.70	6.6	1.0	186	44	13
JUNE												
14...	--	24	--	--	--	--	--	--	--	--	--	--
02240400 MUD LAKE NR SALT SPRINGS, FLA. (LAT 29 18 00 LONG 081 51 50)												
OCT., 1967												
30...	--	21	--	.04	59	--	--	--	--	--	--	--
SEP., 1968												
27...	--	--	--	--	--	--	--	--	--	--	--	--
02240900 NEWMANS LAKE NR GAINESVILLE, FLA. (LAT 29 34 04 LONG 082 14 22)												
DEC., 1967												
21...	--	--	--	--	4.9	2.0	--	6.6	1.6	--	--	--
MAY, 1968												
09...	--	20	7.9	.11	3.7	1.8	.00	7.8	.7	14	1.6	14
02240950 HOGTOWN CREEK NR GAINESVILLE FLA (LAT 29 39 01 LONG 082 22 32)												
MAY, 1968												
09...	1.0	21	7.0	.04	78	5.2	.08	7.8	1.2	100	6.6	12
02240952 LAKE ALICE AT GAINESVILLE FLA (LAT 29 38 20 LONG 082 21 15)												
DEC., 1967												
21...	--	--	--	--	100	13	--	15	.9	--	--	--
02240980 BIVANS ARM NEAR GAINESVILLE FLA (LAT 29 37 16 LONG 082 20 32)												
DEC., 1967												
19...	--	--	--	--	52	4.0	--	13	2.0	--	--	--
02241900 LOCHLOOSA CREEK AT GROVE PARK FLA (LAT 29 36 00 LONG 082 08 42)												
MAY, 1969												
09...	.00	21	1.0	.13	19	11	.05	8.2	1.5	100	.8	16
02242400 LOCHLOOSA LAKE AT LOCHLOOSA FLA (LAT 29 30 19 LONG 082 06 08)												
DEC., 1967												
19...	--	--	--	--	9.3	2.7	--	5.6	.8	--	--	--
MAY, 1968												
09...	--	22	.7	.03	11	3.4	.01	6.6	.9	38	7.2	12

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

273

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
ST. JOHNS RIVER BASIN--CONTINUED												
02238800 LAKE WEIR AT OKLAHAWA FLA (LAT 29 02 30 LONG 081 55 40)												
SEP., 1968												
30...	--	--	--	--	--	--	--	120	--	--	--	--
02239000 OKLAHAWA RIVER NEAR OCALA FLA (LAT 29 11 00 LONG 081 59 40)												
NOV., 1967												
17...	--	--	--	--	--	--	--	310	--	--	--	--
DEC.												
26...	--	--	--	--	--	--	--	335	--	--	--	--
FEB., 1968												
16...	--	--	--	--	--	--	--	300	--	--	--	--
APR.												
19...	--	--	--	--	--	--	--	315	--	--	--	--
MAY												
07...	.5	4.2	.13	178	212	118	13	318	7.5	30	7.0	82
JUNE												
14...	--	--	--	--	--	--	--	200	--	--	--	--
JULY												
25...	.4	2.0	--	163	223	118	40	280	7.1	220	--	--
02239497 SILVER SPRINGS AT SILVER SPRINGS, FLA. (LAT 29 13 00 LONG 082 03 10)												
OCT., 1967												
25...	--	--	--	--	--	--	--	390	--	--	--	--
NOV.												
27...	--	--	--	--	--	200	--	390	--	0	--	--
DEC.												
29...	--	--	--	--	--	200	--	359	--	0	--	--
JAN., 1968												
29...	--	--	--	--	--	216	--	430	--	5	--	--
FEB.												
26...	--	--	--	--	--	220	--	404	--	5	--	--
MAR.												
19...	--	--	--	--	--	220	--	439	--	0	--	--
MAY												
17...	--	--	--	--	--	222	--	432	--	5	--	--
SEP.												
20...	--	2.1	.09	--	--	200	--	360	9.1	0	--	--
02239501 SILVER SPRINGS RUN NR OCALA FLA (LAT 29 12 53 LONG 082 02 29)												
MAY, 1968												
07...	.2	2.1	.05	249	272	209	51	409	7.8	0	6.8	78
JULY												
18...	--	--	--	--	--	224	--	402	--	0	--	--
02240000 OKLAHAWA RIVER NR CONNER FLA (LAT 29 12 50 LONG 081 59 10)												
NOV., 1967												
17...	--	--	--	--	--	--	--	390	--	--	--	--
APR., 1968												
19...	--	--	--	--	--	--	--	393	--	--	--	--
MAY												
07...	.3	2.2	.06	245	274	206	53	418	7.5	0	8.2	96
JUNE												
14...	--	--	--	--	--	--	--	340	--	--	--	--
02240400 MUD LAKE NR SALT SPRINGS, FLA. (LAT 29 18 00 LONG 081 51 50)												
OCT., 1967												
30...	--	--	--	--	--	--	--	478	7.2	15	--	--
SEP., 1968												
27...	--	--	--	--	--	--	--	--	--	140	--	--
02240900 NEWNAVS LAKE NEAR GAINESVILLE, FLA. (LAT 29 34 04 LONG 082 14 22)												
DEC., 1967												
21...	--	--	--	--	--	--	--	153	--	--	--	--
MAY, 1968												
09...	.2	.3	.53	40	88	16	5	91	6.2	60	10.0	118
02240950 HOGTOWN CREEK NR GAINESVILLE FLA (LAT 29 39 01 LONG 082 22 32)												
MAY, 1968												
09...	.6	1.0	2.3	121	135	92	10	212	7.2	20	9.1	101
02240952 LAKE ALICE AT GAINESVILLE FLA (LAT 29 38 20 LONG 082 21 15)												
DEC., 1967												
21...	--	--	--	--	--	--	--	625	--	--	--	--
02240980 BIVANS ARM NEAR GAINESVILLE FLA (LAT 29 37 16 LONG 082 20 32)												
DEC., 1967												
19...	--	--	--	--	--	--	--	332	--	--	--	--
02241900 LOCHLOOSA CREEK AT GRJVE PARK FLA (LAT 29 36 00 LONG 082 08 42)												
MAY, 1968												
09...	.3	1.0	.21	107	149	90	8	213	7.1	110	6.6	73
02242400 LOCHLOOSA LAKE AT LOCHLOOSA FLA (LAT 29 30 19 LONG 082 06 08)												
DEC., 1967												
19...	--	--	--	--	--	--	--	104	--	--	--	--
MAY, 1968												
09...	.3	1.0	.32	62	87	42	11	118	6.5	30	6.5	74

DATE	VIS- CHARGE (CFS)	TEMP- FATURE (DEG C)	SILICA (SIOP)	DISE- SOLVED TRIP (FE)	CAL- CIUM (CA)	ME- SIUM (MG)	STRON- TIUM (SP)	SODIUM (NA)	POTAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (SO4)	CHLORIDE (CL)	
ST. JOHNS RIVER BASIN--CONTINUED													
02244250 ORANGE LAKE AT ORANGE LAKE FLA (LAT 29 25 50 LONG 082 12 10)													
EC., 1967	-	--	--	--	7.2	2.0	--	5.5	--	--	--	--	
UV., 1968	--	19	1.5	.00	10	2.4	.00	6.9	.7	34	4.2	13	
02243000 ORANGE CREEK AT ORANGE SPRINGS FLA (LAT 29 30 34 LONG 081 56 47)													
AY., 1968	6.0	24	4.0	.05	16	3.4	.00	4.5	.4	65	.8	9.5	
UV., 1968	--	24	--	--	--	--	--	--	--	--	--	12	
02243800 DEEP CREEK NEAR RODMAN FLA (LAT 29 32 28 LONG 081 50 12)													
EC., 1968	--	23	--	--	--	--	--	--	--	--	--	7.0	
02244000 KIKAWAHA R AT WSL NR ORANGE SPRINGS FLA (LAT 29 29 40 LONG 081 48 00)													
UV., 1967	1100	20	--	--	--	--	--	--	--	--	--	--	
EC., 1968	--	19	--	1160	--	--	--	--	--	--	--	--	
UV., 1968	1100	18	--	--	--	--	--	--	--	--	--	--	
UV., 1968	900	26	--	--	--	--	--	--	--	--	--	--	
AY., 1968	872	23	8.5	.01	6.8	14	.48	61	1.8	160	64	108	
UV., 1968	1170	26	--	--	--	--	--	--	--	--	--	--	
UV., 1968	1350	28	--	--	--	--	--	--	--	--	--	--	
02244350 LAKE WINONA NR DELAND (LAT 29 10 50 LONG 081 20 06)													
PR., 1968	--	27	.6	.00	3.7	4.7	.00	9.0	2.8	0	27	14	
02244420 LITTLE HAW CREEK NR SEVILLE (LAT 29 19 20 LONG 081 23 10)													
PR., 1968	.00	24	1.0	.47	5.9	1.5	.04	8.3	.7	8	.0	16	
02244450 ST JOHNS RIVER AT PALATKA FLA (LAT 29 38 37 LONG 081 37 36.1)													
PR., 1968	26...	25	2.1	.09	60	23	1.1	166	5.4	110	85	310	
UV., 1968	24...	27	--	--	--	--	--	--	--	--	--	120	
02244518 ANDERSON-CUE LAKE NR MELROSE, FLA. (LAT 29 41 20 LONG 082 00 20)													
CT., 1967	10...	--	--	--	.6	.6	--	2.6	--	--	--	--	
UV., 1968	02...	--	--	--	.8	.7	--	2.6	.5	--	--	--	
EC., 1968	05...	--	--	--	.6	.6	--	2.6	.5	--	--	--	
02244520 MC CLOUD LAKE NR MELROSE, FLA. (LAT 29 41 40 LONG 081 59 50)													
CT., 1967	10...	--	--	--	--	--	--	--	--	--	--	--	
UV., 1968	02...	--	--	--	--	--	--	--	--	--	--	--	
EC., 1968	05...	--	--	--	.4	.5	--	3.3	.2	--	--	--	
02244600 SAND HILL LAKE NR KEYSTONE HEIGHTS FLA (LAT 29 51 01 LONG 082 01 10)													
AY., 1968	03...	--	29	2.6	.02	.7	.5	.00	2.7	.1	0	.0	4.5
02244650 MAGNOLIA LAKE NR KEYSTONE HEIGHTS FLA (LAT 29 49 12 LONG 082 00 55)													
AY., 1968	03...	--	26	.3	.01	.5	.5	.00	2.7	.1	0	.0	5.0
02244750 BROOKLYN LAKE NR KEYSTONE HEIGHTS FLA (LAT 29 47 46 LONG 082 01 21)													
AY., 1968	03...	--	27	.0	.02	.8	.5	.00	2.9	.1	0	.0	5.5
02244800 LAKE GEYER AT KEYSTONE HEIGHTS FLA (LAT 29 46 26 LONG 082 01 59)													
AY., 1968	03...	--	27	1.0	.03	1.6	1.0	.00	5.1	.4	3	4.4	9.0
02244850 PEBBLE LAKE NEAR KEYSTONE HEIGHTS FLA (LAT 29 49 31 LONG 081 57 10)													
AY., 1968	03...	--	27	.7	.03	3.5	1.9	.00	2.2	.1	20	.0	4.2
02244900 LITTLE LAKE JOHNSON NR KEYSTONE HEIGHTS FLA (LAT 29 49 31 LONG 081 57 07)													
AY., 1968	03...	--	27	.4	.06	.8	.5	.00	3.0	.3	0	.0	5.0



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

275

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	ITPATE (H3)	PHIS- PHATE (PO4)	DIS- SOLVED SOLIDS SUM OF CONSTITU- ENTS	DIS- SOLVED SOLIDS RESI- DUE AT 180 C	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- HMS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
ST. JOHNS RIVER BASIN--CONTINUED												
02242450 ORANGE LAKE AT ORANGE LAKE FLA (LAT 29 25 50 LONG 082 12 10)												
DEC., 1967	--	--	--	--	--	--	--	87	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
APR., 1968	--	--	--	--	--	--	--	--	--	--	--	--
30...	.2	1.4	.22	58	70	35	7	107	6.4	30	7.4	79
02243000 ORANGE CREEK AT ORANGE SPRINGS FLA (LAT 29 30 34 LONG 081 56 47)												
MAY, 1968	--	--	--	--	--	--	--	--	--	--	--	--
08...	.2	.7	.27	72	96	54	1	130	7.1	30	8.2	96
27...	--	--	--	--	--	--	--	--	--	--	--	--
SEP.	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	1.8	--	--	--	52	--	115	--	120	--	--
02243800 DEEP CREEK NEAR ROOMAN FLA (LAT 29 32 24 LONG 081 50 12)												
SEP., 1968	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	1.4	--	--	--	70	--	125	--	80	--	--
02244000 IKLAHAWA R AT HSL NR ORANGE SPRINGS FLA (LAT 29 29 40 LONG 081 48 00)												
NOV., 1967	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	670	--	--	--	--
DEC.	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	670	--	--	--	--
FEB., 1968	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	710	--	--	--	--
APR.	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	620	--	--	--	--
MAY	--	--	--	--	--	--	--	--	--	--	--	--
08...	.4	1.3	.10	406	423	228	96	740	7.6	0	8.6	99
JUNE	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	750	--	--	--	--
AUG.	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	380	--	--	--	--
02244350 LAKE MINNA NR DELAND (LAT 29 10 50 LONG 081 20 06)												
APR., 1968	--	--	--	--	--	--	--	--	--	--	--	--
30...	.1	.7	.01	64	75	28	25	122	5.9	5	9.1	112
02244420 LITTLE HAW CREEK NR SEVILLE (LAT 29 19 20 LONG 081 23 10)												
APR., 1968	--	--	--	--	--	--	--	--	--	--	--	--
30...	.1	5.3	.17	43	95	20	13	89	5.7	240	5.1	60
02244450 ST JOHNS RIVER AT PALATKA FLA (LAT 29 38 37 LONG 081 37 36.1)												
APR., 1968	--	--	--	--	--	--	--	--	--	--	--	--
26...	.3	.1	.21	707	791	246	156	1360	7.4	50	8.3	99
SEP.	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	7.2	--	--	--	114	--	510	--	140	--	--
02244518 ANDERSON-CUE LAKE NR MELROSE, FLA. (LAT 29 41 20 LONG 082 00 20)												
OCT., 1967	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	30	--	--	--	--
NOV.	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	30	--	--	--	--
DEC.	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	36	--	--	--	--
02244520 MC CLJUD LAKE NR MELROSE, FLA. (LAT 29 41 40 LONG 081 59 50)												
OCT., 1967	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	33	--	--	--	--
NOV.	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	31	--	--	--	--
DEC.	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	36	--	--	--	--
02244600 SAND HILL LAKE NR KEYSTONE HEIGHTS FLA (LAT 29 51 01 LONG 082 01 10)												
MAY, 1968	--	--	--	--	--	--	--	--	--	--	--	--
03...	.1	.8	.07	12	16	4	4	25	5.4	5	9.8	126
02244650 MAGNOLIA LAKE NR KEYSTONE HEIGHTS FLA (LAT 29 49 12 LONG 082 00 55)												
MAY, 1968	--	--	--	--	--	--	--	--	--	--	--	--
03...	.1	.8	.05	10	13	3	3	25	5.4	5	8.4	102
02244750 BROOKLYN LAKE NR KEYSTONE HEIGHTS FLA (LAT 29 47 46 LONG 082 01 21)												
MAY, 1968	--	--	--	--	--	--	--	--	--	--	--	--
03...	.1	.8	.04	11	15	4	4	29	5.2	0	8.9	110
02244800 LAKE GENEVA AT KEYSTONE HEIGHTS FLA (LAT 29 46 26 LONG 082 01 59)												
MAY, 1968	--	--	--	--	--	--	--	--	--	--	--	--
03...	.1	.9	.07	25	28	8	6	49	5.7	5	9.5	117
02244850 PEBBLE LAKE NEAR KEYSTONE HEIGHTS FLA (LAT 29 49 31 LONG 081 57 10)												
MAY, 1968	--	--	--	--	--	--	--	--	--	--	--	--
03...	.1	1.5	.16	24	24	16	0	44	6.6	5	9.1	112
02244900 LITTLE LAKE JOHNSON NR KEYSTONE HEIGHTS FLA (LAT 29 49 31 LONG 081 57 07)												
MAY, 1968	--	--	--	--	--	--	--	--	--	--	--	--
03...	.1	.9	.10	11	21	4	4	29	5.4	10	9.3	115

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	P3- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
ST. JOHNS RIVER BASIN--CONTINUED												
02244905 BIG LAKE JOHNSON NR KEYSTONE HEIGHTS FLA (LAT 29 40 26 LONG 081 56 42)												
MAY , 1968 03...	--	76	1.5	.07	.5	.5	.00	2.8	.2	0	.0	5.5
0244950 LAKE GRANDIN NEAR INTERLACHEN, FLA. (LAT 29 40 16 LONG 081 52 55)												
MAY , 1968 09...	--	73	.1	.09	1.8	1.1	.00	4.9	.5	4	5.4	9.2
02245200 RICE CREEK NEAR PALATKA FLA (LAT 29 41 57 LONG 081 39 48)												
APR., 1968 26...	--	79	7.7	.46	50	14	--	172	3.6	192	78	242
02245400 SOUTH FORK BLACK CREEK NR CAMP BLANDING FLA (LAT 29 56 33 LONG 081 53 52)												
MAY , 1968 03...	9.2	20	4.1	.15	2.7	.7	.03	2.7	.1	6	3.6	5.0
02245470 GREENS CREEK NR PENNEY FARMS FLA (LAT 29 54 38 LONG 081 47 40)												
MAY , 1968 03...	.00	22	1.4	.55	6.5	1.6	.06	5.6	.4	29	.0	10
02245500 SOUTH FORK BLACK CREEK NR PENNEY FARMS FLA (LAT 29 58 45 LONG 081 51 08)												
APR., 1968 29...	15	21	3.9	.12	3.2	1.0	.04	2.9	.2	12	1.6	5.8
02245700 KINGSLEY LAKE AT CAMP BLANDING FLA (LAT 29 58 28 LONG 081 59 22)												
MAY , 1968 03...	--	23	1.3	.01	3.6	.9	.00	4.0	.4	9	6.0	8.9
02245900 YELLOW WATER CREEK NR MAXVILLE FLA (LAT 30 13 44 LONG 081 55 17)												
MAY , 1968 01...	.25	19	9.2	.27	9.2	2.3	.00	7.4	1.2	38	3.7	12
02246000 NO FORK BLACK CREEK NR MIDDLEBURG FLA (LAT 30 06 47 LONG 081 54 24)												
MAY , 1968 02...	18	23	5.9	.10	12	2.8	.02	9.8	.7	35	22	7.0
02246150 BIG DAVIS CREEK AT BAYARD, FLA. (LAT 30 09 05 LONG 081 31 34)												
NOV., 1967 17...	1.4	14	4.5	.06	2.4	1.7	--	7.5	.4	74	1.6	12
JAN., 1968 04...	--	17	--	--	--	--	--	--	--	--	--	--
FEB. 16...	--	12	--	--	--	--	--	--	--	--	--	--
MAR. 29...	--	14	--	--	--	--	--	--	--	--	--	--
MAY 02...	1.2	13	7.1	.08	24	1.7	.08	7.0	.5	77	5.9	11
JUNE 12...	11	25	--	--	--	--	--	--	--	--	--	--
JULY 23...	.93	25	--	--	--	--	--	--	--	--	--	--
02246200 DUBBIN CREEK NR DUBBIN FLA (LAT 30 05 57 LONG 081 31 34)												
MAY , 1968 02...	.00	29	7.2	.07	37	3.2	.23	13	1.6	124	12	18
02246211 DOCTORS INLET AT ORANGE PARK FLA (LAT 30 04 48 LONG 081 42 04)												
SEP., 1968 05...	--	--	4.1	.08	24	12	--	75	3.8	52	39	141
02246250 ST JOHNS RIVER AT NAVAL AIR STATION UPPER (LAT 30 13 39 LONG 080 39 58)												
MAY , 1968 01...	--	29	1.5	.04	124	302	2.8	2490	96	100	655	4550
02246300 ORTEGA RIVER NR JACKSONVILLE FLA (LAT 30 14 50 LONG 081 47 49)												
NOV., 1967 16...	1.4	13	3.6	.04	12	3.0	--	6.0	1.4	47	5.6	10
JAN., 1968 04...	--	16	--	--	--	--	--	--	--	--	--	--
FEB. 16...	--	19	--	--	--	--	--	--	--	--	--	--
MAR. 27...	4.9	16	--	--	--	--	--	--	--	--	--	--
MAY 01...	2.5	23	4.7	.14	13	3.0	.00	6.7	1.7	44	10	11
JUNE 11...	130	26	--	--	--	--	--	--	--	--	--	--
JULY 24...	47	29	--	--	--	--	--	--	--	--	--	--
02246500 ST JOHNS RIVER AT JACKSONVILLE FLA (LAT 30 19 26 LONG 081 39 12)												
DEC., 1967 06...	--	17	3.0	.08	141	409	--	3400	127	103	870	6000
MAY , 1968 02...	--	22	2.7	.03	243	555	5.8	4580	168	114	1160	8500
SEP. 05...	--	0	3.1	.14	17	9.1	--	58	2.9	40	30	103

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
ST. JOHNS RIVER BASIN--CONTINUED												
02244905 BIG LAKE JOHNSON NR KEYSTONE HEIGHTS FLA (LAT 29 49 26 LONG 081 56 42)												
MAY, 1968 03...	.1	.2	.12	11	15	3	3	28	5.1	0	8.8	107
02244950 LAKE GRANDIN NEAR INTERLACHEN, FLA. (LAT 29 40 16 LONG 081 52 55)												
MAY, 1968 09...	.1	.7	.27	26	40	9	6	54	5.8	30	7.6	87
02245200 RICE CREEK NEAR PALATKA FLA (LAT 29 41 57 LONG 081 39 48)												
APR., 1968 26...	.4	.0	--	664	695	183	26	1120	7.1	200	--	--
02245400 SOUTH FORK BLACK CREEK NR CAMP BLANDING FLA (LAT 29 56 33 LONG 081 53 52)												
MAY, 1968 03...	.1	.5	.27	23	32	10	4	36	6.5	30	10.0	109
02245470 GREENS CREEK NR PENNEY FARMS FLA (LAT 29 54 38 LONG 081 47 40)												
MAY, 1968 03...	.1	.8	.13	41	58	22	0	75	6.3	110	3.2	36
02245500 SOUTH FORK BLACK CREEK NR PENNEY FARMS FLA (LAT 29 58 45 LONG 081 51 08)												
APR., 1968 29...	.2	.2	.37	25	32	12	2	41	6.7	45	7.8	87
02245700 KINGSLEY LAKE AT CAMP BLANDING FLA (LAT 29 58 28 LONG 081 59 22)												
MAY, 1968 03...	.1	.5	.03	31	42	12	5	57	6.4	0	11.0	126
02245900 YELLOW WATER CREEK NR MAXVILLE FLA (LAT 30 13 44 LONG 081 55 17)												
MAY, 1968 01...	.1	1.1	.35	63	0	30	0	134	6.6	30	8.2	87
02246000 NO FORK BLACK CREEK NR MIDDLEBURG FLA (LAT 30 06 47 LONG 081 54 24)												
MAY, 1968 07...	.2	.8	.34	78	86	42	42	130	6.8	30	10.0	115
02246150 BIG DAVIS CREEK AT BAYARD, FLA. (LAT 30 09 05 LONG 081 31 34)												
NOV., 1967 17...	.2	.2	--	92	102	67	6	167	6.9	45	--	--
JAN., 1968 04...	--	--	--	--	--	--	--	149	--	--	--	--
FEB. 16...	--	--	--	--	--	--	--	180	--	--	--	--
MAR. 28...	--	--	--	--	--	--	--	175	--	--	--	--
MAY 02...	.2	.7	.50	96	111	67	4	191	7.0	60	7.0	74
JUNE 12...	--	--	--	--	--	--	--	120	--	--	--	--
JULY 23...	--	--	--	--	--	--	--	153	--	--	--	--
02246200 DURBIN CREEK NR DURBIN FLA (LAT 30 05 57 LONG 081 31 34)												
MAY, 1968 02...	.2	1.3	.74	155	163	106	4	260	7.3	40	5.5	60
02246211 DOCTORS INLET AT ORANGE PARK FLA (LAT 30 08 48 LONG 081 42 04)												
SEP., 1968 05...	.2	.0	.09	328	408	110	67	642	6.9	140	--	--
02246250 ST JOHNS RIVER AT NAVAL AIR STATION UPPER (LAT 30 13 39 LONG 080 39 58)												
MAY, 1968 01...	.6	.3	.34	8280	--	1560	1480	13900	7.1	40	8.3	101
02246300 ORTEGA RIVER NR JACKSONVILLE FLA (LAT 30 14 50 LONG 081 47 49)												
NOV., 1967 16...	.2	.2	--	71	80	42	3	122	6.7	30	--	--
JAN., 1968 04...	--	--	--	--	--	--	--	94	--	--	--	--
FEB. 16...	--	--	--	--	--	--	--	112	--	--	--	--
MAR. 27...	--	--	--	--	--	--	--	107	--	--	--	--
MAY 01...	.2	1.4	.31	78	89	45	9	146	6.7	40	7.3	79
JUNE 11...	--	--	--	--	--	--	--	51	--	--	--	--
JULY 24...	--	--	--	--	--	--	--	68	--	--	--	--
02246500 ST JOHNS RIVER AT JACKSONVILLE FLA (LAT 30 19 26 LONG 081 39 12)												
DEC., 1967 06...	.7	.7	--	11000	--	2080	2000	18500	6.9	50	6.8	--
MAY, 1968 02...	.9	.4	.48	15300	--	2870	2800	24100	7.2	40	5.8	66
SEP. 05...	.3	.0	.10	245	313	85	52	465	6.9	120	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

279

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (N33)	PHOS- PHATE (P74)	715-	SOLVED	DIS-	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
				(SUM OF TUNTSI)	SOLIDS	SOLIDS			(RESI- DUE AT 180 C)				
ST. JOHNS RIVER BASIN--CONTINUED													
02246530 ST JOHNS R AT DREDGE DEPOT NR JACKSONVILLE F (LAT 30 21 25 LONG 081 37 18)													
MAY , 1968 01...	.1	.5	.41	17300	--	3240	3140	27300	7.2	30	5.9	70	
02246600 TROUT RIVER AT DINSMORE FLA (LAT 30 25 51 LONG 091 46 07)													
MAY , 1968 01...	.4	.2	.11	2100	--	940	855	3870	7.1	50	3.0	32	
COASTAL BASINS BETWEEN ST. JOHNS RIVER AND TURKEY CREEK													
02246900 MOUTRIE CR AT HWY 207 NR ST AUGUSTINE (LAT 29 50 50 LONG 081 21 39)													
APR., 1963 30...	.6	.0	.21	880	932	392	274	1590	7.7	30	4.8	53	
02247200 FISH SWAMP OUTLET NR SUMMER HAVEN FLA (LAT 29 39 20 LONG 081 19 43)													
APR., 1968 30...	.2	.0	.44	304	307	259	2	530	8.1	10	4.9	56	
02247510 TOMOKA RIVER NEAR HOLLY HILL FLA (LAT 29 13 02 LONG 081 06 32)													
MAY , 1969 03...	.3	1.0	.40	267	307	192	15	480	7.6	80	7.6	93	
02248000 SPRUCE CREEK NEAR SANSULA FLA (LAT 29 03 01 LONG 091 02 49)													
MAY , 1968 02...	.3	1.1	.11	403	433	289	7	720	7.9	40	9.3	111	
02248050 SPRUCE CREEK NEAR PORT ORANGE FLA (LAT 29 04 28 LONG 090 59 37)													
MAY , 1963 03...	.1	1.3	.38	22200	--	4060	3910	33800	7.6	30	6.6	72	
02249500 CRANE CREEK AT MELBOURNE FLA (LAT 28 04 42 LONG 080 37 48)													
APR., 1968 30...	.4	.0	.21	934	1070	504	304	1630	7.4	30	3.2	38	
TURKEY CREEK AND COASTAL BASINS SOUTH TO ST. LUCIE RIVER													
02250000 TURKEY CREEK NEAR PALM HAY FLA (LAT 28 00 46 LONG 080 37 20)													
APR., 1968 30...	.5	.0	.10	923	1160	468	284	1630	7.7	30	7.9	98	
02251000 SO PRING SEBASTION CREEK NR SEBASTIAN FLA (LAT 27 46 10 LONG 080 30 21)													
APR., 1968 18...	.7	.1	.23	1070	1130	478	314	1920	7.5	25	6.8	80	
02251800 INDIAN RIVER AT WABASSO FLA (LAT 27 45 42 LONG 080 24 52)													
APR., 1968 17...	1.4	.0	.27	31700	--	6000	5860	48300	7.4	5	6.9	82	
02252000 FELLSMERE CANAL NR FELLSMERE FLA (LAT 27 49 18 LONG 080 36 27)													
APR., 1968 18...	.6	1.0	.04	438	507	259	94	770	7.4	50	5.7	68	
02252500 NORTH CA NR VERO BEACH FLA (LAT 27 41 37 LONG 080 25 00)													
OCT., 1967 03...	--	--	--	--	--	--	--	1100	--	--	--	--	
NOV. 21...	--	--	--	--	--	--	--	960	--	--	--	--	
JAN., 1968 04...	--	--	--	--	--	--	--	790	--	--	--	--	
FEB. 27...	--	--	--	--	--	--	--	720	--	--	--	--	
APR. 17...	.5	.1	.15	694	723	344	183	1280	7.4	40	8.5	101	
JUNE 05...	--	--	--	--	--	--	--	305	--	--	--	--	
SEP. 10...	--	--	--	--	--	--	--	680	--	--	--	--	
02253000 MAIN CANAL AT VERO BEACH FLA (LAT 27 38 54 LONG 080 24 10)													
OCT., 1967 03...	--	--	--	--	--	--	--	1300	--	--	--	--	
NOV. 21...	--	--	--	--	--	--	--	1300	--	--	--	--	
JAN., 1968 09...	--	--	--	--	--	--	--	1220	--	--	--	--	
FEB. 27...	--	--	--	--	--	--	--	1410	--	--	--	--	
APR. 17...	.6	.1	.23	123	973	377	216	1470	7.4	40	8.7	107	
JUNE 05...	--	--	--	--	--	--	--	382	--	--	--	--	
SEP. 09...	--	--	--	--	--	--	--	850	--	--	--	--	

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (P24)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC SOLIDS COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
TURKEY CREEK AND COASTAL BASINS SOUTH TO ST. LUCIE RIVER--CONTINUED												
02253500 SOUTH CANAL AT VEKIV REACH FLA (LAT 27 36 11 LONG 081 23 24)												
OCT., 1967								1300				
31...	--	--	--	--	--	--	--					
NOV.								910				
21...	--	--	--	--	--	--	--					
JAN., 1968								652				
09...	--	--	--	--	--	--	--					
FEB.								670				
27...	--	--	--	--	--	--	--					
APR.								720	7.4	45	8.8	105
18...	.4	1.2	.44	413	452	248	58					
JUNE								380				
05...	--	--	--	--	--	--	--					
SEP.								65				
09...	--	--	--	--	--	--	--					
02253600 MOORE CREEK AT FORT PIERCE FLA (LAT 27 26 58 LONG 080 19 37)												
APR., 1968								337	7.0	50	3.1	36
17...	.4	.5	.72	202	224	114	9					
LAKE OKEECHOBEE AND THE EVERGLADES BASINS												
02257800 HARNEY POND CANAL ABOVE S-71 NEAR LAKEPORT FLA (LAT 27 02 00 LONG 081 04 15.1)												
OCT., 1967								190				
31...	--	--	--	--	--	--	--					
NOV.								300				
30...	--	--	--	--	--	--	--					
DEC.								290				
29...	--	--	--	--	--	--	--					
JAN., 1968								282				
31...	--	--	--	--	--	--	--					
FEB.								349				
29...	--	.0	.02	--	--	--	--					
APR.								520				
01...	--	.0	.04	--	--	--	--					
30...	.3	.7	.10	99	125	56	28	176	6.6	80	4.6	106
MAY								202				
31...	--	.6	.11	--	--	--	--					
JULY								210				
01...	--	3.1	.42	--	--	--	--					
AUG.								142				
01...	--	.6	.04	--	--	--	--					
30...	--	1.3	.02	--	--	--	--	114				
02257801 HARNEY POND CANAL BL S-71 NEAR LAKEPORT FLA (LAT 27 01 59 LONG 081 04 15)												
OCT., 1967								210				
31...	--	--	--	--	--	--	--					
NOV.								280				
30...	--	--	--	--	--	--	--					
DEC.								400				
29...	--	--	--	--	--	--	--					
JAN., 1968								450				
31...	--	--	--	--	--	--	--					
FEB.								349				
29...	--	.0	.02	--	--	--	--					
APR.								520				
01...	--	.0	.04	--	--	--	--					
30...	.5	.9	.07	250	282	141	46	450	7.3	60	7.8	96
MAY								290				
31...	--	.7	.60	--	--	--	--					
JULY								210				
01...	--	3.1	.42	--	--	--	--					
AUG.								147				
01...	--	.6	.05	--	--	--	--					
30...	--	.6	.02	--	--	--	--	117				
02259200 INDIAN PRAIRIE CANAL AT S-72 NEAR OKEECHOBEE FLA (LAT 27 05 35 LONG 081 00 25.1)												
OCT., 1967								260				
31...	--	--	--	--	--	--	--					
NOV.								310				
30...	--	--	--	--	--	--	--					
DEC.								202				
29...	--	--	--	--	--	--	--					
JAN., 1968								202				
31...	--	--	--	--	--	--	--					
FEB.								184				
29...	--	.0	.04	--	--	--	--					
APR.								193				
01...	--	.1	.03	--	--	--	--					
30...	.3	1.0	.08	117	142	68	39	209	6.6	70	8.8	109
JUNE, 1968								215				
25...	--	1.2	.16	--	--	--	--					
AUG.								240				
30...	--	2.6	.08	--	--	--	--					

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NESIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POT- AS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02259201 INDIAN PRAIRIE CANAL RL S-72 NR OKEECHOBEE FLA (LAT 27 05 35 LONG 081 00 25)												
OCT., 1967												
31...	.00	26	--	--	--	--	--	--	--	--	--	--
NOV.												
30...	--	24	--	--	--	--	--	--	--	--	--	--
DEC.												
29...	.00	14	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
31...	.00	19	--	--	--	--	--	--	--	--	--	--
FEB.												
29...	.30	17	--	--	--	--	--	--	--	--	--	--
APR.												
01...	.30	26	--	--	--	--	--	--	--	--	--	--
30...	.00	27	2.4	.04	43	8.1	.84	25	2.1	104	52	38
JUNE												
25...	744	31	--	--	--	--	--	--	--	--	--	--
AUG.												
30...	.00	29	--	--	--	--	--	--	--	--	--	--
02260800 ALLIGATOR LAKE NR ASHTON (LAT 28 13 55 LONG 081 11 20)												
MAY, 1968												
03...	--	26	1.1	.07	2.8	2.1	.00	9.5	1.3	2	10	16
02261900 LAKE MARY JANE NR NARCOSSEF (LAT 29 22 46 LONG 081 11 15)												
MAY, 1968												
07...	--	26	1.9	.24	3.5	2.1	.00	8.9	.8	4	10	16
02262200 HART LAKE NR NARCOSSEF (LAT 28 22 46 LONG 081 13 27)												
MAY, 1968												
07...	--	26	2.2	.01	10	5.5	.03	12	7.2	1	50	21
02262800 LAKE CONWAY AT PINECASTLE FLA (LAT 28 27 55 LONG 081 21 23)												
MAY, 1968												
07...	--	26	.3	.00	10	5.4	.00	13	2.0	36	20	22
02262900 HUGGY CREEK NR TAFT (LAT 28 22 16 LONG 081 18 39)												
MAY, 1968												
07...	1.7	20	9.9	.10	9.0	3.1	.00	16	2.4	43	6.6	20
02263400 EAST LK TOHOPEKALIGA AT ST CLOUD (LAT 28 15 30 LONG 081 16 57)												
MAY, 1968												
03...	--	25	1.2	.08	4.5	2.2	.00	10	1.5	8	9.7	21
02263500 ST CLOUD CANAL ABOVE S-59 NR ST CLOUD FLA (LAT 28 15 56 LONG 081 18 39)												
NOV., 1967												
21...	.89	20	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
03...	--	21	--	--	--	--	--	--	--	--	--	--
FEB.												
14...	--	14	--	--	--	--	--	--	--	--	--	--
MAR.												
27...	--	27	--	--	--	--	--	--	--	--	--	--
MAY												
03...	.00	26	.7	.08	3.7	2.1	.03	9.5	1.2	4	8.8	18
JUNE												
18...	767	28	--	--	--	--	--	--	--	--	--	--
02263501 ST CLOUD CANAL RL S-59 NEAR ST CLOUD FLA (LAT 28 15 56 LONG 081 18 39)												
JAN., 1968												
03...	--	20	--	--	--	--	--	--	--	--	--	--
FEB.												
14...	--	9	--	--	--	--	--	--	--	--	--	--
MAR.												
27...	--	22	--	--	--	--	--	--	--	--	--	--
MAY												
03...	.00	26	15	.03	34	6.3	.62	30	6.6	54	43	42
02263800 SHINGLE CREEK AT AIRPORT NEAR KISSIMEE FLA (LAT 28 18 14 LONG 081 27 04)												
MAY, 1968												
02...	2.5	24	9.0	.12	15	4.7	.08	50	4.4	69	10	56
02263850 RAY LAKE NEAR VINELAND FLA (LAT 28 25 28 LONG 081 34 09)												
MAR., 1968												
13...	--	--	2.3	--	3.2	2.9	.02	11	1.5	8	13	19
APR.												
09...	--	--	3.5	.10	3.7	2.4	.00	11	1.6	4	12	19
MAY												
07...	--	25	5.1	.07	3.6	2.5	.00	12	1.4	2	14	20
02263900 LAKE BUTLER AT WINDERMERE, FLA. (LAT 28 29 26 LONG 081 32 04)												
MAY, 1968												
08...	--	24	.3	.01	7.5	7.3	.05	14	6.4	6	48	24
02264100 PINNET CREEK NEAR VINELAND, FLA. (LAT 28 19 58 LONG 081 31 20)												
APR., 1968												
05...	--	--	11	.24	13	3.4	.10	6.3	.5	44	.8	13
MAY												
01...	1.4	21	14	.25	11	3.1	.08	6.5	.5	32	.0	15



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

283

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVE (SUM OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS (RESIDUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MH/S)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02259201 INDIAN PRAIRIE CANAL BL S-72 NR OKEECHOBEE FLA (LAT 27 05 35 LONG 081 00 25)												
CT., 1967												
31...	--	--	--	--	--	--	--	249	--	--	--	--
MOV.												
30...	--	--	--	--	--	--	--	350	--	--	--	--
DEC.												
29...	--	--	--	--	--	--	--	352	--	--	--	--
JUN., 1968												
31...	--	--	--	--	--	--	--	370	--	--	--	--
FEB.												
29...	--	1.3	.04	--	--	--	--	328	--	--	--	--
APR.												
31...	--	.2	.09	--	--	--	--	354	--	--	--	--
30...	.4	1.2	.22	224	263	142	57	397	7.2	0	74.0	91
JUNE												
25...	--	.7	.11	--	--	--	--	215	--	--	--	--
AUG.												
30...	--	1.7	.06	--	--	--	--	217	--	--	--	--
02260800 ALLIGATOR LAKE NR ASHTON (LAT 28 13 55 LONG 081 11 20)												
MAY, 1968												
03...	.1	1.3	.14	45	56	16	14	93	5.3	40	8.5	104
02261900 LAKE MARY JANE NR MARCOSSEE (LAT 28 22 46 LONG 081 11 15)												
MAY, 1968												
07...	.1	2.0	.15	48	92	17	14	90	5.4	120	9.7	106
02262200 HART LAKE NR MARCOSSEE (LAT 28 22 46 LONG 081 13 27)												
MAY, 1968												
07...	.3	.0	.04	109	116	48	47	212	4.7	0	7.0	89
02262800 LAKE CUNWAY AT PINECASTLE FLA (LAT 28 27 55 LONG 081 21 23)												
MAY, 1968												
07...	.1	.8	.00	92	92	47	17	172	6.8	5	9.9	121
02262900 BOGGY CREEK NR TAFT (LAT 28 22 16 LONG 081 18 39)												
MAY, 1968												
07...	.2	1.3	2.3	92	108	36	1	152	6.6	70	7.5	82
02263400 EAST LK TONHOPEKALIGA AT ST CLOUD (LAT 28 15 30 LONG 081 16 57)												
MAY, 1968												
03...	.2	3.6	.18	58	64	20	13	106	6.0	30	7.9	94
02263500 ST CLOUD CANAL ABOVE S-59 NR ST CLOUD FLA (LAT 28 15 56 LONG 081 18 38)												
NOV., 1967												
21...	--	--	--	--	--	--	--	81	--	--	--	--
JAN., 1968												
03...	--	--	--	--	--	--	--	81	--	--	--	--
FEB.												
16...	--	--	--	--	--	--	--	92	--	--	--	--
MAR.												
27...	--	--	--	--	--	--	--	88	--	--	--	--
APR.												
07...	.7	1.5	.07	48	58	18	15	92	6.1	40	8.0	98
JUNE												
18...	--	--	--	--	--	--	--	87	--	--	--	--
02263501 ST CLOUD CANAL BL S-59 NEAR ST CLOUD FLA (LAT 28 15 56 LONG 081 18 38)												
JAN., 1968												
07...	--	--	--	--	--	--	--	210	--	--	--	--
FEB.												
16...	--	--	--	--	--	--	--	470	--	--	--	--
MAR.												
27...	--	--	--	--	--	--	--	420	--	--	--	--
APR.												
07...	.6	33	15	253	270	112	68	397	6.9	30	4.1	50
02263800 SHINGLE CREEK AT AIRPORT NEAR KISSIMMEE FLA (LAT 28 18 14 LONG 081 27 04)												
MAY, 1968												
02...	.7	2.3	20	205	222	57	0	360	7.3	100	6.0	71
02263850 BAY LAKE NEAR VINELAND FLA (LAT 28 25 28 LONG 081 34 09)												
APR., 1968												
17...	.1	6.0	.09	64	76	20	13	102	6.0	55	--	--
MAY												
03...	.2	1.7	--	57	70	18	15	110	5.1	50	--	--
JUN.												
07...	.2	1.9	.06	62	92	20	18	110	5.0	15	5.8	69
02263900 LAKE BUTLER AT WINDERMERE, FLA. (LAT 28 29 26 LONG 081 32 04)												
MAY, 1968												
07...	.2	.6	.09	111	133	48	43	209	5.7	5	9.6	113
02264100 BONNET CREEK NEAR VINELAND, FLA. (LAT 28 19 58 LONG 081 31 20)												
NOV., 1968												
09...	.2	3.5	--	74	111	46	10	163	6.9	280	--	--
APR.												
07...	.2	2.1	.22	69	125	40	14	106	6.5	400	3.3	37

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DISE- CHARGE (CFS)	TEMP- RATURE (DEG C)	SILICA (SIOP)	(N)- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02264900 - LAKE THIMPEKALIGA AT KISSIMMEE (LAT 28 17 20 LONG 081 24 20)												
MAY, 1968 01...	--	30	5.3	.03	17	4.0	.13	10	1.6	58	9.0	16
02265000 SO PORT CANAL AB 5-61 NR ST CLOUD (LAT 28 08 22 LONG 081 21 06)												
NOV., 1967 21...	.00	19	--	--	--	--	--	--	--	--	--	--
DEC. 21...	.90	19	--	--	--	--	--	--	--	--	--	--
JAN., 1968 03...	--	18	--	--	--	--	--	--	--	--	--	--
FEB. 13...	--	15	--	--	--	--	--	--	--	--	--	--
MAR. 26...	--	25	--	--	--	--	--	--	--	--	--	--
MAY 02...	5.0	25	1.4	.06	5.0	2.5	.03	11	1.2	12	11	20
JULY 09...	1210	23	--	--	--	--	--	--	--	--	--	--
02265001 SOUTH PORT CANAL BELOW 5-61 NR ST CLOUD, FLA. (LAT 28 08 22 LONG 081 21 06)												
DEC., 1967 21...	.00	19	--	--	--	--	--	--	--	--	--	--
JAN., 1968 03...	--	18	--	--	--	--	--	--	--	--	--	--
FEB. 13...	--	15	--	--	--	--	--	--	--	--	--	--
MAR. 26...	--	25	--	--	--	--	--	--	--	--	--	--
MAY 02...	5.0	24	3.2	.14	8.9	3.3	.06	12	1.2	18	18	22
02265400 LAKE GENTRY NR ST CLOUD (LAT 28 07 35 LONG 081 15 30)												
MAY, 1968 02...	--	30	.7	.05	1.3	1.6	.00	9.0	.5	4	5.0	15
02266062 HANCOCK LAKE NR CLERMONT (LAT 28 22 36 LONG 081 39 45)												
AUG., 1968 06...	--	20	1.7	.06	1.5	1.5	--	6.4	.3	0	4.8	14
02266200 WHITTENHORSE CREEK NEAR VINELAND FLA (LAT 28 23 05 LONG 091 37 00)												
MAY, 1969 01...	--	25	4.5	.17	9.8	3.5	.00	12	6.1	38	.2	24
02266300 REEPLY CREEK NEAR VINELAND FLA (LAT 28 19 57 LONG 081 34 48)												
APR., 1968 09...	--	--	6.5	.15	5.1	2.6	.00	7.7	.9	4	4.4	16
MAY 01...	.05	23	2.1	.08	3.6	2.0	.00	4.4	.9	0	15	6.
02266480 DAVENPORT CREEK NEAR LUDLOW FLA (LAT 28 16 15 LONG 081 35 28)												
APR., 1968 09...	--	--	7.5	.06	15	4.2	.00	4.0	.7	48	8.0	8.
30...	.72	23	6.9	.03	15	4.2	.04	4.3	1.0	48	9.6	10
02266500 REEPLY CREEK NEAR LUDLOW FLA (LAT 28 15 41 LONG 081 32 12)												
APR., 1969 09...	--	--	6.7	.07	14	4.2	.00	5.3	1.0	40	12	10
30...	.70	23	5.9	.03	16	4.5	.18	4.5	.9	49	16	9.
02266600 CYPRESS LAKE NR ST CLOUD FLA (LAT 28 03 40 LONG 081 15 30)												
APR., 1968 29...	--	28	1.7	.18	6.9	3.2	.04	11	1.1	14	15	18
02266650 LAKE MARION NR HAINES CITY (LAT 28 03 40 LONG 081 19 58)												
MAY, 1968 01...	--	30	1.5	.02	15	4.5	.10	5.5	1.0	54	10	11
02266900 LAKE PIERCE NR LAKE WALES (LAT 27 59 37 LONG 081 32 33)												
MAY, 1968 02...	--	23	.8	.07	15	5.0	.20	6.0	1.3	52	14	11
02267000 CATFISH CREEK NR LAKE WALES (LAT 27 57 40 LONG 091 29 49)												
MAY, 1968 02...	5.4	25	1.5	.00	15	5.1	.25	5.9	1.4	54	14	12
02267400 LAKE HATCHINEHA NR LAKE WALES FLA (LAT 28 00 00 LONG 081 22 50)												
APR., 1968 29...	--	23	1.5	.19	17	3.8	.09	9.5	1.2	33	12	16

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

285

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02264900 LAKE TOMOKEALIGA AT KISSIMEE (LAT 28 17 20 LONG 081 24 20)												
MAY , 1968 01...	.3	3.4	.86	96	96	59	11	170	6.7	40	8.8	116
02265000 SO PORT CANAL AB S-61 NR ST CLOUD (LAT 28 08 22 LONG 081 21 06)												
NOV., 1967 21...	--	--	--	--	--	--	--	85	--	--	--	--
DEC. 21...	--	--	--	--	--	--	--	95	--	--	--	--
JAN., 1968 03...	--	--	--	--	--	--	--	82	--	--	--	--
FEB. 13...	--	--	--	--	--	--	--	100	--	--	--	--
MAR. 26...	--	--	--	--	--	--	--	100	--	--	--	--
MAY 02...	.2	3.2	.11	61	71	23	13	114	5.9	50	7.8	93
JULY 09...	--	--	--	--	--	--	--	95	--	--	--	--
02265001 SOUTH PORT CANAL BELOW S-61 NR ST CLOUD, FLA. (LAT 28 08 22 LONG 081 21 06)												
DEC., 1967 21...	--	--	--	--	--	--	--	120	--	--	--	--
JAN., 1968 03...	--	--	--	--	--	--	--	119	--	--	--	--
FEB. 13...	--	--	--	--	--	--	--	125	--	--	--	--
MAR. 26...	--	--	--	--	--	--	--	129	--	--	--	--
MAY 02...	.2	3.7	.19	82	96	36	21	143	6.2	50	4.1	49
02265400 LAKE GENTRY NR ST CLOUD (LAT 28 07 35 LONG 081 15 39)												
MAY , 1968 02...	.1	.6	.07	37	53	10	7	77	4.9	70	9.5	125
02266062 HANCOCK LAKE NR CLERMONT (LAT 28 22 36 LONG 081 39 45)												
AUG., 1968 06...	.2	.7	.05	31	54	10	10	62	5.0	70	--	--
02266200 WHITTENHORSE CREEK NEAR VINELAND FLA (LAT 28 23 05 LONG 081 37 00)												
MAY , 1968 01...	.2	7.2	.35	87	129	39	8	162	6.0	100	1.6	19
02266300 REEDY CREEK NEAR VINELAND FLA (LAT 28 19 57 LONG 081 34 48)												
APR., 1968 09...	.3	.7	--	47	122	26	23	90	5.3	320	--	--
MAY 01...	.2	1.0	.06	36	56	17	17	70	5.0	60	9.7	123
02266480 DAVENPORT CREEK NEAR LOUGHMAN FLA (LAT 28 16 15 LONG 081 35 28)												
APR., 1968 09...	.1	4.3	--	77	93	55	16	131	6.9	--	--	--
30...	.2	4.5	.22	81	94	58	19	140	6.7	20	7.5	86
02266500 REEDY CREEK NEAR LOUGHMAN FLA (LAT 28 15 41 LONG 081 32 12)												
APR., 1968 09...	.3	2.8	--	76	98	52	19	129	6.7	120	--	--
30...	.2	2.5	.03	84	94	58	18	143	6.6	20	1.5	17
02266600 CYPRESS LAKE NR ST CLOUD FLA (LAT 28 03 40 LONG 081 15 39)												
APR., 1968 29...	.2	1.2	.16	65	104	30	19	121	6.3	100	12.0	152
02266650 LAKE MARION NR MAINE CITY (LAT 28 03 40 LONG 081 19 58)												
MAY , 1968 01...	.2	1.2	.20	77	101	56	12	141	6.2	10	12.0	158
02266900 LAKE PIERCE NR LAKE WALES (LAT 27 58 37 LONG 081 32 33)												
MAY , 1968 02...	.2	1.5	.10	91	103	58	15	150	6.7	20	10.0	127
02267000 CATFISH CREEK NR LAKE WALES (LAT 27 57 40 LONG 081 29 49)												
MAY , 1968 02...	.1	2.8	.10	85	105	59	15	152	6.6	20	8.9	106
02267400 LAKE HATCHINEHA NR LAKE WALES FLA (LAT 28 00 00 LONG 081 22 50)												
APR., 1968 29...	.2	1.2	.08	73	103	46	19	132	6.6	100	11.0	144

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	D15- CHARGE (GFS)	TEMP- ERATURE (DEG C)	SILICA (SiO2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PJ- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02267500 KISSIMMEE RIVER NR LAKE WALES FLA (LAT 28 00 00 LONG 081 22 50)												
OCT., 1967												
20... 1020		21	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
19... 1200		16	--	--	--	--	--	--	--	--	--	--
MAR.												
05... -499		16	1.0	.07	9.2	3.2	.04	7.6	.9	27	10	14
APR.												
29... --		27	2.3	.09	11	3.6	.08	8.5	.9	30	11	14
JUNE												
19... 3230		28	--	--	--	--	--	--	--	--	--	--
02268200 LAKE WALES AT LAKE WALES (LAT 27 54 13 LONG 081 34 44)												
MAY, 1968												
01... --		29	1.0	.00	19	4.2	.04	7.6	.7	62	13	14
02268400 LAKE WEDDYAKAPKA AT INDIAN LAKE ESTATES FLA (LAT 27 48 50 LONG 081 23 16)												
APR., 1968												
29... --		26	3.0	.03	6.3	3.5	.16	8.3	.9	24	9.0	14
02268600 LAKE ROSALIE NR LAKE WALES FLA (LAT 27 57 20 LONG 081 24 40)												
APR., 1968												
29... --		27	1.3	.05	9.3	4.0	.20	9.4	.7	19	22	15
02268800 LAKE MARIAN NR KEVANSVILLE FLA (LAT 27 52 09 LONG 081 02 36)												
APR., 1968												
19... --		26	.1	.05	8.4	2.6	.12	11	1.2	23	6.4	--
02269000 KISSIMMEE R BL LAKE KISSIMMEE, FLA. (LAT 27 46 13 LONG 081 10 45)												
MAY, 1968												
22... 142		27	3.8	.04	10	3.1	--	10	.7	30	9.6	16
02269100 KISSIMMEE RIVER AT FORT LONESOME (LAT 27 35 27 LONG 081 09 20)												
MAY, 1968												
08... --		25	2.4	.06	14	3.9	.27	12	1.3	36	16	24
02269200 CROOKED LAKE NR BABSON PARK (LAT 27 49 38 LONG 081 33 26)												
MAY, 1968												
01... --		29	1.5	.01	2.7	2.0	.00	8.8	.8	1	11	16
02269300 LAKE CLINCH AT FROSTPROOF, FLA. (LAT 27 45 15 LONG 081 32 25)												
MAY, 1968												
01... --		27	1.0	.02	2.8	2.0	.00	6.5	1.5	4	12	12
02269400 REEDY LAKE NR FROSTPROOF (LAT 27 43 13 LONG 081 28 40)												
APR., 1968												
26... --		27	7.7	.03	19	7.1	.60	12	3.9	73	29	16
02269500 REEDY CREEK NR FROSTPROOF (LAT 27 43 13 LONG 081 28 40)												
APR., 1968												
26... 1.8		27	9.2	.13	19	7.1	.60	12	3.8	67	28	16
02269600 ARBUCKLE LAKE NR AVON PARK (LAT 27 39 50 LONG 081 22 41)												
MAY, 1968												
08... --		26	1.0	.03	13	5.2	.46	9.8	1.7	38	27	15
02269790 LAKE LUTELA AT AVON PARK, FLA. (LAT 27 35 05 LONG 081 28 55)												
MAY, 1968												
01... --		25	5.7	.00	3.0	3.3	.03	8.4	1.5	9	12	13
02269800 LAKE LETTA NR AVON PARK (LAT 27 33 35 LONG 081 27 15)												
MAY, 1968												
01... --		25	2.6	.00	3.8	4.1	.02	9.1	2.6	4	28	15
02270500 ARBUCKLE CREEK NR DESOTO CITY FLA (LAT 27 26 32 LONG 081 17 51)												
OCT., 1967												
16... 43		24	--	--	--	--	--	--	--	--	--	--
DEC.												
07... 68		20	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
16... 63		15	--	--	--	--	--	--	--	--	--	--
MAR.												
08... 79		17	--	--	--	--	--	--	--	--	--	--
APR.												
18... 13		26	.8	.06	8.1	4.1	.30	7.4	1.5	21	23	10
JUNE												
11... 1030		30	--	--	--	--	--	--	--	--	--	--
SEP.												
16... 257		27	--	--	--	--	--	--	--	--	--	--
02270550 LAKE JACKSON AT SEBRING (LAT 27 28 05 LONG 081 27 30)												
APR., 1968												
22... --		30	1.1	.03	4.3	2.5	.07	7.2	2.0	9	13	12
02270650 JOSEPHINE LAKE NR DE SOTO CITY FLA (LAT 27 24 00 LONG 081 25 10)												
APR., 1968												
19... .00		26	1.7	.06	5.8	2.8	.06	7.1	1.5	6	14	13



ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (MG/L)	DIS- SOLVED (PPM)	CAL- CIUM (MG/L)	MAG- NE- SIUM (MG)	STRON- TIUM (PPM)	SODIUM (MG)	POT- TAS- SIUM (MG)	BICAR- BONATE (MG/3)	SULFATE (MG/4)	CHLOR- IDE (MG/L)
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
APR., 1968 16...	.00	25	.9	.03	2.1	.5	.01	3.2	.3	5	2.8	5.8
02270700 LAKE ANNIE NR LAKE PLACID FLA (LAT 27 12 35 LONG 081 20 57)												
APR., 1968 22...	--	26	2.1	.00	2.0	1.1	.03	4.8	.7	4	6.5	9.0
02270900 LAKE SIATONA AT LAKE PLACID (LAT 27 17 10 LONG 081 22 00)												
APR., 1968 22...	--	22	2.4	.00	7.3	6.1	.04	6.3	3.5	6	36	16
02270950 LAKE JUNE-IN-WINTER NR LAKE PLACID (LAT 27 19 27 LONG 081 25 00)												
APR., 1968 22...	--	28	.7	.01	5.4	3.5	.00	8.1	2.4	10	21	16
02271200 LAKE FRANCIS NR LAKE PLACID (LAT 27 20 00 LONG 081 24 10)												
APR., 1968 22...	--	24	.8	.01	4.4	3.2	.03	7.8	1.8	12	15	14
02271500 JOSEPHINE CREEK NR DE SOTO CITY FLA (LAT 27 22 26 LONG 081 23 37)												
APR., 1968 13...	4.4	25	10	.02	21	6.8	.84	4.8	.6	52	40	8.0
02272000 ISTOKOUGA CANAL NR CERNWELL FLA (LAT 27 23 56 LONG 081 09 45)												
OCT., 1967 16...	25	23	--	--	--	--	--	--	--	--	--	--
DEC. 04...	10	13	--	--	--	--	--	--	--	--	--	--
JAN., 1968 16...	23	14	--	--	--	--	--	--	--	--	--	--
MAR. 08...	8.7	18	--	--	--	--	--	--	--	--	--	--
APR. 18...	5.9	27	.7	.05	2.4	4.4	.38	10	1.5	16	26	17
JUNE 11...	385	30	--	--	--	--	--	--	--	--	--	--
02273001 KISSIMMEE RIVER BL S-65F NEAR OKEECHOBEE FLA (LAT 27 13 34 LONG 080 57 44)												
NOV., 1967 17...	300	21	2.3	.04	12	2.7	--	10	1.0	28	14	16
JAN., 1968 31...	208	14	2.1	.15	17	3.8	--	12	1.1	44	18	19
FEB. 29...	200	14	1.5	.04	13	4.0	.19	13	1.2	52	18	22
APR. 16...	100	24	.7	.07	18	4.0	.27	12	1.1	46	34	20
JUNE 11...	1200	28	--	--	--	--	--	--	--	--	--	--
JULY 22...	6600	31	2.9	.41	9.2	2.1	--	7.0	.7	21	8.8	11
SEP. 11...	--	0	2.5	.11	21	2.5	--	8.0	.4	62	11	13
02273201 CANAL 41A BELOW S-83 NEAR LAKE PLACID FLA (LAT 27 19 55 LONG 081 15 05.2)												
OCT., 1967 13...	324	25	3.2	.02	7.0	3.4	--	8.8	1.6	13	22	15
NOV. 27...	140	24	2.2	.03	9.1	3.5	--	9.0	1.6	17	22	15
JAN., 1968 15...	.00	17	5.1	.04	10	3.9	--	9.1	1.5	13	26	15
MAR. 09...	35	17	.8	.07	7.8	3.9	.25	12	1.0	14	24	16
APR. 18...	290	20	.3	.03	2.4	4.4	.40	10	1.7	16	24	17
JUNE 17...	1800	--	2.0	.03	7.6	3.8	--	8.8	1.6	14	22	14
SEP. 17...	425	28	1.3	.11	4.7	2.9	--	6.5	1.4	10	16	11
02273300 CANAL 41A AT S-84 NEAR OKEECHOBEE, FLA. (LAT 27 12 55 LONG 080 58 55)												
APR., 1968 30...	.00	27	6.0	.10	31	9.3	1.0	20	1.7	44	74	33
02273301 CANAL 41A BELOW S-34 NR OKEECHOBEE FLA (LAT 27 12 55 LONG 080 58 54)												
APR., 1968 30...	.00	26	3.2	.12	26	5.9	.50	17	1.4	58	35	30
02274000 TAYLOR CREEK NR BASINGER FLA (LAT 27 23 39 LONG 080 53 44)												
APR., 1968 18...	.00	25	.0	.03	41	4.5	.37	19	3.5	123	13	35
02274330 TAYLOR CREEK AB S-1 NR OKEECHOBEE FLA (LAT 27 17 50 LONG 080 49 45)												
APR., 1968 16...	2.0	27	2.5	.04	59	10	1.0	47	7.3	181	21	84
02274331 TAYLOR CREEK BELOW S-1 NR OKEECHOBEE FLA (LAT 27 17 43 LONG 080 45 37)												
APR., 1968 16...	2.0	27	2.7	.04	59	10	.98	47	7.3	182	21	83

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

289

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS-SOLVED SOLIDS (WEST-190 C)	HARDNESS (CA+MG)	NON-CARBONATE HARDNESS	SPECIAL FIC CONDUCTANCE (MICRO-MHOS)	PH	COLOR	DISSOLVED OXYGEN	PERCENT SATURATION
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02270700 LAKE ANNIE NR LAKE PLACID FLA (LAT 27 12 35 LONG 091 20 57)												
APR., 1968 16...	.0	.4	.19	19	29	7	3	35	6.2	10	8.9	106
02270750 LAKE PLACID NR LAKE PLACID (LAT 27 15 44 LONG 081 22 09)												
APR., 1968 22...	.0	.0	.06	29	28	10	7	54	5.0	10	9.2	112
02270900 LAKE SIRENA AT LAKE PLACID (LAT 27 17 10 LONG 081 22 00)												
APR., 1968 22...	.1	1.4	.27	83	95	45	40	154	5.9	5	9.6	122
02270950 LAKE JUNE-IN-WINTER NR LAKE PLACID (LAT 27 19 22 LONG 081 25 09)												
APR., 1968 22...	.2	.6	.05	63	60	28	20	116	6.2	10	9.6	122
02271200 LAKE FRANCIS NR LAKE PLACID (LAT 27 20 00 LONG 081 24 10)												
APR., 1968 22...	.1	1.2	.04	55	71	25	15	104	6.3	5	9.6	122
02271200 JOSEPHINE CREEK NR DE SOTO CITY FLA (LAT 27 22 26 LONG 081 23 37)												
APR., 1968 19...	.2	2.8	.10	121	128	82	39	183	6.7	20	--	--
02272000 ISTOKPOGA CANAL NR CURNWELL FLA (LAT 27 23 56 LONG 081 09 45)												
OCT., 1967 16...	--	--	--	--	--	--	--	150	--	--	--	--
DEC. 04...	--	--	--	--	--	--	--	130	--	--	--	--
JAN., 1968 16...	--	--	--	--	--	--	--	172	--	--	--	--
MAR. 08...	--	--	--	--	--	--	--	142	--	--	--	--
APR. 18...	.2	.0	.05	77	104	42	29	143	6.5	60	10.0	123
JUNE 11...	--	--	--	--	--	--	--	120	--	--	--	--
02273001 KISSIMMEE RIVER BL S-65E NEAR OKEECHOBEE FLA (LAT 27 13 34 LONG 080 57 44)												
NOV., 1967 17...	.3	.4	--	73	109	41	18	139	6.4	100	--	--
JAN., 1968 31...	.3	.9	--	96	126	58	22	178	6.8	90	--	--
FEB. 26...	.3	1.0	.05	105	132	62	19	182	6.7	60	--	--
APR. 16...	.3	.5	.07	114	130	62	24	189	7.0	70	8.4	99
JUNE 11...	--	--	--	--	--	--	--	140	--	--	--	--
JULY 22...	.2	.5	--	53	86	29	12	94	6.2	160	--	--
SEP. 11...	.3	.4	--	90	116	63	12	158	7.1	100	--	--
02273201 CANAL 41A BELOW S-68 NEAR LAKE PLACID FLA (LAT 27 19 55 LONG 081 15 05.21)												
OCT., 1967 13...	.0	.1	--	69	90	34	23	123	6.0	80	--	--
NOV. 27...	.6	.4	--	68	94	34	24	125	6.0	80	--	--
JAN., 1968 19...	.2	1.3	--	79	104	41	30	151	6.1	90	--	--
MAR. 09...	.2	.9	.03	74	96	36	25	132	6.2	50	--	--
APR. 18...	.2	.0	.08	75	107	42	29	141	6.7	60	10.0	124
JUNE 17...	.2	1.2	--	68	90	34	23	129	6.5	40	--	--
SEP. 17...	.3	.9	--	50	80	24	16	90	6.0	100	--	--
02273300 CANAL 41A AT S-84 NEAR OKEECHOBEE, FLA. (LAT 27 12 55 LONG 080 58 55)												
APR., 1968 30...	.2	1.2	.03	200	244	117	81	334	6.9	100	10.0	123
02273301 CANAL 41A BELOW S-84 NR OKEECHOBEE FLA (LAT 27 12 55 LONG 080 58 54)												
APR., 1968 30...	.3	1.5	.04	150	184	90	42	263	6.9	50	8.4	102
02274000 TAYLOR CREEK NR BASINGER FLA (LAT 27 23 39 LONG 080 53 44)												
APR., 1968 18...	.3	.0	.09	179	198	122	21	325	7.5	40	10.0	119
02274330 TAYLOR CREEK AB S-1 NR OKEECHOBEE FLA (LAT 27 17 50 LONG 080 49 45)												
APR., 1968 16...	.4	.9	2.7	325	355	189	41	570	7.5	45	8.8	109
02274331 TAYLOR CREEK BELOW S-1 NR OKEECHOBEE FLA (LAT 27 17 43 LONG 080 45 37)												
APR., 1968 16...	.4	.1	2.5	324	358	139	40	575	7.5	50	8.8	109

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (GFS)	TEMP- ERATURE (DEG C)	SILICA (%O2)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	RICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
APR., 1963 16...	3.2	25	8.9	.03	135	52	14	303	8.4	198	188	560
02274495 WILLIAMSON DITCH AB S-7 NR OKEECHOBEE FLA (LAT 27 17 45 LONG 080 49 35)												
APR., 1968 16...	3.2	24	8.8	.03	133	52	14	291	8.8	200	200	540
02274496 WILLIAMSON DITCH BL S-7 NR OKEECHOBEE FLA (LAT 27 17 43 LONG 080 49 37)												
MAY , 1968 22...	.03	26	4.9	.05	66	6.1	.44	24	.2	192	30	36
02276800 MONREVE RANCH DRAINAGE CA NR STUART (LAT 27 03 40 LONG 080 19 11)												
OCT., 1967 27...	--	27	5.0	.04	43	3.3	--	23	.9	120	17	36
NOV. 24...	--	23	7.9	.02	60	18	--	74	3.8	208	60	103
FEB., 1968 06...	--	19	12	.07	72	21	--	74	4.7	252	62	105
MAR. 20...	--	21	20	--	86	30	--	190	8.8	390	65	278
MAY 21...	2560	27	23	.05	84	33	3.3	219	8.0	394	68	305
JUNE 19...	2350	26	27	.16	91	34	--	152	7.4	35	98	205
JULY 23...	--	28	21	.20	87	25	--	159	6.0	342	71	215
02278450 WEST PALM BCH CA AB S-5A NR LOXAHATCHEE FLA (LAT 26 41 05 LONG 080 22 15)												
SEP., 1968 19...	1840	29	28	.06	110	42	3.2	195	9.1	474	108	252
02278520 W PALM BCH CA AB S-5A-W NR LOXAHATCHEE (LAT 26 41 05 LONG 080 22 00)												
MAY , 1968 21...	50	26	16	.07	79	26	2.2	141	6.2	320	60	205
02278550 LEVFE 8 CA AT W PALM BCH CA NR LOXAHATCHEE (LAT 26 41 05 LONG 080 21 35)												
MAY , 1968 21...	50	26	16	.05	78	25	2.1	138	6.2	316	59	205
SEP. 19...	--	23	6.7	.04	56	7.6	--	35	1.7	166	30	56
02278600 WEST PALM BCH CA BL S-5AE NR LOXAHATCHEE (LAT 26 41 05 LONG 080 21 50)												
MAY , 1968 21...	.00	27	19	.06	78	26	--	152	6.9	334	64	212
02279000 WEST PALM BCH CA AT WEST PALM BCH (LAT 26 38 40 LONG 080 03 32)												
MAY , 1968 22...	520	26	7.4	.04	76	9.2	--	51	3.3	220	46	79
JUNE 20...	2500	27	4.8	.07	34	2.2	--	9.0	1.4	98	16	14
02281190 LEVEE 6 CANAL AT S-6 NR SHAWANO (LAT 26 27 50 LONG 080 26 30)												
MAY , 1968 02...	.00	27	4.2	.03	62	20	1.5	76	3.8	228	53	114
02281200 HILLSBORO CANAL AB S-6 NR SHAWANO (LAT 26 28 20 LONG 080 26 45.1)												
MAY , 1968 02...	.00	27	4.0	.04	63	19	1.4	76	3.9	228	53	118
02281201 HILLSBORO CANAL BL S-6 NR SHAWANO AUX (LAT 26 28 25 LONG 080 26 55)												
MAY , 1968 02...	.00	27	15	.02	60	25	2.0	128	5.9	284	24	192
02281300 HILLSBORO C AB S-39 NR DEERFIELD BCH FLA (LAT 26 21 20 LONG 080 17 58)												
OCT., 1967 25...	--	26	20	.04	89	35	--	136	5.3	408	43	192
MAY , 1968 20...	5.0	30	10	.03	55	23	1.7	104	4.1	262	31	155
JULY 22...	--	29	11	.05	36	9.1	.60	50	12	142	18	72
SEP. 20...	3.0	29	27	.04	95	40	3.0	133	7.1	428	64	182
02281435 US HWY 441 CA NR DEERFIELD BEACH (LAT 26 19 35 LONG 080 12 09)												
MAY , 1968 20...	.00	25	9.2	.05	75	15	1.4	83	1.9	284	19	128
02281499 HILLSBORO C AB CONTROL NR DEERFIELD BCH FLA (LAT 26 19 39 LONG 080 07 51)												
MAY , 1968 20...	333	27	6.8	.08	84	9.4	1.2	68	4.1	264	27	118



## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DISTOLVED SOLIDS (SUM OF CONSTITUENTS)	DISTOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CAL/MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH	COLOR	DISTOLVED OXYGEN	PERCENT SATURATION
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
APR., 1968		02274495	WILLIAMSON DITCH A4 S-7 NR OKEECHOBEE FLA (LAT 27 17 45 LONG 080 49 35)									
16...	.8	.8	2.6	1370	--	567	405	2370	7.5	50	2.2	26
APR., 1968		02274496	WILLIAMSON DITCH BL S-7 NR OKEECHOBEE FLA (LAT 27 17 43 LONG 080 49 37)									
16...	.6	.4	1.9	1350	--	562	394	2320	7.2	45	7.2	85
MAY, 1968		02276800	MONREVE RANCH DRAINAGE CA NR STUART (LAT 27 03 40 LONG 080 19 11)									
22...	.5	.5	.29	264	290	100	32	462	7.7	50	3.6	44
OCT., 1967		02278450	WEST PALM BCH CA AB S-5A NR LOXAHATCHEE FLA (LAT 26 41 05 LONG 080 22 15)									
27...	.2	.5	--	188	219	121	23	340	7.3	50	--	--
NOV. 29...	.9	1.4	--	431	473	224	53	760	7.5	60	--	--
FEB., 1968		04...		479	513	266	59	910	7.8	65	--	--
MAR. 20...	.9	4.1	--	875	909	338	18	1470	7.7	120	--	--
MAY 21...	1.1	.6	.15	939	1060	349	26	1650	8.0	160	2.4	29
JUNE 19...	.9	4.8	--	795	939	367	338	1350	7.7	320	--	--
JULY 23...	.8	6.3	--	759	875	370	40	1290	7.4	400	--	--
SEP., 1968		02278450	WEST PALM BCH CA AB S-5A NR LOXAHATCHEE FLA (LAT 26 41 05 LONG 080 22 15)									
19...	1.1	8.4	--	990	1090	450	62	1650	7.8	220	--	--
MAY, 1968		02278520	W PALM BCH CA AB S-5A-W NR LOXAHATCHEE (LAT 26 41 05 LONG 080 22 00)									
21...	.3	.7	.24	655	777	306	43	1210	7.9	120	4.2	51
MAY, 1968		02278550	LEEVE B CA AT W PALM BCH CA NR LOXAHATCHEE (LAT 26 41 05 LONG 080 21 35)									
21...	1.1	.3	.28	687	445	300	41	1200	7.9	120	4.2	51
SEP. 19...	.3	.2	--	276	293	171	35	482	7.0	90	--	--
MAY, 1968		02278600	WEST PALM BCH CA BL S-5AE NR LOXAHATCHEE (LAT 26 41 05 LONG 080 21 50)									
21...	.8	2.4	--	726	805	307	28	1280	7.8	140	6.8	94
MAY, 1968		02279000	WEST PALM BCH CA AT WEST PALM BCH (LAT 26 38 40 LONG 080 03 32)									
22...	.3	1.2	--	391	431	228	48	680	7.5	50	4.0	49
JUNE 20...	.2	.4	--	130	157	94	14	235	6.9	100	--	--
MAY, 1968		02281190	LEEVE C CANAL AT S-6 NR SHAWANO (LAT 26 27 50 LONG 080 26 30)									
02...	.6	2.1	.04	449	492	238	51	792	7.8	40	6.8	84
MAY, 1968		02281200	HILLSBORO CANAL AB S-6 NR SHAWANO (LAT 26 29 20 LONG 080 26 45.1)									
02...	.6	2.7	.03	453	485	236	49	792	7.6	40	6.3	78
MAY, 1968		02281201	HILLSBORO CANAL BL S-6 NR SHAWANO AUX (LAT 26 28 25 LONG 080 26 55)									
02...	1.1	2.2	.03	575	667	255	22	1050	7.9	80	3.7	46
OCT., 1967		02281300	HILLSBORO C AB S-39 NR DEERFIELD BCH FLA (LAT 26 21 20 LONG 080 17 58)									
25...	1.2	2.5	--	760	821	296	0	1740	7.9	160	--	--
MAY, 1968		20...		514	573	234	19	940	7.9	70	7.2	95
JULY 22...	.4	.0	--	279	309	128	12	463	7.2	140	--	--
SEP. 20...	1.3	2.8	--	761	855	405	54	1730	7.7	160	--	--
MAY, 1968		02281435	US HWY 441 CA NR DEERFIELD BEACH (LAT 26 19 35 LONG 080 12 09)									
20...	.6	.0	.06	473	515	250	17	865	7.8	50	1.8	21
MAY, 1968		02281499	HILLSBORO C AB CONTROL NR DEERFIELD BCH FLA (LAT 26 19 39 LONG 080 07 51)									
20...	.5	.0	.49	440	496	250	33	805	7.7	80	3.0	37

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (SO4)	CHL0- RIDE (CL)
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02281500 HILLSBORO CA AB CONTROL AT DEERFIELD BCH FLA (LAT 26 19 39 LONG 080 07 51)												
NOV., 1967												
29...	--	--	3.7	.03	93	8.2	--	51	3.3	292	23	79
FEB., 1968												
06...	--	21	7.8	.03	86	13	--	68	3.9	289	25	106
MAR.												
21...	7.0	22	7.9	--	86	15	--	83	4.0	300	28	130
MAY												
20...	.28	--	--	--	--	--	--	--	--	--	--	--
02282000 POMPANO CANAL AB CONTROL AT POMPANO BCH FLA (LAT 26 13 51 LONG 080 07 28)												
NOV., 1967												
29...	--	24	9.2	.05	101	3.5	--	22	1.8	274	20	34
FEB., 1968												
05...	--	--	3.4	.02	101	6.0	--	39	2.0	286	29	61
APR.												
01...	.00	24	4.4	.02	96	3.8	--	28	1.9	280	19	48
29...	.00	28	9.3	.01	84	2.6	.50	27	1.5	236	13	43
JULY												
01...	--	27	9.5	.04	74	6.4	--	32	2.5	224	26	49
02282100 CYPRESS CREEK CA AB S-37A NR POMPANO BCH FLA (LAT 26 12 20 LONG 080 07 57)												
NOV., 1967												
08...	.00	23	13	.05	105	6.0	--	35	2.5	308	39	52
FEB., 1968												
02...	.00	19	3.8	.01	96	7.6	--	45	3.0	290	26	69
APR.												
01...	.00	23	3.1	.03	99	7.0	--	45	2.4	298	26	74
30...	.00	26	5.2	.03	82	9.4	1.3	54	2.4	270	21	86
JULY												
01...	.990	28	11	.05	65	12	--	56	3.1	218	35	80
02282700 HIDDLE R CA AB S-36 NR FT LAUDERDALE FLA (LAT 26 10 22 LONG 080 10 47)												
NOV., 1967												
08...	.00	24	5.6	.03	94	3.1	--	18	1.8	266	22	30
FEB., 1968												
05...	.00	19	4.3	.02	105	4.0	--	33	2.8	300	23	49
APR.												
01...	.00	22	5.0	.03	103	4.1	--	33	3.2	286	27	56
30...	.00	29	4.4	.03	245	555	4.0	4620	178	202	1150	8400
JULY												
02...	155	27	6.9	.03	108	3.2	--	19	1.7	304	23	32
02282701 MIDDLE R CA BL S-36 NR FT LAUDERDALE FLA (LAT 26 10 22 LONG 080 10 44)												
APR., 1968												
30...	.00	29	4.4	.03	245	555	4.0	4620	178	202	1150	8400
02283200 PLANTATION RD CA AB S-33 NR FT LAUDERDALE FL (LAT 26 08 05 LONG 080 11 42)												
NOV., 1967												
10...	--	23	9.1	.02	90	2.4	--	19	2.2	249	26	29
FEB., 1968												
05...	.00	21	6.0	.03	81	6.8	--	41	2.2	248	13	62
APR.												
01...	.00	21	13	.05	51	3.7	--	59	7.6	184	38	82
30...	.00	26	14	.10	45	4.0	.40	62	9.2	95	37	86
JULY												
02...	44	27	6.9	.03	89	3.0	--	20	2.0	244	22	31
02283201 PLANTATION RD CA BL S-33 NR FT LAUDERDALE (LAT 26 08 05 LONG 080 11 40)												
APR., 1968												
30...	.00	29	10	.04	136	129	1.5	1110	44	267	261	2020
02285001 NEW RIVER CANAL NR FT LAUDERDALE BEL'W (LAT 26 07 03 LONG 080 08 37.2)												
APR., 1968												
29...	.00	28	5.4	.03	83	51	1.1	405	15	248	83	700
02285399 NEW RIVER CANAL AB S-9 NR DAVIE (LAT 26 03 40 LONG 080 26 30)												
MAY, 1968												
06...	.00	24	8.9	.02	72	16	1.2	57	1.6	288	1.8	94
02285400 SOUTH NEW RIVER CANAL BL S-9 NR DAVIE (LAT 26 03 40 LONG 080 26 30)												
MAY, 1968												
06...	.00	24	10	.09	87	16	1.0	60	1.6	348	.5	89
02286100 SOUTH NEW RIVER CANAL AB S-13 NEAR DAVIE FLA (LAT 26 03 57 LONG 080 12 32)												
NOV., 1967												
09...	.150	23	9.7	.02	96	5.9	--	22	1.2	276	16	39
FEB., 1968												
01...	.00	21	5.3	.02	101	4.2	--	33	1.2	302	14	55
MAR.												
29...	30	--	9.1	.05	94	2.4	--	41	1.3	308	9.4	72
APR.												
29...	.00	29	6.0	.03	34	9.2	.90	42	1.5	296	6.4	69
JULY												
03...	307	27	8.5	.03	73	6.0	--	22	1.3	276	17	38
02286101 NEW RIVER CANAL BL S-13 NEAR DAVIE FLA (LAT 26 03 57 LONG 080 12 32)												
APR., 1968												
09...	.00	30	3.3	.02	170	299	2.6	2570	98	248	596	4650

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (P24)	(SUM OF SOLIDS CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED													
02281500 HILLSBORO CA AB CONTROL AT DEERFIELD BCH FLA (LAT 26 19 39 LONG 080 07 51)													
NOV., 1967													
28...	.9	.4	--	412	442	266	26	740	7.4	70	--	--	--
FEB., 1968													
06...	.6	2.6	--	455	491	268	32	730	7.9	80	--	--	--
MAR.,													
21...	.6	1.0	--	504	540	276	30	880	7.6	70	--	--	--
MAY													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
02282000 POMPANO CANAL AP CONTROL AT POMPANO BCH FLA (LAT 26 13 51 LONG 080 07 28)													
NOV., 1967													
08...	.4	.0	--	326	348	266	41	560	7.4	50	--	--	--
FEB., 1968													
05...	.5	.9	--	384	407	276	41	680	7.9	50	--	--	--
APR.,													
01...	.3	.6	--	340	352	255	25	600	8.0	40	--	--	--
30...	.2	3.9	.16	296	320	220	26	520	7.5	25	9.0	114	114
JULY													
01...	.3	.2	--	309	349	211	28	550	7.1	70	--	--	--
02282100 CYPRESS CREEK CA AB S-37A NR POMPANO BCH FLA (LAT 26 12 20 LONG 080 07 57)													
NOV., 1967													
08...	.4	.6	--	406	433	286	33	690	7.6	50	--	--	--
FEB., 1968													
02...	.5	2.2	--	396	423	271	33	680	7.9	55	--	--	--
APR.,													
01...	.5	.6	--	405	429	276	32	730	7.9	50	--	--	--
30...	.5	1.3	.47	396	430	244	23	690	7.8	50	4.2	51	51
JULY													
01...	.3	.2	--	370	421	212	33	650	7.2	120	--	--	--
02282700 MIDDLE RIVER CA AB S-36 NR FT LAUDERDALE FLA (LAT 26 10 22 LONG 080 10 47)													
NOV., 1967													
08...	.4	1.0	--	307	350	248	30	530	7.6	75	--	--	--
FEB., 1968													
02...	.5	11	--	381	416	278	32	675	7.6	50	--	--	--
APR.,													
01...	.4	13	--	386	417	274	39	660	7.5	60	--	--	--
30...	.9	.0	1.7	15300	--	2900	2730	24200	7.6	40	--	--	--
JULY													
02...	.3	3.1	--	347	390	282	34	600	7.3	60	--	--	--
02282701 MIDDLE R CA BL S-36 NR FT LAUDERDALE FLA (LAT 26 10 22 LONG 080 10 44)													
APR., 1968													
30...	.9	.0	1.7	15300	--	2900	2730	24200	7.6	40	--	--	--
02283200 PLANTATION RD CA AB S-33 NR FT LAUDERDALE FL (LAT 26 08 05 LONG 080 11 42)													
NOV., 1967													
10...	.4	4.9	--	305	348	234	31	550	7.5	60	--	--	--
FEB., 1968													
05...	.4	10	--	344	379	230	27	590	7.6	60	--	--	--
APR.,													
01...	.5	.3	--	378	373	142	0	700	7.4	80	--	--	--
30...	2.2	5.8	35	330	366	130	52	610	7.2	50	13.0	159	159
JULY													
02...	.2	9.4	--	301	337	234	34	520	7.2	50	--	--	--
02283201 PLANTATION RD CA BL S-33 NR FT LAUDERDALE (LAT 26 08 05 LONG 080 11 40)													
APR., 1968													
30...	.7	.2	3.6	3850	--	872	653	6800	7.4	40	--	--	--
02285001 NEW RIVER CANAL NR FT LAUDERDALE BELOW (LAT 26 07 03 LONG 080 08 37.2)													
APR., 1968													
29...	.5	.0	.42	1470	--	418	215	2690	7.8	50	--	--	--
02285399 S NEW R CANAL AB S-9 NR DAVIE (LAT 26 03 40 LONG 080 26 30)													
MAY, 1968													
06...	.5	.1	.02	395	441	247	11	730	7.9	50	6.5	79	79
02285400 SOUTH NEW RIVER CANAL BL S-9 NR DAVIE (LAT 26 03 40 LONG 080 26 30)													
MAY, 1968													
06...	.4	.9	.02	437	491	284	0	777	7.9	60	3.3	39	39
02286100 SOUTH NEW RIVER CANAL AB S-13 NEAR DAVIE FLA (LAT 26 03 57 LONG 080 12 32)													
NOV., 1967													
09...	.4	2.1	--	328	378	264	38	570	7.6	80	--	--	--
FEB., 1968													
01...	.3	3.9	--	371	422	286	38	640	8.0	90	--	--	--
MAR.,													
29...	.4	4.7	--	392	423	273	20	680	7.8	60	--	--	--
APR.,													
29...	.3	1.7	.13	366	411	248	5	640	7.7	70	2.6	32	32
JULY													
03...	.2	4.9	--	327	333	256	30	550	8.0	100	--	--	--
02286101 S NEW RIVER CANAL BL S-13 NEAR DAVIE FLA (LAT 26 03 57 LONG 080 12 32)													
APR., 1968													
09...	.7	.0	.27	8510	--	1650	1450	14000	7.6	50	--	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POT- AS- SIUM (K)	BICAR- BONATE (HC03)	SULFATE (SO4)	CHLO- RIDE (CL)
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02286147 LAKE GEORGE NR DANIA FLA (LAT 26 03 43 LONG 080 12 02)												
FEB., 1968												
15...	--	13	4.9	--	80	20	.83	154	3.5	222	48	278
15...	--	--	--	--	--	--	--	--	--	--	53	--
16...	--	16	--	--	--	--	--	--	--	--	48	--
02286200 SIAKE CR CA AT NW 67TH AVE NR HIALEAH FLA (LAT 25 57 50 LONG 080 18 40)												
MAR., 1968												
05...	--	22	5.8	.07	87	10	--	41	.9	292	8.9	66
MAY												
06...	154	24	5.7	.04	81	10	.88	47	.9	286	.3	72
JULY												
03...	773	25	7.3	.05	85	7.9	--	25	1.6	276	18	42
SEP.												
03...	280	26	9.2	.02	79	9.3	--	40	.7	268	.8	65
02286300 SIAKE CREEK CANAL AB S-29 AT N MIAMI BCH FLA (LAT 25 55 41 LONG 080 09 22)												
NOV., 1967												
02...	--	27	6.9	.02	210	437	--	3700	146	228	915	6550
MAY, 1968												
02...	11	27	3.2	.02	67	2.2	.73	48	1.4	240	8.2	78
02286301 SIAKE CR CNL BL S-29 AT N MIAMI BCH FLA (LAT 25 55 42 LONG 080 09 02)												
NOV., 1967												
02...	--	26	7.0	.01	249	592	--	5030	204	216	1190	8750
02286340 BISCAYNE CANAL AB S-28 NR MIAMI (LAT 25 52 24 LONG 080 10 55)												
MAY, 1968												
02...	.00	29	1.8	.10	70	11	.68	62	2.8	210	24	108
02286380 LITTLE R CA AT S-27 AT MIAMI (LAT 25 56 00 LONG 080 25 50)												
MAY, 1968												
06...	.00	27	4.6	.02	66	11	.84	57	2.4	226	10	98
02286699 MIAMI CANAL AB S-B NR LAKE HARBOR AUX (LAT 26 19 44 LONG 080 46 19)												
MAY, 1968												
06...	.00	26	5.6	.05	45	19	1.2	65	3.5	292	47	108
02286700 MIAMI CANAL BL S-B NR LAKE HARBOR (LAT 26 19 45 LONG 080 46 20)												
MAY, 1968												
06...	.00	26	4.2	.03	90	16	1.0	49	2.4	308	30	76
02288000 MIAMI CANAL LATERAL AT PENSUCCO NR MIAMI (LAT 25 55 00 LONG 080 22 00)												
MAY, 1968												
07...	--	24	6.6	.05	75	11	.92	45	1.3	282	.0	67
02288200 MIAMI CANAL AT PALMETTO BYPASS NR HIALEAH (LAT 25 51 11 LONG 080 19 22)												
MAY, 1968												
07...	126	24	6.6	.04	75	11	.92	45	1.3	284	.0	70
02288600 MIAMI CANAL AT N W 36TH ST MIAMI (LAT 25 48 29 LONG 080 15 44)												
MAY, 1968												
06...	.00	26	5.5	.02	76	11	.88	44	1.0	280	.0	73
02288800 TAMIAHI CA BTLS MONROE TO CARNESTOWN BR 84 (LAT 25 53 10 LONG 081 15 30)												
MAY, 1968												
13...	40	26	4.6	.01	81	6.1	.11	34	1.6	248	10	59
JUNE												
26...	--	28	5.2	.04	47	2.5	--	5.1	.5	156	.4	9.0
JULY												
12...	--	29	3.0	.03	41	2.2	--	4.8	.4	137	3.2	7.5
02288802 TAMIAHI CANAL AT BR 77 NR CARNESTOWN (LAT 25 53 10 LONG 081 15 30)												
MAY, 1968												
13...	4.6	27	1.0	.04	205	176	1.1	1450	47	202	448	2650
02288804 TAMIAHI CANAL AT BRIDGE 86 NR OCHOPEE (LAT 25 52 30 LONG 081 13 30)												
OCT., 1967												
30...	--	25	2.0	.02	77	3.1	--	12	.3	240	.0	23
JAN., 1968												
26...	--	14	1.9	.02	83	3.0	--	9.5	.3	263	.4	15
JULY												
16...	--	40	2.1	.03	51	1.7	--	4.2	.2	160	2.8	8.0
SEP.												
16...	--	27	2.9	.04	63	2.7	--	7.5	.4	212	.0	13
02288810 ROCK PIT NR OCHOPEE (LAT 25 53 15 LONG 081 14 15)												
OCT., 1967												
30...	--	27	--	.01	--	--	--	--	--	220	.8	14
02288900 TAM CA DLS 40 MI BEND MONROE NR MIAMI BR 105 (LAT 25 51 05 LONG 080 58 50)												
MAY, 1968												
13...	.00	26	3.2	.02	74	3.4	.29	17	3.1	236	4.9	26

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

295

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- MIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SOL OF TUEENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02286147 LAKE GEORGE NR DAVIA FLA (LAT 26 03 43 LONG 080 12 02)												
FEB., 1968												
15...	.1	3.6	3.1	705	726	293	101	1290	7.7	50	--	--
15...	--	.9	--	--	--	--	--	1380	--	--	--	--
16...	--	2.1	--	--	--	--	--	1310	--	--	--	--
02286200 SNAKE CR CA AT NW 67TH AVE NR HIALEAH FLA (LAT 25 57 50 LONG 080 18 40)												
MAR., 1968												
05...	.3	2.7	--	367	397	258	18	650	8.0	50	--	--
MAY												
06...	.3	1.3	.02	360	403	244	9	650	7.8	40	3.8	45
JULY												
03...	.3	2.2	--	325	352	244	18	570	7.4	70	--	--
SEP.												
03...	.5	.1	--	337	375	236	16	530	7.6	50	--	--
02286300 SNAKE CREEK CANAL AB S-29 AT N MIAMI BCH FLA (LAT 25 55 41 LONG 080 09 22)												
NOV., 1967												
02...	.3	21	--	12100	--	2370	2180	19800	7.5	50	--	--
MAY, 1968												
02...	.4	3.3	.57	338	375	206	9	600	7.6	35	7.2	89
02286301 SNAKE CR CNL BL S-29 AT N MIAMI BCH FLA (LAT 25 55 42 LONG 080 09 02)												
NOV., 1967												
07...	.9	6.3	--	16100	--	3050	2870	25300	7.6	50	--	--
02286340 BISCAYNE CANAL AB S-28 NR MIAMI (LAT 25 52 24 LONG 080 10 55)												
MAY, 1968												
07...	.3	1.3	.17	385	448	220	48	735	7.9	30	9.3	118
02286380 LITTLE R CA AT S-27 AT MIAMI (LAT 25 56 00 LONG 080 25 50)												
MAY, 1968												
06...	.4	5.3	.18	367	404	210	25	650	7.6	40	6.2	77
02286699 MIAMI CANAL AB S-8 NR LAKE HARBOR AUX (LAT 26 19 44 LONG 080 46 19)												
MAY, 1968												
06...	.6	1.7	.03	481	535	292	52	832	7.9	50	6.7	82
02286700 MIAMI CANAL BL S-3 NR LAKE HARBOR (LAT 26 19 45 LONG 080 46 20)												
MAY, 1968												
06...	.6	1.4	.03	423	486	292	39	740	7.9	60	5.9	72
02288000 MIAMI CANAL LATERAL AT PENSUCCO NR MIAMI (LAT 25 55 00 LONG 080 22 00)												
MAY, 1968												
07...	.4	1.3	.07	348	341	233	2	660	7.7	50	2.3	27
02288200 MIAMI CANAL AT PALMETTO BYPASS NR HIALEAH (LAT 25 51 11 LONG 080 19 22)												
MAY, 1968												
07...	.3	1.1	.01	351	391	233	0	630	7.7	40	6.1	72
02288600 MIAMI CANAL AT N W 36TH ST MIAMI (LAT 25 49 29 LONG 080 15 44)												
MAY, 1968												
06...	.3	1.1	.03	351	380	236	6	610	7.7	40	6.8	83
02288800 TAMIAHI CA OTLS MONROE TJ CARNESTOWN BR 84 (LAT 25 53 10 LONG 081 15 30)												
MAY, 1968												
13...	.2	.0	--	319	337	227	24	590	7.7	20	2.8	34
JUNE												
26...	.1	.9	--	148	164	128	0	269	7.3	60	--	--
JULY												
12...	.2	.5	--	130	142	112	0	235	7.2	45	--	--
02288802 TAMIAHI CANAL AT BR 77 NR CARNESTOWN (LAT 25 53 10 LONG 081 15 30)												
MAY, 1968												
13...	.3	.3	.02	5080	--	1240	1070	9200	7.7	70	5.1	63
02288804 TAMIAHI CANAL AT BRIDGE 96 NR OCHWEE (LAT 25 52 30 LONG 081 13 30)												
OCT., 1967												
30...	.2	.1	--	237	245	205	8	432	7.5	40	--	--
JAN., 1968												
26...	.2	1.2	--	245	256	220	4	447	7.8	30	--	--
JULY												
16...	.2	.0	--	149	165	134	3	270	7.7	50	--	--
SEP.												
16...	.2	.5	--	200	218	133	10	368	7.9	2	--	--
02288810 ROCK PIT NR OCHWEE (LAT 25 53 15 LONG 081 14 15)												
OCT., 1967												
30...	--	3.3	--	--	--	216	36	433	8.0	5	--	--
02288900 TAM CA DLS 40 MI BEND MONROE NR MIAMI BR 105 (LAT 25 51 05 LONG 080 58 50)												
MAY, 1968												
13...	.2	9.0	.49	257	265	199	5	469	7.5	15	2.5	30

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED ALUM- INUM (AL)	DIS- SOLVED IRON (FE)	DISS- OLVED MAN- GANESE (MNI)	TOTAL CHRO- MIUM (CR)	COPPER (CU)	LEAD (PB)	ZINC (ZN)	ARSENIC (AS)	
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02288906 TAMAMI CANAL AT 40 MI BEVO NR MIAMI (LAT 25 45 50 LONG 080 49 50)												
MAY , 1963 13....	.10	25	4.7	.01	57	3.4	.40	15	.8	184	.0	25
02289031 TAMAMI CANAL BELOW S-128 NR MIAMI FLA (LAT 25 45 40 LONG 080 46 05)												
OCT., 1967 31....	--	26	5.6	.01	59	3.2	--	13	1.2	186	.8	20
JAN., 1968 20....	.00	18	3.4	.05	61	3.4	--	14	.8	191	.8	23
MAR., 12....	.00	24	1.6	.02	62	3.2	--	14	.6	200	.8	24
02289075 TAMAMI CANAL AT L-29-1 NR CORPENTOWN FLA (LAT 25 45 39 LONG 080 33 38)												
OCT., 1967 31....	--	26	6.6	.04	46	3.4	--	20	.6	146	.4	32
JAN., 1968 26....	.00	15	4.6	.02	54	5.2	--	31	.8	173	.8	52
02289500 TAMAMI CANAL CUNAL GARLES (LAT 25 45 43 LONG 080 19 42)												
MAY , 1968 03....	30	26	4.0	.02	80	6.2	.64	29	.5	260	.2	56
02290600 SNAPPER CR CA NR CUNAL GARLES (LAT 25 45 40 LONG 080 23 05)												
MAY , 1968 03....	10	26	4.0	.02	80	6.2	.60	29	.6	260	.0	52
02290620 SNAPPER CR CA AT MILLER NR NR S MIAMI (LAT 25 42 56 LONG 080 22 59)												
MAY , 1968 03....	50	26	5.0	.04	79	5.2	.58	23	.8	257	2.4	39
02290700 SNAPPER CR CA AT S-22 NR SD MIAMI (LAT 25 40 11 LONG 080 17 03)												
MAY , 1968 01....	.00	26	3.3	.03	74	5.0	.56	23	1.2	220	6.4	46
02290828 EVERGLADES P-36 NEAR HOMESTEAD FLA (LAT 25 32 30 LONG 080 47 00)												
MAR., 1968 08....	--	19	2.6	--	.10	.03	.00	.00	.01	.02	.00	
MAY 30....	--	31	5.1	--	.03	.01	.00	.00	.00	.00	.00	
AUG. 06....	--	30	4.8	--	.49	.00	.00	.00	.01	.01	--	
02290830 EVERGLADES P-35 NEAR HOMESTEAD FLA (LAT 25 27 20 LONG 080 52 30)												
NOV., 1967 08....	--	22	3.5	--	.23	--	.00	.00	.00	.01	.00	
DEC. 12....	--	23	1.7	--	--	--	.00	.01	.02	.01	.00	
MAR., 1968 04....	--	20	5.3	--	.06	--	.00	.05	.00	.05	.00	
APR. 18....	--	28	8.0	--	.03	.09	.01	.01	.00	.03	.00	
JULY 02....	--	27	4.6	--	.05	.01	.01	.00	.00	.00	.00	
02290841 ROOKERY BRANCH NEAR HOMESTEAD FLA (LAT 25 26 48 LONG 080 53 30)												
NOV., 1967 08....	--	21	3.4	--	.41	--	.00	.00	.00	.01	.00	
DEC. 12....	--	23	2.6	--	--	--	.00	.01	.01	.05	.01	
APR., 1968 10....	--	26	6.8	--	.05	--	.02	.00	.00	.01	.01	
JULY 02....	--	27	5.2	--	.03	.01	.00	.00	.00	.00	.00	
02290842 TARPON BAY AT TUSSOCK KEY NEAR HOMESTEAD FLA (LAT 25 25 30 LONG 080 57 30)												
NOV., 1967 08....	--	22	4.1	--	.67	--	.00	.00	.00	.01	.00	
DEC. 12....	--	23	3.2	--	--	--	.00	.01	.01	.00	.00	
APR., 1968 10....	--	--	4.7	--	.04	--	.02	2.0	.00	.04	.01	
JULY 02....	--	27	4.9	--	.05	.01	.00	.00	.00	.00	.01	

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

297

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 140 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02288906 TAMIAHI CANAL AT 40 MI HEND NR MIAMI (LAT 25 45 50 LONG 080 49 50)												
MAY, 1968 13....	.3	1.3	--	199	233	156	5	362	8.0	10	3.9	43
02289031 TAMIAHI CANAL BELOW S-128 NR MIAMI FLA (LAT 25 45 40 LONG 080 46 05)												
OCT., 1967 31....	.3	.5	--	196	222	160	7	351	7.4	20	--	--
JAN., 1968 26....	.3	2.0	--	203	222	166	9	375	7.6	20	--	--
MAR. 12....	.3	.4	--	206	219	168	4	379	7.7	20	--	--
02289075 TAMIAHI CANAL AT L-29-1 NR CORPERSOWN FLA (LAT 25 45 39 LONG 080 33 38)												
OCT., 1967 31....	.2	1.7	--	183	206	129	9	170	7.4	40	--	--
JAN., 1968 26....	.3	1.2	--	235	265	156	14	441	7.4	40	--	--
02289500 TAMIAHI CANAL NR CORAL GABLES (LAT 25 45 43 LONG 080 19 42)												
MAY, 1968 03....	.2	1.4	.00	306	338	226	13	540	7.8	35	3.8	46
02290600 SNAPPER CR CANAL NR CORAL GABLES (LAT 25 45 40 LONG 080 23 05)												
MAY, 1968 03....	.3	2.4	.00	303	341	226	13	540	7.7	35	2.7	33
02290620 SNAPPER CR CANAL AT MILLER DR NR S MIAMI (LAT 25 42 56 LONG 080 22 59)												
MAY, 1968 03....	.3	6.2	1.1	290	373	219	8	500	7.3	35	2.7	33
02290700 SNAPPER CR CANAL AT S-22 NR SD MIAMI (LAT 25 40 11 LONG 080 17 03)												
MAY, 1968 01....	.3	5.7	2.4	277	310	208	28	484	7.4	30	1.7	21
DATE	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	ALKALINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	TUR- BID- ITY	COLI- FORM (COL- ONIES PER 100 ML)		
02290828 EVERGLADES P-36 NEAR HOMESTEAD FLA (LAT 25 32 30 LONG 080 47 00)												
MAR., 1968 08....	290	334	207	0	207	505	7.7	50	24	--		
MAY 30....	134	156	102	0	102	256	7.1	40	10	--		
AUG. 06....	239	283	137	9	128	458	6.9	50	12	--		
02290830 EVERGLADES P-35 NEAR HOMESTEAD FLA (LAT 25 27 20 LONG 080 52 30)												
NOV., 1967 08....	221	243	153	12	141	405	7.3	50	21	--		
DEC. 12....	208	242	143	10	133	395	7.4	40	4.0	--		
MAR., 1968 04....	1840	--	550	281	269	3380	7.5	60	23	--		
APR. 18....	9980	--	2130	1870	258	17000	7.1	50	1.6	--		
JULY 02....	140	161	105	6	98	269	7.0	50	9.7	--		
02290841 ROOKERY BRANCH NEAR HOMESTEAD FLA (LAT 25 26 48 LONG 080 53 30)												
NOV., 1967 08....	276	302	162	21	141	525	6.4	50	5.0	--		
DEC. 12....	282	326	170	17	153	540	7.3	40	4.0	--		
APR., 1968 10....	7580	--	1630	1370	265	12600	7.5	60	9.7	--		
JULY 02....	165	185	112	6	105	315	7.0	45	4.2	--		
02290842 TARPON BAY AT TUSOCK KEY NEAR HOMESTEAD FLA (LAT 25 25 30 LONG 080 57 30)												
NOV., 1967 08....	903	953	294	146	148	1700	7.0	40	8.0	--		
DEC. 12....	2050	--	508	342	166	3850	7.5	50	3.8	--		
APR., 1968 10....	15300	--	3060	2790	267	24000	7.5	60	5.2	--		
JULY 02....	338	374	144	32	112	650	7.0	50	3.4	--		

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	LITHIUM (LI)	AMMONIA (NH4)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED											
02290796 LITTLE MADEIRA BAY NR KEY LARGO FLA (LAT 25 10 30 LONG 080 38 00)											
MAR., 1968											
08....	332	1000	5.3	8450	335	.12	.00	180	0	2080	
02290798 TAYLOR RIVER NR FLORIDA CITY FLA (LAT 25 13 30 LONG 080 38 30)											
MAR., 1968											
08....	154	268	2.2	2370	92	.00	.00	236	0	550	
02290800 TAYLOR SLOUGH NEAR HOMESTEAD, FLA. (LAT 25 24 05 LONG 080 36 25)											
OCT., 1967											
16....	52	2.7	--	9.5	.2	--	--	164	0	1.6	
JAN., 1968											
15....	70	3.0	--	8.5	.2	--	--	224	0	.8	
MAR., 1968											
27....	59	3.0	--	8.9	.3	--	--	192	0	.8	
JUNE 1968											
28....	46	1.9	--	5.6	.4	--	--	148	0	.0	
OCT., 1967											
16....	--	--	--	--	--	--	--	--	--	--	
02290810 EVERGLADES P-37 NR HOMESTEAD FLA (LAT 25 17 30 LONG 080 40 30)											
NOV., 1967											
09....	49	3.5	.51	16	.6	.00	.00	156	0	.0	
JAN., 1968											
25....	74	5.0	.81	41	.6	.00	--	228	0	2.0	
AUG., 1968											
09....	25	3.0	--	16	2.0	.00	--	82	--	.0	
02290812 ALLIGATOR HOLE AT COTTONMOUTH CP NR HOMESTD FLA (LAT 25 38 10 LONG 080 44 20)											
OCT., 1967											
11....	37	3.7	.28	18	.6	.00	.00	128	0	.4	
NOV., 1967											
04....	44	5.1	.37	19	.6	.00	.20	158	0	.0	
05....	41	--	--	--	--	--	.13	--	--	--	
06....	42	--	--	--	--	--	.13	--	--	--	
JAN., 1968											
04....	50	6.6	.46	24	1.1	.00	.10	180	0	.0	
MAR., 1968											
13....	56	7.9	.60	28	1.3	.00	.10	192	0	3.2	
MAY 1968											
02....	65	10	.56	48	6.4	.00	--	164	--	.8	
14....	48	5.4	.40	19	.8	.00	--	166	--	.0	
DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SiO2)	DIS- SOLVED ALUM- INIUM (AL)	DIS- SOLVED IRON (FE)	DISS- OLVED MAN- GANESE (MN)	TOTAL CHRO- MIUM (CR)	COPPER (CU)	LEAD (PB)	ZINC (ZN)	ARSENIC (AS)
02290812 ALLIGATOR HOLE AT COTTONMOUTH CP NR HOMESTD FLA (LAT 25 38 10 LONG 080 44 20)											
MAY, 1968											
14....	--	31	3.9	--	.02	.02	.00	.00	.00	.01	.00
02290813 OPEN GLADES NR COTTONMOUTH CP NR HOMESTD FLA (LAT 25 38 00 LONG 080 44 00)											
NOV., 1967											
04....	--	--	--	--	--	--	--	--	--	--	--
04....	--	--	1.9	--	--	--	.00	.00	.00	.01	.00
05....	--	--	--	--	--	--	--	--	--	--	--
DEC., 1967											
05....	--	21	1.7	--	--	--	.00	.01	.02	.01	.00
JAN., 1968											
04....	--	22	.8	--	--	--	.00	.01	.01	.01	.00
MAR., 1968											
13....	--	--	.0	--	1.2	--	.00	.04	.01	.65	.00
02290815 EVERGLADES P-33 NEAR HOMESTEAD FLA (LAT 25 36 30 LONG 080 41 30)											
OCT., 1967											
11....	--	--	3.6	--	--	--	.00	.00	.01	.05	.00
NOV., 1967											
10....	--	19	2.6	--	.58	--	.00	.00	.00	.01	.00
JAN., 1968											
25....	--	20	3.0	--	.08	--	.00	.01	.01	.04	.00
MAR., 1968											
06....	--	19	1.7	--	.80	--	.00	.00	.00	.04	.00
MAY 1968											
30....	--	31	8.1	--	.02	.01	.01	.00	.00	.01	.00
AUG., 1968											
06....	--	30	6.0	--	.32	.00	.00	.00	.01	.01	--
02290820 EVERGLADES P-38 NR HOMESTEAD (LAT 25 22 30 LONG 080 49 00)											
NOV., 1967											
09....	--	22	2.2	--	.10	--	.00	.00	.00	.00	.00
JAN., 1968											
25....	--	21	1.5	--	.00	--	.00	--	.02	.01	.01
AUG., 1968											
09....	--	29	3.9	--	.10	.00	.00	.00	.01	.01	--



## ANALYSIS OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

299

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	CHLO- RIDE (CL)	FLUO- RIDE (F)	BROMIDE (BR)	IODIDE (I)	NITRITE (NO2)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	BORON (B)	TANNIN AND LIGNIN
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED										
02290796 LITTLE MADEIRA BAY NR KEY LARGO FLA (LAT 25 10 30 LONG 080 38 00)										
MAR., 1968 08... 14900		1.1	48	.00	.01	8.0	.00	--	3.7	--
02290798 TAYLOR RIVER NR FLORIDA CITY FLA (LAT 25 13 30 LONG 080 38 30)										
MAR., 1968 08... 4250		.4	14	.00	.01	2.3	.04	--	.75	.5
02290800 TAYLOR SLOUGH NEAR HOMESTEAD, FLA. (LAT 25 24 05 LONG 080 36 25)										
OCT., 1967 16... 16		.6	--	--	--	.6	--	--	--	--
JAN., 1968 15... 15		.2	--	--	--	.2	--	--	--	--
MAR. 27... 18		.2	--	--	--	2.4	--	--	--	--
JUNE 28... 9.0		.2	--	--	--	.8	--	--	--	--
OCT., 1967 16... --		--	--	--	--	--	--	--	--	--
02290810 EVERGLADES P-37 NR HOMESTEAD FLA (LAT 25 17 30 LONG 080 40 30)										
NOV., 1967 09... 29		.1	.08	.00	.01	1.4	.00	--	.04	.2
JAN., 1968 25... 74		.2	.00	.00	.00	.4	.00	--	.04	--
AUG. 09... 30		.1	--	--	--	.4	--	--	--	--
02290812 ALLIGATOR HOLE AT COTTONMOUTH CP NR HOMESTO FLA (LAT 25 38 10 LONG 080 44 20)										
OCT., 1967 11... 27		.2	.00	.00	.00	.3	.00	--	.06	.5
NOV. 06... 27		.2	.00	.00	.03	.5	.00	--	.07	.5
05... --		--	--	--	.02	2.3	.01	--	--	--
06... --		--	--	--	.02	1.3	.03	--	--	--
JAN., 1968 04... 37		.3	.00	.00	.02	2.1	.00	--	.06	.9
MAR. 13... 44		.2	.00	.00	.01	.8	.01	--	.06	1.1
MAY 02... 81		.4	.00	.00	.16	60	--	.93	.06	.0
14... 31		.3	.00	.00	.01	2.3	--	.21	.07	.1
DIS- SOLVED OIS- SOLVED NON- CAR- ALKA- SPECI- COLI- SOLIDS SOLIDS SONATE LINITY COND- FORM (SUM OF (RESI- HARD- CAR- AS UCTANCE (COL- CONSTI- DUE AT HARD- NESS CAC03 (MICRO- UNIES TUENTS) 180 C) (CA,MC) NESS CAC03 MHOS) PH COLOR TUR- DATE 02290812 ALLIGATOR HOLE AT COTTONMOUTH CP NR HOMESTO FLA (LAT 25 38 10 LONG 080 44 20)										
MAY , 1968 14... 188		227	138	3	135	355	7.2	35	10	--
02290813 OPEN GLADES NR COTTONMOUTH CP NR HOMESTO FLA (LAT 25 38 00 LONG 080 44 00)										
NOV., 1967 04... --		--	--	--	--	--	--	--	5.0	--
04... 171		197	126	3	123	312	7.6	10	4.9	--
05... --		--	--	--	--	--	--	--	4.0	--
DEC. 09... 207		235	151	8	143	388	7.3	30	4.5	--
JAN., 1968 04... 211		252	153	4	149	421	7.5	40	3.8	--
MAR. 13... 239		293	172	11	161	435	7.7	50	20	--
02290815 EVERGLADES P-33 NEAR HOMESTEAD FLA (LAT 25 36 30 LONG 080 41 30)										
OCT., 1967 11... 156		176	113	6	107	282	7.4	10	8.0	--
NOV. 10... 234		254	184	13	171	440	7.4	30	21	--
JAN., 1968 25... 254		288	192	8	184	472	8.0	50	22	--
MAR. 08... 270		300	192	0	203	459	7.7	45	22	--
MAY 30... 151		170	116	3	113	275	7.4	0	10	--
AUG. 06... 267		310	154	6	148	510	7.0	50	12	--
02290820 EVERGLADES P-38 NR HOMESTEAD (LAT 25 22 30 LONG 080 49 00)										
NOV., 1967 09... 226		240	158	20	138	440	7.5	40	6.0	--
JAN., 1968 25... 317		344	186	60	126	625	7.7	15	3.0	--
AUG. 09... 114		140	86	14	72	228	7.0	15	13	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	LITHIUM (LI)	AMMONIA (NH4)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED											
02290812	ALLIGATOR HOLE AT COTTONMOUTH CP NR HOMESTD FLA (LAT 25 38 10 LONG 080 44 20)										
MAY, 1968	14...	46	5.3	.40	19	.8	.00	--	164	-- .0	
02290813 OPEN GLADES NR COTTONMOUTH CP NR HOMESTD FLA (LAT 25 38 00 LONG 080 44 00)											
NOV., 1967	04...	43	--	--	--	--	.13	--	--	--	
04...	42	4.9	.34	19	.6	.00	.10	150	0	.4	
04...	42	--	--	--	--	--	.14	--	--	--	
DEC.	05...	50	6.2	.42	24	.8	.00	.20	174	0 .0	
JAN., 1968	04...	50	6.7	.44	24	1.1	.00	.10	182	0 .0	
MAR.	13...	56	7.6	.59	29	1.3	.00	.10	196	0 .8	
02290815 EVERGLADES P-33 NEAR HOMESTEAD FLA (LAT 25 36 30 LONG 080 41 30)											
OCT., 1967	11...	36	5.5	.40	18	.8	.00	.10	130	0 .0	
NOV.	10...	62	6.9	.46	22	.8	.00	.10	208	0 .0	
JAN., 1968	25...	64	7.8	.60	25	1.1	.00	--	224	0 .4	
MAR.	08...	65	7.2	--	28	1.4	.00	.00	248	0 .0	
MAY	30...	40	3.8	.34	11	.6	.00	--	138	-- .0	
AUG.	06...	45	10	--	46	1.9	.00	--	180	-- 2.4	
02290820 EVERGLADES P-38 NR HOMESTEAD (LAT 25 22 30 LONG 080 49 00)											
NOV., 1967	09...	57	3.8	.46	25	.4	.00	.00	168	0 .0	
JAN., 1968	25...	64	6.2	.69	49	.8	.00	.03	154	0 .0	
AUG.	09...	31	2.2	--	12	.6	.00	--	88	-- .0	
DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED ALUM- INIUM (AL)	DIS- SOLVED IRON (FE)	DISS- OLVED MAN- GANESE (MNI)	TOTAL CHRO- MIUM (CR)	CUPPER (CU)	LEAD (PBI)	ZINC (ZN)	ARSENIC (AS)
02290844 TARPON BAY AT MID-BAY PASS NR HOMESTEAD FLA (LAT 25 25 04 LONG 080 59 22)											
NOV., 1967	08...	--	3.5	--	--	--	.00	.00	.00	.30	.00
DEC.	12...	--	23	3.7	--	--	.00	.02	.01	.00	.01
JULY, 1968	02...	--	27	4.4	--	.04	.01	.08	.00	.04	.01
02290850 SHARK RIVER NEAR HOMESTEAD FLA (LAT 25 20 07 LONG 081 06 44.1)											
NOV., 1967	08...	--	22	3.9	--	--	.00	.00	.01	.20	.00
APR., 1968	10...	--	--	3.2	--	.03	.05	.04	.00	.00	.01
JULY	02...	--	28	4.5	--	.05	.01	.00	.00	.00	.01
02290854 SHARK RIVER CUTOFF NEAR HOMESTEAD FLA (LAT 25 26 30 LONG 080 59 10)											
NOV., 1967	08...	--	23	1.9	--	.17	.00	.03	.00	.28	.01
DEC.	12...	--	23	2.9	--	--	.00	.04	.00	.00	.00
JULY, 1968	02...	--	28	5.7	--	.04	.01	.01	.00	.00	.00
02290858 SHARK R AT MARKER 68 NEAR HOMESTEAD FLA (LAT 25 20 07 LONG 081 06 44)											
NOV., 1967	08...	--	22	2.8	--	.15	.01	.02	.00	.01	.01
MAR., 1968	04...	--	22	1.1	--	.04	.06	.35	.00	.16	.03
APR.	10...	--	27	1.5	--	.01	.06	.08	.00	.02	.00
JULY	02...	--	28	2.8	--	.03	.01	.02	.04	.00	.00

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

301

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	CHLORIDE (CL)	FLUORIDE (F)	BROMIDE (BR)	IODIDE (I)	NITRITE (NO2)	NITRATE (NO3)	ORTHOPHOSPHATE (PO4)	PHOSPHATE (PO4)	BORON (B)	TANNIN AND LIGNIN
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED										
MAY, 1968	02290812	ALLIGATOR HOLE AT COTTONMOUTH CP	NR	HOMESTEAD FLA	(LAT 25 38 10 LONG 080 44 20)					
14...	31	.2	.00	.00	.01	.6	—	.08	.08	.1
NOV., 1967	02290813	OPEN GLADES NR COTTONMOUTH CP	NR	HOMESTEAD FLA	(LAT 25 38 00 LONG 080 44 00)					
04...	—	—	—	—	.02	1.9	.01	—	—	—
04...	27	.2	.00	.00	.01	.5	.00	—	.03	.5
05...	—	—	—	—	.01	1.0	.02	—	—	—
DEC.	05...	38	.2	1.6	.00	.00	1.9	.01	—	.03
JAN., 1968	04...	38	.3	.00	.00	.00	2.1	.01	—	.09
MAR.	13...	45	.1	.00	.00	.01	.8	.01	—	.06
										1.3
OCT., 1967	02290815	EVERGLADES P-33 NEAR HOMESTEAD FLA	(LAT 25 36 30 LONG 080 41 30)							
11...	27	.2	.00	.00	.00	.3	.00	—	.05	.4
NOV.	10...	35	.3	.00	.00	.00	1.1	.00	—	.05
JAN., 1968	25...	42	.3	.00	.00	.00	.6	.00	—	.07
MAR.	08...	43	.2	.00	.00	.00	.8	.00	—	.06
MAY	30...	18	.2	.00	.00	.01	.6	—	.08	.11
AUG.	06...	66	.3	—	—	—	.5	—	—	—
NOV., 1967	02290820	EVERGLADES P-38 NR HOMESTEAD	(LAT 25 22 30 LONG 080 49 00)							
09...	52	.2	1.4	.00	.02	1.5	.00	—	.00	.3
JAN., 1968	25...	119	.2	.00	.00	.00	.1	.00	—	.02
AUG.	09...	21	.1	—	—	—	.0	—	—	—
DATE	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARD- NESS (CA, MG)	NON-CARBONATE HARD- NESS	ALKALINITY AS CA CO3	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	TURBIDITY	COLIFORM (COLONIES PER 100 ML)
NOV., 1967	02290844	TARPON BAY AT MID-BAY PASS	NR	HOMESTEAD FLA	(LAT 25 25 04 LONG 080 59 22)					
08...	1030	1100	296	150	146	1900	7.5	10	21	—
DEC.	12...	5270	—	1080	901	179	9300	7.5	50	4.0
JULY, 1968	02...	551	602	180	65	115	1060	7.0	60	2.6
NOV., 1967	02290850	SHARK RIVER NEAR HOMESTEAD FLA	(LAT 25 20 07 LONG 081 06 44.1)							
08...	2870	—	632	465	167	5200	7.4	10	21	—
APR., 1968	10...	29900	—	5640	5410	226	44000	7.5	50	5.2
JULY	02...	1390	—	343	217	126	2620	7.0	70	5.3
NOV., 1967	02290854	SHARK RIVER CUTOFF NEAR HOMESTEAD FLA	(LAT 25 26 30 LONG 080 59 10)							
08...	17800	—	3210	3030	180	28000	7.3	40	6.0	—
DEC.	12...	24700	—	4510	4340	172	38000	7.6	40	.7
JULY, 1968	02...	4590	—	940	794	146	8200	7.0	75	3.4
NOV., 1967	02290858	SHARK R AT MARKER 68 NEAR HOMESTEAD FLA	(LAT 25 20 07 LONG 081 06 44)							
08...	16300	—	2960	2790	172	26500	7.6	20	23	—
MAR., 1968	04...	32300	—	5900	5720	179	47400	7.8	30	4.3
APR.	10...	36400	—	6600	6440	163	53000	7.5	20	3.4
JULY	02...	17600	—	3300	3140	161	28200	7.0	40	2.1

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	LITHIUM (LI)	AMMONIA (NH4)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)	
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED											
02290828 EVERGLADES P-36 NEAR HOMESTEAD FLA (LAT 25 32 30 LONG 080 47 00)											
MAR., 1968											
08...	71		7.2	.57	31	1.2	.00	.40	252	0 .8	
MAY	36		3.0	.20	11	.4	.00	--	124	-- .0	
AUG.											
06...	45		5.9	--	40	1.3	.00	--	156	-- .0	
02290830 EVERGLADES P-35 NEAR HOMESTEAD FLA (LAT 25 27 20 LONG 080 52 30)											
NOV., 1967											
08...	54		4.4	.31	27	.9	.00	.00	172	0 .0	
DEC.											
12...	49		4.7	.32	27	1.2	.00	.10	162	0 .0	
MAR., 1968											
04...	134		52	1.1	464	14	.00	.90	328	0 76	
APR.											
18...	278		348	2.0	2950	112	.03	--	314	-- 720	
JULY											
02...	37		3.0	.20	13	.5	.00	--	120	-- .0	
02290841 ROOKERY BRANCH NEAR HOMESTEAD FLA (LAT 25 26 48 LONG 080 53 30)											
NOV., 1967											
08...	54		6.6	.31	45	1.4	.00	.00	172	0 .4	
DEC.											
12...	57		6.8	.36	44	1.6	.00	.10	186	0 .0	
APR., 1968											
10...	234		254	2.6	2180	74	.02	.03	323	0 514	
JULY											
02...	38		3.9	.24	19	.9	.00	--	128	-- .0	
02290842 TARPON BAY AT TUSSOCK KEY NEAR HOMESTEAD FLA (LAT 25 25 30 LONG 080 57 30)											
NOV., 1967											
08...	70		29	.48	232	6.6	.00	.10	180	0 47	
DEC.											
12...	86		71	.88	575	22	.00	.00	202	0 136	
APR., 1968											
10...	300		560	3.8	4580	161	.06	.06	326	0 1160	
JULY											
02...	41		10	.20	71	3.0	.00	--	136	-- 13	
DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED ALUM- INIUM (AL)	DIS- SOLVED IRON (FE)	DISS- OLVED MAN- GANESE (MN)	TOTAL CHRO- MIUM (CR)	COPPER (CU)	LEAD (PB)	ZINC (ZN)	ARSENIC (AS)
02290796 LITTLE MADEIRA BAY NR KEY LARGO FLA (LAT 25 10 30 LONG 080 38 00)											
MAR., 1968											
08...	--	--	.3	.8	.04	.03	.02	.15	.00	1.5	.00
02290798 TAYLOR RIVER NR FLORIDA CITY FLA (LAT 25 13 30 LONG 080 38 30)											
MAR., 1968											
08...	--	--	.3	.4	.10	.01	--	.01	.00	.02	.01
02290800 TAYLOR SLOUGH NEAR HOMESTEAD, FLA. (LAT 25 24 05 LONG 080 36 25)											
OCT., 1967											
16...	--	26	4.8	--	.02	--	--	--	--	--	--
JAN., 1968											
15...	.00	16	4.2	--	.01	--	--	--	--	--	--
MAR.											
27...	.00	24	3.2	--	.02	--	--	--	--	--	--
JUNE											
28...	226	27	4.9	--	.00	--	--	--	--	--	--
OCT., 1967											
16...	--	--	--	--	--	--	--	--	--	--	--
02290810 EVERGLADES P-37 NR HOMESTEAD FLA (LAT 25 17 30 LONG 080 40 30)											
NOV., 1967											
09...	--	26	2.1	--	.16	--	.00	.00	.00	.02	.00
JAN., 1968											
25...	--	21	.4	--	.01	--	.00	.00	--	--	--
AUG.											
09...	--	36	4.0	--	.35	.00	.00	.02	.03	.06	--
02290812 ALLIGATOR HOLE AT COTTONMOUTH CP NR HOMESTD FLA (LAT 25 38 10 LONG 080 44 20)											
OCT., 1967											
11...	--	--	3.3	--	--	--	.00	.00	.00	.01	.00
NOV.											
04...	--	--	2.3	--	.83	--	.00	.00	.00	.01	.00
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
JAN., 1968											
04...	--	22	1.1	--	.50	--	.00	.01	.01	.02	.01
MAR.											
13...	--	--	.8	--	.98	--	.00	.00	.00	.00	.01
MAY											
02...	--	29	4.6	--	.03	.02	.00	.00	.01	.02	.01
14...	--	27	3.7	--	.03	.02	.00	.00	.00	.00	.01

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

303

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	CHLORIDE (CL)	FLUORIDE (F)	BROMIDE (BR)	IODIDE (I)	NITRITE (NO2)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	BORON (B)	TANNIN AND LIGNIN
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED										
02290828 EVERGLADES P-36 NEAR HOMESTEAD FLA (LAT 25 32 30 LONG 080 47 00)										
MAR., 1968										
08...	50	.2	.00	.00	.01	1.0	.00	--	.06	.7
MAY										
30...	16	.2	.00	.00	.01	.9	--	.06	.17	.1
AUG.										
06...	64	.2	--	--	--	.0	--	--	--	--
02290830 EVERGLADES P-35 NEAR HOMESTEAD FLA (LAT 25 27 20 LONG 080 52 30)										
NOV., 1967										
08...	44	.5	.00	.00	.02	1.1	.00	--	.03	.7
DEC.										
12...	44	.1	.00	.00	.00	1.9	.00	--	.06	1.0
MAR., 1968										
04...	930	.1	2.2	.25	.08	.2	.40	--	.25	1.2
APR.										
18...	5400	.5	.80	.00	.01	1.6	--	.44	.67	.0
JULY										
02...	22	.2	.00	.00	.06	.8	--	.18	.10	.2
02290841 ROOKERY BRANCH NEAR HOMESTEAD FLA (LAT 25 26 48 LONG 080 53 30)										
NOV., 1967										
08...	78	.3	.00	.00	.00	1.9	.00	--	.05	.8
DEC.										
12...	77	.2	.00	.00	.02	1.9	.00	--	.06	.9
APR., 1968										
10...	4150	.5	12	.00	.01	3.1	.17	--	.08	.9
JULY										
02...	34	.2	.00	.00	.01	.8	--	.08	.46	.1
02290842 TARPON BAY AT TUSSOCK KEY NEAR HOMESTEAD FLA (LAT 25 25 30 LONG 080 57 30)										
NOV., 1967										
08...	424	.3	.16	.13	.01	.9	.00	--	.10	.6
DEC.										
12...	1060	.3	4.8	.00	.00	4.4	.01	--	.25	1.0
APR., 1968										
10...	8350	.7	26	1.0	.02	.1	.08	--	.17	.9
JULY										
02...	127	.2	.00	.00	.00	.6	--	.07	.15	.1
02290796 LITTLE MADEIRA BAY NR KEY LARGO FLA (LAT 25 10 30 LONG 080 38 00)										
MAR., 1968										
08...	27200	--	4950	4800	148	41100	8.0	5	--	--
02290798 TAYLOR RIVER NR FLORIDA CITY FLA (LAT 25 13 30 LONG 080 38 30)										
MAR., 1968										
08...	7800	--	1490	1300	194	13400	8.1	30	--	--
02290800 TAYLOR SLOUGH NEAR HOMESTEAD, FLA. (LAT 25 24 05 LONG 080 36 25)										
OCT., 1967										
16...	169	171	140	5	135	300	7.2	20	--	--
JAN., 1968										
15...	212	219	187	4	184	388	7.6	20	--	--
MAR.										
27...	191	190	160	2	157	340	7.5	20	--	--
JUNE										
28...	142	157	123	2	121	260	7.7	20	--	--
OCT., 1967										
16...	--	--	--	6	--	--	--	--	--	--
02290810 EVERGLADES P-37 NR HOMESTEAD FLA (LAT 25 17 30 LONG 080 40 30)										
NOV., 1967										
09...	179	186	138	10	128	330	7.2	50	8.0	--
JAN., 1968										
25...	310	317	206	19	187	590	8.0	20	23	--
AUG.										
09...	121	136	75	8	67	228	7.0	10	16	--
02290812 ALLIGATOR HOLE AT COTTONMOUTH CP NR HOMESTD FLA (LAT 25 38 10 LONG 080 44 20)										
OCT., 1967										
11...	154	173	108	3	105	278	7.3	10	8.0	--
NOV.										
04...	177	199	132	2	130	324	7.5	10	4.9	--
05...	--	--	--	--	--	--	--	--	4.0	--
06...	--	--	--	--	--	--	--	--	4.0	--
JAN., 1968										
04...	210	247	152	4	148	400	7.4	30	4.9	--
MAR.										
13...	239	292	172	14	157	429	7.5	50	20	--
MAY										
02...	358	393	204	69	135	660	7.5	45	18	--
14...	193	225	142	6	136	360	7.1	35	5.1	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	LITHIUM (LI)	AMMONIA (NH4)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED										
02290844 TARPON BAY AT MID-BAY PASS NR HOMESTEAD FLA (LAT 25 25 04 LONG 080 59 22)										
NOV., 1967										
08...	64	33	.60	272	8.7	.00	.00	178	0	57
DEC.										
12...	128	185	1.6	1560	62	.00	.00	218	0	376
JULY, 1968										
02...	42	18	.24	135	6.1	.00	--	140	--	24
02290850 SHARK RIVER NEAR HOMESTEAD FLA (LAT 25 20 07 LONG 081 06 44.1)										
NOV., 1967										
08...	88	100	.99	870	29	.01	.00	204	0	196
APR., 1968										
10...	410	1120	5.8	9150	350	.13	.03	276	0	2220
JULY										
02...	55	50	.50	399	16	.01	--	154	--	88
02290854 SHARK RIVER CUTOFF NEAR HOMESTEAD FLA (LAT 25 26 30 LONG 080 59 10)										
NOV., 1967										
08...	252	626	3.4	5480	9.8	.10	.00	220	0	1330
DEC.										
12...	330	895	4.8	7500	305	.10	.00	210	0	1880
JULY, 1968										
02...	95	168	11	1360	55	.02	--	178	--	322
02290858 SHARK R AT MARKER 68 NEAR HOMESTEAD FLA (LAT 25 20 07 LONG 081 06 44)										
NOV., 1967										
08...	244	572	3.2	4960	9.2	.10	.00	210	0	1200
MAR., 1968										
04...	416	1180	5.9	9940	355	.10	.01	218	0	2410
APR.										
10...	435	1340	6.5	10900	447	.15	.03	199	0	2720
JULY										
02...	248	650	6.0	5370	243	.00	--	196	--	1320
DATE	OIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	DIS- SOLVED ALUM- INUM (AL)	OIS- SOLVED IRON (FE)	DISS- OLVED MAN- GANESE (MN)	TOTAL CHRG- MIUM (CR)	COPPER (CU)	LEAD (PB)	ZINC (ZN)	ARSENIC (AS)
02290860 HARNEY RIVER NR HOMESTEAD, FLA. (LAT 25 25 20 LONG 081 01 30)										
NOV., 1967										
08...	--	22	3.8	--	--	.00	.00	.00	.00	.00
DEC.										
12...	--	23	4.4	--	--	.00	.05	.01	.00	.00
JULY, 1968										
02...	--	28	4.7	--	.03	.01	.00	.01	.00	.01
02290870 EVERGLADES P-34 NR HOMESTEAD FLA (LAT 25 36 30 LONG 080 55 30)										
NOV., 1967										
10...	--	21	2.8	--	--	.00	.00	.00	.01	.00
JAN., 1968										
25...	--	18	1.6	--	.02	.00	.00	.02	.00	.00
MAY										
30...	--	27	5.6	--	.02	.01	.00	.00	.00	.00
DATE	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	LITHIUM (LI)	AMMONIA (NH4)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	SULFATE (SO4)
02290860 HARNEY RIVER NR HOMESTEAD, FLA. (LAT 25 25 20 LONG 081 01 30)										
NOV., 1967										
08...	67	47	.64	383	13	.00	.00	182	0	85
DEC.										
12...	212	438	2.9	3680	145	.10	.00	234	0	900
JULY, 1968										
02...	49	31	.43	246	11	.00	--	146	--	51
02290870 EVERGLADES P-34 NR HOMESTEAD FLA (LAT 25 36 30 LONG 080 55 30)										
NOV., 1967										
10...	67	2.3	.35	8.6	.2	.00	.00	202	0	.0
JAN., 1968										
25...	90	3.4	.45	13	.3	.00	.00	272	0	.4
MAY										
30...	44	1.3	.20	4.8	.4	.00	--	130	--	7.2

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	CHLORIDE (CL)	FLUORIDE (F)	BROMIDE (BR)	IODIDE (I)	NITRITE (NO2)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	BORON (B)	TANNIN AND LIGNIN
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED										
02290844 TARPON BAY AT MID-BAY PASS NR HOMESTEAD FLA (LAT 25 25 04 LONG 080 59 22)										
NOV., 1967										
08... 498		.4	.16	.00	.00	1.9	.00	--	.12	.7
DEC.										
12... 2850		.4	3.2	.00	.00	3.8	.00	--	.06	1.1
JULY, 1968										
02... 252		.3	.00	.00	.01	.0	--	.11	.11	.1
02290850 SHARK RIVER NEAR HOMESTEAD FLA (LAT 25 20 07 LONG 081 06 44.1)										
NOV., 1967										
08... 1480		.4	4.7	.25	.00	1.1	.00	--	.37	1.0
APR., 1968										
10... 16500		1.3	42	.00	.02	12	.05	--	3.6	.6
JULY										
02... 700		.3	.00	.00	.01	.0	--	.25	.23	.1
02290854 SHARK RIVER CUTOFF NEAR HOMESTEAD FLA (LAT 25 26 30 LONG 080 59 10)										
NOV., 1967										
08... 9650		.9	19	.25	.02	2.0	.00	--	2.0	.8
DEC.										
12... 13600		1.0	18	.00	.00	22	.04	--	3.3	.6
JULY, 1968										
02... 2480		.4	.80	.00	.01	.0	--	.14	.65	.1
02290858 SHARK R AT MARKER 68 NEAR HOMESTEAD FLA (LAT 25 20 07 LONG 081 06 44)										
NOV., 1967										
08... 9000		.8	14	.13	.02	1.2	.00	--	2.0	.6
MAR., 1968										
04... 17900		1.3	51	.25	.00	.1	.03	--	6.0	.0
APR.										
10... 20400		1.5	66	.00	--	14	.09	--	4.4	.4
JULY										
02... 9650		.8	1.6	.00	.03	.1	--	.09	1.1	.0
DATE	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	ALKA- LINITY AS CACO3	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	TUR- BID- ITY	COLI- FORM (COL- ONIES PER 100 ML)
02290860 HARNEY RIVER NR HOMESTEAD, FLA. (LAT 25 25 20 LONG 081 01 30)										
NOV., 1967										
08... 1370	--		361	212	149	2590	7.4	10	10	--
DEC.										
12... 12100	--		2330	2140	192	20200	7.5	50	1.9	--
JULY, 1968										
02... 927	1010		250	131	120	1780	7.1	70	1.2	--
02290870 EVERGLADES P-34 NR HOMESTEAD FLA (LAT 25 36 30 LONG 080 55 30)										
NOV., 1967										
10... 179	148		177	11	166	355	7.7	10	8.0	--
JAN., 1968										
25... 270	285		239	16	223	498	8.0	25	9.0	--
MAY										
30... 138	143		116	9	107	252	7.0	30	2.6	--
DATE	CHLORIDE (CL)	FLUORIDE (F)	BROMIDE (BR)	IODIDE (I)	NITRITE (NO2)	NITRATE (NO3)	ORTHO PHOS- PHATE (PO4)	PHOS- PHATE (PO4)	BORON (B)	TANNIN AND LIGNIN
02290860 HARNEY RIVER NR HOMESTEAD, FLA. (LAT 25 25 20 LONG 081 01 30)										
NOV., 1967										
08... 680		.3	2.2	.25	.00	1.6	.00	--	.17	.8
DEC.										
12... 6650		.6	8.8	.00	.00	13	.00	--	1.5	1.1
JULY, 1968										
02... 462		.2	.00	.00	.01	.0	--	.05	.17	.1
02290870 EVERGLADES P-34 NR HOMESTEAD FLA (LAT 25 36 30 LONG 080 55 30)										
NOV., 1967										
10... 17		.2	.32	.13	.00	.1	.00	--	.02	.3
JAN., 1968										
25... 26		.2	.00	.00	.00	.4	.00	--	.04	1.0
MAY										
30... 10		.2	.80	.00	.01	.4	--	.13	.26	.0

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
02291000 BARRON RIVER CANAL NP EVERGLADES (LAT 25 53 00 LONG 081 21 00)												
MAY , 1969 13...	37	26	5.2	.02	103	5.8	.25	18	.9	332	4.8	32
02291200 LAKE TRAFFORD NR IMMOKALEE (LAT 26 26 09 LONG 081 29 25)												
MAY , 1968 14...	--	20	2.6	.05	41	5.1	.16	19	2.5	136	1.0	39
02291300 GOLDEN GATE CANAL AT NAPLES FLA (LAT 26 10 01 LONG 081 46 02)												
NOV., 1967 21...	--	24	8.7	.06	146	5.0	--	24	.5	336	86	45
FEB., 1968 27...	--	19	6.8	.02	133	7.4	--	37	2.2	332	59	72
MAY 14...	127	24	7.0	.03	129	6.5	.45	32	2.4	288	95	68
JULY 16...	--	28	6.0	.04	95	4.2	--	17	1.4	234	54	32
AUG. 14...	--	28	7.6	.03	123	4.8	--	21	.6	268	72	39
02291400 COCOHATCHEE RIVER CANAL NR NAPLES FLA (LAT 26 16 20 LONG 081 47 00)												
NOV., 1967 21...	--	24	7.5	.07	114	3.6	--	20	.5	292	50	33
FEB., 1968 27...	--	19	4.3	.15	117	4.2	--	25	1.8	308	52	38
MAY 14...	19	26	6.5	.18	112	4.4	.39	25	2.0	280	57	41
JULY 16...	--	29	3.8	.04	28	1.7	--	7.4	.5	83	15	12
AUG. 14...	--	28	5.5	.08	64	3.1	--	14	.4	164	34	23
02291600 ESTERO RIVER NR ESTERO (LAT 26 26 04 LONG 081 48 18)												
MAY , 1968 14...	.00	26	7.2	.15	89	76	1.6	162	10	196	102	298
02292900 CALOOSAHATCHEE RIVER AT S-79 NR OLGA FLA (LAT 26 43 25 LONG 081 41 55)												
OCT., 1967 30...	--	26	7.6	.03	73	9.9	--	29	2.0	200	42	57
JAN., 1968 06...	.00	27	7.2	.02	90	15	--	55	2.8	248	60	100
MAR. 04...	.00	17	.2	.02	99	37	--	230	8.8	252	102	441
APR. 26...	--	26	1.5	.02	124	122	--	930	34	248	284	1640
SEP. 03...	--	30	7.1	.07	62	13	--	41	2.4	190	49	65
30...	--	28	6.4	.10	55	12	--	31	2.6	168	43	49
02293050 ORANGE R AT BUCKINGHAM NR FT MYERS (LAT 26 40 00 LONG 081 43 00)												
MAY , 1969 14...	--	27	8.7	.23	96	15	.81	54	2.0	242	70	115
COASTAL BASINS BETWEEN LAKE OKEECHOBEE AND THE EVERGLADES AND PEACE RIVER												
02293360 SO PRONG ALLIGATOR CREEK NR PUNTA GORDA (LAT 26 53 03 LONG 081 58 45)												
MAY , 1968 15...	.09	23	7.3	--	191	36	4.8	257	5.7	--	--	620
02293390 NO PRONG ALLIGATOR CREEK NEAR PUNTA GORDA FLA (LAT 26 53 41 LONG 081 58 31)												
MAY , 1969 15...	.58	33	7.5	.03	121	9.8	1.7	77	.6	208	79	182
02293400 ALLIGATOR CREEK NR PUNTA GORDA (LAT 26 53 03 LONG 082 00 22)												
MAY , 1969 15...	--	27	1.9	.10	135	28	6.3	165	4.7	228	92	378
PEACE RIVER BASIN												
02293478 LAKE ROCHELLE NR LAKE ALFRED (LAT 28 04 10 LONG 081 43 43)												
MAY , 1968 14...	--	27	2.6	.09	7.3	6.5	.00	19	6.7	26	35	24
02293496 LAKE SMART NR FLORENCE VILLA (LAT 28 03 08 LONG 081 42 38)												
MAY , 1968 14...	.00	28	1.4	.03	20	7.5	.00	23	6.5	108	22	21
02293518 LAKE FANNIE NR FLORENCE VILLA (LAT 28 02 50 LONG 081 41 15)												
MAY , 1969 14...	.00	29	1.4	.03	8.2	6.9	.00	25	7.4	24	47	33
02293545 LAKE OTIS AT WINTER HAVEN (LAT 28 01 10 LONG 081 42 35)												
MAY , 1968 14...	--	26	.2	.00	14	10	.00	14	8.9	36	59	23
02293570 LK HAMILTON OUTLET NR LK HAMILTON (LAT 28 02 00 LONG 081 39 00)												
MAY , 1968 14...	--	31	4.0	.02	12	8.0	.00	22	6.0	26	46	31



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

307

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF TUEENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
LAKE OKEECHOBEE AND THE EVERGLADES BASINS--CONTINUED												
D2291000 BAR-ON RIVER CANAL NR EVERGLADES (LAT 25 53 00 LONG 081 21 00)												
MAY , 1968 13....	.2	.8	.03	335	346	282	10	610	7.9	20	3.4	41
D2291200 LAKE TRAFFORD NR IMMOKALFE (LAT 26 26 08 LONG 081 29 25)												
MAY , 1968 14....	.2	2.9	.24	181	217	124	12	333	7.4	30	5.5	71
D2291300 GOLDEN GATE CANAL AT NAPLES FLA (LAT 26 10 01 LONG 081 46 02)												
NOV., 1967 21....	.4	.6	--	482	516	385	109	790	7.7	70	--	--
FEB., 1968 27....	.4	1.5	--	483	541	362	90	780	7.9	50	--	--
MAY 14....	.2	.0	.04	433	543	349	113	805	8.1	40	5.8	71
JULY 16....	.2	.5	--	325	386	254	62	560	7.7	80	--	--
AUG. 14....	.3	.1	--	400	462	327	107	630	7.7	60	--	--
D2291400 COCONAHATCHEE RIVER CANAL NR NAPLES FLA (LAT 26 16 20 LONG 081 47 00)												
NOV., 1967 21....	.4	.3	--	373	398	300	60	640	7.7	60	--	--
FEB., 1968 27....	.3	.9	--	398	436	314	61	660	8.0	60	--	--
MAY 14....	.2	1.1	.03	388	439	298	68	670	7.7	50	3.7	45
JULY 16....	.2	.5	--	110	131	77	9	184	6.8	100	--	--
AUG. 14....	.3	.0	--	275	264	173	38	370	7.5	70	--	--
D2291600 ESTERJ RIVER NR ESTERO (LAT 26 26 04 LONG 081 48 18)												
MAY , 1968 14....	.5	.4	.29	794	880	331	170	1440	7.4	0	3.3	40
D2292900 CALOOSAHATCHEE RIVER AT S-79 NR OLGA FLA (LAT 26 43 25 LONG 081 41 55)												
OCT., 1967 30....	.4	.3	--	315	335	222	58	550	7.7	70	--	--
JAN., 1968 04....	.4	.1	--	453	494	236	33	800	7.7	40	--	--
MAR. 04....	.4	2.5	--	1040	1120	399	192	1900	7.5	30	--	--
APR. 26....	.3	.0	--	3260	--	412	608	5800	74.0	30	--	--
SEP. 03....	.3	.4	--	334	384	208	57	569	7.4	80	--	--
30....	.3	1.5	--	284	341	186	49	500	7.0	140	--	--
D2293050 ORANGE R AT HUCKINGHAM NR FT MYERS (LAT 26 40 00 LONG 081 43 00)												
MAY , 1968 14....	.3	1.2	.30	482	539	302	103	827	7.7	50	4.4	54
D2293360 COSTAL BASINS BETWEEN LAKE OKEECHOBEE AND THE EVERGLADES AND PEACE RIVER SO PRONG ALLIGATOR CREEK NR PUNTA GORDA (LAT 26 53 03 LONG 081 58 45)												
MAY , 1968 15....	--	--	.02	--	--	631	--	2500	--	--	5.8	66
D2293390 NU PRONG ALLIGATOR CREEK NEAR PUNTA GORDA FLA (LAT 26 53 41 LONG 081 58 31)												
MAY , 1968 15....	.6	.0	.06	581	752	344	174	1050	7.7	10	--	--
D2293400 ALLIGATOR CREEK NR PUNTA GORDA (LAT 26 53 08 LONG 082 00 22)												
MAY , 1968 15....	.5	.1	.04	924	1080	459	272	1710	7.6	5	5.3	6
D2293478 PEACE RIVER BASIN LAKE ROCHELLE NR LAKE ALFRED (LAT 28 04 10 LONG 081 43 43)												
MAY , 1968 14....	.3	3.4	.11	118	--	44	23	216	6.8	50	5.6	69
D2293496 LAKE SMART NR FLORENCE VILLA (LAT 28 03 08 LONG 081 42 38)												
MAY , 1968 14....	.3	2.5	.13	157	--	81	0	282	7.2	5	6.6	94
D2293518 LAKE FANNIE NR FLORENCE VILLA (LAT 28 02 50 LONG 081 41 15)												
MAY , 1968 14....	.4	.7	.07	142	146	49	29	258	6.5	30	6.8	87
D2293545 LAKE OTIS AT WINTER HAVEN (LAT 28 01 10 LONG 081 42 35)												
MAY , 1968 14....	.3	.4	.01	148	170	76	46	265	6.6	5	8.8	107
D2293570 LK HAMILTON OUTLET NR LK HAMILTON (LAT 28 02 00 LONG 081 39 00)												
MAY , 1968 14....	.3	1.0	.01	143	--	63	42	265	6.6	15	7.6	101

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	TEMP-ERATURE (DEG C)	SILICA (SI02)	DIS-SOLVED IRON (FE)	CAL-CIUM (CA)	MAG-NE-SIUM (MG)	STRON-TIUM (SR)	SODIUM (NA)	POT-AS-SIUM (K)	BICAR-BONATE (HCO3)	SULFATE (SO4)	CHLO-RIDE (CL)
PEACE RIVER BASIN--CONTINUED												
MAY , 1968 14...		.00	31	12	.13	8.6	4.0	.00	14	5.2	24	23
02293621 LAKE HENRY OUTLET NR HAINES CITY (LAT 28 05 09 LONG 081 38 59)												
MAY , 1968 14...	--		29	7.0	.00	40	9.4	.19	6.5	2.0	162	9.0
02293774 MOUNTAIN LAKE NR LAKE WALES (LAT 27 56 01 LONG 081 34 59)												
MAY , 1968 14...	--		31	2.5	.05	41	9.6	.40	43	11	226	19
02293785 LAKE EFFIE AT LAKE WALES (LAT 27 54 31 LONG 081 36 11)												
MAY , 1968 14...	6.4		29	.9	.03	39	9.3	.35	42	10	229	17
02293986 PEACE CREEK DRAINAGE CANAL NR ALTURAS (LAT 27 55 23 LONG 081 42 28)												
MAY , 1968 13...	--		26	1.3	.01	7.3	6.3	.00	17	5.0	26	24
02293999 LAKE MARIANA NEAR AUBURNDALE (LAT 28 04 10 LONG 081 45 20)												
MAY , 1968 13...	--		28	.7	.02	5.6	5.7	.00	14	5.6	24	21
02294010 LAKE HARTRIDGE AT WINTER HAVEN (LAT 28 03 10 LONG 081 45 10)												
MAY , 1968 13...	--		30	.7	.09	12	6.0	.00	15	5.0	28	25
02294028 DEER LAKE NEAR WINTER HAVEN (LAT 28 01 41 LONG 081 45 54)												
MAY , 1968 13...	.00		29	.6	.01	15	5.7	.07	15	5.6	56	22
02294036 LAKE HOWARD AT WINTER HAVEN (LAT 28 01 20 LONG 081 44 16)												
MAY , 1968 13...	--		35	4.0	.00	17	5.7	.00	33	14	49	42
02294065 LAKE LULU NEAR ELOISE (LAT 27 59 26 LONG 081 43 48)												
MAY , 1968 13...	3.9		30	13	.02	33	6.8	.00	27	5.7	178	10
02294068 LAKE LULU OUTLET AT ELOISE LOWER (LAT 27 59 03 LONG 081 43 47)												
MAY , 1968 13...	--		29	1.2	.04	29	4.8	.00	18	2.4	80	25
02294259 LAKE PARKER AT LAKELAND (LAT 28 02 59 LONG 081 55 22)												
02294409 BANANA-HANCOCK CA NR HIGHLAND CITY FLA (LAT 27 59 04 LONG 081 53 28)												
FEB., 1968 27... 27...	--		14	--	--	--	--	--	--	123 118	--	--
02294462 LAKE HANCOCK NEAR HIGHLAND CITY (LAT 27 57 49 LONG 081 51 29)												
MAY , 1968 15...	--		32	27	.07	33	11	.00	40	5.2	148	35
02294490 SADDLE CR AD STRUCTURE P-11 NR BARTON FLA (LAT 27 56 17 LONG 081 51 05)												
FEB., 1968 27... 27...	5.0 5.0		14	--	--	--	--	--	--	132 124	--	--
02294650 PEACE RIVER AT BARTON FLA (LAT 27 54 07 LONG 081 49 03)												
FEB., 1968 27... 27...	--		14	--	--	--	--	--	--	164 162	--	--
MAY 15... JULY 23...	5.0		26	6.2	.00	45	12	.08	25	.7	44	75
02294745 SIXMILE CR AT US 99 NR BARTON FLA (LAT 27 51 47 LONG 081 49 43)												
FEB., 1968 27... 27...	--		16	--	--	--	--	--	--	100 99	--	--
02294781 PEACE RIVER NR HIGHLAND FLA (LAT 27 49 13 LONG 081 47 57)												
FEB., 1968 27... 27...	5.7 5.7		14	--	--	--	--	--	--	93 92	--	--
02294898 PEACE RIVER AT FORT WADE FLA (LAT 27 45 04 LONG 081 46 56)												
FEB., 1968 27... 27...	10 10		15	--	--	--	--	--	--	94 93	--	--
MAY 15... JULY 23...	36		27	6.8	.00	61	18	.45	23	1.1	87	12

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

309

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (P4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 190 C)	HARD- NESS (CALG)	NON- CAR- BONATE HARD- NESS	SPECI- FIG COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
PEACE RIVER BASIN--CONTINUED												
MAY , 1968 14...	1.0	1.7	.59	117	--	38	18	170	5.7	120	5.8	77
02293621 LAKE HENRY OUTLET NR HAINES CITY (LAT 28 05 08 LONG 081 38 59)												
MAY , 1968 14...	.3	1.2	.19	165	--	13	0	292	7.5	0	4.8	62
02293774 MOUNTAIN LAKE NR LAKE WALES (LAT 27 56 01 LONG 081 34 59)												
MAY , 1968 14...	.5	16	12	274	--	142	0	480	7.7	30	4.0	53
02293785 LAKE EFFIE AT LAKE WALES (LAT 27 54 31 LONG 081 36 11)												
MAY , 1968 14...	.4	8.0	12	254	--	134	0	451	7.2	30	8.8	113
02293986 PEACE CREEK DRAINAGE CANAL NR ALTURAS (LAT 27 55 23 LONG 081 42 28)												
MAY , 1968 13...	.3	1.1	.03	106	--	44	23	200	6.3	5	7.5	91
02293999 LAKE MARIANA NEAR AUBURNDALE (LAT 28 04 10 LONG 081 45 20)												
MAY , 1968 13...	.2	1.4	.10	93	--	40	20	178	6.5	5	5.8	73
02294010 LAKE HARTRIDGE AT WINTER HAVEN (LAT 28 03 10 LONG 081 45 10)												
MAY , 1968 13...	.3	1.5	.05	113	--	54	31	213	7.0	5	9.8	128
02294028 DEER LAKE NEAR WINTER HAVEN (LAT 28 01 41 LONG 081 45 54)												
MAY , 1968 13...	.3	6.6	.06	122	131	64	18	227	6.9	20	12.0	15
02294036 LAKE HOWARD AT WINTER HAVEN (LAT 28 01 20 LONG 081 44 16)												
MAY , 1968 13...	.5	8.3	.9	189	--	66	26	332	6.8	120	12.0	169
02294065 LAKE LULU NEAR ELOISE (LAT 27 59 26 LONG 081 43 48)												
MAY , 1968 13...	.3	7.2	.86	196	--	110	0	335	7.1	20	1.1	14
02294066 LAKE LULU OUTLET AT ELOISE LOWFR (LAT 27 59 03 LONG 081 43 47)												
MAY , 1968 13...	.3	7.2	.86	196	--	110	0	335	7.1	20	1.1	14
02294259 LAKE PARKER AT LAKELAND (LAT 28 02 59 LONG 081 55 22)												
MAY , 1968 13...	1.0	14	.66	151	--	92	26	270	7.0	10	4.1	52
02294409 BANANA-HANCOCK CA NR HIGHLAND CITY FLA (LAT 27 59 04 LONG 081 53 28)												
FEB., 1968 27...	.6	--	--	--	--	106	5	454	7.8	30	--	--
FEB., 1968 27...	.6	--	--	--	--	114	17	451	8.0	30	--	--
02294462 LAKE HANCOCK NEAR HIGHLAND CITY (LAT 27 57 48 LONG 081 51 29)												
MAY , 1968 15...	1.0	10	4.1	282	--	140	10	462	7.0	100	7.0	94
02294490 SAUDLE CR AB STRUCTURE P-11 NR BARTOW FLA (LAT 27 56 17 LONG 081 51 05)												
FEB., 1968 27...	1.0	--	--	--	--	180	72	399	7.6	20	--	--
FEB., 1968 27...	1.0	--	--	--	--	194	92	402	7.3	20	--	--
02294650 PEACE RIVER AT BARTOW FLA (LAT 27 54 07 LONG 081 49 03)												
FEB., 1968 27...	.5	--	--	--	--	130	0	355	7.2	50	--	--
FEB., 1968 27...	.5	--	--	--	--	132	0	360	7.2	50	--	--
MAY 15...	2.0	.2	.11	266	--	162	126	450	7.3	5	3.6	44
JULY 23...	.6	3.5	--	104	143	62	23	174	6.9	280	--	--
02294741 SIXMILE CR AT US 98 NR BARTOW FLA (LAT 27 51 47 LONG 081 49 43)												
FEB., 1968 27...	3.4	--	--	--	--	240	158	460	7.5	30	--	--
FEB., 1968 27...	3.4	--	--	--	--	248	167	460	7.6	20	--	--
02294781 PEACE RIVER NR HOMELAND FLA (LAT 27 49 13 LONG 081 47 57)												
FEB., 1968 27...	2.5	--	--	--	--	234	158	469	7.6	20	--	--
FEB., 1968 27...	5.2	--	--	--	--	208	133	470	7.7	20	--	--
02294898 PEACE RIVER AT FORT MEADE FLA (LAT 27 45 04 LONG 081 46 56)												
FEB., 1968 27...	2.6	--	--	--	--	210	133	492	7.6	30	--	--
FEB., 1968 27...	2.6	--	--	--	--	212	136	470	7.4	30	--	--
MAY 15...	.6	.4	5.9	342	--	226	155	550	1.6	15	10.0	128
JULY 23...	--	--	--	--	--	--	--	241	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
PEACE RIVER BASIN--CONTINUED												
MAY , 1968												
15...	1.1	30	4.7	.05	6.4	4.5	.02	6.4	.6	20	1.6	14
02295013 BOWLEGS CREEK NEAR FT MEADE (LAT 27 41 57 LONG 081 41 40)												
MAY , 1968												
17...	11	24	2.9	.02	36	15	.07	24	.6	74	110	14
JULY												
23...	--	--	5.0	.71	7.9	3.0	--	5.3	1.0	12	18	6.2
02296180 LITTLE CHARLEY BOWLEGS CR NR CREWESVILLE (LAT 27 25 48 LONG 081 33 04)												
MAY , 1968												
16...	.00	31	4.8	.11	21	9.8	4.4	11	8.2	48	52	22
02296191 L CHARLEY BOWLEGS CR AT FENCE RD NR SEBRING (LAT 27 27 48 LONG 081 33 15)												
MAY , 1968												
16...	.00	26	7.4	.10	14	7.2	1.6	11	4.8	24	39	23
02296207 L CHARLEY BOWLEGS CR AT CT 9 RD NR SEBRING (LAT 27 28 13 LONG 081 33 14)												
MAY , 1968												
16...	.00	24	5.3	.27	5.0	2.8	2.4	7.7	.8	2	17	14
02296222 LITTLE CHARLEY BOWLEGS CR NR SEBRING AUX (LAT 27 28 40 LONG 081 33 25.1)												
MAY , 1968												
16...	.00	24	1.2	.13	4.3	2.0	2.1	6.8	.6	3	.4	14
02296223 LITTLE CHARLEY BOWLEGS CR NR SEBRING (LAT 27 28 40 LONG 081 33 25.2)												
MAY , 1968												
16...	.00	24	1.7	.16	4.5	1.9	.23	6.5	.4	4	.9	14
02296500 CHARLIE CR NR GARDNER (LAT 27 22 29 LONG 081 47 48)												
MAY , 1968												
16...	3.5	31	1.7	.02	26	13	4.5	8.6	1.4	60	64	13
02297100 JOSHUA CREEK AT NOCATEF FLA (LAT 27 09 59 LONG 081 52 47)												
MAY , 1968												
13...	2.5	28	3.9	.01	55	19	5.1	29	3.4	137	104	46
02297310 HORSE CREEK NEAR ARCADIA (LAT 27 11 57 LONG 081 59 19)												
MAY , 1968												
17...	11	27	1.6	.05	42	18	.90	13	1.3	44	138	17
02298123 PRAIRIE CREEK NEAR FT UGDEN (LAT 27 03 06 LONG 081 47 05)												
MAY , 1968												
16...	1.0	29	9.5	.01	62	13	7.5	46	1.5	206	42	71
02298202 SHELL CREEK NR PUNTA GORDA (LAT 26 59 04 LONG 081 56 09)												
MAY , 1968												
15...	23	27	4.1	.04	129	224	4.0	1800	64	154	485	3250
02298203 SHELL CREEK NEAR PUNTA GORDA FLA (LOWER) (LAT 26 59 04 LONG 081 56 10)												
MAY , 1968												
15...	23	27	4.1	.04	128	224	4.0	1800	64	154	485	3250
MYAKKA RIVER BASIN												
02298830 MYAKKA RIVER NEAR SARASOTA FLA (LAT 27 14 25 LONG 082 18 50)												
MAY , 1968												
25...	--	20	--	--	--	--	--	--	--	--	--	--
MAY												
13...	.00	30	.4	.08	13	7.0	.26	13	1.6	32	25	26
JUNE												
24...	--	31	4.2	.57	7.1	3.2	--	5.4	1.5	18	9.2	10
JULY												
29...	--	33	4.7	.29	4.0	1.8	--	3.0	.3	9	5.6	5.5
SEP.												
16...	1610	28	4.9	.12	4.3	2.1	--	3.4	.7	12	1.6	7.2
02299470 BIG SLOUGH NEAR MURDOCK FLA (LAT 27 04 15 LONG 082 13 05)												
MAY , 1968												
14...	1.7	28	5.6	.09	55	26	3.4	49	2.5	92	129	100
JUNE												
25...	--	31	6.7	.25	18	5.7	--	9.3	1.1	46	22	16
JULY												
30...	--	30	3.2	.17	9.0	2.8	--	4.7	.7	22	9.6	9.0
SEP.												
18...	503	29	3.0	.06	5.1	1.9	--	4.1	.5	16	1.2	7.5
COASTAL BASINS BETWEEN MYAKKA RIVER AND HILLSBOROUGH RIVER												
02299750 PHILLIPPI CREEK NEAR SARASOTA FLA (LAT 27 18 30 LONG 082 27 06)												
FEB., 1968												
12...	--	17	--	--	--	--	--	--	--	--	--	98
MAY												
13...	1.1	28	5.9	.05	122	54	9.1	31	2.3	150	384	50
JUNE												
25...	--	24	9.5	.19	75	21	--	18	7.9	96	194	26
JULY												
30...	--	24	12	.05	84	26	--	20	1.9	150	186	28
SEP.												
16...	25	29	8.2	.07	56	14	--	13	3.0	84	114	17

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

311

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (N/3)	PHOS- PHATE (P/4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARO- NESS	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
PEACE RIVER BASIN--CONTINUED												
02295013 BOWLEGS CREEK NEAR FT MEADE (LAT 27 41 57 LONG 081 41 40)												
MAY , 1968 15...	.2	12	.48	60	--	34	18	118	6.3	50	7.2	95
02295420 PAYNE CREEK NR BOWLING GREEN (LAT 27 37 13 LONG 081 49 33)												
MAY , 1968 17...	1.6	2.1	2.4	245	--	152	91	410	7.4	25	5.8	68
JULY 23...	.6	.1	--	54	96	32	22	94	6.0	280	--	--
02296180 LITTLE CHARLEY BOWLEGS CR NR CREWSVILLE (LAT 27 25 48 LONG 081 33 04)												
MAY , 1968 16...	.5	4.1	.02	162	--	98	59	291	7.7	80	8.6	114
02296191 L CHARLEY BOWLEGS CR AT FENCE RD NR SEBRING (LAT 27 27 48 LONG 081 33 15)												
MAY , 1968 16...	.3	3.7	.75	124	--	66	46	212	6.5	60	5.4	66
02296207 L CHARLEY BOWLEGS CR AT CT 9 RD NR SEBRING (LAT 27 28 13 LONG 081 33 14)												
MAY , 1968 16...	.3	1.0	.30	55	--	24	23	103	5.0	100	2.4	28
02296222 LITTLE CHARLEY BOWLEGS CR NR SEBRING AUX (LAT 27 28 40 LONG 081 33 25.1)												
MAY , 1968 16...	.4	1.3	.29	33	--	18	16	76	5.6	160	3.2	38
02296223 LITTLE CHARLEY BOWLEGS CR NR SEBRING (LAT 27 28 40 LONG 081 33 25.2)												
MAY , 1968 16...	.2	1.3	.36	34	--	20	17	75	5.6	140	2.5	29
02296500 CHARLIE CR NR GARDNER (LAT 27 22 29 LONG 081 47 48)												
MAY , 1968 16...	.5	.7	2.2	165	--	124	75	295	7.1	15	6.1	81
02297100 JOSHUA CREEK AT NOCATEE FLA (LAT 27 09 59 LONG 081 52 47)												
MAY , 1968 18...	.9	.3	3.0	336	400	221	109	570	7.5	15	10.0	127
02297310 HORSE CREEK NEAR ARCADIA (LAT 27 11 57 LONG 081 59 19)												
MAY , 1968 17...	.8	.7	.91	255	309	190	144	423	6.8	30	6.9	85
02298123 PRAIRIE CREEK NEAR FT GORDEN (LAT 27 03 06 LONG 081 47 05)												
MAY , 1968 16...	2.0	.6	.07	356	--	216	47	640	8.0	30	7.3	96
02298202 SHFLL CREEK NR PUNTA GORDA (LAT 26 59 04 LONG 081 56 09)												
MAY , 1968 15...	1.0	.7	1.5	6040	--	1250	1120	10300	7.6	40	6.4	79
02298203 SHELL CREEK NEAR PUNTA GORDA FLA (LOWER) (LAT 26 59 04 LONG 081 56 10)												
MAY , 1968 15...	1.0	.7	1.5	6040	--	1250	1120	10300	7.6	40	6.4	79
MYAKKA RIVER BASIN												
02298830 MYAKKA RIVER NEAR SARASOTA FLA (LAT 27 14 25 LONG 082 18 50)												
MAR., 1968 25...	--	--	--	--	--	--	--	153	--	--	--	--
MAY 13...	.5	.9	.20	104	151	62	36	199	6.5	60	9.0	118
JUNE 24...	.3	.2	--	51	154	30	16	89	6.3	320	--	--
JULY 25...	.3	.5	--	30	68	18	10	48	6.3	240	--	--
SEP. 16...	.3	.1	--	31	59	19	9	55	5.9	140	--	--
02299470 BIG SLOUGH NEAR MURDOCK FLA (LAT 27 04 15 LONG 082 13 05)												
MAY , 1968 14...	1.0	.0	.68	417	483	248	173	740	6.8	25	8.4	106
JUNE 25...	.5	.5	--	103	154	68	31	160	6.7	320	--	--
JULY 30...	.4	1.3	--	51	78	32	14	91	7.4	160	--	--
SEP. 18...	.2	.1	--	32	56	21	8	65	6.2	120	--	--
COASTAL BASINS BETWEEN MYAKKA RIVER AND HILLSBOROUGH RIVER												
02299750 PHILLIPPI CREEK NEAR SARASOTA FLA (LAT 27 13 30 LONG 082 27 06)												
FEB., 1968 12...	--	--	--	--	--	--	--	1100	--	--	--	--
MAY 13...	1.1	.1	.60	734	424	537	414	1090	7.3	25	3.6	46
JUNE 25...	.7	6.6	--	406	503	274	195	642	7.3	150	--	--
JULY 30...	.9	.4	--	433	513	316	194	670	7.2	70	--	--
SEP. 16...	.6	.0	--	267	317	197	128	429	6.4	100	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFPS)	TEMP- ERATURE (DEG C)	SILICA (SiO2)	DIS- SOLVED IRON (Fe)	CAL- CIUM (Ca)	MAG- NE- SIUM (Mg)	STRON- TIUM (Sr)	SODIUM (Na)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (Cl)
COASTAL BASINS BETWEEN MYAKKA RIVER AND HILLSBOROUGH RIVER--CONTINUED												
02299800 PHILLIPI CREEK AT SARASOTA FLA (LAT 27 19 20 LONG 082 30 20)												
FEB., 1964												
12...	--	16	--	--	--	--	--	--	--	--	--	--
MAR.												
25...	--	15	--	--	--	--	--	--	--	--	--	--
MAY												
14...	--	22	9.2	.02	102	42	8.0	47	4.0	173	272	65
02300040 BRAIDEN RIVER NEAR BRADENTON FLA (LAT 29 26 01 LONG 082 29 13)												
MAY., 1964												
01...	.00	29	1.8	.01	81	24	13	27	3.3	138	244	42
13...	--	28	3.5	.06	345	215	7.5	7620	287	138	1880	13900
02300100 LITTLE MYATEE R NR FT LONFSOME (LAT 27 42 16 LONG 082 11 53)												
APR., 1964												
23...	.02	26	2.7	.13	4.4	2.2	.00	6.6	.6	9	3.2	12
02300200 S JACK LITTLE MYATEE R NR DUETTE (LAT 27 35 25 LONG 082 10 57)												
APR., 1968												
24...	--	23	8.3	1.1	9.7	3.5	.00	3.0	.6	38	.8	7.8
02300700 BULLFROG CREEK NR WIMAUNA (LAT 27 47 30 LONG 082 21 09)												
APR., 1965												
24...	--	30	2.5	.04	59	28	2.2	12	1.6	128	150	19
02300882 NORTH PRONG ALAFIA R NR NICHOLS FLA (LAT 27 53 24 LONG 082 00 43)												
FEB., 1968												
27...	--	14	--	--	--	--	--	--	--	34	--	--
27...	--	14	--	--	--	--	--	--	--	0	--	--
02300896 NORTH PRONG ALAFIA R TRIB NR NICHOLS FLA (LAT 27 54 27 LONG 082 00 47)												
FEB., 1963												
27...	--	12	--	--	--	--	--	--	--	23	--	--
27...	--	12	--	--	--	--	--	--	--	20	--	--
02300900 SCOTT LAKE NR LAKELAND FLA (LAT 27 57 20 LONG 081 56 00)												
FEB., 1963												
27...	--	14	--	--	--	--	--	--	--	27	--	--
MAY												
15...	.30	29	2.2	.03	11	4.5	.00	10	1.0	13	15	.2
02300930 PILEY CREEK NR MULBERRY FLA (LAT 27 55 23 LONG 082 01 50)												
FEB., 1968												
27...	--	13	--	--	--	--	--	--	--	123	--	--
27...	--	13	--	--	--	--	--	--	--	126	--	--
02300978 ENGLISH CREEK NR MULBERRY FLA (LAT 27 55 36 LONG 082 03 56)												
FEB., 1968												
27...	--	13	--	--	--	--	--	--	--	48	--	--
02301350 LITTLE ALAFIA R NR HOPEWELL (LAT 27 56 15 LONG 082 09 23)												
APR., 1968												
27...	.00	31	4.1	.02	22	12	.04	6.7	1.3	108	4.1	15
02301800 SIXMILE CREEK AT TAMPA (LAT 27 57 59 LONG 082 22 07)												
APR., 1968												
25...	17	23	9.2	.01	63	9.1	.80	9.7	.5	160	59	19
HILLSBOROUGH RIVER BASIN												
02301900 FOX BRANCH NR SODRUM (LAT 28 10 55 LONG 082 00 45)												
MAR., 1963												
22...	--	24	--	--	--	--	--	--	--	--	--	--
APR.												
30...	.27	27	4.5	.02	37	10	.03	8.0	.8	166	.0	13
02301940 LAKE PASADENA NEAR DADE CITY FLA (LAT 28 19 10 LONG 082 13 20)												
FEB., 1968												
28...	--	19	--	--	--	--	--	--	--	11	--	--
02301990 HILLSBOROUGH R AB CRYSTAL SPGS NR ZEPHYRHILLS (LAT 28 11 07 LONG 082 11 03)												
MAR., 1968												
21...	--	27	--	--	--	--	--	--	--	--	--	--
APR.												
29...	6.9	24	10	.02	54	3.5	.23	4.1	.2	176	5.5	9.0
02302000 CRYSTAL SPRINGS NR ZEPHYRHILLS FLA (LAT 28 10 55 LONG 082 11 09)												
FEB., 1968												
13...	--	24	--	--	--	--	--	--	--	--	--	--
MAR.												
21...	--	24	--	--	--	--	--	--	--	--	--	--
MAY												
01...	--	24	10	.01	49	3.7	.24	3.6	.3	166	6.2	7.0

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 150 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC CATION- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
COASTAL BASINS BETWEEN MYAKKA RIVER AND HILLSBOROUGH RIVER--CONTINUED												
02299800 PHILLIPI CREEK AT SARASOTA FLA (LAT 27 19 20 LONG 082 30 20)												
FEB., 1968												
12...	--	--	--	--	--	--	--	730	--	--	--	--
MAR.												
25...	--	--	--	--	--	--	--	950	--	--	--	--
MAY												
14...	1.3	1.2	7.7	643	730	436	294	980	7.4	35	3.6	46
02300040 BRADEN RIVER NEAR BRADENTON FLA (LAT 29 26 01 LONG 082 29 13)												
MAY., 1968												
01...	.7	.5	.09	519	--	374	260	820	7.7	25	11.0	141
13...	1.5	.4	1.4	25000	--	4630	4520	39800	7.5	15	5.9	75
02300100 LITTLE MANATEE R NR FT LONESOME (LAT 27 42 16 LONG 082 11 53)												
APR., 1968												
23...	.3	.8	1.3	39	53	20	13	83	6.2	60	8.6	105
02300200 S FORK LITTLE MANATEE R NR OUETTE (LAT 27 35 25 LONG 082 10 57)												
APR., 1968												
24...	.4	14	3.4	56	64	36	5	93	6.9	45	2.4	28
02300700 BULLFROG CREEK NR WIMAUNA (LAT 27 47 30 LONG 082 21 09)												
APR., 1968												
24...	.8	.9	.26	339	387	264	159	570	7.5	20	14.0	184
02300882 NORTH PRONG ALAFIA R NR NICHOLS FLA (LAT 27 53 24 LONG 082 00 43)												
FEB., 1968												
27...	2.9	--	--	--	--	81	53	197	7.1	30	--	--
27...	10	--	--	--	--	197	197	570	4.6	30	--	--
02300896 NORTH PRONG ALAFIA R TRIB NR NICHOLS FLA (LAT 27 54 27 LONG 082 00 47)												
FEB., 1968												
27...	3.3	--	--	--	--	6650	6630	21500	6.4	30	--	--
27...	3.4	--	--	--	--	7040	7020	22700	6.4	20	--	--
02300900 SCOTT LAKE NR LAKELAND FLA (LAT 27 57 20 LONG 081 56 00)												
FEB., 1968												
27...	.9	--	--	--	--	59	37	138	6.1	20	--	--
MAY												
15...	.3	14	.78	66	--	46	35	162	5.9	10	12.0	154
02300930 POLEY CREEK NR MULBERRY FLA (LAT 27 55 23 LONG 082 01 50)												
FEB., 1968												
27...	2.3	--	--	--	--	232	131	434	7.7	20	--	--
27...	2.4	--	--	--	--	202	99	434	7.8	30	--	--
02300978 ENGLISH CREEK NR MULBERRY FLA (LAT 27 55 36 LONG 082 03 56)												
FEB., 1968												
27...	5.2	--	--	--	--	128	89	482	7.3	40	--	--
02301350 LITTLE ALAFIA R NR HOPSWELL (LAT 27 56 15 LONG 082 09 23)												
APR., 1968												
22...	.9	1.2	1.6	122	128	104	15	230	7.3	20	17.0	227
02301800 SIXMILE CREEK AT TAMPA (LAT 27 57 59 LONG 082 22 07)												
APR., 1968												
25...	.4	.2	.50	250	278	192	61	438	7.4	5	5.6	66
HILLSBOROUGH RIVER BASIN												
02301900 FOX BRANCH NR SOCUM (LAT 28 10 55 LONG 082 00 45)												
MAR., 1968												
22...	--	--	--	--	--	--	--	250	--	--	--	--
APR.												
30...	.4	1.1	.10	157	168	134	0	293	7.4	15	8.4	104
02301940 LAKE PASADENA NEAR DADE CITY FLA (LAT 28 19 10 LONG 082 13 20)												
FEB., 1968												
28...	--	--	--	--	--	18	9	101	6.1	50	--	--
02301990 HILLSBOROUGH R AB CRYSTAL SPGS NR ZEPHYRHILLS (LAT 28 11 07 LONG 082 11 03)												
MAR., 1968												
21...	.2	--	--	--	--	--	--	200	--	--	--	--
APR.												
29...	.2	3.6	.08	177	180	150	6	310	7.7	5	3.0	35
02302000 CRYSTAL SPRINGS NR ZEPHYRHILLS FLA (LAT 28 10 55 LONG 082 11 09)												
FEB., 1968												
13...	--	--	--	--	--	--	--	241	--	--	--	--
MAR.												
21...	.2	--	--	--	--	--	--	290	--	--	--	--
MAY												
01...	.2	4.3	.08	167	176	138	2	289	7.7	0	4.0	47





## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

315

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (P14)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARO- NESS	SPECI- FIC C-NO3 UCTANCE (MICRO- METER)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
HILLSBOROUGH RIVER BASIN--CONTINUED												
02302500 BLACKWATER CREEK NEAR KNIGHTS FLA (LAT 28 03 25 LONG 082 09 001)												
DEC., 1967												
20...	--	--	--	--	--	--	--	450	--	--	--	--
FEB., 1968												
12...	.5	.2	--	251	253	168	0	450	7.7	10	--	--
MAR.												
22...	.5	10	--	247	255	158	0	410	7.7	20	--	--
APR.												
30...	.6	.6	2.5	747	256	166	0	416	7.7	40	5.8	68
JUNE												
20...	.6	1.5	--	93	145	58	18	156	7.0	240	--	--
JULY												
17...	.6	1.1	--	72	171	46	12	120	6.5	240	--	--
AUG.												
27...	.7	2.1	--	161	191	99	0	262	7.3	140	--	--
02303000 HILLSBOROUGH RIVER NEAR ZEPHYRHILLS FLA												
DEC., 1967												
25...	--	--	--	--	--	--	--	370	--	--	--	--
JAN., 1968												
12...	.3	.1	--	171	141	134	21	293	7.2	50	--	--
FEB.												
13...	--	--	--	--	--	--	--	265	--	--	--	--
MAR.												
22...	.3	2.2	1.4	204	--	165	18	358	7.1	5	--	--
APR.												
25...	.3	.6	.14	172	186	145	4	310	7.4	0	4.0	47
JUNE												
17...	.5	1.5	--	87	128	58	18	143	6.7	200	--	--
JULY												
16...	.5	.5	--	67	111	48	11	114	6.5	240	--	--
AUG.												
03...	.4	.1	--	77	110	61	9	136	6.5	140	--	--
02303100 NEW R NR ZEPHYRHILLS (LAT 28 09 55 LONG 082 15 55)												
APR., 1968												
26...	.3	11	.47	265	299	214	22	467	8.1	80	1.5	16
02303200 PEMBERTON CREEK NR DOVER (LAT 28 01 34 LONG 082 14 12)												
APR., 1968												
30...	.3	16	7.4	247	262	161	13	412	7.5	20	4.5	57
02303290 L THONOTOSASSA NR THONOTOSASSA (LAT 28 03 33 LONG 082 17 09)												
APR., 1968												
30...	.5	5.2	2.0	169	184	115	8	308	7.5	40	11.0	134
02303320 FLINT CR AT SH-582 NR THONOTOSASSA (LAT 28 04 30 LONG 082 15 50)												
APR., 1968												
30...	.6	3.1	1.9	161	177	109	4	291	7.3	40	--	--
02303330 HILLSBOROUGH R AT MORRIS BR NR THONOTOSASSA (LAT 28 05 50 LONG 082 18 45)												
APR., 1968												
26...	.3	2.5	1.6	185	191	154	14	331	7.9	10	7.0	80
02303350 TROUT CREEK NR SULPHUR SPRINGS (LAT 28 08 20 LONG 082 21 50)												
APR., 1968												
27...	.5	2.0	.11	205	269	156	28	372	7.1	35	--	--
02303379 KING LAKE NEAR SAN ANTONIO FLA (LAT 28 17 24 LONG 082 17 34)												
APR., 1968												
27...	--	--	--	--	--	12	9	65	5.5	50	--	--
02303419 TWIN LAKES NR LAND LAKES FLA (LAT 28 11 15 LONG 082 25 15)												
APR., 1968												
30...	--	--	--	--	--	65	52	201	6.7	30	--	--
02303420 CYPRESS CREEK AT WORTHINGTON GARDENS (LAT 28 11 06 LONG 082 24 13)												
APR., 1968												
30...	.3	1.7	.06	123	168	95	24	225	7.1	70	6.7	79
02303436 KING LAKE TRIBUTARY LAKE AT DREXEL FLA (LAT 28 14 25 LONG 082 27 20)												
APR., 1968												
30...	--	--	--	--	--	38	31	141	5.9	50	--	--
02303438 KING LAKE AT DREXEL FLA (LAT 28 13 50 LONG 082 27 05)												
APR., 1968												
30...	--	--	--	--	--	24	19	103	6.1	10	--	--
02303439 BELL LAKE NEAR DREXEL FLA (LAT 28 13 15 LONG 082 27 15)												
APR., 1968												
30...	--	--	--	--	--	28	15	115	6.5	5	--	--
02303440 LAKE PADGETT NEAR LUTZ FLA (LAT 28 12 12 LONG 082 27 43)												
APR., 1968												
30...	--	--	--	--	--	37	22	139	7.0	10	--	--
APR., 1968												
30...	.3	1.6	.06	82	93	38	22	151	6.7	5	12.0	143



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

317

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HAR- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
HILLSBOROUGH RIVER BASIN--CONTINUED												
02303486 SAXON LAKE NR DREXEL FLA (LAT 28 12 00 LONG 082 26 55)												
APR., 1968 05...	--	--	--	--	--	60	33	210	6.9	40	--	--
02303513 BIRD LAKE AT LAND OLAKES FLA (LAT 28 10 50 LONG 082 27 10)												
FEB., 1968 28...	--	--	--	--	--	16	10	98	6.1	40	--	--
MAR., 04...	--	--	--	--	--	40	25	146	6.7	35	--	--
02303610 LAKE KELL NEAR LUTZ FLA (LAT 28 10 00 LONG 082 27 60)												
MAR., 1968 05...	--	--	--	--	--	40	30	143	6.4	40	--	--
02303700 LAKE STEMPER NEAR LUTZ FLA (LAT 28 08 09 LONG 082 27 22)												
FEB., 1968 28...	--	--	--	--	--	33	27	132	6.2	20	--	--
APR., 30...	.4	.2	.04	77	96	36	31	151	5.9	10	6.8	86
02303800 CYPRESS CREEK NR SULPHUR SPRINGS (LAT 28 05 20 LONG 082 24 33)												
APR., 1968 29...	.4	1.8	.03	126	184	100	11	250	6.9	80	8.4	104
02303990 COW HOUSE CR NR TEMPLE TERRACE (LAT 28 03 30 LONG 082 21 10)												
APR., 1968 26...	.6	7.5	1.2	332	375	28	0	530	7.6	30	3.6	39
02304000 HILLSBOROUGH R AT FOWLER AVE NR TAMPA (LAT 28 03 15 LONG 082 21 50)												
APR., 1968 26...	.4	.4	.98	181	193	152	9	328	7.7	15	7.8	93
02304200 HILLSBOROUGH RIVER AT HARNEY (LAT 28 00 54 LONG 082 22 30)												
APR., 1968 29...	.4	.3	1.7	209	209	167	5	372	7.4	10	10.0	122
02304300 HILLSBOROUGH R AT 56TH ST NR TAMPA (LAT 28 01 30 LONG 082 23 40)												
APR., 1968 26...	.3	.0	.91	180	181	146	11	318	7.7	10	9.0	106
02304500 HILLSBOROUGH RIVER NEAR TAMPA FLA (LAT 28 01 25 LONG 082 25 40)												
APR., 1968 23...	.5 .9	.0 .8	.88 .28	501 3360	544 --	250 806	112 656	900 6100	7.6 7.3	20 5	6.9 6.7	81 80
02304505 BURRELL LAKE TRIB LAKE (HWO) NEAR NOWATNEY FLA (LAT 28 05 50 LONG 082 27 14)												
APR., 1968 05...	--	--	--	--	--	62	56	210	5.9	30	--	--
02304510 HILLSBOROUGH R AT 22ND ST AT TAMPA (LAT 28 01 15 LONG 082 26 05)												
APR., 1968 29...	1.1	.1	.12	6000	--	1270	1090	10400	7.5	10	--	--
02304700 LAKE HOBBS NEAR LUTZ FLA (LAT 28 09 30 LONG 082 28 00)												
FEB., 1968 28...	--	--	--	--	--	51	48	199	5.7	5	--	--
MAR., 04...	--	--	--	--	--	52	49	190	5.8	5	--	--
APR., 30...	.3	.1	.03	110	136	56	54	202	5.6	0	7.7	--
02305178 SADDLE BACK LAKE NEAR BRUING FLA (LAT 28 07 13 LONG 082 29 44)												
FEB., 1968 28...	--	--	--	--	--	14	9	58	6.1	60	--	--
MAR., 01...	--	--	--	--	--	14	11	62	5.5	40	--	--
01...	--	--	--	--	--	14	8	57	6.2	90	--	--
02305200 ROUND LAKE NEAR LUTZ FLA (LAT 28 07 16 LONG 082 30 04)												
MAY , 1968 21...	.4	1.3	.05	177	--	154	0	329	7.8	5	9.0	118
02305288 LAKE CHARLES NEAR LUTZ FLA (LAT 28 06 56 LONG 082 28 52)												
JUNE, 1968 14...	--	1.0	.46	72	116	32	29	139	5.6	40	--	--
02305408 CHAPMAN LAKE TRIB LAKE (HWO) NEAR NOWATNEY FLA (LAT 28 06 15 LONG 082 27 30)												
APR., 1968 05...	--	--	--	--	--	64	43	192	6.5	50	--	--
02305413 LONG LAKE TRIBUTARY LAKE NR NOWATNEY FLA (LAT 28 05 27 LONG 082 27 32)												
APR., 1968 08...	--	--	--	--	--	54	52	192	5.2	5	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SI02)	DIS-SOLVED IRON (FE)	CALCIUM (CA)	MAGNESIUM (MG)	STRONTIUM (SR)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	SULFATE (SO4)	CHLORIDE (CL)
HILLSBOROUGH RIVER BASIN--CONTINUED												
APR., 1969	05...	02305419	LONG LAKE TRIB LAKE NO 2 (HND) NEAR NOWATNEY FLA	(LAT 28 06 00 LONG 082 27 25)								
		--	29	--	--	--	--	--	--	16	--	--
APR., 1969	05...	02305422	LONG LAKE NEAR NOWATNEY FLA	(LAT 28 05 40 LONG 082 27 35)						4	--	--
		--	33	--	--	--	--	--	--	--	--	--
MAR., 1968	04...	02305434	CHAPMAN LAKE NEAR SULPHUR SPRINGS FLA	(LAT 28 06 18 LONG 082 27 50)						26	--	--
		--	18	--	--	--	--	--	--	--	--	--
APR., 1968	08...	02305598	DRAINAGE DITCH TRIB LAKE NO 2 AT NOWATNEY FLA	(LAT 28 05 01 LONG 082 27 18)						156	--	--
		--	32	--	--	--	--	--	--	--	--	--
APR., 1968	08...	02305600	DRAINAGE DITCH TRIB LAKE (HND) AT NOWATNEY FLA	(LAT 28 05 00 LONG 082 27 23)						45	--	--
		--	31	--	--	--	--	--	--	--	--	--
APR., 1968	30...	02306000	SULPHUR SPRINGS AT SULPHUR SPRINGS FLA	(LAT 28 01 15 LONG 082 27 07)						170	96	238
		--	23	9.0	.01	.93	16	.92	123	4.4	--	--
COASTAL BASINS BETWEEN HILLSBOROUGH RIVER AND WITHLACOOCHIEE RIVER												
MAY , 1968	20...	02306100	OLD TAMPA BAY AT ROCKY POINT FLA	(LAT 27 57 59 LONG 082 33 57)						138	2370	17100
		--	--	2.5	.00	402	1120	6.0	9540	362	--	--
MAY , 1968	21...	02306200	LAKE MAGDALENE NEAR LUTZ FLA	(LAT 28 04 55 LONG 082 29 10)						5	33	20
		--	29	.3	.00	8.8	4.1	.00	11	3.3	--	--
MAY , 1968	20...	02306300	BAY LAKE NEAR SULPHUR SPRINGS FLA	(LAT 28 04 10 LONG 083 30 00)						11	27	23
		--	33	.8	.01	10	4.0	.00	11	1.9	--	--
FEB., 1968	28...	02306600	LAKE CARROLL NEAR SULPHUR SPRINGS FLA	(LAT 28 02 58 LONG 082 29 06)						22	--	--
MAY	20...	--	31	.0	.00	19	4.5	.00	15	4.5	26	38
		--	--	--	--	--	--	--	--	--	--	--
MAY , 1968	20...	02306647	SWEETWATER CREEK NR TAMPA	(LAT 28 00 55 LONG 082 32 31)						14	12	11
		--	27	8.6	.02	7.4	1.6	.04	5.4	1.5	--	--
FEB., 1968	28...	02306800	STARVATION LAKE NEAR LUTZ FLA	(LAT 28 07 22 LONG 082 30 13)						9	--	--
MAY	21...	--	29	1.4	.01	11	2.1	.00	8.1	.8	7	26
		--	--	--	--	--	--	--	--	--	--	--
NOV., 1967	30...	02307028	SAMPLING POINT 1 IN UPPER OLD TAMPA BAY	(LAT 27 59 15 LONG 082 38 01)						132	1980	14400
		--	21	2.8	.00	322	990	5.1	8160	300	--	--
NOV., 1967	30...	02307140	SAMPLING POINT 3 IN UPPER OLD TAMPA BAY	(LAT 28 00 17 LONG 082 40 12)						132	1880	14200
		--	21	3.8	.00	328	965	5.2	8040	290	--	--
NOV., 1967	30...	02307149	SAMPLING POINT 4 IN UPPER OLD TAMPA BAY	(LAT 28 01 04 LONG 082 40 42)						132	1880	14000
		--	21	.0	.00	324	960	5.0	7880	290	--	--
MAY , 1968	21...	02307227	CALM LAKE NR ODESSA	(LAT 28 08 25 LONG 082 35 05)						4	69	25
		--	26	.0	.00	17	7.7	.00	11	8.2	--	--
MAY , 1968	21...	02307243	BROOKER CREEK NEAR ODESSA	(LAT 28 08 49 LONG 082 35 38)						41	11	16
		--	23	1.5	.00	15	1.9	.00	8.2	2.0	--	--
MAY , 1969	27...	02307359	BROOKER CREEK NR TARPON SPRINGS	(LAT 28 05 45 LONG 082 41 15)						136	8.2	60
		--	25	9.3	.94	51	4.3	.12	32	.8	--	--
MAY , 1968	21...	02307378	CHURCH LAKE NR CITRUS PARK	(LAT 28 06 15 LONG 082 36 00)						1	43	25
		--	29	.2	.00	8.1	8.1	.00	10	4.4	--	--
NOV., 1967	30...	02307527	SAMPLING POINT 5 IN UPPER OLD TAMPA BAY	(LAT 28 01 47 LONG 082 41 21)						136	1820	13600
		--	21	4.8	.00	326	920	5.0	7400	285	--	--

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PJ4)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (CA+MG)	NON-CARBONATE SOLIDS (CA+MG)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH	COLOR	DISSOLVED OXYGEN	PERCENT SATURATION
HILLSBOROUGH RIVER BASIN--CONTINUED											
APR., 1968 05...	--	--	--	--	--	46	33	132	6.1	70	--
02305419 LONG LAKE TRIB LAKE NO 2 (HWD) NEAR NOWATNEY FLA (LAT 28 06 00 LONG 082 27 25)											
APR., 1968 05...	--	--	--	--	--	32	29	123	5.5	40	--
02305422 LONG LAKE NEAR NOWATNEY FLA (LAT 28 05 40 LONG 082 27 35)											
APR., 1968 05...	--	--	--	--	--	32	29	123	5.5	40	--
02305434 CHAPMAN LAKE NEAR SULPHUR SPRINGS FLA (LAT 28 06 18 LONG 082 27 50)											
MAR., 1968 04...	--	--	--	--	--	45	24	146	6.9	25	--
02305598 DRAINAGE DITCH TRIB LAKE NO 2 AT NOWATNEY FLA (LAT 28 05 01 LONG 082 27 18)											
APR., 1968 08...	--	--	--	--	--	152	24	323	7.2	120	--
02305600 DRAINAGE DITCH TRIB LAKE (HWD) AT NOWATNEY FLA (LAT 28 05 00 LONG 082 27 23)											
APR., 1968 08...	--	--	--	--	--	54	17	192	6.7	40	--
02306000 SULPHUR SPRINGS AT SULPHUR SPRINGS FLA (LAT 28 01 15 LONG 082 27 07)											
APR., 1968 30...	.5	.0	.23	665	724	299	160	1190	7.5	5	2.2
COASTAL BASINS BETWEEN HILLSBOROUGH RIVER AND WITHLACOOCHIE RIVER											
02306100 OLD TAMPA BAY AT ROCKY POINT FLA (LAT 27 57 59 LONG 082 33 57)											
MAY , 1963 20...	2.9	.0	5.7	32900	--	5620	5510	46870	7.5	5	6.8
02306200 LAKE MAGDALENE NEAR LUTZ (LAT 28 04 55 LONG 082 29 10)											
MAY , 1968 21...	.2	.1	.03	83	--	39	35	168	5.5	0	8.1
02306300 BAY LAKE NEAR SULPHUR SPRINGS FLA (LAT 28 04 10 LONG 083 30 00)											
MAY , 1968 20...	.2	.4	.01	84	108	42	33	158	6.3	5	7.8
02306600 LAKE CARROLL NEAR SULPHUR SPRINGS FLA (LAT 28 02 58 LONG 082 29 06)											
FEB., 1968 28...	--	--	--	--	--	60	42	211	7.0	10	--
MAY 20...	.3	1.5	.07	122	130	64	43	272	6.4	5	8.7
02306647 SWEETWATER CREEK NR TAMPA (LAT 28 00 55 LONG 082 32 31)											
MAY , 1968 20...	.2	.7	.24	55	76	25	14	88	6.5	15	4.6
02306800 STARVATION LAKE NEAR LUTZ FLA (LAT 28 07 22 LONG 082 30 13)											
FEB., 1968 28...	--	--	--	--	--	30	23	100	6.2	40	--
MAY 21...	.2	2.0	.06	68	--	36	30	132	6.9	20	8.1
02307028 SAMPLING POINT 1 IN UPPER OLD TAMPA BAY (LAT 27 59 15 LONG 082 38 01)											
NOV., 1967 30...	3.0	.0	--	26200	--	4830	4770	40000	7.4	0	--
02307140 SAMPLING POINT 3 IN UPPER OLD TAMPA BAY (LAT 28 00 17 LONG 082 40 12)											
NOV., 1967 30...	3.0	.0	--	25800	--	4790	4680	39500	7.2	0	--
02307149 SAMPLING POINT 4 IN UPPER OLD TAMPA BAY (LAT 28 01 04 LONG 082 40 42)											
NOV., 1967 30...	3.0	.3	--	25400	--	4760	4650	39000	7.1	0	--
02307227 CALM LAKE NR ODESSA (LAT 28 08 25 LONG 082 35 05)											
MAY , 1968 21...	.2	.2	.00	140	170	74	71	256	5.5	5	9.0
02307243 BROOKER CREEK NEAR ODESSA (LAT 28 08 49 LONG 082 35 38)											
MAY , 1968 21...	.2	.5	.01	76	--	46	12	150	6.9	10	--
02307359 BROOKER CREEK NR TARPON SPRINGS (LAT 28 05 45 LONG 082 41 15)											
MAY , 1963 27...	.6	3.7	.21	238	311	144	32	432	7.7	100	--
02307378 CHURCH LAKE NR CITRUS PARK (LAT 28 06 15 LONG 082 36 00)											
MAY , 1968 21...	.7	.5	.01	100	130	54	53	198	4.9	0	6.1
02307527 SAMPLING POINT 5 IN UPPER OLD TAMPA BAY (LAT 28 01 47 LONG 082 41 21)											
NOV., 1967 30...	2.9	.0	--	24800	--	4600	4490	37800	7.1	0	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (PPM)	TDS-SOLVED (PPM)	CALCIUM (PPM)	MAGNESIUM (PPM)	SODIUM (PPM)	POTASSIUM (PPM)	BICARBONATE (MG/L)	SULFATE (MG/L)	CHLORIDE (MG/L)
COASTAL BASINS BETWEEN HILLSBOROUGH RIVER AND WITHLACOOCHIE RIVER--CONTINUED											
MAY , 1968 23...	--	29	3.4	.00	405	1110	6.1	9720	354	139	2230 17000
02307578 OLD TAMPA BAY AT SAFETY HARBOR (LAT 27 59 07 LONG 082 41 07)											
NOV.., 1967 30...	--	21	3.8	.00	326	960	5.0	7960	290	128	1920 14100
02307697 ALLIGATOR CREEK AT SAFETY HARBOR (LAT 27 58 47 LONG 082 41 42)											
JAN.., 1968 20...	--	13	--	--	--	--	--	--	--	--	--
MAR.. 11...	--	22	--	--	--	--	--	--	--	--	43
APR.. 18...	--	25	--	--	--	--	--	--	--	--	--
MAY 29...	--	29	2.7	.02	58	9.4	.14	37	7.0	166	40 64
02308858 LONG HAYOU AB NORTH DAM NR LARGO FLA (LAT 27 53 10 LONG 082 46 55)											
MAY , 1968 28...	--	28	17	.07	69	8.5	.20	73	13	201	42 93
02308888 SEMINOLE LAKE AT NORTH DAM NR LARGO (LAT 27 50 20 LONG 082 46 50)											
MAY , 1968 28...	--	29	6.1	.07	73	16	.29	94	14	214	72 145
02308889 SEMINOLE LAKE OUTLET NR LARGO (LAT 27 50 20 LONG 082 46 50)											
MAY , 1968 28...	.00	28	2.3	.06	93	18	.34	89	14	226	76 150
02309044 MCKAY CR AT WALSINGHAM REV NR INDIAN RK (LAT 27 52 45 LONG 082 48 35)											
MAY , 1968 29...	--	29	.4	.00	23	6.9	.11	25	3.0	48	31 48
02309059 MCKAY CR AT TAYLOR AVE RESERVOIR AT LARGO (LAT 27 54 25 LONG 082 48 10)											
MAY , 1968 28...	--	28	1.6	.03	25	6.8	.13	30	8.2	72	37 49
02309258 STEVENSON CREEK AT CLEARWATER (LAT 27 58 19 LONG 082 46 54)											
MAY , 1968 27...	1.2	27	8.3	.04	53	6.5	.16	27	5.2	136	33 59
02309421 CURLEW CREEK NR OZONA (LAT 28 02 24 LONG 082 44 51)											
MAY , 1968 29...	.37	25	9.8	.04	28	5.3	.06	14	2.8	104	.8 23
02309584 LAKE THOMAS AT DREXEL FLA (LAT 28 14 14 LONG 082 28 08)											
FEB.., 1968 28...	--	17	--	--	--	--	--	--	8	--	--
MAY 29...	--	31	1.2	.00	5.0	2.3	.00	7.8	2.0	10	14 16
02309814 CAMP LAKE NEAR DENHAM (LAT 28 11 03 LONG 082 29 26)											
MAY , 1968 29...	--	33	.0	.03	2.3	1.7	.00	5.5	2.1	2	9.0 12
02310100 LAKE DAN NEAR ODESSA (LAT 28 10 00 LONG 082 38 55)											
MAY , 1968 21...	--	27	2.0	.17	3.0	2.0	.00	7.4	.9	25	11 14
02310200 SPRING HAYOU AT TARPON SPRINGS (LAT 28 08 45 LONG 082 45 30)											
MAY , 1968 27...	--	28	.6	.01	360	1080	5.4	9030	350	142	2200 16100
02310220 NEFF LAKE NR BROOKSVILLE FLA (LAT 28 28 44 LONG 082 19 14)											
FEB.., 1968 27...	--	15	--	--	--	--	--	--	10	--	--
02310227 CREWS LAKE NEAR LOYCE NORTH (LAT 28 24 04 LONG 082 30 13)											
MAY , 1968 22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	35	2.3	.18	30	2.3	.04	12	2.8	86	.2 20
02310228 GOOSE LAKE NEAR LOYCE FLA (LAT 28 21 25 LONG 082 28 05)											
FEB.., 1968 28...	--	17	--	--	--	--	--	--	4	--	--
02310229 LAKE Y NR EHREN FLA (LAT 28 19 05 LONG 082 26 50)											
FEB.., 1968 28...	--	20	--	--	--	--	--	--	2	--	--

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (P04)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
COASTAL BASINS BETWEEN HILLSBOROUGH RIVER AND WITHLACOCHEE RIVER--CONTINUED												
02307578 OLD TAMPA BAY AT SAFETY HARBOR (LAT 27 59 17 LONG 082 41 07)												
MAY , 1968 28...	1.0	.0	5.0	30900	--	5580	5470	46200	7.5	5	7.8	99
02307587 SAMPLING POINT 2 IN UPPER OLD TAMPA BAY (LAT 27 59 07 LONG 082 40 23)												
NOV., 1967 30...	1.0	.0	--	25600	--	4770	4670	39000	7.2	0	--	--
02307697 ALLIGATOR CREEK AT SAFETY HARBOR (LAT 27 53 47 LONG 082 41 42)												
JAN., 1968 29...	--	--	--	--	--	--	--	425	--	--	--	--
MAR. 11...	--	--	--	--	--	--	--	450	--	--	--	--
APR. 18...	--	--	--	--	--	--	--	492	--	--	--	--
MAY 28...	.5	1.5	.67	302	355	183	47	550	7.5	25	7.0	90
02308858 LONG BAYOU AB NORTH DAM NR LARGO FLA (LAT 27 53 10 LONG 082 46 55)												
MAY , 1968 28...	.9	2.9	25	437	481	204	40	760	7.0	30	2.2	28
02308888 SEMINOLE LAKE AT NORTH DAM NR LARGO (LAT 27 50 20 LONG 082 46 50)												
MAY , 1968 28...	.7	7.8	4.9	539	609	248	72	950	7.2	50	6.8	87
02308889 SEMINOLE LAKE OUTLET NR LARGO (LAT 27 50 20 LONG 082 46 50)												
MAY , 1968 29...	.9	1.0	2.3	547	643	292	97	980	7.4	20	7.8	--
02309044 MCKAY CR AT WALSINGHAM REV NR INDIAN RK (LAT 27 52 45 LONG 082 48 35)												
MAY , 1968 28...	.4	3.9	.32	166	--	86	47	318	6.9	20	6.8	97
02309059 MCKAY CR AT TAYLOR AVE RESERVOIR AT LARGO (LAT 27 54 25 LONG 082 48 10)												
MAY , 1968 29...	.4	1.2	.08	194	227	90	31	360	6.8	20	8.8	111
02309258 STEVENSON CREEK AT CLEARWATER (LAT 27 58 19 LONG 082 46 54)												
MAY , 1968 29...	1.0	1.3	.66	262	317	158	46	473	7.3	30	3.2	40
02309421 CURLEW CREEK NR OZONA (LAT 28 02 24 LONG 082 44 51)												
MAY , 1968 29...	.4	1.7	.06	144	161	92	7	253	7.4	40	4.8	57
02309584 LAKE THOMAS AT DREXEL FLA (LAT 28 14 14 LONG 082 28 08)												
FEB., 1968 28...	--	--	--	--	--	22	15	91	6.2	5	--	--
MAY 29...	.2	.1	.01	54	59	22	14	127	6.1	0	8.0	106
02309814 CAMP LAKE NEAR DENHAM (LAT 28 11 03 LONG 082 29 26)												
MAY , 1968 29...	.2	1.1	.07	35	--	12	10	72	5.6	35	7.3	100
02310100 LAKE DAN NEAR ODESSA (LAT 28 10 00 LONG 082 38 55)												
MAY , 1968 21...	.2	1.1	.20	54	--	16	0	113	6.5	50	5.6	69
02310200 SPRING BAYOU AT TARPON SPRINGS (LAT 28 08 45 LONG 082 45 30)												
MAY , 1968 27...	1.3	.2	.12	29200	--	5350	5230	43000	7.2	5	5.3	67
02310220 NEFF LAKE NR BROOKSVILLE FLA (LAT 28 28 44 LONG 082 19 14)												
FEB., 1968 27...	--	--	--	--	--	18	10	64	5.9	50	--	--
02310227 CREWS LAKE NEAR LOYCE NORTH (LAT 28 24 04 LONG 082 30 13)												
MAY , 1968 22...	--	--	--	126	187	84	14	--	--	--	--	--
22...	.3	14	.23	--	--	--	--	246	6.5	35	--	--
02310228 GOOSE LAKE NEAR LOYCE FLA (LAT 28 21 25 LONG 082 28 05)												
FEB., 1968 28...	--	--	--	--	--	18	15	74	5.6	30	--	--
02310229 LAKE Y NR EHREN FLA (LAT 28 19 05 LONG 082 26 50)												
FEB., 1968 28...	--	--	--	--	--	27	25	107	4.7	20	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POT- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
COASTAL BASINS BETWEEN HILLSBOROUGH RIVER AND WITHLACOOCHIEE RIVER--CONTINUED												
02310230 LAKE IDLA NEAR SAN ANTONIO FLA (LAT 28 23 28 LONG 082 17 54)												
FEB., 1968	--	14	--	--	--	--	--	--	--	20	--	--
MAY												
01...	--	29	.7	.03	7.2	3.7	.01	8.3	2.8	16	22	14
02310232 LAKE HANCOCK NEAR DIXIE FLA (LAT 28 26 00 LONG 082 19 55)												
FEB., 1968	--	15	--	--	--	--	--	--	--	24	--	--
02310240 JUMPING GULLY AT LOYCE (LAT 28 23 05 LONG 082 29 22)												
MAY, 1968	--	32	1.0	.20	7.7	1.5	.00	7.0	.6	7	7.0	16
02310260 CREWS LAKE NEAR LOYCE FLA (LAT 28 23 30 LONG 082 30 40)												
FEB., 1968	--	19	--	--	--	--	--	--	--	118	--	--
02310280 PITHLACHASCOTEE R NR FIVAY JCT (LAT 28 19 44 LONG 082 32 13)												
MAY, 1968	--	22	8.1	.17	49	2.5	.04	7.6	4.7	150	1.5	15
02310282 LAKE PIERCE AT FIVAY JUNCTION FLA (LAT 28 19 15 LONG 082 30 45)												
FEB., 1968	--	15	--	--	--	--	--	--	--	2	--	--
02310290 MOON LAKE NR NEW PORT RICHEY (LAT 28 17 15 LONG 082 36 49)												
MAY, 1968	--	30	.9	.03	4.5	1.3	.00	7.8	.7	6	6.7	14
02310300 PITHLACHASCOTEE RIVER NR NEW PORT RICHEY FL (LAT 28 15 19 LONG 082 39 37)												
MAY, 1968	.97	27	6.7	.01	55	3.3	.18	4.1	.6	160	10	9.0
JULY												
17...	--	24	6.5	.17	26	2.4	--	8.6	.6	44	26	18
SEP.												
05...	58	27	5.1	.13	19	1.5	--	6.0	.5	48	1.2	12
02310350 BEAR CREEK NR HUDSON (LAT 28 19 10 LONG 082 39 06)												
MAY, 1968	.03	21	6.2	.01	58	2.7	.42	4.7	.5	186	13	85
02310355 BEAR CR BL BEAR SINK NR HUDSON (LAT 28 19 50 LONG 082 40 22)												
MAY, 1968	--	21	.1	.04	45	2.3	.12	10	1.2	132	8.9	20
02310500 WEEKIWACHEE SPRINGS NR BROOKSVILLE (LAT 28 31 00 LONG 082 34 25)												
MAY, 1968	155	24	9.0	.01	46	5.6	.17	3.0	.2	170	6.5	6.0
02310600 GULF OF MEXICO NEAR BAYPORT (LAT 28 32 00 LONG 082 39 01)												
MAY, 1968	--	24	7.1	.00	103	176	1.3	1470	60	170	364	2620
02310650 CHASSAHOWITZKA RIVER NEAR HOMOSASSA (LAT 28 42 54 LONG 082 34 38)												
MAY, 1968	110	25	7.1	.09	53	27	.28	165	5.4	170	43	302
02310678 HOMOSASSA SPGS AT HOMOSASSA SPRINGS (LAT 28 47 58 LONG 082 35 20)												
MAY, 1968	128	24	8.2	.01	50	45	.44	322	12	176	84	580
02310680 MORRISON POND AT LEGANTO (LAT 28 51 26 LONG 082 29 04)												
MAY, 1968	--	27	1.5	.17	5.3	1.2	.00	3.3	.7	17	.0	5.5
02310688 SE FORK HOMOSASSA SPGS AT HOMOSASSA SPGS (LAT 28 47 51 LONG 082 35 23)												
MAY, 1968	52	24	7.5	.00	37	9.2	.06	24	.9	150	9.8	45
02310750 CRYSTAL RIVER NR CRYSTAL RIVER (LAT 28 54 17 LONG 082 38 13)												
MAY, 1968	--	25	5.3	.02	60	90	.64	726	27	136	175	1300
07...	--	27	5.6	.00	67	83	.61	633	24	130	162	1160



**ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA**  
**CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968**

323

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (PO4)	DISTOLVED SOLIDS (SUM OF CONSTITUENTS)	DISTOLVED SOLIDS (RESIDUE AT 180 C) (CA, MG)	HARDNESS (CA, MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH	COLOR	DISSOLVED OXYGEN	PERCENT SATURATION
<b>COASTAL BASINS BETWEEN HILLSBOROUGH RIVER AND WITHLACOOCHIE RIVER--CONTINUED</b>												
<b>02310230 LAKE ISLA NEAR SAN ANTONIO FLA (LAT 28 23 28 LONG 082 17 54)</b>												
FEB., 1968 26...	--	--	--	--	--	35	19	127	6.7	10	--	--
MAY 01...	.3	1.4	.03	68	76	33	20	130	6.4	5	5.7	73
<b>02310232 LAKE HANCOCK NEAR DIXIE FLA (LAT 28 26 00 LONG 082 19 55)</b>												
FEB., 1968 28...	--	--	--	--	--	26	6	90	6.3	30	--	--
<b>02310240 JUMPING GULLY AT LOYCE (LAT 28 23 05 LONG 082 29 22)</b>												
MAY, 1968 22...	.2	6.5	.13	51	114	25	19	94	5.8	120	7.6	103
<b>02310260 CREWS LAKE NEAR LOYCE FLA (LAT 28 23 30 LONG 082 30 40)</b>												
FEB., 1968 28...	--	--	--	--	--	100	3	206	7.4	20	--	--
<b>02310280 PITHLACHASCOTEE R NR FIVAY JCT (LAT 28 19 44 LONG 082 32 13)</b>												
MAY, 1968 27...	.3	4.6	.30	168	202	133	10	301	7.5	70	--	--
<b>02310282 LAKE PIERCE AT FIVAY JUNCTION FLA (LAT 28 19 15 LONG 082 30 45)</b>												
FEB., 1968 28...	--	--	--	--	--	18	16	77	5.1	10	--	--
<b>02310290 MOON LAKE NR NEW PORT RICHEY (LAT 28 17 15 LONG 082 36 49)</b>												
MAY, 1968 27...	.3	.3	.01	40	54	16	11	85	6.0	5	8.8	116
<b>02310300 PITHLACHASCOTEE RIVER NR NEW PORT RICHEY FL (LAT 28 15 19 LONG 082 39 37)</b>												
MAY, 1968 27...	.6	2.0	.12	170	182	150	19	308	7.8	5	7.8	96
JULY 17...	.5	.5	--	111	188	75	39	196	6.9	180	--	--
SEP. 05...	.4	.0	--	69	120	51	12	116	6.6	240	--	--
<b>02310350 BEAR CREEK NR HUDSON (LAT 28 19 10 LONG 082 39 06)</b>												
MAY, 1968 22...	.2	.3	.02	187	183	156	3	310	7.4	15	5.8	64
<b>02310355 BEAR CR BL BEAR SINK NR HUDSON (LAT 28 19 50 LONG 082 40 22)</b>												
MAY, 1968 22...	.5	1.4	.07	155	190	123	15	293	7.5	60	--	--
<b>02310500 WEEKINACHEE SPRINGS NR BROOKSVILLE (LAT 28 31 00 LONG 082 34 25)</b>												
MAY, 1968 01...	.2	1.1	.03	161	161	138	0	282	7.5	0	1.7	20
<b>02310600 GULF OF MEXICO NEAR BAYPORT (LAT 28 32 00 LONG 082 39 01)</b>												
MAY, 1968 01...	.7	.5	.00	4890	--	982	863	8650	7.5	5	6.4	75
<b>02310650 CHASSAHOWITZKA RIVER NEAR HOMOSASSA (LAT 28 42 54 LONG 082 34 38)</b>												
MAY, 1968 01...	.4	.0	.13	637	742	244	105	1330	7.5	5	9.0	107
<b>02310678 HOMOSASSA SPGS AT HOMOSASSA SPRINGS (LAT 28 47 58 LONG 082 35 20)</b>												
MAY, 1968 02...	.4	.0	.30	1170	--	310	198	2220	7.4	0	4.2	49
<b>02310680 MORRISON POND AT LEGATO (LAT 28 51 26 LONG 082 29 04)</b>												
MAY, 1968 02...	.3	2.7	.14	29	42	18	4	58	6.6	80	8.4	104
<b>02310688 SE FORK HOMOSASSA SPGS AT HOMOSASSA SPGS (LAT 28 47 51 LONG 082 35 23)</b>												
MAY, 1968 02...	.2	.2	.14	208	202	130	7	368	7.5	0	6.5	76
<b>02310750 CRYSTAL RIVER NR CRYSTAL RIVER (LAT 28 54 17 LONG 082 38 13)</b>												
MAY, 1968 02...	.6	.0	.53	2450	--	520	408	4480	7.4	0	7.8	93
31...	.3	.0	.07	2190	--	496	389	4010	7.5	0	8.5	105

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (GFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PJ- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
WITHLACOOCHEE RIVER BASIN												
02310760 LAKE JULIANA NR POLK CITY (LAT 28 07 51 LONG 081 47 45)												
JAN., 1968												
07...	--	18	--	--	--	--	--	--	--	--	--	--
MAR.												
25...	--	23	--	--	--	--	--	--	--	--	--	--
APR.												
30...	--	25	1.1	.01	4.1	5.2	.00	16	3.4	16	23	24
JUNE												
18...	--	20	--	--	--	--	--	--	--	--	--	--
SEP.												
16...	--	28	--	--	--	--	--	--	--	--	--	--
02310850 LAKE HELFNE NR POLK CITY FLA (LAT 28 10 25 LONG 081 48 21)												
NOV., 1967												
20...	--	21	--	--	--	--	--	--	--	--	--	--
FEB., 1968												
12...	--	15	--	--	--	--	--	--	--	--	--	--
MAR.												
25...	--	19	--	--	--	--	--	--	--	--	--	--
APR.												
30...	--	25	1.0	.01	4.4	4.3	.00	13	2.6	9	24	20
SEP.												
16...	--	29	--	--	--	--	--	--	--	--	--	--
02310947 WITHLACOOCHEE RIVER NR CUMPRESSCO FLA (LAT 28 18 42 LONG 082 03 22)												
OCT., 1967												
05... 574		23	--	--	--	--	--	--	--	--	--	--
NOV.												
14... 4.8		18	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
04... 1.9		20	--	--	--	--	--	--	--	--	--	--
FEB.												
16... 2.0		16	--	--	--	--	--	--	--	--	--	--
APR.												
04... .80		22	--	--	--	--	--	--	--	--	--	--
29... .01		22	1.1	.00	41	3.2	.14	12	2.6	116	4.8	28
JUNE												
19... 646		24	--	--	--	--	--	--	--	--	--	--
JULY												
16... 1070		25	--	--	--	--	--	--	--	--	--	--
SEP.												
04... 997		26	--	--	--	--	--	--	--	--	--	--
02310950 LAKE OFESON NR LAKELAND FLA (LAT 28 06 37 LONG 081 55 51)												
NOV., 1967												
20...	--	20	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
02... 32	--	18	--	--	--	--	--	--	--	--	--	--
FEB.												
12... 15	--	15	--	--	--	--	--	--	--	--	--	--
MAR.												
25... 24	--	24	--	--	--	--	--	--	--	--	--	--
APR.												
30... 25	--	25	.8	.03	4.6	3.1	.00	8.8	1.3	2	23	14
JUNE												
18... 23	--	23	--	--	--	--	--	--	--	--	--	--
SEP.												
16... 23	--	23	--	--	--	--	--	--	--	--	--	--
02311600 CLEAR LAKE AT SAN ANTONIO FLA (LAT 28 20 20 LONG 082 16 02)												
DEC., 1967												
21... 120	--	--	--	--	--	--	--	120	--	--	--	--
JAN., 1968												
06... 170	--	--	--	--	--	--	--	170	--	--	--	--
FEB.												
16... 178	--	--	--	--	--	--	--	178	--	--	--	--
27... .3	--	1.3	--	97	110	49	13	179	6.5	0	--	--
28... 208	--	--	--	--	--	57	15	208	6.4	20	--	--
APR.												
02... 185	--	--	--	--	--	--	--	185	--	--	--	--
29... .3	--	2.2	.16	100	105	50	9	191	6.8	5	7.7	92
JUNE												
24... 236	--	--	--	--	--	--	--	236	--	--	--	--
JULY												
25... 170	--	--	--	--	--	--	--	170	--	--	--	--
02311655 FERGUSON LAKE NEAR DADE CITY FLA (LAT 28 21 15 LONG 082 10 15)												
FEB., 1968												
27... 14	--	--	--	--	--	14	3	66	6.2	45	--	--
02311700 DADE CITY CANAL NR DADE CITY FLA (LAT 28 22 52 LONG 082 11 12)												
NOV., 1967												
14... 310	--	--	--	--	--	--	--	310	--	--	--	--
JAN., 1968												
04... 300	--	--	--	--	--	--	--	300	--	--	--	--
FEB.												
19... 300	--	--	--	--	--	--	--	300	--	--	--	--
APR.												
05... 350	--	--	--	--	--	--	--	350	--	--	--	--
29... .2	--	2.4	.46	191	196	148	10	330	7.5	30	3.8	47
JUNE												
18... 312	--	--	--	--	--	--	--	312	--	--	--	--
JULY												
26... 240	--	--	--	--	--	--	--	240	--	--	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

325

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
WITHLACOOCHIE RIVER BASIN												
02310760 LAKE JULIANA NR POLK CITY (LAT 28 07 51 LONG 081 47 45)												
JAN., 1968								160	--	--	--	--
02...	--	--	--	--	--	--	--					
MAR.								140	--	--	--	--
25...	--	--	--	--	--	--	--					
APR.								166	6.1	20	9.8	117
30...	.4	1.7	.00	87	100	32	19					
JUNE								160	--	--	--	--
18...	--	--	--	--	--	--	--					
SEP.								150	--	--	--	--
16...	--	--	--	--	--	--	--					
02310850 LAKE HELENE NR POLK CITY FLA (LAT 28 10 25 LONG 081 48 21)												
NOV., 1967								120	--	--	--	--
20...	--	--	--	--	--	--	--					
FEB., 1968								185	--	--	--	--
12...	--	--	--	--	--	--	--					
MAR.								130	--	--	--	--
25...	--	--	--	--	--	--	--					
APR.								143	6.2	5	9.4	112
30...	.3	1.1	.06	75	85	28	21					
SEP.								110	--	--	--	--
16...	--	--	--	--	--	--	--					
02310947 WITHLACOOCHIE RIVER NR CUMPRESCO FLA (LAT 28 18 42 LONG 082 03 22)												
OCT., 1967								52	--	--	--	--
05...	--	--	--	--	--	--	--					
NOV.								92	--	--	--	--
14...	--	--	--	--	--	--	--					
JAN., 1968								149	--	--	--	--
04...	--	--	--	--	--	--	--					
FEB.								211	--	--	--	--
16...	--	--	--	--	--	--	--					
APR.								193	--	--	--	--
04...	--	--	--	--	--	--	--					
29...	.3	4.6	.26	155	207	116	21	285	7.4	60	7.2	82
JUNE								128	--	--	--	--
19...	--	--	--	--	--	--	--					
JULY								62	--	--	--	--
16...	--	--	--	--	--	--	--					
SEP.								68	--	--	--	--
04...	--	--	--	--	--	--	--					
02310950 LAKE DEESON NR LAKELAND FLA (LAT 28 06 37 LONG 081 55 51)												
NOV., 1967								848	--	--	--	--
20...	--	--	--	--	--	--	--					
JAN., 1968								82	--	--	--	--
02...	--	--	--	--	--	--	--					
FEB.								102	--	--	--	--
02...	--	--	--	--	--	--	--					
MAR.								110	--	--	--	--
25...	--	--	--	--	--	--	--					
APR.								117	5.1	10	9.1	108
30...	.3	1.9	.10	50	71	24	22					
JUNE								94	--	--	--	--
18...	--	--	--	--	--	--	--					
SEP.								83	--	--	--	--
16...	--	--	--	--	--	--	--					
02311600 CLEAR LAKE AT SAN ANTONIO FLA (LAT 28 20 20 LONG 082 16 02)												
DEC., 1967								6.9	1.3	--	--	--
21...	--	--	--	--	11	1.4	--					
JAN., 1968					--	--	--	--	--	--	--	--
04...	--	19	--	--	--	--	--					
FEB.					--	--	--	--	--	--	--	--
16...	--	15	--	--	--	--	--					
27...	--	16	.8	.00	12	4.6	--	13	3.7	44	13	26
28...	--	16	--	--	--	--	--			51	--	--
APR.					--	--	--	--	--	--	--	--
02...	--	23	--	--	--	--	--					
29...	--	25	.1	.04	12	4.7	.00	14	3.9	50	13	25
JUNE					--	--	--	--	--	--	--	--
24...	--	29	--	--	--	--	--					
JULY					--	--	--	--	--	--	--	--
25...	--	31	--	--	--	--	--					
02311655 FERGUSON LAKE NEAR DADE CITY FLA (LAT 28 21 15 LONG 082 10 15)												
FEB., 1968								--	--	13	--	--
27...	--	15	--	--	--	--	--					
02311700 DADE CITY CANAL NR DADE CITY FLA (LAT 28 22 52 LONG 082 11 12)												
NOV., 1967								--	--	--	--	--
14...	26	26	--	--	--	--	--					
JAN., 1968								--	--	--	--	--
04...	49	27	--	--	--	--	--					
FEB.								--	--	--	--	--
19...	21	18	--	--	--	--	--					
APR.								--	--	--	--	--
05...	--	25	--	--	--	--	--					
29...	33	27	8.2	.01	49	6.0	.24	12	.9	168	14	15
JUNE								--	--	--	--	--
15...	62	32	--	--	--	--	--					
JULY								--	--	--	--	--
26...	11	28	--	--	--	--	--					

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER. WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (P34)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
WITHLACOOCHIEE RIVER BASIN--CONTINUED												
02312000 WITHLACOOCHIEE RIVER AT TRILLY FLA (LAT 28 28 47 LONG 082 10 40)												
OCT., 1967												
05...	--	--	--	--	--	--	--	150	--	--	--	--
NOV.												
14...	--	--	--	--	--	--	--	270	--	--	--	--
JAN., 1968												
04...	--	--	--	--	--	--	--	295	--	--	--	--
FEB.												
19...	--	--	--	--	--	--	--	319	--	--	--	--
APR.												
05...	--	--	--	--	--	--	--	361	--	--	--	--
29...	.2	.7	.03	191	196	160	9	330	7.7	10	9.9	109
JUNE												
18...	--	--	--	--	--	--	--	127	--	--	--	--
JULY												
26...	--	--	--	--	--	--	--	58	--	--	--	--
02312016 LAKE BLANTON AT BLANTON FLA (LAT 28 24 10 LONG 082 14 50)												
FEB., 1968												
27...	--	--	--	--	--	25	14	86	6.1	45	--	--
02312022 LAKE DOWLING NEAR BLANTON FLA (LAT 28 26 10 LONG 082 14 55)												
FEB., 1968												
27...	--	--	--	--	--	23	0	109	6.3	50	--	--
02312100 SPRING LAKE NEAR BROOKSVILLE FLA (LAT 28 29 35 LONG 082 17 52)												
FEB., 1968												
28...	--	--	--	--	--	41	15	130	6.8	15	--	--
02312134 BAY LAKE AT BAY LAKE (LAT 28 29 00 LONG 081 54 26)												
AUG., 1969												
06...	.2	.4	.08	30	48	11	8	63	6.2	50	--	--
02312140 BAYDON'T SLOUGH HEADWATERS NEAR BAY LAKE, FLA (LAT 29 27 23 LONG 081 55 14)												
NOV., 1967												
10...	--	--	--	--	--	--	--	57	--	--	--	--
JAN., 1968												
04...	--	--	--	--	--	--	--	65	--	--	--	--
FEB.												
15...	--	--	--	--	--	--	--	60	--	--	--	--
MAR.												
20...	--	--	--	--	--	--	--	67	--	--	--	--
MAY												
02...	.2	.0	.49	41	97	15	8	96	5.7	200	.4	4
JUNE												
17...	--	--	--	--	--	--	--	95	--	--	--	--
SEP.												
20...	--	--	--	--	--	--	--	62	--	--	--	--
02312150 LAKE CATHERINE AT GROVELAND FLA (LAT 28 34 27 LONG 081 51 37)												
NOV., 1967												
17...	--	--	--	--	--	--	--	280	--	--	--	--
JAN., 1968												
03...	--	--	--	--	--	--	--	330	--	--	--	--
FEB.												
13...	--	--	--	--	--	--	--	340	--	--	--	--
APR.												
02...	--	--	--	--	--	--	--	330	--	--	--	--
MAY												
07...	.2	.5	.13	194	191	110	0	337	7.6	10	10.0	122
JUNE												
17...	--	--	--	--	--	--	--	318	--	--	--	--
SEP.												
19...	--	--	--	--	--	--	--	180	--	--	--	--
02312180 LITTLE WITHLACOOCHIEE RIVER NR TARRYTOWN FLA (LAT 28 31 17 LONG 082 03 18)												
OCT., 1967												
05...	--	--	--	--	--	--	--	42	--	--	--	--
NOV.												
16...	--	--	--	--	--	--	--	58	--	--	--	--
APR., 1968												
04...	--	--	--	--	--	--	--	169	--	--	--	--
JAN.												
04...	--	--	--	--	--	--	--	76	--	--	--	--
FEB.												
15...	--	--	--	--	--	--	--	142	--	--	--	--
JUNE												
19...	--	--	--	--	--	--	--	168	--	--	--	--
JULY												
16...	--	--	--	--	--	--	--	65	--	--	--	--
AUG.												
27...	--	--	--	--	--	--	--	42	--	--	--	--
02312500 WITHLACOOCHIEE RIVER AT GROOM FLA (LAT 28 35 33 LONG 082 13 20)												
NOV., 1967												
14...	--	--	--	--	--	--	--	260	--	--	--	--
JAN., 1968												
04...	--	--	--	--	--	--	--	270	--	--	--	--
FEB.												
16...	--	--	--	--	--	--	--	320	--	--	--	--
APR.												
07...	--	--	--	--	--	--	--	311	--	--	--	--
30...	.2	1.1	.06	191	174	156	8	321	7.9	10	6.4	78
JUNE												
20...	--	--	--	--	--	--	--	142	--	--	--	--
JULY												
25...	--	--	--	--	--	--	--	69	--	--	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

	VIS- CHARGE (CFS)	TEMP- PERATURE (DEG C)	SILICA (SI/32)	DIS- SOLVED IRON (PPM)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POTAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLOR- IDE (CL)
WITHLACOOCHEE RIVER BASIN--CONTINUED												
02312520 LAKE LINDSEY NEAR BROOKSVILLE FLA (LAT 28 37 4 LONG 082 21 45)												
OCT., 1967												
25...	--	27	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
04...	--	--	--	--	--	--	--	--	--	--	--	--
FEB.												
16...	--	14	--	--	--	--	--	--	--	--	--	--
APR.												
02...	--	24	--	--	--	--	--	--	--	--	--	--
10...	--	27	.6	.04	3.6	.9	.00	4.1	1.2	11	1.0	9.2
JULY												
26...	--	32	--	--	--	--	--	--	--	--	--	--
02312527 LAKE HUSTPE NEAR BROOKSVILLE FLA (LAT 28 32 40 LONG 082 19 40)												
FEB., 1968												
23...	--	12	--	--	--	--	--	--	--	107	--	--
02312530 BLUE SINK DRAIN NR BROOKSVILLE FLA (LAT 28 36 30 LONG 082 20 21)												
OCT., 1967												
27...	--	24	--	--	--	--	--	--	--	--	--	--
MAY, 1968												
10...	--	24	1.6	.04	23	4.6	.08	2.9	.5	112	3.0	6.0
02312600 WITHLACOOCHEE RIVER NR FLORAL CITY FLA (LAT 28 44 36 LONG 082 13 13)												
OCT., 1967												
06... 550		24	--	--	--	--	--	--	--	--	--	--
NOV.												
13... 172		19	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
05... 101		20	5.9	.05	54	3.6	--	5.9	.6	170	8.8	12
FEB.												
20... 194		13	--	--	--	--	--	--	--	--	--	--
APR.												
11... 51		23	--	--	--	--	--	--	--	--	--	--
MAY												
02... 28		27	2.9	.13	54	3.8	.14	6.9	.8	172	7.0	18
JUNE												
21... 263		29	--	--	--	--	--	--	--	--	--	--
JULY												
31... 1350		28	--	--	--	--	--	--	--	--	--	--
02312640 JUMPER CREEK CANAL NR BUSHWELL FLA (LAT 28 41 45 LONG 082 06 34)												
NOV., 1967												
15... 17		21	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
02... 15		22	--	--	--	--	--	--	--	--	--	--
FEB.												
19... 163		15	--	--	--	--	--	--	--	--	--	--
APR.												
04... --		27	--	--	--	--	--	--	--	--	--	--
MAY												
01... 9.4		20	4.4	.03	92	1.7	.00	9.1	.1	272	3.2	23
JUNE												
20... 21		26	--	--	--	--	--	--	--	--	--	--
JULY												
18... 37		24	--	--	--	--	--	--	--	--	--	--
SEP.												
06... 33		28	--	--	--	--	--	--	--	--	--	--
02312685 WALLED SINK DRAIN NR COLEMAN FLA (LAT 28 45 05 LONG 082 02 05)												
FEB., 1968												
21...	--	15	--	--	--	--	--	--	--	--	--	--
MAY												
10...	--	23	5.1	.02	86	2.0	.10	5.3	.4	270	.3	14
02312690 LAKE PANASOFFKEE NR LAKE PANASOFFKEE FLA (LAT 23 48 30 LONG 082 08 10)												
NOV., 1967												
15...	--	19	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
02...	--	19	--	--	--	--	--	--	--	--	--	--
FEB.												
21...	--	14	--	--	--	--	--	--	--	--	--	--
APR.												
09...	--	25	--	--	--	--	--	--	--	--	--	--
MAY												
01...	--	27	2.5	.00	42	5.2	.41	5.1	.2	108	34	12
JUNE												
17...	--	28	--	--	--	--	--	--	--	--	--	--
JULY												
26...	--	33	--	--	--	--	--	--	--	--	--	--
SEP.												
09...	--	30	--	--	--	--	--	--	--	--	--	--

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
WITHLACOOCHIEE RIVER BASIN--CONTINUED												
02312520 LAKE LINDSEY NEAR BROOKSVILLE FLA (LAT 28 37 43 LONG 082 21 45)												
OCT., 1967								40	--	--	--	--
25...	--	--	--	--	--	--	--					
JAN., 1968								46	--	--	--	--
04...	--	--	--	--	--	--	--					
FEB.								50	--	--	--	--
16...	--	--	--	--	--	--	--					
APR.								55	--	--	--	--
02...	--	--	--	--	--	--	--					
30...	.2	1.7	.11	28	53	12	3	53	6.1	40	9.4	116
JULY												
26...	--	--	--	--	--	--	--	58	--	--	--	--
02312527 LAKE BYSTRE NEAR BROOKSVILLE FLA (LAT 28 32 40 LONG 082 19 40)												
FEB., 1968								219	7.0	15	--	--
28...	--	--	--	--	--	98	10					
02312530 BLUE SINK DRAIN NR BROOKSVILLE FLA (LAT 28 36 30 LONG 082 20 21)												
OCT., 1967								200	--	--	--	--
27...	--	--	--	--	--	--	--					
MAY, 1968								192	7.2	0	12.0	141
10...	.2	.8	.24	103	105	89	0					
02312600 WITHLACOOCHIEE RIVER NR FLORAL CITY FLA (LAT 28 44 36 LONG 082 13 13)												
OCT., 1967								159	--	--	--	--
06...	--	--	--	--	--	--	--					
NOV.								240	--	--	--	--
13...	--	--	--	--	--	--	--					
JAN., 1968								316	7.3	30	--	--
05...	.2	.2	--	175	188	150	11					
FEB.								308	--	--	--	--
20...	--	--	--	--	--	--	--					
APR.								311	--	--	--	--
11...	--	--	--	--	--	--	--					
MAY								311	7.5	20	6.9	85
02...	.2	1.6	.03	180	180	150	9					
JUNE								215	--	--	--	--
21...	--	--	--	--	--	--	--					
JULY								69	--	--	--	--
31...	--	--	--	--	--	--	--					
02312640 JUMPER CREEK CANAL NR BUSHNELL FLA (LAT 28 41 45 LONG 082 06 34)												
NOV., 1967								440	--	--	--	--
15...	--	--	--	--	--	--	--					
JAN., 1968								410	--	--	--	--
02...	--	--	--	--	--	--	--					
FEB.								447	--	--	--	--
19...	--	--	--	--	--	--	--					
APR.								443	--	--	--	--
06...	--	--	--	--	--	--	--					
MAY								461	8.0	5	8.7	95
01...	.2	1.0	.11	269	261	236	13					
JUNE								472	--	--	--	--
20...	--	--	--	--	--	--	--					
JULY								360	--	--	--	--
18...	--	--	--	--	--	--	--					
SEP.								310	--	--	--	--
04...	--	--	--	--	--	--	--					
02312685 HALLED SINK DRAIN NR COLEMAN FLA (LAT 28 45 05 LONG 082 02 05)												
FEB., 1968								230	--	--	--	--
21...	--	--	--	--	--	--	--					
MAY								434	7.6	5	7.0	80
10...	.1	.2	.11	247	247	222	1					
02312690 LAKE PANASOFFKEE NR LAKE PANASOFFKEE FLA (LAT 28 48 30 LONG 082 08 10)												
NOV., 1967								290	--	--	--	--
15...	--	--	--	--	--	--	--					
JAN., 1968								300	--	--	--	--
02...	--	--	--	--	--	--	--					
FEB.								300	--	--	--	--
21...	--	--	--	--	--	--	--					
APR.								358	--	--	--	--
09...	--	--	--	--	--	--	--					
MAY								268	7.6	0	7.5	93
01...	.3	2.0	.00	157	177	127	38					
JUNE								305	--	--	--	--
17...	--	--	--	--	--	--	--					
JULY								320	--	--	--	--
24...	--	--	--	--	--	--	--					
SEP.								250	--	--	--	--
09...	--	--	--	--	--	--	--					

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	TEMP-ERATURE (DEG C)	DIS-SOLVED SILICA (SI02)	CAL-CIUM (CA)	MAG-NE-SIUM (MG)	STRON-TIUM (SR)	SODIUM (NA)	POT-ASSIUM (K)	BICAR-BONATE (HC03)	SULFATE (SO4)	CHLORIDE (CL)
WITHLACODOCHEE RIVER BASIN--CONTINUED											
02312700 OUTLET RIVER AT PANACHODOCHEE RETREATS (LAT 28 48 33 LONG 082 08 10)											
NOV., 1967	15...	155	19	--	--	--	--	--	--	--	--
JAN., 1968	07...	163	19	--	--	--	--	--	--	--	--
FEB.	21...	110	14	--	--	--	--	--	--	--	--
APR.	12...	--	21	--	--	--	--	--	--	--	--
MAY	01...	68	26	2.4	.00	43	5.3	.43	5.1	.2	112
JUNE	20...	137	23	--	--	--	--	--	--	--	34
JULY	26...	166	28	--	--	--	--	--	--	--	10
SEP.	09...	317	30	--	--	--	--	--	--	--	--
02312720 WITHLACODOCHEE R R HL WYSONG DAM AT CARLSON FLA (LAT 28 49 24 LONG 082 10 59)											
NOV., 1967	15...	415	19	--	--	--	--	--	--	--	--
JAN., 1968	07...	378	19	--	--	--	--	--	--	--	--
FEB.	21...	430	14	--	--	--	--	--	--	--	--
APR.	09...	192	24	--	--	--	--	--	--	--	--
MAY	01...	197	26	1.6	.01	47	5.1	.38	5.8	.7	124
JUNE	20...	428	29	--	--	--	--	--	--	--	29
JULY	29...	1250	29	--	--	--	--	--	--	--	12
SEP.	07...	1750	28	--	--	--	--	--	--	--	--
02312772 WITHLACODOCHEE-TSALA APOPKA DIV CA NR FLORAL CITY (LAT 28 45 20 LONG 082 13 50)											
OCT., 1967	06...	43	23	--	--	--	--	--	--	--	--
NOV.	13...	6.5	18	--	--	--	--	--	--	--	--
JAN., 1968	05...	3.1	19	--	--	--	--	--	--	--	--
FEB.	20...	15	12	--	--	--	--	--	--	--	--
APR.	11...	4.9	23	--	--	--	--	--	--	--	--
MAY	02...	7.8	25	2.7	.00	54	3.8	.19	6.4	.9	172
JUNE	21...	51	28	--	--	--	--	--	--	--	5.3
JULY	31...	134	28	--	--	--	--	--	--	--	14
0231786 THE CANAL (ORANGE STATE CANAL) NR FLORAL CITY FLA (LAT 28 44 48 LONG 082 15 49)											
OCT., 1967	06...	47	23	--	--	--	--	--	--	--	--
NOV.	14...	7.9	17	--	--	--	--	--	--	--	--
JAN., 1968	07...	4.5	18	--	--	--	--	--	--	--	--
FEB.	20...	.00	11	--	--	--	--	--	--	--	--
APR.	11...	3.3	22	--	--	--	--	--	--	--	--
MAY	02...	4.8	23	3.1	.00	54	3.8	.19	6.2	.8	176
JUNE	21...	38	29	--	--	--	--	--	--	--	5.3
JULY	31...	82	27	--	--	--	--	--	--	--	12
02312800 TSALA-APOPKA LAKE AT FLORAL CITY FLA (LAT 28 45 03 LONG 082 16 49)											
NOV., 1967	13...	--	17	--	--	--	--	--	--	--	--
FEB., 1968	24...	--	11	--	--	--	--	--	--	--	--
APR.	11...	--	22	--	--	--	--	--	--	--	--
MAY	02...	--	24	2.9	.00	52	3.6	.19	6.5	.9	164
JULY	29...	--	29	--	--	--	--	--	--	--	5.0
02312900 TSALA-APOPKA LAKE AT INVERNESS FLA (LAT 28 50 39 LONG 082 19 21)											
NOV., 1967	13...	--	18	--	--	--	--	--	--	--	--
FEB., 1968	20...	--	13	--	--	--	--	--	--	--	--
APR.	11...	--	23	--	--	--	--	--	--	--	--
MAY	02...	--	25	1.6	.03	21	1.8	.02	6.3	.8	66
JULY	29...	--	31	--	--	--	--	--	--	--	.8



## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (P14)	(SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOLVED SOLIDS (HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
WITHLACOOCHIEE RIVER BASIN--CONTINUED												
02312700 OUTLET RIVER AT PANACHOCHEE RETREATS (LAT 28 48 30 LONG 082 08 10)												
NOV., 1967	--	--	--	--	--	--	--	290	--	--	--	--
15...	--	--	--	--	--	--	--	290	--	--	--	--
JAN., 1968	--	--	--	--	--	--	--	300	--	--	--	--
02...	--	--	--	--	--	--	--	300	--	--	--	--
FEB.	--	--	--	--	--	--	--	297	--	--	--	--
21...	--	--	--	--	--	--	--	289	--	--	--	--
APR.	--	--	--	--	--	--	--	289	--	--	--	--
12...	--	--	--	--	--	--	--	278	--	--	--	--
MAY	--	--	--	--	--	--	--	278	--	--	--	--
01...	.3	1.4	.01	157	188	130	38	278	7.3	D	5.7	70
JUNE	--	--	--	--	--	--	--	278	--	--	--	--
20...	--	--	--	--	--	--	--	250	--	--	--	--
JULY	--	--	--	--	--	--	--	250	--	--	--	--
26...	--	--	--	--	--	--	--	250	--	--	--	--
SEP.	--	--	--	--	--	--	--	250	--	--	--	--
09...	--	--	--	--	--	--	--	250	--	--	--	--
02312720 WITHLACOOCHIEE R BL WYSSING DAM AT CARLSON FLA (LAT 28 49 24 LONG 082 10 59)												
NOV., 1967	--	--	--	--	--	--	--	270	--	--	--	--
15...	--	--	--	--	--	--	--	330	--	--	--	--
JAN., 1968	--	--	--	--	--	--	--	330	--	--	--	--
02...	--	--	--	--	--	--	--	340	--	--	--	--
FEB.	--	--	--	--	--	--	--	328	--	--	--	--
21...	--	--	--	--	--	--	--	328	--	--	--	--
APR.	--	--	--	--	--	--	--	290	7.4	10	9.0	110
09...	--	--	--	--	--	--	--	330	--	--	--	--
MAY	--	--	--	--	--	--	--	150	--	--	--	--
01...	.3	1.3	.02	164	171	139	37	150	--	--	--	--
JUNE	--	--	--	--	--	--	--	140	--	--	--	--
20...	--	--	--	--	--	--	--	140	--	--	--	--
JULY	--	--	--	--	--	--	--	140	--	--	--	--
27...	--	--	--	--	--	--	--	140	--	--	--	--
SEP.	--	--	--	--	--	--	--	140	--	--	--	--
09...	--	--	--	--	--	--	--	140	--	--	--	--
02312772 WITHLACOOCHIEE-TSALA APOPKA DIV CA NR FLORAL CITY (LAT 28 45 20 LONG 082 13 50)												
OCT., 1967	--	--	--	--	--	--	--	152	--	--	--	--
06...	--	--	--	--	--	--	--	240	--	--	--	--
NOV.	--	--	--	--	--	--	--	240	--	--	--	--
13...	--	--	--	--	--	--	--	300	--	--	--	--
JAN., 1968	--	--	--	--	--	--	--	310	--	--	--	--
05...	--	--	--	--	--	--	--	315	--	--	--	--
FEB.	--	--	--	--	--	--	--	311	7.7	20	6.2	74
20...	--	--	--	--	--	--	--	192	--	--	--	--
APR.	--	--	--	--	--	--	--	192	--	--	--	--
11...	--	--	--	--	--	--	--	75	--	--	--	--
MAY	--	--	--	--	--	--	--	75	--	--	--	--
02...	.2	1.2	.01	174	192	150	9	75	--	--	--	--
JUNE	--	--	--	--	--	--	--	75	--	--	--	--
21...	--	--	--	--	--	--	--	75	--	--	--	--
JULY	--	--	--	--	--	--	--	75	--	--	--	--
31...	--	--	--	--	--	--	--	75	--	--	--	--
02312786 THE CANAL (ORANGE STATE CANAL) NR FLORAL CITY FLA (LAT 28 44 48 LONG 082 15 49)												
OCT., 1967	--	--	--	--	--	--	--	129	--	--	--	--
06...	--	--	--	--	--	--	--	225	--	--	--	--
NOV.	--	--	--	--	--	--	--	225	--	--	--	--
13...	--	--	--	--	--	--	--	220	--	--	--	--
JAN., 1968	--	--	--	--	--	--	--	301	--	--	--	--
05...	--	--	--	--	--	--	--	290	--	--	--	--
FEB.	--	--	--	--	--	--	--	310	--	--	--	--
20...	--	--	--	--	--	--	--	310	--	--	--	--
APR.	--	--	--	--	--	--	--	311	7.7	20	3.9	45
11...	--	--	--	--	--	--	--	196	--	--	--	--
MAY	--	--	--	--	--	--	--	196	--	--	--	--
02...	.2	1.3	.00	174	192	150	6	82	--	--	--	--
JUNE	--	--	--	--	--	--	--	82	--	--	--	--
21...	--	--	--	--	--	--	--	82	--	--	--	--
JULY	--	--	--	--	--	--	--	82	--	--	--	--
31...	--	--	--	--	--	--	--	82	--	--	--	--
02312800 TSALA-APOPKA LAKE AT FLORAL CITY FLA (LAT 28 45 03 LONG 082 16 49)												
NOV., 1967	--	--	--	--	--	--	--	210	--	--	--	--
13...	--	--	--	--	--	--	--	201	--	--	--	--
FEB., 1968	--	--	--	--	--	--	--	201	--	--	--	--
29...	--	--	--	--	--	--	--	231	--	--	--	--
APR.	--	--	--	--	--	--	--	231	--	--	--	--
11...	--	--	--	--	--	--	--	302	7.4	20	6.2	73
MAY	--	--	--	--	--	--	--	98	--	--	--	--
02...	.2	3.0	.32	169	136	144	9	98	--	--	--	--
JULY	--	--	--	--	--	--	--	98	--	--	--	--
29...	--	--	--	--	--	--	--	98	--	--	--	--
02312900 TSALA-APOPKA LAKE AT INVERNESS FLA (LAT 28 50 39 LONG 082 19 21)												
NOV., 1967	--	--	--	--	--	--	--	130	--	--	--	--
13...	--	--	--	--	--	--	--	140	--	--	--	--
FEB., 1968	--	--	--	--	--	--	--	147	--	--	--	--
20...	--	--	--	--	--	--	--	147	--	--	--	--
APR.	--	--	--	--	--	--	--	150	6.8	20	7.4	88
MAY	--	--	--	--	--	--	--	125	--	--	--	--
02...	.2	1.6	.05	79	99	60	6	125	--	--	--	--
JULY	--	--	--	--	--	--	--	125	--	--	--	--
29...	--	--	--	--	--	--	--	125	--	--	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUORIDE (F)	NITRATE (NO3)	PHOSPHATE (P34)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C)	HARDNESS (CA+MG)	NON-CARBONATE HARDNESS	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	COLOR	DISSOLVED OXYGEN	PERCENT SATURATION
WITHLACOOCHIEE RIVER BASIN--CONTINUED												
02312950 TSALA APOPKA LAKE AT HERNANDO FLA (LAT 28 54 09 LONG 082 22 31)												
NOV., 1967												
13...	--	--	--	--	--	--	--	110	--	--	--	--
FEB., 1968												
20...	--	--	--	--	--	--	--	122	--	--	--	--
MAY												
02...	.2	1.7	.04	69	86	52	6	128	6.8	20	8.7	9
JULY												
29...	--	--	--	--	--	--	--	100	--	--	--	--
02313180 BLUE RUN AT DUNNELLON FLA (LAT 29 02 57 LONG 082 26 53)												
MAY, 1968												
03...	.2	2.1	.00	139	140	120	13	242	7.3	0	8.5	100
02313200 WITHLACOOCHIEE RIVER AT DUNNELLON FLA (LAT 29 02 45 LONG 082 27 53)												
JAN., 1968												
03...	--	--	--	--	--	--	--	230	--	--	--	--
APR.												
03...	--	--	--	--	--	--	--	335	--	--	--	--
10...	--	--	--	--	--	--	--	189	--	--	--	--
MAY												
03...	.2	.6	.08	169	226	146	21	290	7.4	0	7.0	82
JULY												
30...	--	--	--	--	--	--	--	130	--	--	--	--
02313230 WITHLACOOCHIEE RIVER AB INGLIS DAM NR DUNNELLON (LAT 29 00 36 LONG 082 37 00)												
NOV., 1967												
09...	--	--	--	--	--	--	--	245	--	--	--	--
DEC.												
29...	--	--	--	--	--	--	--	265	--	--	--	--
FEB., 1968												
23...	--	--	--	--	--	--	--	278	--	--	--	--
APR.												
10...	--	--	--	--	--	--	--	282	--	--	--	--
MAY												
06...	.2	1.4	.02	138	141	116	20	235	7.2	0	9.0	107
JUNE												
24...	--	--	--	--	--	--	--	252	--	--	--	--
JULY												
30...	--	--	--	--	--	--	--	220	--	--	--	--
SEP.												
30...	--	--	--	--	--	--	--	170	--	--	--	--
02313231 WITHLACOOCHIEE RIVER BL INGLIS DAM NR DUNNELLON (LAT 29 00 36 LONG 082 37 00)												
NOV., 1967												
09...	--	--	--	--	--	--	--	250	--	--	--	--
DEC.												
29...	--	--	--	--	--	--	--	250	--	--	--	--
FEB., 1968												
23...	--	--	--	--	--	--	--	270	--	--	--	--
MAY												
06...	.2	1.5	.02	143	152	122	19	247	7.3	0	7.0	83
JULY												
30...	--	--	--	--	--	--	--	210	--	--	--	--
COASTAL BASINS BETWEEN WITHLACOOCHIEE RIVER AND SUWANNEE RIVER												
02313400 WACCASASSA RIVER NR BRONSON FLA (LAT 29 28 32 LONG 082 42 58)												
NOV., 1967												
02...	--	--	--	--	--	--	--	91	--	--	--	--
DEC.												
15...	--	--	--	--	--	--	--	96	--	--	--	--
JAN., 1968												
31...	--	--	--	--	--	--	--	107	--	--	--	--
MAR.												
18...	--	--	--	--	--	--	--	120	--	--	--	--
MAY												
08...	.2	.9	.10	79	126	62	9	153	6.8	80	7.0	79
JULY												
15...	--	--	--	--	--	--	--	105	--	--	--	--
SEP.												
05...	--	--	--	--	--	--	--	69	--	--	--	--
02313448 LITTLE WACCASASSA RIVER NR BRONSON FLA (LAT 29 28 34 LONG 082 41 13)												
NOV., 1967												
02...	--	--	--	--	--	--	--	110	--	--	--	--
DEC.												
15...	--	--	--	--	--	--	--	99	--	--	--	--
JAN., 1968												
31...	--	--	--	--	--	--	--	116	--	--	--	--
MAR.												
18...	--	--	--	--	--	--	--	110	--	--	--	--
MAY												
08...	.3	.5	.82	119	156	98	3	229	7.0	60	4.0	43
JULY												
15...	--	--	--	--	--	--	--	122	--	--	--	--
02313448 LITTLE WACCASASSA RIVER NR BRONSON FLA (LAT 29 28 34 LONG 082 41 13)												
SEP., 1968												
05...	--	--	--	--	--	--	--	55	--	--	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	TEMP- ERATURE (DEG C)	SILICA (SI72)	SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NESIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	POTAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
COASTAL BASINS BETWEEN WITHLACOOCHIE RIVER AND SUWANNEE RIVER--CONTINUED												
02313450 BLUE SPRING NR BRONSON FLA (LAT 29 27 02 LONG 082 41 57)												
NOV., 1967												
02...	--	23	--	--	--	--	--	--	--	--	--	--
DEC.												
15...	4.7	23	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
31...	5.6	23	--	--	--	--	--	--	--	--	--	--
MAR.												
18...	5.0	22	--	--	--	--	--	--	--	--	--	--
MAY												
08...	5.2	22	6.0	.03	28	4.1	.06	2.1	.2	109	.5	4.0
JULY												
15...	5.8	23	--	--	--	--	--	--	--	--	--	--
SEP.												
06...	9.7	23	--	--	--	--	--	--	--	--	--	--
02313510 CHUNKY POND NEAR BRONSON FLA (LAT 29 23 36 LONG 082 37 19)												
NOV., 1967												
02...	--	22	--	--	--	--	--	--	--	--	--	--
JAN., 1968												
31...	--	14	--	--	--	--	--	--	--	--	--	--
MAR.												
18...	--	16	--	--	--	--	--	--	--	--	--	--
MAY												
08...	--	22	.0	.11	1.6	.7	.00	4.2	.1	2	.6	9.8
JULY												
15...	--	27	--	--	--	--	--	--	--	--	--	--
SEP.												
05...	--	26	--	--	--	--	--	--	--	--	--	--
02313600 WEKIVA SPRINGS NR GULF HAMMOCK FLA (LAT 29 16 49 LONG 082 39 23)												
NOV., 1967												
02...	41	23	--	--	--	--	--	--	--	--	--	--
MAY, 1968												
05...	31	24	6.4	.04	26	4.8	.08	6.9	.4	96	5.6	13
02313700 WAGGASASSA RIVER NR GULF HAMMOCK FLA (LAT 29 12 14 LONG 082 46 09)												
NOV., 1967												
03... -6530		21	--	--	--	--	--	--	--	--	--	--
FEB., 1968												
23...	--	14	--	--	--	--	--	--	--	--	--	--
MAR.												
18... -3980		18	--	--	--	--	--	--	--	--	--	--
MAY												
08...	--	24	8.1	.04	232	572	3.0	4600	180	180	1180	8300
JULY												
15...	--	26	--	--	--	--	--	--	--	--	--	--
02314200 TENMILE CREEK AT LEBANON STATION FLA (LAT 29 09 39 LONG 082 38 21)												
NOV., 1967												
09...	.09	13	--	--	--	--	--	--	--	--	--	--
DEC.												
29...	3.7	14	--	--	--	--	--	--	--	--	--	--
FEB., 1968												
23...	1.1	13	--	--	--	--	--	--	--	--	--	--
MAR.												
03...	.13	22	--	--	--	--	--	--	--	--	--	--
MAY												
06...	.04	24	5.5	.06	93	11	.00	7.7	.6	284	39	13
JUNE												
24...	6.9	26	--	--	--	--	--	--	--	--	--	--
JULY												
18...	58	24	--	--	--	--	--	--	--	--	--	--
02314205 HORSE HOLE CREEK NR LEBANON STATION FLA (LAT 29 08 01 LONG 082 38 14)												
DEC., 1967												
29...	.08	13	--	--	--	--	--	--	--	--	--	--
FEB., 1968												
23...	.02	12	--	--	--	--	--	--	--	--	--	--
JULY												
18...	7.8	25	--	--	--	--	--	--	--	--	--	--
SEP.												
05...	17	27	--	--	--	--	--	--	--	--	--	--
SUWANNEE RIVER BASIN												
02315000 SUWANNEE RIVER NR BENTON (LAT 30 30 26 LONG 082 43 00)												
MAY, 1968												
16...	--	26	1.2	.19	3.8	2.2	.00	5.0	.4	10	.2	9.2
02315005 HUNTER CREEK (PENNINGTON CREEK) NEAR BELMONT FLA (LAT 30 29 20 LONG 082 41 40)												
NOV., 1967												
21...	--	14	11	.03	12	5.7	--	2.5	.3	59	.0	4.0
MAY, 1968												
16...	--	22	15	.20	6.6	3.3	.04	5.6	.7	23	.5	11
02315090 RHYAN CREEK NEAR BELMONT FLA (LAT 30 25 50 LONG 082 40 00)												
NOV., 1967												
21...	--	13	17	.04	12	4.6	--	3.7	.6	55	.4	5.5
MAY, 1968												
16...	--	21	14	.33	11	4.9	.00	3.6	.5	46	.6	7.0
02315500 SUWANNEE RIVER AT WHITE SPRINGS (LAT 30 19 32 LONG 082 44 18)												
APR., 1968												
29...	60	25	4.2	.16	7.2	3.3	.02	4.4	1.0	24	.0	10
MAY												
16...	--	26	4.2	.13	8.4	4.1	.00	4.1	.3	35	.5	7.8

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	(SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
COASTAL BASINS BETWEEN WITHLACOOCHIE RIVER AND SUWANNEE RIVER--CONTINUED												
02313450 BLUE SPRING NR BRONSON FLA (LAT 29 27 02 LONG 082 41 57)												
NOV., 1967												
02...	--	--	--	--	--	--	--	175	--	--	--	--
DEC.												
15...	--	--	--	--	--	--	--	200	--	--	--	--
JAN., 1968												
31...	--	--	--	--	--	--	--	175	--	--	--	--
MAR.												
18...	--	--	--	--	--	--	--	175	--	--	--	--
MAY												
08...	.1	1.4	.12	190	103	87	0	181	7.5	0	5.7	65
JULY												
15...	--	--	--	--	--	--	--	175	--	--	--	--
SEP.												
06...	--	--	--	--	--	--	--	150	--	--	--	--
02313510 CHUNKY POND NEAR BRONSON FLA (LAT 29 23 36 LONG 082 37 19)												
NOV., 1967												
02...	--	--	--	--	--	--	--	29	--	--	--	--
JAN., 1968												
31...	--	--	--	--	--	--	--	39	--	--	--	--
MAR.												
18...	--	--	--	--	--	--	--	38	--	--	--	--
MAY												
08...	.1	.3	.08	19	--	7	5	43	5.1	45	5.8	66
JULY												
15...	--	--	--	--	--	--	--	37	--	--	--	--
SEP.												
05...	--	--	--	--	--	--	--	43	--	--	--	--
02313600 WEKIVA SPRINGS NR GULF HAMMOCK FLA (LAT 29 16 49 LONG 082 39 23)												
NOV., 1967												
02...	--	--	--	--	--	--	--	170	--	--	--	--
MAY 1968												
08...	.2	.4	.11	111	112	84	5	201	7.5	0	8.5	10
02313700 WACCASASSA RIVER NR GULF HAMMOCK FLA (LAT 29 12 14 LONG 082 46 09)												
NOV., 1967												
03...	--	--	--	--	--	--	--	3000	--	--	--	--
FEB., 1968												
23...	--	--	--	--	--	--	--	1200	--	--	--	--
MAR.												
18...	--	--	--	--	--	--	--	342	--	--	--	--
MAY												
08...	.7	.1	.18	15200	--	2940	2790	24600	7.5	25	8.2	96
JULY												
15...	--	--	--	--	--	--	--	392	--	--	--	--
02314200 TENMILE CREEK AT LEBANON STATION FLA (LAT 29 09 39 LONG 082 38 21)												
NOV., 1967												
09...	--	--	--	--	--	--	--	530	--	--	--	--
DEC.												
29...	--	--	--	--	--	--	--	180	--	--	--	--
FEB., 1968												
23...	--	--	--	--	--	--	--	336	--	--	--	--
MAR.												
03...	--	--	--	--	--	--	--	419	--	--	--	--
MAY												
06...	.4	.9	.14	311	318	277	44	540	8.0	20	7.2	85
JUNE												
26...	--	--	--	--	--	--	--	168	--	--	--	--
JULY												
18...	--	--	--	--	--	--	--	105	--	--	--	--
02314205 HORSE HOLE CREEK NR LEBANON STATION FLA (LAT 29 08 01 LONG 082 38 14)												
DEC., 1967												
23...	--	--	--	--	--	--	--	100	--	--	--	--
FEB., 1968												
23...	--	--	--	--	--	--	--	224	--	--	--	--
JULY												
18...	--	--	--	--	--	--	--	130	--	--	--	--
SEP.												
05...	--	--	--	--	--	--	--	62	--	--	--	--
SUWANNEE RIVER BASIN												
02315000 SUWANNEE RIVER NR BENTON (LAT 30 30 26 LONG 082 43 00)												
MAY 1968												
16...	.2	1.6	.29	29	78	18	10	59	5.9	400	--	--
02315005 HUNTER CREEK (PENNINGTON CREEK) NEAR BELMONT FLA (LAT 30 29 20 LONG 082 41 40)												
NOV., 1967												
21...	.4	.4	--	65	73	54	6	118	6.9	30	--	--
MAY 1968												
16...	.5	.7	1.2	55	90	30	11	82	6.1	100	--	--
02315090 ROMAN CREEK NEAR BELMONT FLA (LAT 30 25 50 LONG 082 40 00)												
NOV., 1967												
21...	.7	.0	--	72	76	49	4	114	6.6	20	--	--
MAY 1968												
16...	.7	1.0	4.2	70	96	47	9	103	6.5	120	--	--
02315500 SUWANNEE RIVER AT WHITE SPRINGS (LAT 30 19 32 LONG 082 44 18)												
APR., 1968												
29...	.2	3.9	.51	46	78	32	12	87	6.1	140	8.4	100
MAY												
16...	.3	1.0	.64	48	77	38	9	90	6.4	120	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	TEMP- ERATURE (DEG C)	SILICA (%102)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
SUWANNEE RIVER BASIN--CONTINUED												
MAY , 1968												
10...	--	29	23	.10	47	15	.10	38	1.3	23	143	29
02315517 OCCIDENTAL MINE DRAINAGE DITCH NEAR GEMDA FLA (LAT 30 25 05 LONG 082 47 25)												
MAY , 1968												
10...	--	26	24	.07	44	14	.08	36	1.2	32	126	29
02315520 SWIFT CREEK AT FACIL FLA (LAT 30 22 14 LONG 082 48 00)												
MAY , 1968												
01... 145	--	--	4.2	.16	26	5.7	.02	7.1	.7	85	22	10
16...	--	28	10	.12	32	7.2	.03	8.8	.6	95	30	10
02315550 SUWANNEE RIVER AT SUWANNEE SPRINGS (LAT 30 23 34 LONG 082 56 00)												
MAY , 1968												
01... 145	--	--	4.2	.16	26	5.7	.02	7.1	.7	85	22	10
16...	--	28	10	.12	32	7.2	.03	8.8	.6	95	30	10
02315600 SUWANNEE SPRINGS NR LIVE OAK (LAT 30 23 39 LONG 082 56 04)												
MAY , 1968												
01... 5.2	--	21	12	.08	53	8.2	.08	4.1	.5	182	18	8.0
02319300 WITHLACOCHEE RIVER NR MADISON (LAT 30 35 43 LONG 083 15 35)												
APR , 1968												
10...	--	23	8.8	.11	46	7.0	.18	12	.8	164	20	9.0
02319500 SUWANNEE RIVER AT ELLAVILLE (LAT 30 23 04 LONG 082 10 19)												
APR , 1968												
10... 1530	--	27	10	.03	42	8.1	.11	5.5	.7	136	28	10
02320000 SUWANNEE RIVER AT LURAVILLE (LAT 30 05 59 LONG 083 10 18)												
APR , 1968												
30...	--	24	8.2	.07	44	9.2	.12	8.2	1.6	154	21	11
02320600 SANTA FE LAKE NR KEYSTONE HEIGHTS FLA (LAT 29 45 38 LONG 082 04 30)												
DEC , 1967												
21...	--	--	--	--	1.6	1.0	--	5.4	.4	--	--	--
MAY , 1968												
03...	--	28	.5	.05	2.0	1.1	.02	5.8	.3	5	4.0	11
02320610 LITTLE SANTA FE LAKE NR WALDO FLA (LAT 29 46 20 LONG 082 05 30)												
DEC , 1967												
21...	--	--	--	--	1.5	1.0	--	5.4	.4	--	--	--
02320630 LAKE ALTHO AT WALDO FLA (LAT 29 46 43 LONG 082 08 41)												
DEC , 1967												
21...	--	--	--	--	2.0	1.0	--	5.3	3.0	--	--	--
02320700 SANTA FE RIVER NR GRAHAM (LAT 29 50 46 LONG 082 13 11)												
APR , 1968												
29...	.48	21	6.6	.02	27	12	.04	5.0	.4	140	.0	9.0
02321000 NEW RIVER NR LAKE BUTLER (LAT 29 59 53 LONG 082 16 27)												
APR , 1968												
29...	2.4	21	7.1	.04	29	13	.17	19	2.3	145	7.1	26
02321600 OLUSTEE CREEK NR LULU (LAT 30 05 42 LONG 082 28 25)												
APR , 1968												
29...	.01	21	4.5	.05	21	12	.00	4.5	.9	124	.2	8.0
02321700 SWIFT CREEK NR LAKE BUTLER (LAT 30 03 28 LONG 082 25 10)												
APR , 1968												
29...	.01	31	2.3	.34	6.8	3.3	.03	5.4	.8	16	.8	13
02321800 OLUSTEE CREEK NR PROVIDENCE (LAT 30 00 14 LONG 082 34 20)												
MAY , 1968												
01...	.01	25	4.3	.32	9.4	3.9	.03	8.1	2.2	34	.2	16
02322000 SANTA FE RIVER NR HIGH SPRINGS (LAT 29 50 40 LONG 082 37 50)												
MAY , 1968												
02... 235	--	22	12	.00	70	12	1.0	9.7	1.0	180	69	18
02322500 SANTA FE RIVER NR FORT WHITE (LAT 29 51 00 LONG 082 42 50)												
MAY , 1968												
02... 1000	--	22	6.6	.03	63	7.4	.41	6.0	1.0	190	27	10
02322600 ALLIGATOR LAKE AT LAKE CITY (LAT 30 10 31 LONG 082 37 55)												
APR , 1968												
29...	--	26	1.0	.06	13	2.1	.01	11	2.3	20	10	15
02322700 ICHATUCKNEE SPRINGS NR HILDRETH (LAT 29 57 10 LONG 082 47 10)												
MAY , 1968												
01... 353	--	24	9.8	.00	49	5.6	.14	4.2	.8	168	6.6	8.0
02322800 SANTA FE RIVER NR HILDRETH (LAT 29 54 50 LONG 082 51 30)												
MAY , 1968												
02...	--	21	7.1	.00	60	7.0	.34	5.7	.9	182	23	10

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

337

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	OIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
SUWANNEE RIVER BASIN--CONTINUED												
02315517 OCCIDENTAL MINE DRAINAGE DITCH NEAR GENOA FLA (LAT 30 25 05 LONG 082 47 25)												
MAY , 1968 16...	4.8	34	25	370	420	179	160	540	6.4	30	--	--
02315520 SWIFT CREEK AT FACIL FLA (LAT 30 22 14 LONG 082 48 00)												
MAY , 1968 16...	5.0	32	23	350	386	168	142	510	6.4	30	--	--
02315550 SUWANNEE RIVER AT SUWANNEE SPRINGS (LAT 30 23 34 LONG 082 56 00)												
MAY , 1968 01... 16...	.7 1.0	2.8 1.8	2.2 3.9	127 150	145 167	88 110	18 32	209 250	6.9 6.8	100 70	7.1 --	81 --
02315600 SUWANNEE SPRINGS NR LIVE OAK (LAT 30 23 39 LONG 082 56 04)												
MAY , 1968 01...	.3	.4	.27	195	202	166	17	330	7.5	10	1.2	13
02319300 WITHLACOOCHIE RIVER NR MADISON (LAT 30 35 43 LONG 083 15 35)												
APR , 1968 30...	.5	1.4	.37	187	186	144	9	318	7.6	13	4.0	46
02319500 SUWANNEE RIVER AT ELLAVILLE (LAT 30 23 04 LONG 082 10 19)												
APR , 1968 30...	.4	.6	.54	172	193	138	26	291	7.3	30	6.4	73
02320000 SUWANNEE RIVER AT LURAVILLE (LAT 30 05 59 LONG 083 10 18)												
APR , 1968 30...	.4	4.3	.43	184	191	148	22	317	7.4	20	6.4	75
02320600 SANTA FE LAKE NR KEYSTONE HEIGHTS FLA (LAT 29 45 38 LONG 082 04 30)												
DEC , 1967 21... MAY , 1968 03...	-- -- .2	-- -- .0	-- -- .11	-- -- 27	-- -- 41	-- -- 10	-- -- 6	53 -- 55	-- -- 6.1	-- -- 30	-- -- 8.7	-- -- 110
02320610 LITTLE SANTA FE LAKE NR WALDO FLA (LAT 29 46 20 LONG 082 05 30)												
DEC , 1967 21...	--	--	--	--	--	--	--	52	--	--	--	--
02320630 LAKE ALTHO AT WALDO FLA (LAT 29 46 43 LONG 082 08 41)												
DEC , 1967 21...	--	--	--	--	--	--	--	52	--	--	--	--
02320700 SANTA FE RIVER NR GRAHAM (LAT 29 50 46 LONG 082 13 11)												
APR , 1968 29...	.2	.8	.73	130	130	117	2	249	7.3	20	3.4	38
02321000 NEW RIVER NR LAKE BUTLER (LAT 29 59 53 LONG 082 16 27)												
APR , 1968 29...	.7	1.2	3.2	179	182	124	5	330	7.6	40	5.8	64
02321600 OLUSTEE CREEK NR LULU (LAT 30 05 42 LONG 082 28 25)												
APR , 1968 29...	.2	.5	.19	113	121	102	0	210	6.9	30	3.5	39
02321700 SWIFT CREEK NR LAKE BUTLER (LAT 30 03 28 LONG 082 25 10)												
APR , 1968 29...	.2	3.7	.13	45	115	30	17	87	5.9	320	8.0	107
02321800 OLUSTEE CREEK NR PROVIDENCE (LAT 30 00 14 LONG 082 34 20)												
MAY , 1968 01...	.2	6.4	.45	68	109	40	12	124	6.2	160	8.4	100
02322000 SANTA FE RIVER NR HIGH SPRINGS (LAT 29 50 40 LONG 082 37 50)												
MAY , 1968 02...	.4	.0	.28	282	332	225	77	478	7.8	10	5.4	61
02322500 SANTA FE RIVER NR FORT WHITE (LAT 29 51 00 LONG 082 42 50)												
MAY , 1968 02...	.2	1.0	.00	217	246	188	32	377	7.8	0	7.8	89
02322600 ALLIGATOR LAKE AT LAKE CITY (LAT 30 10 31 LONG 082 37 55)												
APR , 1968 29...	.4	18	1.9	84	134	41	25	150	6.0	70	7.5	91
02322700 ICHTUCKNEE SPRINGS NR HILDRETH (LAT 29 57 10 LONG 082 47 10)												
MAY , 1968 01...	.2	1.8	.00	169	166	146	8	295	7.5	5	9.1	107
02322800 SANTA FE RIVER NR HILORETH (LAT 29 54 50 LONG 082 51 30)												
MAY , 1968 02...	.3	1.9	.00	206	229	179	30	360	7.8	0	7.6	84

DATE	DIS-CHARGE (CFS)	TEMPERATURE (DEG C)	SILICA (SI02)	DIS-SOLVED (RDV (FE)	CALCIUM (CA)	MAGNESIUM (MG)	STRONTIUM (SR)	SODIUM (NA)	POTASSIUM (K)	BICARBONATE (HCO3)	SULFATE (SO4)	CHLORIDE (CL)
SUWANNEE RIVER BASIN--CONTINUED												
MAY , 1968 03...	4670	25	7.0	.00	53	7.8	.18	8.7	2.0	180	20	15
02323500 SUWANNEE RIVER NR WILCOX (LAT 29 35 20 LONG 082 56 10)												
MAY , 1968 03...	--	28	5.8	.03	54	7.7	.20	8.0	1.7	180	20	13
02323570 SUWANNEE RIVER NR OLD TOWN (LAT 29 28 45 LONG 082 59 13)												
COASTAL BASINS BETWEEN SUWANNEE RIVER AND AUCILLA RIVER												
MAY , 1968 20...	8.2	26	5.6	.02	108	10	.14	5.2	.5	356	11	12
02324000 STEINHATCHEE R NR CROSS CITY (LAT 29 47 11 LONG 083 19 18)												
MAY , 1968 20...	2.4	24	2.7	.32	21	5.5	--	3.1	.3	65	2.0	8.0
02324400 FENHOLLOWAY RIVER NEAR FOLEY FLA (LAT 30 05 53 LONG 083 28 19)												
MAY , 1968 20...	77	35	13	.31	132	21	--	328	3.9	463	168	370
02324500 FENHOLLOWAY RIVER AT FOLEY FLA (LAT 30 03 53 LONG 083 32 01)												
JAN., 1968 09...	--	22	10	--	74	21	.00	220	2.8	450	25	235
02325000 FENHOLLOWAY RIVER NR PERRY FLA (LAT 30 04 16 LONG 083 39 47)												
MAY , 1968 20...	18	24	3.4	.02	70	15	.00	2.6	.2	298	.8	5.4
02326000 ECONFINA RIVER NR PERRY (LAT 30 10 14 LONG 083 49 26)												
MAY , 1968 21...	.26	25	1.2	.84	1.1	.7	.00	2.0	.1	0	.0	5.5
02326300 LITTLE AUCILLA RIVER NEAR GREENVILLE (LAT 30 31 10 LONG 083 35 14)												
MAY , 1968 21...	19	24	5.0	.03	26	4.3	.00	2.6	.3	100	.6	5.5
02326500 AUCILLA RIVER AT LAMONT (LAT 30 22 11 LONG 083 48 25)												
COASTAL BASINS BETWEEN AUCILLA RIVER AND OCHLOCKNEE RIVER												
MAY , 1968 21...	5.2	23	8.4	.19	3.5	1.8	.00	2.3	.3	15	.0	5.0
02326700 LLOYD CREEK AT LLOYD (LAT 30 28 41 LONG 084 00 31)												
MAY , 1968 21...	360	25	13	.01	41	8.1	.00	3.5	.4	160	8.2	5.0
02326900 ST MARKS RIVER NEAR NEWPORT (LAT 30 16 00 LONG 084 09 00)												
MAY , 1968 24...	188	24	12	.01	39	9.5	.00	3.4	.4	150	10	6.0
02327000 WAKULLA SPRING NEAR CRAWFORDVILLE (LAT 30 14 05 LONG 084 18 05)												
OCHLOCKNEE RIVER BASIN												
MAY , 1968 22...	25	19	6.6	.48	10	1.4	.00	3.5	.5	0	16	4.5
02329500 LITTLE RIVER NEAR QUINCY (LAT 30 35 14 LONG 084 29 48)												
MAY , 1968 22...	52	23	6.5	.34	7.6	1.6	.00	6.0	.8	17	7.4	8.0
02329600 LITTLE RIVER NR MIDWAY (LAT 30 30 44 LONG 084 31 25)												
MAY , 1968 22...	3.0	22	6.8	.15	2.6	1.0	.00	2.6	.2	9	.2	4.5
02329700 ROCKY COMFORT CREEK NEAR QUINCY (LAT 30 32 44 LONG 084 38 09)												
MAY , 1968 23...	47	24	3.0	.06	4.7	1.8	.00	2.7	1.0	19	3.5	8.5
02330000 OCHLOCKNEE RIVER NEAR BLOKHAM (LAT 30 22 59 LONG 084 39 18)												
JUNE , 1968 03...	5.7	24	3.6	.15	1.7	1.0	.00	3.1	.5	8	.2	5.2
02330050 TELOGIA CREEK NR GREENSBORO (LAT 30 33 34 LONG 084 43 36)												
JUNE , 1968 10...	58	24	4.2	.10	4.8	.5	.00	1.4	.2	10	.2	3.2
02330100 TELOGIA CREEK NEAR BRISTOL (LAT 30 25 34 LONG 084 55 39)												
COASTAL BASINS BETWEEN OCHLOCKNEE RIVER AND APALACHICOLA RIVER												
MAY , 1968 23...	.00	25	3.1	.29	2.3	.3	.00	2.1	.1	2	.0	4.8
02330200 NEW RIVER AT VILAS (LAT 30 13 08 LONG 084 53 28)												
MAY , 1968 23...	1.9	24	1.5	.19	2.5	.3	.00	2.1	.2	0	.0	5.0
02330300 NEW RIVER NEAR WILMA (LAT 30 07 40 LONG 084 53 45)												



## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (P34)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 130 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC CAR- BONATE CONTENT (MICRO- MG/LS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
SUWANNEE RIVER BASIN--CONTINUED												
02323500 SUWANNEE RIVER NR WILCOX (LAT 29 35 20 LONG 082 56 10)												
MAY , 1968 03...	.3	1.5	.00	204	210	164	16	354	7.1	5	10.0	119
02323570 SUWANNEE RIVER NR OLD TOWN (LAT 29 28 45 LONG 082 59 13)												
MAY , 1968 03...	.3	1.6	.11	201	210	166	18	349	7.7	5	16.0	203
COASTAL BASINS BETWEEN SUWANNEE RIVER AND AUCILLA RIVER--CONTINUED												
02324000 STEINHATCHEE R NR CROSS CITY (LAT 29 47 11 LONG 083 19 18)												
MAY , 1968 20...	.4	.6	.11	328	355	310	18	560	7.9	35	6.1	74
02324400 FENHOLLOWAY RIVER NEAR FOLEY FLA (LAT 30 05 53 LONG 083 28 19)												
MAY , 1968 20...	.4	.0	--	75	150	75	22	135	6.8	480	--	--
02324500 FENHOLLOWAY RIVER AT FOLEY FLA (LAT 30 03 53 LONG 083 32 01)												
MAY , 1968 20...	1.0	.0	--	1330	1440	416	36	2100	8.6	440	--	--
02325000 FENHOLLOWAY RIVER NR PERRY FLA (LAT 30 04 16 LONG 083 39 47)												
JAN., 1969 09...	.4	.8	--	818	888	271	0	1360	8.3	1000	--	--
02326000 ECONIFA RIVER NR PERRY (LAT 30 10 14 LONG 083 49 26)												
MAY , 1968 20...	.3	.4	.05	245	242	236	0	428	7.9	20	7.3	86
02326300 LITTLE AUCILLA RIVER NEAR GREENVILLE (LAT 30 31 10 LONG 083 35 14)												
MAY , 1968 21...	.2	.9	.00	13	46	6	6	35	4.5	140	6.7	80
02326500 AUCILLA RIVER AT LAMONT (LAT 30 22 11 LONG 083 48 25)												
MAY , 1968 21...	.2	.6	.05	95	108	87	5	190	6.9	30	6.3	74
COASTAL BASINS BETWEEN AUCILLA RIVER AND OCHLOCKNEE RIVER--CONTINUED												
02326700 LLOYD CREEK AT LLOYD (LAT 30 28 41 LONG 084 00 31)												
MAY , 1968 21...	.2	1.3	.34	30	31	16	4	44	6.5	50	7.1	82
02326900 ST MARKS RIVER NEAR NEWPORT (LAT 30 16 00 LONG 084 09 00)												
MAY , 1968 21...	.2	.6	.03	159	154	136	5	271	7.7	5	6.5	77
02327000 WAKULLA SPRING NEAR CRAWFORDVILLE (LAT 30 14 05 LONG 084 18 05)												
MAY , 1968 24...	.3	.9	.00	156	155	136	13	272	7.6	5	6.2	73
OCHLOCKNEE RIVER BASIN												
02329500 LITTLE RIVER NEAR QUINCY (LAT 30 35 14 LONG 084 29 48)												
MAY , 1968 22...	.2	29	.07	72	106	31	31	128	4.5	50	6.8	72
02329600 LITTLE RIVER NR MIDWAY (LAT 30 30 44 LONG 084 31 25)												
MAY , 1968 22...	.2	8.4	.50	55	60	26	12	90	6.2	30	6.1	70
02329700 ROCKY COMFORT CREEK NEAR QUINCY (LAT 30 32 44 LONG 084 38 09)												
MAY , 1968 22...	.2	2.4	.14	25	19	10	3	35	6.2	20	6.9	78
02330000 OCHLOCKNEE RIVER NEAR BLOXHAM (LAT 30 22 59 LONG 084 39 18)												
MAY , 1968 28...	.2	1.2	.00	41	42	19	3	83	6.4	20	6.1	72
02330050 TELEOGIA CREEK NR GREENSBORO (LAT 30 33 34 LONG 084 43 36)												
JUNE , 1968 03...	.0	.5	.07	20	28	8	1	35	6.1	40	6.0	71
02330100 TELEOGIA CREEK NEAR BRISTOL (LAT 30 25 34 LONG 084 55 39)												
JUNE , 1968 10...	.2	.9	.01	21	32	14	6	34	6.3	100	7.7	91
COASTAL BASINS BETWEEN OCHLOCKNEE RIVER AND APALACHICOLA RIVER												
02330200 NEW RIVER AT VILAS (LAT 30 13 08 LONG 084 53 28)												
MAY , 1968 23...	.1	.6	.00	15	24	6	4	28	5.7	100	5.7	68
02330300 NEW RIVER NEAR WILMA (LAT 30 07 40 LONG 084 53 45)												
MAY , 1968 23...	.1	.6	.00	13	40	7	7	30	5.1	140	6.1	72

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	TEMP- ERATURE (DEG C)	SILICA (SI02)	DIS- SOLVED IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	STRON- TIUM (SR)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO3)	SULFATE (SO4)	CHLO- RIDE (CL)
COASTAL BASINS BETWEEN OCHLOCKNEE RIVER AND APALACHICOLA RIVER--CONTINUED												
02330400 NEW RIVER NEAR SUMATRA (LAT 30 02 19 LONG 084 50 38)												
MAY, 1968 23...	.98	25	1.5	.23	2.4	.3	.00	2.2	.1	0	.0	5.8
APALACHICOLA RIVER BASIN												
02358600 FLAT CREEK NR CHATTAHOOCHEE (LAT 30 37 43 LONG 084 50 06)												
JUNE, 1968 03...	28	22	7.4	.10	3.7	1.6	.00	2.2	.4	16	.0	3.8
02358800 CHIPOLA RIVER AT DAKDALE (LAT 30 43 02 LONG 085 12 01)												
JUNE, 1968 03...	497	26	5.7	.00	33	1.7	.00	3.8	.4	106	.8	7.5
02359100 DEAD LAKE NEAR WENAHITCHKA (LAT 30 11 40 LONG 085 11 50)												
JUNE, 1968 06...	--	27	5.4	.02	21	3.0	.00	2.2	.2	78	.1	5.0
COASTAL BASINS BETWEEN APALACHICOLA RIVER AND CHOCTAWHATCHEE RIVER												
02359300 SANDY CREEK NR PANAMA CITY (LAT 30 08 27 LONG 085 24 26)												
JUNE, 1968 05...	15	26	5.9	.05	2.2	.6	.00	2.7	.2	2	4.1	5.5
02359350 ECONFINA CREEK NR COMPASS LAKE (LAT 30 33 20 LONG 085 26 05)												
JUNE, 1968 06...	10	22	4.4	.15	.7	.3	.00	1.1	.3	2	.0	3.0
02359450 ECONFINA CREEK NR FOUNTAIN (LAT 30 28 55 LONG 085 31 30)												
JUNE, 1968 07...	71	22	4.7	.03	9.0	1.6	.00	1.2	.3	33	.0	2.5
02359500 ECONFINA CREEK NEAR BEVNETT FLA (LAT 30 23 04 LONG 085 33 24)												
JUNE, 1968 06...	385	22	4.8	.01	17	2.3	.00	1.7	.4	64	.4	4.0
02359550 BEAR CREEK NR YOUNGSTOWN (LAT 30 19 10 LONG 085 27 20)												
MAY, 1968 05...	49	24	8.3	.10	3.1	.5	.00	1.7	.2	4	1.4	3.5
02359618 PORTER LAKE NR GREENHEAD (LAT 30 29 50 LONG 085 33 05)												
JUNE, 1968 07...	--	28	.4	.01	.3	.3	.00	1.6	.2	0	.8	3.0
02359635 CLARKS HOLE NR GREENHEAD (LAT 30 29 50 LONG 085 35 55)												
JUNE, 1968 07...	--	31	.1	.03	1.4	.5	.00	2.2	.4	2	2.6	5.2
02359640 WAGES POND NR GREENHEAD (LAT 30 30 05 LONG 085 35 55)												
JUNE, 1968 07...	--	30	.2	.03	1.7	.5	.00	2.2	.1	0	1.0	5.0
02359645 GULLY POND NR GREENHEAD (LAT 30 29 30 LONG 085 36 55)												
JUNE, 1968 07...	--	33	4.3	.04	1.9	.5	.00	2.0	.4	4	1.6	6.2
02359660 DEER POINT LAKE NEAR PANAMA CITY (LAT 30 17 45 LONG 085 34 55)												
JUNE, 1968 06...	4.9	27	1.3	.01	12	3.3	.00	14	.6	42	5.0	26
CHOCTAWHATCHEE RIVER BASIN												
02365700 SANDY CREEK AT PONCE DE LEON (LAT 30 43 28 LONG 085 56 12)												
JUNE, 1968 04...	43	24	4.7	.16	2.8	.9	.00	1.9	.4	10	.1	4.0
02366000 HOLMES CREEK AT VERNON (LAT 30 37 35 LONG 085 42 45)												
JUNE, 1968 05...	343	22	7.9	.00	34	4.2	.00	3.7	.4	120	.2	8.0
02366500 CHOCTAWHATCHEE RIVER NEAR BRUCE (LAT 30 27 03 LONG 085 53 54)												
JUNE, 1968 04...	2790	29	4.8	.02	16	2.2	.00	3.3	.7	60	.2	5.5
COASTAL BASINS BETWEEN CHOCTAWHATCHEE RIVER AND YELLOW RIVER												
02367000 ALAQUA CREEK NR DE FUNIAK SPRINGS (LAT 30 37 00 LONG 086 09 50)												
JUNE, 1968 06...	60	23	4.8	.07	.5	.2	.00	1.2	.3	4	.0	2.5
02366800 CHOCTAWHATCHEE RIVER NR CHOCTAW (LAT 30 23 57 LONG 086 03 20)												
OCT., 1967 24...	--	19	7.8	.00	17	2.5	.00	4.2	.6	74	.4	7.0
02366810 CHOCTAWHATCHEE RIVER NR POINT WASHINGTON (LAT 30 23 53 LONG 086 07 19)												
OCT., 1967 24...	--	21	3.2	.00	52	124	.55	982	36	64	242	1750

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

341

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
COASTAL BASINS BETWEEN OCHLOCKNEE RIVER AND APALACHICOLA RIVER--CONTINUED												
MAY , 1968 23...	.2	.8	.00	14	49	7	7	32	5.0	160	5.9	70
APALACHICOLA RIVER BASIN--CONTINUED												
JUNE, 1968 03...	.2	.3	.08	28	36	16	3	44	6.3	20	7.2	82
COASTAL BASINS BETWEEN APALACHICOLA RIVER AND CHOCTAWHATCHEE RIVER--CONTINUED												
JUNE, 1968 03...	.1	1.1	.03	106	110	90	3	193	7.1	0	6.7	82
JUNE, 1968 06...	.1	.1	.02	75	72	65	1	135	7.1	5	7.2	89
JUNE, 1968 05...	.1	.3	.02	23	33	8	6	34	5.9	20	6.7	82
JUNE, 1968 06...	.1	.3	.03	11	14	2	0	14	5.8	40	7.4	84
JUNE, 1968 07...	.1	.1	.02	36	38	29	2	64	6.8	10	5.7	65
JUNE, 1968 06...	.1	.3	.03	63	56	52	0	109	7.0	5	6.6	75
MAY , 1968 05...	.1	.7	.02	22	33	10	7	30	6.1	60	7.8	92
JUNE, 1968 07...	.1	.1	.01	7	3	2	2	23	4.7	0	7.4	94
JUNE, 1968 07...	.1	.2	.09	14	42	6	4	37	5.6	20	5.7	76
JUNE, 1968 07...	.1	.3	.06	11	39	6	6	33	5.3	20	6.6	87
JUNE, 1968 07...	.0	.4	.08	19	82	6	3	41	5.6	30	6.8	93
JUNE, 1968 06...	.1	.1	.03	83	85	44	10	162	7.0	5	7.2	89
JUNE, 1968 04...	.1	.4	.28	20	25	10	2	33	6.3	40	6.3	74
JUNE, 1968 05...	.1	.1	.02	118	113	102	4	211	7.3	0	6.8	77
JUNE, 1968 04...	.1	.4	.02	63	66	49	0	117	6.9	5	5.3	67
COASTAL BASINS BETWEEN CHOCTAWHATCHEE RIVER AND YELLOW RIVER												
JUNE, 1968 04...	.0	.2	.03	12	11	2	0	13	5.9	20	6.7	77
OCT., 1967 24...	.1	.0	--	76	79	53	0	132	7.2	5	--	--
OCT., 1967 24...	.3	.0	--	3220	--	640	587	5900	7.0	0	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE	TEMP- ERATURE	SILICA (SiO <sub>2</sub> )	DIS- SOLVED IRON (Fe)	CAL- CIUM (Ca)	MAG- NE- SIUM (Mg)	STRON- TIUM (Sr)	SODIUM (Na)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (Cl)
COASTAL BASINS BETWEEN CHOCTAWHATCHEE RIVER AND YELLOW RIVER--CONTINUED												
02367250 ROCKY CREEK NR NICEVILLE FLA (LAT 30 32 07 LONG 086 22 55)												
MAY , 1968 07...	137	19	3.9	.04	.3	.2	.00	1.3	.1	1	.0	2.5
02367300 SWIFT CREEK NR NICEVILLE FLA (LAT 30 31 40 LONG 086 28 00)												
MAY , 1968 07...	14	22	3.6	.19	.5	.4	.00	1.8	.2	2	.0	3.5
02367305 TURKEY CR NR NICEVILLE FLA (LAT 30 33 43 LONG 086 32 10)												
MAR., 1968 26...	74	14	4.2	.02	.3	.3	--	1.4	.1	1	.8	3.0
MAY 08...	69	20	4.0	.01	.1	.2	.00	1.4	.1	0	.0	3.0
02367310 JUNIPER CK AT ST HWY 85 NR NICEVILLE FLA (LAT 30 33 26 LONG 086 31 10)												
MAR., 1968 25...	76	12	4.0	.02	1.1	.3	--	1.5	.2	3	.8	2.5
MAY 07...	67	17	3.9	.03	.3	.2	.00	1.4	.1	1	.0	3.0
02367315 STORM SEWER DRAIN AT OCEAN CITY (LAT 30 25 54 LONG 086 36 26)												
OCT., 1967 25...	--	21	5.2	.00	91	292	1.6	2460	92	52	588	4350
02367320 EAST BAY RIVER NR WYNNHAVEN BEACH FLA (LAT 30 25 53 LONG 086 46 20)												
MAR., 1968 26...	167	15	4.5	.05	.4	.3	--	1.9	.1	2	.8	4.0
MAY 08...	123	20	4.3	.04	.2	.2	.00	1.8	.1	0	.2	3.5
YELLOW RIVER BASIN												
02367900 YELLOW RIVER NR OAK GROVE FLA (LAT 30 55 30 LONG 086 33 34)												
MAY , 1968 09...	246	20	5.7	.12	12	2.0	.00	2.5	.4	41	4.8	3.0
02368300 BAGGETT CREEK NR MILLIGAN FLA (LAT 30 43 40 LONG 086 39 35)												
APR., 1968 24...	11	20	3.9	.21	.5	.4	.08	1.6	.3	2	.0	3.0
02368500 SHOAL RIVER NR MOSSY HEAD FLA (LAT 30 47 45 LONG 086 18 25)												
JAN., 1968 25...	200	8	5.0	.15	.9	.3	--	1.5	.2	2	.4	3.2
MAR. 08...	123	11	3.0	.11	.7	.4	--	1.6	.2	2	.8	3.0
APR. 26...	90	17	4.1	.16	1.0	.4	.04	1.4	.2	2	.0	3.2
JUNE 21...	51	24	--	--	--	--	--	--	--	--	--	--
21...	51	24	3.9	.01	5.7	2.5	--	16	.6	12	4.0	32
02368800 POND CREEK NR DORCAS FLA (LAT 30 50 02 LONG 086 25 43)												
NOV., 1967 01...	2400	15	3.1	.03	1.6	.5	--	1.4	.8	8	.8	2.8
MAR., 1968 28...	77	10	4.4	.25	1.3	.6	--	2.2	.4	6	.8	4.0
MAY 08...	29	22	5.1	.16	1.2	.5	.00	2.0	.3	4	.0	3.5
02368850 SHOAL RIVER NR DORCAS FLA (LAT 30 47 27 LONG 086 25 14)												
MAY , 1968 08...	208	23	4.3	.12	1.9	.8	.00	1.5	.2	8	.0	3.8
02368900 SHOAL RIVER AT US HWY 90 NR CRESTVIEW FLA (LAT 30 45 10 LONG 086 30 33)												
APR., 1968 25...	--	19	4.6	.11	2.4	.8	.08	1.4	.2	8	.0	3.2
02368990 TITI CREEK NR CRESTVIEW FLA (LAT 30 42 05 LONG 086 29 28)												
NOV., 1967 01...	1050	16	3.6	.12	.5	.4	--	1.3	.2	0	5.2	2.5
MAR., 1968 25...	134	10	3.9	.07	.4	.2	--	1.4	.3	2	.8	3.0
MAY 08...	95	20	4.3	.03	.2	.2	.00	1.0	.1	0	.0	2.2

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

343

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (NO3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS)	DIS- SOLVED SOLIDS RESI- DUE AT 180 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
COASTAL BASINS BETWEEN CHOCTAWHATCHEE RIVER AND YELLOW RIVER--CONTINUED												
02367250 ROCKY CREEK NR NICEVILLE FLA (LAT 30 32 07 LONG 086 22 55)												
MAY, 1968 07...	.1	.2	.03	9	11	2	1	12	5.8	5	7.3	78
02367300 SWIFT CREEK NR NICEVILLE FLA (LAT 30 31 40 LONG 086 28 00)												
MAY, 1968 07...	.1	.7	.09	12	13	2	0	18	6.0	30	7.0	80
02367305 TURKEY CR NR NICEVILLE FLA (LAT 30 33 43 LONG 086 32 10)												
MAR., 1968 26...	.1	.2	--	11	7	2	1	13	5.5	10	--	--
MAY 08...	.1	.5	.05	9	12	1	1	12	5.7	5	8.3	90
02367310 JUNIPER CK AT ST HWY 85 NR NICEVILLE FLA (LAT 30 33 26 LONG 086 31 10)												
MAR., 1968 25...	.1	.2	--	12	11	4	2	15	5.5	20	--	--
MAY 07...	.1	.5	.06	10	9	2	1	13	5.7	5	8.7	90
02367315 STDRM SEWER DRAIN AT OCEAN CITY (LAT 30 25 54 LONG 086 36 26)												
OCT., 1967 25...	.5	.0	--	7910	--	1430	1390	10400	6.6	5	--	--
02367320 EAST BAY RIVER NR WYNNHAVEN BEACH FLA (LAT 30 25 53 LONG 086 46 20)												
MAR., 1968 26...	.1	.9	--	14	17	2	0	20	5.0	60	--	--
MAY 08...	.1	.8	.04	11	11	2	2	15	5.6	10	7.3	79
YELLOW RIVER BASIN												
02367900 YELLOW RIVER NR OAK GROVE FLA (LAT 30 55 30 LONG 086 33 34)												
MAY, 1968 09...	.1	1.1	.06	52	53	38	4	90	6.2	10	7.0	76
02368300 BAGGETT CREEK NR MILLIGAN FLA (LAT 30 43 40 LONG 086 39 35)												
APR., 1968 24...	.0	.7	.05	12	16	2	0	18	6.2	30	7.5	82
02368500 SHOAL RIVER NR MOSSY HEAD FLA (LAT 30 47 45 LONG 086 18 25)												
JAN., 1968 25...	.0	.2	--	13	16	3	1	19	5.5	45	--	--
MAR. 08...	.1	.6	--	12	20	3	1	17	5.4	40	--	--
APR. 26...	.1	1.3	.05	13	18	4	2	17	6.0	35	7.7	79
JUNE 21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	.1	.2	--	71	91	24	14	142	6.0	10	--	--
02368800 POND CREEK NR DORCAS FLA (LAT 30 50 02 LONG 086 25 43)												
NOV., 1967 01...	.1	.7	--	16	21	6	0	23	5.8	40	--	--
MAR., 1968 28...	.2	.3	--	17	21	6	1	23	6.0	40	--	--
MAY 08...	.1	1.3	.07	16	21	5	2	23	6.2	20	7.2	82
02368850 SHOAL RIVER NR DORCAS FLA (LAT 30 47 27 LONG 086 25 14)												
MAY, 1968 08...	.1	1.2	.05	18	22	8	1	25	6.4	20	8.5	98
02368900 SHOAL RIVER AT US HWY 90 NR CRESTVIEW FLA (LAT 30 45 10 LONG 086 30 33)												
APR., 1968 25...	.1	1.1	.03	18	23	10	3	24	6.2	20	--	--
02368990 TITI CREEK NR CRESTVIEW FLA (LAT 30 42 05 LONG 086 29 28)												
NOV., 1967 01...	.2	.5	--	15	46	2	2	36	4.2	200	--	--
MAR., 1968 25...	.1	.3	--	11	15	2	0	15	5.4	40	--	--
MAY 08...	.1	.3	.03	8	9	2	2	10	5.6	10	6.6	72

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE	TEMP- ERATURE	SILICA (SiO <sub>2</sub> )	DIS- SOLVED (Fe)	CAL- CIUM (Ca)	MAG- NE- SIUM (Mg)	STRON- TIUM (Sr)	SODIUM (Na)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (Cl)
YELLOW RIVER BASIN--CONTINUED												
02369000 SHOAL RIVER NR CRESTVIEW FLA (LAT 30 41 48 LONG 086 34 17)												
JAN., 1968												
24...	--	10	5.0	.10	1.1	.5	--	1.4	.3	4	.0	2.8
MAR.												
27...	682	15	4.2	.14	1.1	.6	--	1.6	.2	5	.8	3.2
APR.												
25...	291	18	4.3	.12	1.2	.6	.00	1.4	.3	4	.0	3.2
JUNE												
20...	293	26	5.0	.11	1.2	.6	--	1.4	.2	5	.8	1.8
AUG.												
15...	496	24	4.5	.05	1.4	.6	--	2.0	.4	8	.0	2.8
02369500 YELLOW RIVER NR HOLT FLA (LAT 30 40 25 LONG 086 44 50)												
APR., 1968												
24...	--	23	4.8	.08	4.0	.9	.01	1.6	.3	14	.0	3.5
BLACKWATER RIVER BASIN												
02369920 BLACKWATER RIVER NR GOOD HOPE FLA (LAT 30 59 20 LONG 086 43 12)												
MAY, 1968												
09...	34	17	5.2	.12	.6	.4	.00	1.6	.2	0	.0	3.0
02370000 BLACKWATER RIVER NR BAKER FLA (LAT 30 50 00 LONG 086 44 05)												
JAN., 1968												
23...	172	12	8.1	.08	.9	.4	--	1.8	.2	2	.4	3.2
MAR.												
07...	147	13	6.0	.07	5.0	.5	--	1.6	.2	14	.8	3.2
APR.												
24...	82	21	4.4	.09	.8	.4	.05	1.6	.3	2	.0	3.2
02370100 BLACKWATER RIVER NR HOLT FLA (LAT 30 43 26 LONG 086 47 34)												
MAY, 1968												
09...	158	23	5.5	.05	.6	.4	.00	1.8	.3	0	.0	3.0
02370500 120 BIG CLOUWATER CREEK NEAR MILTON, FLA. (LAT 30 42 30 LONG 086 58 20)												
APR., 1968												
24...	227	21	6.3	.04	.6	.4	.02	1.7	.2	3	.0	3.8
02370700 POND CREEK NR MILTON FLA (LAT 30 40 50 LONG 087 07 55)												
APR., 1968												
24...	32	20	5.5	.06	.5	.4	.06	1.7	.2	2	.0	3.5
02370750 HURRICANE BRANCH NR MILTON FLA (LAT 30 40 32 LONG 087 08 17)												
APR., 1968												
24...	--	21	4.3	.07	.2	.3	.05	1.8	.2	2	.0	4.0
02375500 ESCAMBIA RIVER NEAR CENTURY FLA (LAT 30 47 54 LONG 087 14 03)												
OCT., 1967												
17...	1000	21	8.6	.05	9.3	1.0	--	10	1.0	34	4.8	12
31...	4900	--	7.4	.08	7.8	1.0	--	11	1.1	26	4.0	16
NOV.												
16...	--	13	9.3	.13	9.7	1.0	--	6.6	.9	32	4.0	7.2
DEC.												
12...	15450	11	7.6	.11	8.3	.9	--	4.0	1.1	24	2.8	5.2
15...	10500	14	8.2	.88	5.9	.9	--	3.5	1.2	19	6.8	5.2
JAN., 1968												
15...	6000	9	9.4	.64	6.6	1.0	--	4.2	.8	21	3.2	5.9
23...	3870	10	9.5	.32	9.0	1.0	--	5.2	.8	31	2.4	6.4
FEB.												
15...	2050	9	8.1	--	9.8	.9	--	5.6	.7	30	4.8	8.0
MAR.												
06...	3050	10	8.0	.34	9.8	.9	--	5.1	.6	30	5.2	8.0
17...	835	15	8.4	.18	6.8	.9	.03	3.7	.9	20	3.4	6.5
APR.												
23...	1860	26	7.8	.20	13	1.2	.06	8.6	1.0	48	4.0	12
MAY												
16...	1350	27	8.8	.01	10	1.1	--	9.6	1.0	41	4.8	12
JUNE												
17...	800	31	7.8	.04	11	1.2	--	12	1.2	42	4.4	16
18...	1000	30	7.9	.23	13	1.3	--	14	1.3	47	4.8	18
18...	1000	30	--	--	--	--	--	--	--	--	--	--
JULY												
15...	1550	30	7.7	.12	9.0	1.0	--	9.6	.9	40	4.0	10
AUG.												
13...	997	30	8.3	.10	12	1.2	--	13	1.4	40	6.4	18
15...	1190	27	7.6	.03	29	6.1	--	11	1.0	108	5.6	19
SEP.												
15...	704	25	7.4	.06	12	1.1	--	13	1.1	45	5.2	14
02376000 PINE BARREN CREEK NR BARTH FLA (LAT 30 47 55 LONG 087 22 05)												
APR., 1968												
22...	67	23	5.5	.13	.5	.5	.00	1.9	.3	3	.0	3.5
COASTAL BASINS BETWEEN ESCAMBIA RIVER AND MOBILE RIVER												
02376300 BRUSHY CREEK NR WALNUT HILL FLA (LAT 30 53 21 LONG 087 32 24)												
APR., 1968												
23...	43	21	7.3	.10	.7	.4	.00	2.8	.5	3	.0	5.0
02376500 PERDIDO RIVER AT BARRINEAU PARK, FLA. (LAT 30 41 25 LONG 087 26 25)												
APR., 1968												
22...	253	23	6.5	.06	.5	.4	.04	2.1	.2	2	.0	4.2

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN FLORIDA

345

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	FLUO- RIDE (F)	NITRATE (ND3)	PHOS- PHATE (PO4)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (RESI- DUE AT 100 C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	COLOR	DISS- OLVED OXYGEN	PER- CENT SATUR- ATION
YELLOW RIVER BASIN--CONTINUED												
D2369D00 SHOAL RIVER NR CRESTVIEW FLA (LAT 30 41 48 LONG 086 34 17)												
JAN., 1968												
24...	.1	.6	--	14	15	4	1	18	6.1	30	--	--
MAR.												
27...	.1	.4	--	15	18	5	1	19	5.9	40	--	--
APR.												
25...	.1	.8	.05	14	20	6	3	19	6.1	25	8.2	86
JUNE												
20...	.1	.2	--	14	15	6	2	23	60.0	5	--	--
AUG.												
15...	.1	.0	--	16	20	6	0	25	6.0	25	--	--
D2369500 YELLOW RIVER NR HOLT FLA (LAT 30 40 25 LONG 086 44 50)												
APR., 1968												
24...	.1	.6	.03	23	28	14	3	36	6.8	15	7.1	82
BLACKWATER RIVER BASIN												
D2369920 BLACKWATER RIVER NR GOOD HOPE FLA (LAT 30 59 20 LONG 086 43 12)												
MAY, 1968												
09...	.1	.9	.04	12	19	3	3	18	5.6	20	8.2	85
D2370D00 BLACKWATER RIVER NR BAKER FLA (LAT 30 50 00 LONG 086 44 05)												
JAN., 1968												
23...	.1	.2	--	16	16	4	2	22	5.2	30	--	--
MAR.												
07...	.1	.1	--	24	31	14	3	37	6.8	30	--	--
APR.												
24...	.1	.5	.05	13	19	4	2	18	5.8	10	8.3	92
D237D100 BLACKWATER RIVER NR HOLT FLA (LAT 30 43 26 LONG 086 47 34)												
MAY, 1968												
09...	.1	1.0	.13	13	15	3	3	18	5.9	10	87.0	100
D2370500 120 BIG COLDWATER CREEK NEAR MILTON, FLA. (LAT 30 42 30 LONG 086 58 20)												
APR., 1968												
24...	.1	1.1	.02	16	18	3	1	17	6.1	9	8.0	89
D2370700 POND CREEK NR MILTON FLA (LAT 30 40 50 LONG 087 07 55)												
APR., 1968												
24...	.1	.4	.03	13	16	2	0	17	5.9	10	7.7	84
D237075D HURRICANE BRANCH NR MILTON FLA (LAT 30 40 32 LONG 087 08 17)												
APR., 1968												
24...	.1	.3	.03	12	14	2	0	16	5.5	30	7.4	82
D2375500 ESCAMBIA RIVER NEAR CENTURY FLA (LAT 30 47 54 LONG 087 14 03)												
OCT., 1967												
17...	1.1	.2	--	65	65	27	0	115	6.8	30	--	--
31...	1.2	.3	.30	63	64	24	3	111	6.6	30	--	--
NOV.												
16...	1.3	.8	--	57	58	28	2	96	6.8	40	--	--
DEC.												
12...	1.5	1.3	3.0	45	53	24	4	73	6.6	50	--	--
15...	.2	.8	.05	43	56	18	2	59	6.9	80	--	--
JAN., 1968												
15...	.2	.7	.04	43	57	20	3	66	6.8	50	--	--
23...	.2	.1	.03	50	60	26	1	83	6.9	30	--	--
FEB.												
15...	.2	.6	--	54	65	28	3	86	6.7	120	--	--
MAR.												
06...	.2	.3	--	53	119	28	3	82	6.7	60	--	--
17...	.0	.5	.06	41	96	20	4	68	6.0	40	--	--
APR.												
23...	.1	1.2	.05	73	81	38	0	118	7.0	40	4.6	56
MAY												
16...	.1	.5	.06	68	70	30	0	115	6.5	45	--	--
JUNE												
17...	.1	.3	.01	75	78	32	0	126	6.7	25	--	--
18...	.1	.1	--	84	90	38	0	149	6.4	20	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
JULY												
15...	.1	.0	.03	62	69	26	0	105	6.5	30	--	--
AUG.												
13...	.1	.1	.04	81	88	35	2	136	6.6	45	--	--
15...	.1	.9	.03	133	138	98	9	233	7.2	20	--	--
SEP.												
15...	.1	.3	.03	76	79	34	0	128	6.9	20	--	--
D2376D00 PINE BARREN CREEK NR BARTH FLA (LAT 30 47 55 LONG 087 22 05)												
APR., 1968												
22...	.1	.8	.06	15	16	3	1	19	6.0	10	6.3	72
COASTAL BASINS BETWEEN ESCAMBIA RIVER AND MOBILE RIVER												
D2376300 BRUSHY CREEK NR WALNUT HILL FLA (LAT 30 53 21 LONG 087 32 24)												
APR., 1968												
23...	.1	1.1	.50	20	19	3	1	25	5.9	10	5.7	63
D2376500 PERDIDO RIVER AT BARRINEAU PARK, FLA. (LAT 30 41 25 LONG 087 26 25)												
APR., 1968												
22...	.1	.5	.07	16	19	2	0	19	5.8	8	7.4	85

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
APALACHICOLA RIVER BASIN									
02339215 WEHABKEE CREEK NEAR ROCK MILLS, ALA. (LAT 33 08 50 LONG 085 16 55)									
APR., 1968									
06...	178	20	0	1.8	11	0	50	7.4	16
19...	631	15	0	2.2	9	0	33	7.4	17
SEP.									
11...	4.2	18	0	1.0	10	0	35	7.5	22
02339495 OSILIGEE CREEK NEAR LANETT, ALA. (LAT 32 54 10 LONG 085 11 30)									
APR., 1968									
06...	930	14	0	1.0	16	5	38	7.1	13
18...	114	29	0	1.2	20	0	54	7.5	18
SEP.									
11...	14	44	0	1.8	28	0	75	7.7	21
02340750 DSANIPPA CREEK NEAR FAIRFAX, ALA. (LAT 32 47 20 LONG 085 11 30)									
APR., 1968									
06...	393	26	0	2.2	21	0	53	7.5	14
18...	132	26	0	1.4	19	0	53	7.5	19
SEP.									
11...	5.2	52	0	1.2	34	0	87	7.7	22
02341030 WACDJEHE CREEK (NR PHENIX CITY) AT VALLEY, ALA. (LAT 32 37 20 LONG 085 08 00)									
APR., 1968									
05...	44	26	0	2.0	22	1	56	7.6	18
18...	28	26	0	1.8	15	0	58	7.4	18
SEP.									
09...	1.6	34	0	1.2	18	0	62	7.4	24
02341380 MILL CREEK NEAR PHENIX CITY, ALA. (LAT 32 29 32 LONG 085 01 58)									
SEP., 1968									
11...	.11	10	0	2.6	10	2	51	7.0	26
02342150 UCHEE CREEK NEAR SEALE, ALA. (LAT 32 21 16 LONG 085 05 44)									
SEP., 1968									
10...	1.6	28	0	4.0	39	16	105	6.7	27
02342200 PHELPS CREEK NEAR OPELIKA, ALA. (LAT 32 34 00 LONG 085 16 00)									
FEB., 1968									
22...	10	28	0	2.8	18	0	59	7.3	6
APR.									
05...	12	28	0	1.6	20	0	57	7.7	16
18...	4.7	28	0	2.4	18	0	61	7.4	16
SEP.									
09...	.1	58	0	4.8	26	0	100	6.7	25



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

347

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
APALACHICOLA RIVER BASIN									
APR., 1968	02342280	LITTLE UCHEE CREEK NEAR BLEECKER, ALA. (LAT 32 29 45 LONG 085 10 15)							
05...	189	30	0	1.6	25	0	59	7.6	18
18...	54	28	0	1.8	20	0	58	7.3	17
SEP.									
09...	3.2	82	0	.6	58	0	135	7.9	26
SEP., 1968	02342360	LITTLE UCHEE CREEK NEAR CRAWFORD, ALA. (LAT 32 27 42 LONG 085 07 51)							
11...	4.0	66	0	2.0	46	0	114	7.9	22
SEP., 1968	02342400	LITTLE UCHEE CREEK NEAR SEALE, ALA. (LAT 32 22 40 LONG 085 04 50)							
10...	4.5	58	0	2.0	42	0	105	7.6	29
JULY, 1968	02342500	UCHEE CREEK NEAR FT. MITCHELL, ALA. (LAT 32 19 00 LONG 085 00 54)							
22...	34	28	0	1.4	22	0	60	7.6	31
SEP.									
03...	12	30	0	2.0	22	0	64	7.1	26
11...	10	24	0	2.2	24	4	67	7.3	24
SEP., 1968	02342892	HATCHECHUBBEE CREEK NR PITTSVIEW, ALA (LAT 32 10 57 LONG 085 10 03)							
10...	.11	122	0	2.6	101	1	219	8.1	23
SEP., 1968	02342897	WATERMELON CREEK NEAR PITTSVIEW, ALA. (LAT 32 14 36 LONG 085 09 58)							
10...	.38	16	0	.8	11	0	38	7.2	22
SEP., 1968	02342899	WATERMELON CREEK AT PITTSVIEW, ALA. (LAT 32 11 37 LONG 085 08 47)							
10...	4.4	18	0	1.2	18	3	51	7.1	22

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS-CHARGE (CFS)	BICAR-BONATE (HCO3)	CAR-BONATE (CO3)	CHLO-RIDE (CL)	HARD-NESS (CA, MG)	NON-CAR-BONATE HARD-NESS	SPECI-FIC CON-DUCTANCE (MICRO-MHOS)	PH	TEMP-ERATURE (DEG C)
ESCAMBIA RIVER BASIN									
02374798	LITTLE ESCAMBIA CREEK BELOW POLLARD OIL FIELD (LAT 31 02 42 LONG 087 13 06)								
OCT., 1967									
02...	--	3	0	27	15	13	109	5.8	18
NOV.									
07...	--	2	0	29	12	10	110	5.6	11
DEC.									
04...	--	2	0	14	15	13	63	6.0	12
JAN., 1968									
09...	--	6	0	28	18	13	110	6.3	10
30...	--	2	0	39	25	23	150	5.5	12
FEB.									
27...	--	4	0	21	11	8	89	6.0	--
APR.									
02...	--	4	0	30	14	11	108	6.2	21
MAY									
01...	--	4	0	21	11	8	85	6.0	18
JUNE									
05...	--	4	0	34	16	13	125	5.7	27
JULY									
02...	--	3	0	37	22	20	128	6.0	26
31...	--	4	0	27	16	13	100	5.8	27
SEP.									
04...	--	4	0	34	20	17	127	6.3	25
02374800	LITTLE ESCAMBIA CR NR POLLARD (LAT 31 01 14 LONG 087 13 06)								
OCT., 1967									
02...	--	3	0	28	14	12	111	6.0	18
NOV.									
07...	--	4	0	26	12	9	100	5.9	11
DEC.									
04...	--	4	0	13	12	9	57	6.4	12
JAN., 1968									
09...	--	4	0	17	12	9	71	6.0	10
30...	--	3	0	33	18	16	131	5.6	13
FEB.									
27...	--	3	0	20	10	8	85	5.8	--
APR.									
02...	--	4	0	30	12	9	110	6.7	21
MAY									
01...	--	6	0	20	12	9	79	6.3	20
JUNE									
05...	--	4	0	35	18	15	128	6.1	27
JULY									
02...	--	4	0	35	20	17	129	6.3	26
31...	--	10	0	27	18	10	100	6.5	27
SEP.									
04...	--	6	0	34	19	14	127	6.5	26
02398300	MOBILE RIVER BASIN CHATTOGA RIVER ABOVE GAYLESVILLE, ALA. (LAT 34 17 30 LONG 085 30 30)								
OCT., 1967									
10... 784	88	0	12	69	0	200	8.1	18	
NOV.									
17... 328	188	0	12	100	0	368	7.8	10	
DEC.									
29... 1700	89	0	5.4	70	0	170	7.7	8	
FEB., 1968									
20... 410	133	0	11	116	7	263	7.6	8	
MAR.									
28... 597	142	0	6.8	90	0	254	8.0	14	
02399000	LITTLE RIVER NEAR JAMESTOWN, ALA. (LAT 34 24 00 LONG 085 38 00)								
DEC., 1967									
29... 618	3	0	1.0	4	2	14	6.3	8	
FEB., 1968									
19... 73	5	0	2.2	5	1	17	6.3	5	
MAR.									
27... 236	2	0	.4	4	2	14	6.1	12	
APR.									
30... 270	4	0	.2	4	1	13	6.3	16	
02399200	LITTLE RIVER NEAR BLUE POND, ALA. (LAT 34 17 20 LONG 085 40 50)								
OCT., 1967									
10... 720	6	0	1.6	8	3	21	7.3	18	
NOV.									
16... 155	8	0	1.2	5	0	19	6.3	9	
DEC.									
29... 1163	4	0	1.4	5	2	17	6.3	7	
FEB., 1968									
20... 110	5	0	.4	5	1	20	6.3	3	
MAR.									
28... 315	4	0	.4	6	3	16	6.2	11	
02399500	COOSA RIVER (AT WEISS DAM) AT LEESBURG, ALA. (LAT 34 11 00 LONG 085 45 00)								
DEC., 1967									
28... 25800	32	0	1.0	29	3	64	7.3	8	

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

349

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02399800	LITTLE TERRAPIN CREEK NEAR BORDEN SPRINGS, ALA. (LAT 33 54 00 LONG 085 28 00)								
DEC., 1967									
28...	88	14	0	.6	11	0	30	6.9	8
FEB., 1968									
20...	22	17	0	.6	16	2	43	6.7	7
MAR.									
28...	28	16	0	.8	12	0	39	7.0	14
APR.									
06...	110	10	0	1.0	14	6	29	7.2	16
18...	--	14	0	1.0	15	4	34	7.2	18
MAY									
01...	50	12	0	.6	12	2	31	7.0	13
JUNE									
11...	10	20	0	.4	16	0	44	7.0	21
SEP.									
10...	1.0	44	0	.4	36	0	87	7.3	13
02400100	TERRAPIN CREEK AT ELLISVILLE, ALA. (LAT 34 04 00 LONG 085 37 00)								
OCT., 1967									
11...	324	64	0	2.0	55	3	110	7.5	16
NOV.									
17...	198	86	0	1.0	79	8	161	7.4	14
DEC.									
28...	1300	44	0	1.0	42	6	87	7.1	8
FEB., 1968									
20...	296	80	0	1.0	69	3	137	8.1	9
MAR.									
28...	390	64	0	1.2	56	4	115	7.3	15
02401370	BIG CANOE CREEK NEAR SPRINGVILLE, ALA. (LAT 33 48 49 LONG 086 22 54)								
NOV., 1967									
01...	955	42	0	1.4	36	2	95	6.8	14
02401390	BIG CANOE CREEK AT ASHVILLE, ALA. (LAT 30 50 23 LONG 086 15 46)								
OCT., 1967									
11...	53	115	0	2.4	106	12	204	7.7	16
NOV.									
02...	2060	64	0	.6	61	9	136	7.7	15
28...	212	80	0	1.4	75	9	164	7.6	8
JAN., 1968									
08...	704	60	0	.4	56	7	114	7.2	6
FEB.									
23...	96	118	0	2.4	105	8	211	7.8	5
APR.									
02...	129	96	0	1.0	86	7	171	7.8	14
02401500	BIG CANOE CREEK NEAR GADSDEN, ALA. (LAT 33 54 11 LONG 086 06 37)								
NOV., 1967									
27...	--	74	0	1.8	71	10	159	7.8	8
JAN., 1968									
08...	--	55	0	1.0	51	6	110	7.3	6
FEB.									
23...	--	112	0	2.0	100	8	204	7.5	6
APR.									
02...	--	94	0	1.6	85	8	173	7.5	16
02401590	SHOAL CREEK NEAR RAGLAND, ALA. (LAT 33 48 08 LONG 086 07 02)								
NOV., 1967									
01...	232	36	0	.4	35	5	84	7.5	14
02401990	BROKEN ARROW CREEK NEAR PELL CITY, ALA. (LAT 33 40 07 LONG 086 16 45)								
NOV., 1967									
01...	581	14	0	.8	14	3	46	6.7	14
02402500	COOSA RIVER AT RIVERSIDE, ALA. (LAT 33 37 00 LONG 086 12 00)								
SEP., 1968									
12...	--	76	0	4.6	60	0	148	7.4	26
02404000	CHOCOLOCCO CREEK NEAR JENIFER, ALA. (LAT 33 34 14 LONG 085 55 50)								
OCT., 1967									
04...	260	70	0	53	95	34	384	7.6	17
NOV.									
15...	250	58	0	82	130	82	450	8.1	12
OEC.									
12...	1110	38	0	10	40	9	132	7.7	13
JAN., 1968									
23...	577	48	0	41	78	36	266	7.8	11
APR.									
16...	1890	24	0	10	30	10	96	7.2	17
SEP.									
12...	145	102	0	114	141	57	679	7.1	19
02404235	CHEAHA CREEK NEAR MCLENDERRY, ALA. (LAT 33 30 12 LONG 086 00 17)								
SEP., 1968									
12...	7.4	136	6	1.0	120	0	228	8.4	18
02404245	CHEAHA CREEK NEAR TALLADEGA, ALA. (LAT 33 30 37 LONG 086 00 58)								
SEP., 1968									
12...	28	138	4	.6	120	0	223	8.4	16

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02404400	CHOCOLDCO CREEK	AT JACKSON SHOALS NR. LINCOLN, ALA.	(LAT 33 32 54 LONG 086 05 49)						
OCT., 1967									
04...	414	98	0	43	128	48	343	7.8	16
NOV.									
14...	468	88	2	46	125	49	339	8.3	14
JAN., 1968									
25...	2960	47	0	7.0	48	9	129	7.8	8
MAR.									
05...	625	79	0	33	99	34	276	7.9	11
APR.									
17...	2060	38	0	9.2	44	13	109	7.6	17
SEP.									
12...	243	128	0	56	129	24	455	8.0	22
02405325	WOLF CREEK NEAR LONDON, ALA.	(LAT 33 31 22 LONG 086 23 52)							
NOV., 1967									
02...	274	16	0	1.0	14	1	47	7.1	14
02405500	KELLEY CREEK NEAR VINCENT, ALA.	(LAT 33 26 51 LONG 086 23 13)							
OCT., 1967									
03...	23	50	0	2.4	45	4	103	7.2	14
NOV.									
14...	103	36	0	2.8	35	5	76	8.2	11
DEC.									
12...	1810	16	0	1.4	15	2	45	7.3	13
JAN., 1968									
26...	695	18	0	.2	16	1	46	7.3	5
MAR.									
05...	127	29	0	2.4	25	1	64	7.4	6
APR.									
16...	1300	14	0	.4	18	7	35	6.9	14
MAY									
28...	90	35	0	.6	29	0	69	7.9	18
JULY									
10...	12	77	0	1.0	62	0	134	7.4	21
AUG.									
20...	26	46	0	.2	38	0	88	7.6	24
SEP.									
12...	11	64	0	.4	52	0	116	7.2	22
02405800	TALLADEGA CREEK ABOVE TALLADEGA, ALA.	(LAT 33 22 38 LONG 086 01 22)							
OCT., 1967									
03...	31	18	0	2.2	19	4	46	7.3	16
NOV.									
14...	44	18	0	1.4	19	4	44	8.0	12
DEC.									
20...	228	16	0	.2	15	2	42	7.3	16
JAN., 1968									
23...	136	42	0	.2	38	4	80	7.5	--
MAR.									
19...	87	14	0	1.2	11	0	33	7.2	10
APR.									
05...	1990	8	0	.4	10	3	23	7.0	14
17...	245	10	0	.8	12	4	27	6.7	14
JULY									
10...	57	14	0	.6	11	0	34	7.0	21
AUG.									
20...	17	20	0	.2	15	0	44	7.1	23
SEP.									
09...	8.0	19	0	2.0	14	0	45	7.4	22
02406500	TALLADEGA CREEK AT ALPINE, ALA.	(LAT 33 21 34 LONG 086 14 03)							
SEP., 1968									
12...	78	151	0	7.6	124	0	269	8.1	17
02406920	TALLASSEECHATCHEE CREEK NEAR SYLACAUGA, ALA.	(LAT 33 12 47 LONG 086 11 50)							
SEP., 1968									
12...	3.8	118	0	2.0	95	0	197	8.2	18
02406990	TALLASSEECHATCHEE CREEK NEAR CHILDERSBURG, ALA.	(LAT 33 17 01 LONG 086 20 21)							
SEP., 1968									
12...	--	150	0	15	121	0	299	7.3	22
02407470	NORTH FORK YELLOWLEAF CREEK AT CHELSEA, ALA.	(LAT 33 20 33 LONG 086 57 54)							
SEP., 1968									
11...	.68	34	0	.4	25	0	67	6.7	20
02407500	YELLOWLEAF CREEK NEAR WILSONVILLE, ALA.	(LAT 33 18 23 LONG 086 33 04)							
OCT., 1967									
03...	5.4	36	0	3.2	31	1	72	7.6	14
NOV.									
14...	31	18	0	3.6	22	7	46	7.3	11
DEC.									
12...	880	11	0	.4	11	2	35	7.2	13
JAN., 1968									
26...	662	8	0	.4	9	2	27	7.0	5
MAR.									
05...	68	13	0	2.0	12	1	41	7.5	6
APR.									
16...	146	12	0	2.2	12	2	33	6.9	14
MAY									
27...	60	18	0	1.4	14	0	41	7.3	20
JULY									
10...	5.5	62	0	.8	48	0	107	7.2	21
AUG.									
19...	10	34	0	.8	24	0	64	7.6	24
SEP.									
11...	--	34	0	1.2	25	0	68	6.9	21

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

351

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (CO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02407520 YELLOWLEAF CREEK AT WILSONVILLE, ALA. (LAT 33 15 36 LONG 086 27 03)									
SEP., 1968									
11...	--	90	0	7.4	79	5	194	7.6	26
02407620 CEDAR CREEK AT FAYETTEVILLE, ALA. (LAT 33 09 09 LONG 086 24 22)									
SEP., 1968									
12...	7.6	170	0	1.2	129	0	260	8.2	19
02407710 MAXAHATCHEE CREEK NEAR SHELBY, ALA. (LAT 33 06 30 LONG 086 37 52)									
SEP., 1968									
10...	.15	8	0	46	131	124	471	5.9	22
02407900 PAINT CREEK NEAR MARBLE VALLEY, ALA. (LAT 33 02 20 LONG 086 25 30)									
APR., 1968									
05...	253	8	0	.8	10	3	22	7.3	15
15...	25	14	0	1.2	10	0	32	7.4	17
JULY									
09...	13	18	0	.4	11	0	38	7.0	21
AUG.									
19...	.30	28	0	.4	15	0	48	7.8	24
SEP.									
10...	.92	24	0	.8	14	0	46	7.2	24
02408010 YELLOWLEAF CREEK NEAR CLANTON, ALA. (LAT 32 55 49 LONG 086 36 55)									
SEP., 1968									
09...	34	18	0	2.4	15	0	51	6.6	23
02408030 YELLOWLEAF CREEK NEAR LAY OAM NEAR CLANTON, ALA. (LAT 32 57 28 LONG 086 31 54)									
SEP., 1968									
09...	2.5	20	0	2.2	16	0	52	7.1	23
02408170 WALNUT CREEK NEAR CLANTON, ALA. (LAT 32 53 07 LONG 086 32 15)									
SEP., 1968									
09...	1.9	12	0	17	41	31	197	6.2	22
02408325 HATCHET CREEK NEAR BROWNSVILLE, ALA. (LAT 33 11 30 LONG 085 47 30)									
APR., 1968									
05...	1090	6	0	.8	9	4	21	6.9	15
18...	92	12	0	.8	10	0	28	7.3	16
SEP.									
09...	4.5	20	0	.6	16	0	43	6.8	21
02408340 LITTLE HATCHET CREEK NEAR GOODWATER, ALA. (LAT 33 07 32 LONG 086 05 32)									
APR., 1968									
05...	216	6	0	.6	10	5	20	6.9	15
18...	--	20	0	1.2	18	2	39	7.7	18
SEP.									
09...	2.4	58	0	.2	46	0	97	7.3	20
02408350 HATCHET CREEK NEAR GOODWATER, ALA. (LAT 33 05 00 LONG 086 04 40)									
APR., 1968									
06...	756	9	0	1.2	9	2	25	7.2	13
18...	196	14	0	1.4	11	0	31	7.5	17
SEP.									
10...	11	28	0	.2	20	0	51	7.1	24
02408450 SOCAPATOY CREEK NEAR SOCAPATOY, ALA. (LAT 32 59 50 LONG 086 05 00)									
APR., 1968									
06...	38	16	0	2.0	16	3	35	7.4	12
18...	30	16	0	1.4	11	0	37	7.2	15
SEP.									
10...	3.6	28	0	1.0	15	0	52	7.3	24
02408500 HATCHET CREEK NEAR ROCKFORD, ALA. (LAT 32 57 00 LONG 086 13 00)									
APR., 1968									
05...	8610	7	0	.8	12	6	23	7.3	17
15...	1650	10	0	.2	10	2	29	7.1	16
JULY									
09...	163	17	0	.8	12	0	37	7.0	22
AUG.									
19...	71	26	0	.2	14	0	48	7.3	25
SEP.									
10...	42	22	0	.2	14	0	45	7.2	22
02408600 SWAMP CREEK AT SALTER, ALA. (LAT 32 51 30 LONG 086 18 25)									
APR., 1968									
05...	1890	10	0	1.0	11	3	24	7.3	14
19...	87	20	0	1.2	9	0	39	7.3	20
SEP.									
10...	14	26	0	1.0	10	0	45	7.1	21
02409000 WEOGUFKA CREEK NEAR WEOGUFKA, ALA. (LAT 32 59 00 LONG 086 18 00)									
APR., 1968									
05...	4300	8	0	.8	12	5	27	7.1	14
15...	258	18	0	1.4	18	3	46	7.4	17
SEP.									
10...	4.9	26	0	1.0	18	0	50	7.5	21

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA  
 CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	8ICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02409500 COOSA RIVER AT MITCHELL DAM NR VERBENA, ALA. (LAT 32 49 00 LONG 086 26 00)									
APR., 1968									
05...	--	46	0	3.4	45	7	100	7.8	14
19...	--	44	0	2.4	40	4	104	7.4	19
SEP.									
09...	--	67	0	6.2	56	1	150	7.0	27
10...	--	68	0	6.2	56	0	149	7.4	28
02409510 CHESTNUT CREEK AT VERBENA, ALA. (LAT 32 45 23 LONG 086 30 44)									
SEP., 1968									
09...	1.0	16	0	2.2	11	0	39	7.4	22
02409680 SHOAL CREEK NEAR HOLTVILLE, ALA. (LAT 32 39 32 LONG 086 21 47)									
SEP., 1968									
09...	3.6	10	0	1.4	8	0	29	6.3	21
02410000 PATTERSON CREEK NEAR CENTRAL, ALA. (LAT 32 40 54 LONG 086 07 40)									
DEC., 1967									
06...	5.9	22	0	1.4	18	0	45	7.7	9
02410040 SOFKAHATCHEE CREEK NEAR WEOKA, ALA. (LAT 32 39 11 LONG 086 12 44)									
SEP., 1968									
09...	1.2	20	0	1.4	11	0	42	7.0	22
02411600 COOSA RIVER AT WETUMPKA, ALA. (LAT 32 32 13 LONG 86 12 32)									
JUNE									
25...		43	0	4.0	45	10	117	7.4	29
SEPT.									
09...		66	0	6.6	55	1	144	7.1	27
23...		68	0	7.0	59	3	155	7.2	27
02412000 TALLAPOOSA RIVER NEAR HEFLIN, ALA. (LAT 33 37 00 LONG 085 31 00)									
APR., 1968									
06...	5280	8	0	.4	12	5	23	7.2	15
17...	1170	12	0	1.6	10	0	31	7.4	16
JULY									
16...	580	13	0	.2	9	0	30	6.7	21
AUG.									
21...	189	18	0	.8	11	0	38	7.2	23
SEP.									
10...	88	18	0	.8	12	0	37	6.9	21
02412065 CANE CREEK NEAR HEFLIN, ALA. (LAT 33 39 10 LONG 085 32 10)									
APR., 1968									
06...	289	10	0	.2	11	3	24	7.3	14
18...	125	14	0	1.2	9	0	28	7.5	17
SEP.									
10...	9.0	18	0	1.4	12	0	37	6.6	21
02412210 TALLAPOOSA RIVER NEAR BELLTOWN, ALA. (LAT 33 35 00 LONG 085 35 50)									
APR., 1968									
06...	6000	10	0	.6	12	4	28	7.0	16
18...	1200	12	0	1.4	9	0	29	7.3	17
SEP.									
10...	100	18	0	1.2	12	0	39	6.8	23
02412290 CHULAFINEE CREEK AT HOLLIS, ALA. (LAT 33 31 35 LONG 085 37 55)									
APR., 1968									
06...	159	12	0	.2	9	0	29	7.2	16
18...	57	14	0	.8	15	4	36	6.7	17
SEP.									
10...	5.2	22	0	.4	18	0	45	6.8	22
02412300 TALLAPOOSA RIVER NEAR HOLLIS, ALA. (LAT 33 30 20 LONG 085 37 30)									
APR., 1968									
06...	6400	8	0	.6	9	2	24	7.0	16
18...	1300	14	0	.8	12	1	30	7.0	17
SEP.									
10...	--	18	0	1.6	11	0	42	7.0	23
02412500 TALLAPOOSA RIVER NEAR OFELIA, ALA. (LAT 33 20 00 LONG 085 35 00)									
APR., 1968									
07...	6390	10	0	.6	12	4	27	7.4	14
18...	1690	14	0	1.4	9	0	33	7.3	16
SEP.									
11...	168	18	0	.8	14	0	38	6.8	21
02413280 LOST CREEK AT RANBURN, ALA. (LAT 33 31 20 LONG 085 21 40)									
APR., 1968									
06...	183	6	0	.8	9	4	24	6.9	16
18...	48	6	0	1.0	8	3	26	6.5	18
SEP.									
10...	3.1	10	0	1.0	8	0	31	6.5	21
02413300 LITTLE TALLAPOOSA RIVER NEAR NEWELL, ALA. (LAT 33 26 00 LONG 085 24 00)									
APR., 1968									
07...	3430	10	0	1.0	12	4	35	7.0	14
19...	755	14	0	1.2	10	0	39	7.3	17
SEP.									
10...	72	18	0	3.0	11	0	51	7.1	24

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

353

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02413400 WEDOWEE CREEK ABOVE WEDOWEE, ALA. (LAT 33 19 00 LONG 085 21 00)									
APR., 1968									
06...	26	5	0	1.2	9	5	24	6.9	14
18...	15	6	0	3.0	9	4	21	6.9	14
SEP.									
11...	1.8	7	0	1.0	5	0	22	7.0	20
02413475 WEDOWEE CREEK NEAR WEDOWEE, ALA. (LAT 33 19 20 LONG 085 28 50)									
APR., 1968									
07...	172	7	0	1.2	10	4	23	7.1	14
17...	20	8	0	4.4	8	1	31	6.8	18
SEP.									
12...	7.4	11	0	1.4	8	0	29	7.2	17
02413500 LITTLE TALLAPOOSA RIVER NEAR WEDOWEE, ALA. (LAT 33 21 00 LONG 085 33 00)									
APR., 1968									
07...	3940	7	0	1.2	10	4	28	7.1	14
18...	1340	11	0	2.0	11	2	34	7.2	16
SEP.									
11...	115	17	0	2.8	10	0	58	6.8	21
02413800 FOX CREEK NEAR LINEVILLE, ALA. (LAT 33 18 30 LONG 085 38 10)									
APR., 1968									
07...	108	10	0	1.2	9	1	25	7.7	14
19...	62	8	0	4.4	8	1	26	7.1	16
SEP.									
11...	8.7	11	0	.6	8	0	29	6.7	18
02414030 CROOKED CREEK AT CRAGFORD, ALA. (LAT 30 15 15 LONG 085 39 10)									
APR., 1968									
06...	316	8	0	1.6	12	5	26	7.2	12
18...	111	11	0	1.8	8	0	26	6.9	18
SEP.									
09...	19	10	0	2.2	6	0	34	6.9	22
02414500 TALLAPOOSA RIVER AT WADLEY, ALA. (LAT 33 07 00 LONG 085 34 00)									
APR., 1968									
06...	14500	8	0	.4	11	4	26	7.4	14
18...	3800	12	0	1.8	9	0	33	6.7	17
19...	3380	11	0	.6	9	0	32	6.6	19
SEP.									
11...	370	17	0	1.8	12	0	42	7.1	24
02414580 HIGH PINE CREEK AT ABANDA, ALA. (LAT 33 05 30 LONG 085 33 20)									
APR., 1968									
06...	554	10	0	1.4	10	2	31	7.4	16
19...	123	22	0	.2	14	0	46	7.5	19
SEP.									
11...	7.1	30	0	2.6	19	0	64	7.4	22
02414595 CHICKASAWXEE CREEK AT MILLTOWN, ALA. (LAT 33 02 50 LONG 085 28 30)									
APR., 1968									
06...	333	16	0	.8	11	0	35	7.1	13
18...	91	22	0	1.4	15	0	47	7.0	18
SEP.									
11...	9.4	30	0	1.4	18	0	56	7.5	18
02414670 CHATAHOOCREEK CREEK NEAR LAFAYETTE, ALA. (LAT 32 57 10 LONG 085 32 10)									
APR., 1968									
06...	463	17	0	1.2	12	0	43	7.7	15
18...	130	22	0	1.4	14	0	48	7.4	20
SEP.									
11...	8.7	38	0	1.2	22	0	70	7.0	21
02414720 EMUCKFAM CREEK NEAR ALEXANDER CITY, ALA. (LAT 33 14 45 LONG 085 44 40)									
APR., 1968									
06...	382	10	0	1.4	11	3	25	7.1	13
19...	137	14	0	.6	12	1	30	7.2	18
SEP.									
11...	17	16	0	.6	11	0	31	7.3	18
02414770 ENITACHOPCA CREEK AT BLUFF SPRINGS, ALA. (LAT 33 09 30 LONG 085 49 50)									
APR., 1968									
06...	254	9	0	1.0	8	1	24	7.8	11
18...	93	9	0	1.2	8	1	25	7.1	17
SEP.									
09...	15	12	0	.8	9	0	32	7.2	23
02414790 LITTLE HILLABEE CREEK NEAR MILLERVILLE, ALA. (LAT 30 10 40 LONG 085 56 00)									
APR., 1968									
06...	179	14	0	1.0	10	0	34	7.8	10
18...	56	14	0	1.2	10	0	30	7.2	16
SEP.									
09...	9.1	16	0	.8	10	0	34	6.8	21
02414800 HARBUCK CREEK NEAR HACKNEYVILLE, ALA. (LAT 33 07 00 LONG 085 57 00)									
APR., 1968									
18...	16	10	0	1.8	6	0	25	6.9	17
SEP.									
09...	1.7	16	0	1.2	8	0	34	6.8	21

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02415000	HILLABEE CREEK NEAR HACKNEYVILLE, ALA.	(LAT 33 04 00 LONG 085 53 00)							
APR., 1968									
06...	1320	10	0	2.2	8	0	32	7.2	13
19...	452	10	0	1.6	8	0	27	7.0	18
JULY									
16...	161	13	0	.6	10	0	29	7.0	22
AUG.									
22...	77	20	0	.6	11	0	39	7.1	26
SEP.									
10...	55	16	0	.6	9	0	34	7.3	24
02415270	TOWN CREEK NEAR ALEXANDER CITY, ALA.	(LAT 33 01 20 LONG 085 57 00)							
APR., 1968									
06...	56	14	0	1.8	15	4	34	7.5	16
19...	26	23	0	1.0	12	0	45	7.4	16
SEP.									
10...	3.6	28	0	1.0	14	0	52	7.5	22
02415500	HILLABEE CREEK NEAR ALEXANDER CITY, ALA.	(LAT 32 59 05 LONG 085 51 35)							
APR., 1968									
06...	2190	9	0	1.2	12	5	25	7.0	14
19...	557	21	0	1.2	14	0	43	7.2	19
SEP.									
11...	57	18	0	1.0	9	0	37	7.2	21
02416480	SANDY CREEK NEAR DADEVILLE, ALA.	(LAT 32 48 00 LONG 085 46 20)							
APR., 1968									
06...	930	14	0	2.0	16	5	35	7.4	14
18...	236	12	0	1.0	9	0	30	7.1	20
SEP.									
12...	22	28	0	1.6	18	0	59	6.8	19
02418040	CHANNAHATCHEE CREEK NEAR KENT, ALA.	(LAT 32 32 28 LONG 085 57 02)							
SEP., 1968									
09...	1.7	26	0	1.6	12	0	48	7.1	22
02418200	SOUGAHATCHEE CREEK NEAR AUBURN, ALA.	(LAT 32 38 35 LONG 085 30 10)							
APR., 1968									
06...	120	66	0	6.8	18	0	169	7.9	14
18...	57	114	0	11	19	0	275	8.1	21
SEP.									
09...	6.0	579	0	61	38	0	1150	8.1	22
02418264	SOUGAHATCHEE CREEK ABOVE REELTOWN, ALA.	(LAT 32 36 50 LONG 085 43 25)							
APR., 1968									
06...	538	32	0	5.4	24	0	88	7.4	17
18...	228	42	0	2.6	15	0	86	7.5	21
SEP.									
12...	14	133	2	21	22	0	296	8.4	19
02418500	TALLAPOOSA RIVER BELOW TALLASSEE, ALA.	(LAT 32 21 00 LONG 085 53 00)							
APR., 1968									
18...	5280	14	0	3.0	19	8	44	7.0	17
JUNE									
25...	7950	16	0	1.4	11	0	39	7.3	19
AUG.									
02...	9200	22	0	1.4	15	0	47	7.2	20
SEP.									
12...	3930	17	0	.8	11	0	39	7.2	23
02418750	CHEWACLA CREEK NEAR AUBURN, ALA.	(LAT 32 33 00 LONG 085 28 50)							
APR., 1968									
05...	92	48	0	2.0	41	2	82	8.1	18
18...	41	52	0	1.6	44	1	98	7.6	19
SEP.									
09...	.89	134	0	1.2	110	0	219	8.1	23
02418775	PARKERSON MILL CREEK NEAR AUBURN, ALA.	(LAT 32 32 20 LONG 085 30 05)							
APR., 1968									
05...	17	16	0	7.0	29	16	105	7.7	18
18...	12	27	0	9.4	26	4	135	7.2	19
SEP.									
09...	2.9	50	0	19	48	7	238	7.4	22
02419000	UPHAPEE CREEK NEAR TUSKEGEE, ALA.	(LAT 32 28 00 LONG 085 42 00)							
DEC., 1967									
20...	1860	16	0	1.6	22	9	52	7.1	16
JAN., 1968									
11...	911	28	0	3.8	29	6	82	7.8	7
APR.									
06...	257	24	0	4.0	20	0	64	7.3	20
MAY									
17...	116	30	0	3.0	25	0	72	7.5	23
JUNE									
26...	31	42	0	4.8	34	0	102	7.6	27
AUG.									
07...	24	48	0	3.6	40	1	99	7.3	26
SEP.									
11...	7.3	60	0	5.0	46	0	127	7.8	28



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

355

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02419300 UPAHEE CREEK AT FRANKLIN, ALA. (LAT 32 28 57 LONG 085 47 59)									
SEP., 1968									
11...	14	32	0	4.4	24	0	74	7.3	26
02419670 CUBAHATCHEE CREEK NEAR SHORTER, ALA. (LAT 32 23 40 LONG 085 58 20)									
SEP., 1968									
12...	1.1	23	0	1.8	18	0	53	6.9	23
02419800 OAKFUSKEE (LINE) CREEK NEAR SHORTER, ALA. (LAT 32 22 23 LONG 086 00 21)									
SEP., 1968									
12...	.68	41	0	5.4	35	1	102	7.3	27
02419840 CHUBBEHATCHEE CREEK NEAR WARE, ALA. (LAT 32 26 55 LONG 086 04 45)									
SEP., 1968									
09...	1.9	10	0	1.0	8	0	26	7.0	27
02419930 MORTAR CREEK NEAR DEATSVILLE, ALA. (LAT 32 37 16 LONG 086 25 29)									
SEP., 1968									
11...	4.0	10	0	1.4	6	0	23	6.7	21
02419935 SOUTH MORTAR CREEK NEAR DEATSVILLE, ALA. (LAT 32 37 00 LONG 086 25 30)									
SEP., 1968									
11...	3.3	6	0	1.4	5	0	20	6.6	20
02419952 COTTONFORD CREEK NEAR ELMORE, ALA. (LAT 32 32 00 LONG 086 20 25)									
SEP., 1968									
09...	9.4	10	0	1.2	8	0	21	7.0	22
02420000 ALABAMA RIVER NEAR MONTGOMERY, ALA. (LAT 32 24 41 LONG 086 24 30)									
JAN., 1968									
25...	66000	30	0	.8	29	4	72	7.5	8
FEB.									
21...	19400	34	0	3.4	31	3	80	7.4	7
APR.									
03...	16500	56	0	5.2	49	3	125	7.7	16
MAY									
16...	40400	40	0	3.6	35	2	95	7.0	22
JUNE									
28...	6100	44	0	5.4	35	0	103	7.2	27
AUG.									
05...	11900	59	0	5.8	50	2	141	7.3	28
SEP.									
11...	6320	40	0	5.0	38	5	98	7.0	24
18...	4990	38	0	4.4	30	0	92	7.3	23
27...	10000	52	0	5.6	41	0	121	6.9	27
02420270 AUTAUGA CREEK NEAR WHITE CITY, ALA. (LAT 32 37 48 LONG 086 34 23)									
SEP., 1968									
11...	5.3	7	0	.8	4	0	18	6.7	19
02420345 BRIDGE CREEK NEAR PRATTVILLE, ALA. (LAT 32 29 52 LONG 086 32 03)									
SEP., 1968									
11...	24	6	0	.6	4	0	16	6.4	21
02421000 CATOMA CREEK NEAR MONTGOMERY, ALA. (LAT 32 18 26 LONG 086 17 58)									
DEC., 1967									
06...	34	118	0	11	122	25	279	7.8	10
JAN., 1968									
12...	640	75	2	9.0	85	20	203	8.4	7
FEB.									
23...	38	111	0	15	119	28	271	8.1	6
APR.									
05...	621	100	0	6.2	94	12	210	7.9	17
JUNE									
27...	4.0	118	0	8.2	110	13	240	8.0	27
AUG.									
07...	3.0	114	0	9.2	110	17	249	7.5	31
02421135 PINCHONY CREEK NEAR DAVENPORT, ALA. (LAT 32 03 26 LONG 086 25 07)									
SEP., 1968									
10...	.13	104	0	4.6	85	0	183	7.2	23
02421175 PINTLALA CREEK NEAR MONTGOMERY, ALA. (LAT 32 17 05 LONG 086 29 05)									
SEP., 1968									
10...	.14	192	0	5.4	169	12	321	7.8	23
02421205 TALLAWESSEE CREEK NEAR ROBINSON BEND, ALA. (LAT 32 19 24 LONG 086 33 47)									
SEP., 1968									
10...	.90	206	0	6.6	108	0	374	7.3	26
02421245 SWIFT CREEK NEAR BILLINGSLEY, ALA. (LAT 32 43 21 LONG 086 41 28)									
SEP., 1968									
09...	2.7	10	0	2.4	9	1	28	6.8	22
02421256 SWIFT CREEK NEAR VIDA, ALA. (LAT 32 37 41 LONG 086 40 05)									
SEP., 1968									
11...	5.7	10	0	3.2	8	0	29	6.8	19

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (MCD3)	CAR- BONATE (CO3)	CHLD- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHMS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02421280 SWIFT CREEK AT AUTAUGAVILLE, ALA. (LAT 32 26 06 LONG 086 39 04)									
SEP., 1968									
11...	47	8	0	1.8	6	0	23	6.6	19
02422000 BIG SWAMP CREEK NEAR LOWMEDEBORO, ALA. (LAT 32 16 00 LONG 086 41 40)									
DEC., 1967									
05...	59	182	6	12	169	10	411	8.5	9
FEB., 1968									
19...	64	169	7	15	100	0	387	8.5	10
APR.									
05...	1670	74	0	2.4	65	4	138	8.1	16
JUNE									
27...	1.1	180	0	11	79	0	325	8.0	26
JULY									
31...	14	142	0	1.8	109	0	258	7.5	--
SEP.									
10...	.01	214	0	7.0	95	0	357	7.9	27
02422150 LITTLE MULBERRY CREEK AT STATESVILLE, ALA. (LAT 32 28 11 LONG 086 50 10)									
SEP., 1968									
11...	38	8	0	1.4	6	0	24	6.7	19
02422190 MIDDLE FORK MULBERRY CREEK ABOVE MAPLESVILLE, ALA. (LAT 32 50 05 LONG 086 47 55)									
SEP., 1968									
10...	11	14	0	2.0	9	0	35	6.7	19
02422330 MULBERRY CREEK NEAR MAPLESVILLE, ALA. (LAT 32 45 00 LONG 086 52 05)									
SEP., 1968									
10...	26	18	0	1.6	11	0	41	7.1	20
02422500 MULBERRY CREEK AT JONES, ALA. (LAT 32 34 58 LONG 086 54 13)									
DEC., 1967									
05...	253	10	0	4.0	15	7	42	6.9	7
JAN., 1968									
12...	642	6	0	1.8	8	3	28	6.6	8
FEB.									
21...	216	13	0	3.8	11	0	37	7.3	7
APR.									
03...	206	12	0	2.6	10	0	34	7.2	18
MAY									
16...	162	12	0	1.4	11	1	35	7.3	22
JUNE									
28...	63	12	0	1.8	12	2	41	7.3	26
AUG.									
05...	55	21	0	1.4	15	0	42	7.9	30
SEP.									
11...	50	14	0	2.6	11	0	37	7.0	22
18...	68	14	0	1.4	11	0	34	6.9	24
02422600 URIAH CREEK AT BURNSVILLE, ALA. (LAT 32 28 53 LONG 086 53 43)									
FEB., 1968									
21...	1.0	20	0	1.8	16	0	44	7.4	7
APR.									
03...	2.0	10	0	1.6	9	1	25	7.3	18
02423130 CAHABA RIVER AT TRUSSVILLE, ALA. (LAT 33 37 50 LONG 086 35 58)									
OCT., 1967									
24...	4.8	120	0	6.0	112	14	239	7.5	16
02423190 BLACK CREEK NEAR LEEDS, ALA. (LAT 33 35 45 LONG 086 31 53)									
NOV., 1967									
02...	228	50	0	.8	30	0	119	8.0	15
02423415 CAHABA RIVER NEAR HOMEWOOD, ALA. (LAT 33 25 53 LONG 086 42 48)									
SEP., 1968									
11...	5.4	114	0	2.6	95	2	202	7.5	23
02423555 CAHABA RIVER NEAR HELENA, ALA. (LAT 33 17 04 LONG 086 52 57)									
SEP., 1968									
11...	46	122	0	2.4	105	5	218	7.5	22
02423580 SHADES CREEK AT HOMEWOOD, ALA. (LAT 33 27 25 LONG 086 46 54)									
OCT., 1967									
24...	7.4	111	0	11	116	25	277	7.5	16
02423623 UNNAMED TRIB TO LITTLE SHADES C NR BESSEMER, ALA. (LAT 33 22 17 LONG 086 56 14)									
OCT., 1967									
24...	2.8	192	0	24	102	0	528	7.9	19
02423625 SHADES CREEK AT HOPEWELL, ALA. (LAT 33 21 17 LONG 086 56 12)									
OCT., 1967									
24...	23	140	0	18	106	0	410	7.2	16
02423730 SHOAL CREEK AT MONTEVALLO, ALA. (LAT 33 05 40 LONG 086 51 45)									
SEP., 1968									
10...	28	178	0	1.4	148	2	285	7.8	21

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02423785 MAHAN CREEK NEAR BRIERFIELD, ALA. (LAT 33 01 25 LONG 086 52 18)									
SEP., 1968									
10....	4.5	22	0	1.6	18	0	51	7.2	20
02423800 LITTLE CAHABA RIVER NEAR BRIERFIELD, ALA. (LAT 33 03 27 LONG 086 57 10)									
DEC., 1967									
07....	152	109	3	2.0	109	15	222	8.5	12
JAN., 1968									
08....	392	88	0	1.2	85	13	176	8.2	7
FEB.									
23....	144	128	0	2.2	116	11	229	7.3	7
APR.									
02....	128	126	0	2.0	114	11	224	7.7	15
18....	177	120	2	2.2	112	10	217	8.4	19
JUNE									
24....	127	156	0	1.8	139	11	262	7.5	23
02423870 COPPERAS CREEK NEAR SIX MILE, ALA. (LAT 32 58 33 LONG 086 58 52)									
APR., 1968									
18....	9.7	14	0	2.6	14	3	35	6.7	16
JUNE									
24....	1.3	40	0	1.2	34	1	75	7.3	23
02423875 SIX MILE CREEK NEAR SIX MILE, ALA. (LAT 32 59 56 LONG 086 59 49)									
APR., 1968									
06....	745	8	0	.8	14	7	29	6.7	13
18....	52	34	0	2.4	31	3	65	7.1	16
JUNE									
24....	14	68	0	1.6	59	3	119	7.6	23
02423915 SCHULTZ CREEK NEAR WEST BLOCTON, ALA. (LAT 33 02 03 LONG 087 11 41)									
APR., 1968									
06....	108	38	0	1.0	39	8	82	7.2	16
06....	172	40	0	2.2	45	12	91	7.5	16
18....	48	92	0	1.8	81	6	156	7.5	19
JUNE									
24....	35	124	0	1.8	106	4	197	7.8	24
02423945 HILL CREEK NEAR WEST BLOCTON, ALA. (LAT 33 03 12 LONG 087 11 12)									
APR., 1968									
06....	72	32	0	1.6	29	3	64	7.8	14
18....	21	40	0	2.2	36	3	78	7.2	18
JUNE									
24....	5.0	44	0	1.6	35	0	80	7.7	25
02424000 CAHABA RIVER AT CENTREVILLE, ALA. (LAT 32 56 00 LONG 087 08 00)									
DEC., 1967									
07....	1660	56	0	2.2	58	12	144	7.8	8
JAN., 1968									
08....	4310	52	0	1.6	58	15	132	7.8	—
FEB.									
23....	628	100	1	2.6	92	8	198	8.3	7
APR.									
02....	984	81	0	2.6	78	12	167	8.0	17
05....	18800	40	0	.2	40	7	122	5.7	15
18....	1380	74	0	2.8	71	10	169	7.6	19
JUNE									
24....	428	124	0	3.4	108	6	233	7.5	28
02424035 HAYSOP CREEK AT BRENT, ALA. (LAT 32 55 35 LONG 087 10 31)									
APR., 1968									
05....	1250	18	0	.8	19	4	48	7.1	17
18....	30	28	0	2.0	24	1	53	7.0	22
JUNE									
24....	4.9	42	0	.0	36	2	79	7.4	25
02424250 BLUE OUTEE CREEK NEAR HARRISBURG, ALA. (LAT 32 51 23 LONG 087 14 37)									
APR., 1968									
06....	250	16	0	.8	16	3	44	7.0	16
19....	28	6	0	1.8	5	0	21	6.1	19
JUNE									
24....	9.6	8	0	1.2	5	0	19	6.8	22
02424470 OLD TOWN CREEK NEAR HEIBERGER, ALA. (LAT 32 42 41 LONG 087 16 35)									
APR., 1968									
05....	466	4	0	1.2	9	6	21	6.5	14
18....	25	10	0	2.2	9	1	33	7.1	19
JUNE									
24....	5.1	15	0	3.0	14	2	41	7.1	24

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	BICAR- BONATE (HC03)	CAR- BONATE (C03)	CHLO- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02424500 CAHABA RIVER AT SPROTT ALA. (LAT 32 40 05 LONG 087 14 30)									
DEC., 1967									
05... 3840		42	0	5.6	49	15	121	7.7	11
JAN., 1968									
10... 8260		38	0	2.0	39	8	97	7.8	8
FEB.									
21... 1060		86	0	2.6	75	4	166	8.0	8
APR.									
02... 1300		72	0	2.4	64	5	149	7.9	17
05... 10700		28	0	.4	30	7	66	7.5	16
19... 1700		70	0	2.4	66	9	149	7.7	19
JUNE									
24... 470		99	0	2.8	91	10	198	7.5	27
28... 427		110	0	3.4	95	5	214	7.9	26
AUG.									
06... 548		102	0	3.6	88	4	207	7.5	28
02424910 OAKMULGEE CREEK NEAR PERRYVILLE, ALA. (LAT 32 36 42 LONG 087 05 13)									
APR., 1968									
06... 2560		6	0	1.2	10	5	32	6.7	16
19... 175		8	0	1.6	6	0	24	6.3	19
JUNE									
24... 36		8	0	1.8	6	0	24	6.8	24
02424930 LITTLE OAKMULGEE CREEK NEAR SUMMERFIELD, ALA. (LAT 32 35 28 LONG 087 03 02)									
JULY, 1968									
30... 2.6		14	0	.2	14	3	34	7.2	--
02425500 CEDAR CREEK AT MINTER, ALA. (LAT 32 04 45 LONG 086 59 02)									
JAN., 1968									
08... 274		154	6	8.4	155	29	347	8.5	8
FEB.									
29... 535		124	4	5.2	114	6	234	8.3	9
APR.									
01... 108		172	7	5.0	116	0	325	8.5	20
02425940 BOGUECHITTO CREEK NEAR VILULA, ALA. (LAT 32 33 20 LONG 087 19 32)									
APR., 1968									
05... 1390		12	0	1.4	15	5	41	7.1	14
19... 29		16	0	3.0	15	2	48	6.7	19
JUNE									
24... 1.8		44	0	6.4	34	0	101	7.2	26
02426000 BOGUECHITTO CREEK NEAR BROWNS, ALA. (LAT 32 26 00 LONG 087 20 00)									
DEC., 1967									
04... 179		46	0	2.0	48	10	121	7.6	8
JAN., 1968									
09... 108		40	0	4.4	44	11	112	7.8	6
FEB.									
20... 43		36	0	4.6	40	10	93	7.5	8
APR.									
03... 40		48	0	4.4	48	9	112	7.7	18
02441920 LUXAPALLILA CREEK NEAR GLEN ALLEN, ALA. (LAT 33 53 22 LONG 087 50 25)									
OCT., 1967									
24... 12		16	0	3.8	18	5	47	7.0	16
02442000 LUXAPALLILA CREEK NEAR FAYETTE, ALA. (LAT 33 43 00 LONG 087 52 00)									
OCT., 1967									
26... 171		12	0	3.4	12	2	36	6.9	11
02444000 LADAL FIRE CREEK NEAR PICKENVILLE, ALA. (LAT 33 18 00 LONG 088 16 00)									
OCT., 1967									
06... 18		30	0	10	24	0	59	7.0	16
02445000 LUBBUB CREEK NEAR CARROLLTON, ALA. (LAT 33 15 00 LONG 088 05 00)									
FEB., 1968									
27... 69		9	0	1.8	10	3	29	6.6	6
02445125 BEAR CREEK BELOW GORDO, ALA. (LAT 33 17 30 LONG 087 55 30)									
OCT., 1967									
26... 37		11	0	4.8	11	2	41	7.4	12
02445155 TOMBIGBEE RIVER AT VIENNA FERRY, ALA. (LAT 33 01 00 LONG 088 11 00)									
OCT., 1967									
06... 1100		42	0	11	46	12	124	7.0	22
NOV.									
08... 2800		34	0	6.8	34	6	103	6.9	11
02445320 SIPSEY RIVER NEAR HUBBERTVILLE, ALA. (LAT 33 50 45 LONG 087 43 26)									
OCT., 1967									
24... 20		32	0	3.8	65	39	156	6.8	15
02445400 SIPSEY RIVER ABOVE FAYETTE, ALA. (LAT 33 45 50 LONG 087 45 37)									
OCT., 1967									
26... --		22	0	3.0	56	38	132	7.0	17
02445500 SIPSEY RIVER AT FAYETTE, ALA. (LAT 33 40 10 LONG 087 48 59)									
OCT., 1967									
26... --		14	0	4.6	32	21	84	7.2	14

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	FLUO- RIDE (F)
MOBILE RIVER BASIN											
02434000 OLDTOWN CREEK AT TUPELO (LAT 34°17'40", LONG 88°42'35")											
DEC., 1967 06...	11	7.5	0.02	47	1.9	4.8	3.0	126	28	6.8	0.1
02434500 EUCLAUTUBBA CREEK AT SALTILLO (LAT 34°22'20", LONG 88°42'00")											
DEC., 1967 06...	3.9	10	0.00	53	1.8	5.7	3.3	144	24	7.2	0.1
02436500 WEST FORK TOMBIGBEE RIVER NEAR NETTLETON (LAT 34°03'32", LONG 88°37'40")											
DEC., 1967 05...	429	8.4	0.02	49	2.1	6.0	3.9	135	18	11	0.1

DATE	NITRATE (NO <sub>3</sub> )	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECIFIC CON- DUCTANCE (MICRO- MHOS)	PH	COLOR
DEC., 1967							
02434000 OLDTOWN CREEK AT TUPELO (LAT 34°17'40", LONG 88°42'35")							
DEC., 1967 06...	0.0	162	125	22	284	7.0	10
02434500 EUCLAUTUBBA CREEK AT SALTILLO (LAT 34°22'20", LONG 88°42'00")							
DEC., 1967 06...	0.1	179	140	22	316	7.1	5
02436500 WEST FORK TOMBIGBEE RIVER NEAR NETTLETON (LAT 34°03'32", LONG 88°37'40")							
DEC., 1967 05...	0.1	175	131	20	306	6.8	10

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02446500 SIPSEY RIVER NEAR ELROD, ALA. (LAT 33 15 00 LONG 087 46 00)									
OCT., 1967									
07... 93		14	0	2.6	30	19	77	7.0	18
26... 143		33	0	2.8	34	7	67	7.0	14
NOV.									
09... 253		12	0	2.4	24	14	70	6.7	14
DEC.									
12... 3930		4	0	.4	10	7	31	6.1	12
JAN., 1968									
23... 1200		7	0	1.4	15	9	42	6.9	8
FEB.									
27... 358		12	0	2.0	19	9	51	6.6	6
02446950 BRUSH CREEK AT MORROW'S GROVE, ALA. (LAT 33 02 57 LONG 087 59 43)									
OCT., 1967									
25... .62		51	0	3.0	36	0	95	7.5	16
02448500 NUXEBEE RIVER NEAR GEIGER, ALA. (LAT 32 55 00 LONG 088 18 00)									
OCT., 1967									
18... 75		119	0	5.2	104	6	234	8.1	18
26... 118		72	0	5.0	68	9	158	7.1	14
02448900 BOOKA CREEK NEAR BOOKA, ALA. (LAT 32 48 25 LONG 088 18 37)									
OCT., 1967									
26... 7.2		208	0	10	72	0	398	8.2	13
02449005 TUBBS CR. NR NEW MOUNT HEBRON (MOUNT HEBRON), ALA. (LAT 32 50 40 LONG 088 07 07)									
OCT., 1967									
25... 4.0		100	0	9.0	86	4	214	7.0	16
02449050 TRUSSELLS CREEK NEAR CLINTON, ALA. (LAT 32 57 02 LONG 087 57 30)									
OCT., 1967									
25... 1.4		32	0	3.2	28	2	78	6.8	16
02449150 TRUSSELLS CREEK NEAR NEW MOUNT HEBRON, ALA. (LAT 32 49 51 LONG 088 03 37)									
OCT., 1967									
25... 3.3		86	0	10	69	0	199	7.9	14
02449250 BRUSH CREEK NEAR LIZZIEVILLE, ALA. (LAT 32 48 41 LONG 088 01 48)									
OCT., 1967									
25... 3.0		84	0	16	68	0	210	7.7	15
02449340 FACTORY CREEK NEAR SUMTERVILLE, ALA. (LAT 32 44 38 LONG 088 10 01)									
OCT., 1967									
26... .20		144	0	3.4	112	0	271	7.2	14
02449500 TOMBIGBEE RIVER AT EPES, ALA. (LAT 32 41 32 LONG 088 06 45)									
OCT., 1967									
25... 1600		51	0	10	50	8	152	7.0	17
02449750 MULBERRY FORK NEAR BROOKSVILLE, ALA. (LAT 34 10 25 LONG 086 33 11)									
OCT., 1967									
16... 13		22	0	5.0	25	7	59	7.6	17
02449840 DUCK CREEK NEAR BERLIN, ALA. (LAT 34 10 19 LONG 086 41 42)									
OCT., 1967									
16... 5.3		22	0	6.2	18	0	60	7.4	17
02449910 EIGHTMILE CREEK NEAR VINEMONT, ALA. (LAT 34 15 41 LONG 086 47 21)									
OCT., 1967									
16... 1.5		24	0	4.8	20	0	64	6.8	14
02449940 BROGLEN RIVER NEAR CULLMAN, ALA. (LAT 34 08 41 LONG 086 46 08)									
OCT., 1967									
16... 14		12	0	9.4	20	10	100	6.3	18
02449950 BROGLEN RIVER NEAR HANCEVILLE, ALA. (LAT 34 04 57 LONG 086 44 20)									
OCT., 1967									
16... 20		18	0	11	26	11	124	7.1	18
02450000 MULBERRY FORK NEAR GARDEN CITY, ALA. (LAT 33 59 42 LONG 086 44 56)									
OCT., 1967									
16... 75		42	0	6.0	42	8	111	7.6	18
18... 208		42	0	6.8	40	6	121	7.6	17
02450160 MARRIDT CREEK NEAR GARDEN CITY, ALA. (LAT 33 56 53 LONG 086 51 37)									
OCT., 1967									
16... .80		2	0	2.8	88	86	255	5.8	17
02450180 MULBERRY FORK NEAR ARKADOLPHIA, ALA. (LAT 33 52 19 LONG 086 55 20)									
OCT., 1967									
16... 88		42	0	5.0	44	10	106	7.2	18
02450200 ODRSEY CREEK NEAR ARKADOLPHIA, ALA. (LAT 33 57 10 LONG 087 00 14)									
OCT., 1967									
16... .16		16	0	4.6	21	8	59	7.8	16

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

361

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02451535 BLEVENS CREEK NEAR JONES CHAPEL, ALA. (LAT 34 12 45 LONG 087 05 25)									
OCT., 1967									
16...	2.7	18	0	4.0	16	1	51	7.6	16
02451580 CROOKED CREEK NEAR LOGAN, ALA. (LAT 34 06 58 LONG 087 03 11)									
OCT., 1967									
16...	8.2	20	0	4.4	18	2	54	7.5	16
02451750 VEST CREEK NEAR BALDWIN, ALA. (LAT 34 11 54 LONG 086 56 03)									
MAY, 1968									
16...	5.8	12	0	3.0	15	5	46	6.3	17
02451770 RYAN CREEK NEAR CULLMAN, ALA. (LAT 34 07 16 LONG 086 53 57)									
OCT., 1967									
16...	7.3	28	0	6.8	25	2	79	7.2	15
02453000 BLACKWATER CREEK NEAR MANCHESTER, ALA. (LAT 33 54 30 LONG 087 15 25)									
OCT., 1967									
18...	27	20	0	2.6	38	22	101	7.0	17
24...	30	24	0	1.4	45	25	96	7.2	13
02453020 BLACKWATER CREEK NEAR JASPER ALA. (LAT 33 53 05 LONG 087 09 41)									
OCT., 1967									
24...	32	17	0	1.0	36	22	98	7.0	14
02453050 MULBERRY FORK NEAR ARGO, ALA. (LAT 33 48 25 LONG 087 08 25)									
OCT., 1967									
25...	--	17	0	3.4	19	5	55	6.9	14
02453700 MULBERRY FORK NEAR HIGHLEVEL, ALA. (LAT 33 39 45 LONG 087 10 35)									
OCT., 1967									
25...	--	20	0	3.0	20	4	68	7.1	19
02453900 CHEATHAM CREEK NEAR CARBON HILL, ALA. (LAT 33 53 29 LONG 087 26 59)									
NOV., 1967									
01...	7.8	12	0	1.8	10	0	41	7.1	13
22...	12	6	0	2.6	10	5	38	6.2	11
DEC.									
15...	57	5	0	1.8	9	5	31	6.1	12
15...	46	5	0	1.4	10	6	32	6.4	12
18...	320	0	0	16	22	22	119	4.0	14
MAR., 1968									
04...	3.2	9	0	1.2	8	1	31	6.7	7
MAY									
14...	85	4	0	1.8	8	5	29	5.9	17
02454000 LOST CREEK NEAR OAKMAN, ALA. (LAT 33 45 50 LONG 087 21 30)									
OCT., 1967									
26...	54	60	0	4.8	64	15	232	7.7	12
02454200 WOLF CREEK NEAR OAKMAN, ALA. (LAT 33 40 20 LONG 087 23 15)									
OCT., 1967									
26...	12	43	0	2.6	102	67	415	7.5	12
NOV.									
22...	381	14	0	1.0	40	29	147	7.0	12
DEC.									
14...	239	8	0	1.8	52	49	203	6.4	12
15...	1920	8	0	.4	22	15	80	6.5	13
18...	1240	8	0	.4	25	18	95	6.5	15
02454250 LOST CREEK NEAR GOODS SPRINGS, ALA. (LAT 33 38 03 LONG 087 15 07)									
OCT., 1967									
25...	--	19	0	3.0	26	10	80	6.8	18
02454500 LOCUST FORK BELOW SNEAD, ALA. (LAT 34 08 00 LONG 086 23 12)									
OCT., 1967									
12...	42	64	0	4.8	59	7	133	7.5	17
24...	33	56	0	4.8	65	19	145	7.5	13
APR., 1968									
02...	141	32	0	2.8	38	12	89	7.0	13
MAY									
01...	350	22	0	1.6	29	11	71	6.9	16
02454850 WHIPPORWILL CREEK NEAR WYNNVILLE, ALA. (LAT 34 06 51 LONG 086 24 12)									
OCT., 1967									
24...	3.1	76	0	4.8	129	67	274	7.3	14
02455000 LOCUST FORK NEAR CLEVELAND, ALA. (LAT 34 02 00 LONG 086 34 00)									
OCT., 1967									
13...	85	34	0	5.6	38	10	98	7.4	16
24...	92	40	0	5.8	42	9	109	7.7	14
02455250 CALVERT PRONG NEAR ONEONTA, ALA. (LAT 33 59 07 LONG 086 30 32)									
OCT., 1967									
24...	11	112	0	3.4	162	70	329	7.4	14

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)	
MOBILE RIVER BASIN--CONTINUED										
OCT., 1967	02455270	CALVERT	PRONG	NEAR LOCUST FORK, ALA.	(LAT 33 56 05 LONG 086 34 57)					
24...	38	96	0	5.2	119	40	257	7.6	14	
OCT., 1967	02455280	LITTLE WARRIOR RIVER		NEAR LOCUST FORK, ALA.	(LAT 33 55 11 LONG 086 36 28)					
24...	34	104	0	5.0	111	26	246	7.7	16	
OCT., 1967	02455300	LOCUST FORK		NEAR LOCUST FORK, ALA.	(LAT 33 56 13 LONG 086 40 04)					
24...	123	58	0	5.8	61	13	144	7.5	15	
OCT., 1967	02455500	LOCUST FORK		AT TRAFFORD, ALA.	(LAT 33 49 49 LONG 086 45 21)					
13...	136	54	0	3.6	72	28	179	7.6	19	
NOV.	27...	1320	28	0	3.6	32	9	91	7.2	12
JAN., 1968	16...	2200	21	0	2.6	32	15	81	7.1	6
OCT., 1967	02456000	TURKEY CREEK		AT MORRIS, ALA.	(LAT 33 44 25 LONG 086 48 45)					
13...	16	142	8	3.2	138	8	301	8.5	13	
NOV.	27...	104	80	0	3.2	88	22	217	7.5	12
JAN., 1968	16...	205	67	0	3.0	70	15	157	7.6	7
OCT., 1967	02456500	LOCUST FORK		AT SAYRE, ALA.	(LAT 33 42 35 LONG 086 59 00)					
24...	184	58	0	6.0	88	40	216	6.8	15	
DEC.	01...	3480	26	0	3.4	35	14	98	7.2	12
JAN., 1968	23...	1510	31	0	2.2	55	30	113	7.1	8
OCT., 1967	02457000	FIVEMILE CREEK		AT KETONA, ALA.	(LAT 33 36 05 LONG 086 45 20)					
13...	46	202	0	4.6	171	5	339	8.2	16	
24...	8.4	194	0	6.8	168	9	338	7.8	17	
JAN., 1968	16...	140	133	0	4.0	120	11	239	7.5	9
FEB.	26...	42	177	0	2.6	155	10	306	7.4	11
APR.	03...	52	168	0	3.4	139	1	282	7.5	17
MAY	06...	50	170	0	3.6	109	0	288	7.5	18
JUNE	14...	42	182	0	3.2	159	10	292	7.7	23
OCT., 1967	02457650	FIVEMILE CREEK		AT CARDIFF, ALA.	(LAT 33 38 37 LONG 086 56 00)					
24...	28	148	0	28	200	79	924	7.3	16	
OCT., 1967	02460600	LOCUST FORK		AT POWHATAN, ALA.	(LAT 33 35 12 LONG 087 06 35)					
24...	--	62	0	11	122	71	394	7.1	18	
OCT., 1967	02462080	MUD CREEK		NEAR OAK GROVE, ALA.	(LAT 33 27 38 LONG 087 11 52)					
24...	1.7	4	0	3.2	141	139	350	5.6	14	
OCT., 1967	02462480	BIG YELLOW CREEK		NEAR WHITSON, ALA.	(LAT 33 34 18 LONG 087 24 10)					
26...	.41	33	0	2.2	25	0	77	6.9	12	
OCT., 1967	02462500	BLACK WARRIOR RIVER		AT BANKHEAD LOCK AND DAM	(LAT 33 27 30 LONG 087 21 30)					
25...	2000	24	0	4.2	46	26	147	7.5	19	
OCT., 1967	02462600	BLUE CREEK		NEAR OAKMAN, ALA.	(LAT 33 31 17 LONG 087 29 07)					
04...	.30	20	0	1.6	16	0	50	7.2	14	
NOV.	11...	.54	16	0	2.0	19	6	44	7.2	11
OCT., 1967	02462800	DAVIS CREEK		BELOW ABERNANT, ALA.	(LAT 33 18 30 LONG 087 13 10)					
09...	2.0	64	0	2.2	54	2	134	7.3	17	
24...	1.6	78	0	2.0	68	4	171	7.8	14	
NOV.	14...	11	34	0	.8	28	0	96	7.3	11
DEC.	15...	333	12	0	.8	15	5	46	6.8	12
JAN., 1968	22...	42	25	0	1.6	34	13	74	7.0	8
FEB.	26...	16	29	0	.8	34	10	89	7.6	6



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

363

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CF5)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02463500 HURRICANE CREEK NEAR HOLLY, ALA. (LAT 33 12 45 LONG 087 26 55)									
OCT., 1967									
05...	8.5	0	0	5.0	112	112	363	3.8	16
24...	6.2	0	0	2.8	131	131	480	3.6	16
NOV.									
10...	25	0	0	1.8	75	75	224	4.4	8
DEC.									
15...	580	2	0	1.0	21	19	69	5.0	11
FEB., 1968									
26...	54	1	0	1.4	52	51	157	4.6	6
02463540 NORTH RIVER NEAR PHILADELPHIA, ALA. (LAT 33 46 06 LONG 087 36 05)									
OCT., 1967									
24...	.80	42	0	4.2	31	0	90	7.3	15
02463670 CLEAR CREEK NEAR BANKSTON, ALA. (LAT 33 40 41 LONG 087 39 36)									
OCT., 1967									
24...	3.4	12	0	3.2	12	2	31	7.2	14
02463700 NORTH RIVER NEAR BERRY, ALA. (LAT 33 37 50 LONG 087 38 47)									
OCT., 1967									
24...	6.0	18	0	4.0	18	3	45	7.2	13
02463850 JORD CREEK NEAR NEW LEXINGTON, ALA. (LAT 33 33 52 LONG 087 34 35)									
OCT., 1967									
26...	2.5	34	0	2.2	25	0	72	7.3	13
02464000 NORTH RIVER NEAR SAMANTHA, ALA. (LAT 33 28 45 LONG 087 35 50)									
OCT., 1967									
04...	30	20	0	4.8	20	4	54	7.3	16
NOV.									
11...	--	16	0	2.2	18	5	56	7.2	10
JAN., 1968									
19...	776	10	0	1.8	20	0	35	6.9	6
FEB.									
28...	232	13	0	1.6	14	3	37	6.8	5
02464150 TURKEY CREEK NEAR SAMANTHA, ALA. (LAT 33 23 45 LONG 087 33 45)									
OCT., 1967									
24...	1.9	12	0	1.8	11	1	26	7.0	13
02464380 BINNION CREEK NEAR SAMANTHA, ALA. (LAT 33 24 33 LONG 087 36 48)									
OCT., 1967									
24...	18	10	0	2.2	8	0	28	6.8	14
02464500 NORTH RIVER NEAR TUSCALOOSA, ALA. (LAT 33 21 10 LONG 087 33 25)									
OCT., 1967									
04...	50	16	0	4.4	15	2	41	7.1	19
23...	49	14	0	2.4	11	0	40	6.8	13
NOV.									
11...	98	18	0	2.4	16	1	50	6.9	8
FEB., 1968									
28...	203	10	0	2.0	12	4	33	6.6	5
02465280 BLACK WARRIOR RIVER NEAR FOSTERS, ALA. (LAT 33 07 00 LONG 087 39 36)									
OCT., 1967									
25...	9420	50	0	4.2	72	31	143	7.4	20
02465400 BIG SANDY CREEK AT DUNCANVILLE, ALA. (LAT 33 03 27 LONG 087 26 16)									
OCT., 1967									
26...	34	74	0	1.8	68	7	140	7.9	12
02465492 GRANTS CREEK NEAR FOSTERS, ALA. (LAT 33 03 52 LONG 087 40 29)									
OCT., 1967									
26...	15	9	0	2.4	9	2	27	6.7	12
02465493 ELLIOTTS CREEK NEAR MOUNDVILLE, ALA. (LAT 32 59 50 LONG 087 37 20)									
OCT., 1967									
24...	12	12	0	2.2	8	0	24	7.0	16
02465495 GABRIEL CREEK NEAR MOUNDVILLE, ALA. (LAT 32 57 00 LONG 087 37 55)									
OCT., 1967									
24...	11	11	0	2.2	6	0	28	6.4	17
02465500 FIVEMILE CREEK NEAR GREENSBORO, ALA. (LAT 32 50 00 LONG 087 36 00)									
OCT., 1967									
24...	6.9	13	0	2.4	10	0	35	6.2	16
02465670 MINTER CREEK BELOW DEADMANS BRANCH NR EUTAW, ALA. (LAT 32 52 49 LONG 087 51 37)									
OCT., 1967									
25...	1.3	63	0	9.0	52	0	150	7.0	15
02465900 BIG BRUSH CREEK NEAR GREENSBORO, ALA. (LAT 32 45 41 LONG 087 34 50)									
OCT., 1967									
24...	2.8	28	0	3.0	24	1	65	6.9	14

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	BICAR- BONATE (HCO3)	CAR- BONATE (CO3)	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02465944 OCT., 1967 24...	BIG BRUSH CR. ABOVE DRY CR. NR. WEDGEWORTH, ALA.						(LAT 32 49 08 LONG 087 45 08)		
24...	--	36	0	6.6	26	0	93	6.9	17
02465949 DRY CREEK NEAR AKRON, ALA. (LAT 32 49 07 LONG 087 45 10)									
OCT., 1967 24...	2.1	89	0	2230	761	688	7530	7.2	20
02465950 BIG BRUSH CREEK NEAR WEDGEWORTH, ALA. (LAT 32 49 09 LONG 087 45 13)									
OCT., 1967 24...	11	45	0	460	185	148	1730	7.0	17
02466000 BLACK WARRIOR RIVER NEAR EUTAW, ALA. (LAT 32 49 07 LONG 087 48 56)									
OCT., 1967 24...	3000	26	0	10	48	27	179	7.0	20
02466500 BIG PRAIRIE CREEK NEAR GALLION, ALA. (LAT 32 32 30 LONG 087 40 45)									
OCT., 1967 24...	6.8	178	0	9.2	129	0	351	7.5	15
02466600 LITTLE PRAIRIE CREEK NEAR NEWBERN, ALA. (LAT 32 35 33 LONG 087 38 35)									
OCT., 1967 24...	1.4	134	0	8.6	81	0	282	8.0	17
02466800 BIG GERMAN CREEK NEAR GREENSBORO, ALA. (LAT 32 36 42 LONG 087 40 39)									
OCT., 1967 24...	2.9	118	0	5.6	91	0	234	7.5	16
02467000 JUMBIGBEE R AT DEMOPOLIS L AND D NR COATOPA, ALA (LAT 32 31 15 LONG 087 52 39)									
OCT., 1967 27...	4600	40	0	7.8	50	17	158	7.3	21
02467050 TOMBIGBEE RIVER NEAR COATOPA (U.S. HWY. 80), ALA. (LAT 32 26 00 LONG 088 02 00)									
OCT., 1967 18...	3800	54	0	11	58	14	179	7.2	19
27...	4600	45	0	9.8	52	15	174	7.0	21
02467480 SUCARNOCHEE RIVER NEAR BOYD, ALA. (LAT 32 35 55 LONG 088 18 20)									
OCT., 1967 26...	110	19	0	2.2	14	0	51	6.7	13
02467500 UCARNOCHEE RIVER AT LIVINGSTON, ALA. (LAT 32 34 25 LONG 088 11 36)									
OCT., 1967 18...	111	30	0	4.4	24	0	75	7.3	17
26...	112	26	0	5.2	22	1	76	7.1	15
02468000 ALAMUCHEE CREEK NEAR CUBA, ALA. (LAT 32 26 00 LONG 088 20 00)									
OCT., 1967 18...	13	36	0	5.0	24	0	79	6.8	14
27...	12	16	0	3.2	18	5	71	6.6	12
02468140 TOOMSUBA CREEK AT YORK, ALA. (LAT 32 28 58 LONG 088 18 58)									
OCT., 1967 27...	10	30	0	2.6	22	0	78	6.8	12
02468200 SUCARNOCHEE RIVER NEAR BELLAMY, ALA. (LAT 32 27 47 LONG 088 06 32)									
OCT., 1967 26...	122	42	0	6.6	36	2	109	6.9	14
02468270 COTOHAGER CREEK NEAR WHITFIELD, ALA. (LAT 32 19 36 LONG 088 00 58)									
OCT., 1967 26...	.08	31	0	6.4	39	14	136	7.0	16
02468500 CHICKASAW BOGUE NEAR LINDEN, ALA. (LAT 32 19 00 LONG 087 47 00)									
OCT., 1967 13...	6.0	122	4	11	116	16	299	8.3	15
NOV. 28...	44	140	2	13	151	33	341	8.4	11
JAN., 1968 09...	256	136	4	9.0	139	31	301	8.4	7
MAR. 27...	100	127	4	10	135	24	294	8.4	14
02469000 KINTERBISH CREEK NEAR YORK, ALA. (LAT 32 19 00 LONG 088 11 00)									
OCT., 1967 17...	7.7	21	0	2.0	19	2	52	7.1	15
27...	18	16	0	2.4	12	0	46	7.1	12

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	CHLO- RIDE (CL)	HARD- NESS (CA, MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02469694 PUSS CUSS CREEK NEAR GILBERTOWN, ALA. (LAT 31 53 44 LONG 088 23 19)									
OCT., 1967									
04...	--	158	0	2520	616	486	7940	7.8	24
NOV.									
09...	--	144	0	620	242	124	2210	8.1	--
DEC.									
06...	--	148	0	890	318	196	3250	7.7	13
JAN., 1968									
11...	--	68	0	33	75	19	241	7.0	11
31...	--	128	0	220	170	65	979	8.0	16
FEB.									
29...	--	126	2	330	165	58	1330	8.3	--
APR.									
04...	--	137	0	270	174	62	1100	8.1	21
MAY									
03...	--	137	0	260	146	34	1090	7.7	23
JUNE									
07...	--	141	0	2020	594	478	5940	7.3	27
JULY									
03...	--	114	0	1600	575	481	4860	7.3	30
AUG.									
02...	--	130	0	3000	719	613	7570	7.5	31
SEP.									
06...	--	74	0	122	104	43	538	7.6	26
02469700 OKATUPPA CREEK AT GILBERTOWN, ALA. (LAT 31 54 00 LONG 088 19 00)									
OCT., 1967									
10...	9.7	98	0	740	215	135	2710	8.1	21
NOV.									
21...	40	74	0	229	132	72	1000	8.2	13
JAN., 1968									
03...	496	40	0	48	52	19	191	7.5	12
FEB.									
13...	110	59	2	97	88	36	444	8.4	6
MAR.									
26...	154	58	0	40	70	22	255	8.1	14
02469711 LITTLE MILL CREEK AT MOUTH NEAR GILBERTOWN, ALA. (LAT 31 51 40 LONG 088 17 20)									
OCT., 1967									
04...	--	51	0	580	190	148	2000	7.3	18
NOV.									
09...	--	52	0	600	199	157	2110	7.6	--
DEC.									
06...	--	42	0	1090	298	263	3810	7.2	9
JAN., 1968									
11...	--	16	0	132	49	36	496	6.6	11
31...	--	32	0	550	160	134	1910	7.0	13
FEB.									
29...	--	46	0	180	86	48	700	7.7	--
APR.									
04...	--	34	0	580	176	148	1880	7.4	19
MAY									
03...	--	47	0	270	98	60	850	7.1	17
JUNE									
07...	--	55	0	908	254	209	2810	7.6	28
JULY									
03...	--	34	0	740	215	187	2310	7.2	25
AUG.									
02...	--	78	0	410	148	84	1380	7.7	26
SEP.									
06...	--	12	0	300	100	90	1010	6.7	24
02469727 SURVEYORS CREEK NEAR BARRYTOWN, ALA. (LAT 31 51 50 LONG 088 13 20)									
NOV., 1967									
09...	--	26	0	53	32	11	258	7.1	--
DEC.									
06...	--	26	0	90	48	27	367	7.3	9
JAN., 1968									
11...	--	12	0	14	22	12	89	6.5	11
31...	--	20	0	57	45	29	258	6.8	--
FEB.									
29...	--	24	0	89	50	30	379	7.1	--
APR.									
04...	--	29	0	84	50	26	338	7.3	19
MAY									
03...	--	30	0	71	49	24	290	7.2	17
JUNE									
07...	--	40	0	500	182	149	1630	7.1	21
JULY									
03...	--	51	0	1260	531	489	3870	7.2	24
AUG.									
02...	--	47	0	450	144	106	1460	7.1	26
SEP.									
06...	--	8	0	240	150	144	835	6.6	24

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN ALABAMA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	BICAR- BONATE (HCO <sub>3</sub> )	CAR- BONATE (CO <sub>3</sub> )	CHLO- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
MOBILE RIVER BASIN--CONTINUED									
02469730 UKATUPPA CREEK NEAR BARRYTOWN, ALA. (LAT 31 50 50 LONG 088 13 58)									
OCT., 1967	--								
01...	--	58	0	350	114	67	1180	7.2	16
17...	--	64	0	800	226	173	2720	7.4	19
30...	--	34	0	420	126	98	1540	6.9	--
NOV.									
13...	--	46	0	220	98	61	822	7.3	14
28...	--	42	0	300	115	81	1200	7.1	13
DEC.									
12...	--	21	0	39	39	22	202	6.5	14
27...	--	31	0	59	52	27	285	7.4	8
MAR., 1968									
27...	--	46	0	86	66	28	380	7.9	15
JULY									
08...	--	69	0	1020	274	217	3230	7.1	27
02470520 CEDAR CREEK BELOW BRANCH NEAR CITRONELLE, ALA. (LAT 31 06 47 LONG 088 12 75)									
OCT., 1967									
03...	--	3	0	41	29	27	158	5.7	16
NOV.									
08...	--	2	0	42	32	30	167	5.6	9
DEC.									
05...	--	2	0	55	34	32	204	5.6	11
JAN., 1968									
10...	--	2	0	27	20	18	113	5.6	12
31...	--	13	0	39	28	17	156	5.9	12
FEB.									
28...	--	4	0	37	24	21	149	5.7	--
APR.									
03...	--	4	0	38	28	25	142	5.7	19
MAY									
02...	--	4	0	41	26	23	153	6.0	18
JULY									
03...	--	4	0	35	26	23	128	5.9	24
AUG.									
01...	--	4	0	26	15	12	101	6.1	26
SEP.									
06...	--	5	0	31	21	17	119	6.0	23
02470607 BULL BRANCH CREEK NEAR CITRONELLE, ALA. (LAT 31 02 38 LONG 088 06 00)									
JUNE, 1968									
06...	--	4	0	3.2	4	1	18	5.7	23
02476110 CEDAR CREEK AT CEDAR CREEK FALLS, ALA. (LAT 31 03 23 LONG 088 04 23)									
OCT., 1967									
03...	--	10	0	24	14	6	107	6.5	17
DEC.									
05...	--	4	0	23	15	12	100	6.5	11
JAN., 1968									
31...	--	5	0	20	14	10	87	5.8	11
APR.									
03...	--	9	0	25	16	9	107	6.3	20
JUNE									
06...	--	4	0	19	11	8	73	5.6	27
AUG.									
01...	--	11	0	23	11	2	103	6.7	29
02470910 CHICKASAW CREEK AT CO. BRIDGE NEAR GULFCREST, ALA. (LAT 31 00 28 LONG 088 13 30)									
OCT., 1967									
03...	--	7	0	5.4	9	3	36	6.4	17
NOV.									
08...	--	6	0	4.0	6	1	30	6.4	9
DEC.									
05...	--	8	0	4.0	10	3	30	6.5	11
JAN., 1968									
10...	--	4	0	3.8	9	6	27	6.3	12
30...	--	6	0	4.2	6	1	27	6.3	14
FEB.									
28...	--	7	0	3.2	9	3	26	6.8	--
APR.									
03...	--	7	0	3.8	9	3	25	6.7	19
MAY									
02...	--	6	0	3.0	9	4	25	6.6	18
JUNE									
03...	--	9	0	3.8	8	1	27	6.5	23
JULY									
03...	--	9	0	4.4	9	2	28	6.5	24
AUG.									
01...	--	9	0	3.4	8	1	25	6.8	24
SEP.									
05...	--	7	0	4.4	9	3	31	6.5	23

## CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	BICAR- BONATE (HC03)	CAR- BONATE (C03)	CHLO- RIDE (CL)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH	TEMP- ERATURE (DEG C)
PASCAGOULA RIVER BASIN									
02479439	UNNAMED	TRIB	TO	BEAVER	POND	BRANCH	AT	US. HY. 45	(LAT 31 07 03 LONG 088 14 50)
OCT., 1967	--								
03...	--	8	0	27	28	21	116	5.8	18
NOV.	--								
08...	--	8	0	19	18	11	88	6.4	9
DEC.	--								
05...	--	8	0	20	26	19	95	6.7	11
JAN., 1968	--								
10...	--	8	0	16	18	11	76	6.6	12
30...	--	8	0	19	20	13	91	6.1	13
FEB.	--								
28...	--	10	0	18	16	8	86	6.6	--
APR.	--								
03...	--	11	0	19	20	11	91	6.1	18
MAY, 1968	--								
02...	--	12	0	18	21	11	86	6.6	21
JUNE	--								
06...	--	12	0	25	28	18	109	6.5	21
JULY	--								
03...	--	12	0	26	25	15	112	6.0	22
AUG.	--								
01...	--	13	0	29	28	17	122	6.2	27
SEP.	--								
06...	--	8	0	26	29	22	119	5.8	23
02479447 BEAVER POND BRANCH AT MOUTH, ALA. (LAT 31 06 54 LONG 088 18 10)									
OCT., 1967	--								
03...	--	0	0	170	89	89	512	4.4	17
NOV.	--								
08...	--	1	0	151	82	81	530	4.8	9
DEC.	--								
05...	--	2	0	157	115	113	581	5.2	9
JAN., 1968	--								
10...	--	4	0	102	59	56	383	5.5	12
30...	--	3	0	116	68	66	427	5.5	13
FEB.	--								
28...	--	2	0	120	69	67	439	5.5	--
APR.	--								
03...	--	2	0	126	62	60	374	5.2	20
MAY	--								
02...	--	2	0	100	54	52	343	5.8	19
JUNE	--								
06...	--	0	0	120	64	64	439	4.1	22
JULY	--								
03...	--	8	0	93	54	47	324	5.8	24
AUG.	--								
01...	--	2	0	130	61	59	398	4.8	27
02479468 PUPPY CREEK AT COUNTY BRIDGE, ALA. (LAT 31 10 00 LONG 088 20 50)									
OCT., 1967	--								
03...	--	1	0	150	86	85	516	5.0	21
NOV.	--								
08...	--	2	0	230	131	129	858	4.9	9
DEC.	--								
05...	--	0	0	285	150	150	1030	4.5	9
JAN., 1968	--								
10...	--	2	0	188	100	99	679	5.0	11
31...	--	2	0	300	160	159	1070	5.0	14
FEB.	--								
28...	--	3	0	104	54	52	390	5.2	--
APR.	--								
03...	--	2	0	220	110	109	703	5.3	18
MAY	--								
02...	--	1	0	180	108	107	660	4.6	22
JUNE	--								
06...	--	0	0	340	179	179	1090	4.5	22
JULY	--								
03...	--	0	0	360	175	175	1130	4.3	24
AUG.	--								
01...	--	0	0	460	225	225	1440	4.4	31
SEP.	--								
05...	--	0	0	350	186	186	1200	4.4	24

## ANALYSES IN SAMPLES COLLECTED AT MISCELLANEOUS SITES IN MISSISSIPPI AND LOUISIANA

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	DIS- CHARGE (CFS)	SILICA (SiO <sub>2</sub> )	IRON (FE)	CAL- CIUM (CA)	MAG- NE- SIUM (MG)	SODIUM (NA)	PO- TAS- SIUM (K)	BICAR- BONATE (HCO <sub>3</sub> )	SULFATE (SO <sub>4</sub> )	CHLO- RIDE (CL)	FLUO- RIDE (F)
PASCAGOULA RIVER BASIN											
02471250 LEAF RIVER NEAR TAYLORSVILLE (LAT 31°49'40", LONG 89°24'30")											
OCT., 1967 24...	32	8.1	0.09	7.0	0.4	6.6	2.3	23	4.8	7.2	0.0
02471500 OAKHAY CREEK AT MIZE (LAT 31°52'00", LONG 89°32'40")											
OCT., 1967 24...	21	8.4	0.05	3.0	0.9	2.9	1.4	12	1.8	5.0	0.0
02476000 OKATIBBEE CREEK NEAR MERIDIAN (LAT 32°21'15", LONG 88°45'25")											
OCT., 1967 25...	12	9.4	0.24	5.3	2.1	4.0	2.8	27	3.0	4.8	0.1
02477000 CHICKASAWHAY RIVER AT ENTERPRISE (LAT 32°10'30", LONG 88°49'15")											
OCT., 1967 25...	72	11	0.09	7.6	2.2	8.5	3.3	26	11	8.6	0.8
02477330 SHUBUTA CREEK NEAR SHUBUTA (LAT 31°53' LONG 88°44')											
OCT., 1967 25...	6.8	8.7	0.10	5.5	0.8	2.0	1.2	19	1.4	3.0	0.0
PEARL RIVER BASIN											
02487300 STRONG RIVER NEAR PUCKETT (LAT 32°04', LONG 89°45')											
OCT., 1967 24...	5.4	7.8	0.25	11	2.1	5.6	3.4	41	5.6	8.1	0.0
02490000 BOGUE LUSA CREEK NEAR FRANKLINTON (LAT 30°52'05", LONG 90°00'10")											
APR., 1968 06...	475	9.7	0.02	1.5	0.3	2.9	0.8	8	0.0	3.7	0.0
JULY, 1968 19...	1.9	10	.05	1.0	.4	2.0	.2	6	.0	3.1	.0
02490105 BOGUE LUSA CREEK AT BOGALUSA (LAT 30°46'10", LONG 89°53'30")											
APR., 1968 06...	41	8.5	0.06	1.0	0.6	3.2	1.0	10	0.0	3.5	0.0
JULY, 1968 18...	13	11	.06	1.1	.5	3.1	.4	10	.4	3.4	.0
02492000 BOGUE CHITTO NEAR BUSH (LAT 30°37'45", LONG 89°53'50")											
MAR., 1968 01...	1290	9.1	0.02	3.1	0.5	4.6	1.5	10	1.2	7.7	0.0
JULY, 1968 17...	475	10	.03	2.0	1.2	3.8	.5	10	.0	7.0	.0

ANALYSES IN SAMPLES COLLECTED AT MISCELLANEOUS SITES IN MISSISSIPPI AND LOUISIANA  
CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

369

DATE	NITRATE (NO3)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECIFIC CON- DUCTANCE (MICRO- MHOS)	PH	COLOR	
PASCAGOULA RIVER BASIN								
02471250 LEAF RIVER NEAR TAYLORSVILLE (LAT 31°49'40", LONG 89°24'30")								
OCT., 1967 24...	0.1	55	19	0	73	6.2	15	
02471500 OAKHAY CREEK AT MIZE (LAT 31°52'00", LONG 89°32'40")								
OCT., 1967 24...	0.1	33	11	1	38	5.8	15	
02476000 OKATIBBEE CREEK NEAR MERIDIAN (LAT 32°21'15", LONG 88°45'25")								
OCT., 1967 25...	0.1	54	22	0	71	6.2	20	
02477000 CHICKASAWHAY RIVER AT ENTERPRISE (LAT 32°10'30", LONG 88°49'15")								
OCT., 1967 25...	0.1	75	28	7	107	6.0	15	
02477330 SHUBUTA CREEK NEAR SHUBUTA (LAT 31°53', LONG 88°44')								
OCT., 1967 25...	0.1	36	17	1	44	6.2	20	
PEARL RIVER BASIN								
02487300 STRONG RIVER NEAR PUCKETT (LAT 32°04', LONG 89°45')								
OCT., 1967 24...	0.1	74	36	2	106	6.5	30	
DATE	NITRATE (NO3)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	DIS- SOLVED SOLIDS SUM OF CONSTITU- ENTS)	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SPECIFIC CON- DUCTANCE (MICRO- MHOS)	TEM- PERA- TURE (°C)	COLOR
02490000 BOGUE LUSA CREEK NEAR FRANKLINTON (LAT 30°52'05", LONG 90°00'10")								
APR., 1968 04...	0.3	41	23	5	0	27	16	15
JULY, 1968 19...	.3	30	20	4	0	21	22	30
02490105 BOGUE LUSA CREEK AT BOGALUSA (LAT 30°46'10", LONG 89°53'30")								
APR., 1968 04...	0.0	33	23	5	0	28	17	20
JULY, 1968 18...	.3	32	25	5	0	31	25	30
02492000 BOGUE CHITTO NEAR BUSH (LAT 30°37'45", LONG 89°53'50")								
MAR., 1968 01...	0.1	36	33	10	2	45	9	20
JULY, 1968 17...	.2	33	30	10	2	36	28	20

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN SOUTH CAROLINA  
PERIODIC DETERMINATIONS OF SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)		DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
Santee River Basin										
02171000 LAKE MARION TAILRACE NEAR PINEVILLE, S. C. (LAT 33°27'00", LONG 80°09'50")										
JAN 16, 1968	1500	20100	19	1030		JAN 22.....	1030	2750	20	149
JAN 17.....	1130	18000	17	826		JAN 23.....	1345	2200	25	149
JAN 18.....	1215	7580	29	594		JAN 25.....	1140	1980	18	96
JAN 19.....	1130	6440	24	417		JUN 13.....	1230	3380	25	228
JAN 20.....	1015	7590	17	348		JUN 15.....	1300	11700	12	379
JAN 21.....	1130	5630	14	213		JUN 16.....	1230	3630	18	176



# INDEX

A	Page		Page
Acidity.....	15	Chromium.....	12-13
Alabama River, at Claiborne, Ala.....	206-209	Claiborne, Ala., Alabama River at.....	206-209
at Selma, Ala.....	203-204	Claxton, Ga., Canoochee River near.....	79
Alafia River, at Lithia, Fla.....	143-146	Clayton, Ga., Chattooga River near.....	87
North Prong, at Keysville, Fla.....	141-142	Tallulah River near.....	80
South Prong, near Lithia, Fla.....	142-143	Clifton Forge, Va., Cowpasture River near.....	26
Alaga, Ala., Chattahoochee River at.....	179	Jackson River at.....	85
Alapaha River at Stateville, Ga.....	163	Clyo, Ga., Savannah River near.....	85-86
Albany, Ga., Flint River at.....	182	Coastal basins between, Apalachicola River and	
Albemarle Sound.....	233-234	Choctawhatchee River.....	340-341
Altamaha River at Oconee River near.....	93-95	Aucilla River and Ochlockonee River.....	169-170, 338-339
Altamaha River basin.....	88-95	Choctawhatchee River and Yellow River.....	340-343
Altavista, Va., Roanoke (Staunton) River at.....	47-48	Escambia River and Mobile River.....	344-345
Altha, Fla., Chipola River near.....	186-187	Hillsborough River and Withlacoochee	
Aluminum.....	9	River.....	151-156, 318-323
Anclote River near Elfers, Fla.....	154-155	Lake Okeechobee and the Everglades and	
Andersonville, Va., Holiday Creek near.....	44	Peace River.....	306-307
Andytown, Fla., Diversion from Conservation		Myakka River and Hillsborough River.....	139-147, 310-313
Area 2 to Conservation Area 3 at S-143		Ochlockonee River and Apalachicola River.....	338-341
near.....	122	St. Johns River and Turkey Creek.....	278-279
Apalachicola River at Chattahoochee, Fla.....	184-185	St. Marys River and St. Johns River.....	258-259
Apalachicola River basin.....	172-187, 340-341	Suwannee River and Aucilla River.....	338-339
Arcadia, Fla., Peace River at.....	135-139	Withlacoochee River and Suwannee River.....	332-335
Arsenic.....	12	Cobalt.....	13
Arvoonia, Va., Slate River near.....	36-37	Cocoa, Fla., St. Johns River near.....	103-104
Athens, Ga., Milledge River near.....	93-95	Collection and examination of data.....	
Atkinson, Ga., Satilla River at.....	96-97	Color.....	16-13
Augusta, Ga., Savannah River at.....	82	Columbia, Va., James River at.....	38-39
Austell, Ga., Sweetwater Creek near.....	175	Rivanna River near.....	38
B		Columbus, Ga., Chattahoochee River at.....	178-179
Bainbridge, Ga., Flint River at.....	183-184	Composition of surface waters.....	7-19
Barium.....	12	Conasauga River at Tilton, Ga.....	195-196
Bent Creek, Va., James River at.....	32-33	Conecuh River at Brantley, Ala.....	191-193
Bicarbonate, carbonate and hydroxide.....	93-95	Cooper River basin.....	74
Big ditch near Crystal Springs, Fla.....	147-150	Cooperation.....	20-21
Biological and microbiological information.....	17-18	Cocoa River, at Childersburg, Ala.....	202-203
Biochemical oxygen demand.....	17	at Gadsden, Ala.....	201-202
Black Warrior River at Tuscaloosa, Ala.....	212-215	near Rome, Ga.....	199-200
Blackwater River near Bradley, Ala.....	190	Coosawatee River, at Carters, Ga.....	194
Blackwater River basin.....	190, 344-345	near Ellijay, Ga.....	193-194
Bogalusa, La., Pearl River near.....	224-228	Copper.....	173-174
Bogue Chitto near Tylertown, Miss.....	229	Cornelia, Ga., Chattahoochee River near.....	173-174
Boron.....	12	Cowpasture River near Clifton Forge, Va.....	26
Bradley, Ala., Blackwater River near.....	190	Craig Creek at Eagle Rock, Va.....	27
Brantford, Fla., Suwannee River at.....	165-167	Crystal Springs, Fla., Big ditch near.....	147-150
Brantley, Ala., Conecuh River at.....	191-193	Culloden, Ga., Flint River near.....	180-181
Bremo Bluff, Va., James River at.....	37	Cypress Creek, near San Antonio, Fla.....	150-151
Bromide.....	11	near Janice, Miss.....	220-221
Buchanan, Va., James River at.....	28-29	D	
Buena Vista, Va., Maury River at.....	30	Dade City, Fla., Withlacoochee River near.....	158-159
C		Dan River at Paces, Va.....	53-55
Cadmium.....	12	Deer Park, Fla., Jane Green Creek near.....	101-102
Calcium.....	9	Density at 20°C.....	17
Caloosahatchee Canal at Moore Haven, Fla.....	130-131	Dismal Swamp basin.....	256-257
Canal 41A above S-68 at Lake Istokpoga, near		Dissolved oxygen.....	17
Lake Placid, Fla.....	113-114	Dissolved solids.....	12, 14
Canal Point, Fla., West Palm Beach Canal at.....	117-118	Diversion from Conservation Area 2 to	
Canoochee River near Claxton, Ga.....	87	Conservation Area 3 at S-143, near	
Canton, Ga., Etowah River at.....	197-198	Andytown, Fla.....	122
Cape Fear River, at Royster, N.C.....	61-62	Division of work.....	21
near Navassa, N.C.....	59-60	Doctortown, Ga., Altamaha River at.....	93-95
Cape Fear River, Ga.....	59-62, 238-241	Double Creek near Roseville, N.C.....	56
Carters, Ga., Coosawatee River at.....	194	Dublin, Ga., Oconee River at.....	92
Cartersville, Ga., Etowah River above.....	198	Dunnellon, Fla., Rainbow Springs near.....	161-162
Cartersville, Va., James River at.....	40-42	Durham Creek at Edward, N.C.....	59
Caryville, Ala., Choctawhatchee River at.....	188-189	E	
Cedar Creek near Cedarstone, Ga.....	200	Eagle Rock, Va., Craig Creek at.....	27
Cedarstone, Ga., Cedar Creek near.....	200	Eden, Ga., Ogeechee River near.....	86-87
Chatsworth, Ga., Holly Creek near.....	195	Edisto River near Givhans, S.C.....	75-78
Chattahoochee, Fla., Apalachicola River at.....	184-185	Edward, N.C., Durham Creek at.....	59
Chattahoochee River, at Alaga, Ala.....	179	Efingham, S.C., Lynches River at.....	69
at Columbus, Ala.....	178-179	Elfers, Fla., Anclote River near.....	154-155
at West Point, Ga.....	177-178	Ellijay, Ga., Coosawatee River near.....	193-194
near Cornelia, Ga.....	173-174	Emporia, Va., Meherrin River at.....	46-47
near Fairburn, Ga.....	175-176	Enoree River near Enoree, S.C.....	71
near Leaf, Ga.....	172-173	Escambia River basin.....	191-193, 348
near Roswell, Ga.....	174	Etowah River, at Allatoona Dam, above	
near Whitesburg, Ga.....	176-177	Cartersville, Ga.....	198
Chattooga River at Summerville, Ga.....	201	at Canton, Ga.....	197-198
near Clayton, Ga.....	79	at Rome, Ga.....	199
Chemical oxygen demand.....	17	Eure, N.C., Chowan River near.....	44-45
Chemical quality.....	4	Eva, Fla., Withlacoochee River near.....	156-157
Childersburg, Ala., Coosa River at.....	202-203	Expression of results.....	5-7
Chipola River near Altha, Fla.....	186-187	F	
Chloride.....	10	Fairburn, Ga., Chattahoochee River near.....	175-176
Choctawhatchee River, at Caryville, Ala.....	188-189	Fairmont, S.C., North Tyger River near.....	70
near Newton, Ala.....	187	Falling Creek near Juliette, Ga.....	88-89
Choctawhatchee River basin.....	187-189, 340-341	Falling Spring, Va., Jackson River at.....	24
Chowan River near Eure, N.C.....	44-45	Fargo, Ga., Suwannee River at.....	162-163
Chowan River basin.....	44-47, 230, 256-257		
Christmas, Fla., St. Johns River near.....	104-105		

	Page		Page
Fisheating Creek at Palmdale, Fla.	110-111	Mercury.	13-14
Flanagan Mills, Va., Willis River at.	39	Merrill, Miss., Pascagoula River at.	220
Flint River, at Albany, Ga.	182	Miami, Fla., Miami Canal near.	125-128
at Bainbridge, Ga.	183-184	Tamiami Canal near.	129
at Montezuma, Ga.	181-182	Miami Canal, at HGS-3 and S-3, at Lake Harbor,	125-126
at Newton, Ga.	183	Fla.	126-127
near Culloden, Ga.	180-181	east of levee 30, near Miami, Fla.	127-128
near Griffin, Ga.	180	Middle Oconee River near Athens, Ga.	90-91
Florida.	10	Milhaven, Ga., Savannah River near.	84-85
Fort Lauderdale, Fla., North New River Canal		Milledgeville, Ga., Oconee River at.	91
near.	123-124	Willigan, Fla., Yellow River at.	189-190
Fort Motte, S.C., Santee River near.	72	Mineral constituents in solution.	7-14
		Miscellaneous analyses of lakes and streams in	
G		South Atlantic slope and eastern Gulf of	
Gadsden, Ala., Coosa River at.	201-202	Mexico basins.	254-370
Gainesville, Ala., Tombigbee River at.	210	Mobile River basin.	193-219, 348-386
Givhans, S.C., Edisto River near.	75-78	Moskville, N.C., South Yadkin River near.	85
Glasgow, Va., Maury River at.	44	Moncks Corner, S.C., Lake Moultrie tailrace	
Grayson, Ala., Sipsey Fork near.	210-211	near.	74
Griffin, Ga., Flint River near.	180	Monroeville, Ala., Limestone Creek near.	205
Gross, Fla., St. Marys River near.	100-101	Montezuma, Ga., Flint River at.	181-182
		Monticello, Miss., Pearl River near.	22-23
H		Moore Haven, Fla., Caloosahatchee Canal at.	130-131
Hardness.	15	Moss Bluff, Fla., Oklawaha River at.	107-108
Havana, Fla., Ochlockonee River near.	171-172	Myakka Head, Fla., Manatee River near.	139-140
Hillsboro Canal below HGS-4, near South Bay,		Myakka River basin.	310-311
Fla.	119-120		
Hillsborough River basin.	147-151, 312-319	N	
Holcombs Rock, Va., James River at.	31	Navassa, N.C., Cape Fear River near.	59-60
Pedlar River at.	32	Neuse River basin.	235-237
Holder, Fla., Withlacoochee River near.	160-161	New Ellenton, S.C., Upper Three Runs near.	83
Holiday Creek near Hartsville, Va.	44	Newton, Ala., Choctawhatchee River near.	187
Holly Creek near Chatsworth, Ga.	195	Newton, Ga., Flint River at.	183
Howardsville, Va., James River at.	35	Nickel.	14
Rockfish River at.	34-35	Nitrate.	11
Hyco River at McGehees Mill, N.C.	57	Nitrogen.	11
Hydrogen-ion concentration.	16	Nitrogen, organic.	11
I		North Hyco Creek near Leasburg, N.C.	55
Introduction.	1	North New River Canal, at State Road 7, near	
Irtide.	1	Fort Lauderdale, Fla.	124
Iron.	9	below HGS-4, near South Bay, Fla.	120-121
Iva, S.C., Savannah River near.	81-82	Fort Lauderdale, Fla.	123-124
J		North Newport River basin.	250-253
Jackson, Ala., Tombigbee River near.	216-219	North Prong Alafia River at Keyesville, Fla.	141-142
Jackson River, at Clifton Forge, Va.	25	North Tyger River near Fairmont, S.C.	70
at Falling Spring, Va.	24	Norwood, Va., Tye River at.	33
James River, above Pedlar River, at Holcombs			
Rock, Va.	31	O	
at Bent Creek, Va.	32-33	Ochlockonee River, near Havana, Fla.	171-172
at Brems Bluff, Va.	37	near Thomasville, Ga.	170-171
at Buchanan, Va.	28-29	Ochlockonee River basin.	170-172, 338-339
at Cartersville, Va.	40-42	Ocmulgee River, at Lumber City, Ga.	90
at Columbia, Va.	38-39	at Macon, Ga.	89
at Howardsville, Va.	35	Oconee River, at Dublin, Ga.	92
at Scottsville, Va.	36	at Milledgeville, Ga.	91
at Wingina, Va.	34	Ogeechee River near Eden, Ga.	86-87
near Richmond, Va.	42-43	Ochopee River near Reidsville, Ga.	92-93
James River basin near Wimauma, Fla.	24-44, 254-257	Oklawaha River, at Moss Bluff, Fla.	107-108
Jane Green Creek near Deer Park, Fla.	101-102	at State Highway 19, near Salt Springs	
Janice, Miss., Cypress Creek near.	220-221	Fla.	108-110
Jocassee, S.C., Keowee River near.	81	Okeechobee, Fla., Kissimmee River at.	112-113
Juliette, Ga., Falling Creek near.	86-89	Taylor Creek above.	115-116
K		Oostanula River, at Resaca, Ga.	196
Keowee River near Jocassee, S.C.	81	near Rome, Ga.	197
Keyesville, Fla., North Prong Alafia River at.	141-142	Organics.	18
Kissimmee River at S-65E, near Okeechobee, Fla.	112-113		
L		P	
Lake Harbor, Fla., Miami Canal at.	125-126	Paces, Va., Dan River at.	53-55
Lake Moultrie tailrace near Moncks Corner,		Palmdale, Fla., Fisheating Creek at.	110-111
S.C.	74	Partial-record stations, analyses of samples	250-253
Lake Okeechobee and the Everglades.	110-131, 280-307	collected at, in Georgia.	230-250
Lake Placid, Fla., Canal 41A near.	113-114	Pascagoula River at Merrill, Miss.	220
Lake Tarpon near Tarpon Springs, Fla.	152-153	Pascagoula River basin.	220-221, 367-369
Lead.	13	Peace River, at Arcadia, Fla.	135-139
Leaf, Ga., Chattahoochee River at.	172-173	at Zolfo Springs, Fla.	131-134
Leasburg, N.C., North Hyco Creek near.	55	Peace River basin.	331-339, 306-311
Limestone Creek near Monroeville, Ala.	205	Pearl River, near Bogalusa, La.	224-228
Literature cited.	22-23	near Monticello, Miss.	222-223
Lithia, Fla., Alafia River at.	143-146	Pedlar River basin.	221-229, 368-369
Lithia Springs near.	147	Pedlar River at Holcombs Rock, Va.	131-134
South Prong Alafia River near.	142-143	Pee Dee River, at Pee Dee, S.C.	65-68
Lithia Springs near Lithia, Fla.	147	Pee Dee River basin.	62-69, 241-245
Lithium.	13	Pee Dee, S.C., Pee Dee River at.	65-68
Little Manatee River near Wimauma, Fla.	140-141	Perquimans River above Sutton Creek, near	
Little Withlacoochee River at Reddell, Fla.	159	Hartford, N.C.	230
Lumber City, Ga., Ocmulgee River at.	90	Phosphorus.	11-12
Lynches River at Effingham, S.C.	69	Pinetta, Fla., Withlacoochee River near.	164-165
M		Pineville, S.C., Santee River near.	73
MacClenny, Fla., St. Marys River near.	97-99	Pithlachascotee River near Richey Lakes, Fla.	155-156
Macon, Ga., Ocmulgee River at.	89	Preface.	11
Magnesium.	9	Properties and characteristics of water.	14-19
Manatee River near Myakka Head, Fla.	139-140	Publications.	19-20
Manganese.	9		
Maury River, at Buena Vista, Va.	30-31	R	
at Glasgow, Va.	30-31	Rainbow Springs near Dannelton, Fla.	161-162
McGehees Mill, N.C., Hyco River at.	57	Randolph, Va., Roanoke (Staunton) River at.	49-52
Meherin River at Emporia, Va.	46-47	Reidsville, Ga., Ochopee River near.	92-93
		Reddell, Fla., Little Withlacoochee River at.	159
		Resaca, Ga., Oostanula River at.	196
		Richey Lakes, Fla., Pithlachascotee River near.	155-156

	Page		Page
Richmond, Va., James River near.....	42-43	Summerville, Ga., Chattahoochee River at.....	201
Rivanna River near Columbia, Va.....	38	Suwannee River, at Branford, Fla.....	165-167
Roanoke (Guntton) River, at Altavista, Va.....	47-48	at Fargo, Ga.....	162-163
Roanoke (Guntton) River, at Altavista, Va.....	49-52	Suwannee River basin.....	162-168, 334-339
Roanoke River basin.....	47-57, 230-233, 256-257	Sweetwater Creek near Austell, Ga.....	175
Rockfish River at Howardsville, Va.....	34-35		
Rocky Creek near Sulphur Springs, Fla.....	151-152	T	
Rome, Ga., Coosa River near.....	199-200	Tallulah River near Clayton, Ga.....	80
Etowah River near.....	199	Tallahatchee Canal above S-12B, near Miami, Fla.....	129
Oostanaula River near.....	197	Tar River at Tarboro, N.C.....	58
Roseville, N.C., Double Creek near.....	56	Tarboro, N.C., Tar River at.....	58
South Hyco Creek near.....	56	Tarpon Springs, Fla., Lake Tarpon near.....	152-153
Rosewell, Ga., Chattahoochee River near.....	174	Taylor Creek above Oksechopee, Fla.....	115-116
Royster, N.C., Cape Fear River at.....	61-62	Temperature.....	4, 16
		Thomasville, Ga., Ocklocknee River near.....	170-171
S		Tilton, Ga., Conasauga River at.....	195-196
St. Johns River, near Christmas, Fla.....	104-105	Tombigbee River, at Gainesville, Ala.....	210
near Gross, Fla.....	103-104	near Jackson, Ala.....	216-219
St. Johns River, near Stuart, Fla.....	101-102, 258-279	Tombigbee River.....	17
St. Lucie Canal at lock, near Stuart, Fla.....	116-117	Turkey Creek and Coastal basins south to	
St. Marys River, near Gross, Fla.....	100-101	St. Lucie River.....	278-281
near MacClenny, Fla.....	97-99	Tuscaloosa, Ala., Black Warrior River at.....	212-215
St. Marys River basin.....	97-101, 258-259	Tuscaloosa Creek at Walnut Grove, Miss.....	221
Salt Springs, Fla., Suwannee River near.....	108-110	Wausau, Fla., Little Suwanee River near.....	33
San Antonio, Fla., Cypress Creek near.....	150-151	Tylertown, Miss., Bogue Chitto near.....	226
Sanford, Fla., Wekiva River near.....	106-107		
Santa Fe River at Worthington Springs, Fla.....	167-168	U	
Santee River, near Fort Motte, S.C.....	72	Upper Three Runs near New Ellenton, S.C.....	83
near Pineville, S.C.....	70-72, 245-250, 370		
Santee River basin.....	70-72, 245-250, 370	V	
Satilla River, at Atkinson, Ga.....	96-97	Vaccanaw River basin.....	241
near Waycross, Ga.....	96	Walnut Grove, Miss., Tuscaloosa Creek at.....	221
Satilla River basin.....	96-97	Water-quality stations.....	221
Savannah River, at Augusta, Ga.....	84-85	for which records are published.....	24
at Burton Ferry bridge, near Milledgeville, Ga.....	85-86	Waycross, Ga., Satilla River near.....	96
near Clio, Ga.....	81-82	Wekiva River near Sanford, Fla.....	106-107
near Iva, S.C.....	79-86	West Palm Beach Canal at BG5-5, at Canal Point, Fla.....	117-118
Savannah River basin.....	79-86	West Point, Ga., Chattahoochee River at.....	177-178
Sealeville, Va., James River at.....	36	White Oak River basin.....	237
Sedalia, Mo.....	4, 18-20	Whitesburg, Ga., Chattahoochee River near.....	176-177
Selma, Ala., Alabama River at.....	203-204	Willis River at Flanagan Mills, Va.....	39
Silica.....	7, 9	Winnam, Fla., Little Suwanee River near.....	140-141
Sipee Fork near Grayson, Ala.....	210-211	Wingina, Va., James River at.....	34
Slate River at Highway 652, near Arvonis, Va.....	36-37	Withlacoochee River, near Dade City, Fla.....	158-159
Slope, adoption ratio.....	19	near Eya, Fla.....	156-157
Sodium and potassium.....	19	near Holder, Fla.....	160-161
Sopchoppy River near Sopchoppy, Fla.....	169-170	Withlacoochee River basin.....	156-162, 324-333
South Atlantic slope and eastern Gulf of Mexico		Worthington Springs, Fla., Santa Fe River at.....	167-168
basins.....	24-270		
South Hill River, at Canal near.....	119-120	Y	
North New River Canal near.....	120-121	Yadkin River at Yadkin College, N.C.....	62-64
South Hyco Creek near Roseville, N.C.....	56	Yellow River at Milligan, Fla.....	189-190
South Newport River basin.....	253	Yellow River basin.....	189-190, 342-345
South Prong Alabama River near Lithia, Fla.....	142-143		
South Yadkin River near Mocksville, N.C.....	65	Z	
Specific conductance.....	16	Zinc.....	14
Stateville, Ga., Alapha River at.....	163	Zolfo Springs, Fla., Peace River at.....	131-133
Streamflow.....	19		
Strontium.....	14		
Stuart, Fla., St. Lucie Canal near.....	116-117		
Sulfate.....	10		
Sulphide.....	10		
Sulphur Springs, Fla., Rocky Creek near.....	151-152		

