

SUMMARY OF SELECTED WATER-QUALITY DATA  
FOR THE WARRIOR COAL FIELD, ALABAMA

By Will S. Mooty

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U.S. GEOLOGICAL SURVEY  
Open-File Report 85-689

Prepared in cooperation with the  
U.S. BUREAU OF LAND MANAGEMENT

Tuscaloosa, Alabama

1985

UNITED STATES DEPARTMENT OF THE INTERIOR

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SUMMARY OF SELECTED WATER-QUALITY DATA  
FOR THE WARRIOR COAL FIELD, ALABAMA

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ABSTRACT

This report provides a summary of selected water-quality data collected from 1976 to 1984 at 75 surface water sites and 28 test wells in the Warrior coal field in northwestern Alabama. The minimum, maximum, mean or median, standard deviation, and number of determinations are given for each site for discharge, pH, alkalinity, specific conductance, hardness, dissolved and suspended solids, sulfate, total and dissolved iron and manganese. Twelve quadrangles are included in the report showing the location of each site.

## INTRODUCTION

The U.S. Geological Survey, Water Resources Division, in cooperation with the U.S. Bureau of Land Management (BLM), began data collection in 1976 to define the hydrology of selected areas of the Warrior coal field of the Southern Appalachian coal region. The information gathered through this study is used by the BLM in the preparation of environmental impact statements and in other coal leasing actions. This report provides a summary of selected water-quality data collected from 1976 to 1984 at 75 surface water sites and 28 test wells located in the Warrior coal field in northwestern Alabama. These sites were selected to cover the range of geological conditions found in the Warrior coal field, for example, Coker and Pottsville formations, unmined basins, actively mined basins, and basins with reclaimed mines. The sites included in the report are those funded by the BLM as part of a cooperative project to study the effects of mining.

The purpose of this report is to present a statistical summary of the more important water-quality properties and constituents impacted by mining. However, hydrological, biological, and other water-quality data collected for these sites as part of the BLM project plus data for many additional sites in the Warrior coal field from other projects are on file in the Survey's computer system. These data are available on request from the Survey by (1) a polygon retrieval where the latitude and longitude coordinants for the area in question are given and data for all sites located within that area are retrieved or (2) a site specific retrieval if the station number for the site is known. These procedures have been used in the past by the BLM in cooperation with the Survey to obtain data about an area that is under study.

Table 1.--List of quadrangles included in study area

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QUADRANGLE NAME	QUADRANGLE NUMBER
Lake Nicol	163-B
Windham Springs	163-D
Lake Tuscaloosa North	164-C
Wiley	176-B
Oakman	176-D
Berry SE	177-A
New Lexington	177-B
Berry	177-C
Arkadelphia	187-D
Cold Springs	188-C
Howard	190-A
Carbon Hill	190-C

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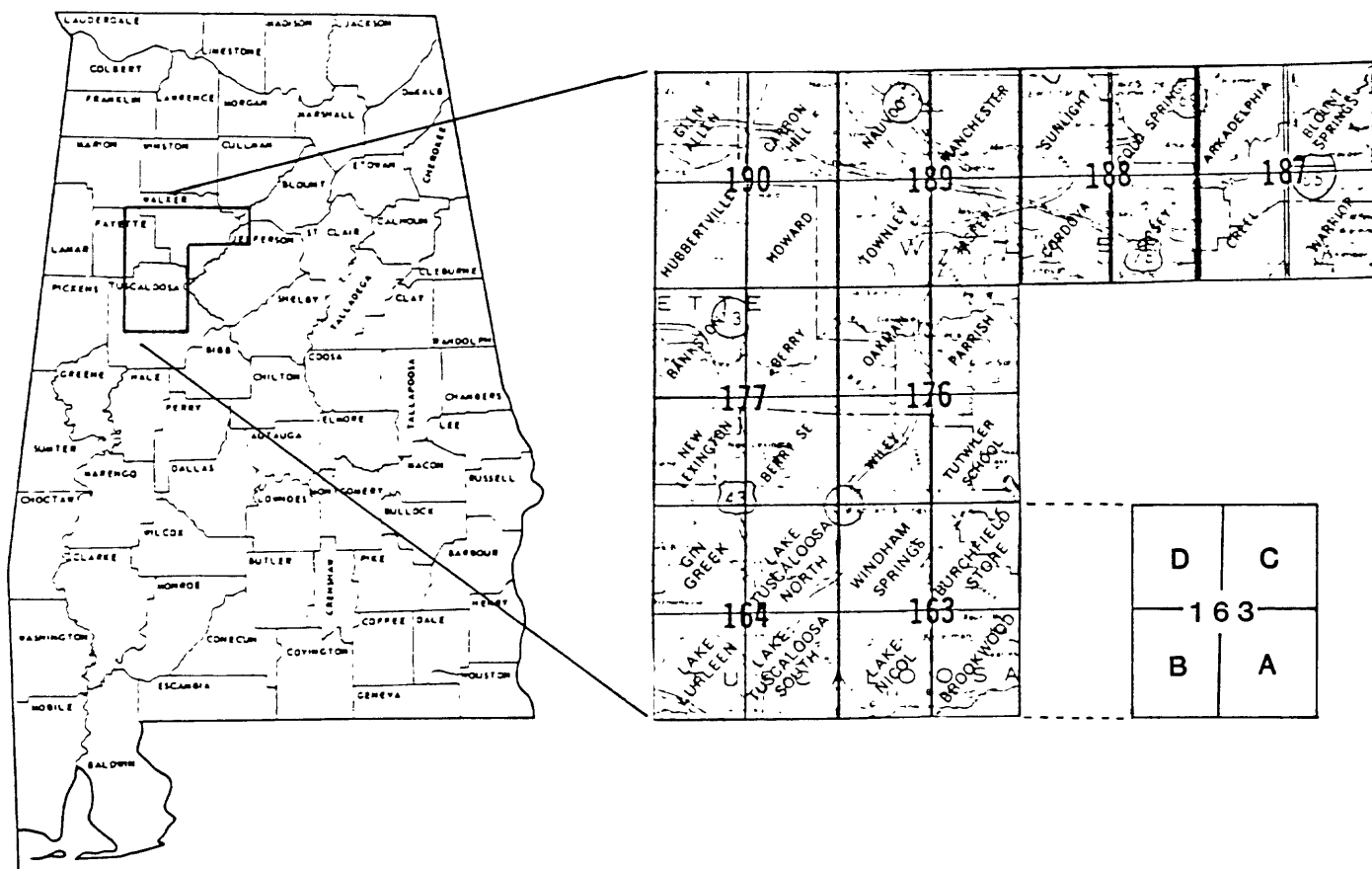


Figure 1.--Project study area in Alabama with quadrangle names and indexing system.

## NOTES ABOUT THE DATA

Table 1 lists the name, number, and letter of each quadrangle included in this report. Figure 1 shows the location of the study area and the numbering and lettering system for the quadrangles developed by the Survey. Quadrangles showing the location of each site are included in this report.

The surface water sites are listed first for each quadrangle. The name of each site is given along with the 8- to 10-digit downstream order number as assigned by the Survey. One exception is Tyro Creek near Boley Springs, Ala., site no. 9 in the Berry SE quadrangle. Instead of a downstream order number, the latitude and longitude for the site is given.

Test wells for each quadrangle are arranged in order of their test well number. However, the number assigned to each well for map identification does not correspond to its original test well number (for example, Windham Springs quadrangle, test well 30 is reassigned no. 12). The latitude and longitude for each well is given after the test well number and its local name, if available.

Table 2 is a list of the symbols used to identify each type of site on the maps presented. Rain gage sites are labeled on the maps, but data from the rain gages are not included with this report. Data may be obtained by request from the Survey.

Summaries of the water-quality data are presented in tables 3 to 14. The minimum, maximum, mean or median, standard deviation, and number of determinations are given for discharge, pH, alkalinity, specific conductance, hardness, dissolved and suspended solids, sulfate, total and dissolved iron and manganese. The data are arranged by quadrangle according to numerical and alphabetical order. The value for "mean" pH is actually the median value due to pH being a logarithmic value. All values have been rounded to two decimal places.

Explanation of abbreviations:

mi<sup>2</sup> = square miles

ft<sup>3</sup>/s = cubic feet per second

ug/L = micrograms per liter

mg/L = milligrams per liter

uS/cm = microsiemens per centimeter at 25° Celsius

acre-ft = acre-feet




N = number of times each parameter was measured



Table 2.--Explanation of map symbols

### GAGING STATIONS

Basic shape is a triangle— $\Delta$










DESCRIPTION	SYMBOL
Continuous-record gaging station	
Measurement site without a gage	
Discontinued gaging station	

### QUALITY-OF-WATER SITES

Basic shape is an inverted triangle— $\nabla$

Discontinued gaging station and quality-of-water site with number







DESCRIPTION	SYMBOL	SYMBOL WITH BASIC SHAPE
Chemical-measurement site		
Temperature-measurement site		
Biological-measurement site	 (extension of top line to left)	
Sediment-measurement site	 (extension of top line to right)	
Inactive site		

### WATER WELLS


Basic shape is a circle— $\bigcirc$

Observation well and number










DESCRIPTION	SYMBOL	SYMBOL WITH BASIC SHAPE
Observation well		
Observation well equipped with a recorder		

### WEATHER STATIONS

Basic shape is a diamond divided into four parts—

Discontinued precipitation station and name



DESCRIPTION	SYMBOL	SYMBOL WITH BASIC SHAPE
Weather station equipped with a recorder		
Weather stations where the following types of measurements are obtained:		
Precipitation		
Temperature		
Humidity		
Wind velocity		
Discontinued weather station		

Federal mineral ownership boundaries

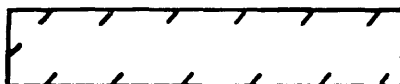


Table 3.--Summary of selected water-quality data

## LAKE NICOL QUADRANGLE

SURFACE WATER SITES						
SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 1 YELLOW CREEK NEAR NORTHPORT 02462990-----						
	Drainage Area (8.38 mi <sup>2</sup> )	774	51.28	124.80	3.31	825.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)					
	pH (standard units)	80	5.53	.	4.20	6.80
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	66	2.59	1.83	0.00	7.00
	Specific conductance (uS/cm)	85	12.71	3.03	8.00	21.00
	Hardness (mg/L as CaCO <sub>3</sub> )	39	3.46	1.52	1.00	8.00
	Solids, dissolved (tons per acre-ft)	31	0.02	0.01	0.02	0.04
	Sediment, suspended (mg/L)	719	42.82	120.04	0.00	1560.00
	Sulfate dissolved (mg/L)	59	2.52	1.47	0.10	6.80
	Iron, total recoverable (ug/L)	35	1045.71	1360.43	160.00	5600.00
	Iron, dissolved (ug/L)	42	116.76	81.46	20.00	400.00
	Manganese, total recoverable (ug/L)	32	55.63	47.85	10.00	190.00
	Manganese, dissolved (ug/L)	35	34.03	27.58	8.00	110.00
NO. 2 TRIBUTARY TO YELLOW CREEK ABOVE WATERMELON ROAD NEAR NORTHPORT 02462991-----						
	Drainage Area (1.49 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	92	7.11	9.59	0.36	38.00
	pH (standard units)	62	6.21	.	5.30	7.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	46	5.59	2.83	0.00	12.00
	Specific conductance (uS/cm)	69	25.78	12.19	13.00	73.00
	Hardness (mg/L as CaCO <sub>3</sub> )	21	6.38	3.02	0.00	14.00
	Solids, dissolved (tons per acre-ft)	20	0.03	0.01	0.02	0.05
	Sediment, suspended (mg/L)	57	221.46	555.56	1.00	3010.00
	Sulfate dissolved (mg/L)	46	5.03	4.05	1.00	20.00
	Iron, total recoverable (ug/L)	20	2344.50	4446.56	350.00	19000.00
	Iron, dissolved (ug/L)	22	176.36	140.19	20.00	560.00
	Manganese, total recoverable (ug/L)	17	260.00	156.00	40.00	590.00
	Manganese, dissolved (ug/L)	20	246.00	179.13	10.00	590.00

Table 3.--Summary of selected water-quality data--Continued

## LAKE NICOL QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 3 YELLOW CREEK AT WATERMELON ROAD NEAR TUSCALOOSA 02462992						
	Drainage Area (unknown)	4	20.50	9.81	12.00	29.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	6.60	.	6.60	6.60
	pH (standard units)	2	4.50	0.71	4.00	5.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	10.50	2.12	9.00	12.00
	Specific conductance (uS/cm)	1	3.00	.	3.00	3.00
	Hardness (mg/L as CaCO <sub>3</sub> )	0	.	.	.	.
	Solids, dissolved (tons per acre-ft)	3	22.00	17.32	2.00	32.00
	Sediment, suspended (mg/L)	2	1.60	0.57	1.20	2.00
	Sulfate dissolved (ug/L)	1	340.00	.	340.00	340.00
	Iron, total recoverable (ug/L)	2	30.00	0.00	30.00	30.00
	Iron, dissolved (ug/L)	0	.	.	.	.
	Manganese, total recoverable (ug/L)	0	.	.	.	.
	Manganese, dissolved (ug/L)	0	.	.	.	.

## WELLS

NO. 1 TEST WELL 1 (332215087291301)	Depth of well (84 feet)					
	pH (standard units)	2	5.00	.	4.60	5.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	3.50	2.12	2.00	5.00
	Specific conductance (uS/cm)	2	16.00	0.00	16.00	16.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	3.50	2.12	2.00	5.00
	Solids, dissolved (tons per acre-ft)	2	0.02	0.00	0.02	0.02
	Sulfate dissolved (mg/L)	2	2.40	2.55	0.60	4.20
	Iron, total recoverable (ug/L)	1	18000.00	.	18000.00	18000.00
	Iron, dissolved (ug/L)	2	560.00	28.28	540.00	580.00
	Manganese, total recoverable (ug/L)	1	100.00	.	100.00	100.00
	Manganese, dissolved (ug/L)	2	36.50	4.95	33.00	40.00

Table 3.--Summary of selected water-quality data--Continued

## LAKE NICOL QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 2 TEST WELL	26 YELLOW CREEK (332224087282701)					
	Depth of well (124 feet)					
	pH (standard units)	2	7.50	.	7.30	7.70
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	97.50	17.68	85.00	110.00
	Specific conductance (uS/cm)	2	196.50	41.72	167.00	226.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	71.00	18.38	58.00	84.00
	Solids, dissolved (tons per acre-ft)	2	0.16	0.04	0.13	0.18
	Sulfate dissolved (mg/L)	2	2.00	1.98	0.60	3.40
	Iron, total recoverable (ug/L)	1	1500.00	.	1500.00	1500.00
	Iron, dissolved (ug/L)	2	310.00	268.70	120.00	500.00
	Manganese, total recoverable (ug/L)	1	70.00	.	70.00	70.00
	Manganese, dissolved (ug/L)	2	45.50	36.06	20.00	71.00

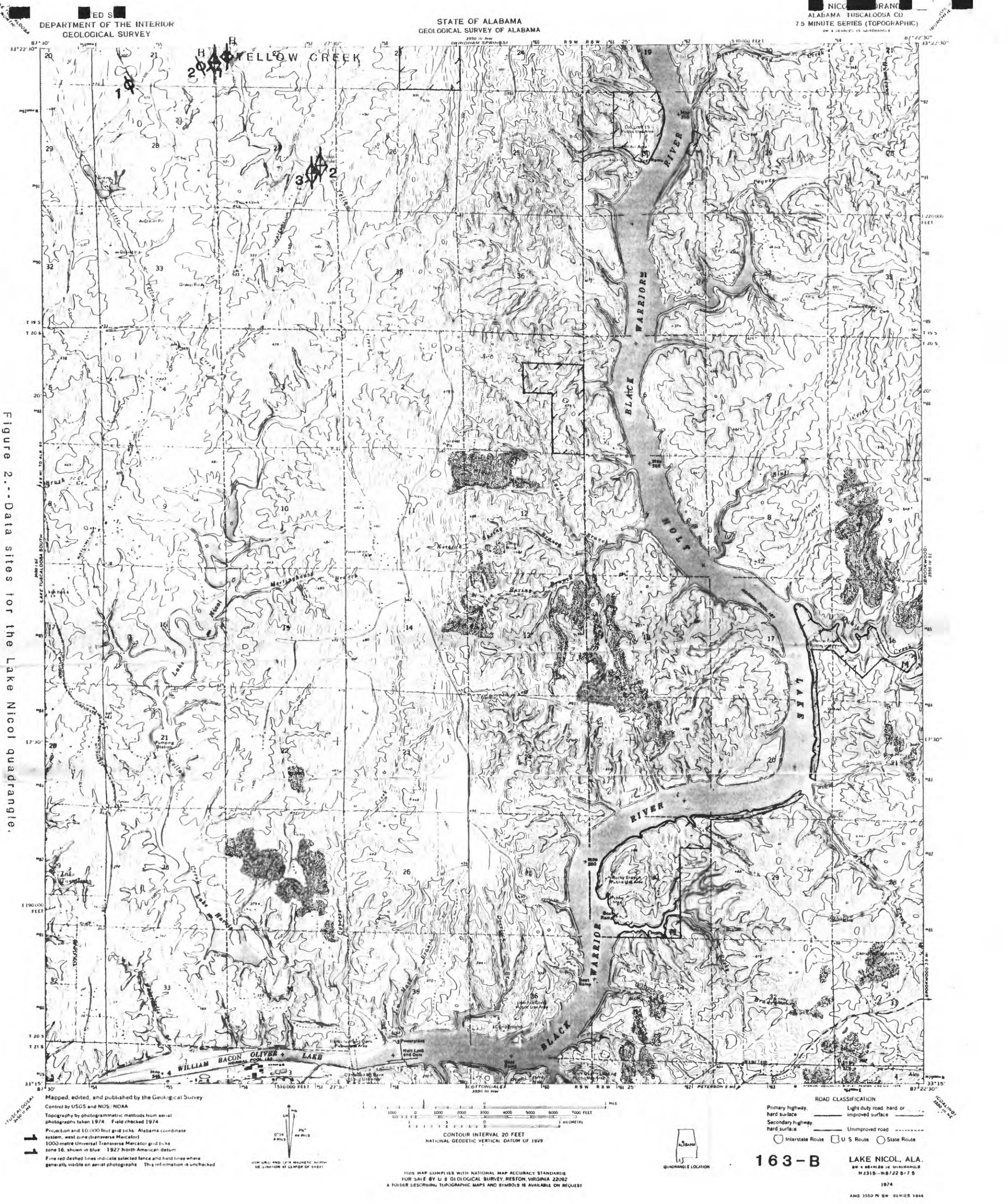


Figure 2.-Data sites for the Lake Nicol quadrangle.

Table 4.--Summary of selected water-quality data

## WINDHAM SPRINGS QUADRANGLE

## SURFACE WATER SITES

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 1 BLUE CREEK NEAR WINDHAM SPRINGS 02462625						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	24	13.28	18.32	0.11	52.00
	pH (standard units)	21	6.64	.	5.60	7.20
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	19	22.19	18.81	2.00	71.00
	Specific conductance (uS/cm)	22	542.68	427.32	50.00	1550.00
	Hardness (mg/L as CaCO <sub>3</sub> )	15	246.73	222.32	16.00	800.00
	Solids, dissolved (tons per acre-ft)	16	0.51	0.41	0.03	1.50
	Sediment, suspended (mg/L)	5	190.40	407.86	5.00	920.00
	Sulfate dissolved (mg/L)	17	225.86	215.51	5.70	750.00
	Iron, total recoverable (ug/L)	15	2406.67	7637.26	180.00	30000.00
	Iron, dissolved (ug/L)	16	52.63	43.67	3.00	170.00
	Manganese, total recoverable (ug/L)	13	1031.54	967.49	150.00	3700.00
	Manganese, dissolved (ug/L)	15	910.67	1001.54	20.00	3900.00

## NO. 2 BLUE CREEK NEAR SPENCER HILL 02462650

	Drainage Area (38 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	12	96.32	225.44	0.44	708.00
	pH (standard units)	12	6.76	.	6.10	7.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	11	11.45	5.89	3.00	22.00
	Specific conductance (uS/cm)	12	281.92	218.04	48.00	700.00
	Hardness (mg/L as CaCO <sub>3</sub> )	9	122.11	107.22	24.00	350.00
	Solids, dissolved (tons per acre-ft)	9	0.31	0.22	0.08	0.70
	Sediment, suspended (mg/L)	9	56.44	112.75	5.00	353.00
	Sulfate dissolved (mg/L)	13	147.92	170.45	13.00	620.00
	Iron, total recoverable (ug/L)	8	1995.00	2949.46	190.00	8900.00
	Iron, dissolved (ug/L)	9	57.78	38.98	10.00	130.00
	Manganese, total recoverable (ug/L)	8	326.25	492.08	30.00	1500.00
	Manganese, dissolved (ug/L)	10	85.70	53.07	20.00	150.00

Table 4.--Summary of selected water-quality data--Continued

## WINDHAM SPRINGS QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 3	YELLOW CREEK NEAR WINDHAM SPRINGS 02462970					
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	4	0.67	0.05	0.62	0.72
	pH (standard units)	3	5.50	.	5.20	5.90
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	4.00	1.00	3.00	5.00
	Specific conductance (uS/cm)	3	14.00	6.08	10.00	21.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	3.00	1.41	2.00	4.00
	Solids, dissolved (tons per acre-ft)	2	0.02	0.01	0.01	0.02
	Sediment, suspended (mg/L)	2	19.50	20.51	5.00	34.00
	Sulfate dissolved (mg/L)	3	2.23	0.95	1.30	3.20
	Iron, total recoverable (ug/L)	1	980.00	.	980.00	980.00
	Iron, dissolved (ug/L)	2	205.00	21.21	190.00	220.00
	Manganese, total recoverable (ug/L)	1	80.00	.	80.00	80.00
	Manganese, dissolved (ug/L)	2	80.00	14.14	70.00	90.00

## NO. 4 TRIBUTARY TO YELLOW CREEK NEAR WINDHAM 02462973

	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	5	0.64	0.10	0.54	0.78
	pH (standard units)	3	4.97	.	4.50	5.80
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	1.33	0.58	1.00	2.00
	Specific conductance (uS/cm)	3	9.33	0.58	9.00	10.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	1.50	2.12	0.00	3.00
	Solids, dissolved (tons per acre-ft)	2	0.01	0.01	0.00	0.02
	Sediment, suspended (mg/L)	3	6.67	6.03	1.00	13.00
	Sulfate dissolved (mg/L)	3	1.83	0.67	1.40	2.60
	Iron, total recoverable (ug/L)	1	380.00	.	380.00	380.00
	Iron, dissolved (ug/L)	2	140.00	14.14	130.00	150.00
	Manganese, total recoverable (ug/L)	1	20.00	.	20.00	20.00
	Manganese, dissolved (ug/L)	2	15.00	7.07	10.00	20.00



Table 4.--Summary of selected water-quality data--Continued

WINDHAM SPRINGS QUADRANGLE--Continued						
SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 5 YELLOW CREEK ABOVE NORTHPORT 02462980 -----						
	Drainage Area (3.73 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	54	10.72	15.14	2.20	66.00
	pH (standard units)	38	5.65	.	4.90	6.70
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	33	3.42	2.19	1.00	10.00
	Specific conductance (uS/cm)	41	12.02	2.27	8.00	18.00
	Hardness (mg/L as CaCO <sub>3</sub> )	17	2.59	0.80	2.00	4.00
	Solids, dissolved (tons per acre-ft)	14	0.02	0.00	0.01	0.02
	Sediment, suspended (mg/L)	30	33.03	76.80	0.00	314.00
	Sulfate dissolved (mg/L)	35	1.61	0.83	0.20	3.70
	Iron, total recoverable (ug/L)	14	957.86	864.76	210.00	3600.00
	Iron, dissolved (ug/L)	18	104.44	48.66	50.00	220.00
	Manganese, total recoverable (ug/L)	12	35.83	22.34	10.00	100.00
	Manganese, dissolved (ug/L)	15	25.20	9.41	8.00	40.00
NO. 6 TRIBUTARY TO YELLOW CREEK NEAR NORTHPORT 02462985 -----						
	Drainage Area (2.49 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	46	5.27	5.05	1.00	29.00
	pH (standard units)	30	5.98	.	4.70	8.20
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	25	3.04	1.62	1.00	7.00
	Specific conductance (uS/cm)	33	10.98	3.05	7.50	18.00
	Hardness (mg/L as CaCO <sub>3</sub> )	15	2.40	1.24	1.00	6.00
	Solids, dissolved (tons per acre-ft)	12	0.02	0.00	0.02	0.03
	Sediment, suspended (mg/L)	27	24.19	45.61	0.00	186.00
	Sulfate dissolved (mg/L)	25	1.62	0.75	0.60	3.20
	Iron, total recoverable (ug/L)	13	368.46	469.31	80.00	1900.00
	Iron, dissolved (ug/L)	17	82.94	44.27	30.00	200.00
	Manganese, total recoverable (ug/L)	11	27.27	31.97	10.00	120.00
	Manganese, dissolved (ug/L)	15	17.80	15.79	8.00	70.00



Table 4.--Summary of selected water-quality data--Continued

## WINDHAM SPRINGS QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 7 TRIBUTARY TO TURKEY CREEK NEAR TUSCALOOSA 02464143						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	4	0.61	0.23	0.41	0.84
	pH (standard units)	3	6.10	.	5.60	6.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	3.33	1.53	2.00	5.00
	Specific conductance (uS/cm)	3	9.33	0.58	9.00	10.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	2.00	0.00	2.00	2.00
	Solids, dissolved (tons per acre-ft)	2	0.01	0.01	0.00	0.02
	Sediment, suspended (mg/L)	2	2.50	2.12	1.00	4.00
	Sulfate dissolved (mg/L)	3	1.27	0.23	1.00	1.40
	Iron, total recoverable (ug/L)	1	310.00	.	310.00	310.00
	Iron, dissolved (ug/L)	2	70.00	14.14	60.00	80.00
	Manganese, total recoverable (ug/L)	1	20.00	.	20.00	20.00
	Manganese, dissolved (ug/L)	2	10.00	0.00	10.00	10.00

## WELLS

NO. 1 TEST WELL 2 (332313087271301)						
	Depth of well (unknown)					
	pH (standard units)	1	4.50	.	4.50	4.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	0.00	.	0.00	0.00
	Specific conductance (uS/cm)	1	15.00	.	15.00	15.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	0.00	.	0.00	0.00
	Solids, dissolved (tons per acre-ft)	1	0.01	.	0.01	0.01
	Sulfate dissolved (mg/L)	1	0.60	.	0.60	0.60
	Iron, total recoverable (ug/L)	0	.	.	.	.
	Iron, dissolved (ug/L)	1	1400.00	.	1400.00	1400.00
	Manganese, total recoverable (ug/L)	0	.	.	.	.
	Manganese, dissolved (ug/L)	1	60.00	.	60.00	60.00

Table 4.--Summary of selected water-quality data--Continued

## WINDHAM SPRINGS QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 2 TEST WELL 9 (332524087295901)						
	Depth of well (142.5 feet)					
	pH (standard units)	2	6.15	.	5.80	6.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	39.50	4.95	36.00	43.00
	Specific conductance (uS/cm)	2	67.00	4.24	64.00	70.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	6.00	1.41	5.00	7.00
	Solids, dissolved (tons per acre-ft)	2	0.03	0.00	0.03	0.03
	Sulfate dissolved (mg/L)	2	2.00	0.00	2.00	2.00
	Iron, total recoverable (ug/L)	2	49000.00	12727.92	40000.00	58000.00
	Iron, dissolved (ug/L)	2	12400.00	5091.17	8800.00	16000.00
	Manganese, total recoverable (ug/L)	2	480.00	28.28	460.00	500.00
	Manganese, dissolved (ug/L)	2	430.00	28.28	410.00	450.00
NO. 3 TEST WELL 11 (332424087261401)						
	Depth of well (200 feet)					
	pH (standard units)	1	5.60	.	5.60	5.60
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	21.00	.	21.00	21.00
	Specific conductance (uS/cm)	1	49.00	.	49.00	49.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	14.00	.	14.00	14.00
	Solids, dissolved (tons per acre-ft)	1	0.03	.	0.03	0.03
	Sulfate dissolved (mg/L)	1	2.20	.	2.20	2.20
	Iron, total recoverable (ug/L)	1	18000.00	.	18000.00	18000.00
	Iron, dissolved (ug/L)	1	3000.00	.	3000.00	3000.00
	Manganese, total recoverable (ug/L)	1	380.00	.	380.00	380.00
	Manganese, dissolved (ug/L)	1	370.00	.	370.00	370.00
NO. 4 TEST WELL 14 (332549087261401)						
	Depth of well (unknown)					
	pH (standard units)	1	7.10	.	7.10	7.10
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	20.00	.	20.00	20.00
	Specific conductance (uS/cm)	1	59.00	.	59.00	59.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	19.00	.	19.00	19.00
	Solids, dissolved (tons per acre-ft)	1	0.04	.	0.04	0.04
	Sulfate dissolved (mg/L)	1	4.90	.	4.90	4.90
	Iron, total recoverable (ug/L)	0	.	.	.	.
	Iron, dissolved (ug/L)	1	0.00	.	0.00	0.00
	Manganese, total recoverable (ug/L)	0	.	.	.	.
	Manganese, dissolved (ug/L)	1	4.00	.	4.00	4.00

Table 4.--Summary of selected water-quality data--Continued

## WINDHAM SPRINGS QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 5 TEST WELL 15 CLEMENTS WELL (332603087275001)						
	Depth of well (65 feet)					
	pH (standard units)	2	5.20	.	4.40	6.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	6.50	7.78	1.00	12.00
	Specific conductance (uS/cm)	2	30.50	21.92	15.00	46.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	2.50	0.71	2.00	3.00
	Solids, dissolved (tons per acre-ft)	2	0.01	0.00	0.01	0.01
	Sulfate dissolved (mg/L)	2	1.80	2.26	0.20	3.40
	Iron, total recoverable (ug/L)	1	110000.00	.	110000.00	110000.00
	Iron, dissolved (ug/L)	2	4050.00	4171.93	1100.00	7000.00
	Manganese, total recoverable (ug/L)	1	400.00	.	400.00	400.00
	Manganese, dissolved (ug/L)	2	115.00	148.49	10.00	220.00
NO. 6 TEST WELL 16 (332411087275101)						
	Depth of well (102 feet)					
	pH (standard units)	3	5.37	.	5.00	5.70
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	6.67	0.58	6.00	7.00
	Specific conductance (uS/cm)	3	22.33	4.04	20.00	27.00
	Hardness (mg/L as CaCO <sub>3</sub> )	3	2.00	0.00	2.00	2.00
	Solids, dissolved (tons per acre-ft)	3	0.02	0.00	0.02	0.02
	Sulfate dissolved (mg/L)	3	1.03	0.91	0.20	2.00
	Iron, total recoverable (ug/L)	1	120000.00	.	120000.00	120000.00
	Iron, dissolved (ug/L)	3	2133.33	568.62	1500.00	2600.00
	Manganese, total recoverable (ug/L)	2	190.00	70.71	140.00	240.00
	Manganese, dissolved (ug/L)	3	103.67	40.13	80.00	150.00
NO. 7 TEST WELL 17 (332441087271301)						
	Depth of well (149.67 feet)					
	pH (standard units)	3	6.50	.	6.00	6.80
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	44.67	17.79	29.00	64.00
	Specific conductance (uS/cm)	2	105.00	24.04	88.00	122.00
	Hardness (mg/L as CaCO <sub>3</sub> )	3	28.00	1.73	26.00	29.00
	Solids, dissolved (tons per acre-ft)	3	0.07	0.02	0.06	0.09
	Sulfate dissolved (mg/L)	3	4.97	1.86	3.00	6.70
	Iron, total recoverable (ug/L)	2	23500.00	6363.96	19000.00	28000.00
	Iron, dissolved (ug/L)	3	9800.00	4303.49	5400.00	14000.00
	Manganese, total recoverable (ug/L)	1	710.00	.	710.00	710.00
	Manganese, dissolved (ug/L)	3	620.00	52.92	580.00	680.00

Table 4.--Summary of selected water-quality data--Continued

## WINDHAM SPRINGS QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 8 TEST WELL 18 (332425087284501) -----						
	Depth of well (222 feet)					
	pH (standard units)	2	7.10	.	7.00	7.20
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	71.50	24.75	54.00	89.00
	Specific conductance (uS/cm)	2	152.50	31.82	130.00	175.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	59.00	21.21	44.00	74.00
	Solids, dissolved (tons per acre-ft)	2	0.13	0.04	0.10	0.15
	Sulfate dissolved (mg/L)	2	4.45	1.20	3.60	5.30
	Iron, total recoverable (ug/L)	1	38000.00	.	38000.00	38000.00
	Iron, dissolved (ug/L)	2	21.50	12.02	13.00	30.00
	Manganese, total recoverable (ug/L)	1	2400.00	.	2400.00	2400.00
	Manganese, dissolved (ug/L)	2	185.00	176.78	60.00	310.00
NO. 9 TEST WELL 24 TURNER WELL (332304087285601) -----						
	Depth of well (58 feet)					
	pH (standard units)	3	5.97	.	5.20	6.60
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	28.00	3.00	25.00	31.00
	Specific conductance (uS/cm)	3	72.00	11.53	59.00	81.00
	Hardness (mg/L as CaCO <sub>3</sub> )	3	10.33	3.21	8.00	14.00
	Solids, dissolved (tons per acre-ft)	3	0.04	0.02	0.02	0.05
	Sulfate dissolved (mg/L)	3	4.87	3.38	2.00	8.60
	Iron, total recoverable (ug/L)	2	6500.00	4242.64	3500.00	9500.00
	Iron, dissolved (ug/L)	3	1306.33	1124.91	19.00	2100.00
	Manganese, total recoverable (ug/L)	2	7000.00	707.11	6500.00	7500.00
	Manganese, dissolved (ug/L)	3	8066.67	1342.88	7100.00	9600.00
NO. 10 TEST WELL 25 J.TURNER WELL (332248087283901) -----						
	Depth of well (unknown)					
	pH (standard units)	1	6.70	.	6.70	6.70
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	82.00	.	82.00	82.00
	Specific conductance (uS/cm)	1	175.00	.	175.00	175.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	77.00	.	77.00	77.00
	Solids, dissolved (tons per acre-ft)	1	0.15	.	0.15	0.15
	Sulfate dissolved (mg/L)	1	2.10	.	2.10	2.10
	Iron, total recoverable (ug/L)	0	.	.	.	.
	Iron, dissolved (ug/L)	1	50.00	.	50.00	50.00
	Manganese, total recoverable (ug/L)	0	.	.	.	.
	Manganese, dissolved (ug/L)	1	140.00	.	140.00	140.00

Table 4.--Summary of selected water-quality data--Continued

## WINDHAM SPRINGS QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 11 TEST WELL 27 (332604087290201)	Depth of well (unknown)					
	pH (standard units)	1	6.20	.	6.20	6.20
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	115.00	.	115.00	115.00
	Specific conductance (uS/cm)	1	257.00	.	257.00	257.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	100.00	.	100.00	100.00
	Solids, dissolved (tons per acre-ft)	1	0.20	.	0.20	0.20
	Sulfate dissolved (mg/L)	1	10.00	.	10.00	10.00
	Iron, total recoverable (ug/L)	0	.	.	.	.
	Iron, dissolved (ug/L)	1	10.00	.	10.00	10.00
	Manganese, total recoverable (ug/L)	0	.	.	.	.
	Manganese, dissolved (ug/L)	1	110.00	.	110.00	110.00
NO. 12 TEST WELL 30 (332917087284101)	Depth of well (124 feet)					
	pH (standard units)	1	7.60		7.60	7.60
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	190.00	.	190.00	190.00
	Specific conductance (uS/cm)	1	395.00	.	395.00	395.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	110.00	.	110.00	110.00
	Solids, dissolved (tons per acre-ft)	1	0.32	.	0.32	0.32
	Sulfate dissolved (mg/L)	1	31.00	.	31.00	31.00
	Iron, total recoverable (ug/L)	1	7700.00	.	7700.00	7700.00
	Iron, dissolved (ug/L)	1	3.00	.	3.00	3.00
	Manganese, total recoverable (ug/L)	1	760.00	.	760.00	760.00
	Manganese, dissolved (ug/L)	1	10.00	.	10.00	10.00

Figure 3.--Data sites for the Windham Springs quadrangle.

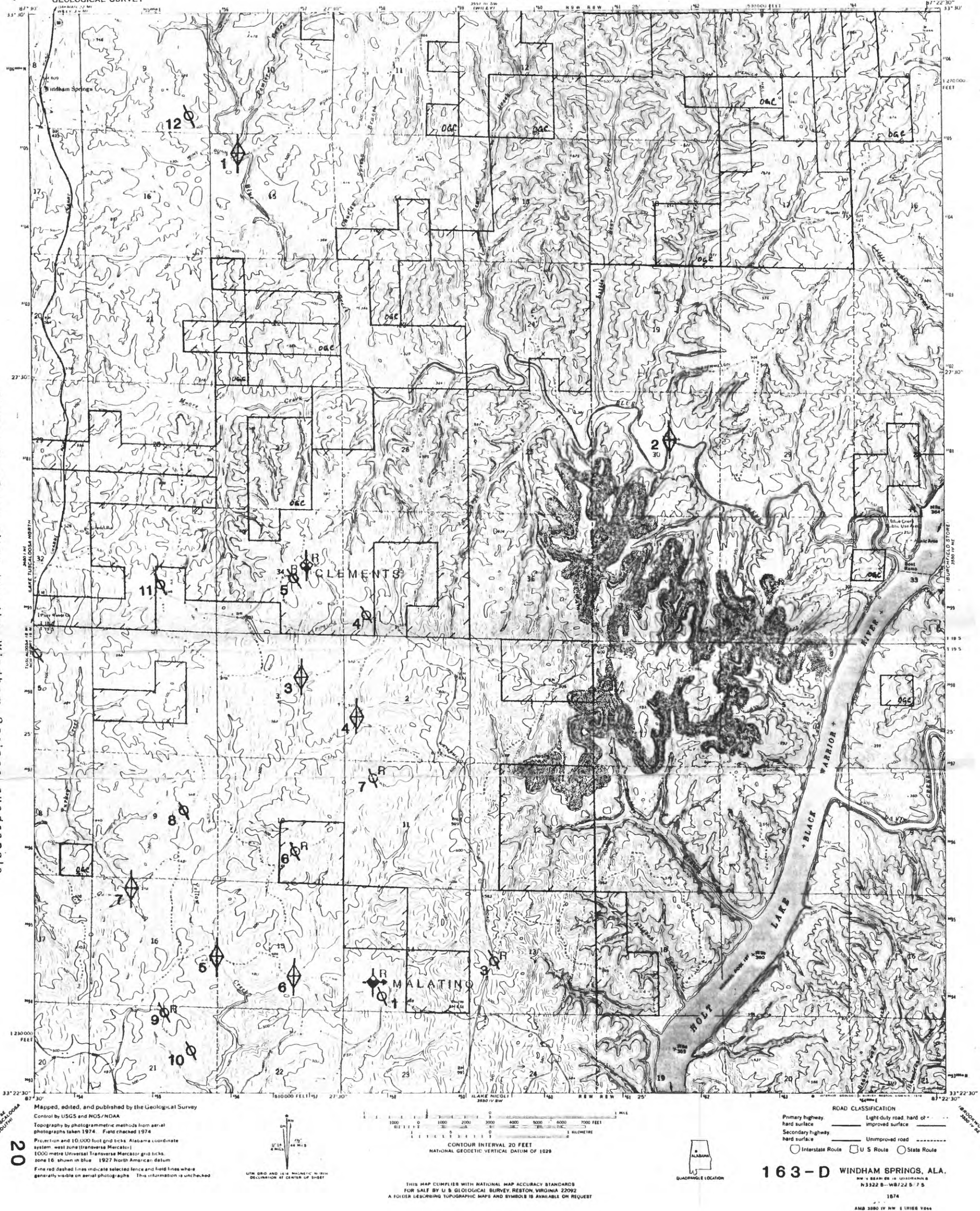




Table 5.--Summary of selected water-quality data

## LAKE TUSCALOOSA NORTH QUADRANGLE

## SURFACE WATER SITES.

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 1 CRIPPLE CREEK NEAR SAMANTHA 02464025 -----						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	24	13.90	24.82	0.04	88.00
	pH (standard units)	22	6.27	.	5.20	7.10
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	19	9.58	4.86	2.00	23.00
	Specific conductance (uS/cm)	22	194.32	246.18	34.00	890.00
	Hardness (mg/L as CaCO <sub>3</sub> )	15	86.47	135.13	9.00	470.00
	Solids, dissolved (tons per acre-ft)	14	0.22	0.31	0.04	1.00
	Sediment, suspended (mg/L)	7	23.00	22.97	4.00	68.00
	Sulfate dissolved (mg/L)	17	80.47	127.32	5.00	460.00
	Iron, total recoverable (ug/L)	14	765.71	550.77	210.00	2100.00
	Iron, dissolved (ug/L)	14	114.64	75.31	29.00	280.00
	Manganese, total recoverable (ug/L)	13	596.92	692.52	100.00	2500.00
	Manganese, dissolved (ug/L)	15	481.80	630.72	63.00	2500.00

NO. 2 LITTLE CREEK EAST OF SAMANTHA 02464032 -----						
	Drainage Area (2.68 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	26	8.51	18.50	0.24	96.00
	pH (standard units)	27	6.62	.	5.80	7.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	26	28.77	20.48	5.00	72.00
	Specific conductance (uS/cm)	26	645.00	323.96	158.00	1420.00
	Hardness (mg/L as CaCO <sub>3</sub> )	14	240.00	137.90	70.00	580.00
	Solids, dissolved (tons per acre-ft)	14	0.50	0.29	0.14	1.20
	Sediment, suspended (mg/L)	2	6.50	3.54	4.00	9.00
	Sulfate dissolved (mg/L)	14	234.86	136.34	58.00	550.00
	Iron, total recoverable (ug/L)	14	625.00	253.22	240.00	1300.00
	Iron, dissolved (ug/L)	14	195.43	57.51	86.00	280.00
	Manganese, total recoverable (ug/L)	13	2593.08	1631.82	390.00	6600.00
	Manganese, dissolved (ug/L)	14	2284.29	1322.46	10.00	4100.00

Table 5.--Summary of selected water-quality data--Continued

## LAKE TUSCALOOSA NORTH QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 3 CRIPPLE CREEK EAST OF SAMANTHA 02464035						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	103	146.61	302.11	0.00	1200.00
	pH (standard units)	93	6.51	.	4.50	7.80
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	81	22.07	30.34	1.00	150.00
	Specific conductance (uS/cm)	98	288.85	395.35	24.00	1840.00
	Hardness (mg/L as CaCO <sub>3</sub> )	52	153.69	244.35	0.00	1100.00
	Solids, dissolved (tons per acre-ft)	52	0.34	0.49	0.03	2.10
	Sediment, suspended (mg/L)	60	402.40	726.48	2.00	2840.00
	Sulfate dissolved (mg/L)	78	118.75	201.72	4.70	960.00
	Iron, total recoverable (ug/L)	48	1996.67	3618.37	160.00	17000.00
	Iron, dissolved (ug/L)	51	102.35	121.81	6.00	810.00
	Manganese, total recoverable (ug/L)	45	820.22	771.96	50.00	3300.00
	Manganese, dissolved (ug/L)	48	722.08	750.95	30.00	3300.00
NO. 4 DRY CREEK NEAR SAMANTHA 02464100						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	27	12.07	14.95	0.01	60.00
	pH (standard units)	29	6.01	.	4.80	6.80
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	28	7.86	4.99	2.00	28.00
	Specific conductance (uS/cm)	29	28.41	5.72	22.00	41.00
	Hardness (mg/L as CaCO <sub>3</sub> )	17	9.06	4.19	4.00	23.00
	Solids, dissolved (tons per acre-ft)	18	0.04	0.01	0.02	0.07
	Sediment, suspended (mg/L)	1	5.00	.	5.00	5.00
	Sulfate dissolved (mg/L)	18	5.03	2.14	1.00	10.00
	Iron, total recoverable (ug/L)	18	1045.00	1212.01	270.00	5600.00
	Iron, dissolved (ug/L)	16	157.44	185.91	3.00	720.00
	Manganese, total recoverable (ug/L)	17	84.12	71.16	20.00	260.00
	Manganese, dissolved (ug/L)	18	65.50	49.85	17.00	200.00



Table 5.--Summary of selected water-quality data--Continued

LAKE TUSCALOOSA NORTH QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 5 TURKEY CREEK AT STATE HIGHWAY 69 NEAR TUSCALOOSA 02464145						
	Drainage Area (6.06 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	84	55.18	103.61	0.80	410.00
	pH (standard units)	56	6.15	.	5.00	7.30
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	42	4.19	2.04	1.00	11.00
	Specific conductance (uS/cm)	62	17.85	6.08	12.00	55.00
	Hardness (mg/L as CaCO <sub>3</sub> )	22	5.14	2.77	2.00	16.00
	Solids, dissolved (tons per acre-ft)	17	0.02	0.01	0.02	0.05
	Sediment, suspended (mg/L)	45	82.33	129.38	0.00	481.00
	Sulfate dissolved (mg/L)	51	2.93	2.10	0.10	15.00
	Iron, total recoverable (ug/L)	20	1184.50	1641.61	140.00	6300.00
	Iron, dissolved (ug/L)	22	111.14	197.51	20.00	970.00
	Manganese, total recoverable (ug/L)	18	65.00	98.47	10.00	400.00
	Manganese, dissolved (ug/L)	18	28.61	41.57	7.00	150.00
NO. 6 TURKEY CREEK BELOW STATE HIGHWAY 69 NEAR TUSCALOOSA 02464146						
	Drainage Area (6.16 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	40	8.78	12.74	0.56	81.00
	pH (standard units)	40	5.98	.	4.90	6.90
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	28	3.61	1.37	2.00	7.00
	Specific conductance (uS/cm)	40	38.53	14.07	13.00	81.00
	Hardness (mg/L as CaCO <sub>3</sub> )	15	15.00	4.97	7.00	29.00
	Solids, dissolved (tons per acre-ft)	23	0.05	0.02	0.00	0.10
	Sulfate dissolved (mg/L)	24	11.18	4.62	3.80	21.00
	Iron, total recoverable (ug/L)	24	388.75	181.86	140.00	980.00
	Iron, dissolved (ug/L)	24	109.46	65.46	3.00	240.00
	Manganese, total recoverable (ug/L)	24	124.58	101.34	20.00	340.00
	Manganese, dissolved (ug/L)	24	115.25	92.83	20.00	300.00

Table 5.--Summary of selected water-quality data--Continued

LAKE TUSCALOOSA NORTH QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 7 TURKEY CREEK NEAR PATTERSON CHAPEL 02464149						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	28	14.52	17.69	1.90	94.00
	pH (standard units)	31	6.23	.	5.30	6.90
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	29	6.66	3.77	2.00	20.00
	Specific conductance (uS/cm)	31	53.94	16.64	35.00	110.00
	Hardness (mg/L as CaCO <sub>3</sub> )	26	17.81	6.76	6.00	38.00
	Solids, dissolved (tons per acre-ft)	26	0.06	0.02	0.02	0.10
	Sediment, suspended (mg/L)	2	9.00	5.66	5.00	13.00
	Sulfate dissolved (mg/L)	28	13.65	5.96	3.60	29.00
	Iron, total recoverable (ug/L)	26	794.62	1326.78	230.00	6900.00
	Iron, dissolved (ug/L)	27	99.67	44.23	43.00	230.00
	Manganese, total recoverable (ug/L)	26	248.08	225.85	30.00	940.00
	Manganese, dissolved (ug/L)	27	221.04	194.19	34.00	900.00

WELLS

NO. 1 TEST WELL 29 (332859087330701)						
	Depth of well (145 feet)					
	pH (standard units)	2	6.60	.	6.30	6.90
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	200.50	28.99	180.00	221.00
	Specific conductance (uS/cm)	2	969.00	354.97	718.00	1220.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	330.00	254.56	150.00	510.00
	Solids, dissolved (tons per acre-ft)	2	0.86	0.35	0.61	1.10
	Sulfate dissolved (mg/L)	2	286.00	149.91	180.00	392.00
	Iron, total recoverable (ug/L)	1	7400.00	.	7400.00	7400.00
	Iron, dissolved (ug/L)	2	62.50	67.18	15.00	110.00
	Manganese, total recoverable (ug/L)	1	1200.00	.	1200.00	1200.00
	Manganese, dissolved (ug/L)	2	295.00	63.64	250.00	340.00



Figure 4.-Data sites for the Lake Tuscaloosa North quadrangle.

Maped, edited, and published by the Geological Survey  
Control by USGS and NOS/NOAA  
Topography by photogrammetric methods from aerial photographs  
taken 1974. Field checked 1975. Map edited 1978  
Projection and 10,000-foot grid ticks: Alabama coordinate  
system, west zone (transverse Mercator)  
1000-meter Universal Transverse Mercator grid ticks,  
zone 18, shown in blue. 1927 North American datum.  
Five not dashed lines indicate selected fences and field lines where  
generally visible on aerial photographs. This information is uncheckd

UTM GRID AND 1927 MAGNETIC NORTH  
DECLINATION AT CENTER OF SHEET

1 MILE  
0 1000 2000 3000 4000 5000 6000 7000 FEET  
1 2 3 4 5 6 7 8 9 10 KILOMETER

CONTOUR INTERVAL 20 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U.S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION  
Primary highway  
hard surface  
Secondary highway  
hard surface  
Light duty road, hard or  
improved surface  
Unimproved road  
( ) Interstate Route [ ] U.S. Route ( ) State Route

LAKE TUSCALOOSA NORTH, ALA.  
164-C  
1878  
AMB 5480 1 NYS 548088 544

Table 6.--Summary of selected water-quality data

## WILEY QUADRANGLE

## SURFACE WATER SITES

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 1 BIG YELLOW CREEK NEAR WHITSON 02462480 -----						
	Drainage Area (14.4 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	30	101.61	454.12	0.00	2500.00
	pH (standard units)	33	6.07	.	4.90	7.10
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	30	9.80	7.18	1.00	27.00
	Specific conductance (uS/cm)	33	54.82	28.35	26.00	140.00
	Hardness (mg/L as CaCO <sub>3</sub> )	16	16.75	10.00	8.00	47.00
	Solids, dissolved (tons per acre-ft)	15	0.06	0.03	0.03	0.15
	Sediment, suspended (mg/L)	5	10.60	9.04	2.00	26.00
	Sulfate dissolved (mg/L)	18	11.13	10.90	3.60	53.00
	Iron, total recoverable (ug/L)	17	1066.47	1108.73	450.00	5200.00
	Iron, dissolved (ug/L)	17	240.06	248.63	11.00	1000.00
	Manganese, total recoverable (ug/L)	16	65.63	47.18	30.00	220.00
	Manganese, dissolved (ug/L)	17	139.65	376.78	10.00	1600.00

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## NO. 2 TRIBUTARY TO LITTLE YELLOW CREEK NEAR SANDTOWN 02462485 -----

	Drainage Area (58 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	0.81	.	0.81	0.81
	pH (standard units)	1	6.00	.	6.00	6.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	4.00	.	4.00	4.00
	Specific conductance (uS/cm)	1	60.00	.	60.00	60.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	18.00	.	18.00	18.00
	Solids, dissolved (tons per acre-ft)	1	0.05	.	0.05	0.05
	Sediment, suspended (mg/L)	1	9.00	.	9.00	9.00
	Sulfate dissolved (mg/L)	1	16.00	.	16.00	16.00
	Iron, total recoverable (ug/L)	1	260.00	.	260.00	260.00
	Iron, dissolved (ug/L)	1	30.00	.	30.00	30.00
	Manganese, total recoverable (ug/L)	1	460.00	.	460.00	460.00
	Manganese, dissolved (ug/L)	1	450.00	.	450.00	450.00

Table 6.--Summary of selected water-quality data--Continued

## WILEY QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 3 LITTLE YELLOW CREEK NEAR SANDTOWN 02462486	Drainage Area (3.52 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	6.70	.	6.70	6.70
	pH (standard units)	1	6.00	.	6.00	6.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	4.00	.	4.00	4.00
	Specific conductance (uS/cm)	1	34.00	.	34.00	34.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	10.00	.	10.00	10.00
	Solids, dissolved (tons per acre-ft)	1	0.03	.	0.03	0.03
	Sediment, suspended (mg/L)	1	15.00	.	15.00	15.00
	Sulfate dissolved (mg/L)	1	9.80	.	9.80	9.80
	Iron, total recoverable (ug/L)	1	650.00	.	650.00	650.00
	Iron, dissolved (ug/L)	1	100.00	.	100.00	100.00
	Manganese, total recoverable (ug/L)	1	440.00	.	440.00	440.00
	Manganese, dissolved (ug/L)	1	430.00	.	430.00	430.00

## NO. 4 LITTLE YELLOW CREEK NEAR SAMANTHA 02462487

	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	35	7.46	9.34	0.21	51.60
	pH (standard units)	36	5.99	.	4.00	7.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	35	5.05	2.46	0.00	10.00
	Specific conductance (uS/cm)	36	128.97	73.99	61.00	480.00
	Hardness (mg/L as CaCO <sub>3</sub> )	13	36.46	13.42	19.00	59.00
	Solids, dissolved (tons per acre-ft)	22	0.13	0.08	0.06	0.41
	Sediment, suspended (mg/L)	13	219.92	703.48	4.00	2560.00
	Sulfate dissolved (mg/L)	23	44.83	35.61	15.00	190.00
	Iron, total recoverable (ug/L)	22	4146.82	16059.28	280.00	76000.00
	Iron, dissolved (ug/L)	20	181.60	152.68	61.00	710.00
	Manganese, total recoverable (ug/L)	22	1588.64	2216.21	570.00	11000.00
	Manganese, dissolved (ug/L)	17	1678.24	2284.38	550.00	10000.00



Table 6.--Summary of selected water-quality data--Continued

## WILEY QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 5 LITTLE YELLOW CREEK NEAR WHITSON 02462490						
	Drainage Area (15 mi <sup>2</sup> )	34	49.26	208.55	0.17	1220.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	32	5.80	.	4.90	6.70
	pH (standard units)	32	4.62	3.75	1.00	20.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	32	96.50	57.63	28.00	300.00
	Specific conductance (uS/cm)	18	34.61	25.87	7.00	120.00
	Hardness (mg/L as CaCO <sub>3</sub> )	17	0.09	0.05	0.04	0.25
	Solids, dissolved (tons per acre-ft)	10	21.50	48.49	1.00	159.00
	Sediment, suspended (mg/L)	19	33.12	28.83	4.50	130.00
	Sulfate dissolved (mg/L)	17	1594.12	4747.79	190.00	20000.00
	Iron, total recoverable (ug/L)	17	91.00	70.73	3.00	240.00
	Iron, dissolved (ug/L)	16	689.37	925.14	40.00	3000.00
	Manganese, total recoverable (ug/L)	17	633.12	938.75	20.00	3300.00
	Manganese, dissolved (ug/L)					

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NO. 6 BLUE CREEK NEAR WILEY 02462590						
	Drainage Area (unknown)	21	4.22	5.84	0.01	25.10
	Streamflow, instantaneous (ft <sup>3</sup> /s)	22	5.77	.	4.60	6.80
	pH (standard units)	21	5.67	3.72	1.00	15.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	22	35.23	15.18	20.00	69.00
	Specific conductance (uS/cm)	10	9.70	5.60	5.00	21.00
	Hardness (mg/L as CaCO <sub>3</sub> )	10	0.04	0.01	0.03	0.07
	Solids, dissolved (tons per acre-ft)	1	4.00	.	4.00	4.00
	Sediment, suspended (mg/L)	10	7.34	3.64	3.00	14.00
	Sulfate dissolved (mg/L)	10	362.00	211.02	140.00	920.00
	Iron, total recoverable (ug/L)	10	85.60	57.32	22.00	180.00
	Iron, dissolved (ug/L)	10	22.00	14.76	10.00	50.00
	Manganese, total recoverable (ug/L)	10	14.20	7.77	7.00	29.00
	Manganese, dissolved (ug/L)					

Table 6.--Summary of selected water-quality data--Continued

## WILEY QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 7 UNNAMED TRIBUTARY TO BLUE CREEK NEAR WILEY 02462592						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	23	0.48	0.50	0.02	1.97
	pH (standard units)	24	6.98	.	5.90	7.90
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	23	82.82	38.75	21.00	160.00
	Specific conductance (uS/cm)	24	1480.42	488.37	630.00	2200.00
	Hardness (mg/L as CaCO <sub>3</sub> )	11	818.18	333.94	320.00	1300.00
	Solids, dissolved (tons per acre-ft)	11	1.70	0.75	0.63	2.90
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	11	779.09	324.42	290.00	1200.00
	Iron, total recoverable (ug/L)	11	751.82	449.24	300.00	1600.00
	Iron, dissolved (ug/L)	11	319.18	324.35	3.00	990.00
	Manganese, total recoverable (ug/L)	8	2875.00	1631.61	1500.00	6700.00
	Manganese, dissolved (ug/L)	11	3354.55	1799.65	1600.00	6700.00
NO. 8 BLUE CREEK ABOVE STATE HIGHWAY 69 NEAR OAKMAN 02462596						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	9	23.54	47.33	0.38	148.00
	pH (standard units)	9	6.97	.	6.20	7.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	8	25.14	26.14	5.00	85.00
	Specific conductance (uS/cm)	9	580.22	465.83	78.00	1400.00
	Hardness (mg/L as CaCO <sub>3</sub> )	6	289.83	212.57	58.00	590.00
	Solids, dissolved (tons per acre-ft)	6	0.58	0.43	0.12	1.20
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	6	256.33	188.93	55.00	530.00
	Iron, total recoverable (ug/L)	6	378.33	208.65	110.00	750.00
	Iron, dissolved (ug/L)	6	39.83	17.06	8.00	55.00
	Manganese, total recoverable (ug/L)	5	668.00	372.65	290.00	1200.00
	Manganese, dissolved (ug/L)	6	898.33	709.43	300.00	2200.00

Table 6.--Summary of selected water-quality data--Continued

WILEY QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 9 BLUE CREEK NEAR OAKMAN 02462600						
	Drainage Area (5.32 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	171	84.20	208.77	0.01	2240.00
	pH (standard units)	116	6.59	.	5.20	7.90
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	81	24.13	27.41	2.00	110.00
	Specific conductance (uS/cm)	137	343.06	457.71	18.00	1850.00
	Hardness (mg/L as CaCO <sub>3</sub> )	51	183.04	260.20	4.00	1200.00
	Solids, dissolved (tons per acre-ft)	47	0.46	0.51	0.03	2.10
	Sediment, suspended (mg/L)	69	267.17	784.44	1.00	4839.99
	Sulfate dissolved (mg/L)	87	152.22	214.14	1.80	980.00
	Iron, total recoverable (ug/L)	49	1266.12	3167.10	80.00	19000.00
	Iron, dissolved (ug/L)	54	68.09	91.56	9.00	630.00
	Manganese, total recoverable (ug/L)	44	435.91	351.13	20.00	1500.00
	Manganese, dissolved (ug/L)	49	461.57	401.04	20.00	1500.00

30  
WELLS  
-----

NO. 1 TEST WELL 3 (333226087275301)								
	Depth of well (290 feet)							
	pH (standard units)	1	7.00	.	7.00		7.00	
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	160.00	.	160.00		160.00	
	Specific conductance (uS/cm)	1	310.00	.	310.00		310.00	
	Hardness (mg/L as CaCO <sub>3</sub> )	1	130.00	.	130.00		130.00	
	Solids, dissolved (tons per acre-ft)	1	0.26	.	0.26		0.26	
	Sulfate dissolved (mg/L)	2	7.00	0.28	6.80		7.20	
	Iron, total recoverable (ug/L)	1	6000.00	.	6000.00		6000.00	
	Iron, dissolved (ug/L)	1	3.00	.	3.00		3.00	
	Manganese, total recoverable (ug/L)	1	1400.00	.	1400.00		1400.00	
	Manganese, dissolved (ug/L)	1	5.00	.	5.00		5.00	



Table 6.--Summary of selected water-quality data--Continued

## WILEY QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 2 TEST WELL 4 COLEMAN WELL (333344087291001)						
	Depth of well (347 feet)					
	pH (standard units)	3	7.83	.	7.70	8.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	186.33	5.51	180.00	190.00
	Specific conductance (uS/cm)	3	351.67	7.64	345.00	360.00
	Hardness (mg/L as CaCO <sub>3</sub> )	3	130.00	0.00	130.00	130.00
	Solids, dissolved (tons per acre-ft)	3	0.26	0.00	0.26	0.26
	Sulfate dissolved (mg/L)	3	4.20	0.80	3.40	5.00
	Iron, total recoverable (ug/L)	2	2800.00	848.53	2200.00	3400.00
	Iron, dissolved (ug/L)	3	6.67	3.51	3.00	10.00
	Manganese, total recoverable (ug/L)	2	120.00	14.14	110.00	130.00
	Manganese, dissolved (ug/L)	3	9.67	6.51	3.00	16.00
NO. 3 TEST WELL 28 (333157087294501)						
	Depth of well (unknown)					
	pH (standard units)	2	7.05	.	6.60	7.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	221.50	12.02	213.00	230.00
	Specific conductance (uS/cm)	2	430.00	21.21	415.00	445.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	205.00	7.07	200.00	210.00
	Solids, dissolved (tons per acre-ft)	2	0.31	0.00	0.31	0.31
	Sulfate dissolved (mg/L)	2	7.85	0.64	7.40	8.30
	Iron, total recoverable (ug/L)	0	.	.	.	.
	Iron, dissolved (ug/L)	2	5.00	7.07	0.00	10.00
	Manganese, total recoverable (ug/L)	0	.	.	.	.
	Manganese, dissolved (ug/L)	2	80.00	28.28	60.00	100.00
NO. 4 TEST WELL 50 ZENNAH WELL (333220087293901)						
	Depth of well (60.47 feet)					
	pH (standard units)	2	6.45	.	6.40	6.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	60.50	23.33	44.00	77.00
	Specific conductance (uS/cm)	2	211.50	16.26	200.00	223.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	64.00	16.97	52.00	76.00
	Solids, dissolved (tons per acre-ft)	2	0.17	0.04	0.14	0.19
	Sulfate dissolved (mg/L)	2	12.50	2.12	11.00	14.00
	Iron, total recoverable (ug/L)	2	9800.00	4525.48	6600.00	13000.00
	Iron, dissolved (ug/L)	2	669.00	892.37	38.00	1300.00
	Manganese, total recoverable (ug/L)	2	495.00	431.34	190.00	800.00
	Manganese, dissolved (ug/L)	2	325.00	289.91	120.00	530.00

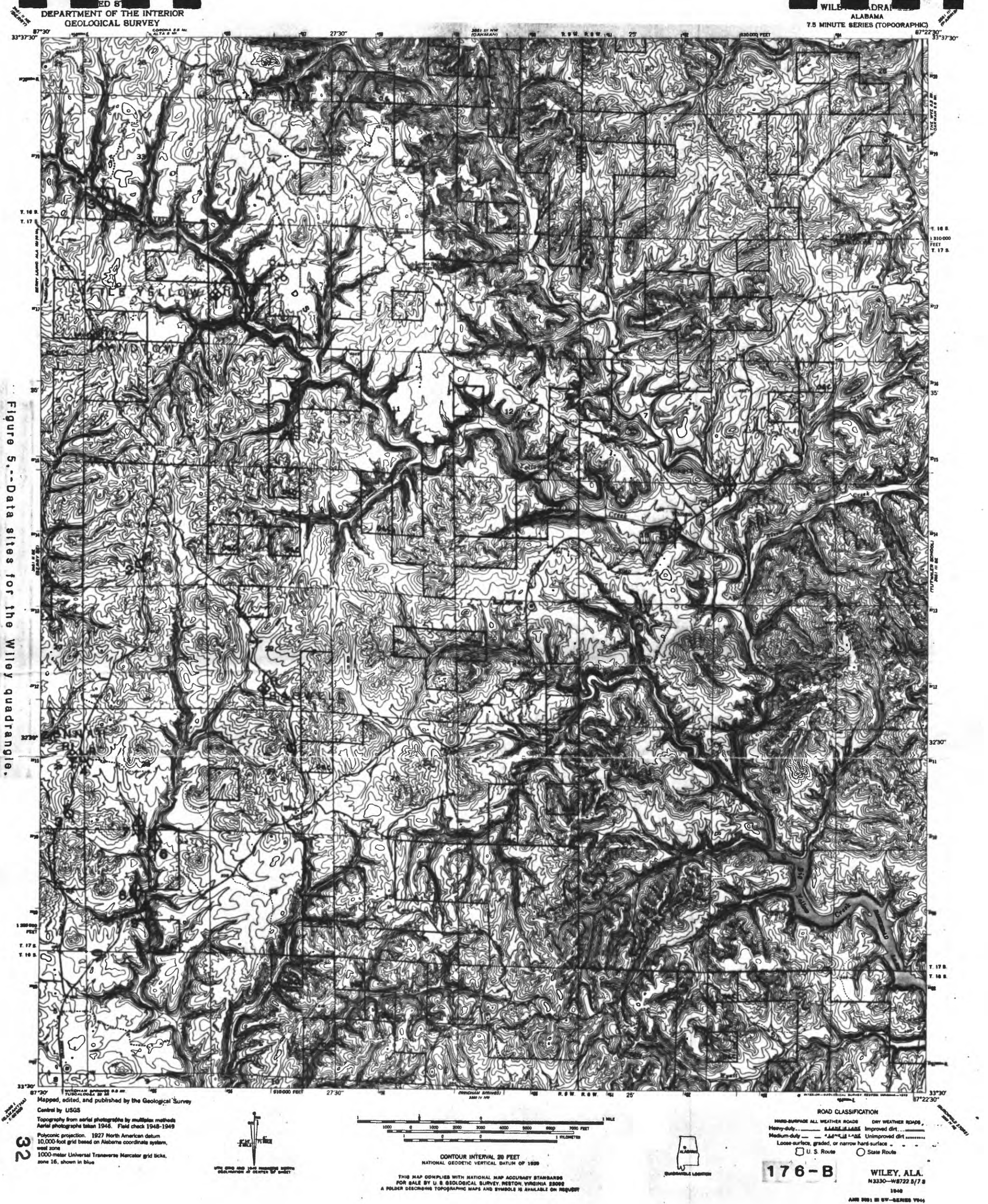


Figure 5.--Data sites for the Wiley quadrangle.

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Maped, edited, and published by the Geological Survey  
Control by USGS  
Topography from aerial photographs by multiple methods  
Aerial photographs taken 1946. Field check 1948-1949  
Polyconic projection. 1927 North American datum  
10,000-foot grid based on Alabama coordinate system,  
west zone  
1000-meter Universal Transverse Mercator grid ticks,  
zone 16, shown in blue



CONTOUR INTERVAL 20 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929  
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 20192  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION  
Heavy-duty ALL WEATHER ROADS Improved dirt  
Medium-duty ALL WEATHER Improved dirt  
Loose surface, graded, or narrow hard surface  
U. S. Route State Route

176-B  
WILEY, ALA.  
N3330-W8722 5/7 S  
1940  
ANN 5001 IN SW-SERIES 7046

Table 7.--Summary of selected water-quality data

## OAKMAN QUADRANGLE

## SURFACE WATER SITES

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 1 BLACK BRANCH NEAR OAKMAN 02454072						
	Drainage Area (3.3 mi <sup>2</sup> )	5	3.16	5.01	0.06	12.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	6	5.52	.	3.10	8.10
	pH (standard units)	6	105.50	119.61	1.00	252.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	6	1495.67	541.69	835.00	2050.00
	Specific conductance (uS/cm)	6	675.00	346.68	250.00	1100.00
	Hardness (mg/L as CaCO <sub>3</sub> )	5	1.74	0.59	0.91	2.40
	Solids, dissolved (tons per acre-ft)	4	52.00	63.18	6.00	144.00
	Sediment, suspended (mg/L)	6	758.33	304.99	390.00	1100.00
	Sulfate dissolved (mg/L)	4	752.50	931.32	110.00	2100.00
	Iron, total recoverable (ug/L)	6	1031.67	1151.30	10.00	2600.00
	Iron, dissolved (ug/L)	5	3368.00	4530.99	250.00	11000.00
	Manganese, total recoverable (ug/L)	4	3137.50	5271.42	30.00	11000.00
	Manganese, dissolved (ug/L)					
NO. 2 WOLF CREEK AT CORONA 02454175						
	Drainage Area (unknown)	4	17.11	32.60	0.06	66.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	4	6.68	.	6.00	7.80
	pH (standard units)	2	19.50	7.78	14.00	25.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	4	259.25	104.06	125.00	352.00
	Specific conductance (uS/cm)	4	257.50	362.57	48.00	800.00
	Hardness (mg/L as CaCO <sub>3</sub> )	4	0.61	0.80	0.12	1.80
	Solids, dissolved (tons per acre-ft)	2	16.50	13.44	7.00	26.00
	Sediment, suspended (mg/L)	4	247.25	336.75	40.00	750.00
	Sulfate dissolved (mg/L)	4	677.50	648.40	210.00	1600.00
	Iron, total recoverable (ug/L)	4	85.00	38.73	40.00	130.00
	Iron, dissolved (ug/L)	4	235.00	151.55	140.00	460.00
	Manganese, total recoverable (ug/L)	4	240.00	187.44	130.00	520.00
	Manganese, dissolved (ug/L)					



Table 7.--Summary of selected water-quality data--Continued

## OAKMAN QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 3 BLUE WATER CREEK NEAR BERRY 02454185						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	0.92	1.24	0.04	1.80
	pH (standard units)	2	6.05	.	5.90	6.20
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	7.50	0.71	7.00	8.00
	Specific conductance (uS/cm)	2	31.00	7.07	26.00	36.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	9.00	1.41	8.00	10.00
	Solids, dissolved (tons per acre-ft)	2	0.04	0.00	0.04	0.04
	Sediment, suspended (mg/L)	2	5.00	2.83	3.00	7.00
	Sulfate dissolved (mg/L)	2	5.55	0.21	5.40	5.70
	Iron, total recoverable (ug/L)	2	515.00	77.78	460.00	570.00
	Iron, dissolved (ug/L)	2	115.00	35.36	90.00	140.00
	Manganese, total recoverable (ug/L)	2	65.00	7.07	60.00	70.00
	Manganese, dissolved (ug/L)	2	55.00	7.07	50.00	60.00
NO. 4 UNNAMED TRIBUTARY TO BLUE WATER CREEK NEAR OAKMAN 02454190						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	3	0.21	0.27	0.04	0.52
	pH (standard units)	3	5.93	.	5.90	6.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	7.67	3.06	5.00	11.00
	Specific conductance (uS/cm)	3	335.33	73.93	250.00	380.00
	Hardness (mg/L as CaCO <sub>3</sub> )	3	146.67	32.15	110.00	170.00
	Solids, dissolved (tons per acre-ft)	3	0.32	0.07	0.25	0.38
	Sediment, suspended (mg/L)	3	18.00	9.54	9.00	28.00
	Sulfate dissolved (mg/L)	3	146.67	32.15	110.00	170.00
	Iron, total recoverable (ug/L)	3	2146.67	1684.79	540.00	3900.00
	Iron, dissolved (ug/L)	3	1510.00	1592.58	250.00	3300.00
	Manganese, total recoverable (ug/L)	2	2350.00	1767.77	1100.00	3600.00
	Manganese, dissolved (ug/L)	3	1710.00	1482.33	630.00	3400.00

Table 7.--Summary of selected water-quality data--Continued

## OAKMAN QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 5 WOLF CREEK NEAR OAKMAN 02454200						
	Drainage Area (85 mi <sup>2</sup> )	9	109.80	249.59	1.03	768.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	25	6.78	.	5.50	7.60
	pH (standard units)	13	15.38	11.24	3.00	42.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	72	243.18	120.17	38.00	563.00
	Specific conductance (uS/cm)	22	64.27	41.51	5.00	200.00
	Hardness (mg/L as CaCO <sub>3</sub> )	6	0.25	0.16	0.04	0.45
	Solids, dissolved (tons per acre-ft)	8	22.50	28.33	4.00	90.00
	Sediment, suspended (mg/L)	9	99.48	63.31	9.30	200.00
	Sulfate dissolved (mg/L)	9	760.00	568.09	320.00	2000.00
	Iron, total recoverable (ug/L)	7	95.71	48.60	40.00	160.00
	Iron, dissolved (ug/L)	8	222.50	114.24	20.00	400.00
	Manganese, total recoverable (ug/L)	6	243.33	85.71	170.00	410.00
	Manganese, dissolved (ug/L)					
NO. 6 BIG YELLOW CREEK NEAR BOLEY SPRINGS 02462470						
	Drainage Area (4.25 mi <sup>2</sup> )	1	5.80	.	5.80	5.80
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	6.50	.	6.50	6.50
	pH (standard units)	1	7.00	.	7.00	7.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	24.00	.	24.00	24.00
	Specific conductance (uS/cm)	1	7.00	.	7.00	7.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	0.03	.	0.03	0.03
	Solids, dissolved (tons per acre-ft)	1	5.00	.	5.00	5.00
	Sediment, suspended (mg/L)	1	4.00	.	4.00	4.00
	Sulfate dissolved (mg/L)	1	480.00	.	480.00	480.00
	Iron, total recoverable (ug/L)	1	170.00	.	170.00	170.00
	Iron, dissolved (ug/L)	1	60.00	.	60.00	60.00
	Manganese, total recoverable (ug/L)	1	60.00	.	60.00	60.00
	Manganese, dissolved (ug/L)					

Figure 6.--Data sites for the Oakman quadrangle.



Table 8.--Summary of selected water-quality data

## BERRY SE QUADRANGLE

## SURFACE WATER SITES

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 1	TRIBUTARY TO LITTLE YELLOW CREEK SITE D NEAR BOLEY SPRINGS	0246248150				
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	1.25	1.56	0.15	2.36
	pH (standard units)	2	5.80	.	4.90	6.70
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	4.00	4.24	1.00	7.00
	Specific conductance (uS/cm)	2	16.00	0.00	16.00	16.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	4.00	0.00	4.00	4.00
	Solids, dissolved (tons per acre-ft)	2	0.02	0.00	0.02	0.02
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	2	2.85	1.20	2.00	3.70
	Iron, total recoverable (ug/L)	2	330.00	98.99	260.00	400.00
	Iron, dissolved (ug/L)	2	123.50	108.19	47.00	200.00
	Manganese, total recoverable (ug/L)	2	40.00	14.14	30.00	50.00
	Manganese, dissolved (ug/L)	2	23.50	4.95	20.00	27.00
NO. 2	TRIBUTARY TO LITTLE YELLOW CREEK SITE C NEAR BOLEY SPRINGS	0246248180				
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	4	0.30	0.40	0.01	0.86
	pH (standard units)	4	6.23	.	5.90	6.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	4	5.00	4.24	1.00	10.00
	Specific conductance (uS/cm)	4	17.25	2.06	15.00	20.00
	Hardness (mg/L as CaCO <sub>3</sub> )	4	4.25	0.50	4.00	5.00
	Solids, dissolved (tons per acre-ft)	4	0.03	0.01	0.02	0.03
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	4	3.18	0.21	3.00	3.40
	Iron, total recoverable (ug/L)	4	465.00	356.79	280.00	1000.00
	Iron, dissolved (ug/L)	4	82.50	22.52	52.00	100.00
	Manganese, total recoverable (ug/L)	4	67.50	28.72	50.00	110.00
	Manganese, dissolved (ug/L)	4	50.50	33.21	30.00	100.00

Table 8.--Summary of selected water-quality data--Continued

## BERRY SE QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 3 TRIBUTARY TO LITTLE YELLOW CREEK SITE B NEAR BOLEY SPRINGS	0246248190					
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	0.52	0.70	0.02	1.01
	pH (standard units)	2	5.95	.	5.40	6.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	4.50	3.54	2.00	7.00
	Specific conductance (uS/cm)	2	26.00	4.24	23.00	29.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	6.00	1.41	5.00	7.00
	Solids, dissolved (tons per acre-ft)	2	0.03	0.01	0.02	0.03
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	2	3.60	0.85	3.00	4.20
	Iron, total recoverable (ug/L)	2	350.00	70.71	300.00	400.00
	Iron, dissolved (ug/L)	2	101.00	69.30	52.00	150.00
	Manganese, total recoverable (ug/L)	2	20.00	0.00	20.00	20.00
	Manganese, dissolved (ug/L)	2	19.50	6.36	15.00	24.00

NO. 4 TRIBUTARY TO LITTLE YELLOW CREEK SITE A NEAR BOLEY SPRINGS	0246248198					
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	0.05	.	0.05	0.05
	pH (standard units)	1	5.50	.	5.50	5.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	2.00	.	2.00	2.00
	Specific conductance (uS/cm)	1	22.00	.	22.00	22.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	5.00	.	5.00	5.00
	Solids, dissolved (tons per acre-ft)	1	0.02	.	0.02	0.02
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	1	4.20	.	4.20	4.20
	Iron, total recoverable (ug/L)	1	400.00	.	400.00	400.00
	Iron, dissolved (ug/L)	1	84.00	.	84.00	84.00
	Manganese, total recoverable (ug/L)	1	30.00	.	30.00	30.00
	Manganese, dissolved (ug/L)	1	31.00	.	31.00	31.00



Table 8.--Summary of selected water-quality data--Continued

## BERRY SE QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 5 TRIBUTARY TO LITTLE YELLOW CREEK NEAR BOLEY SPRINGS 02462482						
	Drainage Area (0.82 mi <sup>2</sup> )	23	14.43	61.20	0.06	295.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	23	5.57	.	4.70	6.80
	pH (standard units)	22	2.50	1.30	1.00	7.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	23	20.09	6.25	15.00	40.00
	Specific conductance (uS/cm)	11	4.64	0.81	4.00	6.00
	Hardness (mg/L as CaCO <sub>3</sub> )	10	0.02	0.01	0.02	0.04
	Solids, dissolved (tons per acre-ft)	2	5.00	0.00	5.00	5.00
	Sediment, suspended (mg/L)	11	3.47	0.84	2.00	5.00
	Sulfate dissolved (mg/L)	11	316.36	137.86	150.00	610.00
	Iron, total recoverable (ug/L)	11	87.09	59.04	41.00	240.00
	Iron, dissolved (ug/L)	11	35.45	19.16	10.00	70.00
	Manganese, total recoverable (ug/L)	11	29.18	8.53	17.00	0.00
	Manganese, dissolved (ug/L)					
NO. 6 LITTLE YELLOW CREEK NEAR BOLEY SPRINGS 02462483						
	Drainage Area (1.73 mi <sup>2</sup> )	1	4.30	.	4.30	4.30
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	6.70	.	6.70	6.70
	pH (standard units)	1	5.00	.	5.00	5.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	31.00	.	31.00	31.00
	Specific conductance (uS/cm)	1	9.00	.	9.00	9.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	0.03	.	0.03	0.03
	Solids, dissolved (tons per acre-ft)	1	11.00	.	11.00	11.00
	Sediment, suspended (mg/L)	1	7.70	.	7.70	7.70
	Sulfate dissolved (mg/L)	1	640.00	.	640.00	640.00
	Iron, total recoverable (ug/L)	1	110.00	.	110.00	110.00
	Iron, dissolved (ug/L)	1	530.00	.	530.00	530.00
	Manganese, total recoverable (ug/L)	1	540.00	.	540.00	540.00
	Manganese, dissolved (ug/L)					

Table 8.--Summary of selected water-quality data--Continued

## BERRY SE QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 7 BOONE CREEK NEAR NEW LEXINGTON 02463838						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	2.07	0.61	1.64	2.50
	pH (standard units)	2	6.15	.	5.90	6.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	7.00	5.66	3.00	11.00
	Specific conductance (uS/cm)	2	36.00	0.00	36.00	36.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	10.00	.	10.00	10.00
	Solids, dissolved (tons per acre-ft)	2	0.04	0.01	0.03	0.04
	Sediment, suspended (mg/L)	2	11.50	4.95	8.00	15.00
	Sulfate dissolved (mg/L)	2	0.45	0.21	0.30	0.60
	Iron, total recoverable (ug/L)	2	1750.00	212.13	1600.00	1900.00
	Iron, dissolved (ug/L)	1	420.00	.	420.00	420.00
	Manganese, total recoverable (ug/L)	2	145.00	49.50	110.00	180.00
	Manganese, dissolved (ug/L)	1	150.00	.	150.00	150.00
NO. 8 LITTLE TYRO CREEK NEAR SANDTOWN 02463840						
	Drainage Area (0.26 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	7	0.11	0.05	0.03	0.16
	pH (standard units)	5	6.68	.	6.40	7.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	5	29.00	8.77	18.00	42.00
	Specific conductance (uS/cm)	5	604.80	157.11	350.00	740.00
	Hardness (mg/L as CaCO <sub>3</sub> )	4	320.00	53.54	250.00	380.00
	Solids, dissolved (tons per acre-ft)	4	0.62	0.05	0.56	0.69
	Sediment, suspended (mg/L)	5	22.20	20.96	4.00	58.00
	Sulfate dissolved (mg/L)	5	267.00	85.12	130.00	340.00
	Iron, total recoverable (ug/L)	3	8533.33	7333.03	4200.00	17000.00
	Iron, dissolved (ug/L)	4	5275.00	5163.57	2200.00	13000.00
	Manganese, total recoverable (ug/L)	2	15000.00	1414.21	14000.00	16000.00
	Manganese, dissolved (ug/L)	4	14500.00	2645.75	11000.00	17000.00

Table 8.--Summary of selected water-quality data--Continued

## BERRY SE QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 9 TYRO CREEK NEAR BOLEY SPRINGS 333539087343500	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	4.50	.	4.50	4.50
	pH (standard units)	1	6.90	.	6.90	6.90
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	13.00	.	13.00	13.00
	Specific conductance (uS/cm)	1	36.00	.	36.00	36.00
	Hardness (mg/L as CaCO <sub>3</sub> )	0	.	.	.	.
	Solids, dissolved (tons per acre-ft)	1	0.04	.	0.04	0.04
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	1	4.00	.	4.00	4.00
	Iron, total recoverable (ug/L)	1	1100.00	.	1100.00	1100.00
	Iron, dissolved (ug/L)	1	180.00	.	180.00	180.00
	Manganese, total recoverable (ug/L)	1	40.00	.	40.00	40.00
	Manganese, dissolved (ug/L)	1	10.00	.	10.00	10.00
NO. 10 TYRO CREEK NEAR NEW LEXINGTON 02463850	Drainage Area (23.9 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	49	193.14	547.42	0.00	2690.00
	pH (standard units)	54	6.03	.	4.70	7.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	44	7.09	5.09	1.00	28.00
	Specific conductance (uS/cm)	53	85.25	57.54	24.00	300.00
	Hardness (mg/L as CaCO <sub>3</sub> )	26	34.19	31.89	6.00	140.00
	Solids, dissolved (tons per acre-ft)	26	0.09	0.07	0.03	0.27
	Sediment, suspended (mg/L)	87	1142.14	1010.94	2.00	5404.00
	Sulfate dissolved (mg/L)	36	30.64	28.67	8.50	120.00
	Iron, total recoverable (ug/L)	25	5766.80	10924.60	240.00	36000.00
	Iron, dissolved (ug/L)	25	113.28	72.25	10.00	250.00
	Manganese, total recoverable (ug/L)	24	1042.50	1303.83	200.00	5900.00
	Manganese, dissolved (ug/L)	26	963.08	1469.07	160.00	6500.00

Table 8.--Summary of selected water-quality data--Continued

## BERRY SE QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 11 TRIBUTARY TO BEAR CREEK NEAR SAMANTHA 02463880						
	Drainage Area (3 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	19	3.28	5.12	0.03	19.50
	pH (standard units)	18	6.13	.	4.80	7.60
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	17	10.65	7.67	1.00	30.00
	Specific conductance (uS/cm)	18	42.44	16.03	20.00	86.00
	Hardness (mg/L as CaCO <sub>3</sub> )	12	12.92	6.43	5.00	27.00
	Solids, dissolved (tons per acre-ft)	13	0.04	0.02	0.03	0.08
	Sediment, suspended (mg/L)	5	5.80	3.90	2.00	12.00
	Sulfate dissolved (mg/L)	14	6.92	2.54	3.60	12.00
	Iron, total recoverable (ug/L)	13	567.69	416.60	80.00	1600.00
	Iron, dissolved (ug/L)	12	171.67	209.71	30.00	780.00
	Manganese, total recoverable (ug/L)	13	92.31	141.67	10.00	540.00
	Manganese, dissolved (ug/L)	12	83.50	148.53	5.00	540.00
NO. 12 DRY BRANCH NEAR SAMANTHA 02463890						
	Drainage Area (0.72 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	76	14.44	19.75	0.01	80.00
	pH (standard units)	37	6.11	.	4.80	7.20
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	30	6.30	2.98	2.00	13.00
	Specific conductance (uS/cm)	51	22.43	5.54	15.00	43.00
	Hardness (mg/L as CaCO <sub>3</sub> )	19	5.63	1.89	2.00	10.00
	Solids, dissolved (tons per acre-ft)	10	0.03	0.01	0.02	0.05
	Sediment, suspended (mg/L)	45	41.64	62.82	0.00	212.00
	Sulfate dissolved (mg/L)	35	3.17	0.63	2.10	4.70
	Iron, total recoverable (ug/L)	18	1230.56	2558.24	170.00	11000.00
	Iron, dissolved (ug/L)	21	37.62	22.11	10.00	90.00
	Manganese, total recoverable (ug/L)	17	43.53	46.63	10.00	160.00
	Manganese, dissolved (ug/L)	17	17.82	20.27	1.00	80.00

Table 8.--Summary of selected water-quality data--Continued

## BERRY SE QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 13 BEAR CREEK NEAR SAMANTHA 02463900						
	Drainage Area (15 mi <sup>2</sup> )	667	257.64	497.93	0.00	2570.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	95	6.30	.	4.60	7.50
	pH (standard units)	72	10.23	7.23	1.00	43.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	103	34.17	14.97	16.00	102.00
	Specific conductance (uS/cm)	37	8.57	3.55	0.00	18.00
	Hardness (mg/L as CaCO <sub>3</sub> )	33	0.04	0.01	0.02	0.06
	Solids, dissolved (tons per acre-ft)	588	177.83	381.43	0.00	2600.00
	Sediment, suspended (mg/L)	70	4.24	1.60	1.40	14.00
	Sulfate dissolved (mg/L)	44	1707.04	2164.65	210.00	9999.98
	Iron, total recoverable (ug/L)	48	134.25	151.62	10.00	760.00
	Iron, dissolved (ug/L)	40	73.25	61.78	10.00	280.00
	Manganese, total recoverable (ug/L)					
NO. 14 CRIPPLE CREEK ABOVE FINLEY BRANCH NEAR SAMANTHA 02464015						
	Drainage Area (4.64 mi <sup>2</sup> )	1	10.00	.	10.00	10.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	7.00	.	7.00	7.00
	pH (standard units)	1	6.00	.	6.00	6.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	21.00	.	21.00	21.00
	Specific conductance (uS/cm)	1	6.00	.	6.00	6.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	0.03	.	0.03	0.03
	Solids, dissolved (tons per acre-ft)	1	5.00	.	5.00	5.00
	Sediment, suspended (mg/L)	1	3.90	.	3.90	3.90
	Sulfate dissolved (mg/L)	1	410.00	.	410.00	410.00
	Iron, total recoverable (ug/L)	1	180.00	.	180.00	180.00
	Iron, dissolved (ug/L)	1	20.00	.	20.00	20.00
	Manganese, total recoverable (ug/L)	1	20.00	.	20.00	20.00
	Manganese, dissolved (ug/L)					

Table 8.--Summary of selected water-quality data--Continued

## BERRY SE QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 15 JOHNSON	BRANCH NEAR UTLEY 02464020					
	Drainage Area (2.79 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	9	0.79	1.26	0.01	3.33
	pH (standard units)	7	6.34	.	5.60	7.30
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	7	14.57	6.85	5.00	26.00
	Specific conductance (uS/cm)	7	43.57	13.30	27.00	56.00
	Hardness (mg/L as CaCO <sub>3</sub> )	5	13.00	4.95	7.00	19.00
	Solids, dissolved (tons per acre-ft)	6	0.05	0.01	0.03	0.06
	Sediment, suspended (mg/L)	6	7.17	5.81	1.00	17.00
	Sulfate dissolved (mg/L)	7	4.44	1.17	3.00	6.00
	Iron, total recoverable (ug/L)	5	920.00	923.23	250.00	2500.00
	Iron, dissolved (ug/L)	5	131.80	208.02	10.00	500.00
	Manganese, total recoverable (ug/L)	5	80.00	90.55	20.00	240.00
	Manganese, dissolved (ug/L)	6	64.00	97.02	8.00	260.00
WELLS						
NO. 1 TEST WELL	5 DRY BRANCH WELL (333204087324601)					
	Depth of well (59.27 feet)					
	pH (standard units)	3	6.20	.	6.00	6.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	45.00	5.57	40.00	51.00
	Specific conductance (uS/cm)	3	113.67	13.65	98.00	123.00
	Hardness (mg/L as CaCO <sub>3</sub> )	3	30.33	1.53	29.00	32.00
	Solids, dissolved (tons per acre-ft)	3	0.07	0.02	0.06	0.09
	Sulfate dissolved (mg/L)	3	5.43	0.49	5.10	6.00
	Iron, total recoverable (ug/L)	1	100000.00	.	100000.00	100000.00
	Iron, dissolved (ug/L)	2	7550.00	4879.04	4100.00	11000.00
	Manganese, total recoverable (ug/L)	2	1450.00	494.97	1100.00	1800.00
	Manganese, dissolved (ug/L)	3	1100.00	0.00	1100.00	1100.00

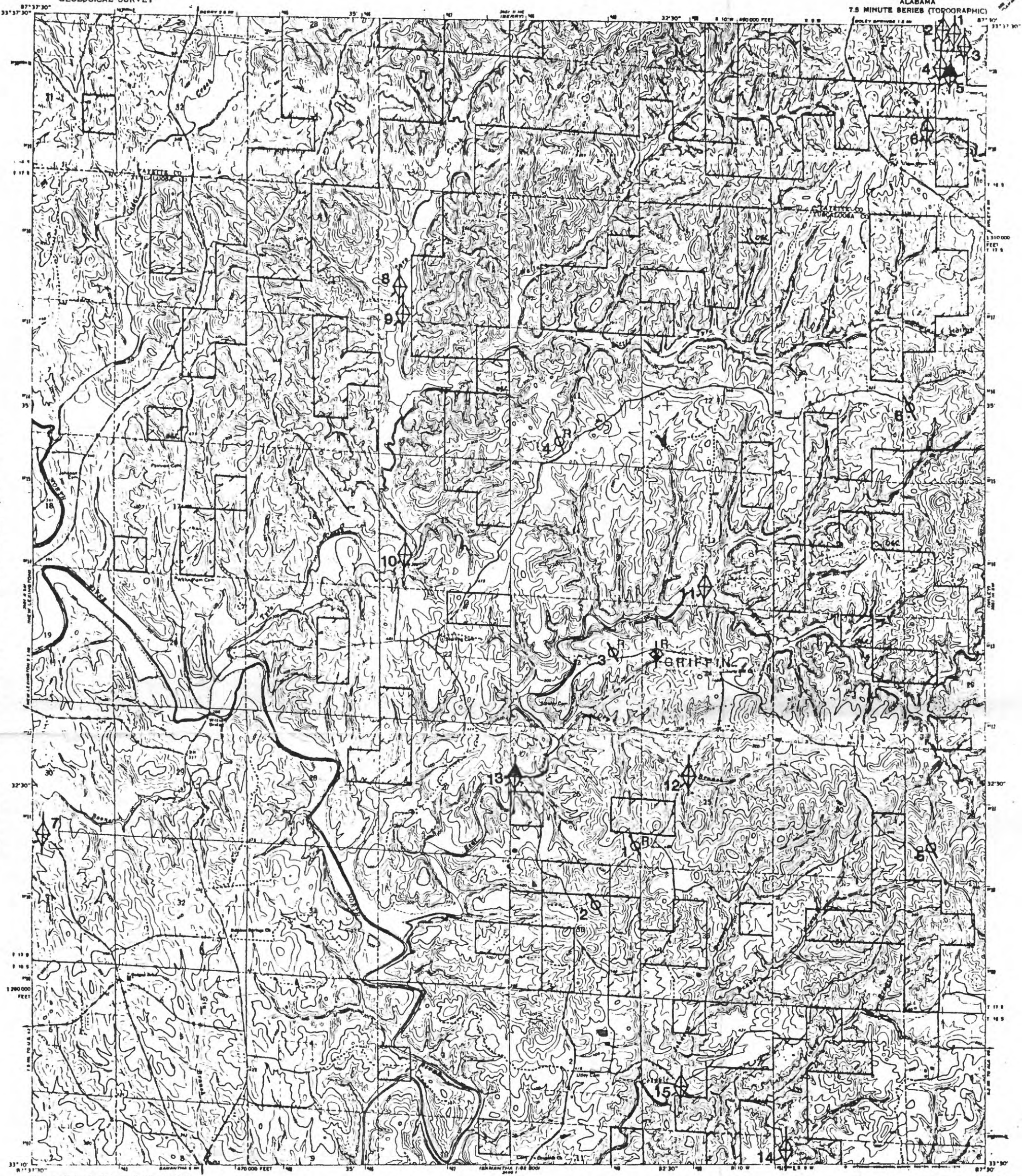
## BERRY SE QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 2 TEST WELL 6 (333144087330401) -----						
	Depth of well (201 feet)					
	pH (standard units)	2	7.50	.	7.40	7.60
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	160.50	41.72	131.00	190.00
	Specific conductance (uS/cm)	2	335.00	49.50	300.00	370.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	110.00	14.14	100.00	120.00
	Solids, dissolved (tons per acre-ft)	2	0.26	0.03	0.24	0.28
	Sulfate dissolved (mg/L)	2	22.00	1.41	21.00	23.00
	Iron, total recoverable (ug/L)	1	110000.00	.	110000.00	110000.00
	Iron, dissolved (ug/L)	2	80.00	84.85	20.00	140.00
	Manganese, total recoverable (ug/L)	1	2000.00	.	2000.00	2000.00
	Manganese, dissolved (ug/L)	2	43.00	4.24	40.00	46.00
NO. 3 TEST WELL 7 DOLLAR WELL (333322087335701) -----						
	Depth of well (150 feet)					
	pH (standard units)	2	7.35	.	7.20	7.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	180.00	0.00	180.00	180.00
	Specific conductance (uS/cm)	2	395.00	0.00	395.00	395.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	125.00	21.21	110.00	140.00
	Solids, dissolved (tons per acre-ft)	2	0.33	0.00	0.33	0.33
	Sulfate dissolved (mg/L)	1	27.00	.	27.00	27.00
	Iron, total recoverable (ug/L)	1	1100.00	.	1100.00	1100.00
	Iron, dissolved (ug/L)	2	21.00	1.41	20.00	22.00
	Manganese, total recoverable (ug/L)	1	30.00	.	30.00	30.00
	Manganese, dissolved (ug/L)	2	19.00	1.41	18.00	20.00
NO. 4 TEST WELL 8 MILLER WELL (333451087331501) -----						
	Depth of well (150 feet)					
	pH (standard units)	3	7.60	.	7.10	8.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	208.33	10.41	200.00	220.00
	Specific conductance (uS/cm)	3	437.00	10.15	428.00	448.00
	Hardness (mg/L as CaCO <sub>3</sub> )	3	156.67	5.77	150.00	160.00
	Solids, dissolved (tons per acre-ft)	3	0.34	0.01	0.33	0.34
	Sulfate dissolved (mg/L)	3	21.00	2.65	19.00	24.00
	Iron, total recoverable (ug/L)	2	9100.00	8343.86	3200.00	15000.00
	Iron, dissolved (ug/L)	3	9.00	3.61	5.00	12.00
	Manganese, total recoverable (ug/L)	2	730.00	141.42	630.00	830.00
	Manganese, dissolved (ug/L)	3	40.00	30.41	20.00	75.00

## BERRY SE QUADRANGLE--Continued

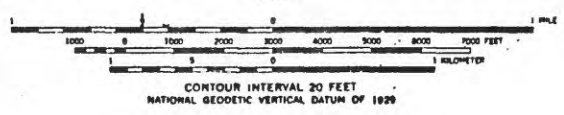
SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 5 TEST WELL 12 (333206087302801)						
	Depth of well (267.5 feet)					
	pH (standard units)	2	6.85	.	6.80	6.90
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	112.50	3.54	110.00	115.00
	Specific conductance (uS/cm)	2	240.50	0.71	240.00	241.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	99.00	0.00	99.00	99.00
	Solids, dissolved (tons per acre-ft)	2	0.21	0.01	0.20	0.21
	Sulfate dissolved (mg/L)	2	7.25	0.78	6.70	7.80
	Iron, total recoverable (ug/L)	1	41000.00	.	41000.00	41000.00
	Iron, dissolved (ug/L)	2	70.50	55.86	31.00	110.00
	Manganese, total recoverable (ug/L)	1	1500.00	.	1500.00	1500.00
	Manganese, dissolved (ug/L)	2	175.00	77.78	120.00	230.00
NO. 6 TEST WELL 13 (333500087303601)						
	Depth of well (166 feet)					
	pH (standard units)	3	6.83	.	6.30	7.10
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	174.00	5.29	170.00	180.00
	Specific conductance (uS/cm)	3	386.67	20.82	370.00	410.00
	Hardness (mg/L as CaCO <sub>3</sub> )	3	180.00	10.00	170.00	190.00
	Solids, dissolved (tons per acre-ft)	3	0.30	0.02	0.28	0.32
	Sulfate dissolved (mg/L)	3	27.00	8.54	18.00	35.00
	Iron, total recoverable (ug/L)	1	3700.00	.	3700.00	3700.00
	Iron, dissolved (ug/L)	3	164.00	142.08	42.00	320.00
	Manganese, total recoverable (ug/L)	1	70.00	.	70.00	70.00
	Manganese, dissolved (ug/L)	3	34.00	22.54	20.00	60.00





Mapped, edited and published by the Geological Survey  
Control by USGS and USC&GS  
Topography by photogrammetric methods from aerial  
photographs taken 1966. Field checked 1967  
Projection: 1927 North American datum  
10,000 foot grid based on Alabama coordinate system, west zone  
1000 meter Universal Transverse Mercator grid ticks,  
zone 16 shown in blue  
Fine red dashed lines indicate selected fence and field lines where  
generally visible on aerial photographs. This information is unchecked

UTM grid and 1983 magnetic north  
declination at center of sheet



ROAD CLASSIFICATION  
Medium-duty .....  
Light-duty .....  
Unimproved dirt .....



177-A BERRY SE, ALA.  
N3330-W8730/7.5

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
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1967  
AMS 3401 II SE-BERRY 7504

Figure 7.--Data sites for the Berry SE quadrangle.

Table 9.--Summary of selected water-quality data

## NEW LEXINGTON QUADRANGLE

## SURFACE WATER SITES

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 1 TRIBUTARY TO FREEMAN CREEK NEAR NEW LEXINGTON 02463835						
	Drainage Area (0.44 mi <sup>2</sup> )	4	0.40	0.41	0.09	1.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	4	3.98	.	3.70	4.50
	pH (standard units)	4	0.75	0.50	0.00	1.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	4	441.00	86.45	339.00	520.00
	Specific conductance (uS/cm)	4	160.00	36.51	120.00	200.00
	Hardness (mg/L as CaCO <sub>3</sub> )	4	0.35	0.07	0.28	0.43
	Solids, dissolved (tons per acre-ft)	3	162.33	176.64	23.00	361.00
	Sediment, suspended (mg/L)	4	190.00	36.51	150.00	230.00
	Sulfate dissolved (mg/L)	4	7670.00	8584.77	980.00	20000.00
	Iron, total recoverable (ug/L)	4	3010.00	3385.49	530.00	7800.00
	Iron, dissolved (ug/L)	4	9700.00	4402.27	3700.00	13000.00
	Manganese, total recoverable (ug/L)	3	5903.33	7250.59	10.00	14000.00
	Manganese, dissolved (ug/L)					
NO. 2 BARBEE CREEK NEAR NEW LEXINGTON 02464313						
	Drainage Area (unknown)	6	1.26	0.39	0.83	2.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	5	6.08	.	5.60	6.90
	pH (standard units)	4	6.50	1.00	5.00	7.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	5	84.00	120.20	29.00	299.00
	Specific conductance (uS/cm)	5	7.60	0.89	7.00	9.00
	Hardness (mg/L as CaCO <sub>3</sub> )	5	0.03	0.01	0.03	0.04
	Solids, dissolved (tons per acre-ft)	5	43.40	28.17	21.00	92.00
	Sediment, suspended (mg/L)	5	1.74	0.69	0.90	2.60
	Sulfate dissolved (mg/L)	4	1080.00	161.04	950.00	1300.00
	Iron, total recoverable (ug/L)	5	156.00	95.29	40.00	250.00
	Iron, dissolved (ug/L)	3	250.00	45.83	200.00	290.00
	Manganese, total recoverable (ug/L)	5	270.00	54.31	180.00	310.00
	Manganese, dissolved (ug/L)					

Table 9.--Summary of selected water-quality data--Continued

## NEX LEXINGTON QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 3 BARBEE CREEK NEAR SAMANTHA 02464317	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	48	33.86	91.40	0.99	375.00
	pH (standard units)	46	6.92	.	5.40	8.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	39	45.46	23.62	6.00	82.00
	Specific conductance (uS/cm)	46	235.22	99.79	25.00	425.00
	Hardness (mg/L as CaCO <sub>3</sub> )	14	108.93	63.13	17.00	200.00
	Solids, dissolved (tons per acre-ft)	14	0.20	0.11	0.04	0.34
	Sediment, suspended (mg/L)	37	553.97	740.13	6.00	1980.00
	Sulfate dissolved (mg/L)	25	61.34	30.59	7.60	130.00
	Iron, total recoverable (ug/L)	13	4068.46	7344.74	420.00	22000.00
	Iron, dissolved (ug/L)	14	83.71	45.06	10.00	180.00
	Manganese, total recoverable (ug/L)	12	519.17	296.75	250.00	1200.00
	Manganese, dissolved (ug/L)	14	374.29	168.28	70.00	700.00



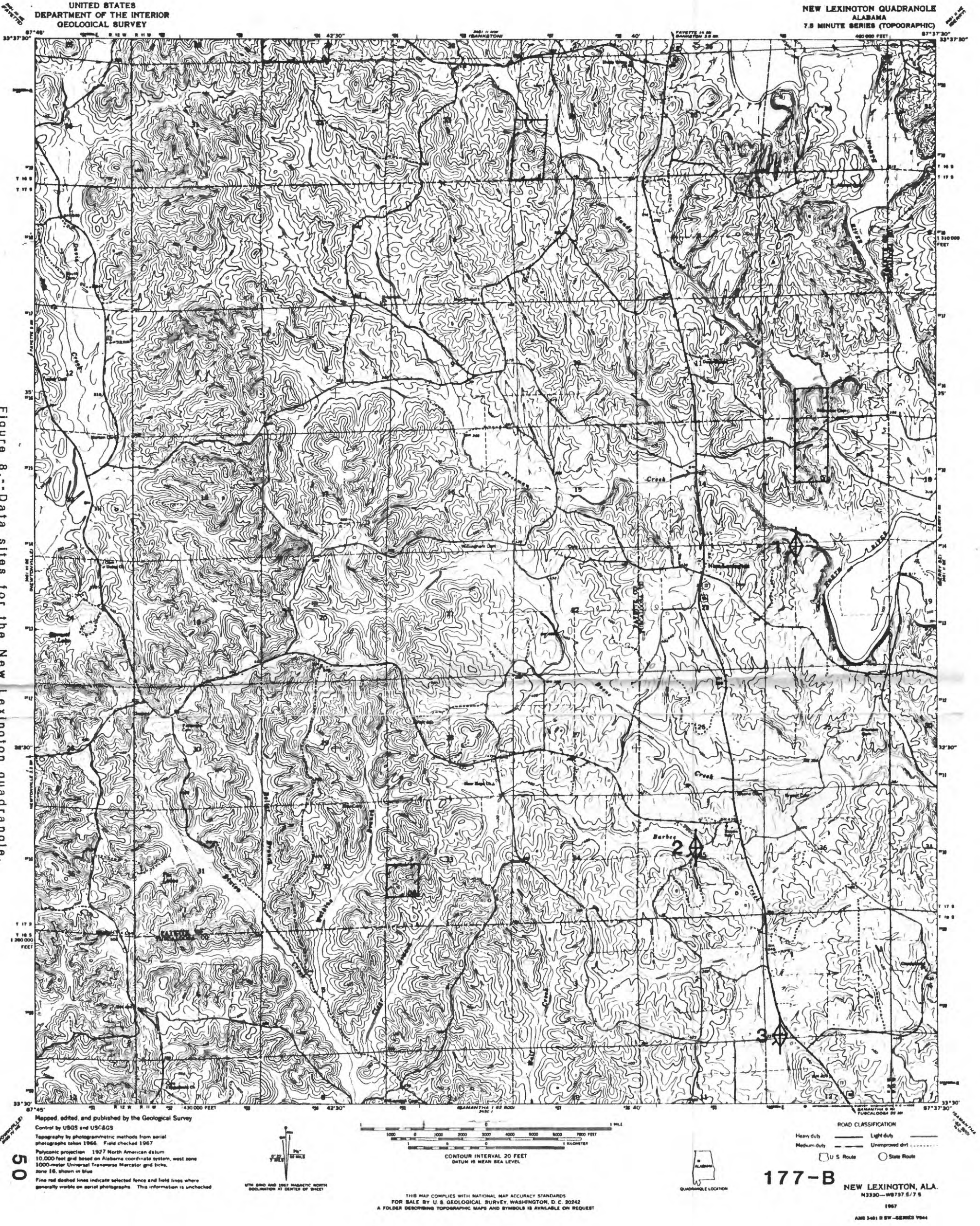


Table 10.--Summary of selected water-quality data

## BERRY QUADRANGLE

SURFACE WATER SITES					
SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE      MAXIMUM VALUE
NO. 1 TRIBUTARY TO LITTLE YELLOW CREEK SITE G NEAR BOLEY SPRINGS 0246248110					
	Drainage Area (unknown)				
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	0.37	0.43	0.06      0.67
	pH (standard units)	2	5.35	.	5.10      5.60
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	3.50	2.12	2.00      5.00
	Specific conductance (uS/cm)	2	14.00	2.83	12.00      16.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	3.00	0.00	3.00      3.00
	Solids, dissolved (tons per acre-ft)	2	0.02	0.00	0.02      0.02
	Sediment, suspended (mg/L)	0	.	.	.
	Sulfate dissolved (mg/L)	2	2.50	2.12	1.00      4.00
	Iron, total recoverable (ug/L)	2	425.00	233.35	260.00      590.00
	Iron, dissolved (ug/L)	2	81.50	16.26	70.00      93.00
	Manganese, total recoverable (ug/L)	2	65.00	35.36	40.00      90.00
	Manganese, dissolved (ug/L)	2	62.50	31.82	40.00      85.00
NO. 2 TRIBUTARY TO LITTLE YELLOW CREEK SITE F NEAR BOLEY SPRINGS 0246248120					
	Drainage Area (unknown)				
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	0.48	0.57	0.08      0.88
	pH (standard units)	2	5.45	.	4.80      6.10
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	2.00	1.41	1.00      3.00
	Specific conductance (uS/cm)	2	14.00	1.41	13.00      15.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	3.00	0.00	3.00      3.00
	Solids, dissolved (tons per acre-ft)	2	0.02	0.00	0.02      0.02
	Sediment, suspended (mg/L)	0	.	.	.
	Sulfate dissolved (mg/L)	2	2.90	1.27	2.00      3.80
	Iron, total recoverable (ug/L)	2	320.00	141.42	220.00      420.00
	Iron, dissolved (ug/L)	2	87.00	18.38	74.00      100.00
	Manganese, total recoverable (ug/L)	2	40.00	0.00	40.00      40.00
	Manganese, dissolved (ug/L)	2	35.50	0.71	35.00      36.00

Table 10.--Summary of selected water-quality data--Continued

## BERRY QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 3 TRIBUTARY TO LITTLE YELLOW CREEK SITE E NEAR BOLEY SPRINGS 0246248140						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	4	0.43	0.50	0.04	1.10
	pH (standard units)	4	5.35	.	4.70	6.10
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	4	2.50	1.29	1.00	4.00
	Specific conductance (uS/cm)	4	17.00	0.82	16.00	18.00
	Hardness (mg/L as CaCO <sub>3</sub> )	4	3.25	0.50	3.00	4.00
	Solids, dissolved (tons per acre-ft)	4	0.02	0.00	0.02	0.02
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	4	3.20	0.24	3.00	3.50
	Iron, total recoverable (ug/L)	4	297.50	187.86	140.00	530.00
	Iron, dissolved (ug/L)	4	75.25	69.88	37.00	180.00
	Manganese, total recoverable (ug/L)	4	22.50	5.00	20.00	30.00
	Manganese, dissolved (ug/L)	4	21.75	3.30	18.00	25.00
NO. 4 UNNAMED TRIBUTARY TO CANE CREEK NEAR PEA RIDGE 02463580						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	7	4.42	8.71	0.04	24.00
	pH (standard units)	7	7.17	.	6.50	7.60
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	7	53.00	22.05	16.00	90.00
	Specific conductance (uS/cm)	7	602.14	130.11	403.00	800.00
	Hardness (mg/L as CaCO <sub>3</sub> )	7	290.00	84.26	170.00	430.00
	Solids, dissolved (tons per acre-ft)	7	0.54	0.13	0.36	0.73
	Sediment, suspended (mg/L)	7	35.14	50.65	2.00	148.00
	Sulfate dissolved (mg/L)	7	247.14	61.30	160.00	330.00
	Iron, total recoverable (ug/L)	6	1151.67	1348.00	230.00	3800.00
	Iron, dissolved (ug/L)	6	62.17	94.36	3.00	250.00
	Manganese, total recoverable (ug/L)	6	761.67	594.99	150.00	1500.00
	Manganese, dissolved (ug/L)	6	485.67	573.75	34.00	1500.00



Table 10.--Summary of selected water-quality data--Continued

## BERRY QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 5 CANE CREEK NEAR BERRY	02463585					
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	26	14.67	38.16	0.04	195.00
	pH (standard units)	27	6.75	.	6.00	7.60
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	26	24.91	11.87	7.00	53.00
	Specific conductance (uS/cm)	27	480.67	160.49	140.00	870.00
	Hardness (mg/L as CaCO <sub>3</sub> )	16	233.94	94.76	53.00	380.00
	Solids, dissolved (tons per acre-ft)	16	0.50	0.21	0.12	0.91
	Sediment, suspended (mg/L)	5	176.00	305.66	1.00	710.00
	Sulfate dissolved (mg/L)	16	211.94	95.82	51.00	400.00
	Iron, total recoverable (ug/L)	16	568.75	820.06	70.00	3000.00
	Iron, dissolved (ug/L)	15	34.07	21.54	10.00	78.00
	Manganese, total recoverable (ug/L)	13	406.15	409.73	50.00	1500.00
	Manganese, dissolved (ug/L)	16	462.88	426.04	46.00	1500.00

## WELLS

NO. 1 TEST WELL 19 (334151087362001)	Depth of well (unknown)					
	pH (standard units)	1	6.60	.	6.60	6.60
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	148.00	.	148.00	148.00
	Specific conductance (uS/cm)	1	330.00	.	330.00	330.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	150.00	.	150.00	150.00
	Solids, dissolved (tons per acre-ft)	1	0.27	.	0.27	0.27
	Sulfate dissolved (mg/L)	1	18.00	.	18.00	18.00
	Iron, total recoverable (ug/L)	0	.	.	.	.
	Iron, dissolved (ug/L)	1	10.00	.	10.00	10.00
	Manganese, total recoverable (ug/L)	0	.	.	.	.
	Manganese, dissolved (ug/L)	1	60.00	.	60.00	60.00

Table 10.--Summary of selected water-quality data--Continued

## BERRY QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 2 TEST WELL 20 (334131087344201)						
	Depth of well (208 feet)					
	pH (standard units)	2	6.00	.	5.60	6.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	31.00	7.07	26.00	36.00
	Specific conductance (uS/cm)	2	81.00	22.63	65.00	97.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	22.50	9.19	16.00	29.00
	Solids, dissolved (tons per acre-ft)	2	0.11	0.04	0.08	0.13
	Sulfate dissolved (mg/L)	1	2.90	.	2.90	2.90
	Iron, total recoverable (ug/L)	1	510000.00	.	510000.00	510000.00
	Iron, dissolved (ug/L)	2	100.00	42.43	70.00	130.00
	Manganese, total recoverable (ug/L)	1	8600.00	.	8600.00	8600.00
	Manganese, dissolved (ug/L)	2	370.00	353.55	120.00	620.00
NO. 3 TEST WELL 21 (334315087320001)						
	Depth of well (206 feet)					
	pH (standard units)	2	6.85	.	6.50	7.20
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	194.50	78.49	139.00	250.00
	Specific conductance (uS/cm)	2	457.50	123.74	370.00	545.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	200.00	70.71	150.00	250.00
	Solids, dissolved (tons per acre-ft)	2	0.39	0.10	0.32	0.46
	Sulfate dissolved (mg/L)	2	50.00	15.56	39.00	61.00
	Iron, total recoverable (ug/L)	1	17000.00	.	17000.00	17000.00
	Iron, dissolved (ug/L)	2	21.50	2.12	20.00	23.00
	Manganese, total recoverable (ug/L)	1	1400.00	.	1400.00	1400.00
	Manganese, dissolved (ug/L)	2	180.00	141.42	80.00	280.00





DIFF. 640 AND 1967 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

ROAD CLASSIFICATION

Medium duty \_\_\_\_\_ Light duty \_\_\_\_\_

Unimproved dirt .....

○ State Route

ALABAMA

BIRMINGHAM LOCATION

177-C BERRY, ALA

1967  
AND 1968 II ME - SERIES YMA

Table 11.--Summary of selected water-quality data

## ARKADELPHIA QUADRANGLE

SURFACE WATER SITES						
SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 1 DORSEY CREEK BELOW ARKADELPHIA 02450215						
	Drainage Area (26 mi <sup>2</sup> )	39	146.04	356.72	0.17	1750.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	40	7.08	.	5.40	7.90
	pH (standard units)	31	26.72	22.24	5.00	90.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	42	218.24	162.24	35.00	580.00
	Specific conductance (uS/cm)	13	99.77	88.52	11.00	250.00
	Hardness (mg/L as CaCO <sub>3</sub> )	14	0.21	0.16	0.03	0.51
	Solids, dissolved (tons per acre-ft)	8	135.25	265.08	6.00	766.00
	Sediment, suspended (mg/L)	38	66.66	54.23	8.20	190.00
	Sulfate dissolved (mg/L)	12	4149.17	5665.42	230.00	19000.00
	Iron, total recoverable (ug/L)	13	86.15	91.88	10.00	370.00
	Iron, dissolved (ug/L)	12	235.83	165.55	40.00	620.00
	Manganese, total recoverable (ug/L)	13	120.00	81.75	40.00	350.00
	Manganese, dissolved (ug/L)					



Figure 10.--Data sites for the Arkadelphia quadrangle.



Table 12.--Summary of selected water-quality data

## COLD SPRINGS QUADRANGLE

SURFACE WATER SITES						
SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 1 DORSEY CREEK NEAR ARKADELPHIA 02450200						
	Drainage Area (13 mi <sup>2</sup> )	13	9.29	12.20	0.03	42.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	25	6.94	.	5.90	8.00
	pH (standard units)	7	11.50	2.50	7.00	15.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	61	73.31	124.04	28.00	980.00
	Specific conductance (uS/cm)	15	19.80	15.92	10.00	76.00
	Hardness (mg/L as CaCO <sub>3</sub> )	3	0.13	0.13	0.05	0.28
	Solids, dissolved (tons per acre-ft)	11	6.64	2.80	1.00	10.00
	Sediment, suspended (mg/L)	12	24.95	31.04	7.70	120.00
	Sulfate dissolved (mg/L)	3	383.33	89.63	280.00	440.00
	Iron, total recoverable (ug/L)	3	53.33	40.41	10.00	90.00
	Iron, dissolved (ug/L)	2	85.00	21.21	70.00	100.00
	Manganese, total recoverable (ug/L)	3	106.67	47.26	70.00	160.00
	Manganese, dissolved (ug/L)					



Figure 11.--Data sites for the Cold Springs quadrangle.



Maped, edited and published by the Geological Survey  
Control by USGS and USC&GS  
Topography from aerial photographs by multistep methods  
Aerial photographs taken 1946 Field check 1949  
Polyconic projection 1927 North American datum  
10,000 foot grid based on Alabama coordinate system,  
zone 18  
1000 meter Universal Transverse Mercator grid ticks,  
zone 18 shown in blue



CONTOUR INTERVAL 20 FEET  
NATIONAL GEODETTIC VERTICAL DATUM OF 1929

THIS MAP COMPLETS WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON/VIRGINIA 22082  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION  
HARD SURFACE ALL WEATHER ROADS BOY WEATHER ROADS  
Heavy duty ————— Improved dirt  
Medium duty ————— Unimproved dirt  
Loose surface graded, or narrow hard surface  
□ U. S. Route ○ State Route

188-C COLD SPRINGS, ALA.  
H3152 5-78700/75  
1949  
AMS 301: 1 ME - SERIES 7844

Table 13.--Summary of selected water-quality data

## HOWARD QUADRANGLE

## SURFACE WATER SITES

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 1 BOXES CREEK SITE F NEAR HOWARD 0244532645						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	0.77	1.06	0.03	1.52
	pH (standard units)	2	6.25	.	6.20	6.30
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	12.50	7.78	7.00	18.00
	Specific conductance (uS/cm)	2	52.50	23.33	36.00	69.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	15.50	7.78	10.00	21.00
	Solids, dissolved (tons per acre-ft)	2	0.05	0.01	0.04	0.06
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	2	8.15	1.63	7.00	9.30
	Iron, total recoverable (ug/L)	2	380.00	28.28	360.00	400.00
	Iron, dissolved (ug/L)	2	71.50	40.31	43.00	100.00
	Manganese, total recoverable (ug/L)	2	25.00	7.07	20.00	30.00
	Manganese, dissolved (ug/L)	2	23.00	4.24	20.00	26.00
NO. 2 BOXES CREEK SITE E-1 NEAR HOWARD 0244532650						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	0.40	0.53	0.02	0.78
	pH (standard units)	2	7.45	.	7.40	7.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	255.00	120.21	170.00	340.00
	Specific conductance (uS/cm)	2	1186.00	415.78	892.00	1480.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	615.00	190.92	480.00	750.00
	Solids, dissolved (tons per acre-ft)	2	1.07	0.33	0.83	1.30
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	2	410.00	113.14	330.00	490.00
	Iron, total recoverable (ug/L)	2	930.00	28.28	910.00	950.00
	Iron, dissolved (ug/L)	2	137.00	145.66	34.00	240.00
	Manganese, total recoverable (ug/L)	2	5650.00	5161.88	2000.00	9300.00
	Manganese, dissolved (ug/L)	2	5650.00	5020.46	2100.00	9200.00

Table 13.--Summary of selected water-quality data--Continued

## HOWARD QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 3 BOXES CREEK SITE E NEAR HOWARD 0244532655						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	0.46	0.62	0.03	0.90
	pH (standard units)	2	7.45	.	7.40	7.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	39.50	43.13	9.00	70.00
	Specific conductance (uS/cm)	2	502.50	144.96	400.00	605.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	245.00	77.78	190.00	300.00
	Solids, dissolved (tons per acre-ft)	2	0.40	0.08	0.34	0.45
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	2	170.00	56.57	130.00	210.00
	Iron, total recoverable (ug/L)	2	680.00	0.00	680.00	680.00
	Iron, dissolved (ug/L)	2	64.00	79.20	8.00	120.00
	Manganese, total recoverable (ug/L)	2	615.00	318.20	390.00	840.00
	Manganese, dissolved (ug/L)	2	485.00	205.06	340.00	630.00
NO. 4 BOXES CREEK SITE D NEAR HOWARD 0244532660						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	0.20	.	0.20	0.20
	pH (standard units)	1	6.40	.	6.40	6.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	10.00	.	10.00	10.00
	Specific conductance (uS/cm)	1	100.00	.	100.00	100.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	36.00	.	36.00	36.00
	Solids, dissolved (tons per acre-ft)	1	0.08	.	0.08	0.08
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	1	31.00	.	31.00	31.00
	Iron, total recoverable (ug/L)	1	400.00	.	400.00	400.00
	Iron, dissolved (ug/L)	1	260.00	.	260.00	260.00
	Manganese, total recoverable (ug/L)	1	140.00	.	140.00	140.00
	Manganese, dissolved (ug/L)	1	120.00	.	120.00	120.00

Table 13.--Summary of selected water-quality data--Continued

## HOWARD QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 5 BOXES CREEK SITE C-3 NEAR HOWARD 0244532665						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	0.51	.	0.51	0.51
	pH (standard units)	1	6.00	.	6.00	6.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	3.00	.	3.00	3.00
	Specific conductance (uS/cm)	1	24.00	.	24.00	24.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	5.00	.	5.00	5.00
	Solids, dissolved (tons per acre-ft)	1	0.03	.	0.03	0.03
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	1	7.00	.	7.00	7.00
	Iron, total recoverable (ug/L)	1	360.00	.	360.00	360.00
	Iron, dissolved (ug/L)	1	30.00	.	30.00	30.00
	Manganese, total recoverable (ug/L)	1	20.00	.	20.00	20.00
	Manganese, dissolved (ug/L)	1	5.00	.	5.00	5.00
NO. 6 BOXES CREEK SITE C-2 NEAR HOWARD 0244532670						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	0.62	0.86	0.01	1.23
	pH (standard units)	2	7.25	.	7.20	7.30
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	132.00	138.59	34.00	230.00
	Specific conductance (uS/cm)	2	715.00	770.75	170.00	1260.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	360.50	409.41	71.00	650.00
	Solids, dissolved (tons per acre-ft)	2	0.67	0.75	0.14	1.20
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	2	267.00	315.37	44.00	490.00
	Iron, total recoverable (ug/L)	2	2750.00	1767.77	1500.00	4000.00
	Iron, dissolved (ug/L)	2	28.00	35.36	3.00	53.00
	Manganese, total recoverable (ug/L)	2	1895.00	2411.23	190.00	3600.00
	Manganese, dissolved (ug/L)	2	1700.00	2262.74	100.00	3300.00



Table 13.--Summary of selected water-quality data--Continued

## HOWARD QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 7 BOXES CREEK SITE C-1 NEAR HOWARD 0244532672						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	3	0.50	0.80	0.02	1.43
	pH (standard units)	3	6.77	.	6.10	7.50
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	66.00	14.73	50.00	79.00
	Specific conductance (uS/cm)	3	546.67	265.02	250.00	760.00
	Hardness (mg/L as CaCO <sub>3</sub> )	3	246.67	123.42	110.00	350.00
	Solids, dissolved (tons per acre-ft)	3	0.46	0.23	0.21	0.65
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	3	200.67	116.80	72.00	300.00
	Iron, total recoverable (ug/L)	3	893.33	353.46	660.00	1300.00
	Iron, dissolved (ug/L)	3	420.33	589.93	41.00	1100.00
	Manganese, total recoverable (ug/L)	3	2326.67	2786.42	280.00	5500.00
	Manganese, dissolved (ug/L)	3	2420.00	3042.89	260.00	5900.00
NO. 8 BOXES CREEK SITE C NEAR HOWARD 0244532675						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	2.31	3.17	0.06	4.55
	pH (standard units)	2	7.00	.	6.70	7.30
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	62.50	9.19	56.00	69.00
	Specific conductance (uS/cm)	2	489.50	198.70	349.00	630.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	215.00	91.92	150.00	280.00
	Solids, dissolved (tons per acre-ft)	2	0.40	0.18	0.27	0.52
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	2	165.00	91.92	100.00	230.00
	Iron, total recoverable (ug/L)	2	575.00	205.06	430.00	720.00
	Iron, dissolved (ug/L)	2	40.00	1.41	39.00	41.00
	Manganese, total recoverable (ug/L)	2	830.00	523.26	460.00	1200.00
	Manganese, dissolved (ug/L)	2	770.00	466.69	440.00	1100.00

Table 13.--Summary of selected water-quality data--Continued

## HOWARD QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 9 BOXES CREEK SITE B-2 NEAR HOWARD 0244532680						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	0.52	.	0.52	0.52
	pH (standard units)	1	6.30	.	6.30	6.30
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	3.00	.	3.00	3.00
	Specific conductance (uS/cm)	1	23.00	.	23.00	23.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	7.00	.	7.00	7.00
	Solids, dissolved (tons per acre-ft)	1	0.03	.	0.03	0.03
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	1	7.00	.	7.00	7.00
	Iron, total recoverable (ug/L)	1	200.00	.	200.00	200.00
	Iron, dissolved (ug/L)	1	51.00	.	51.00	51.00
	Manganese, total recoverable (ug/L)	1	10.00	.	10.00	10.00
	Manganese, dissolved (ug/L)	1	10.00	.	10.00	10.00
NO. 10 BOXES CREEK SITE B-3 NEAR HOWARD 0244532682						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	1.05	.	1.05	1.05
	pH (standard units)	1	7.20	.	7.20	7.20
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	72.00	.	72.00	72.00
	Specific conductance (uS/cm)	1	284.00	.	284.00	284.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	130.00	.	130.00	130.00
	Solids, dissolved (tons per acre-ft)	1	0.24	.	0.24	0.24
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	1	65.00	.	65.00	65.00
	Iron, total recoverable (ug/L)	1	560.00	.	560.00	560.00
	Iron, dissolved (ug/L)	1	260.00	.	260.00	260.00
	Manganese, total recoverable (ug/L)	1	820.00	.	820.00	820.00
	Manganese, dissolved (ug/L)	1	790.00	.	790.00	790.00

Table 13.--Summary of selected water-quality data--Continued

## HOWARD QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 11 BOXES CREEK SITE B-1 NEAR HOWARD 0244532685						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	0.78	1.05	0.04	1.52
	pH (standard units)	2	6.75	.	6.10	7.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	70.50	16.26	59.00	82.00
	Specific conductance (uS/cm)	2	429.50	27.58	410.00	449.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	200.00	14.14	190.00	210.00
	Solids, dissolved (tons per acre-ft)	2	0.35	0.02	0.33	0.36
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	2	135.00	21.21	120.00	150.00
	Iron, total recoverable (ug/L)	2	1050.00	70.71	1000.00	1100.00
	Iron, dissolved (ug/L)	2	118.50	44.55	87.00	150.00
	Manganese, total recoverable (ug/L)	2	2250.00	1626.35	1100.00	3400.00
	Manganese, dissolved (ug/L)	2	2025.00	1520.28	950.00	3100.00
NO. 12 BOXES CREEK SITE B NEAR HOWARD 0244532687						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	3.66	4.98	0.14	7.18
	pH (standard units)	2	7.10	.	6.80	7.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	57.00	0.00	57.00	57.00
	Specific conductance (uS/cm)	2	420.00	127.28	330.00	510.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	200.00	70.71	150.00	250.00
	Solids, dissolved (tons per acre-ft)	2	0.36	0.13	0.27	0.45
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	2	150.00	70.71	100.00	200.00
	Iron, total recoverable (ug/L)	2	445.00	77.78	390.00	500.00
	Iron, dissolved (ug/L)	2	58.50	41.72	29.00	88.00
	Manganese, total recoverable (ug/L)	2	465.00	63.64	420.00	510.00
	Manganese, dissolved (ug/L)	2	430.00	141.42	330.00	530.00

Table 13.--Summary of selected water-quality data--Continued

## HOWARD QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 13 BOXES CREEK SITE A NEAR HOWARD 0244532690						
	Drainage Area (unknown)					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	2	0.20	0.26	0.01	0.38
	pH (standard units)	2	6.25	.	6.10	6.40
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	2	18.00	11.31	10.00	26.00
	Specific conductance (uS/cm)	2	63.50	14.85	53.00	74.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	20.00	5.66	16.00	24.00
	Solids, dissolved (tons per acre-ft)	2	0.05	0.00	0.05	0.05
	Sediment, suspended (mg/L)	0	.	.	.	.
	Sulfate dissolved (mg/L)	2	6.50	4.95	3.00	10.00
	Iron, total recoverable (ug/L)	2	1225.00	813.17	650.00	1800.00
	Iron, dissolved (ug/L)	2	171.50	125.16	83.00	260.00
	Manganese, total recoverable (ug/L)	2	720.00	820.24	140.00	1300.00
	Manganese, dissolved (ug/L)	2	230.00	183.85	100.00	360.00
NO. 14 BOXES CREEK AT COUNTY HIGHWAY 63 NEAR HOWARD 02445327						
	Drainage Area (1.52 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	37	6.67	20.59	0.06	113.00
	pH (standard units)	39	7.39	.	6.50	8.30
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	32	77.50	31.23	18.00	148.00
	Specific conductance (uS/cm)	39	493.36	139.11	216.00	750.00
	Hardness (mg/L as CaCO <sub>3</sub> )	15	235.87	84.15	88.00	370.00
	Solids, dissolved (tons per acre-ft)	19	0.45	0.14	0.18	0.71
	Sediment, suspended (mg/L)	16	11.87	14.68	3.00	65.00
	Sulfate dissolved (mg/L)	25	155.28	58.08	57.00	290.00
	Iron, total recoverable (ug/L)	17	753.53	1314.19	210.00	5800.00
	Iron, dissolved (ug/L)	16	42.81	30.87	10.00	120.00
	Manganese, total recoverable (ug/L)	17	417.65	348.26	80.00	1600.00
	Manganese, dissolved (ug/L)	17	301.18	140.22	60.00	540.00

Table 13.--Summary of selected water-quality data--Continued

## HOWARD QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 15 BOXES CREEK NEAR HOWARD 02445330 -----						
	Drainage Area (7.43 mi <sup>2</sup> )	3	49.42	85.38	0.02	148.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	3	7.37	.	6.90	7.70
	pH (standard units)	3	68.33	71.50	17.00	150.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	3	474.00	387.74	217.00	920.00
	Specific conductance (uS/cm)	2	290.00	240.42	120.00	460.00
	Hardness (mg/L as CaCO <sub>3</sub> )	2	0.56	0.42	0.26	0.85
	Solids, dissolved (tons per acre-ft)	3	15.67	13.61	5.00	31.00
	Sediment, suspended (mg/L)	3	177.33	160.16	61.00	360.00
	Sulfate dissolved (mg/L)	2	830.00	947.52	160.00	1500.00
	Iron, total recoverable (ug/L)	2	60.00	70.71	10.00	110.00
	Iron, dissolved (ug/L)	2	115.00	49.50	80.00	150.00
	Manganese, total recoverable (ug/L)	2	70.00	56.57	30.00	110.00
	Manganese, dissolved (ug/L)					
NO. 16 WOLF CREEK NEAR HOWARD 02454140 -----						
	Drainage Area (2.83 mi <sup>2</sup> )	13	13.83	33.89	0.04	124.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	13	6.15	.	5.20	6.90
	pH (standard units)	12	7.42	3.80	3.00	18.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	13	43.08	8.23	30.00	57.00
	Specific conductance (uS/cm)	10	11.60	3.78	6.00	18.00
	Hardness (mg/L as CaCO <sub>3</sub> )	9	0.06	0.01	0.04	0.08
	Solids, dissolved (tons per acre-ft)	2	14.00	11.31	6.00	22.00
	Sediment, suspended (mg/L)	10	8.56	1.98	5.00	11.00
	Sulfate dissolved (mg/L)	10	795.00	546.04	240.00	2100.00
	Iron, total recoverable (ug/L)	10	89.00	37.71	26.00	160.00
	Iron, dissolved (ug/L)	10	30.00	23.09	10.00	90.00
	Manganese, total recoverable (ug/L)	10	18.60	12.18	10.00	49.00
	Manganese, dissolved (ug/L)					

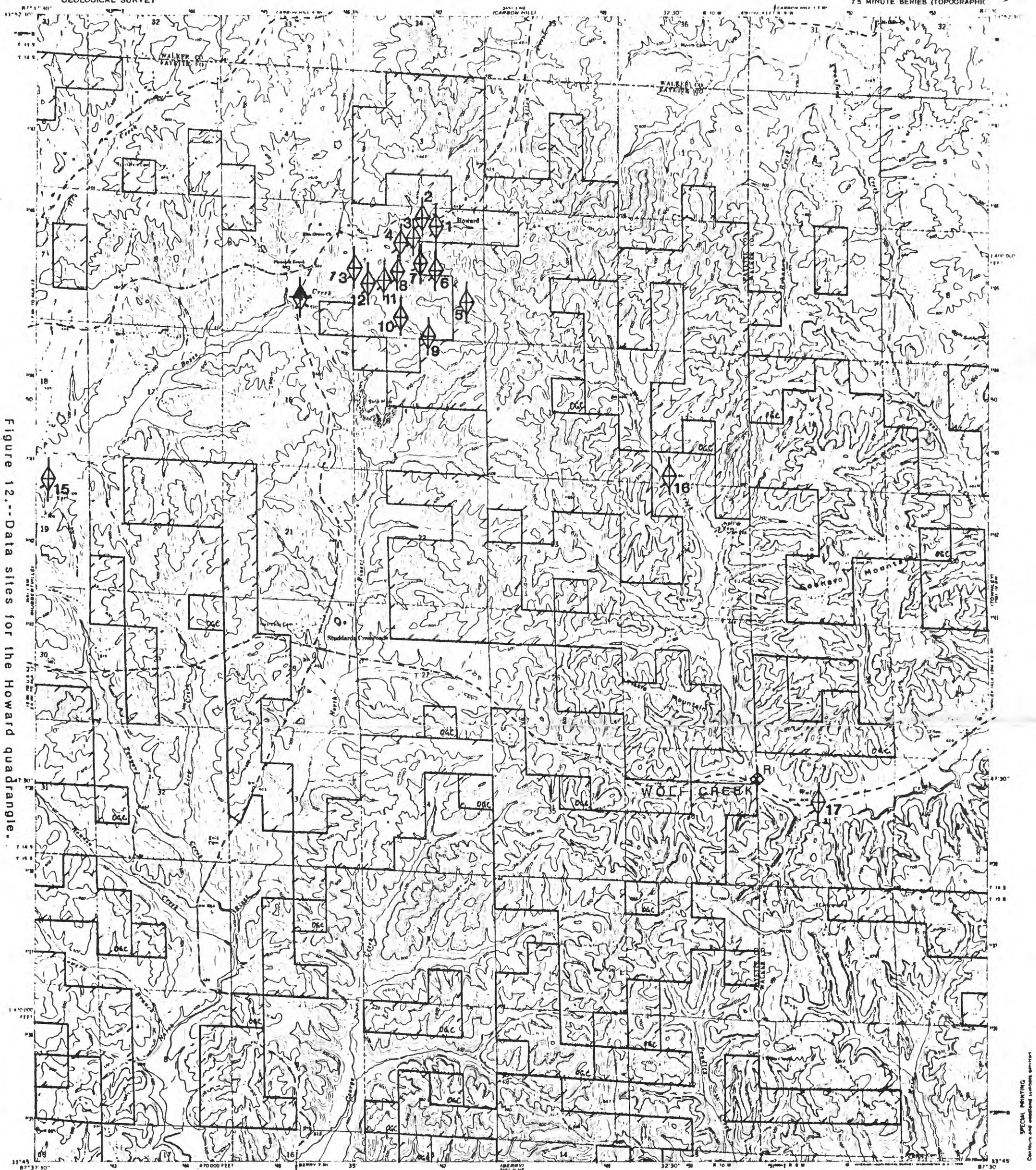
Table 13.--Summary of selected water-quality data--Continued

## HOWARD QUADRANGLE--Continued

SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
NO. 17 WOLF CREEK AT ALABAMA HIGHWAY 102 NEAR TOWNLEY 02454155						
	Drainage Area (9.93 mi <sup>2</sup> )					
	Streamflow, instantaneous (ft <sup>3</sup> /s)	1	3.30	.	3.30	3.30
	pH (standard units)	1	6.70	.	6.70	6.70
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	1	13.00	.	13.00	13.00
	Specific conductance (uS/cm)	1	41.00	.	41.00	41.00
	Hardness (mg/L as CaCO <sub>3</sub> )	1	12.00	.	12.00	12.00
	Solids, dissolved (tons per acre-ft)	1	0.04	.	0.04	0.04
	Sediment, suspended (mg/L)	1	32.00	.	32.00	32.00
	Sulfate dissolved (mg/L)	1	6.30	.	6.30	6.30
	Iron, total recoverable (ug/L)	1	1700.00	.	1700.00	1700.00
	Iron, dissolved (ug/L)	1	110.00	.	110.00	110.00
	Manganese, total recoverable (ug/L)	1	60.00	.	60.00	60.00
	Manganese, dissolved (ug/L)	1	40.00	.	40.00	40.00



Figure 12.-Data sites for the Howard quadrangle.



Maped, edited, and published by the Geological Survey  
Control by USGS and USC&GS  
Topography by photogrammetric methods from aerial  
photographs taken 1966. Field checked 1967  
Polyconic projection. 1927 North American datum.  
10,000 foot grid based on Alabama coordinate system, west zone.  
1000' major Universal Transverse Mercator grid ticks,  
zone 18, shown in blue.  
Fine red dashed lines indicate selected fence and field lines where  
generally visible on aerial photography. This information is uncheckd.

UTM GRID AND 1983 MAGNETIC NORTH  
DECLINATION AT CENTER OF SHEET

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000  
1 KILOMETER  
CONTOUR INTERVAL 20 FEET  
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20242  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ALABAMA  
QUADRANGLE LOCATION

ROAD CLASSIFICATION  
Medium duty ——— Light duty ———  
Unimproved dirt ———  
State Route —○—

190-A HOWARD, ALA.  
N3345-W8730-7.5

1967  
AMS 545-1 SE-SERIES 7544

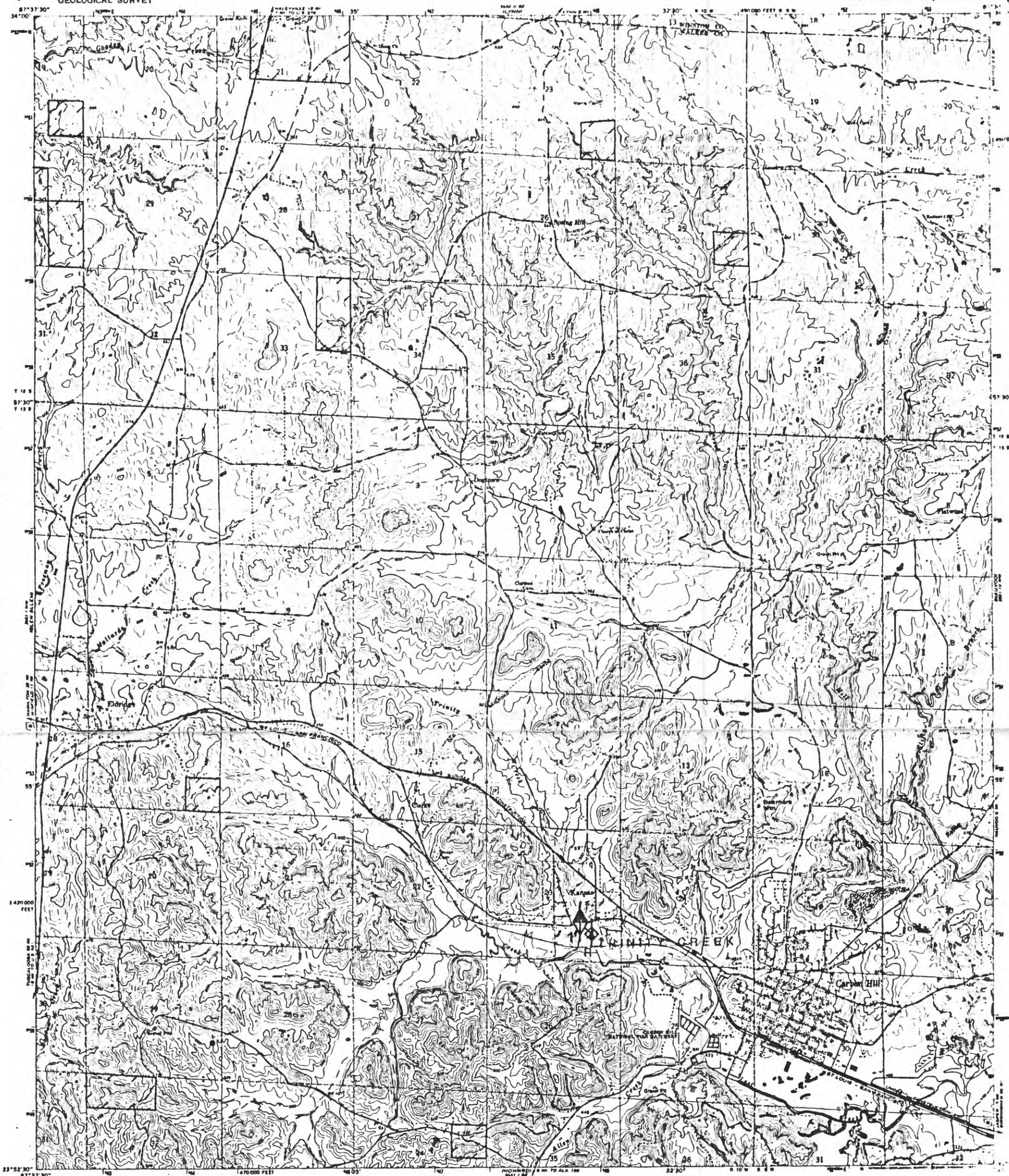
Table 14.--Summary of selected water-quality data

## CARBON HILL QUADRANGLE

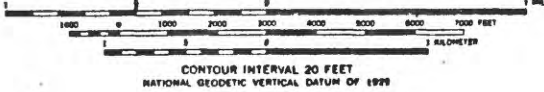
SURFACE WATER SITES					
SITE NUMBER AND NAME	PARAMETER	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE      MAXIMUM VALUE
NO. 1 TRINITY CREEK NEAR CARBON HILL 02453835 -----					
	Drainage Area (2.68 mi <sup>2</sup> )	39	24.26	94.97	0.02      574.00
	Streamflow, instantaneous (ft <sup>3</sup> /s)	39	7.34	.	6.60      8.20
	pH (standard units)	32	68.03	55.45	2.00      189.00
	Alkalinity, field (mg/L as CaCO <sub>3</sub> )	38	564.47	355.26	81.00      1720.00
	Specific conductance (uS/cm)	11	191.00	185.71	0.00      530.00
	Hardness (mg/L as CaCO <sub>3</sub> )	11	0.41	0.31	0.06      0.94
	Solids, dissolved (tons per acre-ft)	50	271.64	547.98	7.00      2543.00
	Sediment, suspended (mg/L)	33	191.21	153.09	20.00      770.00
	Sulfate dissolved (mg/L)	11	9048.18	16041.11	280.00      53000.00
	Iron, total recoverable (ug/L)	9	137.67	204.59	10.00      650.00
	Iron, dissolved (ug/L)	11	400.00	468.08	70.00      1500.00
	Manganese, total recoverable (ug/L)	11	143.91	78.21	60.00      310.00
	Manganese, dissolved (ug/L)				



Figure 13.--Data sites for the Carbon Hill quadrangle.



Mapped, edited, and published by the Geological Survey  
Control by USGS and USC&GS  
Topography by photogrammetric methods from aerial  
photographs taken 1966. Field checked 1967  
Polyconic projection 1927 North American datum  
10 000 foot grid based on Alabama coordinate system, west zone  
1000-meter Universal Transverse Mercator grid ticks,  
zone 18. Spheroid of Bessel  
Fine red dashed lines indicate selected fence and field lines where  
generally visible on aerial photographs. This information is unchecked



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ROAD CLASSIFICATION  
Heavy-duty ——— Light-duty ———  
Medium-duty ——— Unimproved dirt ———  
U.S. Route ——— State Route ———

190-C CARBON HILL, ALA.  
H3152 S-W8730

1967  
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