# U.S. ENVIRONMENTAL PROTECTION AGENCY
# NATIONAL EUTROPHICATION SURVEY

**WORKING PAPER SERIES**

REPORT

ON

LAKE GREENWOOD

GREENWOOD, LAURENS, AND NEWBERRY COUNTIES

SOUTH CAROLINA

EPA REGION IV

WORKING PAPER No. 431

**CORVALLIS ENVIRONMENTAL RESEARCH LABORATORY - CORVALLIS, OREGON**

**and**

**ENVIRONMENTAL MONITORING & SUPPORT LABORATORY - LAS VEGAS, NEVADA**

☆GPO—697-032

# REPORT
# ON
# LAKE GREENWOOD
# GREENWOOD, LAURENS, AND NEWBERRY COUNTIES
# SOUTH CAROLINA
# EPA REGION IV
# WORKING PAPER NO. 431

WITH THE COOPERATION OF THE
SOUTH CAROLINA DEPARTMENT OF HEALTH AND
ENVIRONMENTAL CONTROL
AND THE
SOUTH CAROLINA NATIONAL GUARD

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# F O R E W O R D

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs.

## OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point-source discharge reduction and non-point source pollution abatement in lake watersheds.

## ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

## LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's freshwater lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by EPA and to augment plans implementation by the states.

ACKNOWLEDGMENT

The staff of the National Eutrophication Survey (Office of Research & Development, U. S. Environmental Protection Agency) expresses sincere appreciation to the South Carolina Department of Health and Environmental Control for professional involvement, to the South Carolina National Guard for conducting the tributary sampling phase of the Survey, and to those South Carolina wastewater treatment plant operators who voluntarily provided effluent samples and flow data.

The staff of the South Carolina Bureau of Wastewater and Stream Quality Control provided invaluable lake documentation and counsel during the Survey, reviewed the preliminary reports, and provided critiques most useful in the preparation of this Working Paper series.

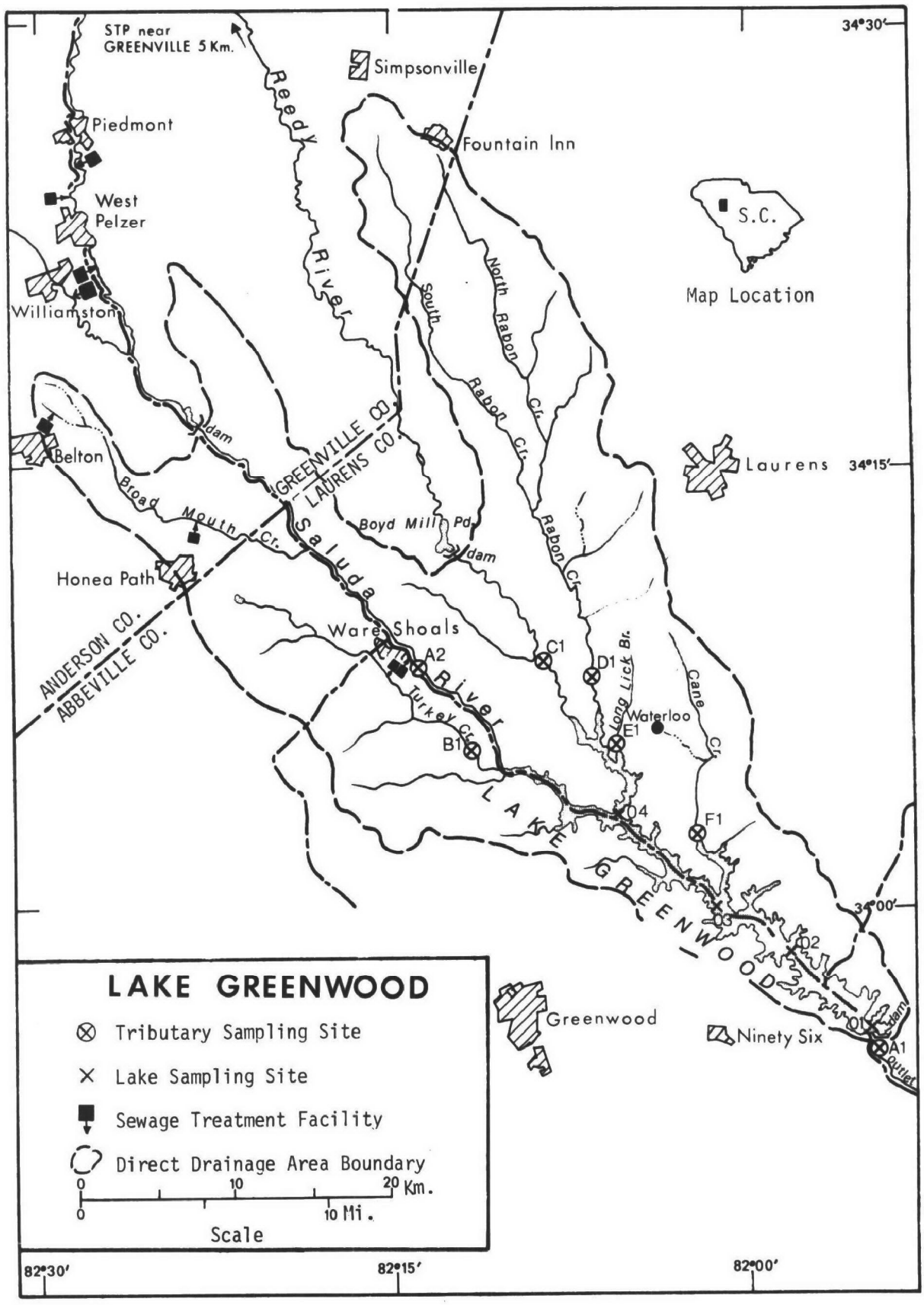
Major General Robert L. McCrady, the Adjutant General of South Carolina, and Project Officer Lt. Colonel John P. DuPre (Retired), who directed the volunteer efforts of the South Carolina National Guardsmen, are also gratefully acknowledged for their assistance to the Survey.

# NATIONAL EUTROPHICATION SURVEY

## STUDY LAKES

## STATE OF SOUTH CAROLINA

| NAME | COUNTY |
|---|---|
| Clark Hill | Abbeville, McCormick, SC; Columbia, Elbert, Lincoln, McDuffie, Wilks, GA |
| Fishing Creek | Chester, Lancaster |
| Greenwood | Greenwood, Laurens, Newberry |
| Hartwell | Anderson, Oconee, Pickens, SC; Franklin, Hart, Stephens, GA |
| Keowee | Oconee, Pickens |
| Marion | Berkeley, Calhoun, Claredon, Orangeburg, Sumter |
| Moultrie | Berkeley |
| Murray | Lexington, Newberry, Richland, Saluda |
| Robinson | Chesterfield, Darlington |
| Saluda | Greenville, Pickens |
| Secession | Abbeville, Anderson |
| Wateree | Fairfield, Kershaw, Lancaster |
| William C. Bowen | Spartanburg |
| Wylie | York, SC; Gaston, Mecklenburg, NC |


STP near GREENVILLE 5 Km.
Simpsonville
Piedmont
Fountain Inn
West Pelzer
Williamston
Reedy River
South Rabon Cr.
North Rabon Cr.
Rabon Cr.
S.C.
Map Location
Belton
Dam
GREENVILLE CO.
LAURENS CO.
Laurens
34°15'
Broad Mouth Cr.
Saluda River
Boyd Mill Pd.
Dam
Honea Path
ANDERSON CO.
ABBEVILLE CO.
Ware Shoals
A2
C1
D1
Long Lick Br.
Cane Cr.
Waterloo
E1
Turkey Cr.
B1
LAKE GREENWOOD
D4
F1
34°00'
D3
D2
Greenwood
Ninety Six
D1
Dam
A1
Outlet
LAKE GREENWOOD
Tributary Sampling Site
Lake Sampling Site
Sewage Treatment Facility
Direct Drainage Area Boundary
0 10 20 Km.
0 10 Mi.
Scale
82°30'
82°15'
82°00'

LAKE GREENWOOD

STORET NO. 4504

# I. CONCLUSIONS

## A. Trophic Condition:

Survey data show that Lake Greenwood is eutrophic. It ranked twelfth in overall trophic quality when the 13 South Carolina lakes sampled in 1973 were compared using a combination of six parameters*. Ten of the lakes had less median total phosphorus, nine had less and one had the same median dissolved phosphorus, 11 had less median inorganic nitrogen, seven had less mean chlorophyll a, and seven had greater mean Secchi disc transparency. Marked depression or depletion of dissolved oxygen with depth occurred at all four sampling stations in July and September.

Survey limnologists did not observe surface concentrations of algae or aquatic macrophytes at any of the three sampling times.

## B. Rate-Limiting Nutrient:

There was a significant loss of nutrients in the assay sample between the time of collection and the beginning of the assay, and the results are not representative of conditions in the lake at the time the sample was taken (03/28/74). However, the lake data indicate phosphorus limitation at all sampling times.

## C. Nutrient Controllability:

1. Point sources--The phosphorus contributions of the point sources considered in this report amounted to an estimated 86.2%

* See Appendix A.

of the total load reaching Lake Greenwood during the sampling year. The Greenville plant contributed over 76% of the load, and the remaining 12 plants collectively contributed 9.8%.

There are at least 69 generally small domestic and industrial point sources in the drainage that were not sampled during the year (see pages 10-11). Therefore, it is likely that the actual point-source contributions were greater than indicated above, although the phosphorus export rates of the sampled tributaries indicate the phosphorus contributions of these sources probably were relatively small (see below).

The phosphorus loading of 8.69 $g/m^2$ measured during the sampling year is almost eight times that proposed by Vollenweider (Vollenweider and Dillon, 1974) as a eutrophic loading (see page 14). While even complete removal of phosphorus at the point sources considered in this report would still leave a loading of 1.19 $g/m^2/yr$, it is likely that a high degree of phosphorus removal at the significant point sources would result in an improvement in the trophic condition of Greenwood Lake and benefit downstream Lake Murray* as well.

On the basis of nutrient retention in Lake Greenwood during the sampling year (77.3% P and 38.5% N), it is calculated that the point sources impacting this lake indirectly contributed 78,285 kg P and 577,830 kg N to downstream Lake Murray.

* Working Paper No. 436.

2. Non-point sources--The estimated phosphorus contributions of non-point sources accounted for 13.8% of the total load reaching the lake during the sampling year. The Saluda River contributed 5.3%, Reedy River contributed an estimated 3.9%, and the remaining four tributaries collectively contributed 2.7% of the total load. Minor tributaries and immediate drainage contributed an estimated 1.7% of the total.

With the exception of Cane Creek, the phosphorus export rates of the tributaries were relatively low (page 14) and compare fairly well with the export rates of tributaries sampled elsewhere in South Carolina; e.g., the mean of the rates of Lake Keowee* tributaries was 17 $kg/km^2/yr$ (range of 15 to 19 $kg/km^2/yr$).

As far as is known, none of the unsampled point sources noted above discharge to Cane Creek, and the higher export rate of this stream probably is due to land-use practices, although septic tanks at Waterloo may contribute to the stream load (see map, page v).

* Working Paper No. 433.

## II. LAKE AND DRAINAGE BASIN CHARACTERISTICS†

### A. Lake Morphometry††:

1. Surface area: 46.14 kilometers$^2$.
2. Mean depth: 6.8 meters.
3. Maximum depth: 21.0 meters.
4. Volume: 315.403 x $10^6$ $m^3$.
5. Mean hydraulic retention time: 74 days.

### B. Tributary and Outlet:
(See Appendix C for flow data)

1. Tributaries -

| Name | Drainage area ($km^2$)* | Mean flow ($m^3$/sec)* |
|---|---|---|
| Saluda River | 1,471.1 | 28.04 |
| Turkey Creek | 117.8 | 1.67 |
| Reedy River | 655.3 | 9.97 |
| Rabon Creek | 326.3 | 4.63 |
| Long Lick Branch | 20.3 | 0.29 |
| Cane Creek | 60.3 | 0.86 |
| Minor tributaries & immediate drainage - | 281.2 | 4.00 |
| Totals | 2,932.3 | 49.46 |

2. Outlet -

| | | |
|---|---|---|
| Saluda River | 2,978.4** | 49.46** |

### C. Precipitation***:

1. Year of sampling: 139.5 centimeters.
2. Mean annual: 116.8 centimeters.

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† Table of metric conversions--Appendix B.
†† Mast, 1974; King, 1974.
* For limits of accuracy, see Working Paper No. 175, "...Survey Methods, 1973-1976".
** Includes area of lake; outflow adjusted to equal sum of inflows.
*** See Working Paper No. 175.

## III. LAKE WATER QUALITY SUMMARY

Lake Greenwood was sampled three times during the open-water season of 1973 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from a number of depths at four stations on the lake (see map, page v). During each visit, a single depth-integrated (4.6 m to surface) sample was composited from the stations for phytoplankton identification and enumeration; and during the first visit, a single 18.9-liter depth-integrated sample was composited for algal assays. Also each time, a depth-integrated sample was collected from each of the stations for chlorophyll *a* analysis. The maximum depths sampled were 17.1 meters at station 1, 13.7 meters at station 2, 7.3 meters at station 3, and 5.8 meters at station 4.

The sampling results are presented in full in Appendix D and are summarized in the following table.

A. SUMMARY OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR LAKE GREENWOOD
STORET CODE 4504

| PARAMETER | 1ST SAMPLING ( 3/28/73) 4 SITES RANGE | MEAN | MEDIAN | 2ND SAMPLING ( 7/ 9/73) 4 SITES RANGE | MEAN | MEDIAN | 3RD SAMPLING ( 9/18/73) 4 SITES RANGE | MEAN | MEDIAN |
|---|---|---|---|---|---|---|---|---|---|
| TEMP (C) | 14.0 - 15.8 | 15.0 | 15.2 | 13.9 - 32.7 | 26.6 | 28.4 | 17.8 - 28.7 | 25.0 | 24.9 |
| DISS OXY (MG/L) | 7.5 - 9.3 | 8.4 | 8.5 | 0.5 - 9.5 | 4.2 | 2.8 | 0.0 - 6.6 | 3.0 | 3.4 |
| CNDCTVY (MCROMO) | 50. - 70. | 54. | 55. | 50. - 120. | 66. | 60. | 39. - 124. | 72. | 75. |
| PH (STAND UNITS) | 7.5 - 8.1 | 7.7 | 7.7 | 6.2 - 8.9 | 7.4 | 6.8 | 6.4 - 7.4 | 6.7 | 6.7 |
| TOT ALK (MG/L) | 10. - 15. | 12. | 12. | 16. - 42. | 24. | 21. | 10. - 34. | 20. | 22. |
| TOT P (MG/L) | 0.061 - 0.155 | 0.091 | 0.087 | 0.018 - 0.126 | 0.044 | 0.031 | 0.019 - 0.264 | 0.092 | 0.045 |
| ORTHO P (MG/L) | 0.011 - 0.034 | 0.019 | 0.019 | 0.003 - 0.035 | 0.009 | 0.006 | 0.005 - 0.046 | 0.017 | 0.011 |
| NO2+NO3 (MG/L) | 0.320 - 0.690 | 0.397 | 0.380 | 0.050 - 0.430 | 0.157 | 0.095 | 0.030 - 0.420 | 0.133 | 0.045 |
| AMMONIA (MG/L) | 0.030 - 0.110 | 0.085 | 0.090 | 0.060 - 0.580 | 0.213 | 0.090 | 0.040 - 1.860 | 0.381 | 0.195 |
| KJEL N (MG/L) | 0.200 - 0.500 | 0.327 | 0.300 | 0.320 - 1.300 | 0.640 | 0.600 | 0.200 - 2.500 | 0.911 | 0.800 |
| INORG N (MG/L) | 0.360 - 0.780 | 0.482 | 0.470 | 0.110 - 0.960 | 0.371 | 0.305 | 0.070 - 1.900 | 0.513 | 0.425 |
| TOTAL N (MG/L) | 0.540 - 1.090 | 0.724 | 0.700 | 0.410 - 1.680 | 0.797 | 0.750 | 0.230 - 2.540 | 1.044 | 1.040 |
| CHLRPYL A (UG/L) | 4.1 - 7.2 | 5.7 | 5.8 | 4.9 - 13.9 | 10.5 | 11.5 | 1.7 - 12.3 | 8.2 | 9.5 |
| SECCHI (METERS) | 0.3 - 0.8 | 0.5 | 0.5 | 0.9 - 1.8 | 1.4 | 1.5 | 0.1 - 1.1 | 0.8 | 1.0 |

B. Biological Characteristics:

1. Phytoplankton -

| Sampling Date | Dominant Genera | Algal Units per ml |
|---|---|---|
| 03/28/73 | 1. Cryptomonas sp. | 273 |
| | 2. Centric diatoms | 182 |
| | 3. Melosira sp. | 137 |
| | 4. Oscillatoria sp. | 68 |
| | 5. Mallomonas sp. | 46 |
| | Other genera | 205 |
| | Total | 911 |
| 07/09/73 | 1. Lyngbya sp. | 2,456 |
| | 2. Cyclotella sp. | 665 |
| | 3. Nitzschia sp. | 462 |
| | 4. Flagellates | 433 |
| | 5. Raphidiopsis sp. | 433 |
| | Other genera | 2,429 |
| | Total | 6,878 |
| 09/18/73 | 1. Raphidiopsis sp. | 9,263 |
| | 2. Dactylococcopsis sp. | 1,693 |
| | 3. Oscillatoria sp. | 796 |
| | 4. Anabaenopsis sp. | 697 |
| | 5. Lyngbya sp. | 399 |
| | Other genera | 1,594 |
| | Total | 14,442 |

2. Chlorophyll a -

| Sampling Date | Station Number | Chlorophyll a (µg/l) |
|---|---|---|
| 03/28/73 | 1 | 5.2 |
| | 2 | 7.2 |
| | 3 | 6.4 |
| | 4 | 4.1 |

| Sampling Date | Station Number | Chlorophyll a (µg/l) |
|---|---|---|
| 07/09/73 | 1 | 9.2 |
| | 2 | 13.9 |
| | 3 | 4.9 |
| | 4 | 13.9 |
| 09/18/73 | 1 | 8.0 |
| | 2 | 11.0 |
| | 3 | 12.3 |
| | 4 | 1.7 |

C. Limiting Nutrient Study:

A 45% loss of phosphorus occurred in the assay sample between the time of collection and the beginning of the assay. Therefore, the results are not representative of conditions in the lake at the time the sample was taken (03/28/73). However, the lake data indicate phosphorus limitation at all sampling times; i.e., the mean inorganic nitrogen/orthophosphorus ratios were 25/1 or greater at all sampling times, and phosphorus limitation would be expected.

## IV. NUTRIENT LOADINGS
(See Appendix E for data)

For the determination of nutrient loadings, the South Carolina National Guard collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page v), except for the high runoff month of January when two samples were collected. Sampling was begun in February, 1973, and was completed in February, 1974.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the South Carolina District Office of the U.S. Geological Survey for the tributary sites nearest the lake.

Except for the Reedy River, nutrient loads for sampled tributaries were determined by using a modification of a U.S. Geological Survey computer program for calculating stream loadings*. Stream loads shown are those measured minus point-source loads, if any.

Nutrient loads for the Reedy River and unsampled "minor tributaries and immediate drainage" ("ZZ" of U.S.G.S.) were estimated using the nutrient loads at stations D-1 and E-1, in $kg/km^2/year$, and multiplying the means by the Reedy River and ZZ areas in $km^2$.

The operators of the Belton, Greenville, Ware Shoals #2, and West Pelzer wastewater treatment plants provided monthly effluent samples and corresponding flow data. The operators of the Honea Path #1 and Ware Shoals #1 plants provided samples but only estimated flows, and the other listed communities did not participate;

* See Working Paper No. 175.

nutrient loads from these sources were estimated at 1.134 kg P and 3.401 kg N/capita/year.

A. Waste Sources*:

1. Known municipal -

| Name | Pop. Served | Treatment | Mean Flow ($m^3$/d) | Receiving Water |
|---|---|---|---|---|
| Belton | 1,200 | stab. pond | 836.5 | Broad Mouth Cr. |
| Easley | | | | |
| Georges Creek | 2,800 | stab. pond | 1,059.8 | Georges Cr./ Saluda R. |
| Glenwood | 2,000 | stab. pond | 757.0 | Br. of Brushy Cr. |
| Brushy Creek | 3,000 | stab. pond | 1,135.5 | Brushy Cr./ Saluda R. |
| Greenville | 115,000 | tr. filter | 98,569.0 | Reedy River |
| Honea Path | | | | |
| #1 | 4,000 | stab. pond | 927.3 | Broad Mouth Cr. |
| #2 | 2,000 | stab. pond | 757.0 | Clatworthy Cr./ Saluda R. |
| Piedmont | 1,405 | act. sludge | 757.0 | Grove Cr./ Saluda R. |
| Ware Shoals | | | | |
| #1 | 1,600 | stab. pond | 832.7 | Turkey Creek |
| #2** | 1,200 | act. sludge | 17,513.2 | Saluda River |
| West Pelzer | 1,000 | act. sludge | 295.2 | Saluda River |
| Williamston | | | | |
| #1 | 1,300 | stab. pond | 283.9 | Saluda River |
| #2 | 2,500 | act. sludge | 1,419.4 | Big Creek |

In addition to the above sources, there are at least two other municipal plants in the Lake Greenwood drainage (i.e., Mauldin and Pelzer; combined PE of about 600), and the Western Carolina Regional Sewer Authority operates 11 mostly small wastewater treatment facilities, including Piedmont. Also, there are at least 27 privately-owned domestic waste treatment plants in the drainage. The significance of these sources is not known, but the nutrient contributions

* Anonymous, 1971; Foley, 1976; survey questionnaires (page 15).
** More than 25% of the waste load is industrial.

of most of them are included in the loads attributed to the sampled tributaries.

2. Known industrial--There are at least 29 industrial waste treatment facilities in the drainage, but the nutrient significance of these sources is not known.

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

| Source | kg P/ yr | % of total |
|---|---|---|
| a. Tributaries (non-point load) - | | |
| Saluda River | 21,205 | 5.3 |
| Turkey Creek | 1,040 | 0.3 |
| Reedy River | 15,725 | 3.9 |
| Rabon Creek | 6,875 | 1.7 |
| Long Lick Branch | 545 | 0.1 |
| Cane Creek | 2,165 | 0.5 |
| b. Minor tributaries & immediate drainage (non-point load) - | 6,750 | 1.7 |
| c. Known municipal STP's - | | |
| Easley | | |
| Georges Creek | 3,175 | 0.8 |
| Glenwood | 2,270 | 0.6 |
| Brushy Creek | 3,400 | 0.8 |
| Greenville | 306,530 | 76.5 |
| Honea Path | | |
| #1 | 4,535 | 1.1 |
| #2 | 2,270 | 0.6 |
| Piedmont | 1,595 | 0.4 |
| Ware Shoals | | |
| #1 | 1,815 | 0.4 |
| #2 | 12,230 | 3.1 |
| West Pelzer | 1,100 | 0.3 |
| Williamston | | |
| #1 | 1,475 | 0.4 |
| #2 | 2,835 | 0.7 |
| d. Septic tanks - Unknown | ? | - |
| e. Industrial - Unknown | ? | - |
| f. Direct precipitation* - | 805 | 0.2 |
| Total | 400,750 | 100.0 |

2. Outputs -

Lake outlet - Saluda River 90,815

3. Net annual P accumulation - 309,935 kg.

* See Working Paper No. 175.

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

| Source | kg N/yr | % of total |
|---|---|---|
| a. Tributaries (non-point load) - | | |
| Saluda River | 978,085 | 41.5 |
| Turkey Creek | 25,600 | 1.1 |
| Reedy River | 165,790 | 7.0 |
| Rabon Creek | 101,970 | 4.3 |
| Long Lick Branch | 3,920 | 0.2 |
| Cane Creek | 18,850 | 0.8 |
| b. Minor tributaries & immediate drainage (non-point load) - | 71,145 | 3.0 |
| c. Known municipal STP's - | | |
| Belton | 6,670 | 0.3 |
| Easley | | |
| Georges Creek | 9,525 | 0.4 |
| Glenwood | 6,800 | 0.3 |
| Brushy Creek | 10,205 | 0.4 |
| Greenville | 815,995 | 34.6 |
| Honea Path | | |
| #1 | 13,605 | 0.6 |
| #2 | 6,800 | 0.3 |
| Piedmont | 4,780 | 0.2 |
| Ware Shoals | | |
| #1 | 5,440 | 0.2 |
| #2 | 45,315 | 1.9 |
| West Pelzer | 2,300 | 0.1 |
| Williamston | | |
| #1 | 4,420 | 0.2 |
| #2 | 8,500 | 0.4 |
| d. Septic tanks - Unknown | ? | - |
| e. Industrial - Unknown | ? | - |
| f. Direct precipitation* - | 49,815 | 2.1 |
| Total | 2,355,530 | 100.0 |

2. Outputs -

Lake outlet - Saluda River 1,448,195

3. Net annual N accumulation - 907,335 kg.

* See Working Paper No. 175.

D. Mean Annual Non-point Nutrient Export by Subdrainage Area:

| Tributary | kg P/km$^2$/yr | kg N/km$^2$/yr |
|---|---|---|
| Saluda River | 14 | 665 |
| Turkey Creek | 9 | 217 |
| Rabon Creek | 21 | 313 |
| Long Lick Branch | 27 | 193 |
| Cane Creek | 36 | 313 |

E. Yearly Loads:

In the following table, the existing phosphorus loadings are compared to those proposed by Vollenweider (Vollenweider and Dillon, 1974). Essentially, his "dangerous" loading is one at which the receiving water would become eutrophic or remain eutrophic; his "permissible" loading is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic loading would be considered one between "dangerous" and "permissible".

Note that Vollenweider's model may not be applicable to water bodies with short hydraulic retention times.

| | Total Phosphorus | | Total Nitrogen | |
|---|---|---|---|---|
| | Total | Accumulated | Total | Accumulated |
| grams/m$^2$/yr | 8.69 | 6.72 | 51.1 | 19.7 |

Vollenweider phosphorus loadings (g/m$^2$/yr) based on mean depth and mean hydraulic retention time of Lake Greenwood:

| | |
|---|---|
| "Dangerous" (eutrophic loading) | 1.12 |
| "Permissible" (oligotrophic loading) | 0.56 |

## V. LITERATURE REVIEWED

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# VI. APPENDICES

## APPENDIX A

## LAKE RANKINGS

LAKE DATA TO BE USED IN RANKINGS

| LAKE CODE | LAKE NAME | MEDIAN TOTAL P | MEDIAN INORG N | 500-MEAN SEC | MEAN CHLORA | 15-MIN DO | MEDIAN DISS ORTHO P |
|---|---|---|---|---|---|---|---|
| 4503 | FISHING CREEK RESERVOIR | 0.143 | 0.535 | 483.000 | 2.811 | 10.200 | 0.051 |
| 4504 | LAKE GREENWOOD | 0.061 | 0.470 | 463.917 | 8.150 | 15.000 | 0.011 |
| 4505 | LAKE HARTWELL | 0.013 | 0.130 | 422.000 | 6.157 | 15.000 | 0.004 |
| 4506 | LAKE MARION | 0.055 | 0.280 | 470.176 | 8.728 | 14.900 | 0.010 |
| 4507 | LAKE MURRAY | 0.024 | 0.260 | 424.905 | 6.478 | 15.000 | 0.007 |
| 4508 | LAKE ROBINSON | 0.014 | 0.260 | 458.778 | 8.611 | 14.000 | 0.005 |
| 4510 | LAKE WATEREE | 0.094 | 0.450 | 475.667 | 8.408 | 14.100 | 0.034 |
| 4511 | LAKE WYLIE | 0.045 | 0.380 | 462.222 | 5.422 | 14.800 | 0.013 |
| 4512 | LAKE MOULTRIE | 0.026 | 0.200 | 455.364 | 8.800 | 11.200 | 0.006 |
| 4513 | LAKE KEOWEE | 0.008 | 0.170 | 371.750 | 2.833 | 15.000 | 0.003 |
| 4514 | LAKE SECESSION | 0.057 | 0.355 | 462.778 | 10.722 | 15.000 | 0.006 |
| 4515 | SALUDA LAKE | 0.046 | 0.230 | 476.833 | 1.517 | 10.800 | 0.006 |
| 4516 | LAKE WILLIAM C. BOWEN | 0.022 | 0.360 | 459.889 | 3.911 | 15.000 | 0.007 |

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

| LAKE CODE | LAKE NAME | MEDIAN TOTAL P | MEDIAN INORG N | 500-MEAN SEC | MEAN CHLORA | 15-MIN DO | MEDIAN DISS ORTHO P | INDEX NO |
|---|---|---|---|---|---|---|---|---|
| 4503 | FISHING CREEK RESERVOIR | 0 ( 0) | 0 ( 0) | 0 ( 0) | 92 ( 11) | 100 ( 12) | 0 ( 0) | 192 |
| 4504 | LAKE GREENWOOD | 17 ( 2) | 8 ( 1) | 33 ( 4) | 42 ( 5) | 21 ( 0) | 25 ( 3) | 146 |
| 4505 | LAKE HARTWELL | 92 ( 11) | 100 ( 12) | 92 ( 11) | 58 ( 7) | 21 ( 0) | 92 ( 11) | 455 |
| 4506 | LAKE MARION | 33 ( 4) | 50 ( 6) | 25 ( 3) | 17 ( 2) | 50 ( 6) | 33 ( 4) | 208 |
| 4507 | LAKE MURRAY | 67 ( 8) | 62 ( 7) | 83 ( 10) | 50 ( 6) | 21 ( 0) | 46 ( 5) | 329 |
| 4508 | LAKE ROBINSON | 83 ( 10) | 62 ( 7) | 67 ( 8) | 25 ( 3) | 75 ( 9) | 83 ( 10) | 395 |
| 4510 | LAKE WATEREE | 8 ( 1) | 17 ( 2) | 17 ( 2) | 33 ( 4) | 67 ( 8) | 8 ( 1) | 150 |
| 4511 | LAKE WYLIE | 50 ( 6) | 25 ( 3) | 50 ( 6) | 67 ( 8) | 58 ( 7) | 17 ( 2) | 267 |
| 4512 | LAKE MOULTRIE | 58 ( 7) | 83 ( 10) | 75 ( 9) | 8 ( 1) | 83 ( 10) | 71 ( 8) | 378 |
| 4513 | LAKE KEOWEE | 100 ( 12) | 92 ( 11) | 100 ( 12) | 83 ( 10) | 21 ( 0) | 100 ( 12) | 496 |
| 4514 | LAKE SECESSION | 25 ( 3) | 42 ( 5) | 42 ( 5) | 0 ( 0) | 21 ( 0) | 58 ( 7) | 188 |
| 4515 | SALUDA LAKE | 42 ( 5) | 75 ( 9) | 8 ( 1) | 100 ( 12) | 92 ( 11) | 71 ( 8) | 388 |
| 4516 | LAKE WILLIAM C. BOWEN | 75 ( 9) | 33 ( 4) | 58 ( 7) | 75 ( 9) | 21 ( 0) | 46 ( 5) | 308 |

LAKES RANKED BY INDEX NOS.

| RANK | LAKE CODE | LAKE NAME | INDEX NO |
|---|---|---|---|
| 1 | 4513 | LAKE KEOWEE | 496 |
| 2 | 4505 | LAKE HARTWELL | 455 |
| 3 | 4508 | LAKE ROBINSON | 395 |
| 4 | 4515 | SALUDA LAKE | 388 |
| 5 | 4512 | LAKE MOULTRIE | 378 |
| 6 | 4507 | LAKE MURRAY | 329 |
| 7 | 4516 | LAKE WILLIAM C. BOWEN | 308 |
| 8 | 4511 | LAKE WYLIE | 267 |
| 9 | 4506 | LAKE MARION | 208 |
| 10 | 4503 | FISHING CREEK RESERVOIR | 192 |
| 11 | 4514 | LAKE SECESSION | 188 |
| 12 | 4510 | LAKE WATEREE | 150 |
| 13 | 4504 | LAKE GREENWOOD | 146 |

# APPENDIX B

# CONVERSION FACTORS

## CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x $8.107 \times 10^{-4}$ = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

# APPENDIX C

# TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR SOUTH CAROLINA 04/27/76

LAKE CODE 4504 LAKE GREENWOOD

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 2978.5

| TRIBUTARY | SUB-DRAINAGE AREA(SQ KM) | NORMALIZED FLOWS(CMS) JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4504A1 | 2978.5 | 60.60 | 66.54 | 78.72 | 69.94 | 50.12 | 41.91 | 36.81 | 36.25 | 33.98 | 36.25 | 38.23 | 45.87 | 49.50 |
| 4504A2 | 1471.1 | 33.13 | 40.21 | 45.31 | 40.78 | 29.17 | 23.33 | 21.97 | 20.44 | 17.75 | 18.32 | 20.30 | 26.65 | 28.04 |
| 4504B1 | 117.8 | 2.38 | 2.94 | 3.71 | 2.41 | 1.42 | 0.96 | 1.13 | 0.88 | 0.74 | 0.76 | 1.25 | 1.59 | 1.67 |
| 4504C1 | 655.3 | 12.63 | 15.72 | 18.32 | 14.53 | 9.06 | 7.31 | 7.08 | 6.88 | 5.72 | 6.23 | 7.28 | 9.26 | 9.97 |
| 4504D1 | 326.3 | 6.57 | 8.13 | 10.25 | 6.68 | 3.91 | 2.66 | 3.34 | 2.49 | 1.84 | 2.01 | 3.45 | 4.39 | 4.63 |
| 4504E1 | 20.3 | 0.40 | 0.51 | 0.62 | 0.42 | 0.25 | 0.17 | 0.20 | 0.17 | 0.11 | 0.14 | 0.23 | 0.28 | 0.29 |
| 4504F1 | 60.3 | 1.22 | 1.50 | 1.90 | 1.25 | 0.71 | 0.48 | 0.57 | 0.45 | 0.37 | 0.40 | 0.65 | 0.82 | 0.86 |
| 4504ZZ | 281.2 | 5.69 | 7.02 | 8.86 | 5.78 | 3.37 | 2.32 | 2.89 | 2.15 | 1.59 | 1.73 | 2.97 | 3.79 | 4.00 |

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 2978.5
SUM OF SUB-DRAINAGE AREAS = 2932.4
TOTAL FLOW IN = 595.24
TOTAL FLOW OUT = 595.22

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|
| 4504A1 | 2 | 73 | 87.782 | 24 | 28.317 | | |
| | 3 | 73 | 99.109 | 21 | 118.931 | | |
| | 4 | 73 | 124.028 | 15 | 116.099 | | |
| | 5 | 73 | 76.455 | 15 | 52.386 | | |
| | 6 | 73 | 87.782 | 17 | 86.366 | | |
| | 7 | 73 | 43.042 | 15 | 11.327 | | |
| | 8 | 73 | 42.475 | 11 | 62.297 | | |
| | 9 | 73 | 79.287 | 17 | 121.762 | | |
| | 10 | 73 | 36.246 | 14 | 15.093 | | |
| | 11 | 73 | 40.493 | 17 | 12.884 | | |
| | 12 | 73 | 48.422 | 20 | 39.077 | | |
| | 1 | 74 | 114.117 | 12 | 132.806 | 26 | 87.782 |
| | 2 | 74 | 93.446 | 12 | 70.792 | | |
| 4504A2 | 2 | 73 | 54.085 | 24 | 30.865 | | |
| | 3 | 73 | 67.394 | 21 | 72.208 | | |
| | 4 | 73 | 74.756 | 15 | 53.236 | | |
| | 5 | 73 | 56.634 | 15 | 45.873 | | |
| | 6 | 73 | 48.988 | 17 | 43.325 | | |
| | 7 | 73 | 30.016 | 15 | 22.653 | | |
| | 8 | 73 | 26.193 | 11 | 22.087 | | |
| | 9 | 73 | 32.848 | 17 | 46.156 | | |
| | 10 | 73 | 18.123 | 14 | 13.167 | | |
| | 11 | 73 | 14.725 | 17 | 12.743 | | |
| | 12 | 73 | 32.848 | 20 | 14.967 | | |
| | 1 | 74 | 58.899 | 12 | 36.246 | 26 | 48.139 |
| | 2 | 74 | 50.976 | 12 | 48.139 | | |

TRIBUTARY FLOW INFORMATION FOR SOUTH CAROLINA 04/27/76

LAKE CODE 4504 LAKE GREENWOOD

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4504B1 | 2 | 73 | 3.398 | 24 | 1.416 | | | | |
| | 3 | 73 | 2.549 | 21 | 1.699 | | | | |
| | 4 | 73 | 3.851 | 15 | 1.416 | | | | |
| | 5 | 73 | 0.991 | 15 | 1.133 | | | | |
| | 6 | 73 | 2.549 | 17 | 1.274 | | | | |
| | 7 | 73 | 0.623 | 15 | 0.850 | | | | |
| | 8 | 73 | 0.765 | 11 | 0.623 | | | | |
| | 9 | 73 | 2.832 | 17 | 1.841 | | | | |
| | 10 | 73 | 0.566 | 14 | 0.425 | | | | |
| | 11 | 73 | 0.510 | 17 | 0.425 | | | | |
| | 12 | 73 | 0.850 | 20 | 1.161 | | | | |
| | 1 | 74 | 2.549 | 12 | 1.926 | 26 | 2.435 | | |
| | 2 | 74 | 3.964 | 12 | 1.218 | | | | |
| 4504C1 | 2 | 73 | 22.087 | 24 | 8.637 | | | | |
| | 3 | 73 | 25.485 | 21 | 21.946 | | | | |
| | 4 | 73 | 27.241 | 15 | 16.707 | | | | |
| | 5 | 73 | 17.698 | 15 | 11.610 | | | | |
| | 6 | 73 | 13.592 | 17 | 10.619 | | | | |
| | 7 | 73 | 8.212 | 15 | 7.504 | | | | |
| | 8 | 73 | 7.221 | 11 | 7.221 | | | | |
| | 9 | 73 | 15.574 | 17 | 19.114 | | | | |
| | 10 | 73 | 6.654 | 14 | 6.513 | | | | |
| | 11 | 73 | 6.513 | 17 | 6.938 | | | | |
| | 12 | 73 | 9.911 | 20 | 7.646 | | | | |
| | 1 | 74 | 22.087 | 12 | 13.026 | 26 | 22.653 | | |
| | 2 | 74 | 18.123 | 12 | 14.158 | | | | |
| 4504D1 | 2 | 73 | 9.486 | 24 | 3.823 | | | | |
| | 3 | 73 | 11.893 | 21 | 4.248 | | | | |
| | 4 | 73 | 10.817 | 15 | 2.124 | | | | |
| | 5 | 73 | 5.663 | 15 | 3.540 | | | | |
| | 6 | 73 | 7.079 | 17 | 3.681 | | | | |
| | 7 | 73 | 2.832 | 15 | 2.549 | | | | |
| | 8 | 73 | 2.549 | 11 | 1.841 | | | | |
| | 9 | 73 | 10.760 | 17 | 5.663 | | | | |
| | 10 | 73 | 2.124 | 14 | 1.218 | | | | |
| | 11 | 73 | 1.416 | 17 | 1.218 | | | | |
| | 12 | 73 | 3.398 | 20 | 3.200 | | | | |
| | 1 | 74 | 7.787 | 12 | 5.239 | 26 | 6.768 | | |
| | 2 | 74 | 11.044 | 12 | 3.398 | | | | |
| 4504E1 | 2 | 73 | 0.566 | 24 | 0.255 | | | | |
| | 3 | 73 | 0.425 | 21 | 0.283 | | | | |
| | 4 | 73 | 0.651 | 15 | 0.227 | | | | |
| | 5 | 73 | 0.170 | 15 | 0.198 | | | | |
| | 6 | 73 | 0.283 | 17 | 0.198 | | | | |
| | 7 | 73 | 0.113 | 15 | 0.142 | | | | |
| | 8 | 73 | 0.142 | 11 | 0.113 | | | | |
| | 9 | 73 | 0.510 | 17 | 0.340 | | | | |
| | 10 | 73 | 0.085 | 14 | 0.085 | | | | |
| | 11 | 73 | 0.085 | 17 | 0.085 | | | | |
| | 12 | 73 | 0.142 | 20 | 0.198 | | | | |
| | 1 | 74 | 0.453 | 12 | 0.340 | 26 | 0.425 | | |
| | 2 | 74 | 0.680 | 12 | 0.198 | | | | |

TRIBUTARY FLOW INFORMATION FOR SOUTH CAROLINA 04/27/76

LAKE CODE 4504 LAKE GREENWOOD

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

| TRIBUTARY | MONTH | YEAR | MEAN FLOW | DAY | FLOW | DAY | FLOW | DAY | FLOW |
|---|---|---|---|---|---|---|---|---|---|
| 4504F1 | 2 | 73 | 1.841 | 24 | 0.736 | | | | |
| | 3 | 73 | 1.274 | 21 | 0.850 | | | | |
| | 4 | 73 | 1.982 | 15 | 0.708 | | | | |
| | 5 | 73 | 0.538 | 15 | 0.623 | | | | |
| | 6 | 73 | 1.133 | 17 | 0.566 | | | | |
| | 7 | 73 | 0.283 | 15 | 0.425 | | | | |
| | 8 | 73 | 0.283 | 11 | 0.340 | | | | |
| | 9 | 73 | 1.557 | 17 | 0.991 | | | | |
| | 10 | 73 | 0.283 | 14 | 0.227 | | | | |
| | 11 | 73 | 0.255 | 17 | 0.227 | | | | |
| | 12 | 73 | 0.425 | 20 | 0.595 | | | | |
| | 1 | 74 | 1.331 | 12 | 0.991 | 26 | 1.246 | | |
| | 2 | 74 | 2.039 | 12 | 0.623 | | | | |
| 4504Z2 | 2 | 73 | 7.929 | 24 | 3.398 | | | | |
| | 3 | 73 | 6.230 | 21 | 3.964 | | | | |
| | 4 | 73 | 9.260 | 15 | 3.115 | | | | |
| | 5 | 73 | 2.407 | 15 | 2.832 | | | | |
| | 6 | 73 | 5.663 | 17 | 3.115 | | | | |
| | 7 | 73 | 1.529 | 15 | 1.982 | | | | |
| | 8 | 73 | 1.841 | 11 | 1.557 | | | | |
| | 9 | 73 | 7.221 | 17 | 4.531 | | | | |
| | 10 | 73 | 1.331 | 14 | 1.048 | | | | |
| | 11 | 73 | 1.274 | 17 | 1.133 | | | | |
| | 12 | 73 | 1.841 | 20 | 2.832 | | | | |
| | 1 | 74 | 6.173 | 12 | 4.644 | 26 | 5.862 | | |
| | 2 | 74 | 9.571 | 12 | 2.945 | | | | |

STORET RETRIEVAL DATE 76/04/27

450401
34 10 60.0 081 54 40.0 3
LAKE GREENWOOD
45081 SOUTH CAROLINA
030892

11EPALES 2111202
0040 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/03/28 | 12 | 15 0000 | 14.9 | | 30 | 58 | 7.70 | 13 | 0.090 | 0.500 | 0.410 | 0.020 |
| | 12 | 15 0004 | 14.9 | 8.6 | | 55 | 7.60 | 14 | 0.080 | 0.200 | 0.390 | 0.019 |
| | 12 | 15 0015 | 14.8 | 7.8 | | 55 | 7.70 | 14 | 0.090 | 0.200 | 0.380 | 0.018 |
| | 12 | 15 0035 | 14.1 | 7.5 | | 55 | 7.60 | 14 | 0.090 | 0.200 | 0.380 | 0.019 |
| 73/07/09 | 16 | 45 0000 | 31.6 | | 72 | 60 | 8.30 | 19 | 0.090 | 0.700 | 0.050 | 0.003 |
| | 16 | 45 0006 | 30.0 | 8.6 | | 72 | 6.50 | 20 | 0.060 | 0.400 | 0.060 | 0.007 |
| | 16 | 45 0015 | 28.8 | 6.8 | | 58 | 6.20 | 19 | 0.090 | 0.400 | 0.430 | 0.006 |
| | 16 | 45 0030 | 19.8 | 0.5 | | 58 | 6.50 | 23 | 0.260 | 0.600 | 0.270 | 0.004 |
| | 16 | 45 0056 | 13.9 | 0.9 | | 50K | 8.20 | 28 | 0.490 | 0.700 | 0.070 | 0.005 |
| 73/09/18 | 12 | 55 0000 | 28.0 | | 43 | 74 | 6.70 | 20 | 0.060 | 0.700 | 0.040 | 0.008 |
| | 12 | 55 0005 | 27.8 | 5.8 | | 73 | 6.70 | 19 | 0.060 | 0.400 | 0.030 | 0.005 |
| | 12 | 55 0015 | 26.1 | 1.6 | | 80 | 6.70 | 22 | 0.250 | 0.600 | 0.090 | 0.008 |
| | 12 | 55 0030 | 24.1 | 0.0 | | 90 | 6.50 | 26 | 0.520 | 0.800 | 0.060 | 0.017 |
| | 12 | 55 0038 | 19.8 | 0.0 | | 85 | 6.50 | 25 | 0.750 | 1.000 | 0.040 | 0.011 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/03/28 | 12 | 15 0000 | 0.066 | 5.2 |
| | 12 | 15 0004 | 0.061 | |
| | 12 | 15 0015 | 0.061 | |
| | 12 | 15 0035 | 0.061 | |
| 73/07/09 | 16 | 45 0000 | 0.018 | 9.2 |
| | 16 | 45 0006 | 0.023 | |
| | 16 | 45 0015 | 0.030 | |
| | 16 | 45 0030 | 0.034 | |
| | 16 | 45 0056 | 0.048 | |
| 73/09/18 | 12 | 55 0000 | 0.020 | 8.0 |
| | 12 | 55 0005 | 0.019 | |
| | 12 | 55 0015 | 0.030 | |
| | 12 | 55 0030 | 0.041 | |
| | 12 | 55 0038 | 0.033 | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

# APPENDIX D

# PHYSICAL and CHEMICAL DATA

STORET RETRIEVAL DATE 76/04/27

450402
34 13 45.0 081 57 50.0 3
LAKE GREENWOOD
45059 SOUTH CAROLINA
030892

11EPALES 2111202
0037 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/03/28 | 12 45 | 0000 | 15.6 | | 16 | 55 | 7.80 | 13 | 0.090 | 0.500 | 0.400 | 0.019 |
| | 12 45 | 0004 | 15.6 | 8.9 | | 55 | 7.70 | 11 | 0.080 | 0.300 | 0.400 | 0.019 |
| | 12 45 | 0015 | 15.2 | 8.4 | | 55 | 7.80 | 12 | 0.090 | 0.300 | 0.400 | 0.020 |
| | 12 45 | 0033 | 14.2 | 8.6 | | 55 | 7.60 | 11 | 0.110 | 0.300 | 0.400 | 0.019 |
| 73/07/09 | 17 15 | 0000 | 32.0 | | 36 | 59 | 8.60 | 18 | 0.070 | 0.500 | 0.060 | 0.004 |
| | 17 15 | 0006 | 30.0 | 9.0 | | 51 | 7.70 | 17 | 0.060 | 0.400 | 0.050 | 0.005 |
| | 17 15 | 0015 | 27.6 | 4.8 | | 60 | 6.80 | 19 | 0.080 | 0.400 | 0.120 | 0.005 |
| | 17 15 | 0025 | 23.0 | 0.6 | | 60 | 6.30 | 20 | 0.170 | 0.400 | 0.320 | 0.006 |
| | 17 15 | 0036 | 17.7 | 1.0 | | 70 | 6.60 | 25 | 0.320 | 0.320 | 0.090 | 0.006 |
| 73/09/18 | 13 15 | 0000 | 28.7 | | 42 | 79 | 6.90 | 22 | 0.040 | 0.500 | 0.030 | 0.010 |
| | 13 15 | 0005 | 28.0 | 6.6 | | 73 | 7.00 | 29 | 0.040 | 0.200K | 0.030 | 0.009 |
| | 13 15 | 0015 | 27.5 | 4.0 | | 75 | 6.90 | 21 | 0.130 | 0.200K | 0.040 | 0.012 |
| | 13 15 | 0025 | 24.5 | 2.2 | | 53 | 6.90 | 11 | 0.220 | 0.800 | 0.260 | 0.022 |
| | 13 15 | 0035 | 21.1 | 0.0 | | 124 | 6.50 | 32 | 1.680 | 2.300 | 0.040 | 0.010 |
| | 13 15 | 0045 | 17.8 | 0.0 | | 117 | 6.60 | 34 | 1.860 | 2.500 | 0.040 | 0.008 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/03/28 | 12 45 | 0000 | 0.087 | 7.2 |
| | 12 45 | 0004 | 0.086 | |
| | 12 45 | 0015 | 0.099 | |
| | 12 45 | 0033 | 0.105 | |
| 73/07/09 | 17 15 | 0000 | 0.023 | 13.9 |
| | 17 15 | 0006 | 0.023 | |
| | 17 15 | 0015 | 0.025 | |
| | 17 15 | 0025 | 0.030 | |
| | 17 15 | 0036 | 0.031 | |
| 73/09/18 | 13 15 | 0000 | 0.022 | 11.0 |
| | 13 15 | 0005 | 0.023 | |
| | 13 15 | 0015 | 0.029 | |
| | 13 15 | 0025 | 0.130 | |
| | 13 15 | 0035 | 0.114 | |
| | 13 15 | 0045 | 0.108 | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450403
34 15 00.0 082 01 15.0 3
LAKE GREENWOOD
45059 SOUTH CAROLINA
030892

11EPALES 2111202
0024 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/03/28 | 13 15 | 0000 | 15.8 | | 12 | 50 | 7.80 | 10K | 0.110 | 0.500 | 0.370 | 0.019 |
| | 13 15 | 0004 | 15.7 | 8.6 | | 50 | 7.50 | 10K | 0.100 | 0.400 | 0.360 | 0.019 |
| | 13 15 | 0015 | 15.2 | 8.5 | | 50 | 7.60 | 10K | 0.090 | 0.300 | 0.360 | 0.017 |
| | 13 15 | 0020 | 14.2 | 8.5 | | 50 | 7.70 | 11 | 0.090 | 0.300 | 0.360 | 0.016 |
| 73/07/09 | 17 35 | 0000 | 32.7 | | 72 | 58 | 8.90 | 21 | 0.070 | 0.700 | 0.050 | 0.004 |
| | 17 35 | 0006 | 30.1 | 9.0 | | 50K | 7.80 | 16 | 0.070 | 0.500 | 0.060 | 0.006 |
| | 17 35 | 0015 | 25.4 | 1.3 | | 80 | 6.50 | 29 | 0.420 | 0.900 | 0.120 | 0.007 |
| | 17 35 | 0024 | 22.1 | 1.0 | | 80 | 6.50 | 30 | 0.460 | 0.800 | 0.100 | 0.007 |
| 73/09/18 | 13 40 | 0000 | 28.4 | | 36 | 78 | 7.40 | 22 | 0.060 | 1.000 | 0.040 | 0.011 |
| | 13 40 | 0005 | 27.7 | 6.4 | | 77 | 7.40 | 22 | 0.060 | 0.600 | 0.050 | 0.008 |
| | 13 40 | 0015 | 24.4 | 4.0 | | 43 | 6.50 | 10 | 0.150 | 0.800 | 0.250 | 0.024 |
| | 13 40 | 0020 | 23.8 | 3.2 | | 41 | 6.90 | 10K | 0.170 | 0.800 | 0.280 | 0.031 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/03/28 | 13 15 | 0000 | 0.112 | 6.4 |
| | 13 15 | 0004 | 0.112 | |
| | 13 15 | 0015 | 0.109 | |
| | 13 15 | 0020 | 0.118 | |
| 73/07/09 | 17 35 | 0000 | 0.029 | 4.9 |
| | 17 35 | 0006 | 0.031 | |
| | 17 35 | 0015 | 0.069 | |
| | 17 35 | 0024 | 0.067 | |
| 73/09/18 | 13 40 | 0000 | 0.049 | 12.3 |
| | 13 40 | 0005 | 0.041 | |
| | 13 40 | 0015 | 0.162 | |
| | 13 40 | 0020 | 0.193 | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

450404
34 21 20.0 082 05 20.0 3
LAKE GREENWOOD
45059 SOUTH CAROLINA
030892

11EPALES 2111202
0020 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00010 WATER TEMP CENT | 00300 DO MG/L | 00077 TRANSP SECCHI INCHES | 00094 CNDUCTVY FIELD MICROMHO | 00400 PH SU | 00410 T ALK CACO3 MG/L | 00610 NH3-N TOTAL MG/L | 00625 TOT KJEL N MG/L | 00630 NO2&NO3 N-TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73/03/28 | 16 15 | 0000 | 15.6 | | 21 | 50 | 8.10 | 12 | 0.040 | 0.300 | 0.320 | 0.012 |
| | 16 15 | 0004 | 15.3 | 9.3 | | 50 | 7.80 | 12 | 0.030 | 0.200K | 0.340 | 0.011 |
| | 16 15 | 0016 | 14.0 | 8.2 | | 70 | 7.50 | 15 | 0.090 | 0.400 | 0.690 | 0.034 |
| 73/07/09 | 17 50 | 0000 | 30.9 | | 48 | 60 | 8.90 | 24 | 0.080 | 0.800 | 0.060 | 0.006 |
| | 17 50 | 0006 | 30.1 | 9.5 | | 50K | 8.50 | 21 | 0.080 | 0.600 | 0.110 | 0.010 |
| | 17 50 | 0013 | 28.1 | 4.4 | | 92 | 6.90 | 38 | 0.390 | 1.100 | 0.430 | 0.035 |
| | 17 50 | 0019 | 25.6 | 0.9 | | 120 | 6.80 | 42 | 0.580 | 1.300 | 0.380 | 0.030 |
| 73/09/18 | 14 00 | 0000 | 25.3 | | 5 | 39 | 6.50 | 10K | 0.240 | 1.000 | 0.300 | 0.022 |
| | 14 00 | 0005 | 23.7 | 4.0 | | 46 | 6.40 | 10K | 0.250 | 1.000 | 0.350 | 0.046 |
| | 14 00 | 0015 | 23.3 | 3.6 | | 52 | 6.40 | 10K | 0.310 | 1.200 | 0.420 | 0.045 |

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00665 PHOS-TOT MG/L P | 32217 CHLRPHYL A UG/L |
|---|---|---|---|---|
| 73/03/28 | 16 15 | 0000 | 0.066 | 4.1 |
| | 16 15 | 0004 | 0.062 | |
| | 16 15 | 0016 | 0.155 | |
| 73/07/09 | 17 50 | 0000 | 0.034 | 13.9 |
| | 17 50 | 0006 | 0.036 | |
| | 17 50 | 0013 | 0.108 | |
| | 17 50 | 0019 | 0.126 | |
| 73/09/18 | 14 00 | 0000 | 0.166 | 1.7 |
| | 14 00 | 0005 | 0.210 | |
| | 14 00 | 0015 | 0.264 | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

# APPENDIX E

## TRIBUTARY and WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 76/04/27

4504A1
34 10 00.0 085 54 30.0 4
SALUDA RIVER
45 GREENWOOD CO HWY
07GREENWOOD LAKE 033592
ST HWY 34 BRDG 6 MI E OF NINETY SIX
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/02/24 | 13 30 | | 0.340 | 0.370 | 0.105 | 0.036 | 0.085 |
| 73/03/21 | 11 35 | | 0.310 | 0.310 | 0.035 | 0.015 | 0.055 |
| 73/04/15 | 11 45 | | 0.310 | 0.400 | 0.085 | 0.040 | 0.085 |
| 73/05/15 | 12 30 | | 0.168 | 0.640 | 0.038 | 0.008 | 0.030 |
| 73/06/17 | 11 55 | | 0.126 | 0.890 | 0.037 | 0.017 | 0.030 |
| 73/07/15 | 10 50 | | 0.150 | 0.190 | 0.027 | 0.013 | 0.030 |
| 73/08/11 | 14 55 | | 0.010K | 0.390 | 0.069 | 0.010 | 0.035 |
| 73/09/17 | 11 00 | | 0.088 | 2.520 | 0.220 | 0.011 | 0.055 |
| 73/10/14 | 11 00 | | 0.100 | 1.850 | 0.220 | 0.005K | 0.035 |
| 73/11/17 | 11 45 | | 0.252 | 0.500 | 0.128 | 0.028 | 0.050 |
| 73/12/20 | 10 05 | | 0.336 | 0.500 | 0.120 | 0.024 | 0.032 |
| 74/01/12 | 11 25 | | 0.320 | 0.500 | 0.080 | 0.044 | 0.130 |
| 74/01/26 | 11 00 | | 0.430 | 0.200 | 0.064 | 0.028 | 0.105 |
| 74/02/12 | 15 15 | | 0.500 | 0.500 | 0.060 | 0.030 | 0.075 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4564A2
34 23 30.0 082 13 20.0 4
SALUDA RIVER
45 GREENWOOD CO HWY
1/GREENWOOD LAKE 030892
US HWY 25 IN WARE SHOALS
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/02/24 | 13 45 | | 0.270 | 0.160 | 0.046 | 0.011 | 0.035 |
| 73/03/21 | 10 15 | | 0.230 | 0.255 | 0.022 | 0.021 | 0.070 |
| 73/04/15 | 10 15 | | 0.230 | 0.135 | 0.019 | 0.012 | 0.040 |
| 73/05/15 | 11 00 | | 0.220 | 0.860 | 0.029 | 0.022 | 0.065 |
| 73/06/17 | 10 20 | | 0.252 | 2.500 | 0.057 | 0.020 | 0.060 |
| 73/07/15 | 09 05 | | 0.280 | 2.100 | 0.082 | 0.019 | 0.050 |
| 73/08/11 | 13 35 | | 0.270 | 0.210 | 0.019 | 0.030 | 0.085 |
| 73/09/17 | 09 30 | | 0.330 | 0.560 | 0.046 | 0.023 | 0.085 |
| 73/10/14 | 09 40 | | 0.220 | 0.150 | 0.036 | 0.017 | 0.060 |
| 73/11/17 | 10 30 | | 0.252 | 0.150 | 0.024 | 0.028 | 0.050 |
| 73/12/20 | 08 35 | | 0.336 | 0.200 | 0.056 | 0.032 | 0.075 |
| 74/01/12 | 09 45 | | 0.290 | 5.300 | 0.036 | 0.152 | |
| 74/01/26 | 09 40 | | 0.330 | 0.490 | 0.024 | 0.020 | 0.125 |
| 74/02/12 | 13 45 | | 0.336 | 0.800 | 0.045 | 0.015 | 0.075 |

STORET RETRIEVAL DATE 76/04/27

4504B1
34 20 30.0 082 11 30.0 4
TURKEY CREEK
45 GREENWOOD CO HWY
T/GREENWOOD LAKE 030892
ST HWY 96 BRDG 4 MI SE OF WARE SHOALS
11EPALLS 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/02/24 | 13 | 30 | 0.210 | 0.250 | 0.032 | 0.009 | 0.030 |
| 73/03/21 | 10 | 00 | 0.210 | 0.420 | 0.025 | 0.015 | 0.050 |
| 73/04/15 | 10 | 00 | 0.176 | 0.100K | 0.017 | 0.012 | 0.035 |
| 73/05/15 | 10 | 45 | 0.290 | 0.440 | 0.033 | 0.014 | 0.035 |
| 73/06/17 | 10 | 05 | 0.290 | 1.050 | 0.069 | 0.027 | 0.100 |
| 73/07/15 | 08 | 55 | 0.315 | 0.540 | 0.016 | 0.019 | 0.065 |
| 73/08/11 | 13 | 20 | 0.300 | 0.130 | 0.010 | 0.019 | 0.055 |
| 73/09/17 | 09 | 15 | 0.210 | 0.260 | 0.044 | 0.018 | 0.055 |
| 73/10/14 | 09 | 25 | 0.180 | 0.150 | 0.018 | 0.011 | 0.040 |
| 73/11/17 | 10 | 15 | 0.052 | 0.100K | 0.016 | 0.024 | 0.030 |
| 73/12/20 | 08 | 15 | 0.264 | 0.300 | 0.024 | 0.016 | 0.050 |
| 74/01/12 | 09 | 30 | 0.240 | 0.300 | 0.024 | 0.024 | 0.065 |
| 74/01/26 | 09 | 25 | 0.240 | 0.100 | 0.020 | 0.016 | |
| 74/02/12 | 13 | 30 | 0.260 | 0.700 | 0.045 | 0.020 | 0.075 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4504C1
34 23 30.0 082 08 30.0 4
REEDY RIVER
45 LAURENS CO HWY M
T/GREENWOOD LAKE 030892
ST HWY BRDG 5 MI WNW OF WATTERLOO
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/02/24 | 14 05 | | 1.100 | 0.990 | 0.480 | 0.240 | 0.340 |
| 73/03/21 | 10 30 | | 0.880 | 0.650 | 0.105 | 0.072 | 0.165 |
| 73/04/15 | 10 30 | | 0.940 | 0.480 | 0.090 | 0.160 | 0.250 |
| 73/05/15 | 11 20 | | 1.200 | 0.920 | 0.076 | 0.240 | 0.345 |
| 73/06/17 | 10 40 | | 1.300 | 1.680 | 0.084 | 0.240 | 0.320 |
| 73/07/15 | 09 25 | | 1.500 | 0.760 | 0.062 | 0.176 | 0.255 |
| 73/08/11 | 13 50 | | 1.200 | 0.695 | 0.036 | 0.310 | 0.490 |
| 73/09/17 | 09 45 | | 0.750 | 0.700 | 0.063 | 0.088 | 0.192 |
| 73/10/14 | 09 55 | | 1.320 | 0.700 | 0.039 | 0.370 | 0.490 |
| 73/11/17 | 10 45 | | 1.760 | 0.750 | 0.076 | 0.650 | 0.780 |
| 73/12/20 | 08 50 | | 1.090 | 0.900 | 0.180 | 0.240 | 0.360 |
| 74/01/12 | 10 00 | | 1.090 | 0.700 | 0.140 | 0.200 | 0.315 |
| 74/01/26 | 09 55 | | 1.060 | 0.800 | 0.112 | 0.176 | 0.370 |
| 74/02/12 | 14 00 | | 1.300 | 1.100 | 0.165 | 0.230 | 0.375 |

STORET RETRIEVAL DATE 76/04/27

450401
34 23 00.0 082 06 30.0 4
RABON CREEK
45 LAURENS CO HWY M
T/GREENWOOD LAKE 030892
ST HWY 54 BRDG 4 MI NE OF WATERLOO
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/02/24 | 14 | 20 | 0.420 | 0.100K | 0.025 | 0.016 | 0.025 |
| 73/03/21 | 10 | 40 | 0.320 | 0.340 | 0.020 | 0.019 | 0.050 |
| 73/04/15 | 10 | 40 | 0.300 | 0.100K | 0.019 | 0.014 | 0.035 |
| 73/05/15 | 11 | 30 | 0.410 | 0.100K | 0.015 | 0.017 | 0.040 |
| 73/06/17 | 10 | 50 | 0.450 | 1.260 | 0.035 | 0.022 | 0.050 |
| 73/07/15 | 09 | 35 | 0.390 | 0.407 | 0.043 | 0.017 | 0.055 |
| 73/08/11 | 14 | 00 | 0.360 | 0.130 | 0.014 | 0.028 | 0.060 |
| 73/09/17 | 10 | 00 | 0.252 | 0.255 | 0.040 | 0.020 | 0.060 |
| 73/10/14 | 10 | 05 | 0.242 | 0.100K | 0.020 | 0.013 | 0.035 |
| 73/11/17 | 10 | 55 | 0.184 | 0.100K | 0.016 | 0.005 | 0.017 |
| 73/12/20 | 09 | 05 | 0.430 | 0.100 | 0.020 | 0.020 | 0.030 |
| 74/01/12 | 10 | 15 | 0.380 | 0.200 | 0.020 | 0.018 | 0.045 |
| 74/01/26 | 10 | 05 | 0.380 | 0.300 | 0.028 | 0.020 | 0.075 |
| 74/02/12 | 14 | 10 | 0.330 | 1.400 | 0.090 | 0.027 | 0.080 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4504F1
34 17 30.0 082 02 00.0 4
CANE CREEK
45 LAURENS CO HWY M
T/GREENWOOD LAKE 030892
ST HWY 72 BRDG 3MI W OF CROSSHILL
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/02/24 | 14 | 45 | 0.160 | 0.110 | 0.042 | 0.019 | 0.030 |
| 73/03/21 | 11 | 05 | 0.096 | 0.290 | 0.016 | 0.024 | 0.065 |
| 73/04/15 | 11 | 00 | 0.038 | 0.600 | 0.038 | 0.025 | 0.090 |
| 73/05/15 | 12 | 00 | 0.034 | 0.540 | 0.093 | 0.019 | 0.075 |
| 73/06/17 | 11 | 30 | 0.025 | 1.300 | 0.030 | 0.015 | 0.055 |
| 73/07/15 | 10 | 20 | 0.010K | 0.560 | 0.011 | 0.014 | 0.080 |
| 73/08/11 | 14 | 25 | 0.010K | 0.830 | 0.009 | 0.016 | 0.080 |
| 73/09/17 | 10 | 30 | 0.016 | 1.150 | 0.034 | 0.010 | 0.085 |
| 73/10/14 | 10 | 35 | 0.072 | 1.150 | 0.063 | 0.017 | 0.040 |
| 73/11/17 | 11 | 20 | 0.016 | 0.100K | 0.016 | 0.015 | 0.030 |
| 73/12/20 | 09 | 35 | 0.160 | 0.400 | 0.024 | 0.020 | 0.045 |
| 74/01/12 | 11 | 00 | 0.136 | 0.300 | 0.020 | 0.028 | 0.080 |
| 74/01/26 | 10 | 35 | 0.120 | 0.300 | 0.020 | 0.032 | 0.210 |
| 74/02/12 | 14 | 35 | 0.152 | 0.900 | 0.045 | 0.030 | 0.130 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4504E1
34 20 30.0 082 05 30.0 4
LONG LICK BRANCH
45 LAURENS CO HWY M
T/GREENWOOD LAKE 030892
ST HWY 307 BRDG 1.5 MI W OF WATERLOO
11EPALES 2111204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P |
|---|---|---|---|---|---|---|---|
| 73/02/24 | 14 | 30 | 0.180 | 0.100K | 0.025 | 0.021 | 0.037 |
| 73/03/21 | 10 | 50 | 0.140 | 0.140 | 0.005K | 0.017 | 0.050 |
| 73/04/15 | 10 | 50 | 0.115 | 0.100K | 0.013 | 0.020 | 0.045 |
| 73/05/15 | 11 | 45 | 0.210 | 0.100K | 0.021 | 0.029 | 0.045 |
| 73/06/17 | 11 | 15 | 0.250 | | 0.067 | 0.039 | 0.070 |
| 73/07/15 | 10 | 05 | 0.180 | 0.400 | 0.026 | 0.033 | 0.060 |
| 73/08/11 | 14 | 15 | 0.168 | 0.110 | 0.015 | 0.039 | 0.070 |
| 73/09/17 | 10 | 15 | 0.154 | 0.210 | 0.052 | 0.040 | 0.060 |
| 73/10/14 | 10 | 20 | 0.100 | 0.450 | 0.046 | 0.035 | 0.055 |
| 73/11/17 | 11 | 05 | 0.028 | 0.300 | 0.012 | 0.048 | 0.050 |
| 73/12/20 | 09 | 20 | 0.156 | 0.100 | 0.012 | 0.032 | 0.050 |
| 74/01/12 | 10 | 40 | 0.184 | 0.300 | 0.020 | 0.032 | 0.065 |
| 74/01/26 | 10 | 20 | 0.176 | 0.300 | 0.016 | 0.032 | |
| 74/02/12 | 14 | 25 | 0.224 | 0.800 | 0.060 | 0.035 | 0.095 |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4504AB PR4504AB P001000
34 39 25.0 082 27 50.0 4
WEST PELZER
45 15 WILLIAMSTON
T/GREENWOOD RESERVOIR 030892
SALUDA RESERVOIR
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/06/02 | 14 00 | | 0.126 | 15.400 | 7.030 | 5.870 | 7.200 | 0.070 | 0.080 |
| 73/07/03 | 15 00 | | 0.230 | 24.000 | 14.700 | 10.100 | 12.000 | 0.090 | 0.080 |
| 73/08/15 | 16 00 | | 0.310 | 32.000 | 15.800 | 0.135 | | 0.090 | 0.080 |
| 73/09/10 | 16 00 | | 0.046 | 34.000 | 18.100 | 15.200 | 16.000 | 0.085 | 0.080 |
| 73/10/07 | 16 00 | | 0.040 | 22.000 | 11.600 | 11.000 | 12.000 | 0.070 | 0.080 |
| 73/12/10 | 16 00 | | 0.120 | 24.000 | 9.800 | 6.700 | 9.650 | 0.065 | 0.070 |
| 74/01/16 | 16 00 | | 1.000 | 17.000 | 8.450 | 7.150 | 9.200 | 0.080 | 0.075 |
| 74/03/12 | 16 00 | | 0.040 | 15.000 | 0.110 | 0.130 | 9.200 | 0.090 | 0.080 |
| 74/04/14 | 16 00 | | 1.120 | 6.600 | 5.900 | 3.800 | 4.700 | 0.075 | 0.080 |
| 74/06/20 | 16 00 | | 13.400 | 1.275 | 0.157 | 4.542 | 10.300 | 0.070 | 0.080 |
| 74/08/28 | 16 30 | | 0.640 | 7.000 | 0.060 | 0.380 | 6.100 | 0.085 | 0.080 |
| 74/09/20 | 16 30 | | | 2.525 | 0.540 | 11.500 | 11.600 | 0.085 | 0.080 |

STORET RETRIEVAL DATE 76/04/27

4504AA PD4504AA P002835*
34 23 25.0 082 13 25.0 4
WARE SHOALS #2
45 GREENWOOD CO HWY
T/LAKE GREENWOOD 030892
SALUDA RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/05/31 | 10 | 00 | | | | | | | |
| CP(T)- | | | 1.887 | | 0.179 | 1.451 | 2.600 | 4.700 | 4.500 |
| 73/06/01 | 10 | 00 | | | | | | | |
| 73/06/30 | 00 | 00 | | | | | | | |
| CP(T)- | | | 8.700 | 1.900 | 0.140 | 1.580 | 1.800 | 3.500 | 4.800 |
| 73/06/30 | 24 | 00 | | | | | | | |
| 73/07/20 | 09 | 00 | 5.700 | 3.300 | 0.110 | 1.400 | 1.500 | 5.300 | 5.000 |
| 73/08/17 | 10 | 00 | | | | | | | |
| CP(T)- | | | 3.200 | | 0.240 | 0.440 | 1.400 | 5.900 | 5.500 |
| 73/08/18 | 10 | 00 | | | | | | | |
| 73/09/13 | 10 | 30 | 6.000 | 2.600 | 0.110 | 0.770 | 1.050 | 5.500 | 5.000 |
| 73/10/11 | 10 | 00 | 3.990 | 2.100 | 0.046 | 1.260 | 1.450 | 5.500 | 5.000 |
| 73/11/08 | 00 | 00 | | | | | | | |
| CP(T)- | | | 4.700 | 3.600 | 0.160 | 1.600 | 1.700 | 5.000 | 5.300 |
| 73/11/08 | 24 | 00 | | | | | | | |
| 73/12/07 | 00 | 00 | | | | | | | |
| CP(T)- | | | 0.540 | 5.200 | 0.036 | 2.040 | 2.100 | 4.900 | 4.500 |
| 73/12/07 | 24 | 00 | | | | | | | |
| 74/01/16 | 14 | 30 | 1.680 | 2.400 | 0.040K | 2.300 | 2.300 | 4.000 | 3.800 |
| 74/02/14 | 00 | 00 | | | | | | | |
| CP(T)- | | | 0.040 | 2.700 | 0.054 | 2.800 | 2.800 | 4.000 | 3.500 |
| 74/02/14 | 24 | 00 | | | | | | | |
| 74/03/14 | 07 | 30 | | | | | | | |
| CP(T)- | | | 5.520 | 3.800 | 0.061 | 2.650 | 2.950 | 4.500 | 4.000 |
| 74/03/15 | 07 | 30 | | | | | | | |

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/04/27

4504CA TF4504CA P115000
34 47 50.0 082 22 00.0 4
GREENVILLE
45 15 GREENVILLE
T/LAKE GREENWOOD 030891
REEDY RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/05/31 | 09 | 10 | | | | | | | |
| CP(T)- | | | 0.090 | 17.000 | 5.100 | 4.900 | 6.500 | 22.500 | 18.700 |
| 73/06/01 | 09 | 10 | | | | | | | |
| 73/06/28 | 09 | 00 | | | | | | | |
| CP(T)- | | | 0.105 | 21.000 | 5.300 | 6.200 | 8.000 | 20.000 | 22.000 |
| 73/06/29 | 09 | 00 | | | | | | | |
| 73/08/14 | 08 | 30 | | | | | | | |
| CP(T)- | | | 0.039 | 17.600 | 0.960 | 6.400 | | 21.200 | 26.000 |
| 73/08/15 | 08 | 30 | | | | | | | |
| 73/08/30 | 08 | 30 | | | | | | | |
| CP(T)- | | | | 22.700 | 6.600 | 7.300 | 9.900 | 19.700 | 21.200 |
| 73/08/31 | 08 | 30 | | | | | | | |
| 73/09/26 | 09 | 00 | | | | | | | |
| CP(T)- | | | 0.120 | 25.900 | 8.650 | 7.800 | 9.800 | 18.100 | 25.500 |
| 73/09/27 | 09 | 00 | | | | | | | |
| 73/11/15 | 11 | 30 | | | | | | | |
| CP(T)- | | | 0.130 | 26.000 | 4.850 | 6.650 | 10.500 | 33.200 | 30.700 |
| 73/11/16 | 11 | 30 | | | | | | | |
| 73/12/19 | 10 | 00 | | | | | | | |
| CP(T)- | | | 0.440 | 18.000 | 0.460 | 6.400 | 9.450 | 23.500 | 28.000 |
| 73/12/20 | 10 | 00 | | | | | | | |
| 74/01/23 | 15 | 00 | | | | | | | |
| CP(T)- | | | 0.440 | 20.000 | 4.500 | 4.900 | 7.100 | 23.100 | 21.700 |
| 74/01/24 | 15 | 00 | | | | | | | |
| 74/02/27 | 13 | 30 | | | | | | | |
| CP(T)- | | | 1.480 | 19.000 | 1.500 | 5.800 | 7.700 | 20.100 | 19.200 |
| 74/02/28 | 13 | 30 | | | | | | | |
| 74/05/01 | | | 3.800 | 32.000 | 5.500 | 6.800 | 10.500 | 20.000 | 29.000 |
| 74/05/16 | 14 | 20 | | | | | | | |
| CP(T)- | | | 0.240 | 28.000 | 5.750 | 7.000 | 9.900 | 31.700 | 32.200 |
| 74/05/17 | 14 | 00 | | | | | | | |
| 74/06/06 | 13 | 00 | | | | | | | |
| CP(T)- | | | 0.040 | 18.000 | 3.900 | 4.550 | 6.300 | 32.600 | 33.800 |
| 74/06/07 | 13 | 00 | | | | | | | |
| 74/07/11 | 15 | 00 | | | | | | | |
| CP(T)- | | | 0.200 | 18.000 | 4.100 | 4.600 | 6.600 | 23.400 | 30.500 |
| 74/07/12 | 15 | 00 | | | | | | | |

STORET RETRIEVAL DATE 76/04/27

45048A PD4504BA P001600
34 22 30.0 082 14 10.0 4
WARE SHOALS #1
45 GREENWOOD CO HWY
T/LAKE GREENWOOD 030892
TURKEY CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/06/01 | 09 00 | | 0.154 | 6.500 | 1.080 | 4.030 | 4.650 | 0.100 | 0.100 |
| 73/06/30 | 00 00 | | | | | | | | |
| CP(T)- | | | 0.045 | 5.000 | 0.094 | 1.440 | 1.900 | 0.250 | 0.250 |
| 73/06/30 | 24 00 | | | | | | | | |
| 73/07/20 | 10 00 | | 0.220 | 11.500 | 0.880 | 6.600 | 7.700 | 0.100 | 0.150 |
| 73/08/17 | 10 00 | | 0.150 | 9.600 | 0.600 | 2.300 | 3.750 | 0.500 | 0.500 |
| 73/09/13 | 09 30 | | 0.132 | 12.000 | 1.160 | 6.200 | 7.200 | 0.500 | 0.500 |
| 73/10/11 | 10 00 | | 0.120 | 11.050 | 1.600 | 5.300 | 6.300 | 0.500 | 0.500 |
| 73/11/07 | 11 00 | | 0.160 | 12.500 | 1.150 | 5.400 | 6.300 | 0.500 | 0.500 |
| 73/12/04 | | | 0.180 | 14.000 | 0.950 | 5.200 | 6.800 | | |
| 74/01/16 | 09 30 | | 0.360 | 12.000 | 1.800 | 8.200 | 9.200 | 0.036 | 0.040 |
| 74/02/13 | 10 00 | | 0.160 | 12.000 | 2.880 | 7.600 | 8.900 | 0.072 | 0.072 |
| 74/03/14 | 08 30 | | 0.168 | 11.000 | 0.947 | 2.331 | 3.162 | 0.036 | 0.040 |

STORET RETRIEVAL DATE 76/04/27

4504XB AP4504XB P001200
34 32 35.0 082 28 55.0 4
BELTON
45 ANDERSON CO HWY
T/LAKE GREENWOOD 030892
BROAD MOUTH CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/06/07 | 08 30 | | 0.315 | 12.000 | 4.600 | 1.700 | 3.150 | 0.225 | 0.205 |
| 73/07/09 | 10 45 | | 0.220 | 40.000 | 21.000 | 5.110 | 10.500 | 0.240 | 0.210 |
| 73/08/15 | 15 45 | | 0.040 | 22.000 | 7.800 | 3.800 | 9.600 | 0.200 | 0.215 |
| 73/09/06 | 10 10 | | | | | 3.960 | | 0.205 | 0.225 |
| 73/10/05 | 10 30 | | 0.040 | 24.000 | 14.000 | 5.800 | 8.500 | 0.100 | 0.190 |
| 73/11/13 | 14 15 | | 0.070 | 29.000 | 14.700 | 5.750 | 14.500 | 0.175 | 0.250 |
| 74/01/10 | 11 00 | | 0.360 | 16.500 | 5.000 | 4.100 | 5.700 | 0.250 | 0.225 |
| 74/02/14 | 10 00 | | 0.160 | 15.000 | 6.600 | 3.300 | 4.600 | 0.300 | 0.210 |
| 74/03/07 | 08 30 | | 0.080 | 31.000 | 13.500 | 6.300 | 9.900 | 0.210 | 0.210 |
| 74/04/10 | 15 05 | | 0.280 | 17.000 | 4.400 | 2.800 | 8.100 | 0.250 | 0.250 |
| 74/05/20 | 09 15 | | 0.680 | 13.000 | 0.940 | 5.500 | 7.300 | 0.180 | 0.250 |

STORET RETRIEVAL DATE 76/04/27

4504XA PD4504XA P004000
34 28 20.0 082 22 25.0 4
HONEA PATH
45 ANDERSON CO HWY
T/LAKE GREENWOOD 031392
BROAD MOUTH CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

| DATE FROM TO | TIME OF DAY | DEPTH FEET | 00630 NO2&NO3 N-TOTAL MG/L | 00625 TOT KJEL N MG/L | 00610 NH3-N TOTAL MG/L | 00671 PHOS-DIS ORTHO MG/L P | 00665 PHOS-TOT MG/L P | 50051 FLOW RATE INST MGD | 50053 CONDUIT FLOW-MGD MONTHLY |
|---|---|---|---|---|---|---|---|---|---|
| 73/06/19 | 09 | 45 | 0.750 | 4.600 | 2.097 | 1.900 | 2.100 | 0.180 | |
| 73/07/20 | | | 0.690 | 1.700 | 0.710 | 0.840 | 0.980 | 0.180 | 0.180 |
| 73/08/24 | 09 | 00 | 0.660 | 7.150 | 1.820 | 3.060 | | 0.180 | 0.180 |
| 73/09/20 | 10 | 30 | 0.830 | 2.200 | 0.550 | 0.890 | 1.100 | 0.180 | 0.180 |
| 73/11/27 | 09 | 00 | 0.360 | 2.400 | 1.000 | 1.200 | 1.400 | 0.180 | 0.180 |
| 73/12/18 | | | 0.840 | 3.700 | 1.000 | 1.470 | 2.100 | 0.180 | |
| 74/02/22 | 14 | 30 | 0.840 | 3.200 | 0.770 | 1.280 | 1.600 | 0.180 | 0.180 |
| 74/03/20 | 10 | 00 | 0.640 | 2.600 | 0.980 | 2.200 | 3.100 | 0.180 | 0.180 |
| 74/04/18 | | | 0.720 | 1.000K | 0.320 | 0.590 | 0.590 | 0.180 | |
| 74/05/24 | 09 | 00 | 0.640 | 12.000 | 2.200 | 2.900 | 4.400 | 0.180 | |
| 74/06/26 | 09 | 30 | 0.635 | 3.000 | 0.560 | 1.650 | 1.930 | | |
| 74/08/16 | 09 | 00 | 0.760 | 2.850 | 0.510 | 0.050K | 1.490 | 0.180 | |
| 74/09/30 | 09 | 00 | 0.780 | 1.500 | 0.600 | 0.925 | 1.150 | | 0.180 |

K VALUE KNOWN TO BE
LESS THAN INDICATED