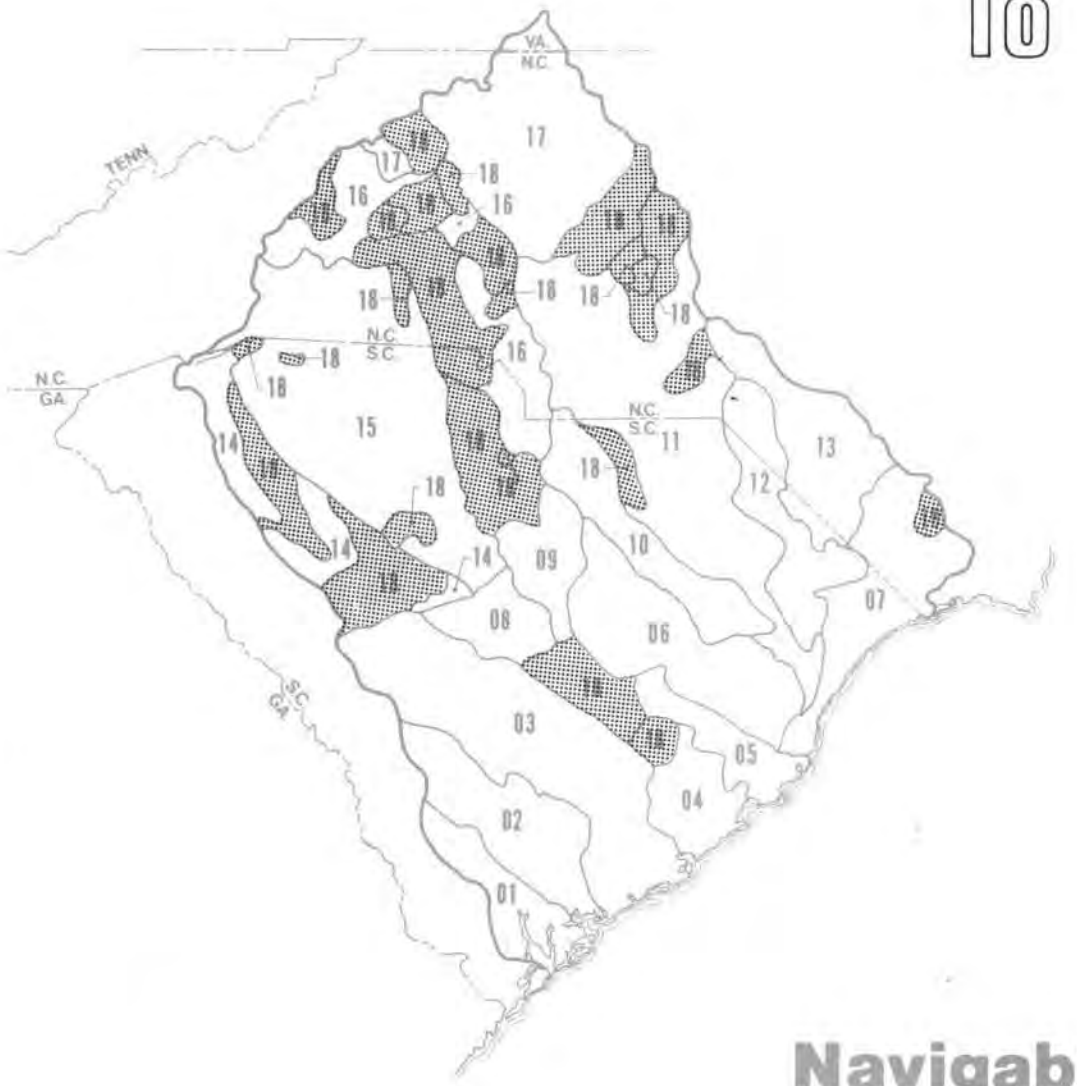
U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

LAKES
(Greater than 1000 acres)

Report No. 18



Navigability Study
1977

STANLEY CONSULTANTS

CONTENTS

	Page
SECTION 1 - INTRODUCTION	18-1
Purpose	18-1
Scope	18-1
Related Reports	18-2
Acknowledgements and Data Sources	18-3
SECTION 2 - PHYSICAL CHARACTERISTICS	18-4
SECTION 3 - NAVIGATION IMPROVEMENT PROJECTS	18-11
Federal Navigation Projects	18-11
Other Navigation Projects	18-11
SECTION 4 - INTERSTATE COMMERCE	18-14
Past	18-14
Present	18-17
Future Potential	18-17
SECTION 5 - LEGAL AUTHORITY	18-19
General	18-19
Navigability Interpretations	18-19
General Federal Court Cases	18-20
Specific Federal Court Cases	18-22
South Carolina State Court Cases	18-22
North Carolina State Court Cases	18-23
Recent Federal Litigation	18-24
Federal Agency Jurisdiction	18-24
SECTION 6 - NAVIGATION OBSTRUCTIONS AND CLASSIFICATIONS	18-27
Navigation Classification Procedures	18-27
Navigation Classification Categories	18-31
Present Navigable Waters of the U. S.	18-31
Historically Navigable Waters	18-31
Recommended Navigable Waters of the U. S.	18-31
Recommended Practical Navigable Waters of the U. S.	18-32
Obstructions to Navigation	18-34
Waters of the U. S.	18-34
SECTION 7 - CONCLUSIONS AND RECOMMENDATIONS	18-39

CONTENTS (continued)

	Page
BIBLIOGRAPHY	18-40
Cited References	18-40
APPENDIX A - STREAM CATALOG	18-A1
APPENDIX B - SUMMARY OF 10 TO 1,000 ACRE LAKES	18-B1

TABLES

Number		Page
1	Physiographic Characteristics	18-5
2	Physical Characteristics	18-6
3	Key Stream Gaging Stations	18-8
4	Authorized Federal Projects	18-12

FIGURES

Number		Page
1	Navigability Decision Diagram	18-28
2	Pinopolis Lock and Dam (Lake Moultrie)	18-36
3	S. C. 45 Highway Bridge (Diversion Canal)	18-36
4	S. C. 45 Highway Bridge (Diversion Canal)	18-37
5	Santee Dam (Lake Marion)	18-37
6	Interstate 95, U. S. 15 Highway Bridge (Power Line) (Lake Marion)	18-38
7	Seaboard Coast Line Railroad Bridge (Lake Marion)	18-38

CONTENTS (continued)

PLATES

Number		Follows Page
18-1	Location Map	18-41
18-2	Significant Features	18-41
18-3	Significant Features	18-41
18-4	Significant Features	18-41
18-5	Significant Features	18-41
18-6	Significant Features	18-41
18-7	Significant Features	18-41
18-8	Significant Features	18-41
18-9	Significant Features	18-41
18-10	Significant Features	18-41
18-11	Plan - Lake Moultrie	18-41
18-12	Plan - Lake Waccamaw	18-41
18-13	Plan - Lake Marion	18-41
18-14	Plan - Lake Murray	18-41
18-15	Plan - Parr Reservoir	18-41
18-16	Plan - Wateree Lake	18-41
18-17	Plan - Lake Robinson	18-41
18-18	Plan - Fishing Creek Reservoir	18-41
18-19	Plan - Blewett Falls Lake	18-41
18-20	Plan - Lake Greenwood	18-41
18-21	Plan - Lake Wylie (Lake Catawba)	18-41
18-22	Plan - Mountain Island Lake	18-41

CONTENTS (continued)

PLATES (continued)

Number		Follows Page
18-23	Plan - Lake Tillery	18-41
18-24	Plan - Badin Lake	18-41
18-25	Plan - Tuckertown Lake	18-41
18-26	Plan - Poinsett Reservoir	18-41
18-27	Plan - Lake William C. Bowen	18-41
18-28	Plan - Buffalo Lake	18-41
18-29	Plan - Lake Norman	18-41
18-30	Plan - High Rock Lake	18-41
18-31	Plan - Lookout Shoals Lake	18-41
18-32	Plan - Lake Hickory	18-41
18-33	Plan - Rhodhiss Lake	18-41
18-34	Plan - Lake James	18-41
18-35	Plan - W. Kerr Scott Reservoir	18-41

SECTION 1 - INTRODUCTION

Purpose

The purpose of this study is to collect, develop, and evaluate information on waterbodies within the boundaries of the Charleston District, Corps of Engineers, for establishing the classification of "navigable waters of the U. S." and "waters of the U. S." (During the course of this study the term "navigable waters" was changed to "waters of the U. S." Herein references to "navigable waters" are synonymous with "waters of the U. S.") Study objectives include definition of the present head of navigation, the historic head of navigation, the potential head of navigation, and the headwaters of all waterbodies within the district.

The information generated as a part of the study will be utilized by the Charleston District in administration of its programs dealing with water resource project construction permits in "navigable waters of the U. S." (River and Harbor Act of 1899), and the deposition of dredge or fill material in "navigable waters" or their contiguous wetlands (Section 404 of PL 92-500).

Scope

The scope of this project is generally summarized by the following:

1. Outline drainage areas, locate headwater points where mean flow is five cubic feet per second (cfs), summarize lake data (10 to 1,000 acres), establish stream mileage for "navigable waters of the U. S.", and prepare a stream catalog summary for the district.
2. Conduct field surveys of waterbodies to establish mean water levels and obstruction clearances for evaluating the potential head of navigation.
3. Analyze available hydrological data to estimate mean, maximum, and minimum discharge rates at obstructions and other selected locations.
4. Conduct a literature review to identify past, present, and future uses of waterbodies for interstate commerce.

5. Conduct a legal search to identify Federal and state court cases which impact on navigation classifications.
6. Prepare plan and profile drawings, maps of the district showing significant physical features, and a map delineating the recommended navigation classifications.
7. Prepare reports on all major river basins and large lakes (greater than 1,000 acres) including information on physical characteristics, navigation projects, interstate commerce, court decisions, navigation obstructions, and recommended classification of waterbodies for navigation.
8. Prepare a summary report outlining navigation-related information for the entire district as well as the methodology, procedures, and other factors pertinent to the development of each of the river basin reports.

Conduct of this study relies heavily upon available information. Compilation and evaluation of existing data from many sources and development of field survey information are the main contributions to the new water resource data base represented by this study.

Related Reports

Information pertaining to this navigability study for the Charleston District has been compiled into a series of reports, one of which is represented by this document. A complete listing of the reports is presented below to facilitate cross referencing.

Number	Title
--	Summary Report
01	Coosawhatchie River Area
02	Combahee River Area
03	Edisto River Area
04	Cooper River Area
05	Santee River Basin
06	Black River Area
07	Waccamaw River Basin
08	Congaree River Basin
09	Wateree River Basin
10	Lynches River Basin

Number	Title
11	Great Pee Dee River Basin
12	Little Pee Dee River Basin
13	Lumber River Basin
14	Saluda River Basin
15	Broad River Basin
16	Catawba River Basin
17	Yadkin River Basin
18	Lakes - Greater Than 1,000 Acres
--	Coastal Supplement

The eighteen reports covering various drainage areas in the district present information for the specific basins. The Summary Report provides an overview of the entire study of district waterbodies and presents information applicable to all waters in the district. Reference should be made to both the individual drainage area reports as well as the Summary Report to obtain a thorough understanding of the study approach and results.

Acknowledgements and Data Sources

The contribution of many project team members within the Corps of Engineers, Charleston District, and Stanley Consultants is gratefully acknowledged by Stanley Consultants. In addition to the legal search and other evaluations and input from Charleston District staff, several others made significant contributions to this study effort. Dr. John W. Gordon, Assistant Professor in the Department of History, The Citadel, prepared the narrative and literature review information for past and present interstate commerce.

Several state water resource, transportation, utility, and planning agencies also cooperated and provided useful data for compiling these reports. Federal water resource and regulatory agencies and private utilities provided information along with public and private operators of large reservoirs.

Specific numbered data sources are referenced in the reports in parentheses. These data sources are listed in the Bibliography of each report of the navigation study.

SECTION 2 - PHYSICAL CHARACTERISTICS

There are 25 lakes in the navigation study area that have a surface area of 1,000 acres or more. These lakes are located throughout the study area (see Plate 18-1) and lie within three physiographic provinces which form the regional physical character. These physiographic provinces are: Coastal Plain; Piedmont Plateau; and Blue Ridge.

The Coastal Plain forms the area from the coast to an area approximately 100 miles inland known as the fall line. The fall line, which separates the Coastal Plain and Piedmont Plateau physiographic provinces, is an irregular area of land transition that crosses the study area in a northeasterly direction just north of Columbia, South Carolina. From the fall line the Coastal Plain consists of low sand ridges with sharp slopes, to wide flat areas near the coast. Elevations in the province range from mean sea level at the coast to approximately 300 feet above mean sea level at the fall line. (1)

The largest physiographic province in the study area is the Piedmont Plateau. This province extends northward from the fall line to an area just inside the northern study area boundary where it meets the Blue Ridge physiographic province. The Piedmont Plateau consists of rolling hills with relatively flat ridge tops. Elevations range from approximately 300 to 1,400 feet above mean sea level. (1)

Only a small northern portion of the study area lies in the Blue Ridge province. Elevations range from approximately 1,200 feet to more than 4,000 feet above mean sea level. Topography is generally steep to very steep with narrow, rounded ridge tops.

Table 1 presents selected physiographic characteristics within the study area. Included are approximate values for climate, topography, geology, and elevations.

Table 2 presents selected physical characteristics of the lakes within the study area. This table includes approximate values for upstream drainage area, report drainage area, surface area, gross storage, approximate mean discharge (where available), physiographic province, location, and use.

Table 3 presents information on the USGS gaging stations located within the various lake areas of the study area.

TABLE 1

PHYSIOGRAPHIC CHARACTERISTICS (1) *

	Coastal Plain	Piedmont Plateau	Blue Ridge
CLIMATE			
Growing Season (days)	220-290	200-240	150-180
Average Precipitation (inches)	44-50	44-60	60-76
TOPOGRAPHY	Nearly level to moderately sloping	Gently sloping to moderately steep	Steep to very steep
GEOLOGY	Sands and clays	Granites, schists, phyllites, gneisses	Schists, gneisses
ELEVATION (ft above msl)	Sea level to 600	300-1400	1200-4000

* See Bibliography for this reference.

TABLE 2

PHYSICAL CHARACTERISTICS (2 through 7)*

Lake Code	Lake Name	Upstream Drainage Area (sq.mi.)	Report Area (sq.mi.)	Surface Area[2] (acres)	Gross Storage[2] (ac.ft.)	Approx. Mean Discharge (cfs)	Physiographic Province[5]	Use**
18-01	Lake Moultrie	14,860	160	60,400[3]	1,211,000[3]	2,280	CP	P, R, WS
18-02	Lake Waccamaw	120	120	8,938[6]	39,327[7]	--	CP	Natural Lk
18-03	Lake Marion	14,700	590	110,600[3]	1,400,000[3]	14,890[4]	CP	P, R
18-04	Lake Murray	2,420[1]	800	51,000	2,114,000	--	PP	P, R, WS
18-05	Parr Shoals Reservoir	4,750[1]	160	1,850[3]	28,120[3]	--	PP	P, R
18-06	Wateree Lake	4,880	970	13,710[3]	310,000[3]	--	PP	P, R, WS
18-07	Lake Robinson	170	170	2,250[3]	31,000[3]	240	CP	I, P, R
18-08	Fishing Creek Reservoir	3,910	20	3,370[3]	80,000[3]	--	PP	P, R, WS
18-09	Blewett Falls Lake	6,830[1]	130	2,500	97,000	7,960	PP	P
18-10	Lake Greenwood	1,150	560	11,400[3]	260,000[3]	--	PP	P, R, M, WS
18-11	Lake Wylie	3,040	980	12,455	107,670	--	PP	P
18-12	Mountain Island Reservoir	1,870	70	3,235	57,300	--	PP	P
18-13	Lake Tillery	4,600[1]	520	5,260	168,000	--	PP	P
18-14	Badin Lake	4,290	50	5,973	279,000	--	PP	P, M
18-15	Tuckertown Lake	4,080[1]	140	2,529	43,000	--	PP	P
18-16	Poinsett Reservoir	30	30	1,080[3]	76,108[3]	--	BR	M
18-17	Lake William C. Bowen	80	30	1,600[3]	24,550[3]	--	PP	M, WS, R

TABLE 2 (continued)

PHYSICAL CHARACTERISTICS (2 through 7)*

Lake Code	Lake Name	Upstream Drainage Area (sq.mi.)	Report Area (sq.mi.)	Surface Area[2] (acres)	Gross Storage[2] (ac.ft.)	Approx. Mean Discharge (cfs)	Physiographic Province[5]	Use**
18-18	Buffalo Lake	70	70	1,275	38,000	--	PP	P, R
18-19	Lake Norman	1,800	230	32,510	1,093,600	--	PP	P
18-20	High Rock Lake	3,980[1]	660	15,886	254,000	--	PP	P
18-21	Lookout Shoals Lake	1,430	130	1,270	31,111	--	PP	P
18-22	Lake Hickory	1,300	240	4,110	127,479	--	PP	P
18-23	Rhodhiss Lake	1,060	80	3,515	73,000	--	PP	P
18-24	Lake James	390	210	6,510	288,800	--	PP	P
18-25	W. Kerr Scott Reservoir	380	280	4,000	153,000	580	BR	P, R, M, WS, I

1) Information provided by owner from lake information survey.

2) At maximum pool unless otherwise indicated.

3) At minimum pool.

4) Discharges through diversion canal depends upon the discharges through the powerhouse on Lake Moultrie.

5) CP - Coastal Plain; PP - Piedmont Province; BR - Blue Ridge.

6) Natural Lake.

7) Estimated value.

* See Bibliography for these references.

** R - Recreation; I - Industrial; P - Power; M - Municipal; WS - Water Supply (other than municipal).

TABLE 3

KEY LAKE GAGING STATIONS (2)(3)(8)

Lake & Code	USGS Gaging Station Number	Location Description	Drainage Area (sq.mi.)	Mean Flow (cfs)	Minimum Flow[1] (cfs)	Maximum Flow[2] (cfs)
Lake Moultrie 18-01	02170500	Located near Pineville, S.C., Berkeley Co., at Lake Marion-Moultrie Diversion Canal, just downstream from S.C. 45 Highway bridge	*	14,885	7,100	25,800
Lake Moultrie 18-01	02172000	Located near Pinopolis, S.C., Berkeley Co., at Power Plant just upstream from Seaboard Coast Line Railroad bridge	*	*	*	*
Lake Marion 18-03	02169800	Located near Ft. Motte, S.C., Calhoun Co., on Santee River just downstream from confluence of Wateree and Congaree Rivers	14,100	*	*	*
Lake Marion 18-03	02169900	Located near Rimini, S.C., Clarendon Co., at Elliott's Landing just downstream from Seaboard Coast Line Railroad bridge	14,194	*	*	*

TABLE 3 (continued)

KEY LAKE GAGING STATIONS (2)(3)(8)

Lake & Code	USGS Gaging Station Number	Location Description	Drainage Area (sq.mi.)	Mean Flow (cfs)	Minimum Flow[1] (cfs)	Maximum Flow[2] (cfs)
Lake Marion 18-03	02171000	Located near Pineville, S.C., Berkeley Co., at Spillway, upstream side, upstream from Old Santee Canal	14,700	*	*	*
Lake Murray 18-04	02168500	Located near Columbia, S.C., at dam of the Saluda River, 10 miles upstream from the confluence of the Saluda and Broad Rivers	2,420	*	*	*
Wateree Lake 18-06	02147500	Located at Great Falls, S.C., Chester Co., on Rocky Creek, just downstream from Turkey Branch	194	194	14	365
Lake Greenwood 18-10	02165000	Located near Ware Shoals, S.C., Laurens Co., on Reedy River just downstream from dam at Boyd's Mill	228	342	62	590

TABLE 3 (continued)

KEY LAKE GAGING STATIONS (2)(3)(8)

Lake & Code	USGS Gaging Station Number	Location Description	Drainage Area (sq.mi.)	Mean Flow (cfs)	Minimum Flow[1] (cfs)	Maximum Flow[2] (cfs)
Lake Greenwood 18-10	02165200	Located near Gray Court, S.C., Laurens Co., on South Rabon Creek at U.S. 76 Highway bridge	30	44	*	*
Lake Greenwood 18-10	02166500	Located near Chappells, S.C., Newberry Co., at dam on Saluda River just upstream from Wilson Creek	1,150	*	*	*
Lake James 18-24	02138500	Located near Nebo, N.C., Burke Co., on the Linville River at N.C. 126 Highway bridge, just downstream from Shooks Creek	67	146	*	*

1) Exceeded or equaled 90 percent of the time.

2) Exceeded or equaled 10 percent of the time.

* No information available.

SECTION 3 - NAVIGATION IMPROVEMENT PROJECTS

Federal Navigation Projects

An examination of recent Corps of Engineers' annual reports indicate only one navigation project relating to lakes greater than 1,000 acres that has been authorized by Congress. This, the St. Stephens project, would benefit or influence navigation on Lake Moultrie and Lake Marion.

Summarized information for the Lakes Report is given in Table 4.

Other Navigation Projects

Inquiries made at various state and Federal agencies indicate no navigation projects are now planned or under construction which would improve or substantially benefit navigation on lakes in the study area. However, there have been two lakes authorized through the Flood Control Act of 1946 as indicated in Table 4.

TABLE 4

AUTHORIZED FEDERAL PROJECTS (9)(10)(11)

Waterbody	Lake Moultrie
Work Authorized	Project will provide for construction of a diversion canal (approximately 15 miles long) from Lake Moultrie to the Lower Santee River with an 84,000 Kw hydroelectric generation plant.
Date Complete	Construction started, 1977
Project Location	St. Stephens Project, near St. Stephens, S. C.
Authorization	River and Harbor Act 1968, Public Law 90-483, Senate Document 88

Waterbody	W. Kerr Scott Reservoir
Work Authorized	Project consists of an earthfill dam 1,740 feet long with crest elevation 1,107.5 feet mean sea level or approximately 148 feet above stream bed elevation.
Date Complete	1963
Project Location	Approximately 5 miles west of Wilkesboro, N. C.
Authorization	Flood Control Act of 24 July 1946

TABLE 4 (continued)

AUTHORIZED FEDERAL PROJECTS (9)(10)(11)

Waterbody	Reddies River Lake
Work Authorized	Proposed dam structure located on the Reddies River near the Town of North Wilkesboro, N. C.
Date Completed	Advanced engineering design in progress (1977)
Project Location	Near Wilkesboro, N. C.
Authorization	Flood Control Act: 24 July 1946

SECTION 4 - INTERSTATE COMMERCE

Past

Santee-Cooper River Basins - Both the Santee and the Cooper have been extensively used since colonial times for purposes of waterborne commerce. Portions of both of these two rivers are currently being used as arteries of interstate commerce. (12)

The two dams which altered the flow of these rivers and which produced the large lakes now in existence date from a project begun in the 1930's. In 1939, work commenced on this plan, known as the Santee-Cooper. By 1941, the South Carolina Public Service Authority had completed the Santee Dam, which forms Lake Marion and inundates the upper fifty-six miles of the Santee River. Lake Moultrie was formed on the Cooper, and the whole project was completed in 1942. Although the project was intended to produce hydroelectric power, a ship lock was added to the Pinopolis Dam on Lake Moultrie to handle any waterborne commerce, enabling navigation to continue to and from points above the dam and down to the coast. (13)

Wateree-Congaree River Basins - This basin is actually part of the Santee River basin and consists of the Catawba, the Wateree, the Congaree, the Broad, the Pacolet, the Reedy, the Tyger, and the Saluda Rivers. In the 19th Century and during the early 20th Century, portions of some or all of these rivers enjoyed some form of waterborne commercial activity. The lakes found on these rivers today are man-made, and date from the advent of hydroelectric power.

In 1965, the various lakes on the Catawba River were listed as follows: Allisons, near Statesville, N. C., Lake Wylie-Lake Catawba, and Lake James, "near Marion and Morgantown ... 6,500 acres; built in 1919 by Duke Power Co." Other lakes on the Catawba include Fishing Creek Reservoir constructed during the first decade of the 20th Century, and Lookout Shoals, built by Duke Power Company in 1923. (14) Two other lakes, Rhodhiss, built in 1924, and Hickory, built in 1928, were also constructed by Duke Power Company. Lake Norman, the last lake to be constructed on the Catawba, was completed in 1963, and was an additional

source of hydroelectric power for the Duke Power Company. After the Catawba River becomes the Wateree, Lake Wateree or Wateree Pond provides additional hydroelectric power, and is a product of a program of development first launched in 1904.

On the Congaree River's upper tributaries of the Broad and the Saluda are additional large lakes used for water supply and hydroelectric power. Beginning in 1882, work was begun on a project which later was adapted to furnish power. Thereafter, twenty-five-mile long Lake Greenwood was formed by damming the Saluda at Buzzards' Roost. The Saluda Dam, constructed at Dreher Shoals, forms Lake Murray and furnishes hydroelectric power. (15) Poinsett Reservoir, constructed during the turn of the century on the North Saluda River, is a water supply reservoir for Greenville, S. C. Buffalo Lake, a water supply reservoir for Kings Mountain, North Carolina, and Lake William C. Bowen, a water supply reservoir for Spartanburg, South Carolina, are located on headwater streams of the Broad River. Parr Shoals Reservoir, located on the Broad River just north of Columbia, South Carolina, was constructed around the turn of the century "supplying the power for a single cotton mill." (16)

Pee Dee-Yadkin River Basins - The Pee Dee-Yadkin River basin contains a number of lakes, both large and small in size. All of these lakes are man-made.

Before construction of these dams and lakes, the Yadkin-Pee Dee basin never constituted an unbroken artery of interstate commerce. Parts of the Yadkin were used for commerce in the 19th Century, and the Pee Dee south of Smiths Mills and down to the mouth functioned as a navigable waterway for interstate commerce. Between Smiths Mills in South Carolina and the portion of the Yadkin which was then navigable, were, as a Corps of Engineers' officer put it in 1892, "111 bad miles of shoals, rocks, and ledges." (17)

The first lake to be constructed was Badin Lake, built in 1917. It was described in 1965 as follows: "210 foot dam, 5,973 acres. Built in 1917 by Carolina Aluminum Co.," it forms the Narrows Reservoir, used for hydroelectric power. (18) Nine years later, High Rock Lake was also

constructed for the Carolina Aluminum Company. It covers nearly 18,000 acres, is 70 feet deep, and, like Badin, is privately owned. A year later, in 1928, Lake Tillery was built by Carolina Power and Light Company. Lake Robinson, located in Darlington County, South Carolina on Black Creek, a tributary to the Great Pee Dee River, is non-navigable in terms of interstate commerce. The newest lakes are: the W. Kerr Scott Dam and Reservoir, located on the Yadkin nine miles upstream from Wilkesboro, N. C., and the Reddies River Lake. Tuckertown Lake was completed in 1962 by the Carolina Aluminum Company for hydroelectric power generation and recreation; the Kerr Scott Lake was completed in 1963, and the Reddies project is to be completed in 1977. Still another lake is to be located on Roaring River. (19)

These lakes were constructed after various schemes for making the Yadkin-Pee Dee a navigable waterway throughout its length had been discarded. Since 1909, the head of commercial navigation on the Pee Dee has been Smiths Mills at R.M. 55, although "no commerce has been reported since 1968." (20)

Waccamaw-Little Pee Dee River Basins - The Waccamaw River-Little Pee Dee River basin contains only one large lake of any significance in terms of waterborne interstate commerce: Lake Waccamaw. (21) Lake Waccamaw is described as follows: "a natural lake in Columbus County [N. C.], 5 mi. long, 3 mi. wide. Surrounding area drains into the lake; appears on Mosely map, 1733. Named for local tribe of Indians." (22)

In the latter portion of the 19th Century, after the passage of the Rivers and Harbors Act of 14 June 1880, navigational improvement on the Waccamaw River was authorized up to Red Bluff and Lake Waccamaw. (23) By 1896, the Waccamaw could be navigated 147 miles by poleboats -- that is to say, navigation by this type of craft was, in fact, possible on Lake Waccamaw itself. (24)

Following the passage of the Rivers and Harbors Act of 3 July 1890, Red Bluff, S. C. (at mile 70) became "the head of commercial navigation on the Waccamaw River." (25)

Present

Santee-Cooper River Basins - Although, as mentioned, the Santee-Cooper project's lakes were formed so as to be able to handle waterborne commerce, the lakes do not appear to be extensively used for that purpose at present. (12)

In 1965, the Santee-Cooper project's lakes were described as "Waterway Charleston to Columbia, connecting W. Br. Cooper River and Santee River via Tailrace Canal, Lake Moultrie, and Diversion Canal." (10)

Wateree-Congaree River Basins - Inland navigation of an interstate, commercial variety long ago ceased to be of significance on the water-bodies dealt with in this group. The construction of dams since the late 19th Century has been for purposes of generating hydroelectric power. There is apparently no commercial waterborne activity on the various lakes described. (12)

Pee Dee-Yadkin River Basins - The various lakes formed on the Yadkin and its tributaries are used for purposes of generating hydro-electric power. Boating activity on these lakes is apparently restricted to the recreational, not the commercial, sort. Waterborne Commerce of the United States 1975 contains no listing of waterborne commercial activity as taking place on the several lakes described above. (12)

Waccamaw-Little Pee Dee Basins - Lake Waccamaw is not currently being used for purposes of waterborne interstate commerce; "There is no commercial navigation above Red Bluff." (26)

In 1965, the lake was described as follows: "state owned. Just off U. S. 74 near Whiteville ... 7 miles long, 5 miles wide; 8,938 acres. Sandy bottom; shallow." (27)

Future Potential

Comprehensive analysis of the regional economics (income, education, employment, community facilities, transportation systems, and similar factors), which would indicate growth patterns and the services needed to sustain various types of industrial and commercial activities, is beyond the scope of this study. Thus, the potential use of the lakes report areas and their tributaries for interstate commerce in future

years is difficult to predict. However, some analysis and judgments have been made covering future commerce to assist in establishing navigation classifications.

As discussed later in Section 6, Lake Moultrie and Lake Marion are classified "navigable waters of the U. S." These lakes are the only lakes currently used for interstate commerce. This commerce is anticipated to continue in the future since they have lock access at Pinopolis Lock and Dam and they are connected to Charleston Harbor, the Atlantic Intracoastal Waterway, and the Atlantic Ocean. However, as regional economic trends change, the degree of demand of commerce activity on Lake Moultrie and Lake Marion may also change.

SECTION 5 - LEGAL AUTHORITY

General

This section presents information pertaining to the legal aspects of the navigability investigation. Such Federal and state court decisions as apply to the specific basin reported on herein are outlined. The Summary Report presents more complete documentation and references to the court cases dealing with navigation classifications and legal jurisdiction.

Navigability Interpretations

The term "navigable waters of the U. S." is used to define the scope and extent of the regulatory powers of the Federal government. Precise definitions of "navigable waters" or "navigability" are ultimately dependent on judicial interpretation, and are not made conclusively by administrative agencies.

Definitions of "navigability" are used for a wide variety of purposes and vary substantially between Federal and state courts. Primary emphasis must therefore be given to the tests of navigability which are used by the Federal courts to delineate Federal powers. Statements made by state courts, if in reference to state tests of navigability, are not authoritative for Federal purposes.

Federal courts may recognize variations in definition of navigability or its application where different Federal powers are under consideration. For instance, some tests of navigability may include:

1. Questions of title to beds underlying navigable waters.
2. Admiralty jurisdiction.
3. Federal regulatory powers.

This study is concerned with Federal regulatory powers. Unfortunately, courts often fail to distinguish between the tests, and instead rely on precedents which may be inapplicable. Thus, a finding that waters are "navigable" in a question dealing with land title may have a somewhat different meaning than "navigable waters of the U. S." which pertains to Federal regulatory functions.

In this study, the term "navigable waters of the U. S." is used to define the extent and scope of certain regulatory powers of the Federal government (River and Harbor Act); this is distinguished from the term "navigable waters" which refers to other Federal regulatory powers (Section 404 of PL 92-500).

Administratively, the term "navigable waters of the U. S." has been defined to mean waters that have been used in the past, are now used, or are susceptible to use as a means to transport interstate commerce landward to their ordinary high water mark and up to the head of navigation as determined by the Chief of Engineers. "Navigable waters of the U. S." are also waters subject to the ebb and flow of the tide shoreward to their mean high water mark. These waters are deemed subject to a Federal "navigation servitude". The term "navigable waters of the U. S." defines the more restricted jurisdiction which pertains to the River and Harbor Act of 1899.

In contrast, the term "navigable waters" defines the new broader jurisdiction with respect to Section 404 of the Federal Water Pollution Control Act Amendments of 1972. Accordingly, "navigable waters" not only include those waters subject to the navigation servitude, but adjacent or contiguous wetlands, tributaries, and other waters, as more fully defined in revised Corps of Engineers Regulations.

Although this navigability study covers both "navigable waters of the U. S." and "navigable waters", the analyses of judicial interpretations have only focused upon determining "navigable waters of the U. S." to the head of navigation. Due to common usages in court cases, the terms "navigability" and "navigable waters" may herein appear interchangeably with the term "navigable waters of the U. S." However, the summary of court cases is directed at the Federal regulatory jurisdiction of the River and Harbor Acts, and not necessarily regulatory jurisdiction under the Federal Water Pollution Control Act.

General Federal Court Cases

Powers of the Federal government over navigable waters stem from the Commerce Clause of the U. S. Constitution (Art. I, §8). Pursuant to

its powers under the Commerce Clause, Congress enacted the River and Harbor Act of 1899.

The well-established Federal test of navigability to whether a body of water is used or is capable of being used in conjunction with other bodies of water to form a continuous highway upon which commerce with other states or countries might be conducted.

Several Federal court decisions make it clear that a waterway which was navigable in its natural or improved state retains its character as "navigable in law" even though it is not presently used for commerce. The test of navigability is not whether the particular body of water is in fact being used for any form of commerce but rather whether it has the capacity for being used for some type of commerce. Several cases substantiate this (see the Summary Report for details on the court decisions).

The ebb and flow of the tide is another test which remains a constant rule of navigability in tidal areas, even though it has sometimes been disfavored as a test of Federal jurisdiction. Several cases note that ebb and flow should not be the sole criterion of navigability, but that extension of Federal jurisdiction into the major non-tidal inland waters is possible by an examination of the waters "navigable character". The ebb and flow test, however, remains valid as a rule of navigability in tidal areas; it is merely no longer a restriction for non-tidal areas. For bays and estauries, this extends to the entire surface and bed of all waterbodies subject to tidal action, even though portions of the waterbody may be extremely shallow or obstructed by shoals, vegetation or other barriers as long as such obstructions are seaward of the mean high tidal water line. Marshlands and similar areas are thus considered "navigable in law" insofar as they are subject to inundation by the mean high waters. The relevant test is therefore the presence of the mean high tidal waters. Navigable waters are considered navigable laterally over the entire surface regardless of depth.

Another factor relevant to navigability determinations is land title. Whatever title a party may claim under state law, the private ownership

of the underlying lands has no bearing on the existence or extent of the dominant Federal jurisdiction over "navigable waters of the U. S." Ownership of a river or lake bed will vary according to state law; however, the Supreme Court has consistently held that title to the bottomlands is subordinate to the public right of navigation.

Specific Federal Court Cases

Navigability, in the sense of actual usability for navigation or as a legal concept embracing both public and private interests, is not defined or determined by a precise formula which fits every type of stream or body of water under all circumstances and at all times. A general definition or test which has been formulated for Federal purposes is that rivers or other bodies of water are navigable when they are used, or are susceptible of being used, in their ordinary condition as highways for commerce over which trade and travel are or may be conducted in the customary modes of trade and travel on water.

The question of navigability of water when asserted under the Constitution of the U. S., as is the case with "navigable waters of the U. S.", is necessarily a question of Federal law to be determined according to the general rule recognized and applied in the Federal courts.

Review of Federal case history reveals one court decision which applies specifically to navigation in the Lakes Report areas. (28)

Lake Murray - Thompson v. South Carolina Electric and Gas Co.* - This case, concerning the death by drowning of plaintiff's intestate, held that the waters of Lake Murray were "navigable waters of the U. S." and the electric company's use and control thereof extended only to uses provided by its licenses to use impounded waters at its power plant below the dam for production of electric energy.

An additional court case is discussed in the Wateree and Catawba basin reports (09 and 16) concerning navigation on these rivers, including lakes.

South Carolina State Court Cases

The South Carolina legislative enactment defining navigability and requiring freedom from obstruction may be found in Section 70-1 of the South Carolina Code of Laws. This Section essentially provides

* 122 F. Supp. 313 (1954).

that all streams which can float rafts of lumber or timber are considered navigable by state law.

Many of the South Carolina State cases reported are primarily concerned with state ownership questions. While the majority of states actually own streams and exercise control over their navigable waters, the ultimate authority has been granted to the Federal government by the Commerce Clause of the Constitution. The general rule, then, is that the states both own and control the navigable streams within their borders, subject to exercise of the superior right of control by the U. S. Although case histories show that state and Federal concepts of navigability do not always agree, when Federal interests are at stake, the Federal test will govern.

There are exceptions, however, to the "overwhelming majority rule of state ownership of lands beneath navigable waters," and South Carolina is in the minority. In the minority states, it was considered that property rights were vested at the time of independence from England and that the state took title only to tidal-navigable streams while riparian owners took title to all stream beds, both navigable and non-navigable, if non-tidal. Even in the minority states, however, private ownership of the bed does not affect the rights of the public to the use of navigable waters.

A legal search indicates that there are no South Carolina state court cases which specifically deal with navigation considerations in the Lakes Report areas. (28)

North Carolina State Court Cases

The issue of navigability has arisen in a number of actions in the state courts of North Carolina. However, most of these cases concern coastal areas not within the boundary of the Charleston District.

North Carolina does not follow the English common-law rule that streams are navigable only as far as tidewater extends. Thus, unlike South Carolina as discussed previously, North Carolina conforms to the majority rule within the U. S. (i.e., state ownership of land beneath navigable waterways).

A review indicates there are no North Carolina state court decisions which relate to navigation in the Lakes Report areas. (28)

Recent Federal Litigation

A review of recent Federal litigation concerning the Charleston District reveals one court action in the Lakes Report areas concerning navigation. (28)

Lake Marion - U. S. v. Edward M. Mitchell* - The government commenced this action on 13 September 1973 against defendant for violation of Section 10 of the River and Harbor Act of 1899. A non-jury trial was heard by the Court on 27 April 1974. From the evidence presented the court found that defendant had excavated a canal commencing below the normal water level of Lake Marion, Clarendon County, South Carolina. The court subsequently ordered on 3 June 1974 that defendant be permanently enjoined and restrained from any further unpermitted alteration or modification, and that defendant refill and restore to as nearly normal as before the canal in accordance with a Corps plan. The court further ordered that upon defendant's failure to restore, the government may effect restoration and recover damages from defendant for the expense therefor, and that either party could apply to the court for resolution of any dispute arising in enforcement of the order. According to a Corps inspection made 26 January 1976, defendant completed a significant portion of the restoration and "refilling" of the canal. The district is currently satisfied that the work accomplished represents adequate restoration of the area.

Federal Agency Jurisdiction

The delineation of "navigable waters of the U. S.", as discussed earlier, in essence, defines the Federal navigation servitude and is applicable to Federal jurisdiction generally (not merely applicable to the Corps of Engineers). No matter which Federal agency or activity may be involved, the assertion of "navigability" ("navigable waters of the U. S.") arises under the U. S. Constitution, or under application of Federal statute.

By virtue of the Commerce Clause of the Federal Constitution, and the clause empowering Congress to make all laws necessary to carry into execution the Federal judicial power in admiralty and maritime matters,

* U.S.D.C., South Carolina, Civil Action No. 73-1125

"navigable waters of the U. S." are under the control of Congress, which has the power to legislate with respect thereto. It is for Congress to determine when and to what extent its power shall be brought into activity. It may be exercised through general or special laws, by Congressional enactments, or by delegation of authority.

Thus, Congress has power which is paramount to that of the states to make improvements in the navigable streams of the U. S. and for this purpose to determine and declare what waters are navigable. The Federal government also has the power to regulate the use of, and navigation on, navigable waters.

The above presents the basis upon which Federal jurisdiction in "navigable waters of the U. S." is established. The basic definition or jurisdictional concept of "navigable waters of the U. S." remains consistent, irrespective of which department or office of the Federal government may be delegated particular responsibility. For instance, the safety, inspection, and marine working functions of the U. S. Coast Guard embrace vessel traffic within "navigable waters of the U. S." as previously defined.

With specific reference to agency regulation of construction or work within "navigable waters of the U. S.", other than by the Corps of Engineers, the Department of Transportation Act of 15 October 1966 (PL 89-670) transferred to and vested in the Secretary of Transportation, certain functions, powers, and duties previously vested in the Secretary of the Army and the Chief of Engineers. By delegation of authority from the Secretary of Transportation, the Commandant, U. S. Coast Guard, has been authorized to exercise certain of these functions, powers, and duties relating to the location and clearances of bridges and causeways in the "navigable waters of the U. S."

An additional agency of particular interest concerning work or construction within "navigable waters of the U. S." is the Federal Power Commission. The Federal Power Act, Title 16, United States Code, Sections 791 et. seq., contemplates the construction and operation of water power projects on navigable waters in pursuance of licenses granted by the Federal Power Commission. The statute was enacted to

develop, conserve, and utilize the navigation and water power resources of the nation. The act provides for the improvement of navigation, development of water power, and use of public lands to make progress with the development of the water power resources of the nation.

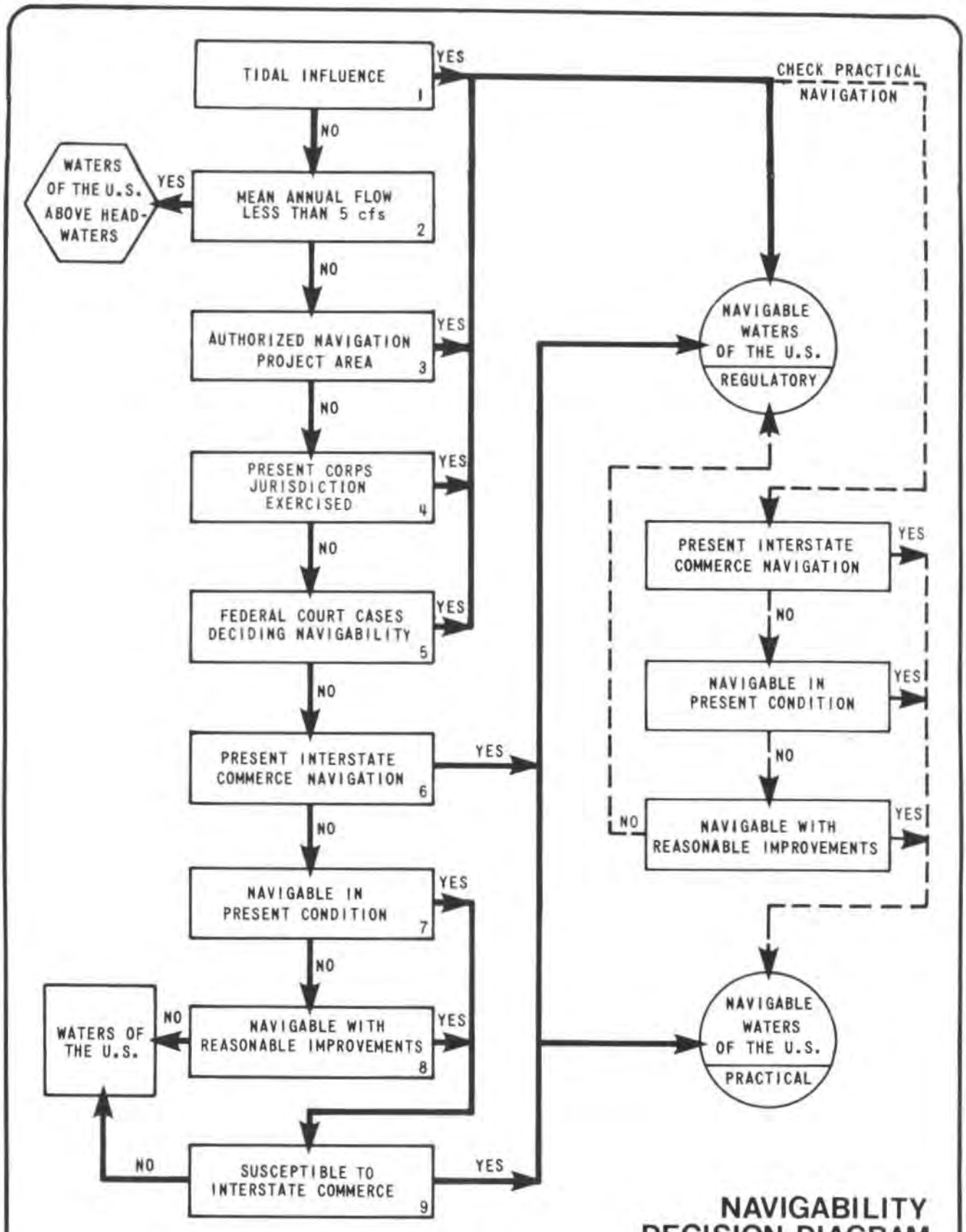
SECTION 6 - NAVIGATION OBSTRUCTIONS AND CLASSIFICATIONS

Navigation Classification Procedures

As noted in Section 5, definition of navigability is not subject to a single precise formula which applies to every circumstance. Many factors including stream physical characteristics (depth, width, flow, slope, etc.), presence of obstructions, court decisions, authorized navigation projects, potential for reasonable improvements, and susceptibility of a stream to interstate commerce activities, play a role in the decision-making process for classifying waterbodies in the Charleston District. In an effort to make the analytical process concerning stream classifications as systematic as possible, a "Navigability Decision Diagram" has been developed and is presented in Figure 1. This diagram has been utilized as a guide in assessing the various navigation classifications for streams and lakes in the Charleston District. The Summary Report includes a detailed presentation on the methodology and approaches used in the analysis; however, the following presents a brief synopsis of the techniques as indicated in Figure 1.

Tidal Influenced Areas - Tidal areas (see item 1 in Figure 1) which are affected by mean high water are classified "navigable waters of the U. S." according to various legislative and judicial actions. The "navigable waters of the U. S." are subject to regulatory jurisdiction by the Corps of Engineers and other agencies. Even though all tidal areas are so classified and subject to regulatory procedures, many are not practically navigable based upon past and/or present requirements for vessels. Figure 1 shows that some additional "check" analyses are necessary to distinguish those tidal waters which are actually capable of practical navigation. Investigation of the tidal areas is beyond the scope of this study; however, drawings showing the "plan" of major rivers to their mouth, often tidal influenced, are presented in the interest of continuity.

Waters of the U. S. Above Headwaters - Section 404 of PL 92-500 considers the headwaters of waterbodies to be the point at which the mean annual flow is five cfs. Waterbodies or portions of waterbodies



NAVIGABILITY DECISION DIAGRAM
Figure 1

located upstream of the headwaters are nationally permitted by law and will not require an individual application for dredge or fill discharge permits provided the proposed work will meet certain conditions. However, these waters are classified "waters of the U. S." and are within Corps of Engineers jurisdiction as applicable to Section 404. Item 2 in Figure 1 shows the testing procedure for the five cfs point.

Authorized Navigation Project Area - Any streams which currently have authorized Federal projects to aid navigation are classified as "navigable waters of the U. S." (Item 3 in Figure 1). Many of the projects thus authorized were based upon conditions which are not currently applicable (for example, use of pole boats or steamboats for justifying the navigation benefits). Consequently, many of the streams having older authorized projects will not allow passage of present-day commercial navigation vessels without some additional improvement. Thus, some portions of the authorized project areas are not considered practical for navigation. Figure 1 shows the additional "check" procedure which has been followed to assess the practical limit of "navigable waters of the U. S."

Present Corps Jurisdiction Exercised - The Corps of Engineers is exercising jurisdiction on several non-tidal waterbodies which are not covered by authorized projects (Item 4 in Figure 1). (10) Determinations previously made on these waterbodies under the River and Harbor Act indicated use for interstate commerce and hence the current classification as "navigable waters of the U. S." Some of these streams are not currently navigable by present-day commercial vessels and thus have practical limits. Figure 1 shows the "check" used to assess the practical limits of "navigable waters of the U. S."

Federal Court Decisions - As noted in Section 5, Federal case law is the predominant indicator which is to be used for establishing Federal jurisdiction over waterbodies in the Charleston District (Item 5 in Figure 1). Several decisions have been rendered which classify certain streams and lakes in the district as "navigable waters of the U. S." However, some of these court decisions have been arrived at under different circumstances or without the benefit of the data developed as a part of this investigation. Therefore, even though some of the

lakes are classified by judicial review as "navigable waters of the U. S.", they are not necessarily practical for navigation with present-day vessels. Figure 1 shows the steps necessary to "check" those portions of the "navigable waters of the U. S." which are capable of practical navigation.

Present Interstate Commerce Navigation - Any lakes currently involved in interstate commerce activities are classified as "navigable waters of the U. S." from both the regulatory and practical standpoint (see Item 6 in Figure 1).

Waters of the U. S. Below Headwaters - For those lakes or lake tributaries not subject to authorized projects, court cases, or present interstate commerce navigation, several additional tests for determining navigability are required (Items 7 and 8 in Figure 1). If the waterbody is not judged to be navigable in its present state or with reasonable improvements, then it is beyond the limit of "navigable waters of the U. S." and is termed "waters of the U. S." over the remaining length. These "waters of the U. S." (as well as the "navigable waters of the U. S.") up to the headwaters (five cfs points) of the lakes are subject to jurisdiction under Section 404 of PL 92-500. A general or individual permit is required for discharge of dredged or fill material below the headwaters (five cfs point) of "waters of the U. S." Discharges above the headwaters are discussed in the previous subsection, "Waters of the U. S. Above Headwaters."

Interstate Commerce - Some non-tidal waters in the district are not now subject to authorized projects, court decisions, or interstate commerce navigation, but can be navigated under present or reasonably improved conditions. These streams may be considered for classification as "navigable waters of the U. S." if they are susceptible to interstate commerce activities (past, present, or future). A combined judgment considering both "reasonable improvement" factors (Item 8 in Figure 1) and "interstate commerce" factors (Item 9 in Figure 1) has often been utilized in arriving at the conclusions and recommendations concerning navigability of waterbodies in the Charleston District. The Summary Report provides further details on these factors.

Navigation Classification Categories

This study classifies streams and lakes into several different categories, each of which is discussed subsequently:

1. Present "navigable waters of the U. S." (by regulatory procedures).
2. Historically navigable waters (based on literature review).
3. Recommended "navigable waters of the U. S." (based upon data developed as a part of this investigation).
4. Recommended waters for practical navigation (within "navigable waters of the U. S.").
5. Headwaters for all waterbodies (five cfs points).

The first four navigation classifications are displayed on the plates presented later in this report. The headwater limits are summarized in Appendix A.

Present Navigable Waters of the U. S.

Lakes currently classified as "navigable waters of the U. S." are Lake Moultrie (18-01), Lake Marion (18-03), Lake Murray (18-04), Lake Wateree (18-06), Fishing Creek Reservoir (18-08), and Lake Wylie (18-11). These classifications are based on regulatory, practical, and/or historical use.

Historically Navigable Waters

Various types of vessels ranging from cypress log canoes to steamboats have navigated numerous streams in the Coastal Plain. Lake Waccamaw (18-02), the only natural lake in the Charleston District, was navigated by early explorers and settlers, while Lake Moultrie (18-01) and Lake Marion (18-03) were navigated in the more recent past and to the present. No other lakes within this report were found to have been used historically for interstate commerce.

Recommended Navigable Waters of the U. S.

"Navigable waters of the U. S.", once classified in the past, cannot be declassified. Thus, the recommended "navigable waters of the U. S. (for regulatory purposes) for the Lakes Report are Lake Moultrie (18-01), Lake Marion (18-03), Lake Murray (18-04), Lake Wateree (18-06), Fishing

Creek Reservoir (18-08), and Lake Wylie (18-11). In addition, the upstream part of the Santee River from Lake Marion to the confluence with the Congaree and Wateree Rivers and the portion of the Saluda River from Lake Murray to Lake Greenwood Dam are also recommended "navigable waters of the U. S." Further discussion of these two river areas follows in the next subsection.

Plate 18-1 presents the location of these lakes. Plates 18-11, 18-13, 18-14, 18-16, 18-18, and 18-21 present the plans of the lakes that are recommended "navigable waters of the U. S."

Recommended Practical Navigable Waters of the U. S.

Lakes recommended as "practical navigable waters of the U. S." are Lake Moultrie and Lake Marion. The recommended "practical navigable waters of the U. S." classification for the Lakes Report is based on field investigation, computational analysis of obstructions, review of navigable access, and present use. As a result, it was determined that Lake Moultrie (18-01) and Lake Marion (18-03) have navigable access to Charleston Harbor, the Intracoastal Waterway, and the Atlantic Ocean. The conclusions reached on lake navigation meet the criteria established for the Federal test of navigability, that the body of water was used in the past, is currently used, or is capable of use, in conjunction with other bodies of water to form a continuous highway upon which commerce with other states or countries might be conducted.

As indicated in Section 4, Lakes Moultrie and Marion were constructed primarily to produce hydroelectric power. However, the ship lock added to the Pinopolis Dam on Lake Moultrie was implemented to handle any waterborne commerce enabling navigation to continue to and from points above the dam and down to the coast.

Lakes Moultrie and Marion, shown on Plates 18-11 and 18-13, respectively, presently maintain limited interstate commerce navigation. The Santee Dam at Lake Marion (18-03) has no lock facilities which prohibits any navigational access from the Santee River. However, Lake Marion is connected to Lake Moultrie via the Diversion Canal. This canal provides diversion of the Santee River flow to the Cooper River and navigational access for Lake Marion to Lake Moultrie.

Lake Marion inundates approximately 56 miles of the Santee River as discussed in Report 05. A small portion of the Santee River, which extends from the upstream area of Lake Marion to the confluence of the Wateree and Congaree Rivers (R.M. 125.3) is included in the Lake Marion area. This section of the Santee River is shown on Plate 18-13. Although the Santee River's practical limit of "navigable waters of the U. S." is at the Santee Dam (R.M. 87.7 - see Report 05) navigation is in fact possible to R.M. 125.3 via the Cooper River and the Tailrace Canal, and a diversion canal which connects Lakes Moultrie and Marion.

A 54-mile segment of the Saluda River (including Lake Murray) extends upstream of Lake Murray Dam to Lake Greenwood Dam. This portion of stream was found to be dimensionally capable of supporting commercial navigation. This segment, however, is isolated from other navigable waterways by steep slope and a non-navigable entrance through the Lake Murray Dam. In addition, the present and potential use of the river for interstate commerce does not appear sufficient to justify the extensive amount of work that would be necessary to open this lake, the section of the river, and Lake Greenwood to navigation. Therefore, Lake Murray, the portion of the Saluda River below Lake Murray, Lake Greenwood, and the Saluda River above Lake Greenwood Dam, are not recommended to be classified as "practical navigable waters of the U. S." (see Report 14 for additional information on the Saluda River).

Unlike Lake Moultrie and Lake Marion, the remaining lakes (18-02 and 18-04 through 18-25) are either without locks or navigable entrances or inaccessible. These lakes were not used in the past, nor are they currently used for interstate commerce. As identified in Section 4, the primary function of the majority of these lakes was hydroelectric power. The present potential for river or lake commerce does not appear sufficient to justify the extensive amount of work that would be required to open these lakes to navigation; therefore, the recommended practical lake navigation was limited to Lake Moultrie and Lake Marion. These remaining lakes are shown on Plates 18-12 and 18-14 through 18-35.

Obstructions to Navigation

Photographs of obstructions located within the recommended "practical navigable waters of the U. S." are shown in Figures 2 through 7. Each photograph is identified to correspond with locations on Plate 18-11 and Plate 18-13. An approximate horizontal channel width of 160 feet, an approximate water depth of 30 feet, and approximately 50 feet vertical clearance from obstruction to the water surface was indicated at South Carolina Highway 45 bridge, shown in Figure 3. Horizontal channel clearance at Interstate 95 and U. S. 15 is approximately 140 feet while vertical clearance from obstruction to water surface is about 50 feet. Depth of channel at these obstructions is approximately 38 feet. These obstructions are shown in Figure 6. Figure 7 presents the Seaboard Coast Line Railroad bridge located in the upstream portion of Lake Marion. A horizontal clearance of about 110 feet, vertical clearance of 18 feet, and a channel depth of approximately 18 feet were identified at this structure. It is emphasized that all references to elevations are approximate since vertical control was established from USGS contour maps and not field instrument surveys. Water depth and structure clearance measurements are also approximate due to accuracy inherent in the field techniques. (See the Summary Report for a detailed description of field procedures and methodology.)

Waters of the U. S.

"Waters of the U. S." are considered to be all streams beyond the recommended limit of "navigable waters of the U. S." "Waters of the U. S." with more than five cfs mean annual flow require a permit for discharge of dredged or fill material. "Waters of the U. S." with less than five cfs mean annual flow are nationally permitted by law and will not require an individual application for dredge or fill discharge permits provided the proposed work will meet certain conditions.

Appendix A lists all the five cfs water flow points associated with the Lakes Report area. Each point is located by stream code, stream name, latitude and longitude, and a mileage reference.

Appendix B lists the lakes located in the Lakes Report area which have surface areas between 10 and 1,000 acres. The lake summary identifies the stream basin code, lake name or owner, county location, and where data is available, the surface area and gross storage.

FIGURE 2 - PINOPOLIS LOCK AND DAM (LAKE MOULTRIE 18-01)

FIGURE 3 - S. C. 45 HIGHWAY BRIDGE (DIVERSION CANAL)

FIGURE 4 - S. C. 45 HIGHWAY BRIDGE (DIVERSION CANAL)

FIGURE 5 - SANTEE DAM (LAKE MARION 18-03)

FIGURE 6 - INTERSTATE 95, U. S. 15 HIGHWAY BRIDGES (AND POWER LINE) (LAKE MARION 18-03)

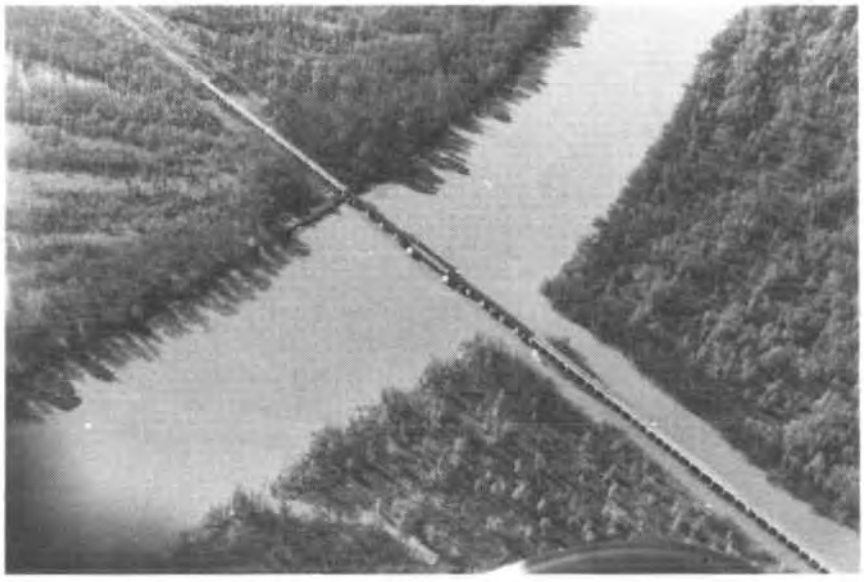


FIGURE 7 - SEABOARD COAST LINE RAILROAD BRIDGE (LAKE MARION 18-03)

SECTION 7 - CONCLUSIONS AND RECOMMENDATIONS

Five classifications of navigation on lakes in the Lakes Report areas have been determined and are presented below. The first two are classifications developed from historical evidence and current Federal stream classifications. Classification 3 is based on field measurements, observations, and data analysis of the Lakes Report area. Classification 4 is based on review of all previously determined limits with a recommendation of the most upstream locations with supporting evidence of navigability. The fifth classification accounts for all lakes not otherwise classified and was determined based on their drainage areas and hydrological aspects.

1. Lakes Moultrie (18-01), Marion (18-03), Murray (18-04), Wateree (18-06), Fishing Creek Reservoir (18-08), and Wylie (18-11) are presently classified "navigable waters of the U. S."
2. Historical navigation of lakes in the Lakes Report area has been recorded on Lake Moultrie (18-01), Lake Waccamaw (18-02), and Lake Marion (18-03).
3. The lakes recommended as "practical navigable waters of the U. S." are Lakes Moultrie (18-01) and Marion (18-03).
4. It is recommended that Lakes Moultrie (18-01), Marion (18-03), Murray (18-04), Wateree (18-06), Wylie (18-11), and Fishing Creek Reservoir (18-08) be classified as "navigable waters of the U. S."
5. All lakes not recommended for classification as "navigable waters of the U. S." are recommended for classification as "waters of the U. S."

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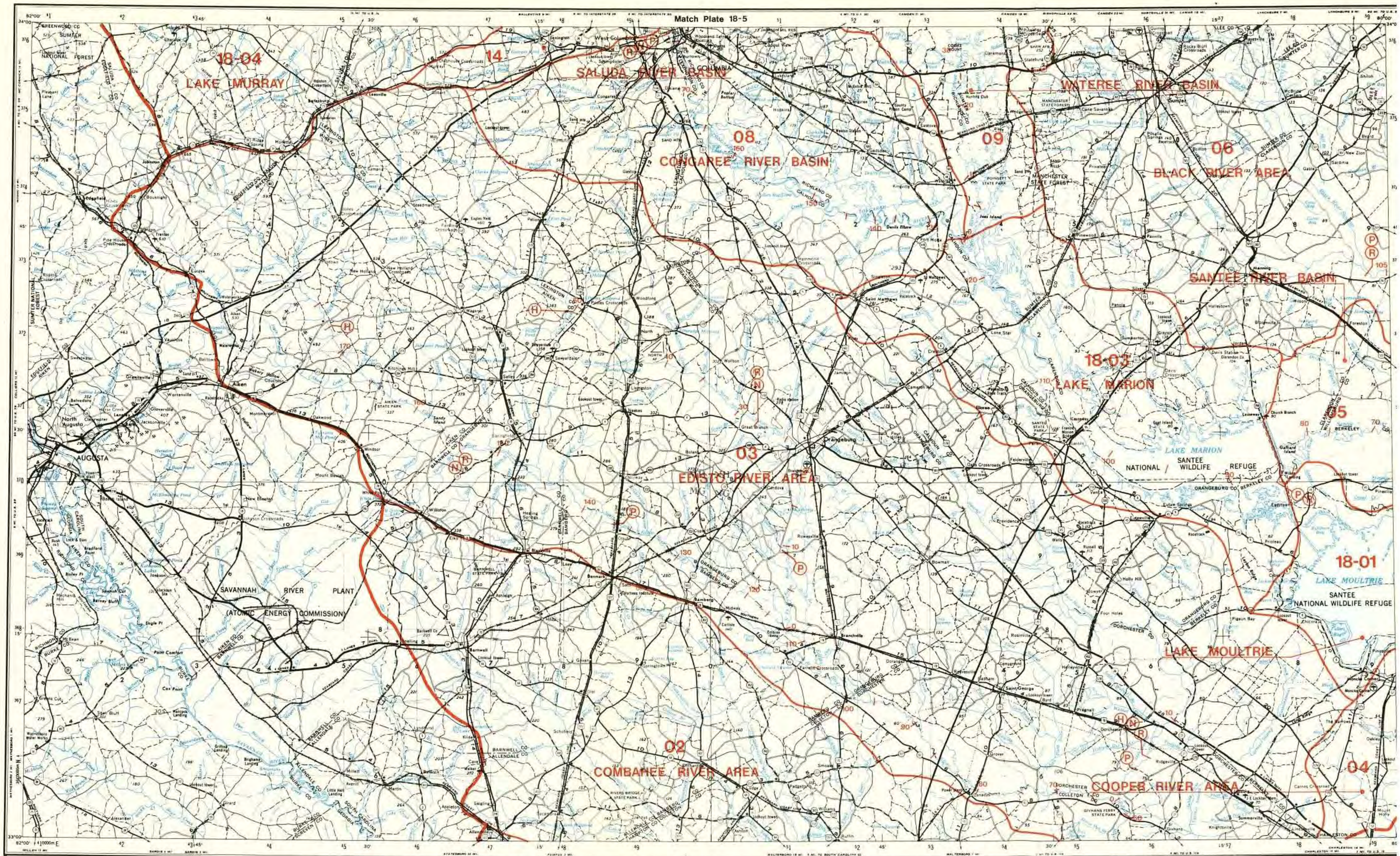


USGS BASE MAP
AUGUSTA, GA., S.C.
1957, Revised 1969
NI 17-8

scale in miles

LEGEND:
- (N) PRESENT LIMIT OF NAVIGABLE WATERS OF THE U.S.
- (H) HISTORIC LIMIT OF NAVIGATION
- (P) PRACTICAL LIMIT OF NAVIGATION (RECOMMENDED)
- (R) LIMIT OF NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
- 20 RIVER MILE

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

SIGNIFICANT FEATURES
LAKES REPORT
Report No. 01,02,03,04,05,06,08,09,14,18
NAVIGABILITY STUDY
Plate 18-2

USGS BASE MAP
GEORGETOWN, S.C. ; N.C.
NI 17-9

scale in miles

LEGEND:

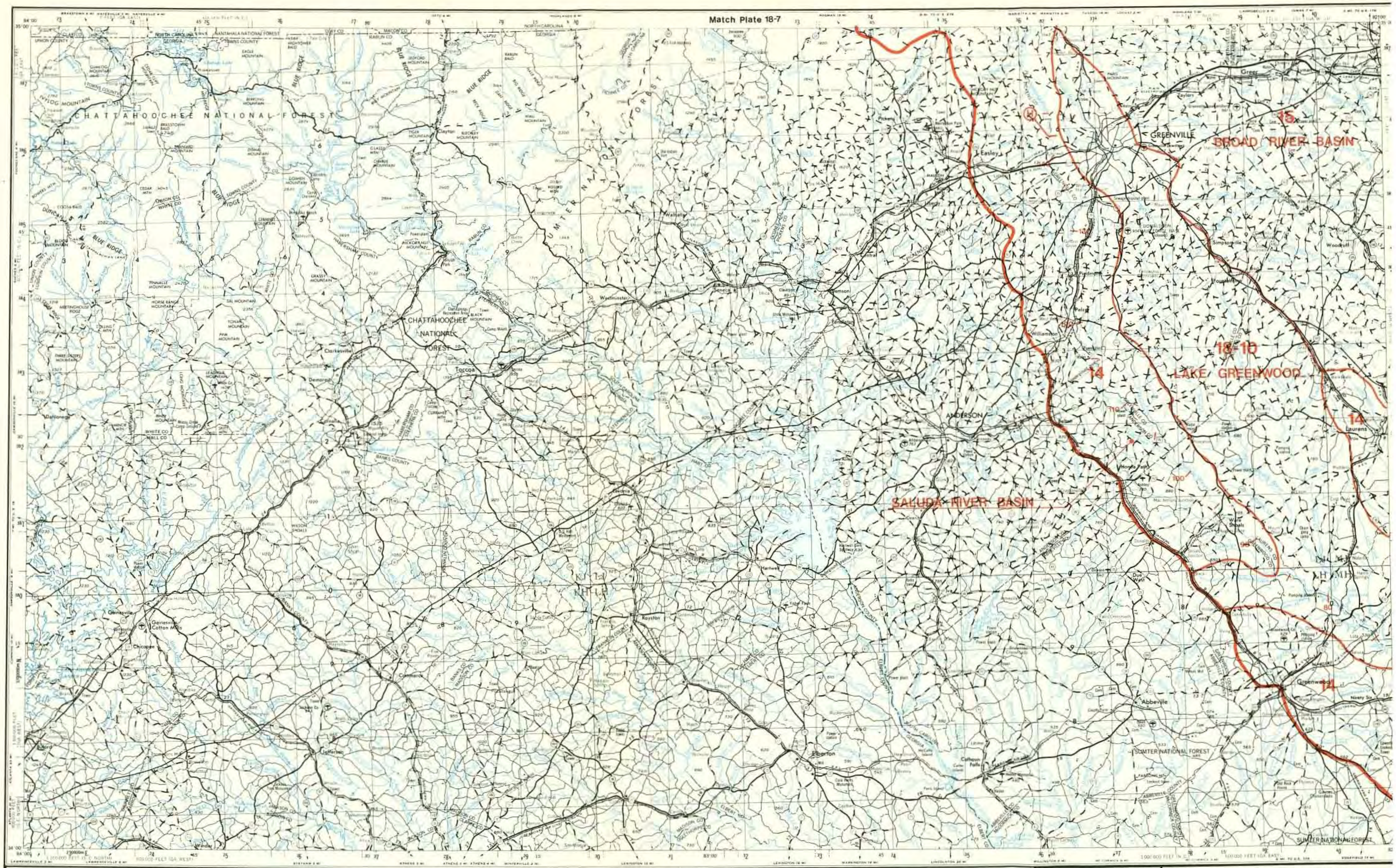
- (N) PRESENT LIMIT OF NAVIGABLE WATERS OF THE U.S.
- (H) HISTORIC LIMIT OF NAVIGATION
- (P) PRACTICAL LIMIT OF NAVIGATION (RECOMMENDED)
- (R) LIMIT OF NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
- (T) APPROXIMATE LIMIT OF TIDAL INFLUENCE
- 70 RIVER MILE

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

SIGNIFICANT
LAKES R
Report No. 04,05,0
NAVIGABILIT



USGS BASE MAP
GREENVILLE, S.C.; GA.; N.C.
1954 Revised 1964
NI 17-4

0 5 10
scale in miles

N

LEGEND:

- (N) PRESENT LIMIT OF NAVIGABLE WATERS OF THE U.S.
- (H) HISTORIC LIMIT OF NAVIGATION
- (P) PRACTICAL LIMIT OF NAVIGATION (RECOMMENDED)
- (R) LIMIT OF NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
- 20 RIVER MILE

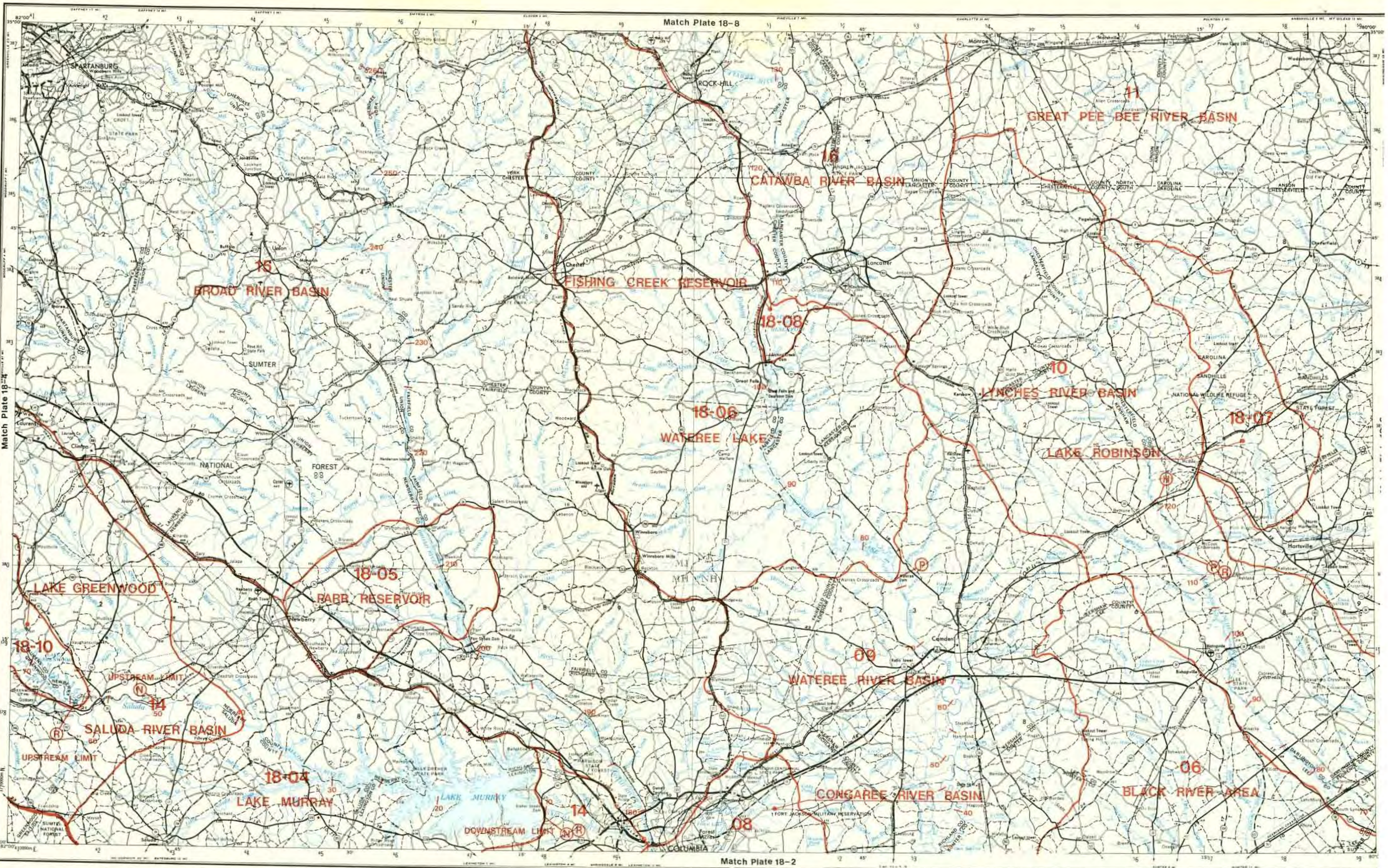
1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

SIGNIFICANT FEATURES

LAKES REPORT
Report No. 14, 15, 18
NAVIGABILITY STUDY
Plate 18-4



USGS BASE MAP
SPARTANBURG, S.C.; N.C.
1953, Revised 1969
NI 17-5

scale in miles

LEGEND:

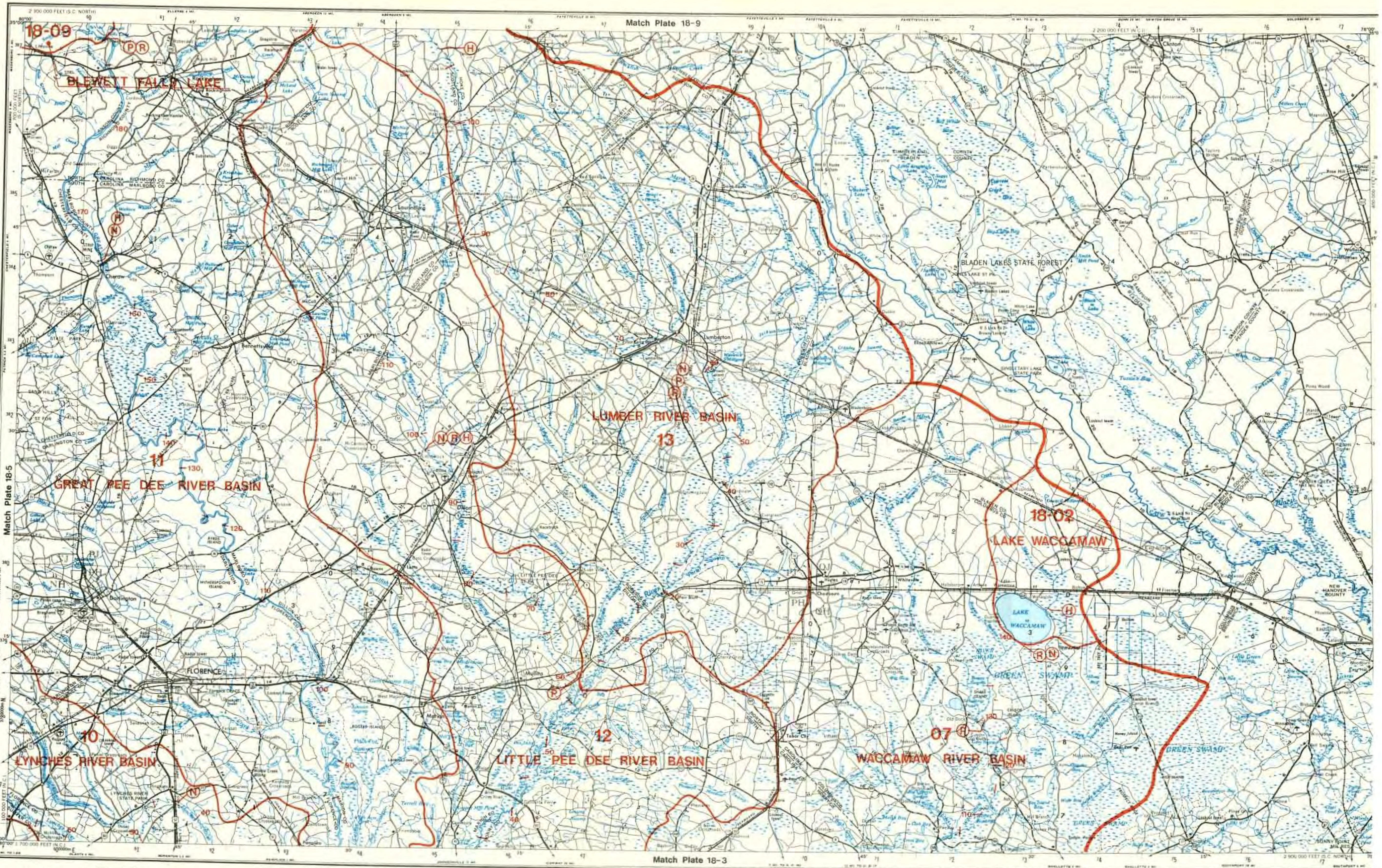
- (N) PRESENT LIMIT OF NAVIGABLE WATERS OF THE U.S.
- (H) HISTORIC LIMIT OF NAVIGATION
- (P) PRACTICAL LIMIT OF NAVIGATION (RECOMMENDED)
- (R) LIMIT OF NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
- RIVER MILE

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

SIGNIFICANT FEATURES
LAKES REPORT
Report No. 06, 08, 09, 10, 11, 14, 15, 16, 18
NAVIGABILITY STUDY
Plate 18-5



USGS BASE MAP
FLORENCE, S.C.; N.C.
1953, Revised 1974
NI 17-6

scale in miles

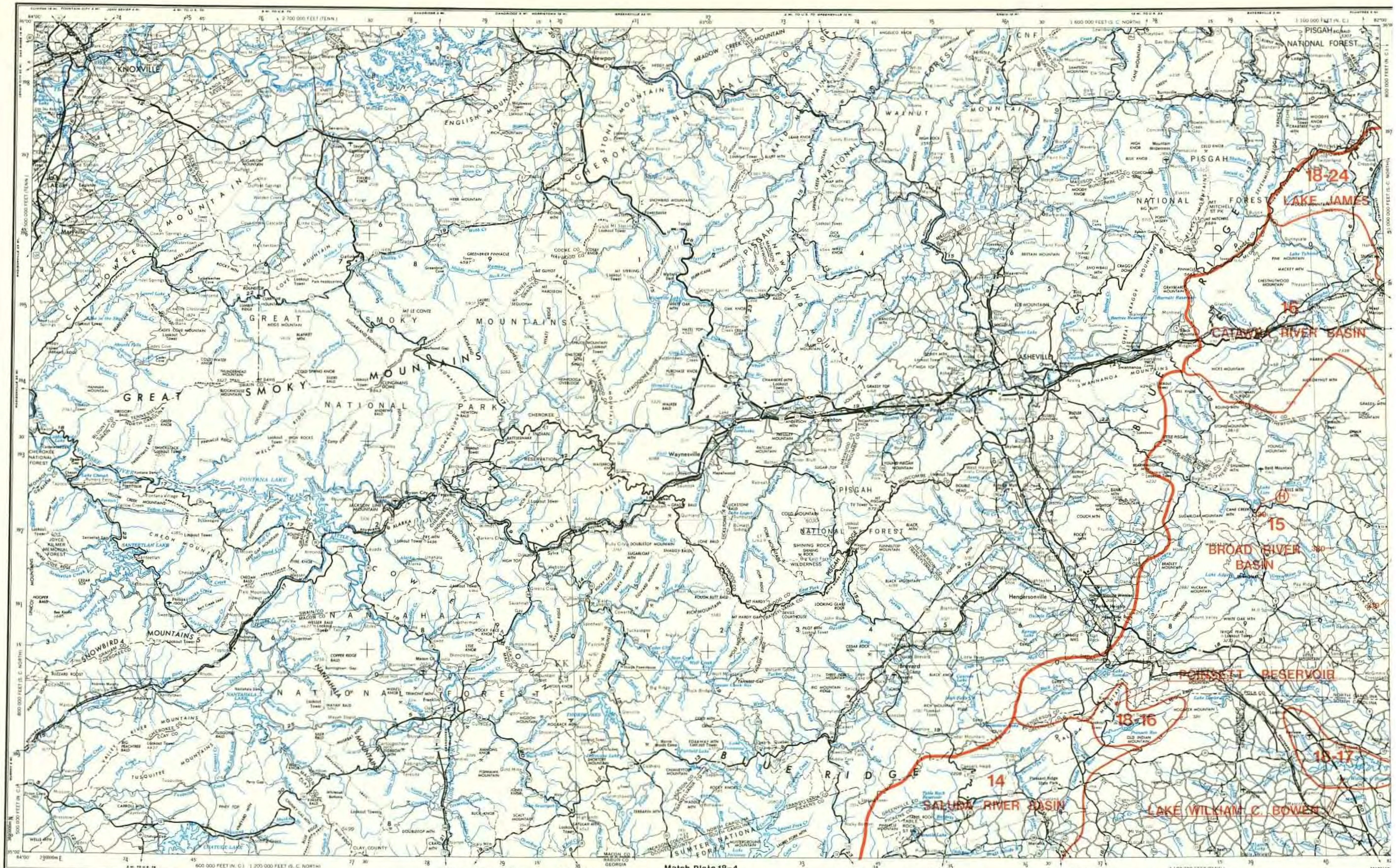
LEGEND:
(N) PRESENT LIMIT OF NAVIGABLE WATERS OF THE U.S.
(H) HISTORIC LIMIT OF NAVIGATION
(P) PRACTICAL LIMIT OF NAVIGATION (RECOMMENDED)
(R) LIMIT OF NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
20 RIVER MILE

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina.

STANLEY CONSULTANTS

SIGNIFICANT FEATURES
LAKES REPORT
Report No. 06, 07, 10, 11, 12, 13, 18
NAVIGABILITY STUDY
Plate 18-6



USGS BASE MAP
KNOXVILLE, TENN., N.C., S.C.
1957 Revised 1972
NI 17-1

scale in miles

LEGEND:
Ⓝ PRESENT LIMIT OF NAVIGABLE WATERS OF THE U.S.
Ⓗ HISTORIC LIMIT OF NAVIGATION
Ⓟ PRACTICAL LIMIT OF NAVIGATION (RECOMMENDED)
Ⓡ LIMIT OF NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
RIVER MILE

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

SIGNIFICANT FEATURES
LAKES REPORT
Report No. 14, 15. 16, 18
NAVIGABILITY STUDY
Plate 18-7

Match Plate 18-10

Match Plate 18-7

Match Plate 18-5

W. KERR SCOTT RESERVOIR

18-25

17

18-21

17

YADKIN RIVER BASIN

16

CATAWBA RIVER BASIN

18-22

LAKE HICKORY

LOOKOUT SHOALS LAKE

18-24

LAKE JAMES

18-23

RHODHISS LAKE

18-20

HIGH ROCK LAKE

DOWNSTREAM LIMIT

16

18-19

LAKE NORMAN

18-15

18-14

TUCKERTOWN LAKE

BADIN LAKE

BUFFALO LAKE

MOUNTAIN ISLAND LAKE

18-12

18-18

18-11

LAKE WYLIE

18-13

LAKE TILLERY

15

BROAD RIVER BASIN

16

CATAWBA RIVER BASIN

11

GREAT PEE DEE RIVER BASIN

WATEREE LAKE

18-06

NEW ORLEANS
CHARLOTTE
CHARLESTON
Georgetown
Kingstree
Nichols

USGS BASE MAP
CHARLOTTE, N.C.; S.C.
1953, Revised 1974
NI 17-2

0 5 10
scale in miles

N

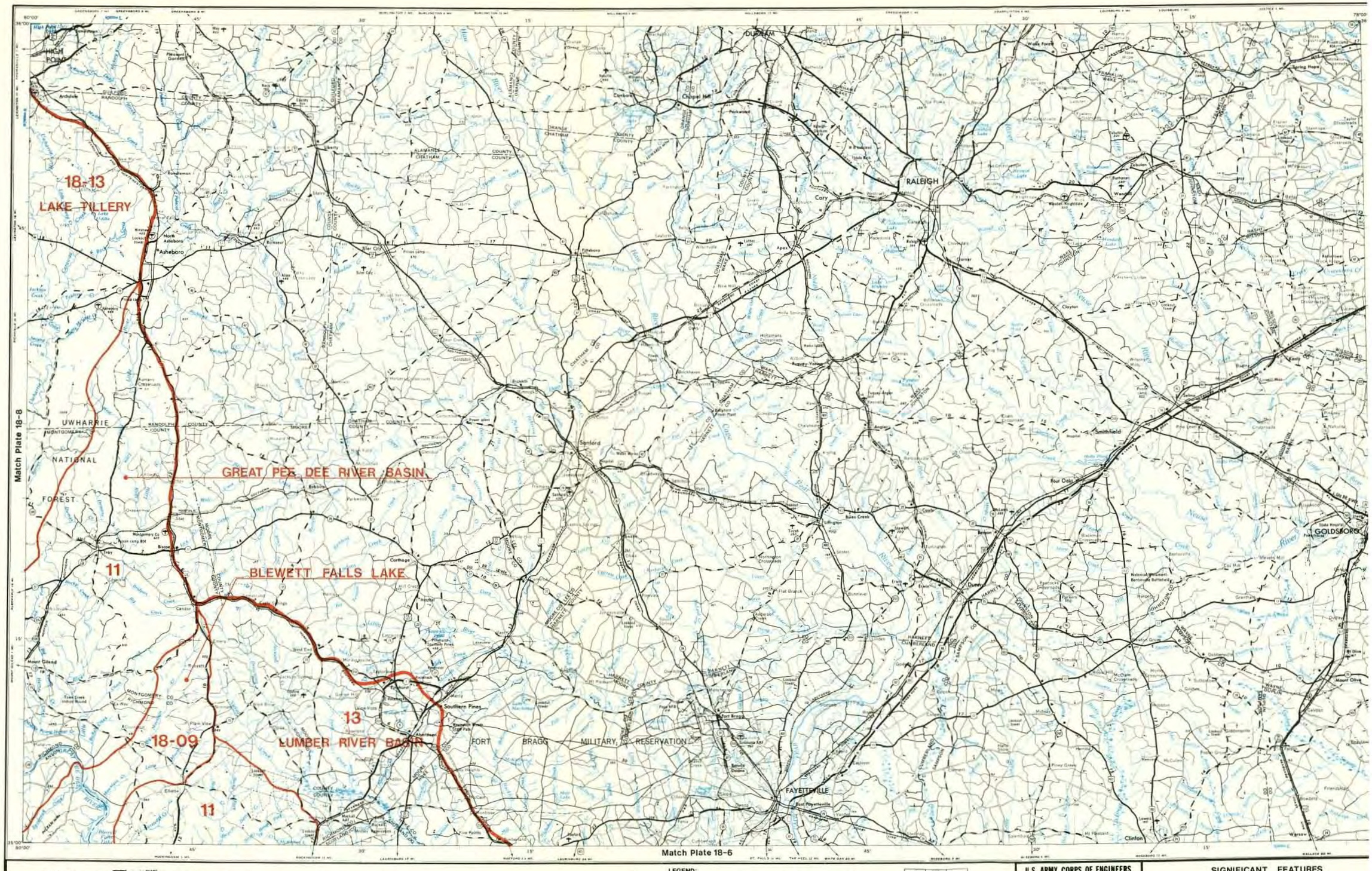
LEGEND:
- (N) PRESENT LIMIT OF NAVIGABLE WATERS OF THE U.S.
- (H) HISTORIC LIMIT OF NAVIGATION
- (P) PRACTICAL LIMIT OF NAVIGATION (RECOMMENDED)
- (R) LIMIT OF NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
- 20 RIVER MILE

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

SIGNIFICANT FEATURES
LAKES REPORT
Report No. 11, 15, 16, 17, 18
NAVIGABILITY STUDY
Plate 18-8



NEW ORLEANS
CHARLOTTE
CHARLESTON

USGS BASE MAP
RALEIGH, N.C.
1953, Revised 1969
NI 17-3

scale in miles: 0 5 10

N

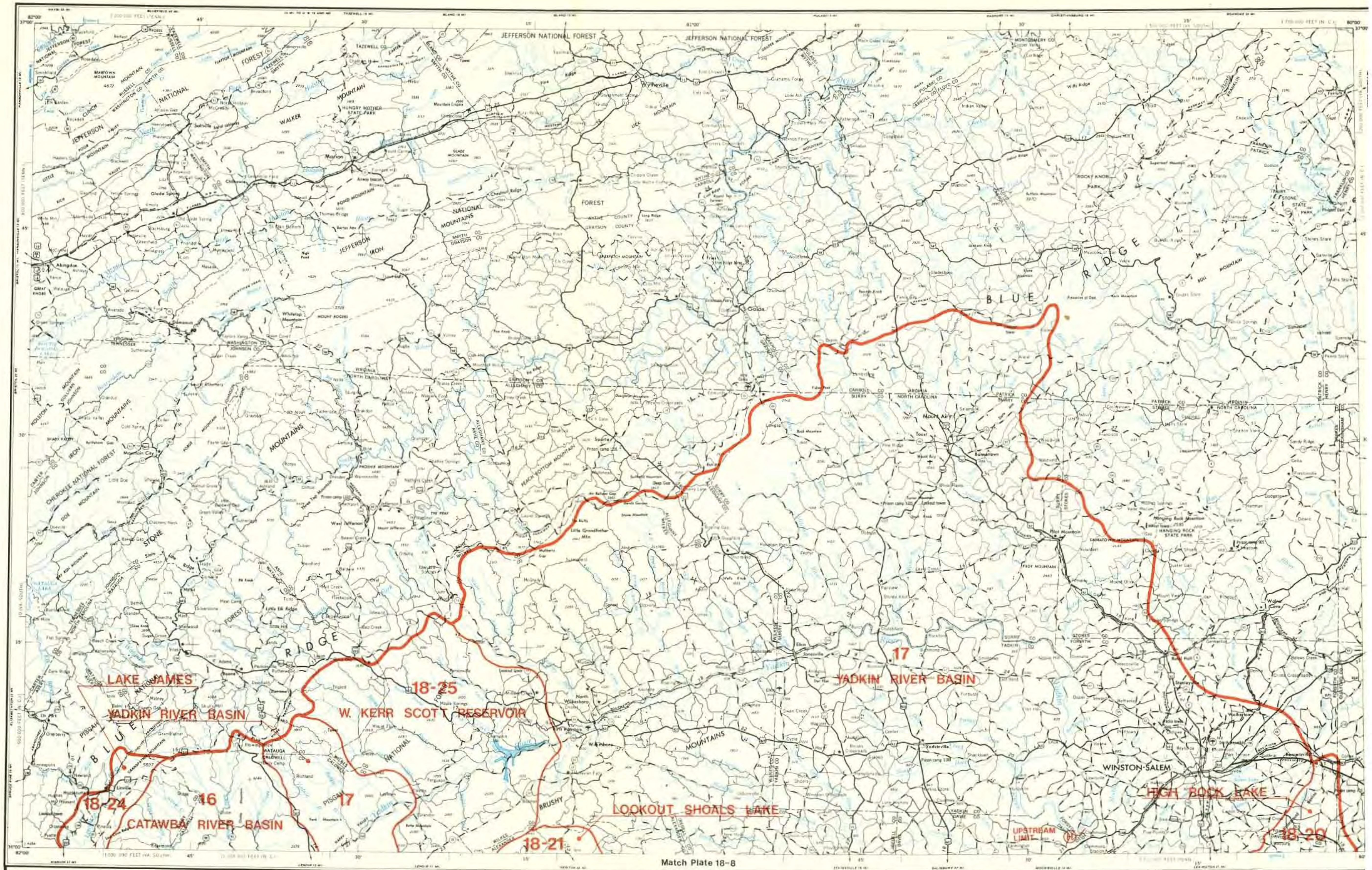
LEGEND:
- (N) PRESENT LIMIT OF NAVIGABLE WATERS OF THE U.S.
- (H) HISTORIC LIMIT OF NAVIGATION
- (P) PRACTICAL LIMIT OF NAVIGATION (RECOMMENDED)
- (R) LIMIT OF NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
- 70 RIVER MILE

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

SIGNIFICANT FEATURES
LAKES REPORT
Report No. 11,13,17,18
NAVIGABILITY STUDY
Plate 18-9



USGS BASE MAP
WINSTON SALEM, N.C.; VA.; TENN.
1953 Revised 1972
NJ-17-11

scale in miles

LEGEND:

- (N) PRESENT LIMIT OF NAVIGABLE WATERS OF THE U.S.
- (H) HISTORIC LIMIT OF NAVIGATION
- (P) PRACTICAL LIMIT OF NAVIGATION (RECOMMENDED)
- (R) LIMIT OF NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
- 20 RIVER MILE

1977

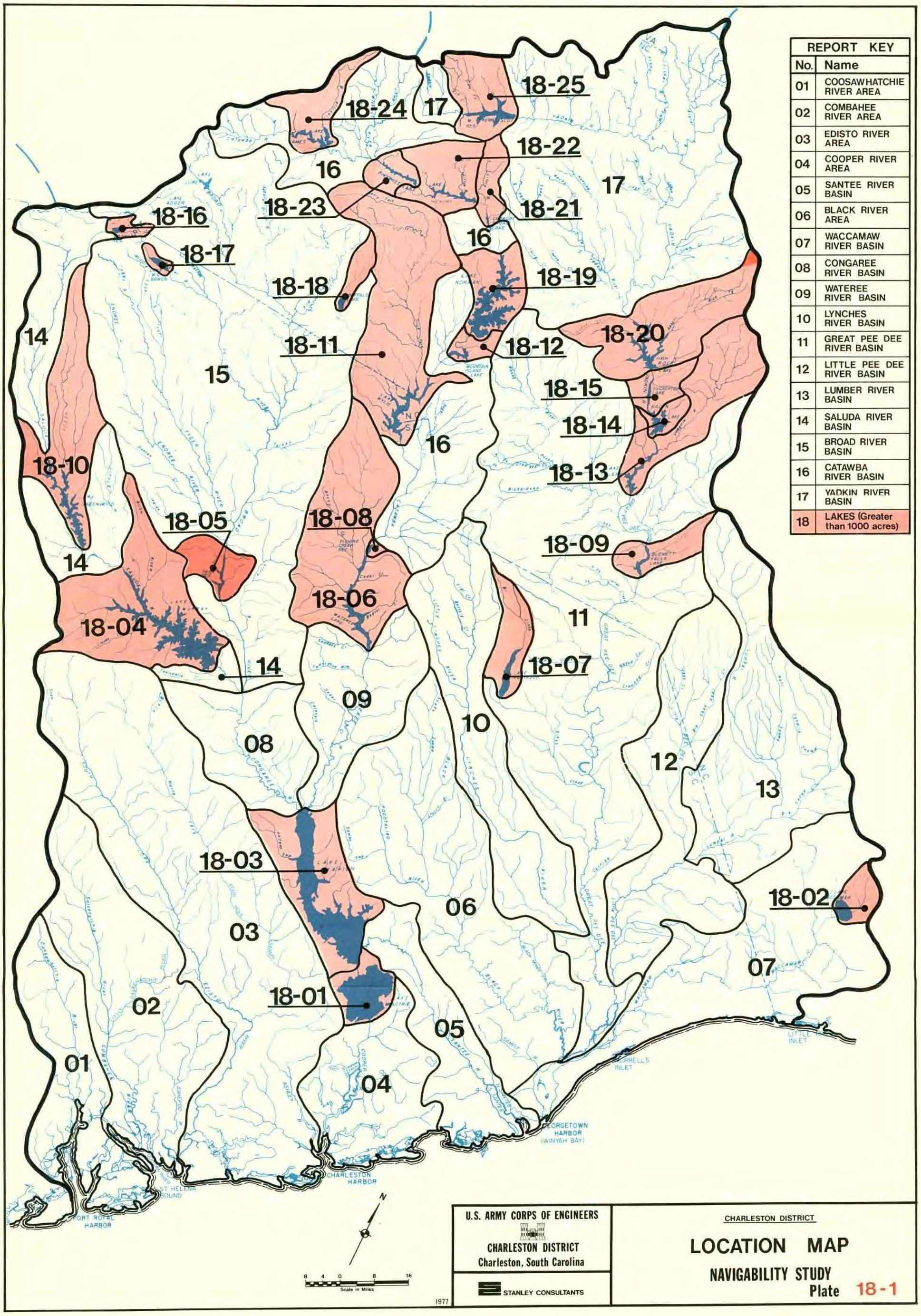
U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

SIGNIFICANT FEATURES

LAKES REPORT
Report No. 16, 17, 18

NAVIGABILITY STUDY
Plate 18–10



REPORT KEY	
No.	Name
01	COOSAWHATCHIE RIVER AREA
02	COMBAHEE RIVER AREA
03	EDISTO RIVER AREA
04	COOPER RIVER AREA
05	SANTEE RIVER BASIN
06	BLACK RIVER AREA
07	WACCAMAW RIVER BASIN
08	CONGAREE RIVER BASIN
09	WATEREE RIVER BASIN
10	LYNCHES RIVER BASIN
11	GREAT PEE DEE RIVER BASIN
12	LITTLE PEE DEE RIVER BASIN
13	LUMBER RIVER BASIN
14	SALUDA RIVER BASIN
15	BROAD RIVER BASIN
16	CATAWBA RIVER BASIN
17	YADKIN RIVER BASIN
18	LAKES (Greater than 1000 acres)

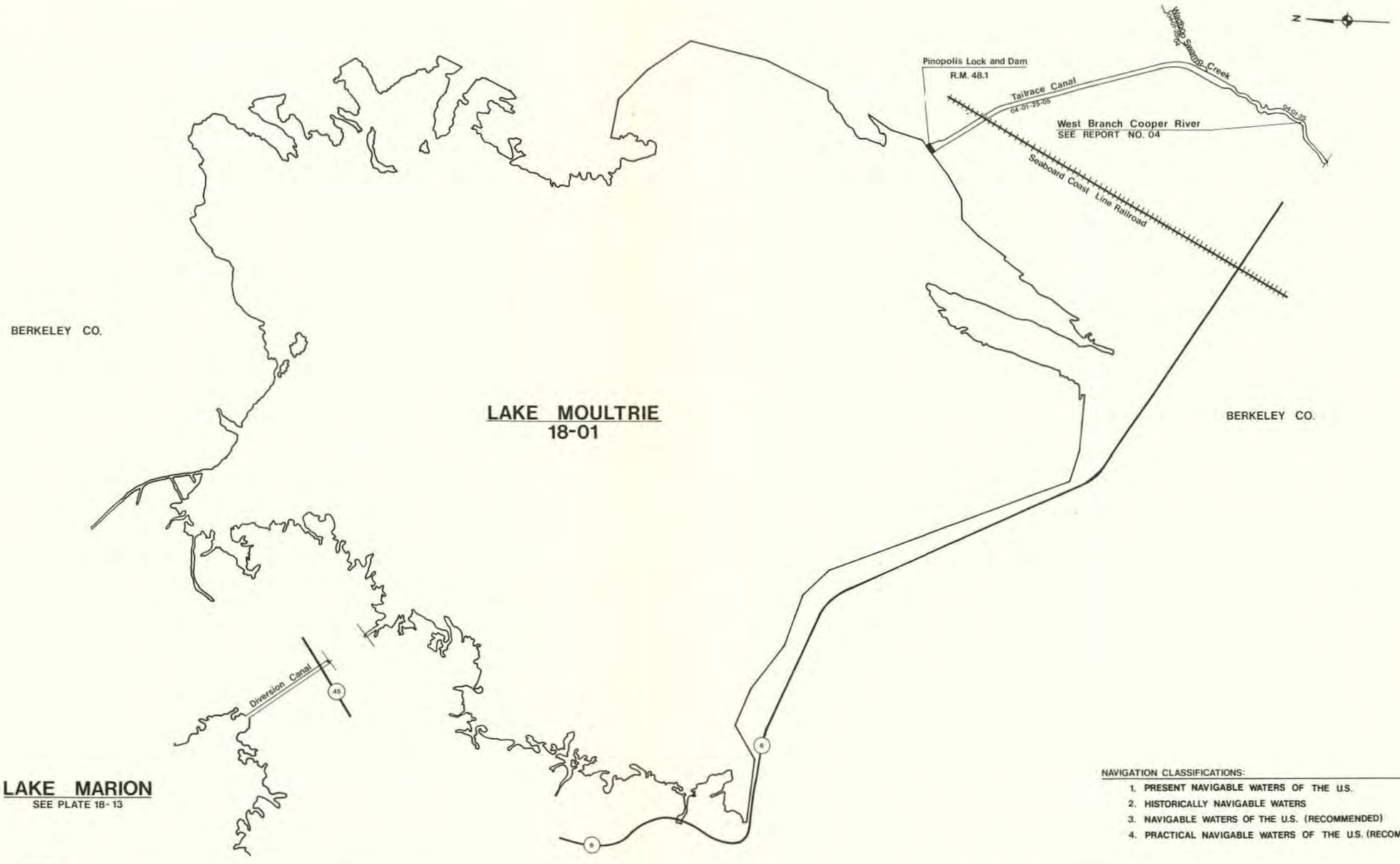
U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

CHARLESTON DISTRICT

LOCATION MAP

NAVIGABILITY STUDY
Plate 18-1



LEGEND:

- FEDERAL HIGHWAYS (Interstate 29, U.S. 85)
- STATE HIGHWAYS (Primary 49, Secondary 21)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 3300 6600 9900
scale in feet

1977

NAVIGATION CLASSIFICATIONS:

1. PRESENT NAVIGABLE WATERS OF THE U.S.
2. HISTORICALLY NAVIGABLE WATERS
3. NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
4. PRACTICAL NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
LAKE MOULTRIE
Cooper River Basin
BERKELEY CO., S.C.
NAVIGABILITY STUDY
Plate 18-11

N

COLUMBUS CO.

COLUMBUS CO.

LAKE
WACCAMAW
18-02

Big Creek
18-02-96

07-01

Waccamaw River
SEE REPORT NO.07

NAVIGATION CLASSIFICATIONS:

1. HISTORICALLY NAVIGABLE WATERS
2. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- Interstate 29 / U.S. 85 — FEDERAL HIGHWAYS
- Primary 49 / Secondary 21 — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

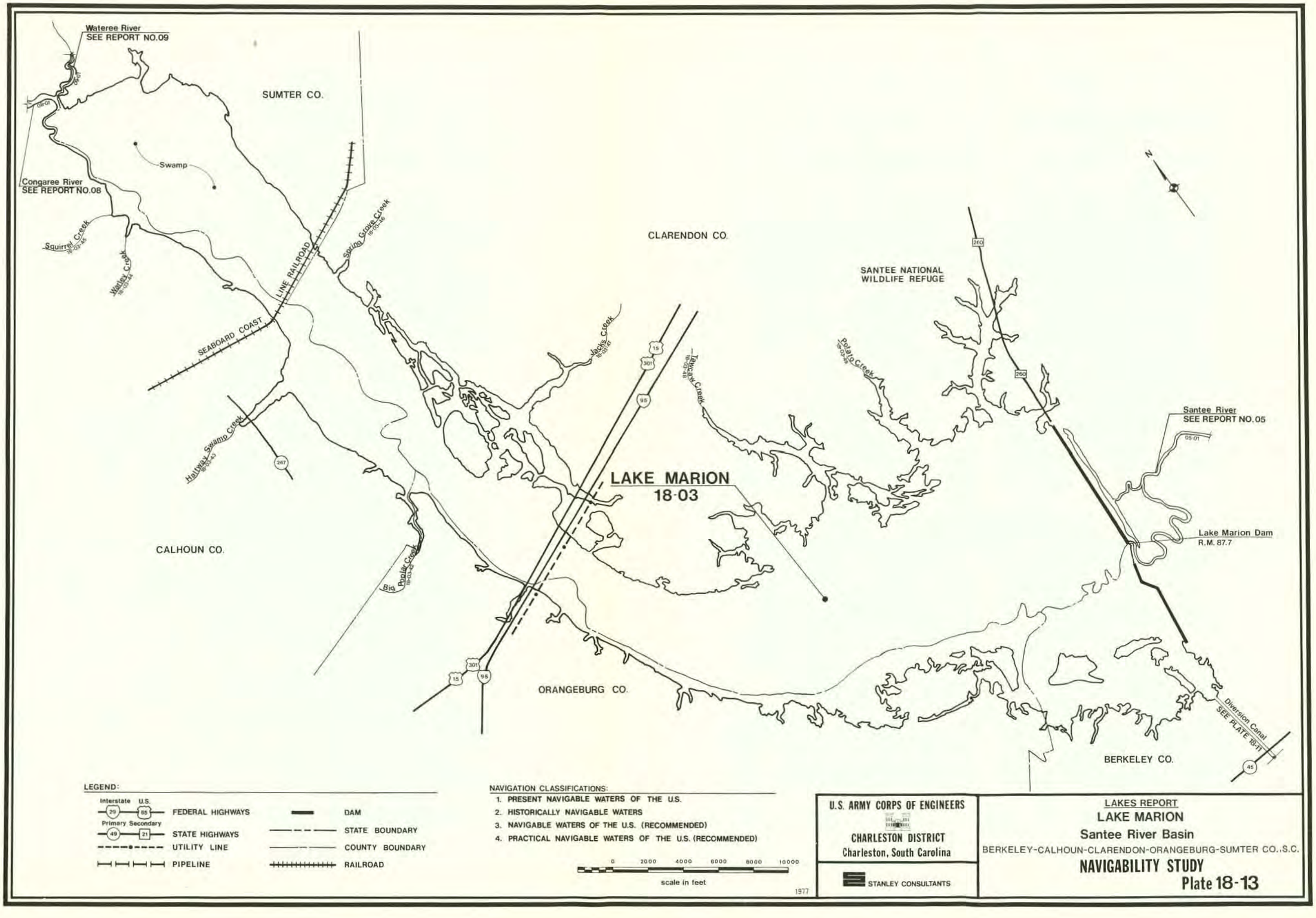
0 500 1000 1500
scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
LAKE WACCAMAW
Waccamaw River Basin
COLUMBUS CO., N.C.
NAVIGABILITY STUDY
Plate 18-12



LEGEND:

- FEDERAL HIGHWAYS (Interstate / U.S.)
- STATE HIGHWAYS (Primary / Secondary)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

NAVIGATION CLASSIFICATIONS:

1. PRESENT NAVIGABLE WATERS OF THE U.S.
2. HISTORICALLY NAVIGABLE WATERS
3. NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)
4. PRACTICAL NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)

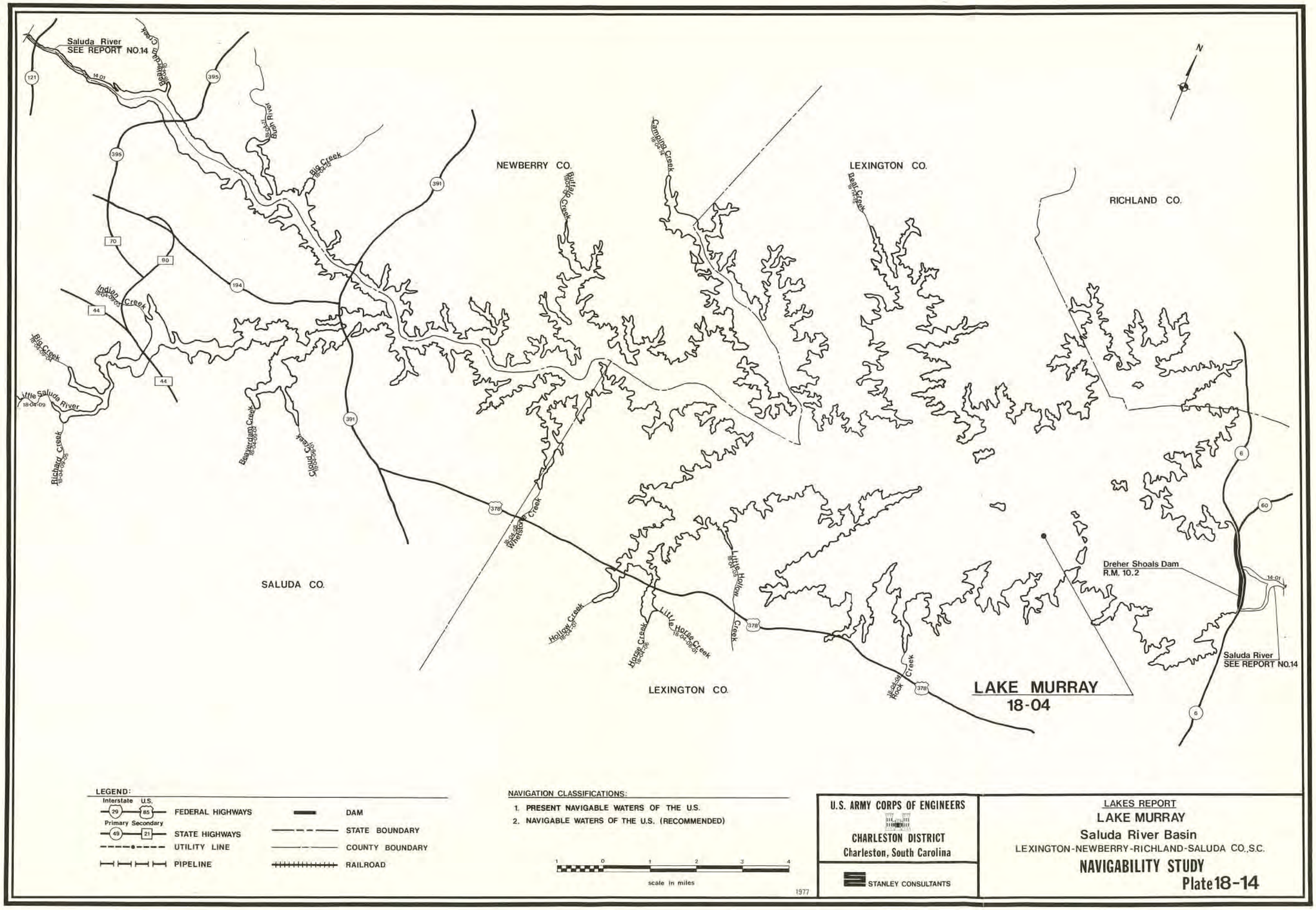
0 2000 4000 6000 8000 10000
scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
LAKE MARION
Santee River Basin
BERKELEY-CALHOUN-CLARENDON-ORANGEBURG-SUMTER CO.,S.C.
NAVIGABILITY STUDY
Plate 18-13



LEGEND:

- Interstate (29) / U.S. (85) — FEDERAL HIGHWAYS
- Primary (49) / Secondary (21) — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

NAVIGATION CLASSIFICATIONS:

1. PRESENT NAVIGABLE WATERS OF THE U.S.
2. NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)

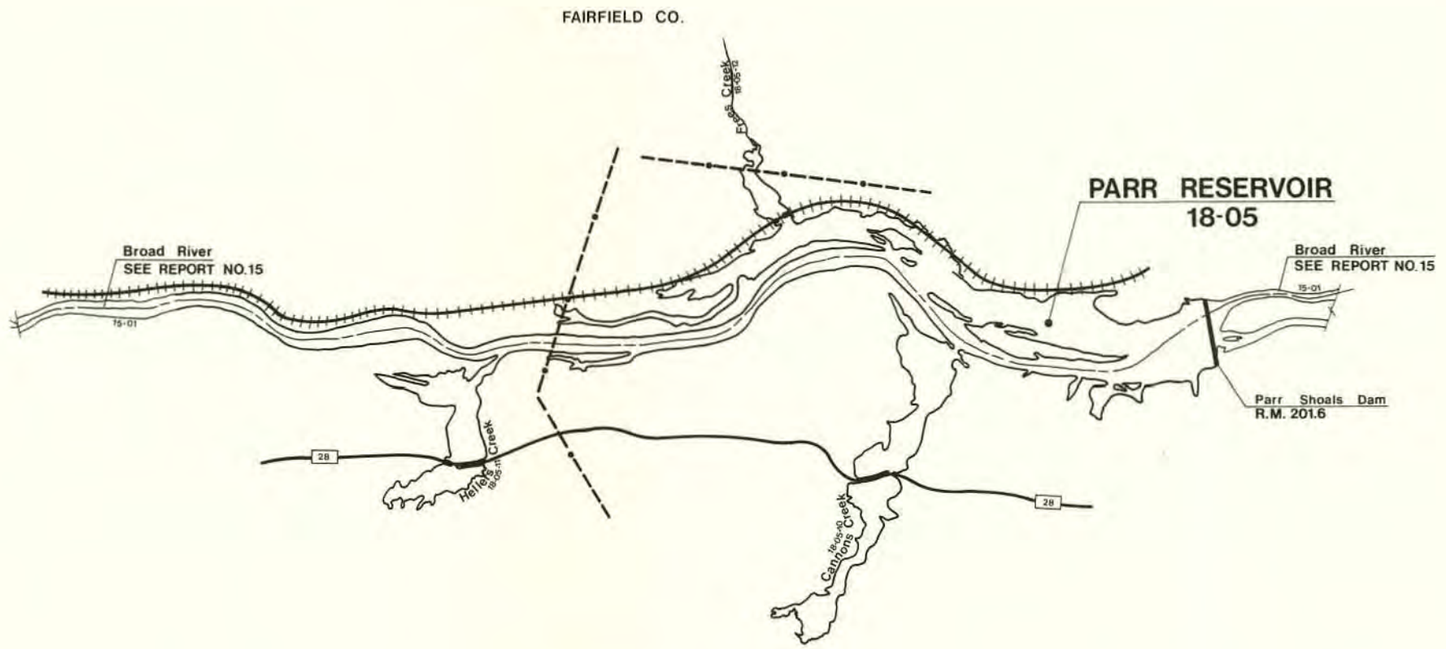
scale in miles: 1 0 1 2 3 4

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
LAKE MURRAY
Saluda River Basin
LEXINGTON-NEWBERRY-RICHLAND-SALUDA CO.,S.C.
NAVIGABILITY STUDY
Plate 18-14



N

LEGEND:

- Interstate 29 / U.S. 85 — FEDERAL HIGHWAYS
- Primary 49 / Secondary 21 — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 2000 4000 6000
scale in feet

1977

NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

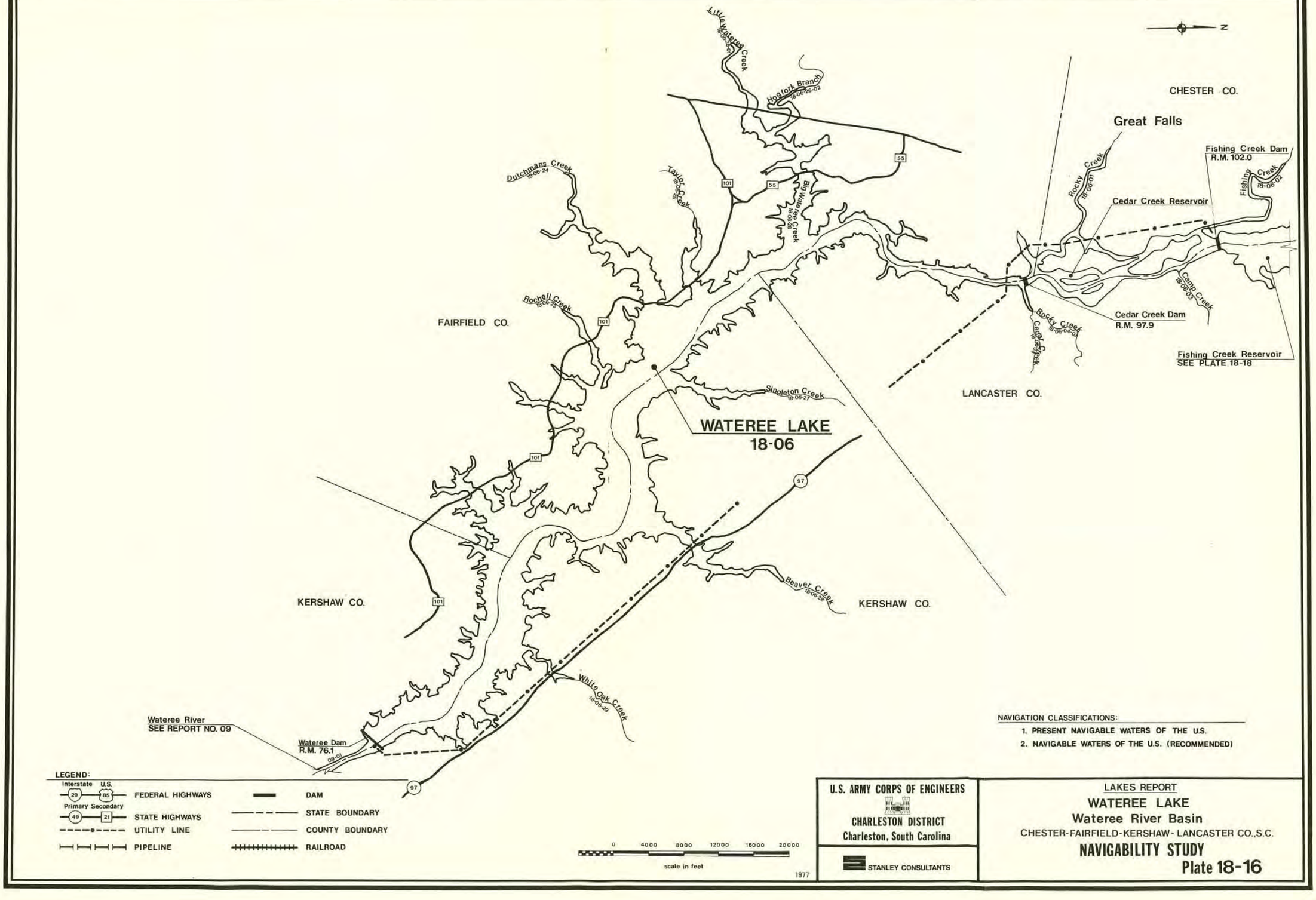
U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT

PARR RESERVOIR
Broad River Basin
FAIRFIELD-NEWBERRY CO., S.C.

NAVIGABILITY STUDY
Plate 18-15



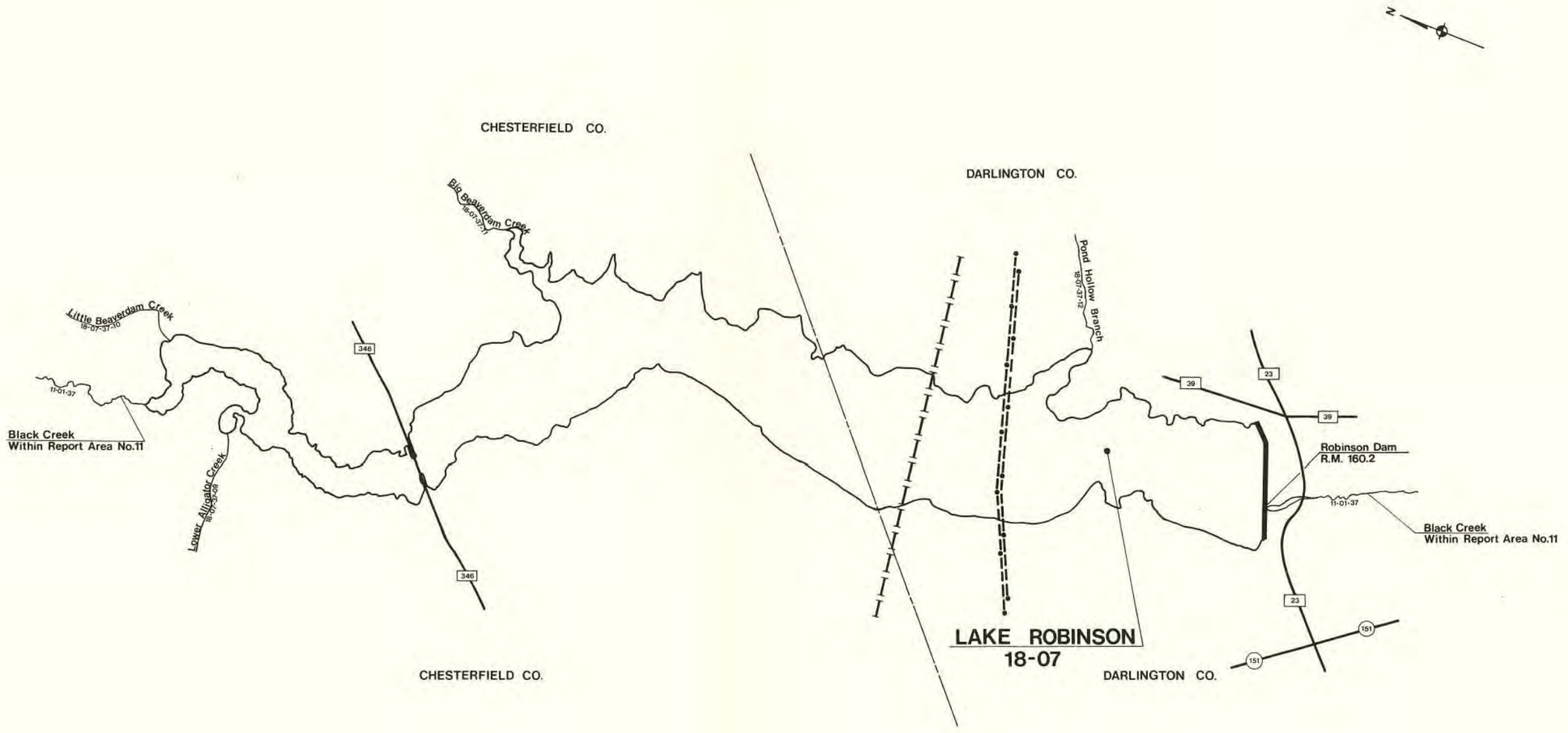
NAVIGATION CLASSIFICATIONS:

1. PRESENT NAVIGABLE WATERS OF THE U.S.
2. NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
WATEREE LAKE
Wateree River Basin
CHESTER-FAIRFIELD-KERSHAW- LANCASTER CO.,S.C.
NAVIGABILITY STUDY
Plate 18-16



LEGEND:

- FEDERAL HIGHWAYS (Interstate 29, U.S. 85)
- STATE HIGHWAYS (Primary 49, Secondary 21)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 660 1320 2640 3960
scale in feet

1977

NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

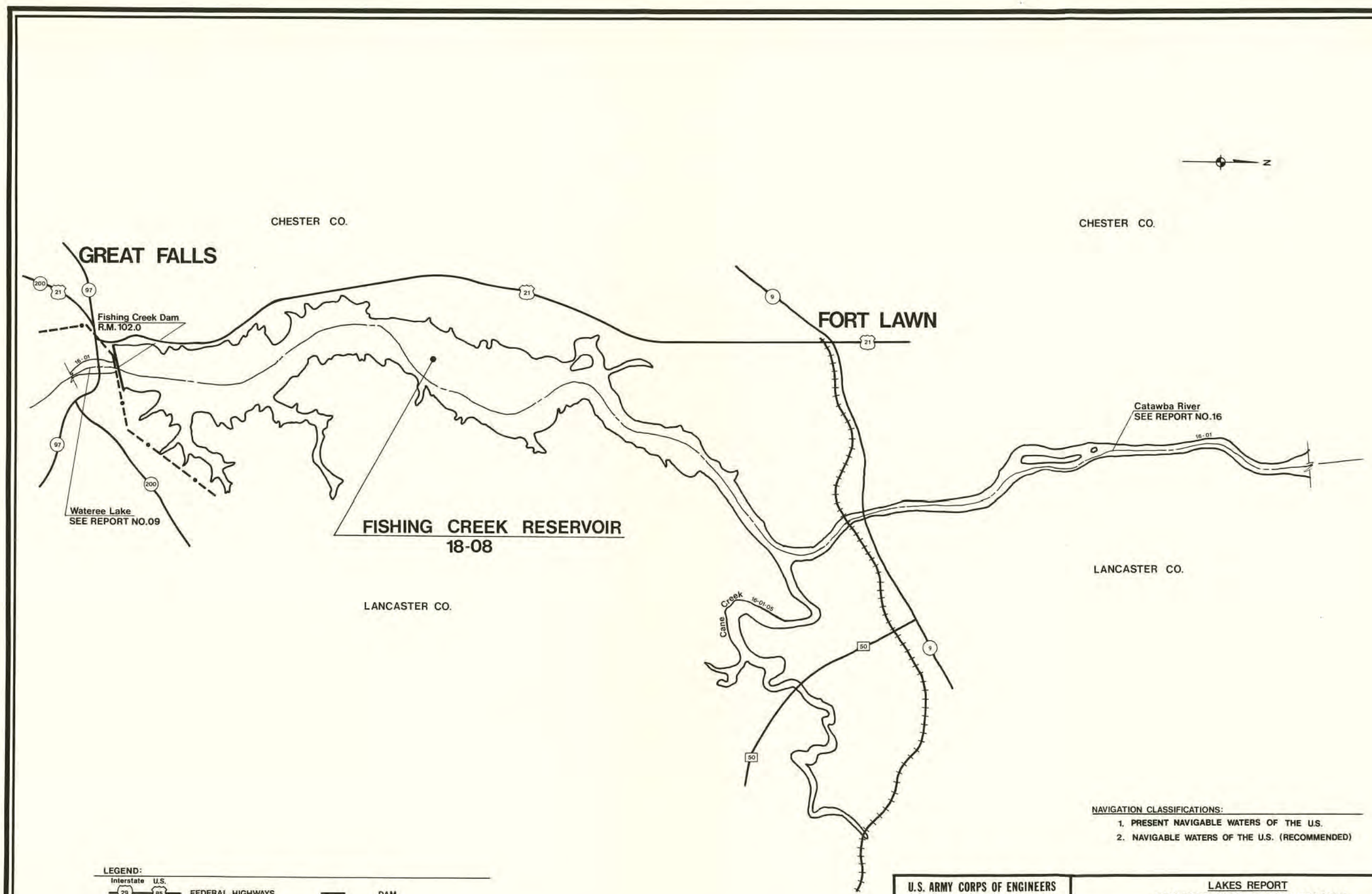
LAKES REPORT

LAKE ROBINSON

Great Pee Dee River Basin
CHESTERFIELD-DARLINGTON CO., S.C.

NAVIGABILITY STUDY

Plate 18-17



LEGEND:

- FEDERAL HIGHWAYS (Interstate / U.S.)
- STATE HIGHWAYS (Primary / Secondary)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 2000 4000 6000 8000 10000
scale in feet

1977

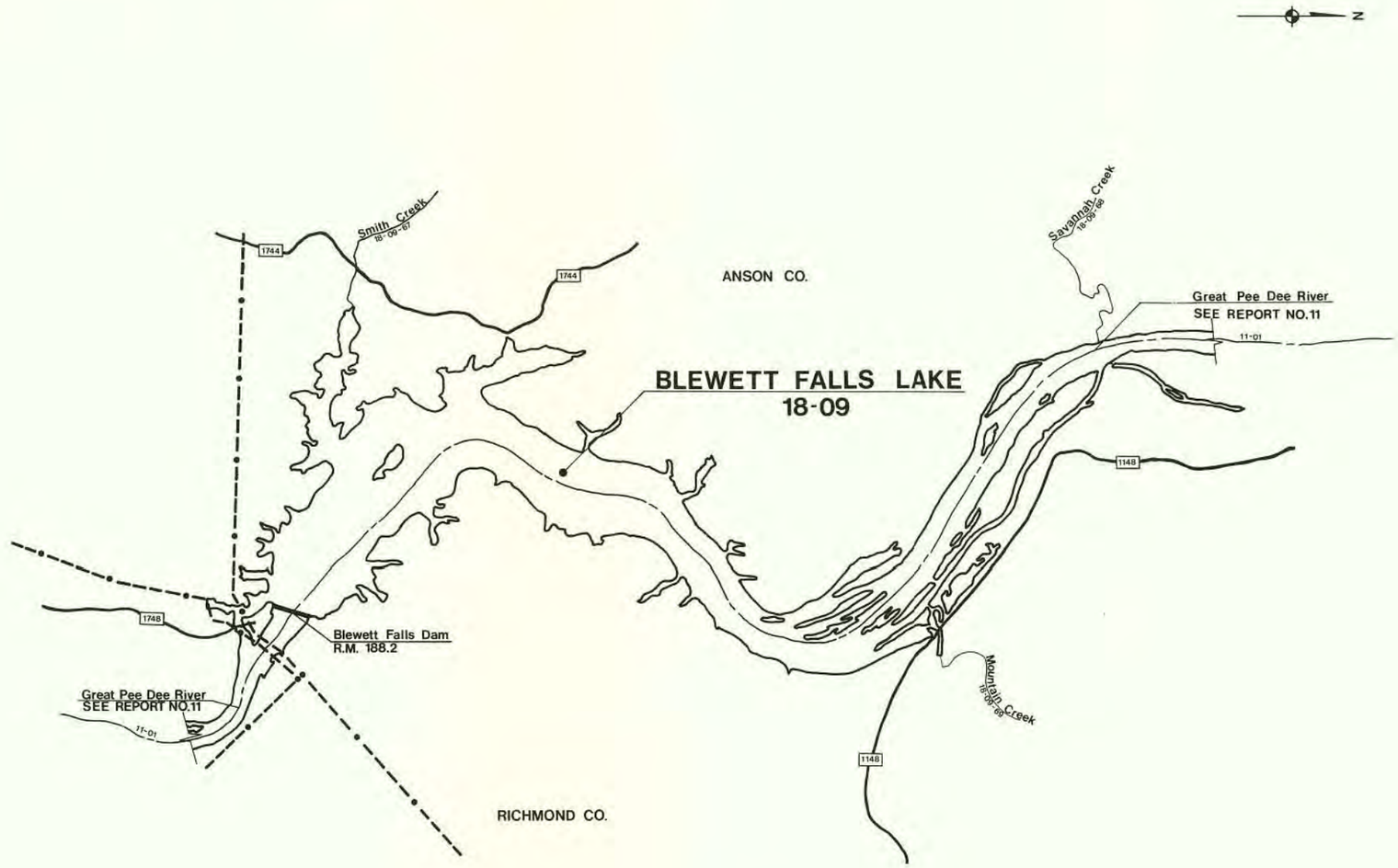
NAVIGATION CLASSIFICATIONS:

1. PRESENT NAVIGABLE WATERS OF THE U.S.
2. NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
FISHING CREEK RESERVOIR
Catawba River Basin
CHESTER-LANCASTER CO., S.C.
NAVIGABILITY STUDY
Plate 18-18



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- Interstate / U.S. — FEDERAL HIGHWAYS
- Primary / Secondary — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 2000 4000 6000 8000 10000

scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT

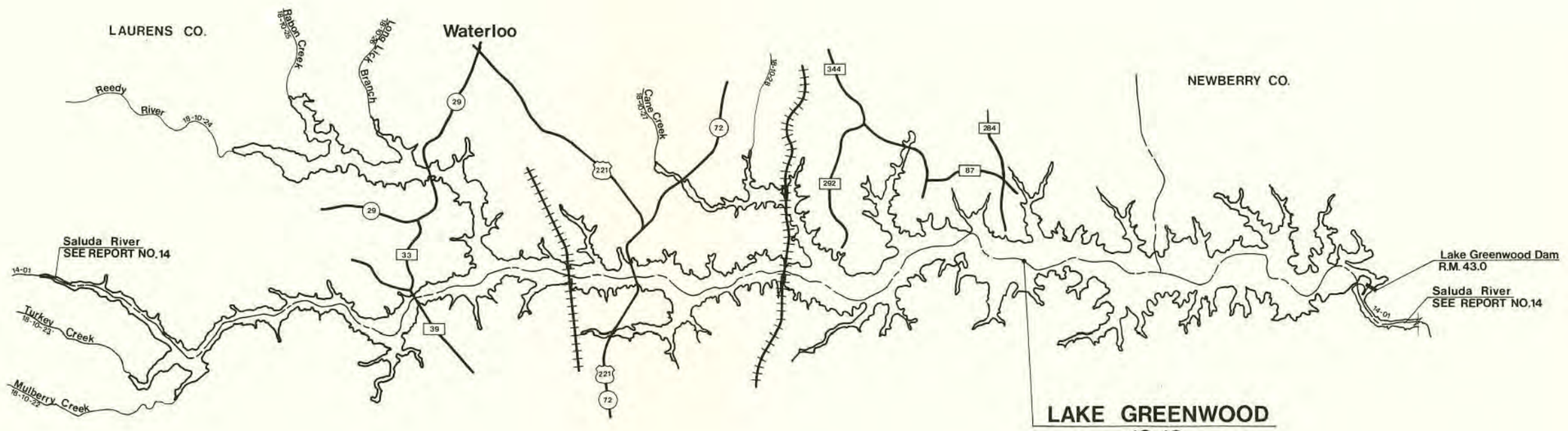
BLEWETT FALLS LAKE

Great Pee Dee River Basin

ANSON-RICHMOND CO.,N.C.

NAVIGABILITY STUDY

Plate 18-19



LEGEND:

- Interstate 29 / U.S. 85 — FEDERAL HIGHWAYS
- Primary 49 / Secondary 21 — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 4000 8000 12000
scale in feet

1977

NAVIGATION CLASSIFICATION:

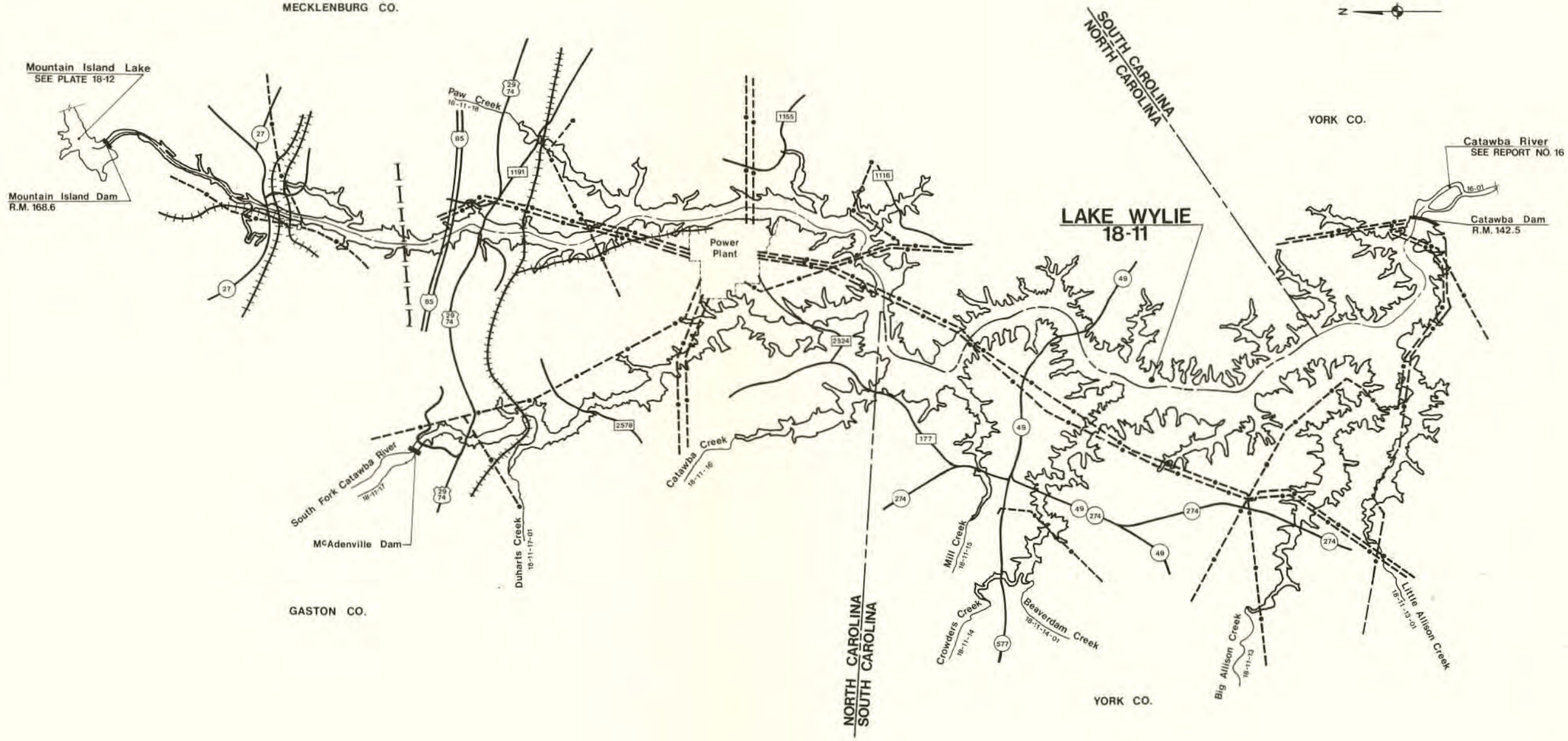
1. WATERS OF THE U.S. (RECOMMENDED)

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT

LAKE GREENWOOD
Saluda River Basin
GREENWOOD-LAURENS-NEWBERRY CO., S.C.
NAVIGABILITY STUDY
Plate 18-20



LEGEND:

- FEDERAL HIGHWAYS (Interstate / U.S.)
- STATE HIGHWAYS (Primary / Secondary)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 4000 8000 12000
scale in feet

1977

NAVIGATION CLASSIFICATIONS:

1. PRESENT NAVIGABLE WATERS OF THE U.S.
2. NAVIGABLE WATERS OF THE U.S. (RECOMMENDED)

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT

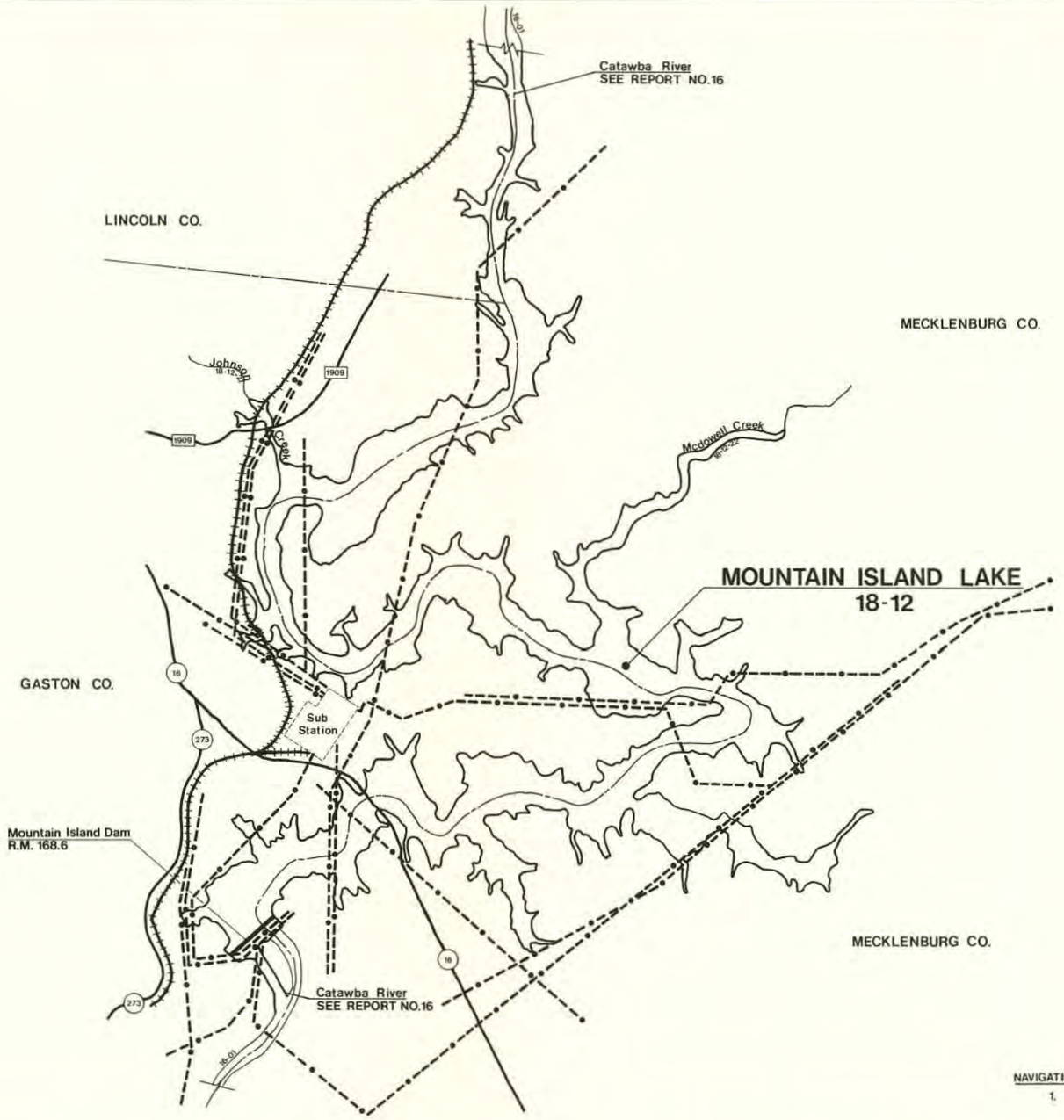
LAKE WYLIE

Catawba River Basin

YORK CO., S.C. - GASTON-MECKLENBURG CO., N.C.

NAVIGABILITY STUDY

18-21



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- FEDERAL HIGHWAYS (Interstate / U.S.)
- STATE HIGHWAYS (Primary / Secondary)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

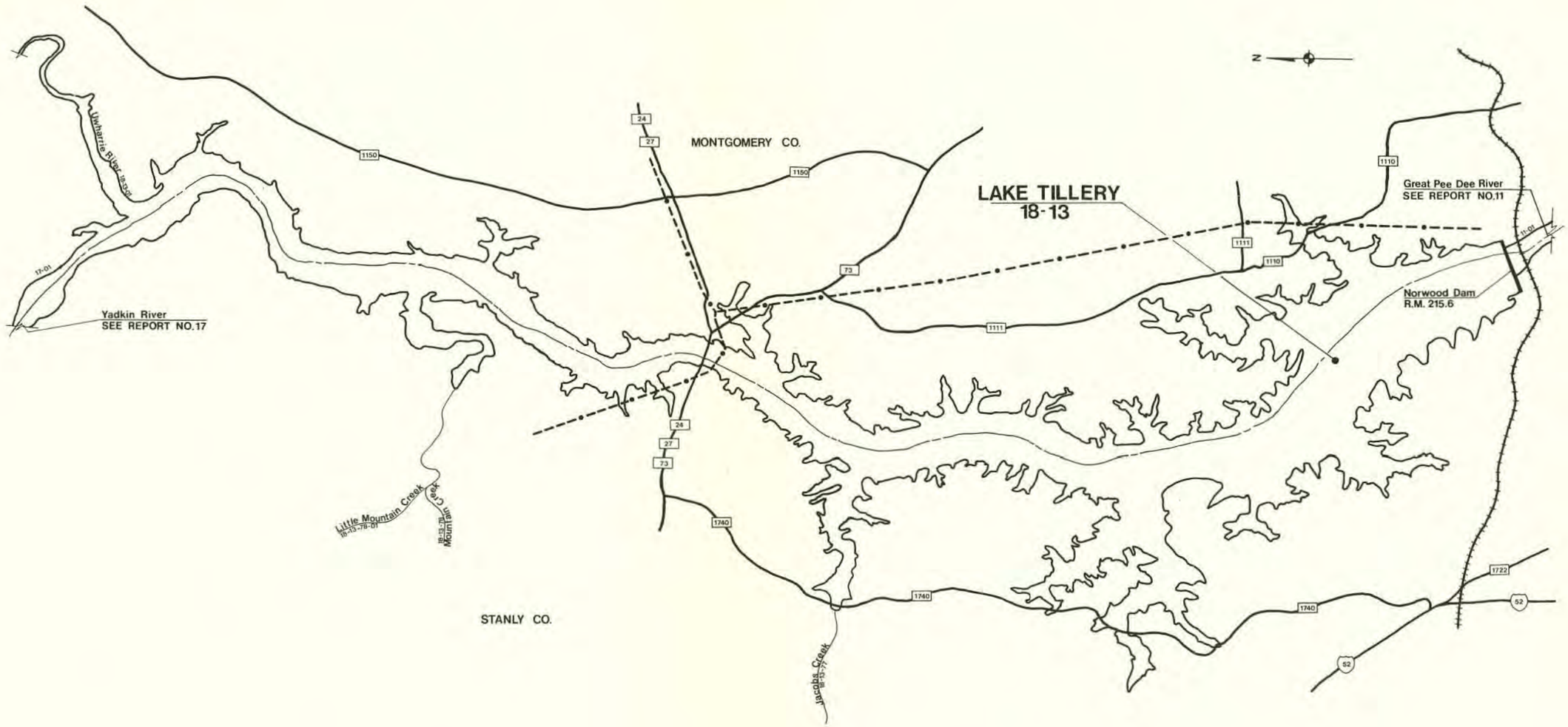
0 2000 4000 6000 8000 10000
scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
MOUNTAIN ISLAND LAKE
Catawba River Basin
GASTON-LINCOLN-MECKLENBURG CO., N.C.
NAVIGABILITY STUDY
Plate 18-22



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- Interstate / U.S. — FEDERAL HIGHWAYS
- Primary / Secondary — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 2000 4000 6000 8000 10000

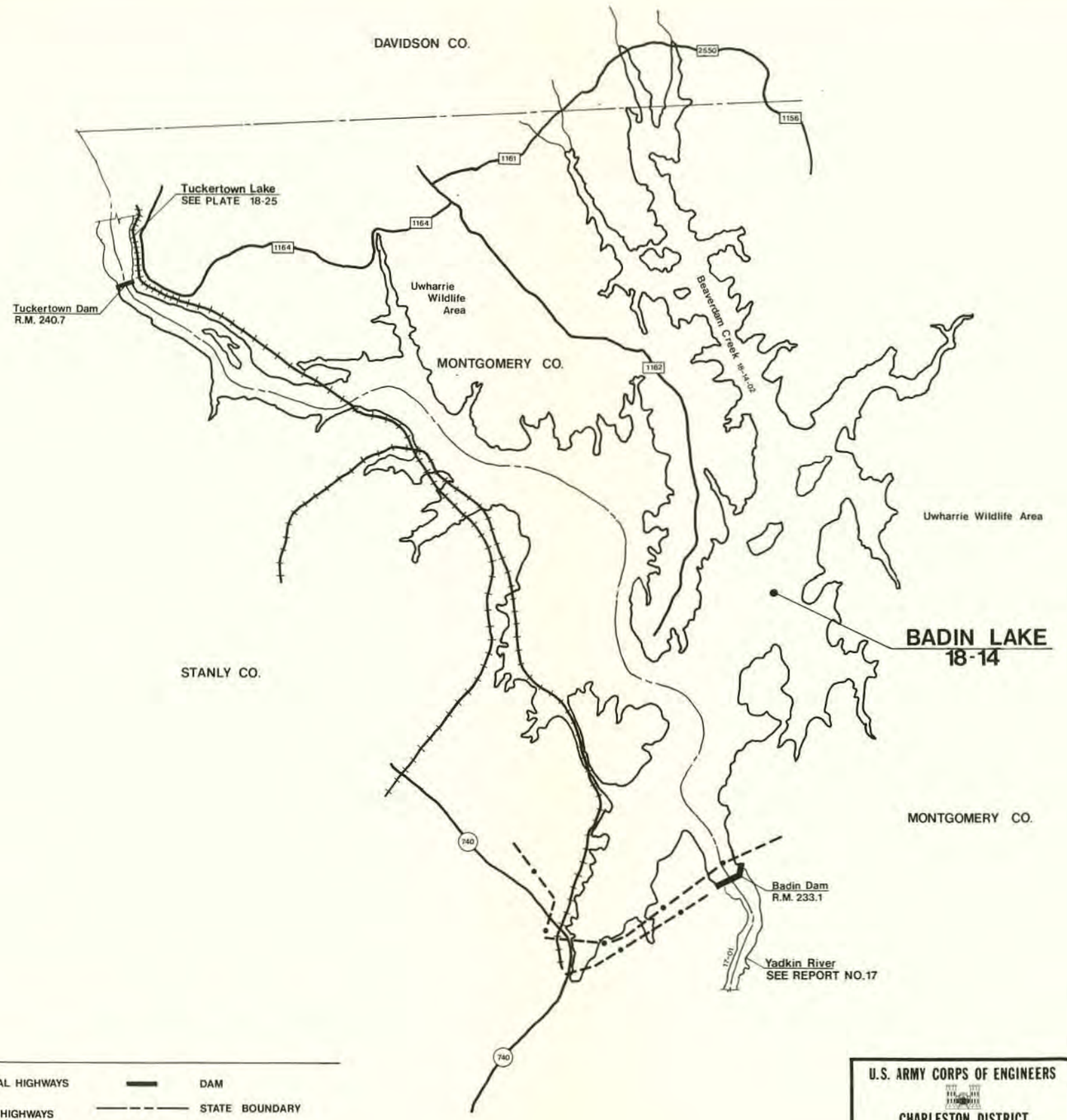
scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
LAKE TILLERY
Great Pee Dee River Basin
MONTGOMERY-STANLY CO., N.C.
NAVIGABILITY STUDY
Plate 18-23



LEGEND:

- Interstate 29 / U.S. 85 — FEDERAL HIGHWAYS
- Primary 49 / Secondary 21 — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

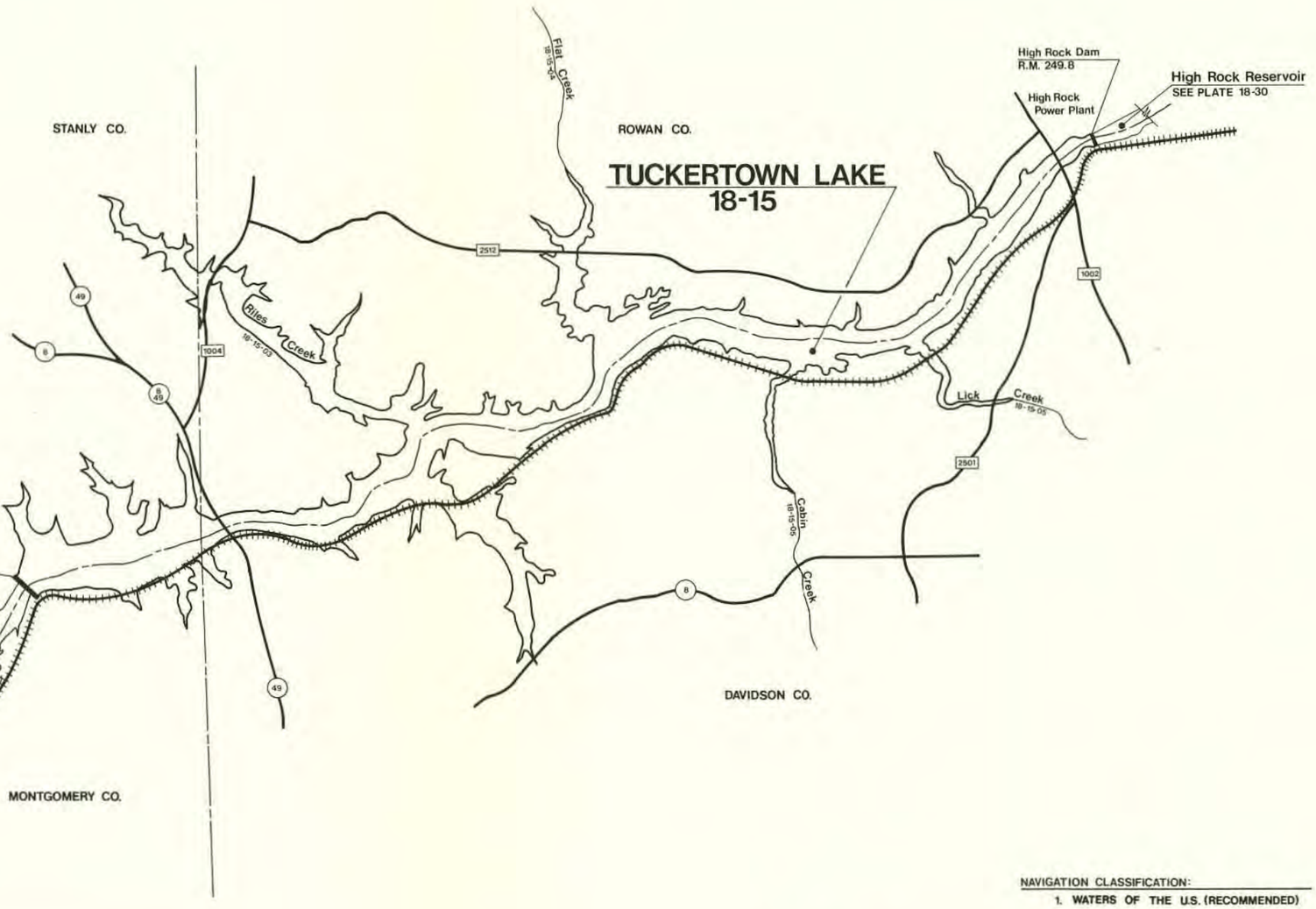
NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
BADIN LAKE
Great Pee Dee River Basin
DAVIDSON-MONTGOMERY-STANLY CO.,N.C.
NAVIGABILITY STUDY
Plate 18-24



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- FEDERAL HIGHWAYS (Interstate 29, U.S. 85)
- STATE HIGHWAYS (Primary 49, Secondary 21)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

2000 0 2000 4000 6000 8000 10000

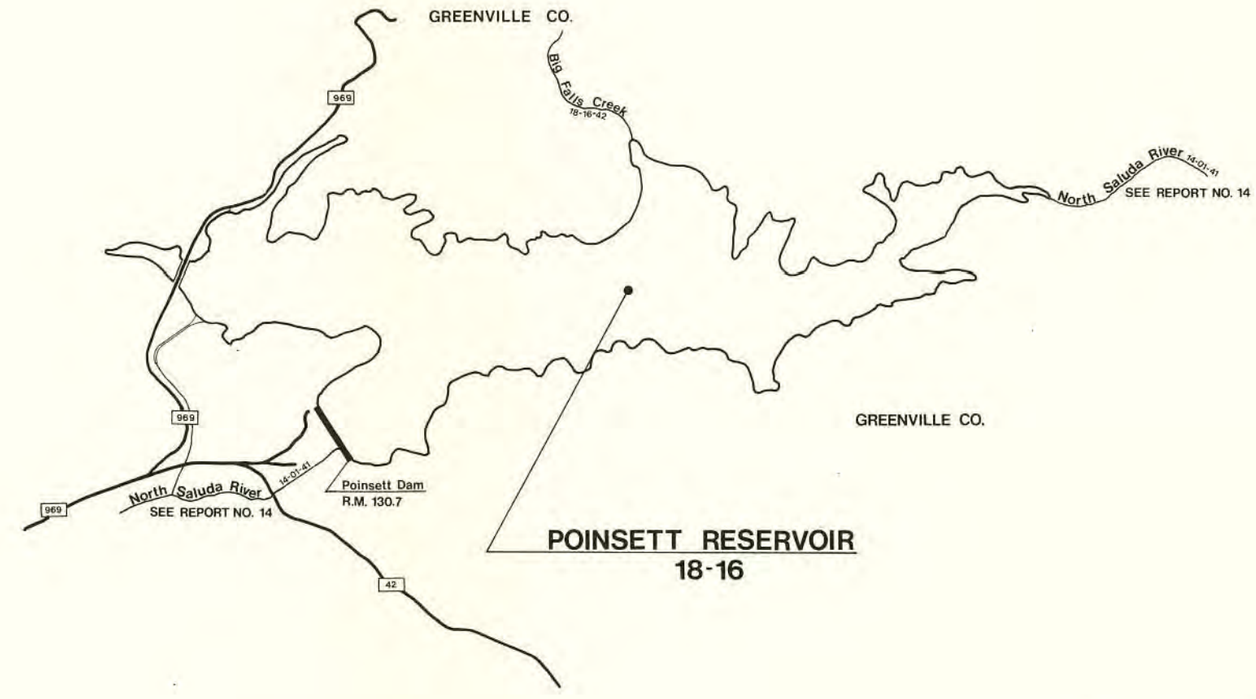
Scale in Feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
TUCKERTOWN LAKE
Yadkin River Basin
DAVIDSON-MONTGOMERY-ROWAN-STANLY CO., N.C.
NAVIGABILITY STUDY
Plate 18-25



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- Interstate (29) / U.S. (85) — FEDERAL HIGHWAYS
- Primary (49) / Secondary (21) — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 500 1000 1500

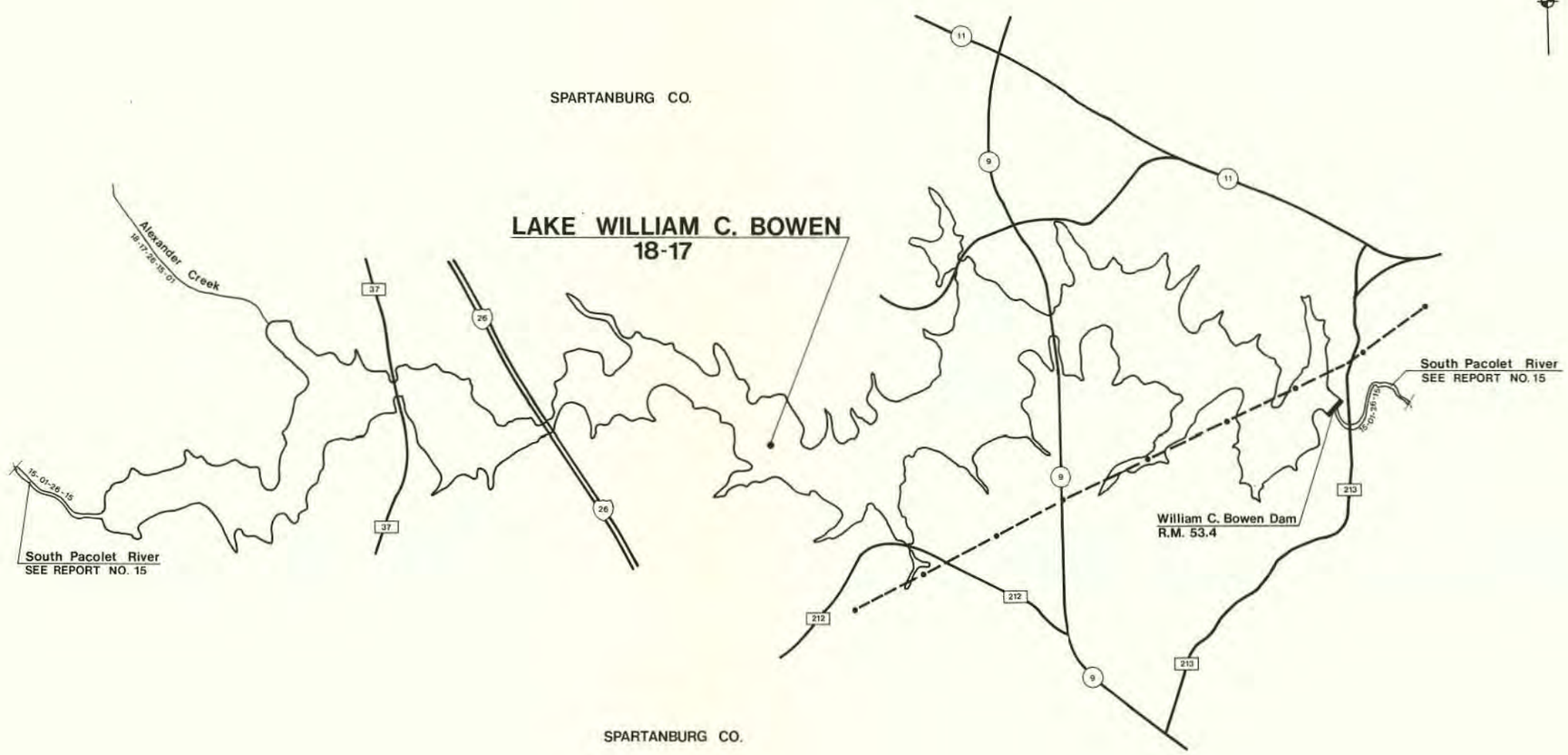
scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
POINSETT RESERVOIR
Saluda River Basin
GREENVILLE CO.,S.C.
NAVIGABILITY STUDY
Plate 18-26



NAVIGATION CLASSIFICATION:
1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- FEDERAL HIGHWAYS (Interstate 26, U.S. 85)
- STATE HIGHWAYS (Primary 49, Secondary 21)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

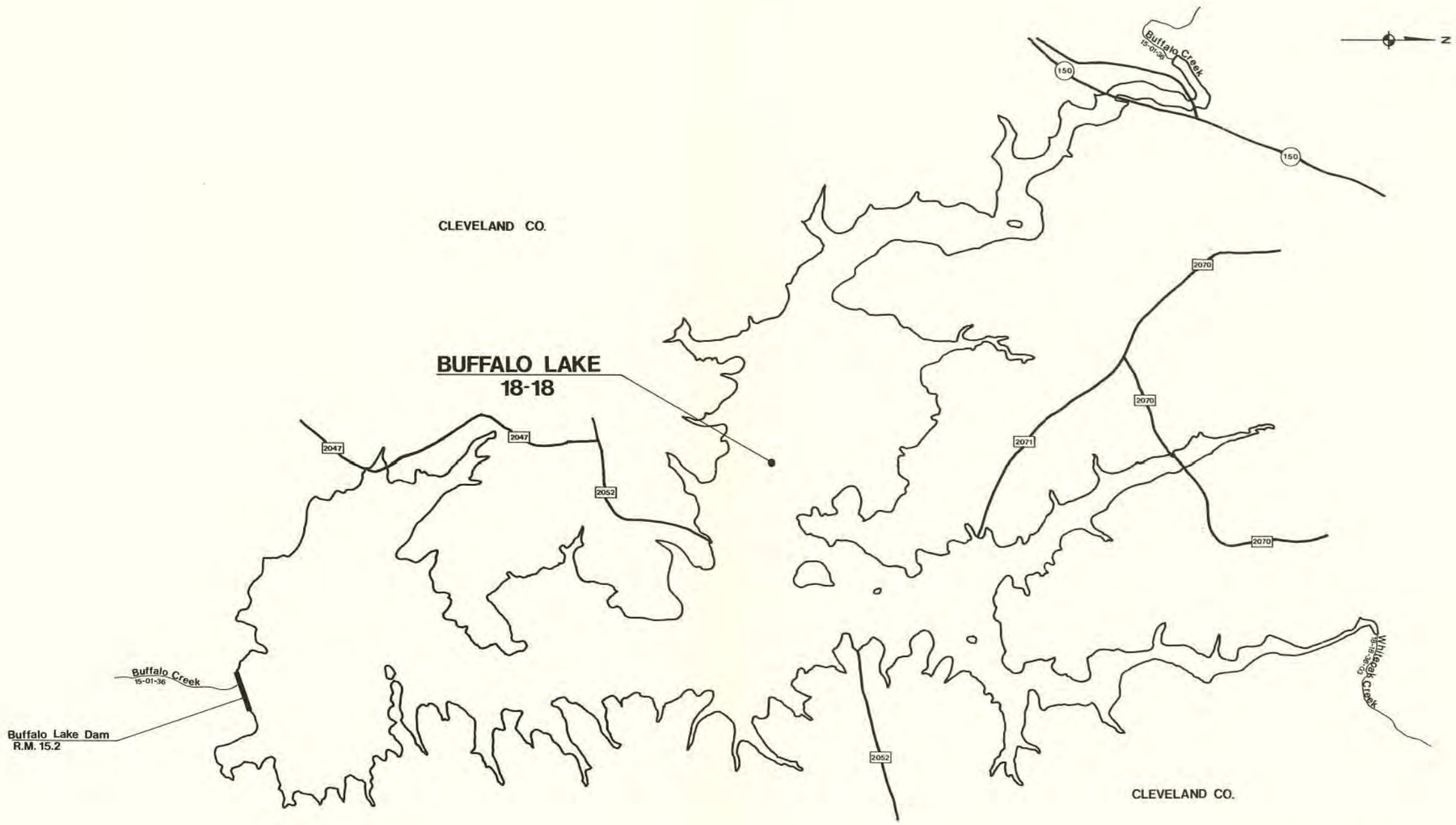
0 500 1000 1500
scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
LAKE WILLIAM C. BOWEN
Broad River Basin
SPARTANBURG CO., S.C.
NAVIGABILITY STUDY
Plate 18-27



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- Interstate 29 / U.S. 85 — FEDERAL HIGHWAYS
- Primary 49 / Secondary 21 — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

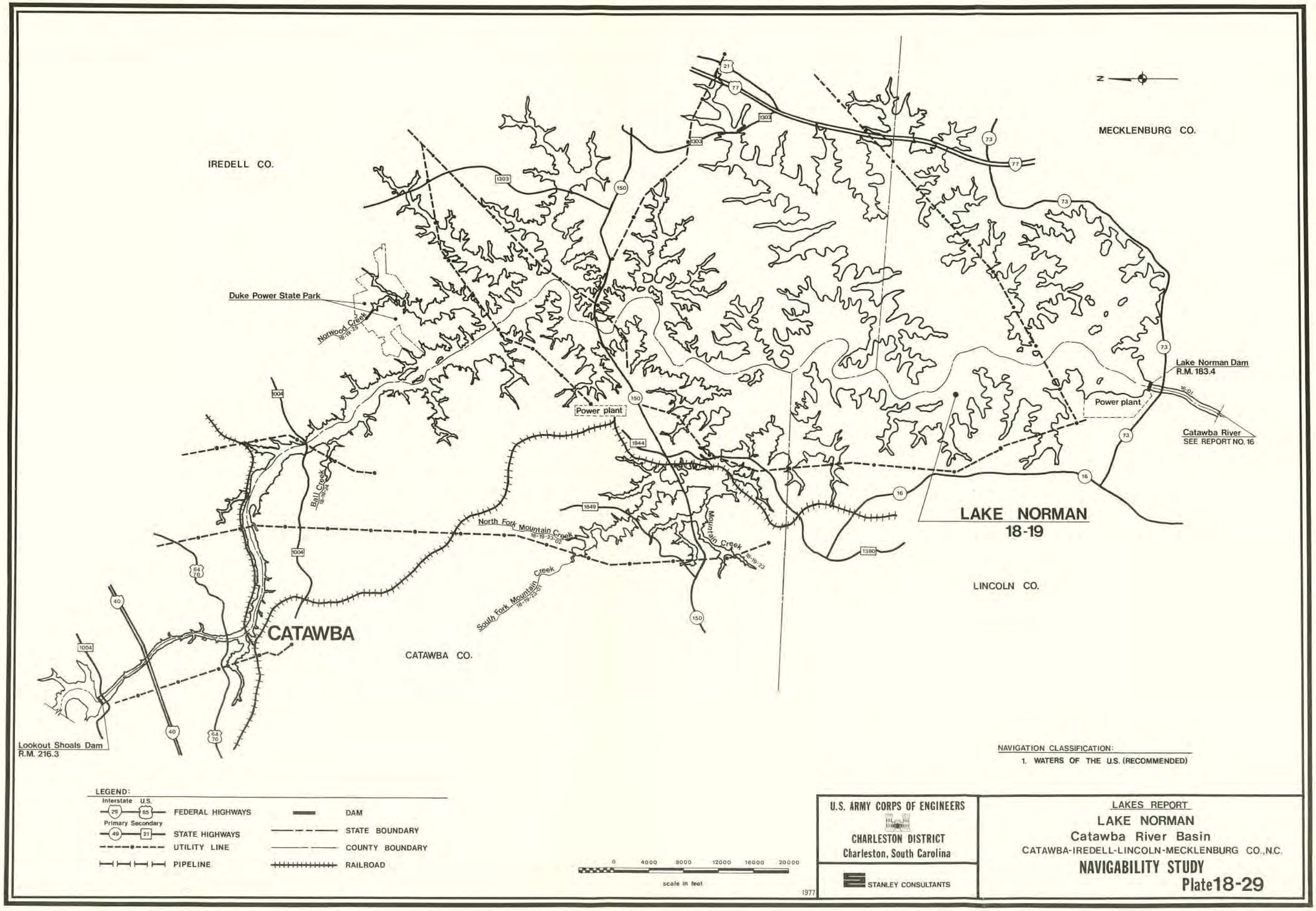
0 800 1600 2400
scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
BUFFALO LAKE
Broad River Basin
CLEVELAND CO., N.C.
NAVIGABILITY STUDY
Plate 18-28



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- Interstate 29 / U.S. 85 — FEDERAL HIGHWAYS
- Primary 49 / Secondary 21 — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 4000 8000 12000 16000 20000

scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT

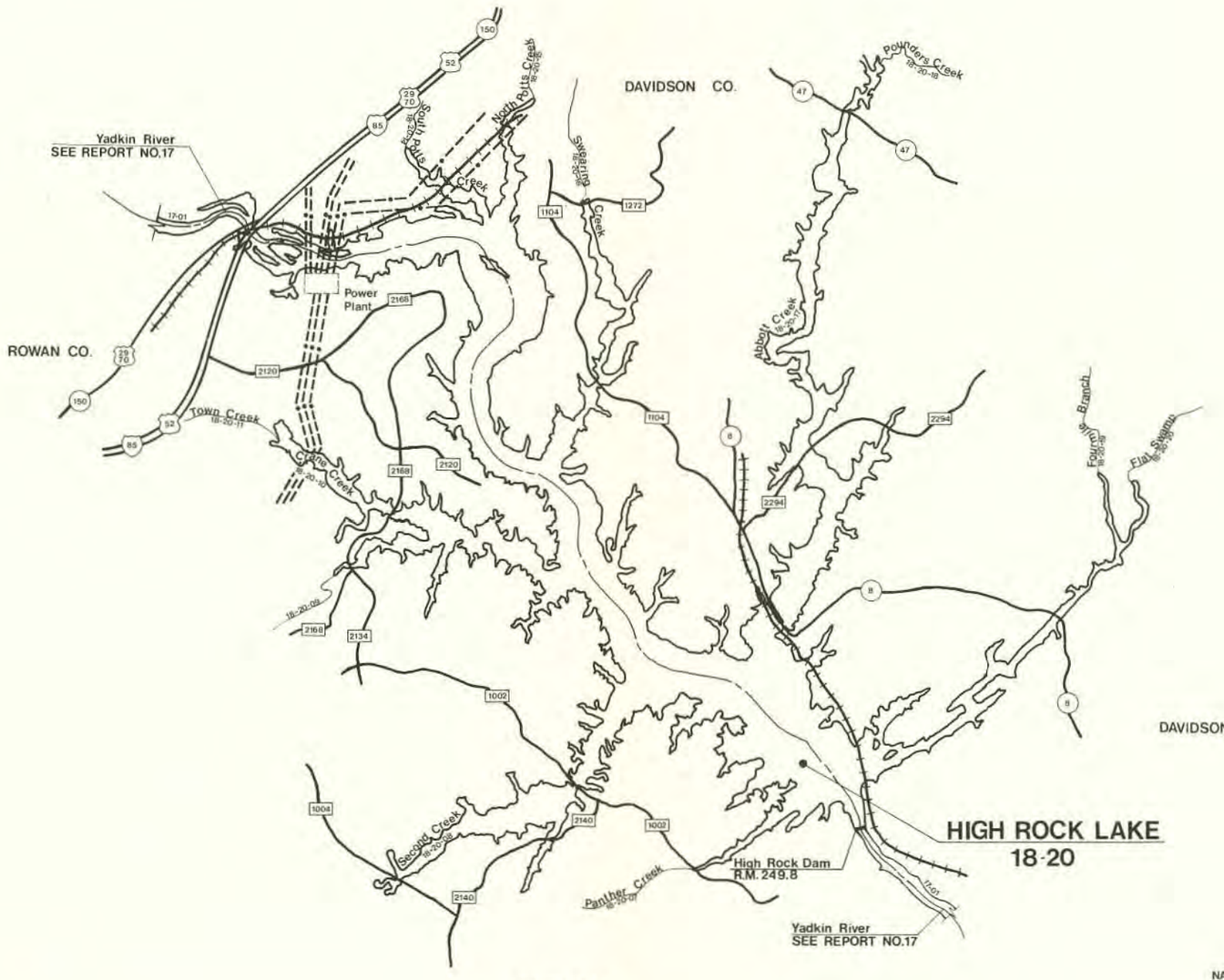
LAKE NORMAN

Catawba River Basin

CATAWBA-IREDELL-LINCOLN-MECKLENBURG CO., N.C.

NAVIGABILITY STUDY

Plate 18-29



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- FEDERAL HIGHWAYS (Interstate / U.S.)
- STATE HIGHWAYS (Primary / Secondary)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

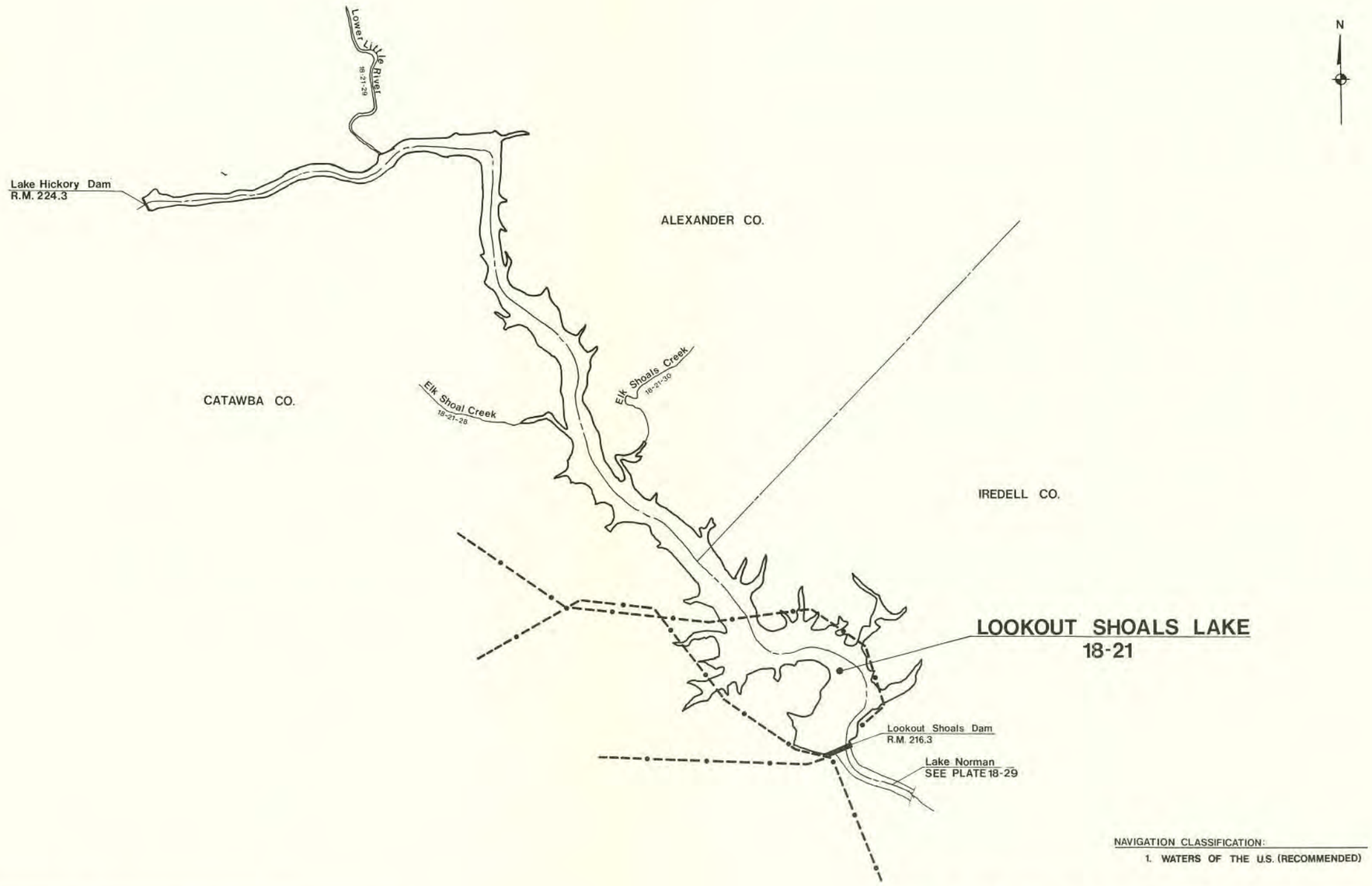
0 4000 8000 12000 16000 20000
scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
HIGH ROCK LAKE
Yadkin River Basin
DAVIDSON-ROWAN CO., N.C.
NAVIGABILITY STUDY
Plate 18-30



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- FEDERAL HIGHWAYS (Interstate 29, U.S. 85)
- STATE HIGHWAYS (Primary 49, Secondary 21)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 2000 4000 6000 8000 10000

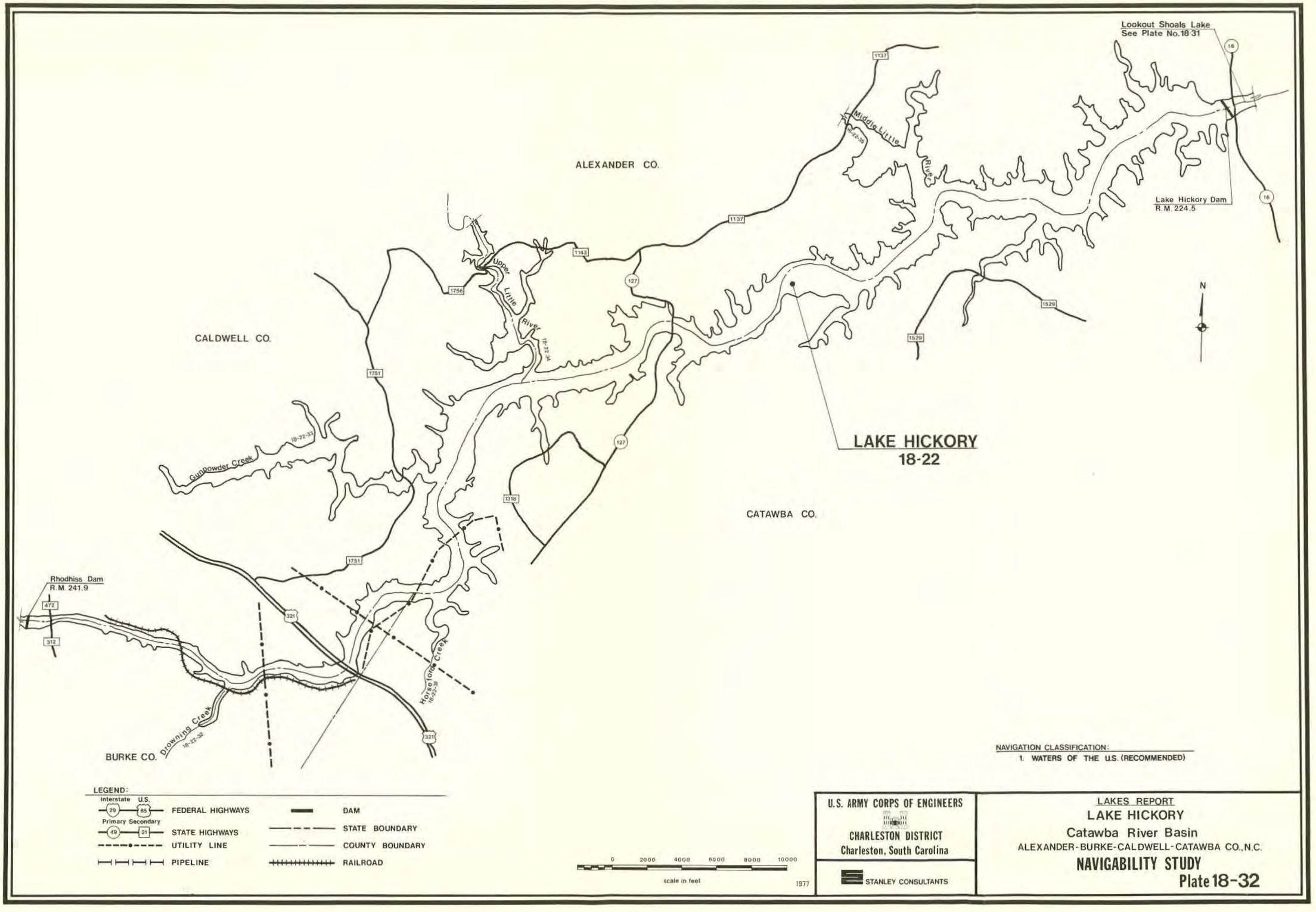
scale in feet

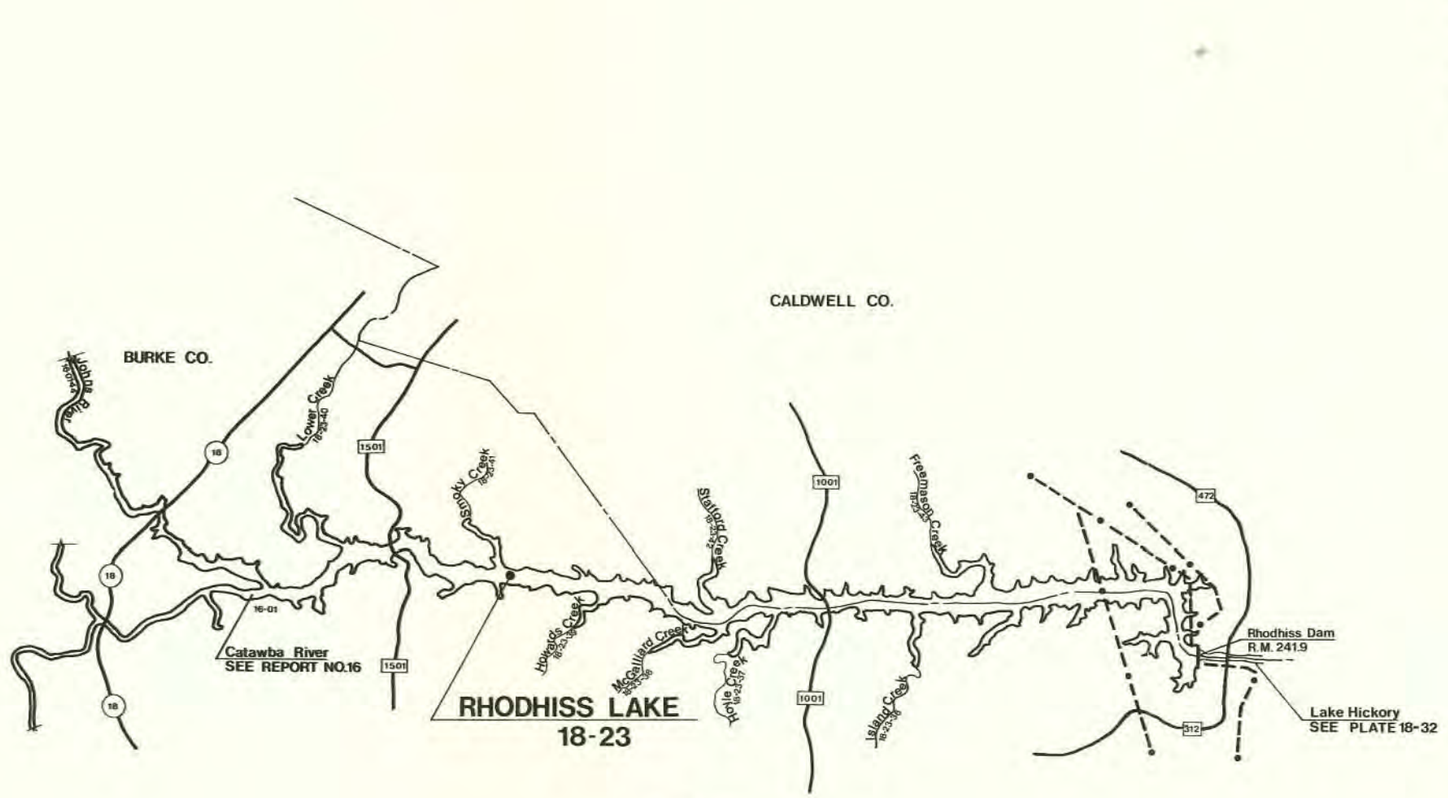
1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
LOOKOUT SHOALS LAKE
Catawba River Basin
ALEXANDER-CATAWBA-IREDELL CO.,N.C.
NAVIGABILITY STUDY
Plate 18-31


Lookout Shoals Lake
See Plate No.18-31
ALEXANDER CO.
CALDWELL CO.
BURKE CO.
CATAWBA CO.
Middle Little River
18-22-36
Upper Little River
18-22-34
Gunpowder Creek
18-22-37
Drowning Creek
18-22-38
Horse Forge Creek
18-22-33
Lake Hickory Dam
R.M. 224.5
Rhodhiss Dam
R.M. 241.9
LAKE HICKORY
18-22
N
1137
1143
1756
1751
127
1529
1318
321
472
312
18
16
LEGEND:
Interstate U.S.
FEDERAL HIGHWAYS
Primary Secondary
STATE HIGHWAYS
UTILITY LINE
PIPELINE
DAM
STATE BOUNDARY
COUNTY BOUNDARY
RAILROAD
0 2000 4000 6000 8000 10000
scale in feet
1977
NAVIGATION CLASSIFICATION:
1. WATERS OF THE U.S. (RECOMMENDED)
U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina
STANLEY CONSULTANTS
LAKES REPORT
LAKE HICKORY
Catawba River Basin
ALEXANDER-BURKE-CALDWELL-CATAWBA CO., N.C.
NAVIGABILITY STUDY
Plate 18-32



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- Interstate (29) / U.S. (85) — FEDERAL HIGHWAYS
- Primary (49) / Secondary (21) — STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 4000 8000 16000 20000 24000

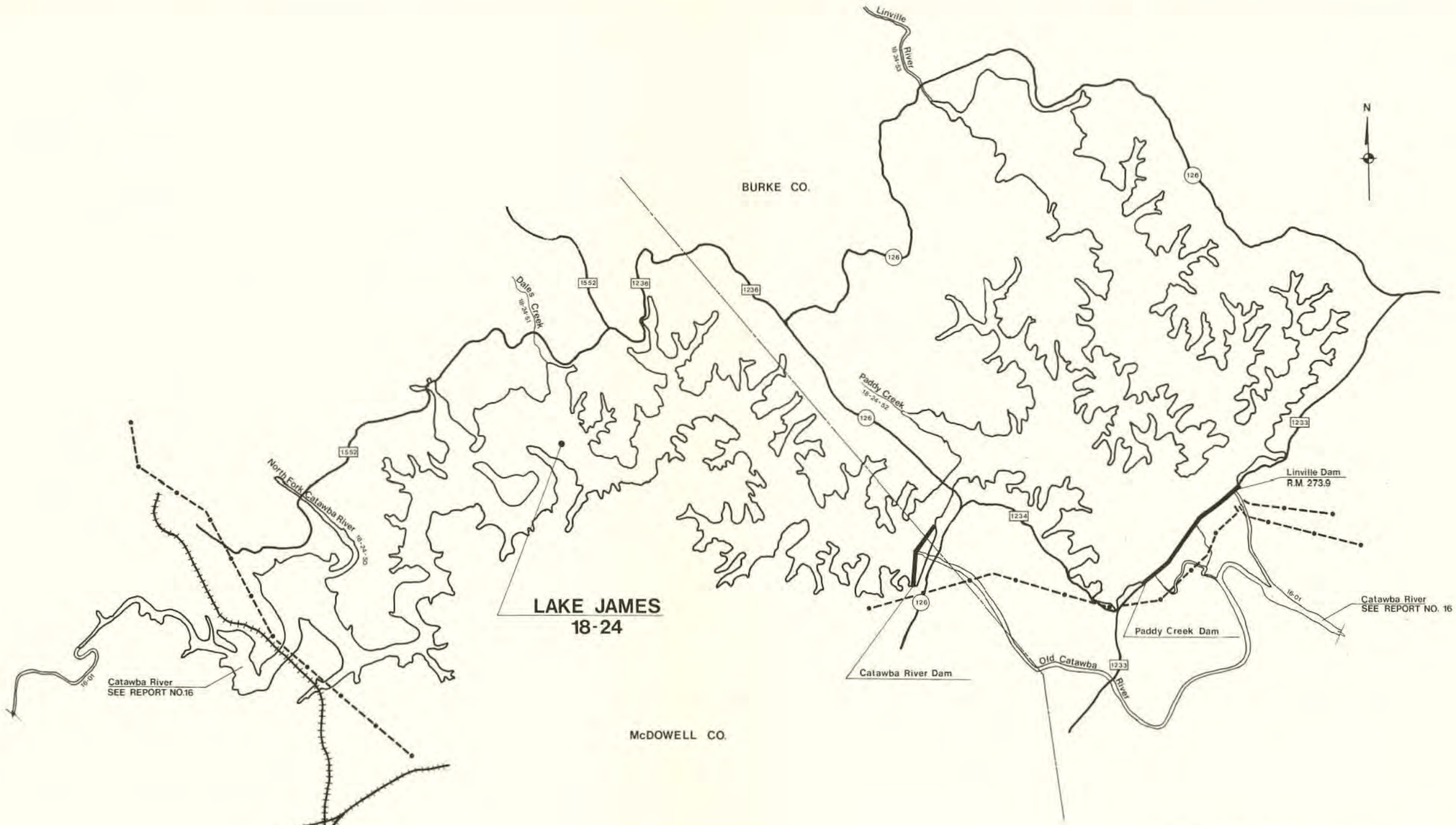
scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT
RHODHISS LAKE
Catawba River Basin
BURKE-CALDWELL CO., N.C.
NAVIGABILITY STUDY
Plate 18-33



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- FEDERAL HIGHWAYS (Interstate 29 / U.S. 85; Primary 49 / Secondary 21)
- STATE HIGHWAYS
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

0 2000 4000 6000 8000 10000

scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT

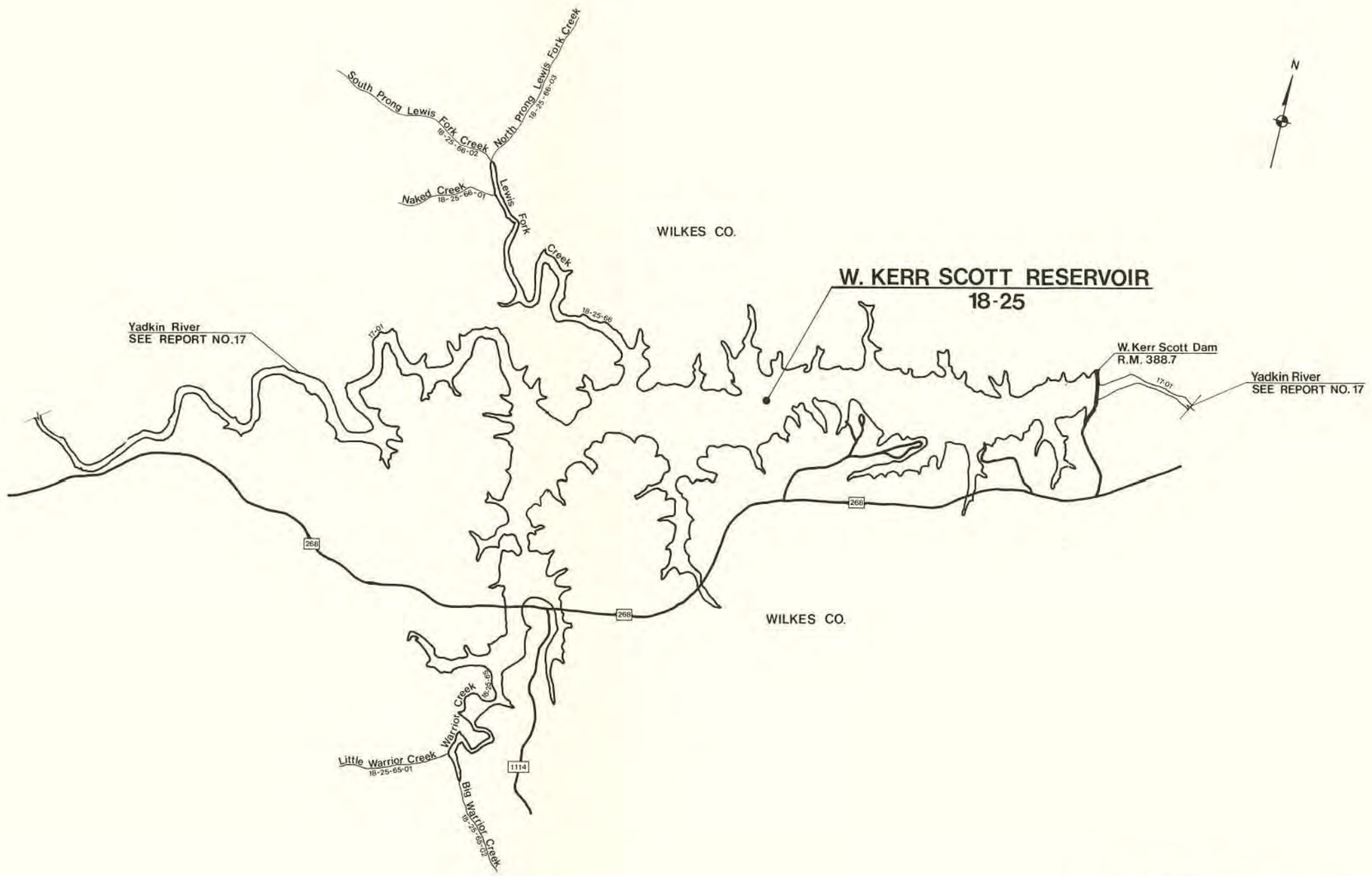
LAKE JAMES

Catawba River Basin

BURKE-McDOWELL CO., N.C.

NAVIGABILITY STUDY

Plate 18-34



NAVIGATION CLASSIFICATION:

1. WATERS OF THE U.S. (RECOMMENDED)

LEGEND:

- FEDERAL HIGHWAYS (Interstate 29, U.S. 85)
- STATE HIGHWAYS (Primary 49, Secondary 21)
- UTILITY LINE
- PIPELINE
- DAM
- STATE BOUNDARY
- COUNTY BOUNDARY
- RAILROAD

1600 800 0 1600 3200 4800

scale in feet

1977

U.S. ARMY CORPS OF ENGINEERS

CHARLESTON DISTRICT

Charleston, South Carolina

STANLEY CONSULTANTS

LAKES REPORT

W. KERR SCOTT RESERVOIR

Yadkin River Basin

WILKES CO., N.C.

NAVIGABILITY STUDY

Plate 18-35

APPENDIX A
STREAM CATALOG

This appendix presents a coded listing of all streams that have a mean annual flow greater than or equal to five cfs and drain into lakes with surface areas of 1,000 acres or more.

The points where flow is approximately equal to five cfs (headwaters) are defined by approximate longitude and latitude, and river miles from the nearest named tributary, majority highway, railroad, or other similar reference point. Some streams listed in the tabulation may not have headwater locations identified. This occurs when the name of a stream changes at a confluence where the flow immediately downstream is greater than five cfs. Thus, the headwater locations for streams with more than one name are associated with the appropriate upstream name found on USGS quadrangle maps. Some streams in this appendix listing are also coded in other reports for this study. Cross-references to specific reports are noted.

The coding system shown in the tabulation uses a procedure developed by the Charleston District, Corps of Engineers. Each lake has a specific number within this report (18-01 through 18-25). Primary stream numbers are continued from the primary streams located downstream of the lake, and are summarized in a clockwise direction around the lake starting at the downstream end. Remaining streams are summarized from the mouth of the primary stream upstream to the five cfs point.

USGS data was used to identify the location where the mean annual stream flow is five cfs. Flow records from gaging stations throughout the Charleston District were evaluated and an isoflow map developed to indicate variations in runoff (cfs per square mile). These runoff values were then applied to the appropriate stream drainage areas (as determined from USGS quadrangle maps) so that a flow of five cfs was approximated.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	01						LAKE MOULTRIE *					
	02						LAKE WACCAMAW					
		96					Big Creek #					
			01				Slap Swamp	34 23 15	78 31 50	0.6		Richlands Branc
			02				Fryer Swamp					
				01			Boggy Branch	34 24 45	78 29 10	0.5		Fryer Swamp
			03				Buckhead Branch	34 21 20	78 26 00	0.5		Gum Swamp
	03						LAKE MARION					
		42					Big Poplar Creek ##	33 32 00	80 32 15		0.6	Two Chop Road
		43					Halfway Swamp Creek ##	33 40 25	80 44 30	2.3		Furlick Branch
			01				Unnamed Tributary	33 34 15	80 36 00	1.3		Halfway Swamp
			02				Lyons Creek					
				01			Antley Spring Branch	33 37 55	80 45 05			Confluence-Bell Br
		44					Warley Creek ##	33 39 40	80 38 15	3.6		Santee River
		45					Squirrel Creek ##	33 41 20	80 37 50	1.5		Lake Marion

* No 5 cfs headwater locations within lake basin. # Dual code in Report 07. ## Dual code in Report 05.

APPENDIX A

STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	03	46					Spring Grove Creek ##					
			01				Ballard Creek	33 41 30	80 28 00	0.8		Duckford Branch
		47					Jacks Creek ##	33 37 55	80 23 15			Confluence-Belser Cr
		48					Tawcaw Creek ##	33 36 15	80 20 15	3.4		Lake Marion
		49					Potato Creek ##	33 33 35	80 16 55	0.6		Lake Marion
	04						LAKE MURRAY					
		04					Rock Creek #	34 00 20	81 20 20	1.7		Lake Murray
		05					Little Hollow Creek #	34 00 37	81 24 05	1.5		Lake Murray
		06					Horse Creek #	33 58 10	81 26 30	3.8		U.S. 378 Highway Bridge
			01				Little Horse Creek	34 00 05	81 25 12	0.6		Horse Creek
		07					Hollow Creek #	33 58 10	81 30 00	1.1		Caney Creek
			01				Little Creek	33 58 30	81 27 45	1.1		Hollow Creek
		08					Whetstone Creek #	34 02 05	81 28 50	0.2		Lake Murray
		09					Little Saluda River # (Lake Murray)					

Dual code in Report 14. ## Dual code in Report 05.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	04	09	01				Clouds Creek	33 51 27	81 37 30	1.0		Peters Creek
				01			West Creek	33 56 50	81 34 05			Confluence-Bates Br
				02			Moores Creek	33 55 23	81 36 55			Confluence-Dye Creek
				03			Peters Creek	33 51 53	81 39 30	0.6		Clouds Creek
			02				Beaverdam Creek	34 00 55	81 36 23	2.9		Little Saluda River (Lake Murray)
			03				Indian Creek	34 06 00	81 40 15	2.5		Little Saluda River (Lake Murray)
			04				Big Creek	34 03 37	81 49 50			Confluence-Shiloh Br
				01			Persimmon Creek	34 05 40	81 45 30			Confluence-Watermelon Branch
				02			Dry Creek	34 03 35	81 46 50	0.5		Big Creek
			05				Richard Creek	33 58 35	81 41 35	0.1		Poplar Branch
			06				Burnets Creek	34 01 15	81 45 15	1.5		Little Saluda River (Lake Murray)
			07				Mine Creek	33 53 40	81 47 30	3.2		Little Mine Creek
				01			Dry Creek	33 53 32	81 45 10		0.2	S.C. 193 Highway Bridge

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	04	09	08				Red Bank Creek	34 01 05	81 52 13	3.5		U.S. 378 Highway Bridge
				01			Penn Creek	33 57 55	81 49 45			Confluence-Salem Br
					01		Unnamed Tributary	33 57 30	81 49 17	0.5		Penn Creek
		10					Beaverdam Creek #	34 14 25	81 44 45	3.3		Welch Creek
			01				Welch Creek	34 15 20	81 42 45	2.5		Beaverdam Creek
		11					Bush River #	34 25 50	81 52 37	0.7		S.C. 56 Highway Bridge
			01				Timothy Creek	34 12 15	81 34 30	2.4		Kinards Creek
				01			Kinards Creek	34 13 45	81 35 55	2.7		Timothy Creek
			02				Unnamed Tributary	34 15 25	81 38 05	1.7		Bush River
			03				Big Beaverdam Creek	34 18 35	81 40 45	1.5		Bush River
			04				Shell Creek	34 25 25	81 50 20	1.2		Bush River
		12					Big Creek #	34 08 23	81 33 10	1.8		Lake Murray
		13					Buffalo Creek #	34 09 00	81 29 50	1.5		Lake Murray
		14					Camping Creek #	34 11 50	81 29 05			Confluence-Susannah Branch
		15					Bear Creek #	34 09 55	81 22 45			Confluence-Rocky Br

Dual code in Report 14.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	05						PARR RESERVOIR					
		10					Cannons Creek ##	34 16 50	81 33 40	0.2		Rocky Branch
			01				Mud Creek	34 17 50	81 28 00	3.7		Cannons Creek
			02				Kerr Creek	34 14 15	81 30 45	1.7		I-26 Highway Bridge
			03				Unnamed Tributary	34 15 25	81 31 05	1.3		I-26 Highway Bridge
		11					Hellers Creek ##	34 21 25	81 31 10	0.1		U.S. 176 Highway Bridge
			01				Second Creek	34 20 10	81 28 00	1.6		Back Creek
		12					Frees Creek ##	34 21 40	81 19 50	5.5		Broad River
	06						WATEREE LAKE					
		23					Rochell Creek #	34 23 35	80 52 05	2.3		Wateree Lake
		24					Dutchmans Creek #	34 20 05	80 59 30	0.9		Lots Fork
			01				Unnamed Tributary	34 21 20	80 56 10	2.2		Dutchmans Creek
		25					Taylor Creek #	34 26 15	80 53 50	0.5		Wateree Lake
		26					Big Wateree Creek #	34 30 10	81 06 35	2.8		Wall Creek

Dual code in Report 09. ## Dual code in Report 15.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	06	26	01				Little Wateree Creek					
				01			Horse Branch	34 24 35	80 58 55	2.6		Little Wateree Creek
				02			Minton Creek	34 26 55	81 05 05		0.2	White Oak Branch
				03			Unnamed Tributary	34 25 05	81 02 10	1.8		Little Wateree Creek
				04			McCulley Creek	34 23 20	81 02 45	2.6		Little Wateree Creek
				05			Horse Creek	34 21 55	81 01 25	3.2		McCulley Creek
					01		Unnamed Tributary	34 21 35	81 01 15	0.7		Horse Creek
			02				Hogfork Branch	34 29 25	80 58 15	0.7		Big Wateree Creek
			03				Scabber Branch	34 30 20	81 00 25	0.1		S.C. 200 Highway Bridge
			04				Gaydens Creek	34 29 10	81 02 15	2.1		Big Wateree Creek
			05				Wall Creek	34 30 40	81 04 50	1.4		Big Wateree Creek
			06				Unnamed Tributary	34 30 20	81 06 34			Confluence-Woodward Branch
		01					Rocky Creek ##	34 44 35	81 10 20	0.3		S.C. 72 & 121 Highway Bridge

Dual code in Report 16.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	06	01	01				Turkey Branch	34 33 45	80 55 35	0.4		Rocky Creek
			02				Hodges Branch	34 33 55	80 56 25	0.8		Rocky Creek
			03				Little Rocky Creek	34 36 40	81 08 15	3.5		Shannon Creek
				01			Stover Creek					
					01		Bell Creek	34 33 50	81 04 20	3.3		Stover Creek
				02			Shannon Creek	34 34 50	81 07 50	2.7		Little Rocky Creek
			04				Beaverdam Creek	34 40 25	80 59 20	6.6		Rocky Creek
			05				Bull Skin Creek	34 38 50	81 04 35	2.8		Rocky Creek
			06				Barbers Creek	34 42 15	81 03 15			Confluence-McDaniel Branch
			07				Hopper Creek	34 42 45	81 06 20			Confluence-Melton Br
			08				Bull Run Creek	34 39 50	81 09 10	4.3		Rocky Creek
		02					Fishing Creek ##	35 00 45	81 13 00			At U.S. 49 Highway Bridge
			01				Reaves Creek	34 42 20	80 56 00	1.0		Fishing Creek
			02				Tinkers Creek					

Dual code in Report 16.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	06	02	02	01			Neeley Creek	34 49 25	80 57 20	0.6		Rum Branch
			03				Hicklin Branch	34 46 35	80 59 55			Confluence-McFadden Branch
			04				South Fork Catawba R	34 51 30	81 09 40	1.2		Love Creek
				01			Conrad Creek	34 50 10	81 12 30	5.8		South Fork Catawba R
				02			Love Creek	34 51 05	81 10 30	1.2		South Fork Catawba R
			05				Stony Fork	34 53 45	81 08 00	4.6		U.S. 21 Highway Bridge
			06				Taylor Creek	34 53 00	81 00 30	1.1		S.C. 901 Highway Bridge
			07				Wildcat Creek	34 55 45	81 03 45	1.5		Tools Fork
				01			Tools Fork	34 57 40	81 07 00	3.0		S.C. 322 Highway Bridge
			08				Langham Branch					
				01			Unnamed Tributary	34 57 45	81 12 25	0.8		Langham Branch
		03					Camp Creek ##	34 37 10	80 44 35	1.9		S.C. 19 Secondary Highway Bridge

Dual code in Report 16.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	06	03	01				Dry Creek	34 35 25	80 48 05	2.9		Camp Creek
		04					Cedar Creek ##	34 34 40	80 45 50	2.5		Bell Branch
			01				Rocky Creek	34 32 50	80 50 30	0.8		Gar Creek
		27					Singleton Creek #	34 29 25	80 49 05			Confluence-McDow Cr
		28					Beaver Creek #	34 31 25	80 42 55	1.0		Tranham Creek
			01				Little Beaver Creek	34 31 00	80 45 15	3.0		Beaver Creek
			02				Tranham Creek	34 31 05	80 41 40	0.9		Beaver Creek
		29					White Oak Creek #	34 25 45	80 43 05	3.3		Wateree Lake
		30					Catawba River # ##					
	07						LAKE ROBINSON					
		37	09				Lower Alligator Cr ###	34 29 45	80 12 20	2.1		Lake Robinson
			10				Little Beaverdam Cr ###	34 31 05	80 08 05	3.1		Lake Robinson
			11				Big Beaverdam Creek ###	34 28 55	80 06 50	2.4		Lake Robinson
			12				Pond Hollow Branch ###	34 25 25	80 07 40	0.7		Lake Robinson
			13				Little Alligator Cr ###	34 31 10	80 13 15	2.5		Black Creek

Dual code in Report 09. ## Dual code in Report 16. ### Dual code in Report 11.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	07	37	14				Ham Creek #	34 34 25	80 14 15	2.2		Cow Branch
				01			Cow Branch	34 32 50	80 13 25	0.8		Ham Branch
			15				Skipper Creek #	34 37 45	80 13 10	0.2		Dead Pine Branch
			16				Little Black Creek #	34 43 35	80 17 05	1.1		Martin Branch
	08						FISHING CREEK RESERVOIR *					
	09						BLEWETT FALLS					
		67					Smith Creek #	34 59 15	79 56 45	1.4		North Fork
		68					Savannah Creek #	35 02 35	79 57 30	4.1		Great Pee Dee River
		69					Mountain Creek #					
			01				Little Mountain Creek	35 07 35	79 45 25	0.9		Jobs Creek
			02				Beaverdam Creek	35 09 20	79 46 50	1.0		Mountain Creek
			03				Big Mountain Creek	35 13 30	79 45 25	2.8		Dry Creek

* No 5 cfs headwater locations within lake basin.

\# Dual code in Report 11.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	10						LAKE GREENWOOD					
		22					Mulberry Creek ##	34 19 25	82 14 35	0.9		Dudley Creek
		23					Turkey Creek ##	34 25 35	82 20 20	3.8		Goose Creek
			01				Little Turkey Creek	34 21 25	82 15 30	2.2		Turkey Creek
			02				Gibson Creek	34 22 55	82 18 05	1.9		Turkey Creek
			03				Goose Creek	34 24 20	82 18 55	1.5		Turkey Creek
		24					Reedy River ##	34 57 35	82 27 35	5.1		Little Creek
			01				Walnut Creek	34 25 52	82 12 45	6.0		Reedy River
			02				Unnamed Tributary	34 29 55	82 14 15	1.4		Reedy River
			03				Horse Creek	34 35 37	82 18 55	9.7		Reedy River
			04				Martin Creek	34 35 10	82 14 55	1.2		Reedy River
			05				Huff Creek	34 43 15	82 21 15	5.1		Baker Creek
				01			Little Creek	34 38 10	82 21 00	3.9		Huff Creek
				02			Baker Creek	34 40 10	82 21 15	2.5		Huff Creek
					01		Unnamed Tributary	34 39 10	82 21 15	1.3		Baker Creek
			06				Rocky Creek	34 43 10	82 16 45	2.4		Reedy River

Dual code in Report 14.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	10	24	07				Laurel Creek	34 48 25	82 19 30	3.6		Reedy River
			08				Brushy Creek	34 49 35	82 24 45	4.4		Reedy River
			09				Richland Creek	34 52 05	82 22 50	2.0		Reedy River
			10				Langston Creek	34 53 45	82 25 30	1.5		Reedy River
		25					Rabon Creek #					
			01				Unnamed Tributary	34 25 35	82 04 25	2.6		Rabon Creek
			02				Dirty Creek	34 27 50	82 05 05	3.2		Rabon Creek
			03				North Rabon Creek					
				01			Lick Creek	34 32 30	82 06 50	1.3		U.S. 76 Highway Bridge
				02			Mountain Creek	34 34 25	82 08 25	1.6		North Rabon Creek
				03			Stoddard Creek	34 39 25	82 11 45	5.5		S.C. 101 Highway Bridge
			04				South Rabon Creek					
				01			Payne Branch Creek	34 41 00	82 14 50	1.6		S.C. 418 Highway Bridge
		26					Long Lick Branch	34 22 25	82 04 30	2.3		Lake Greenwood
		27					Cane Creek #	34 22 40	82 02 15	6.8		S.C. 72 Highway Bridge

Dual code in Report 14.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	10	28					Unnamed Tributary #	34 17 05	82 00 45	0.6		Cane Creek
	11						LAKE WYLIE					
		13					Big Allison Creek ##	35 05 15	81 14 50	1.5		Morris Branch
			01				Little Allison Creek	35 00 50	81 07 25	1.6		S.C. 274 Highway Bridge
		14					Crowders Creek ##	35 14 30	81 17 25	2.2		Abernethy Creek
			01				Beaverdam Creek	35 07 50	81 11 40	3.0		S.C. 557 Highway Bridge
			02				South Fork Crowder Cr	35 08 35	81 17 45	3.7		South Crowder Creek
				01			South Crowder Creek	35 10 45	81 16 25	1.1		S.C. Secondary 1103 Highway Bridge
		15					Mill Creek ##	35 07 15	81 05 05	0.2		S.C. 274 Highway Bridge
		16					Catawba Creek ##	35 14 00	81 08 45			Confluence-Shoal Br
		17					South Fork Catawba R ##					

Dual code in Report 14. ## Dual code in Report 16.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	11	17	01				Duharts Creek	35 15 25	81 07 10	0.7		N.C. Secondary 2329 Highway Bridge
			02				Long Creek	35 18 25	81 19 45	0.3		N.C. Secondary 1408 Highway Bridge
				01			Little Long Creek	35 19 20	81 11 40	0.2		U.S. 321 Highway Bridge
				02			Unnamed Tributary	35 20 00	81 17 00	0.6		Long Creek
			03				Hoyle Creek	35 27 10	81 11 10	1.1		N.C. Secondary 1315 Highway Bridge
				01			Mauney Creek	35 20 45	81 07 30	0.6		Hoyle Creek
			04				Rattle Shoal Creek	35 21 55	81 12 20			At U.S. 321 Highway Bridge
			05				Sulphur Creek	35 23 50	81 13 05	1.0		South Fork
			06				Muddy Creek	35 25 30	81 12 45	0.7		U.S. 321 Highway Bridge
			07				Beaverdam Creek	35 23 00	81 19 45	3.1		Little Beaverdam Cr
				01			Little Beaverdam Creek	35 22 30	81 18 40	1.7		Beaverdam Creek

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	11	17	08				Indian Creek	35 32 15	81 24 50	2.3		Little Indian Creek
				01			Lick Fork - Indian Cr	35 24 40	81 22 45	1.0		Indian Creek
				02			Mill Creek	35 25 20	81 23 45	1.4		Indian Creek
				03			Little Indian Creek[1)]	35 28 30	81 24 30	0.8		Indian Creek
				04			Little Indian Creek[1)]					
					01		Unnamed Tributary	35 32 00	81 27 25	1.2		Little Indian Creek
			09				Clark Creek	35 42 30	81 16 25			Confluence-Miller Br
				01			Larkard Creek	35 32 30	81 14 00	0.6		Hog Branch
					01		Maiden Creek	35 36 10	81 09 15	3.1		Allen Creek
						01	Allen Creek	35 34 40	81 11 00	0.9		Maiden Creek
				02			Pinch Gut Creek	35 35 40	81 12 40			Confluence-Long Br
				03			Smyre Creek	35 38 10	81 13 25			Confluence-Town Cr
				04			Cline Creek	35 41 10	81 15 15	0.6		Clark Creek
			10				Howards Creek					
				01			Tanyard Creek	35 30 45	81 20 15	1.6		Howard Creek

1) Two streams with same name.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	11	17	10	02			Unnamed Tributary	35 33 05	81 24 10	0.4		Howard Creek
			11				Pott Creek	35 36 05	81 21 25	0.3		Cow Branch
			12				Jacob Fork	35 35 35	81 38 55			Confluence-Nettle Branch
				01			Camp Creek	35 38 35	81 27 50	3.5		Jacob Fork
				02			Rock Creek	35 36 40	81 31 20			Confluence-Whitener Creek
				03			White Oak	35 35 10	81 35 30	0.6		Jacob Fork
				04			Little River	35 36 35	81 36 25	1.7		Jacob Fork
			13				Henry Fork	35 37 10	81 42 50	0.6		He Creek
				01			Muddy Creek	35 40 10	81 17 40	0.9		Henry Fork
				02			Cub Creek	35 41 15	81 30 50	1.0		Henry Fork
				03			Laurel Creek	35 41 00	81 35 35	1.3		Ball Alley Creek
					01		Ball Alley Creek	35 41 25	81 34 25	1.1		Laurel Creek
		18					Paw Creek #	35 15 35	80 56 20	2.4		U.S. 85 Highway Bridge

Dual code in Report 16.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	12						MOUNTAIN ISLAND LAKE					
		21					Johnson Creek #	35 24 15	80 59 10	1.1		Seaboard Coast Line Railroad Bridge
		22					McDowell Creek #	35 26 45	80 52 45	2.9		Torrence Creek
			01				Torrence Creek	35 24 15	80 52 55	0.7		McDowell Creek
	13						LAKE TILLERY					
		77					Jacobs Creek ##	35 17 55	80 08 45	2.1		Lake Tillery
		78					Mountain Creek ##	35 23 15	80 09 45	4.5		Little Mountain Cr
			01				Little Mountain Creek	35 24 05	80 07 25	3.1		Mountain Creek
		01					Unwharrie River ###	35 52 52	79 59 54		0.3	N.C. 62 Highway Bridge
			01				McLeans Creek	35 26 00	80 01 35			Confluence-Moccasin Creek
			02				Spencer Creek	35 25 10	79 59 25			Confluence-Cattail Creek
			03				Barnes Creek	35 29 45	79 55 45	2.4		Poison Fork

Dual code in Report 16. ## Dual code in Report 11. ### Dual code in Report 17.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	13	01	04				Crow Creek	35 30 05	80 00 35			Confluence-Big Creek
			05				Laniers Creek	35 34 10	80 00 07			Confluence-Nanny Br
			06				Hannahs Creek	35 35 15	79 56 30			Confluence-Robbins Branch
			07				Second Creek					
				01			South Fork Second Creek	35 36 15	80 01 55	1.1		Second Creek
			08				Betty McGees Creek	35 37 30	79 55 40	3.4		Uwharrie River
			09				Toms Creek	35 37 15	80 04 15	7.9		N.C. 49 Highway Bridge
			10				Caraway Creek	35 50 00	79 55 37			At N.C. Secondary 1408 Highway Bridge
				01			Taylors Creek	35 40 00	79 54 15	3.2		Caraway Creek
				02			Back Creek	35 45 52	79 50 35	5.9		Long Branch
					01		Long Branch	35 43 25	79 51 40	1.1		Back Creek
				03			Little Caraway Creek	35 46 30	79 57 10	4.9		Caraway Creek
				04			Unnamed Tributary	35 48 00	79 53 50	0.1		Caraway Creek
			11				Jackson Creek	35 42 25	80 01 00	0.9		South Fork Jackson Creek

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	13	01	12				Little Uwharrie River	35 48 30	80 03 10	2.1		Brier Creek
				01			Brier Creek	35 45 45	80 03 55	3.1		Little Uwharrie R
					01		Unnamed Tributary	35 47 15	80 03 55	0.8		Brier Creek
					02		Unnamed Tributary	35 46 50	80 05 35	2.4		Brier Creek
	14						BADIN LAKE					
		02					Beaverdam Creek #	35 31 40	80 06 22	1.3		Badin Lake
	15						TUCKERTOWN LAKE					
		03					Riles Creek #	35 31 10	80 17 00	5.1		Curltail Creek
			01				Curtail Creek	35 28 25	80 14 25	1.4		Riles Creek
		04					Flat Creek #	35 32 42	80 13 10	1.0		Yadkin River
		05					Cabin Creek #	35 35 00	80 07 40	5.4		Yadkin River
		06					Lick Creek #	35 40 45	80 06 30			Confluence-West Br
	16						POINSETT RESERVOIR					
		42					Big Falls Creek ##	35 10 50	82 23 40	0.6		Posey Creek

Dual code in Report 17.

Dual code in Report 14.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	17						LAKE WILLIAM C. BOWEN					
		26	15	01			Alexander Creek #	35 07 20	82 07 00	1.1		Lake William C. Bowen
	18						BUFFALO LAKE					
		36	03				Whiteoak Creek #	35 18 35	81 26 55		3.3	Seaboard Coast Line Railroad Bridge
	19						LAKE NORMAN					
		23					Mountain Creek ##					
			01				South Fork-Mountain Cr	35 36 15	81 04 30	0.7		N.C. Secondary 1818 Highway Bridge
			02				North Fork-Mountain Cr	35 37 30	81 03 45			Confluence-Battle Run Creek
		24					Balls Creek ##	35 39 55	81 05 50	0.3		Murrays Mill Lake
		25					Norwood Creek ##	35 41 15	80 56 45			Confluence-Power Spring Branch

Dual code in Report 15.

Dual code in Report 16.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	20						HIGH ROCK LAKE					
		07					Panther Creek #	35 35 08	80 17 25	1.2		High Rock Lake
		08					Secondary Creek #	35 31 45	80 25 35	3.9		U.S. 52 Highway Bridge
		09					Unnamed Tributary #	35 36 25	80 23 35	0.9		N.C. Secondary 1004 Highway Bridge
		10					Crane Creek #	35 36 00	80 28 50	3.5		U.S. 52 Highway Bridge
		11					Town Creek #	35 37 08	80 31 05		2.6	I-85 Highway Bridge
		12					Grants Creek #	35 35 05	80 35 10		0.4	N.C. 152 Highway Bridge
			01				Drafts Branch	35 40 12	80 31 45	1.4		Grants Creek
			02				Little Creek	35 37 55	80 35 23	2.2		Grants Creek
			03				Unnamed Tributary	35 35 23	80 35 45	1.0		Grants Creek
		13					Deals Creek #	35 44 45	80 26 35	1.1		Yadkin River
		14					South Potts Creek #	35 45 40	80 22 40	1.9		U.S. 52 Highway Bridge

Dual code in Report 17.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	20	15					North Potts Creek #	35 47 20	80 20 00	1.2		U.S. 52 Highway Bridge
		16					Swearing Creek #	35 51 10	80 16 40	1.6		Weightman Creek
		17					Abbotts Creek #	36 03 10	80 05 30	2.5		U.S. 311 Highway Bridge
			01				Leonard Creek	35 51 52	80 12 30	2.4		Dam-City Lake
				01			Unnamed Tributary	35 52 15	80 13 45	1.6		Leonard Creek
			02				Hamby Creek	35 51 10	80 08 50		1.0	N.C. 109 Highway Bridge
				01			Rich Fork	35 58 15	80 03 50	3.6		Payne Creek
					01		Hunts Fork	35 54 25	80 05 50	0.1		N.C. 109 Highway Bridge
					02		Kennedy Mill Creek	35 55 55	80 05 45	1.4		Rich Fork
					03		Payne Creek	35 56 55	80 04 10	2.2		Rich Fork
				02			Unnamed Tributary	35 51 40	80 10 30	0.9		Hamby Creek
			03				Brushy Fork	35 58 50	80 10 20			Confluence-Long Br
			04				Spurgeon Creek	36 00 30	80 07 15			Confluence-Mary Reich Creek

Dual code in Report 17.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	20	18					Pounder Fork #	35 47 25	80 12 10	0.6		U.S. 64 Highway Bridge
		19					Four Mile Branch #	35 44 40	80 11 05	2.8		Boss Branch
		20					Flat Swamp #	35 44 15	80 06 30	6.2		Dry Branch
	21						LOOKOUT SHOALS					
		28					Elk Shoal Creek ##	35 47 45	81 08 20			Confluence-Dellinger Creek
		29					Lower Little River ##	35 59 45	81 14 05			Confluence-East Prong
			01				Glade Creek	35 52 55	81 09 55	0.9		Jumping Run
			02				Muddy Fork	35 57 25	81 11 05	0.8		N.C. Secondary 1409 Highway Bridge
			03				Lambery Fork	35 58 00	81 16 15			Confluence-Poplar Cr
			04				Grassy Creek	35 59 05	81 11 15	3.9		Lower Little River
		30					Elk Shoals Creek ##	35 49 55	81 04 50	0.2		Guys Branch

Dual code in Report 17. ## Dual code in Report 16.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	22						LAKE HICKORY					
		31					Horseford Creek #	35 44 55	81 21 40			Confluence-Frye & Cripple Creek
		32					Drowning Creek #	35 44 45	81 27 45	1.6		N.C. Secondary 1621 Highway Bridge
			01				Unnamed Tributary	35 44 10	81 26 15	0.4		Drowning Creek
		33					Gun Powder Creek #	35 51 50	81 29 50	0.2		Angley Creek
			01				Little Gunpowder Creek	35 50 20	81 29 55	1.2		U.S. 321A Highway Bridge
		34					Upper Little River #	35 54 20	81 26 05			Confluence-McRary Cr
		35					Middle Little River #					
			01				Duck Creek	35 57 25	81 20 10	2.9		White Creek
			02				Ginger Creek	35 56 30	81 22 45	0.5		Middle Little River
	23						RHODHISS LAKE					
		36					Island Creek #	35 45 50	81 30 45	1.6		Catawba River
		37					Hoyle Creek #	35 45 15	81 32 30			Confluence-Micol Cr

Dual code in Report 16.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	23	38					McGalliard Creek #	35 44 55	81 35 00			Confluence-Double Branch
		39					Howard Creek #	35 46 20	81 35 10			Confluence-Secrets Creek
		40					Lower Creek #	35 56 45	81 28 30	2.3		N.C. 90 Highway Bridge
			01				Bristol Creek					
				01			White Mill Creek	35 50 05	81 40 50	1.2		Bristol Creek
			02				Husband Creek	35 53 20	81 37 30	2.4		Celia Creek
				01			Celia Creek	35 52 10	81 38 00	1.9		Husband Creek
			03				Abington Creek	35 54 05	81 35 20	2.2		Lower Creek
			04				Greasy Creek	35 54 00	81 34 10	0.8		Lower Creek
			05				Spainhour Creek					
				01			Blair Fork	35 56 15	81 32 30	0.5		Spainhour Creek
			06				Zacks Fork Creek	35 57 25	81 30 10	3.9		U.S. 321 Highway Bridge
		41					Smoky Creek #	35 49 05	81 35 10	4.2		Catawba River

Dual code in Report 16.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	23	42					Stafford Creek #	35 47 40	81 33 10	1.4		Catawba River
		43					Freemason Creek #	35 47 55	81 30 00	2.0		Catawba River
	24						LAKE JAMES					
		50					North Fork Catawba R #	35 55 45	81 56 25	3.1		Laurel Branch
			01				Limekiln Creek	35 47 30	82 01 25	0.3		North Fork Catawba R
			02				Armstrong Creek	35 47 35	82 07 45	0.1		Bee Rock Creek
				01			Cox Creek	35 49 35	82 02 50			Confluence-Rag Cr
				02			Three Mile Creek	35 49 25	82 04 35			Confluence-Sycamore Branch
			03				Pepper Creek	35 51 00	82 00 40			Confluence-Lonon Br
			04				Honey Cutt	35 52 30	81 58 40	2.5		U.S. 221 Highway Bridge
		51					Dales Creek #	35 46 25	81 57 10	1.1		Lake James
		52					Paddy Creek #	35 48 25	81 57 10			Confluence-Yellow Fork
		53					Linville River #	36 06 15	81 51 00			Confluence-Big Grassy Creek

Dual code in Report 16.

APPENDIX A
STREAM CATALOG

STREAM CODE							STREAM NAME	HEADWATER LOCATION (Mean Flow = 5 cfs)				
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER		LATITUDE (° ' ")	LONGITUDE (° ' ")	STREAM MILES UP	STREAM MILES DOWN	FROM
18	24	53	01				Camp Creek	35 58 40	81 55 05	0.1		Blue Ridge Parkway
			02				Mill Turner Creek	36 02 00	81 54 50			Confluence-White Pine Creek
			03				Grandmother Creek	36 03 35	81 51 45	1.4		Linville River
			04				West Fork-Linville River	36 05 05	81 52 40	0.4		Linville River
	25						KERR SCOTT RESERVOIR					
		65					Warrior Creek ##					
			01				Little Warrior Creek	36 03 20	81 17 25	1.7		Old Mill Road
			02				Big Warrior Creek	36 02 20	81 17 20	1.9		N.C. 18 Highway Bridge
		66					Lewis Fork ##					
			01				Naked Creek	36 07 50	81 19 45	0.6		Dragstrip Road
			02				South Prong Lewis Fork	36 12 25	81 26 50	1.4		Fall Creek
				01			Fall Creek	36 14 10	81 25 55	1.3		Fall Creek Road Bridge
			03				North Prong Lewis Fork	36 15 50	81 23 55	0.7		Little Fork
				01			Little Fork Creek	36 13 40	81 21 15	1.5		North Prong Lewis Fork

Dual code in Report 17.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

This appendix is a compilation of lakes from 10 to 1,000 acres which are contained in the localized drainage areas of lakes with 1,000 acres or more.

This inventory was compiled from the following sources:

1. Inventory of Lakes in South Carolina Ten Acres or More in Surface Area.
2. Hydrological Information Storage and Retrieval System, Register of Dams for North Carolina (computer printout).
3. USGS Quadrangle Maps.

The USGS quadrangle maps were used to locate and to detect lakes that were not listed in the other sources. Actual surface area and gross storage information is supplied where available. The lakes were coded by major stream basin in accordance with other procedures developed for identifying streams. The map data from Source 1 above generally does not permit detailed location of the small lakes. Thus, lakes are coded by basin only as far as the secondary order.

APPENDIX B
SUMMARY OF 10 TO 1,000 ACRE LAKES

REPORT NUMBER	STREAM CODE: MAJOR LAKE	STREAM CODE: PRIMARY	STREAM CODE: SECONDARY	STREAM CODE: TERTIARY	STREAM CODE: FOURTH ORDER	STREAM CODE: FIFTH ORDER	LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (SOUTH CAROLINA)
18	01						LAKE MOULTRIE *	60,400	1,211,000	Berkeley
										(NORTH CAROLINA)
18	02						LAKE WACCAMAW #	8,938	--	Columbus
18	02	96	02				Council Millpond	200	--	Bladen
18	02	96	02				Meapes Millpond	--	--	Bladen
										(SOUTH CAROLINA)
18	03						LAKE MARION ##	110,600	1,400,000	Orangeburg/Clarendon
18	03	01					Robert Lee	25	150	Clarendon
18	03	01					Robert Lee	10	60	Clarendon
18	03	01					Dale Mercer	25	120	Clarendon
18	03	47					S. G. Stukes	10	40	Clarendon
18	03	47					Tarheel Coal	30	120	Clarendon
18	03	47					H. F. Tindal	25	100	Clarendon
18	03	46					R. F. Elliotts	25	80	Clarendon
18	03						Unknown Lake	15	75	Orangeburg
18	03						L. E. Miller	12	58	Orangeburg
18	03						Santee State Park	15	72	Orangeburg

* No lakes 10 to 1,000 acres are located within the lake drainage area.
\# Dual code in Report 07. ## Following lakes dual code in Report 05.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

REPORT NUMBER	STREAM CODE: MAJOR LAKE	STREAM CODE: PRIMARY	STREAM CODE: SECONDARY	STREAM CODE: TERTIARY	STREAM CODE: FOURTH ORDER	STREAM CODE: FIFTH ORDER	LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (SOUTH CAROLINA)
18	03						Santee State Park	10	80	Orangeburg
18	03						Santee State Park	10	80	Orangeburg
18	03	42					Robert B. Shuler	20	80	Orangeburg
18	03	42					Unknown Lake	15	50	Orangeburg
18	03	42					Unknown Lake	12	60	Orangeburg
18	03	43					Hutto	40	224	Calhoun
18	03	43	01				Perkins	12	77	Calhoun
18	03	43	01				D. Rast	18	101	Calhoun
18	03	43	01				D. Rast	15	84	Calhoun
18	03	43	01				R. Rast	18	101	Calhoun
18	03	43					Shires	12	77	Calhoun
18	03	43					Bill Campbell	12	58	Calhoun
18	03	43	02				Wannamaker	35	196	Calhoun
18	03	43					St. Matthews	25	160	Calhoun
18	03	43					Wannamaker	35	224	Calhoun
18	03	44					A. P. Hanes	30	108	Calhoun

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

STREAM CODE							LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (SOUTH CAROLINA)
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER				
18	04						LAKE MURRAY #	51,000	2,114,000	Lexington
18	04						Ray O. Bickley	15	106	Lexington
18	04						L. O. Porth	18	151	Lexington
18	04	07					E. D. Senn	10	72	Lexington
18	04	09	01				Ponderosa Gulf Club	12	50	Saluda
18	04	09	01				Crouch Brothers	14	90	Saluda
18	04	09	01				Asbill Pond	12	96	Saluda
18	04	09	01				Harold F. Frick	16	100	Saluda
18	04	09	01				O. T. Price, Jr.	12	60	Saluda
18	04	09	01				R. M. Watson & Sons	12	60	Saluda
18	04	09	01				Elijah Rodgers	12	48	Saluda
18	04	09	01				L. S. Burton	10	50	Saluda
18	04	09					Town of Saluda	40	232	Saluda
18	04	09					Persimmon Hill Golf Club	13	78	Saluda
18	04	14					Caldwells Pond	10	51	Newberry
18	04	11					C. T. Smith	16	76	Newberry

Following lakes dual code in Report 14.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

STREAM CODE							LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (SOUTH CAROLINA)
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER				
18	05						PARR RESERVOIR	1,850	28,120	Newberry
18	05	10	02				Caldwells Pond #	10	80	Newberry
18	06						WATEREE LAKE	13,710	310,000	Kershaw
18	06	28	02				William H. Bridges ##	11	50	Kershaw
		28					Unnamed Lake			
18	06	26	06				Wateree Watershed Structure No. 1 ##	22	90	Kershaw
18	06	26					Wateree Watershed Structure No. 2 ##	21	68	Fairfield
18	06	26	05				Wateree Watershed Structure No. 3 ##	17	70	Fairfield
18	06	26	04				Wateree Watershed Structure No. 4 ##	13	71	Fairfield
18	06	12	04				Shiver Pond	--	--	Lee
18	06	02					Fishing Creek Watershed Structure No. 1 ###	70	420	York
18	06	02	08				Fishing Creek Watershed Structure No. 2 ###	32	100	York
18	06	02	05				Cameron Farms ###	13	79	York

Dual code in Report 15. ## Dual code in Report 09. ### Dual code in Report 16.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

REPORT NUMBER	STREAM CODE: MAJOR LAKE	STREAM CODE: PRIMARY	STREAM CODE: SECONDARY	STREAM CODE: TERTIARY	STREAM CODE: FOURTH ORDER	STREAM CODE: FIFTH ORDER	LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (SOUTH CAROLINA)
18	06	02	05				Grady Daves #	25	153	York
18	06	02					Fishing Creek Watershed Structure No. 5 #	18	57	York
18	06	02					Fishing Creek Watershed Structure No. 4 #	14	45	York
18	06	02	06				Rock Hill Country Club #	10	40	York
18	06	02	05				Cameron Farms #	10	61	York
18	06	02					Lamar Cloaninger #	20	160	York
18	06	02	06				Arnold E. Marshall #	10	61	York
18	06	02	08				James L. & Joseph R. Moss # (York County Home Farm)	15	92	York
18	06	01					Walker M. Atkinson #	13	52	Chester
18	06	02					Lake Oliphant-Chester Reservoir #	40	225	Chester
18	06	02	02				Tinkers Cr. RC&D Project No. 21 #	55	2,815	Chester
18	06	03					Bridges Pond #	11	66	Lancaster
18	06	03					Bridges Pond #	13	78	Lancaster
18	06						Rock and Cedar Cr. Reservoir #	800	23,000	Lancester, Chesterfield, Fairfield
18	06	04					Efird Pond #	13	--	Lancaster

Dual code in Report 16.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

STREAM CODE							LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (SOUTH CAROLINA)
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER				
18	06	04					Nesbit Pond #	24	200	Lancaster
18	06						Dearborn, Great Falls Pond #	450	16,000	Chester
18	07						LAKE ROBINSON ##	2,250	31,000	Chesterfield
18	07	37	09				Ridgeview Farms	15	72	Chesterfield
18	07	37	10				Thomas J. Morrison	10	48	Chesterfield
18	07	37	10				Sandhill State Forrest	20	96	Chesterfield
18	07	37	14				U.S. Wildlife Refuge-Martins Lake	60	288	Chesterfield
18	07	37	14				U.S. Wildlife Refuge-Pool D	20	88	Chesterfield
18	07	37	14				U.S. Wildlife Refuge-Lake 12	10	44	Chesterfield
18	07	37	14				U.S. Wildlife Refuge-Lake 16	15	66	Chesterfield
18	07	37	14				U.S. Wildlife Refuge-Lake Bee	25	120	Chesterfield
18	07	37	14				U.S. Wildlife Refuge-Pool G	15	66	Chesterfield
18	07	37					U.S. Wildlife Refuge-Mays Lake	25	180	Chesterfield
18	07	37	15				U.S. Wildlife Refuge-Pook K	30	144	Chesterfield
18	07	37	15				U.S. Wildlife Refuge-Pool L	30	144	Chesterfield
18	07	37	15				U.S. Wildlife Refuge-Pool K	30	144	Chesterfield

Dual code in Report 16.

Following lakes dual code in Report 11.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

STREAM CODE							LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (SOUTH CAROLINA)
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER				
18	07	37	16				Woodward Millpond	20	144	Chesterfield
18	07	37	16				Jimmy Sutton	10	50	Chesterfield
18	07	37	16				R. W. Jordan Estate (Graves Millpond)	22	97	Chesterfield
18	08						FISHING CREEK RESERVOIR *	3,370	80,000	Chester (NORTH CAROLINA)
18	09						BLEWETT FALLS LAKE	2,500	97,000	Richland & Anson
18	09	67					Unnamed Lake	--	--	Anson
18	09						Unnamed Lake	--	--	Richmond (SOUTH CAROLINA)
18	10						LAKE GREENWOOD ##	11,400	260,000	Greenwood
18	10						Bill Heerd	16	100	Greenwood
18	10						Brook & Jack Scurry	15	107	Laurens
18	10	24	05				Huff Creek Watershed Structure No. 3	21	93	Greenwood
18	10	24	05				Huff Creek Watershed Structure No. 5	37	232	Greenwood

* No lakes 10 to 1,000 acres are located within the lake drainage area.
\# Dual code in Report 11. ## Following lakes dual code in Report 14.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

STREAM CODE										
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER	LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (SOUTH CAROLINA)
18	10	24	05				Trollingwood Lake (Shows Lake)	32	480	Greenwood
18	10	24	05				Huff Creek Watershed Structure No. 2	19	87	Greenwood
18	10	24	05				Huff Creek Watershed Structure No. 1	22	127	Greenwood
18	10	24	05				Huff Creek Watershed Structure No. 4	27	222	Greenwood
18	10	24					Conestee Lake	48	600	Greenwood
18	10	24	10				Cone Mills	14	112	Greenwood
18	11						LAKE WYLIE #	12,455	107,670	York
18	11	13					Arthur Neeley II	10	72	York
18	11	13					Jennings S. Edmonds	18	108	York (NORTH CAROLINA)
18	11	17	12				Jacob Fork Creek Lake	52	153	Catawba
18	11	17					Lincolnton Lake (Long Shoals Cottonmill)	152	--	Lincoln
18	11	17					Mirror Lake	10	--	Lincoln

Following lakes dual code in Report 16.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

STREAM CODE							LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (NORTH CAROLINA)
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER				
18	11	17	04				Robinson Lake	18	--	Gaston
18	11	18					Robinwood Lake	35	--	Gaston
18	11	14	02				Short Lake	15	--	Gaston
18	11	17					Spencer Mountain Lake (Duke Power Co.)	68	3,000	Gaston
18	11	17	02				Bessemer City Reservoir	18	--	Gaston
18	11	17					Carpenters Lake	--	--	Lincoln
18	11	14	02				Unnamed Lake	--	--	York
18	11	14	02				Sparrow Springs Lake	--	--	Gaston
18	11	18	09				Unnamed Lake	--	--	Catawba
18	11	18	09				Unnamed Lake	--	--	Catawba
18	12						MOUNTAIN ISLAND LAKE *	3,235	57,300	Mecklenburg
18	13						LAKE TILLERY #	5,260	168,000	Montgomery & Stanly
18	13	01	10				Asheboro City Lake Dam 02 (Charles W. McCrary)	14	--	Randolph

* No lakes 10 to 1,000 acres are located within the lake drainage area.

\# Following lakes dual code in Report 17.

APPENDIX B
SUMMARY OF 10 TO 1,000 ACRE LAKES

REPORT NUMBER	STREAM CODE: MAJOR LAKE	STREAM CODE: PRIMARY	STREAM CODE: SECONDARY	STREAM CODE: TERTIARY	STREAM CODE: FOURTH ORDER	STREAM CODE: FIFTH ORDER	LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (NORTH CAROLINA)
18	13	01	10				Asheboro City Lake Dam 03 (John Burch)	30	--	Randolph
18	13	01	10				Asheboro City Lake Dam 04 (Back Creek Lake-Clydel Lucas)	250	--	Randolph
18	13	01	10				Asheboro Country Club Lake	20	--	Randolph
18	13	01	01				Bob Cat Acres Lake	10	--	Randolph
18	13	01					Colonial Country Club Lake	18	--	Randolph
18	13	01					Colonial Country Club Lake	12	--	Randolph
18	13	01	11				Scoonbeck Lake	10	--	Randolph
18	13	01					Lamberts Millpond	15	--	Randolph
18	13	01	10				U-Alta Lake	25	--	Randolph
18	13	01	12				Wheatmore Pond	25	--	Randolph
18	13	01	10				White Lake	10	--	Randolph
18	14						BADIN LAKE *	5,973	279,000	Montgomery
18	15						TUCKERTOWN LAKE *	2,529	43,000	Stanly

* No lakes 10 to 1,000 acres are located within the lake drainage area.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

STREAM CODE							LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (NORTH CAROLINA)
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER				
18	16						POINSETT RESERVOIR *	1,030	76,108	Greenville
18	17						LAKE WILLIAM C. BOWEN *	1,600	24,550	Spartanburg
18	18						BUFFALO LAKE *	1,275	38,000	Cleveland
18	19						LAKE NORMAN #	32,510	1,093,600	Catawba, Lincoln, Mecklenburg & Iredel
18	19						Superior Cable Pond	15	--	Catawba
18	19	25					Murrays Mill Lake	--	--	Catawba
18	20						HIGH ROCK LAKE ##	15,886	254,000	Davidson & Rowan
18	20	17	01				City Lake - City of Lexington (Lexington City Lake)	63	--	Davidson
18	20						Clodfelters Lake	10	--	Davidson
18	20	16					Cobles Reservoir	27	--	Davidson
18	20						Dan Nichols Park Lake	10	--	Davidson

* No lakes 10 to 1,000 acres are located within the lake drainage area.
\# Following lakes dual code in Report 16. ## Following lakes dual code in Report 17.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

STREAM CODE							LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (NORTH CAROLINA)
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER				
18	20	12	01				Rowan Wildlife Assn. Lake	10	--	Rowan
18	20	12					Lake Corriher	--	--	Rowan
18	20	17	01				Lexington-Thomasville City Lake	786	6,522	Davidson
18	21						LOOKOUT SHOALS LAKE	1,270	31,111	Catawba
18	21	30					Alspaugh Dam Carolina Glove Co. #	35	--	Alexander
18	22						LAKE HICKORY ##	4,110	127,479	Alexander & Catawba
18	22	33					Gunpowder Lake 01 (Duke Power Co.)	126	--	Caldwell
18	22	33					Gunpowder Lake 02 (Duke Power Co.)	15	--	Caldwell
18	22	34					Icard Lake	125	--	Caldwell & Alexander
18	22	34					Little River Lake (Duke Power Co.)	162	--	Caldwell & Alexander
18	23						RHODHISS LAKE ##	3,515	73,000	Burkes & Caldwell
18	23						Zacks Ford Cr. Lake (Town of Lenoir)	95	--	Caldwell

Dual code in Report 16.

Following lakes dual code in Report 17.

APPENDIX B

SUMMARY OF 10 TO 1,000 ACRE LAKES

STREAM CODE										
REPORT NUMBER	MAJOR LAKE	PRIMARY	SECONDARY	TERTIARY	FOURTH ORDER	FIFTH ORDER	LAKE NAME OR OWNER	SURFACE AREA (acres)	GROSS STORAGE (acre-ft)	LOCATION BY COUNTY (NORTH CAROLINA)
18	24						LAKE JAMES #	6,510	288,800	Burke & McDowell
18	24	53	03				Grandfather Mountain Lake	30	--	Avery
18	24	53					Land Harbors Lake	65	--	Avery
18	24	53					Loch Dorie Lake	35	--	Avery
18	25						KERR SCOTT RESERVOIR *	4,000	153,000	Wilkes

* No lakes 10 to 1,000 acres are located within the lake drainage area.
\# Following lakes dual code in Report 16.