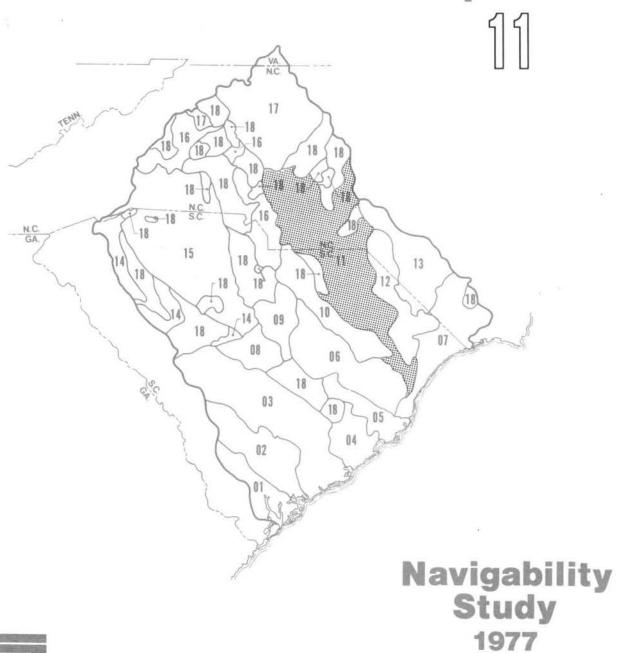


U.S. ARMY CORPS OF ENGINEERS
CHARLESTON DISTRICT
Charleston, South Carolina



## **GREAT PEE DEE RIVER BASIN**

Report No.





STANLEY CONSULTANTS.

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#### 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:

- 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.
- Conduct field surveys of waterbodies to establish mean water levels and obstruction clearances for evaluating the potential head of navigation.
- Analyze available hydrological data to estimate mean, maximum, and minimum discharge rates at obstructions and other selected locations.
- Conduct a literature review to identify past, present, and future uses of waterbodies for interstate commerce.

- Conduct a legal search to identify Federal and state court cases which impact on navigation classifications.
- 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

The Great Pee Dee River basin has its headwaters on the Yadkin River on the eastern slope of the Blue Ridge Mountains in western North Carolina and extends 430 river miles to the mouth of the Great Pee Dee River at Winyah Bay near Georgetown, South Carolina. The principal tributaries to the Great Pee Dee River are the Black River, Little Pee Dee River, Lynches River, and Yadkin River. Physical characteristics of the Black, Lynches, Little Pee Dee, and Yadkin Rivers are discussed in detail in Reports 06, 10, 12, and 17, respectively. Plate 11-1 shows the entire drainage basin of the Great Pee Dee River and its tributaries.

Major urban areas in the basin include Florence and Georgetown,
South Carolina. There are a series of electric power dams and associated lakes on the Great Pee Dee and Yadkin Rivers. These are the High Rock, Tuckertown, Badin Falls, Tillery, and Blewett Falls Lakes and
Dams. Plates 11-2 through 11-6 indicate these and other significant features in the basin.

The Great Pee Dee is a large river having a mean flow of about 17,810 cfs at its mouth. Its channel is generally wide, straight and free of debris. The river is gently sloped from the Blewett Falls Dam at river mile (R.M.) 188.2 to its mouth, except for a steep 17 mile stretch downstream of the dam. Upstream of Blewett Falls Dam a succession of five major dams exist in an area which has significant change in channel elevation.

The Yadkin River is a high-sloped river which is the primary tributary of the Great Pee Dee River. From the headwaters of the Yadkin River to the mouth of the Great Pee Dee River the water surface drops approximately 2,280 feet to mean sea level.

Thirty-three miles of the Great Pee Dee River are considered to be tidally influenced.

Table I presents selected physical characteristics of the river basin. Included are approximate values for drainage areas, mean water flows, and elevation changes. Detailed slope information may be found in Table 4. Methodology for determining the numerical values of physical characteristics appearing in Table 1 is defined in the Summary Report.

The location of key stream gaging stations on the Great Pee Dee River is presented in Table 2. Also shown in Table 2 are the mean, minimum, and maximum flows at the gaging stations.

TABLE 1

PHYSICAL CHARACTERISTICS (1)(2)(3)(4)\*

| Stream<br>& Code                    | Length-Mouth<br>to Headwaters<br>(mi) | Elevation<br>Change<br>(ft) | Drainage<br>Area<br>(sq.mi.) | Mean<br>Discharge<br>at Mouth<br>(cfs) | Limit of<br>Tidal<br>Influence<br>(R.M.) | Confluence<br>With Great<br>Pee Dee River<br>(R.M.) | Present Navi-<br>gable Waters<br>of the U. S.<br>(R.M.) |
|-------------------------------------|---------------------------------------|-----------------------------|------------------------------|--|--|---|---|
| Great Pee Dee<br>River<br>11-01     | 232.0 <sup>2)</sup>                   | 280 <sup>2)</sup>           | 16,190 <sup>4)</sup>         | 17,810 <sup>4)</sup>                   | 33                                       |   | 0-165   |
| Black River<br>11-01-03             | 145.9 <sup>3)</sup>                   | 180                         | 2,080                        | 1,460                                  | 40                                       | 3.1   | 0-49.6  |
| Little Pee Dee<br>River<br>11-01-23 | 109.0 <sup>3)</sup>                   | 190                         | 3,140                        | 3,770                                  |  | 33.2  | 0-99.0  |
| Lynches River                       | 195.6 <sup>3)</sup>                   | 495                         | 1,400                        | 1,400                                  |  | 61.9  | 0-42.5  |
| Yadkin River<br>11-01-79            | 198.03)                               | 2,000                       | 4,300                        | 5,590                                  |  | 232.0   |   |

<sup>1)</sup> See Summary Report for explanation of code.

<sup>2)</sup> From mouth of Great Pee Dee River to the mouths of Yadkin and Uwharrie Rivers.

<sup>3)</sup> From mouth at the confluence with Great Pee Dee River to a remote point in the indicated basin having a mean annual flow of five cfs.

<sup>4)</sup> Value is for entire drainage basin of Great Pee Dee River including Yadkin River.

<sup>\*</sup> See Bibliography for these references.

TABLE 2

KEY STREAM GAGING STATIONS (1)(2)(5)(6)

| Stream                 | USGS Gaging<br>Station Number | Location Description   | Drainage<br>Area<br>(sq.mi.) | Mean<br>Flow<br>(cfs) | Minimum<br>Flow <sup>1</sup> )<br>(cfs) | Maximum<br>Flow <sup>2</sup> )<br>(cfs) |
|------------------------|-------------------------------|--|------------------------------|-----------------------|---|---|
| Great Pee Dee<br>River | 02120900                      | Located near Rockingham<br>in Richmond Co., N. C.<br>on U. S. 74 Highway<br>Bridge | 6,870                        | 7,964                 | 2,383                                   | 13,874                                  |
| Great Pee Dee<br>River | 02131000                      | Located near Pee Dee<br>in Marion Co., S. C.<br>on U. S. 76 Highway<br>Bridge      | 8,830                        | 9,657                 | 3,200                                   | 18,000                                  |

<sup>1)</sup> Exceeded or equaled 90 percent of the time.

<sup>2)</sup> Exceeded or equaled 10 percent of the time.

#### SECTION 3 - NAVIGATION IMPROVEMENT PROJECTS

#### Federal Navigation Projects

A Federal navigation project (summarized in Table 3) provides for a cleared channel for navigation from the Waccamaw River via Bull Creek to Cheraw, South Carolina, on the Great Pee Dee River. The project was authorized by the River and Harbor Acts and was completed in 1909. As a result of the project, a 9 feet deep channel was cleared from the Waccamaw River to Smith Mills (R.M. 51) and a 3.5 feet deep channel was cleared to Cheraw (R.M. 165). Entrance to the Great Pee Dee River for commercial navigation is from the Waccamaw River through the connecting stream, Bull Creek, at R.M. 27.8 on the Great Pee Dee River.

Subsequent surveys in 1939 and 1950 indicated a cleared channel 3 feet deep from R.M. 54 (3 miles above Smith Mills) to Jefferys Creek (R.M. 86.5), a 2 feet deep channel to Mars Bluff (R.M. 100), and a channel less than 1 foot deep to Cheraw (R.M. 165).

# TABLE 3 AUTHORIZED FEDERAL NAVIGATION PROJECT (4) (7)

| Waterbody | Great | Pee | Dee | River |
|-----------|-------|-----|-----|-------|

| Work Authorized 9 ft to 3. | 5 ft | deep | navigation |
|----------------------------|------|------|------------|
|----------------------------|------|------|------------|

channel

Date Completed 1909

Project Location R.M. 27.8 to 165

Authorization River and Harbor Acts

S. Ex. Doc. 117, 46th Cong.,

2nd Session.

Annual Report, 1880. H. Doc. 124, 56th Cong.,

2nd Session.

### Other Navigation Projects

Inquiries made at various state and Federal agencies indicate no projects are now planned or under construction which would improve or substantially benefit navigation on the Great Pee Dee River.

#### SECTION 4 - INTERSTATE COMMERCE

#### Past

The first English settlers in South Carolina moved up from Charles Town (later named Charleston) using river transportation which was the most effective means of transportation then available. By the early 1700's, settlements had appeared at various points along the Great Pee Dee River. By 1750, a settlement at "the Cheraws" was established (i.e., Cheraw, South Carolina), which was then considered "at the head of schooner navigation." (8)(9)(10)

As the rice-growing culture spawned the great plantations along the lower tidewater reaches of the river, the up-river settlers (predominantly Scotch-Irish) shipped their surplus grains and foodstuffs down the Great Pee Dee River to feed the plantations' slave-labor forces. "The rice was collected at Georgetown for shipment to Charles Town and beyond ... to other colonies or to England itself." The river settlers in turn "received all their salt and heavy goods by water from Georgetown." (11) (12)

The grain and foodstuffs trade gradually replaced earlier exportation of furs and pelts to England with arrival of the Scotch-Irish settlers from Pennsylvania and Virginia in the 1750's. A heavy trade in barrel staves and lumber apparently continued with British colonies and possessions in the West Indies following an interruption during the American Revolution (1775-1783). (13)

Until the advent of the steamboat, vessel traffic on the river (1700-1820) appears to have been of various types and capacities. At first canoes constructed from cypress logs, and perhaps carrying sails and long oars, seem to have predominated. Next in size was the perriauger\*, which might carry a hundred barrels of pitch and tar or tobacco. Flats, scows, and various modes or rigs of sloops, schooners,

<sup>\*</sup> Perriauger - A vessel used during the early development period of the United States (1700's-1800's) for the transportation of supplies. The vessel was sometimes oared, poled, or pulled and was occasionally fitted with mast and sail.

and yawls were larger vessels that could navigate some distance up the various tributaries of the river, fetching products which were difficult to transport over the meager road network. (14)(15)

The development of the cotton gin in 1793 led to upland cotton-growing in the Great Pee Dee River basin which provided a great spur to interstate and international trade via the Great Pee Dee River.

The cotton trade to British and New England mills flourished until 1860. This significant navigation occurred even though upland planters customarily disposed of the logs and stumps they had removed from their new cotton lands in the river, creating innumerable snags and hazards to navigation. Steamboats plied between Georgetown and Cheraw, and between Georgetown and Charleston, at which point the cotton was shipped in ocean-going vessels. This was the pinnacle of interstate and international trade on the Great Pee Dee River. (16)(17) Later, in 1880, two steamboats navigated the river carrying 16,000 cotton bales, 25,800 barrels of naval stores, corn, fertilizer, and lumber, which could then be exported directly to Northern ports. (18)(19)

River trade never fully recovered from railroad competition. Rail lines had begun steadily to syphon away much of the river's commerce twenty years before the Civil War. The Great Pee Dee River's commerce was severely damaged during this period by railroad competition even with the Corps of Engineers' improvements of the 1880's.

Interstate commerce continued on the river through the early 1930's. Truck transportation and a paved highway network constructed during this period joined with the railroads in carrying products which previously had been moved by water. Since then, the tendency has been for the river to be used mainly for moving bulky, low-unit cost products such as pulpwood and lumber. (21)(22)

#### Present

The Great Pee Dee River between Winyah Bay and the Seaboard Coast Line Railroad bridge (R.M. 67.9) continues to be a significant artery for interstate commerce, although vastly less important than in colonial and antebellum days. By 1939 numerous landings had appeared

along the river for the handling of pulpwood; a freight traffic of 400 logs (10,572 tons) and 372 vessel trips was reported. In 1973 a total of 493 tons of commerce moved on the river for a total of 1,000 ton-miles. (23)

#### 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 Great Pee Dee River and its tributaries for interstate commerce in future years is difficult to predict. However, some analysis and judgments have been made concerning future commerce to assist in establishing navigation classifications.

As discussed later in Section 6, the Great Pee Dee River is recommended as practically navigable, with reasonable improvements, up to the Blewett Falls Dam at R.M. 188.2. It is anticipated that this stretch of stream has the potential to be utilized for shipment of goods into other states since it is connected with Georgetown Harbor (Winyah Bay) and the Atlantic Ocean. The upstream reaches of the basin are not currently used for interstate commerce and the future potential is not anticipated to be significant. This is due in part to limited industrial and commercial activity and heavy dependence on other forms of transportation including the interstate highway system, railroads, and air transport.

#### 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.
- 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, "navigable waters of the U. S." are determined by the Chief of Engineers and they may include 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. "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 Acts -- particularly the one of 1899 which specifically defined certain regulatory functions for the Corps of Engineers.

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 analysis of judicial interpretation has 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. 1,§8). Pursuant

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 no decisions which apply specifically to navigation in the Great Pee Dee River basin.

#### 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 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 Great Pee Dee River basin.

#### 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 one North Carolina state court decision which relates to navigation in the Great Pee Dee River basin. (24) This case is briefly summarized below.

<u>Dunlop v. Carolina Power and Light Co.\*</u> - The plantiff, a lower riparian owner, instituted a civil action against the defendant, an upper

<sup>\* 212</sup> N. C. 814, 195 S. E. 43 (1938).

riparian owner, to recover damages for the alleged unlawful and wrongful use of the waters of the Yadkin River\* by defendant and for compensation for damages to his lands, which the plaintiff alleged in effect amounted to a taking without just compensation. Plaintiff owned a tract of land bordering on the Rocky River and Yadkin River\* at the confluence of the two streams; the stream from the point of confluence of these two rivers to the ocean is known as the Great Pee Dee River. The case held that the Yadkin, or Great Pee Dee River, was a non-navigable stream, citing the cases, State v. Glen, 52 N.C. 321 and Cornelius v. Glen, 52 N.C. 512. Therefore, for the purpose of determining the riparian rights of the plaintiff, the court found that it must be deemed that his ownership extended to the center of the stream.

#### Recent Federal Litigation

A review of recent Federal litigation concerning the Charleston District did not reveal any court actions in the Great Pee Dee River basin relating to navigation.

#### 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, "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

<sup>\*</sup> Research for this study reveals that the Yadkin River referred to in this case appears to be (from USGS maps) the Great Pee Dee River instead.

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.

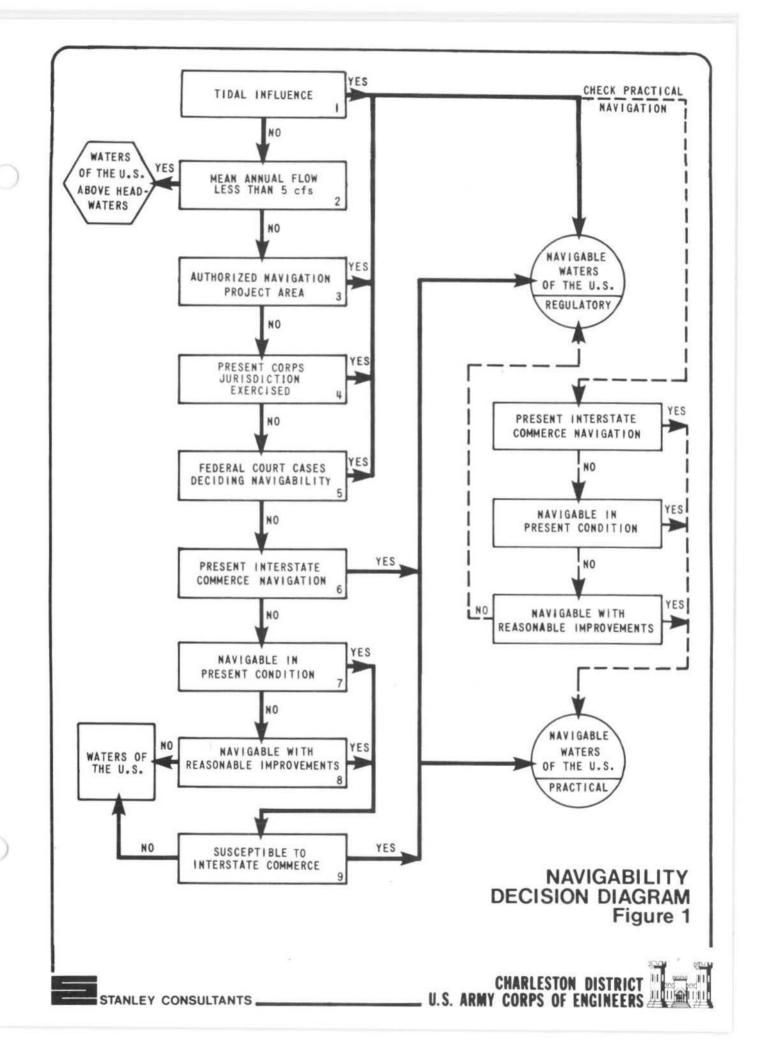
#### SECTION 6 - NAVIGATION OBSTRUCTIONS AND CLASSIFICATIONS

#### 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 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.

<u>Waters of the U. S. Above Headwaters</u> - 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



located upstream of the headwaters are nationally permitted by law and do not require an 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). (4)

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 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

streams are classified by judicial review as "navigable waters of the U. S.", they are not 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.

<u>Present Interstate Commerce Navigation</u> - Any rivers 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 streams, or portions of streams, 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 streams 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 into several different categories, each of which is discussed subsequently:

- Present "navigable waters of the U. S." (by regulatory procedures).
- 2. Historically navigable waters (based on literature review).
- Recommended "navigable waters of the U. S." (based upon data developed as a part of this investigation).
- 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.

Currently the Great Pee Dee River is classified as "navigable waters of the U. S." from its mouth at Winyah Bay to Cheraw, South Carolina, approximately at R.M. 165, where a Federal navigation project ends (for location see Plate 11-3). The present-day limit of commercial navigation is the Seaboard Coast Line Railroad bridge at R.M. 67.9.

(4) (7)

According to Charleston District documentation, in non-tidal areas, Jordan Lake, Jordan Creek, Jacobs Creek, Clark Creek, and Muddy Creek are each classified as "navigable waters of the U. S." from their confluences for distances of 1.0, 1.0, 0.5, 6.0, and 3.0 miles respectively. (4) Jordan Lake, Jordan Creek, and Jacobs Creek form a continuous stream which has its confluence at R.M. 35.5 on the Great Pee Dee River. Jacobs Creek eventually rejoins the Great Pee Dee River at R.M. 42.5 and R.M. 43.8. Clark Creek, which joins the Great Pee Dee River (at R.M. 52.2) with R.M. 0.8 on the Lynches River, is part of an authorized navigation project providing access to the Lynches River. Muddy Creek is a tributary of Clark Creek, both of which are discussed in Report 10 (Lynches River basin).

#### Historically Navigable Waters

Various types of vessels ranging from cypress log canoes to steam-boats have navigated the Great Pee Dee River from Georgetown to Cheraw (R.M. 165) as noted in Section 4. Therefore, the historical limit of navigation on the river is approximately identical to the present limit of "navigable waters of the U. S." (see Plate 11-3 for location).

#### Recommended and Practical Navigable Waters of the U. S.

The recommended and practical limit for "navigable waters of the U. S." on the Great Pee Dee River is at R.M. 188.2 where the Blewett Falls Dam is an insurmountable obstruction to navigation. Field investigation of all bridges crossing the Great Pee Dee River between the limit of tidal influence at about R.M. 33 and Blewett Falls Dam at R.M. 188.2 revealed water depth of at least 7 feet and channel width of at least 50 feet at channel bottom in all but one case. The Seaboard Coast Line Railroad bridge (R.M. 182.9) has an estimated channel depth of 5 feet at mean water level. The bridge is located in a 17-mile stretch of the river between R.M. 171 and R.M. 188 which has an average slope of 3.4 feet per mile according to USGS maps of the area. The high slope is the probable explanation for the low depth at the railroad bridge. The low depth and high slope for this stretch of the river, however, are considered minor obstructions to navigation.

The Blewett Falls Dam at R.M. 188.2 is considered a major barrier to navigation and therefore is recommended as the practical limit of navigation and the end of "navigable waters of the U. S." The dam is the first of six major dams on a 60 mile stretch of the Great Pee Dee-Yadkin Rivers. Currently there are no lock facilities for river traffic at the Blewett Falls Dam or at any other of the upstream dams, nor are there any future plans to permit navigation around these dams. There is no indication that the upstream impoundments are being used or have significant potential for interstate commerce.

"Navigable waters of the U. S.", once classified in the past, cannot be declassified. Thus, the recommended limits of "navigable waters of the U. S." (for regulatory purposes) for Jacobs Creek are

from its confluence with the Great Pee Dee River to R.M. 0.5. This recommendation is the same as the present limit. (4) Field investigation of Jacobs Creek revealed insufficient water depth and/or channel width to meet navigability criteria, thus it is not recommended for practical navigation. Clark Creek is recommended for classification as "navigable waters of the U. S." (for regulatory purposes) from its junction with the Great Pee Dee River (at R.M. 52.2) to its junction with the Lynches River (at R.M. 0.8), a distance of 6 miles, since this is the present classification. (4) Field investigation of Clark Creek revealed sufficient depth and/or width to meet navigability criteria for only the first mile (adjacent to the Great Pee Dee River), thus Clark Creek is recommended for practical navigation only to R.M. 1.0. Jordan Creek, which is presently classified "navigable waters of the U. S." for 1 mile, is recommended for practical navigation only to R.M. 0.6, but for regulatory purposes the recommended limit of "navigable waters of the U. S." is at the present limit, R.M. 1.0. Jordan Lake, which is also presently classified "navigable waters of the U. S." for 1 mile, is recommended for practical navigation to that same limit (R.M. 1.0) based on the results of field investigations. In addition, field investigation of other small tributary streams revealed sufficient depth and width to justify recommendation of two additional tributaries for navigability classification. Thus, the following streams (which confluence with the Great Pee Dee River within its recommended practical limits of "navigable waters of the U. S.) are recommended for classification and are listed with their upstream recommended and practical limits of "navigable waters of the U. S." indicated in parentheses: Staple Lake (R.M. 0.5), and Byrds Island (tributary) (R.M. 0.2). The downstream limit for both of these small streams is at the confluence with the Great Pee Dee River.

Also, Black Creek, a tributary of the Great Pee Dee River at R.M. 108.5, was investigated as potential "navigable waters of the U. S." based on the size of its drainage area and mean discharge. Field investigation of eight bridges crossing the creek revealed insufficient depth for commercial navigation. The creek would require extensive

channel improvement (dredging, clearing, and straightening) and major bridge renovation to allow navigation. There are no major urban or industrial centers that could be usefully served by commercial river traffic on Black Creek. Therefore, Black Creek is not recommended for classification as "navigable waters of the U. S."

These conclusions on the navigation limits meet the criteria established for the Federal test of navigability that the 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.

Plates 11-7 through 11-17 are plan and profiles for the recommended "navigable waters of the U. S." The plan and profile plates show mean water surface as determined from USGS maps, stream bed depth, 50 feet wide navigable channel depth, pier spacing for bridges crossing the river, and vertical clearances at structures. Approximate vertical clearances for overhead utilities are shown later in this section in Table 4. It is emphasized that all references to elevation are approximate since vertical control was established from USGS contour maps and not field instrument surveys. Water depth and structure vertical clearance measurements are also approximate due to the accuracy inherent in the field techniques. Small tributary streams recommended for classification as "navigable waters of the U. S." for less than one mile in length from their confluences are shown on the plan only. (See the Summary Report for a detailed description of field procedures and the methodology used to calculate water depth at mean flow.)

#### Obstructions to Navigation

Table 4 is a listing of all obstructions within the recommended "navigable waters of the U. S." on the Great Pee Dee River. No obstructions were found on the small tributary streams recommended for classification as "navigable waters of the U. S." Vertical clearance to mean water level and mean water slope are presented at all obstructions and mean discharge is shown at all bridges. It is emphasized that mean discharge, slope, and vertical clearances are only approximations

based on best available data. Specific procedures for determining these are discussed in the Summary Report.

Photographs of each obstruction investigated in the field are presented in Figures 2 through 30. Each photograph is identified to correspond with the data in Table 4.

#### Waters of the U. S.

"Waters of the U. S." are considered to be all streams beyond the recommended limits 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 Great Pee Dee River basin. Each point is located by stream code, stream name, latitude and longitude, and a mileage reference.

Appendix B lists the lakes located in the Great Pee Dee River basin 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.

TABLE 4

OBSTRUCTION LISTING FROM TIDAL INFLUENCE LIMIT
TO RECOMMENDED LIMIT OF NAVIGABLE WATERS OF THE U. S. (3)

| Great<br>Pee Dee<br>River Mile | Description                            | Mean<br>Discharge<br>(cfs) | Mean<br>Water Slope<br>(ft/mi) | Approximate Vertical Clearance To Obstruction (ft) |
|--------------------------------|--|----------------------------|--------------------------------|--|
| 47.0                           | Utility Line (power)                   |                            | 0.37                           | 62.0   |
| 47.0                           | Utility Line (power)                   |                            | 0.37                           | 57.0   |
| 67.9                           | Seaboard Coast Line<br>Railroad Bridge | 9,820                      | 0.73                           | 22.0   |
| 69.4                           | U. S. 378 Highway Bridge               | 9,810                      | 0.38                           | 32.0   |
| 96.0                           | Utility Line (power)                   |                            | 0.39                           | 39.0   |
| 100.2                          | U. S. 76-301 Highway<br>Bridges        | 9,660                      | 0.39                           | 30.0   |
| 100.4                          | Utility Line (power)                   |                            | 0.39                           | 45.0   |
| 100.4                          | Seaboard Coast Line<br>Railroad Bridge | 9,660                      | 0.39                           | 23.0   |
| 101.3                          | Utility Line (power)                   |                            | 0.39                           | 57.0   |
| 101.3                          | Utility Line (power)                   |                            | 0.39                           | 55.0   |
| 101.3                          | Utility Line (power)                   |                            | 0.39                           | 59.0   |
| 109.8                          | Utility Line (power)                   |                            | 0.75                           | 42.0   |
| 109.9                          | 1-95 Highway Bridges                   | 9,050                      | 0.75                           | 29.0   |
| 116.1                          | S. C. 34 Highway Bridge                | 8,980                      | 0.50                           | 31.5   |
| 136.1                          | Utility Line (power)                   |                            | 0.47                           | 56.0   |
| 145.4                          | Utility Line (power)                   |                            | 0.47                           | 77.0   |
| 146.6                          | U. S. 15-52-401 Highway<br>Bridge      | 8,670                      | 0.47                           | 35.0   |

TABLE 4 (continued)

OBSTRUCTION LISTING FROM TIDAL INFLUENCE LIMIT
TO RECOMMENDED LIMIT OF NAVIGABLE WATERS OF THE U. S. (3)

| Great<br>Pee Dee<br>River Mile | Description                            | Mean<br>Discharge<br>(cfs) | Mean<br>Water Slope<br>(ft/mi) | Approximate Vertical Clearance To Obstruction (ft) |
|--------------------------------|--|----------------------------|--------------------------------|--|
| 148.0                          | Utility (underground pipe)             |                            | 0.47                           | -3.01)   |
| 148.0                          | Utility (underground pipe)             |                            | 0.47                           | -3.0 <sup>1)</sup>                                 |
| 161.3                          | Utility Line (power)                   |                            | 0.59                           | 58.0   |
| 164.7                          | Utility Line (power)                   |                            | 0.59                           | 55.0   |
| 164.7                          | Seaboard Coast Line<br>Railroad Bridge | 7,970                      | 0.59                           | 40.0   |
| 164.8                          | Utility Line (power)                   |                            | 0.59                           | 53.0   |
| 164.8                          | Utility Line (power and telephone)     |                            | 0.59                           | 39.0   |
| 164.8                          | U. S. 1, S. C. 9 High-<br>way Bridges  | 7,970                      | 0.59                           | 40.0   |
| 165.2                          | Utility (underground pipe)             |                            | 0.59                           | -2.5 <sup>1)</sup>                                 |
| 165.2                          | Utility Line (power)                   |                            | 0.59                           | 60.0   |
| 165.9                          | Utility Line (power)                   |                            | 0.59                           | 45.0   |
| 166.7                          | Utility (underground pipe)             |                            | 0.59                           | -3.0 <sup>1)</sup>                                 |
| 175.5                          | Utility Line (power)                   |                            | 3.45                           | 75.0   |
| 182.9                          | Utility Line (power)                   |                            | 2.78                           | 53.0   |
| 182.9                          | Seaboard Coast Line<br>Railroad Bridge | 7,960                      | 2.78                           | 32.0   |

TABLE 4 (continued)

OBSTRUCTION LISTING FROM TIDAL INFLUENCE LIMIT
TO RECOMMENDED LIMIT OF NAVIGABLE WATERS OF THE U. S. (3)

| Great<br>Pee Dee<br>River Mile | Description                     | Mean<br>Discharge<br>(cfs) | Mean<br>Water Slope<br>(ft/mi) | Approximate Vertical Clearance To Obstruction (ft) |
|--------------------------------|---------------------------------|----------------------------|--------------------------------|--|
| 184.5                          | Utility (underground telephone) |                            | 3.57                           | On Bed   |
| 184.5                          | Utility Line (power)            |                            | 3.57                           | 45.0   |
| 184.7                          | U. S. 74 Highway Bridge         | 7,960                      | 3.57                           | 44.0   |
| 184.7                          | U. S. 74 Highway Bridge         | 7,960                      | 3.57                           | 38.0   |
| 184.7                          | Utility Line (power)            |                            | 3.57                           | 23.0   |
| 185.5                          | Utility (underground pipe)      |                            | 3.57                           | -3.0 <sup>1)</sup>                                 |
| 185.5                          | Utility Line (power)            |                            | 3.57                           | 45.0   |
| 187.9                          | Utility Line (power)            |                            | 3.57                           | 51.0   |
| 187.9                          | Utility Line (power)            |                            | 3.57                           | 33.0   |
| 188.2                          | Blewett Falls Dam               |                            |                                |  |

<sup>1)</sup> Estimated minimum depth below streambed at time of construction.

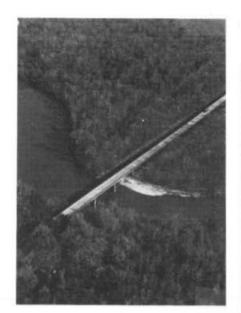


FIGURE 2 - TWO UTILITY LINES (R.M. 47.0)





FIGURE 3 - SEABOARD COAST LINE RAILROAD BRIDGE (R.M. 67.9)



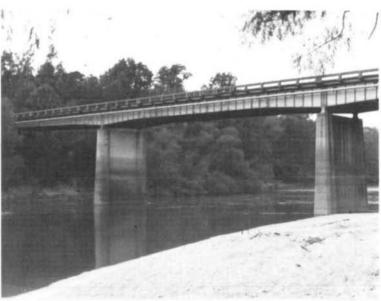


FIGURE 4 - U. S. 378 HIGHWAY BRIDGE (R.M. 69.4)



FIGURE 5 - UTILITY LINE (R.M. 96.0)



FIGURE 6 - U. S. 76 - 301 HIGHWAY BRIDGES (R.M. 100.2)



FIGURE 7 - U. S. 76 - 301 HIGHWAY BRIDGES (R.M. 100.2)



FIGURE 8 - UTILITY LINE (R.M. 100.4)
(AND SEABOARD COAST LINE RAILROAD BRIDGE)



FIGURE 9 - SEABOARD COAST LINE RAILROAD BRIDGE (R.M. 100.4)

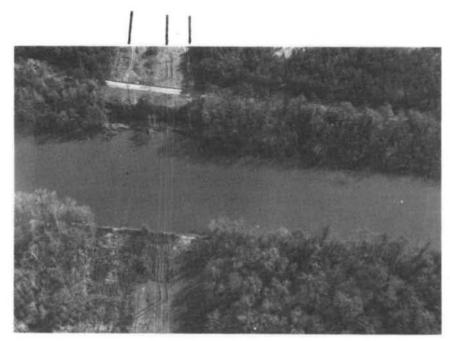


FIGURE 10 - THREE UTILITY LINES (R.M. 101.3)

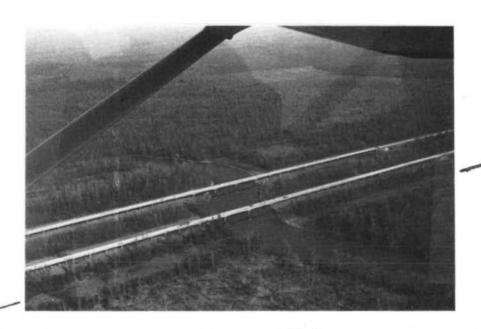


FIGURE 11 - UTILITY LINE (R.M. 109.8) (AND 1-95 HIGHWAY BRIDGES)



FIGURE 12 - I-95 HIGHWAY BRIDGES (R.M. 109.9)
(TWO IDENTICAL BRIDGES - ONLY ONE SHOWN)

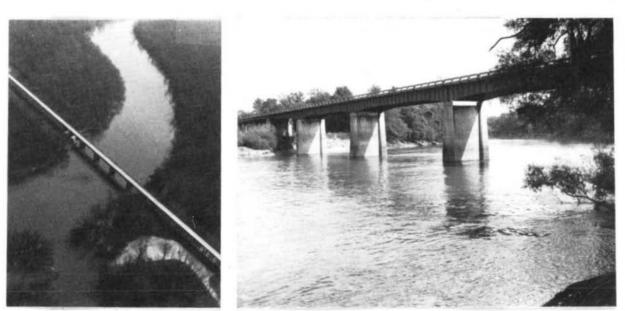


FIGURE 13 - S. C. 34 HIGHWAY BRIDGE (R.M. 116.1)



FIGURE 14 - UTILITY LINE (R.M. 136.1)



FIGURE 15 - UTILITY LINE (R.M. 145.4)



FIGURE 16 - U. S. 15-52-401 HIGHWAY BRIDGE (R.M. 146.6).



FIGURE 17 - U. S. 15-52-401 HIGHWAY BRIDGE (R.M. 146.6)



FIGURE 18 - UTILITY LINE (R.M. 161.3)

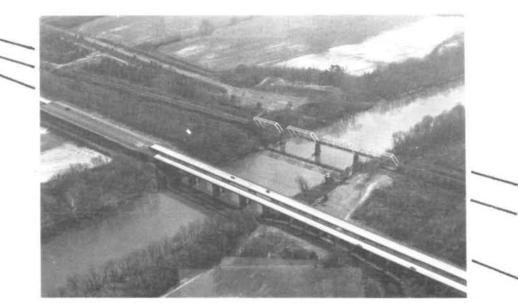


FIGURE 19 - THREE UTILITY LINES (R.M. 164.7, 164.8, 164.8)

(AND SEABOARD COAST LINE RAILROAD BRIDGE & U. S. 1, S. C. 9 HIGHWAY BRIDGES)



FIGURE 20 - SEABOARD COAST LINE RAILROAD BRIDGE (R.M. 164.7)



FIGURE 21 - U. S. 1, S. C. 9 HIGHWAY BRIDGES (R.M. 164.8)



FIGURE 22 - UTILITY LINE (R.M. 165.2)



FIGURE 23 - UTILITY LINE (R.M. 165.9)



FIGURE 24 - UTILITY LINE (R.M. 175.5)

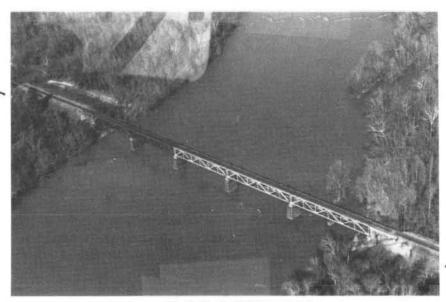


FIGURE 25 - UTILITY LINE (R.M. 182.9) (AND SEABOARD COAST LINE RAILROAD BRIDGE)



FIGURE 26 - UTILITY LINE (R.M. 184.5)

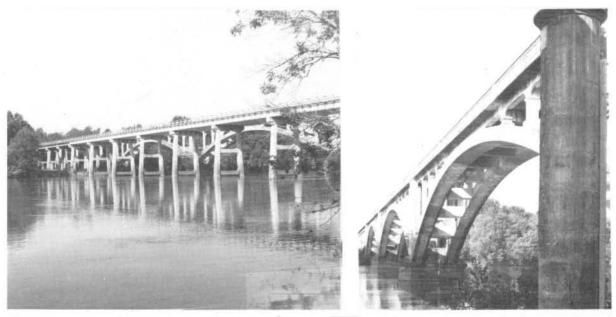


FIGURE 27 - U. S. 74 HIGHWAY BRIDGES (EAST BOUND & WEST BOUND) (R.M. 184.7)

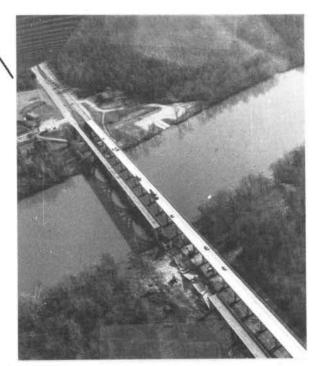


FIGURE 28 - UTILITY LINE (R.M. 184.7) (AND U. S. 74 HIGHWAY BRIDGES)



FIGURE 29 - UTILITY LINE (R.M. 185.5)



FIGURE 30 - TWO UTILITY LINES (R.M. 187.9)
AND BLEWETT FALLS DAM (R.M. 188.2)

## SECTION 7 - CONCLUSIONS AND RECOMMENDATIONS

Five classifications of navigation on streams in the Great Pee Dee River basin 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 for the river. 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 streams not otherwise classified and was determined based on the drainage area and hydrological aspects of the stream.

- The Great Pee Dee River is presently classified "navigable waters of the U. S." between its mouth at Winyah Bay (R.M. 0) near Georgetown, South Carolina to Cheraw, South Carolina (R.M. 165). Also, Jordan Lake, Jordan Creek, Jacobs Creek, Clark Creek, and Muddy Creek are each presently classified "navigable waters of the U. S." from their confluences for distances of 1.0, 1.0, 0.5, 6.0, and 3.0 miles respectively. (4)
- The historical limit of navigation on the Great Pee Dee River is at Cheraw, South Carolina (R.M. 165).
- 3. The recommended practical limit of navigation is at Blewett Falls Dam (R.M. 188.2). Some minor channel improvements will be necessary for commercial river craft to actually use the river up to this point. In addition, the following small tributaries are recommended for practical navigation, and are listed with their upstream recommended practical limit of navigation indicated in parentheses: Jordan Lake (R.M. 1.0), Jordan Creek (R.M. 0.6), Staple Lake (R.M. 0.5), Clark Creek (R.M. 1.0), and Byrds Island (tributary) (R.M. 0.2). The downstream limit for each of these small streams is at its confluence with the Great Pee Dee River.
- 4. It is recommended that the Great Pee Dee River be classified "navigable waters of the U. S." between its mouth and Blewett

Falls Dam (R.M. 188.2). In addition, the following small tributaries are recommended for classification as "navigable waters of the U. S." from their confluences with the Great Pee Dee River to the upstream limits indicated in parentheses: Jordan Lake (R.M. 1.0), Jordan Creek (R.M. 1.0), Jacobs Creek (R.M. 0.5), Staple Lake (R.M. 0.5), Clark Creek (R.M. 6.0), and Byrds Island (tributary) (R.M. 0.2). These conclusions are based on the analytical procedures and tests of navigability used in this study effort.

5. All streams not recommended for classification as "navigable waters of the U. S." are recommended for classification as "waters of the U. S." throughout their entire length.

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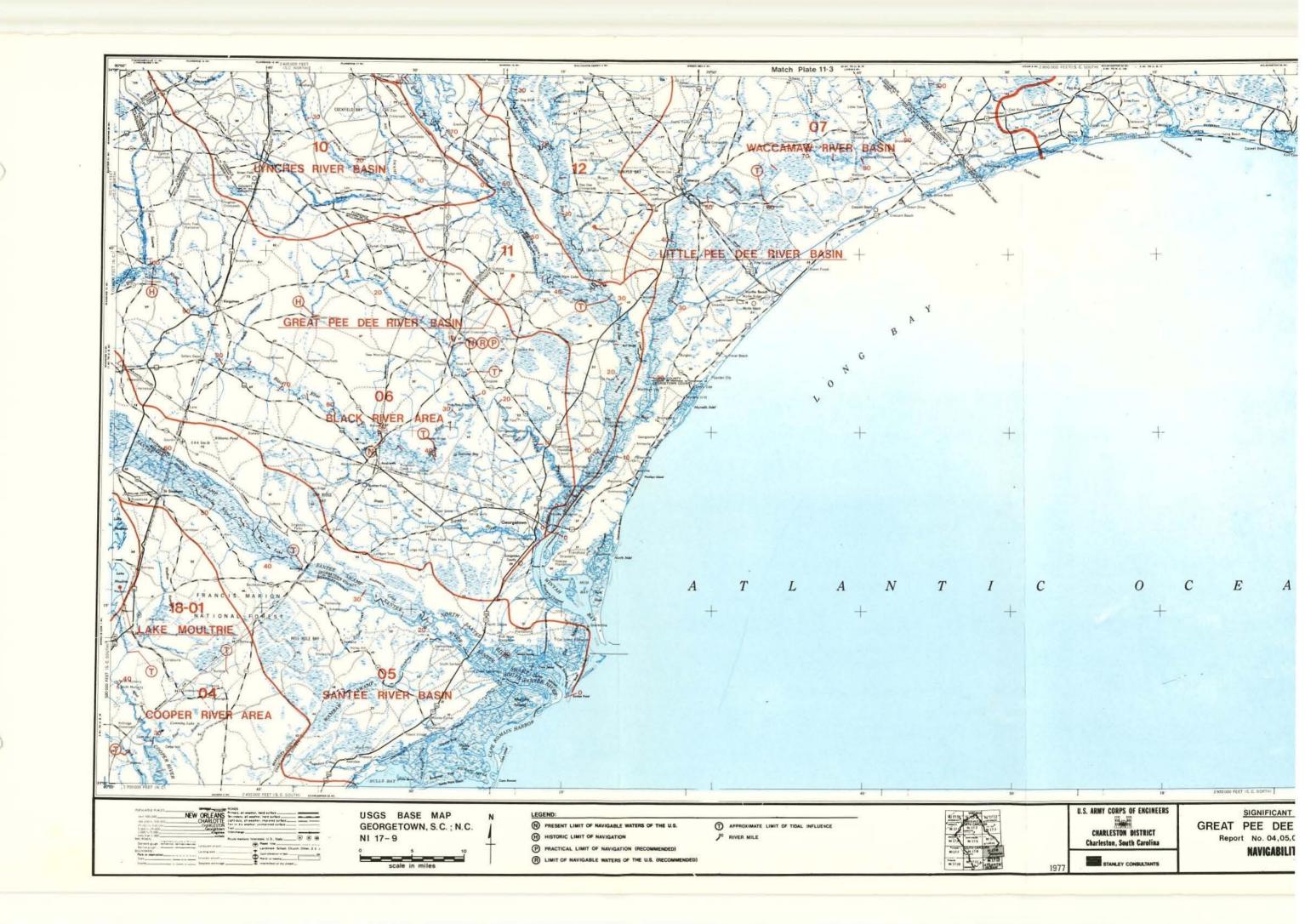
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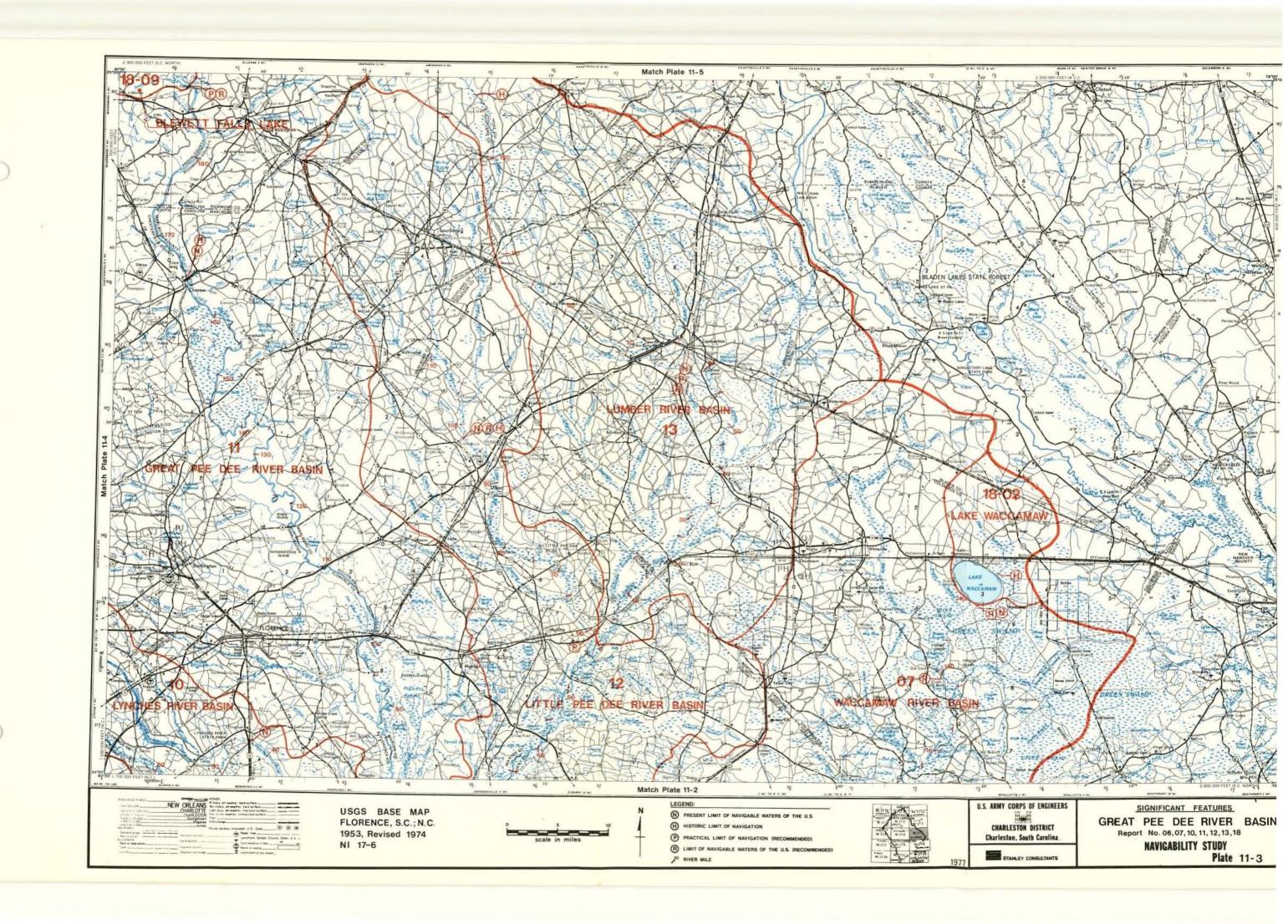
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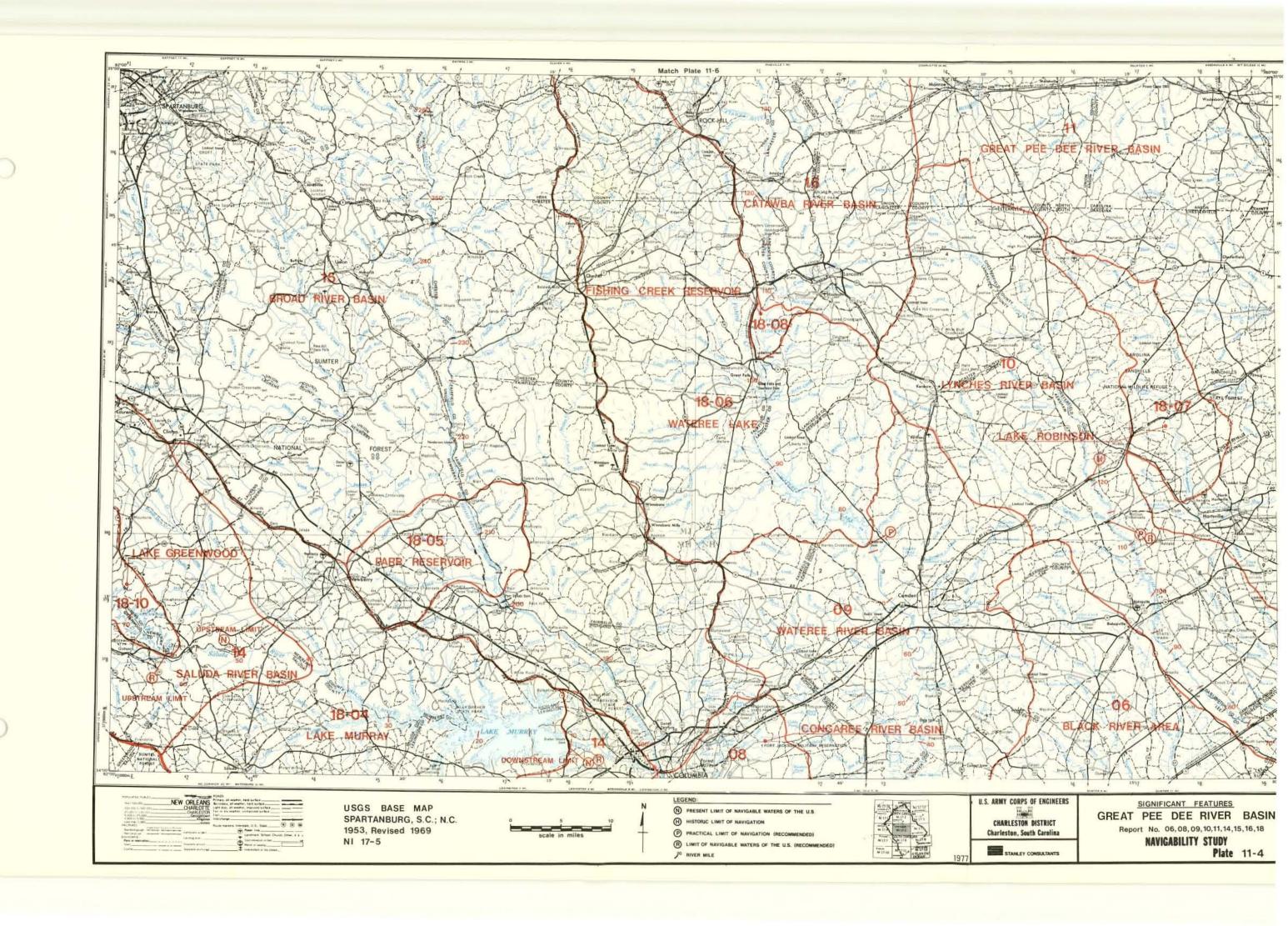
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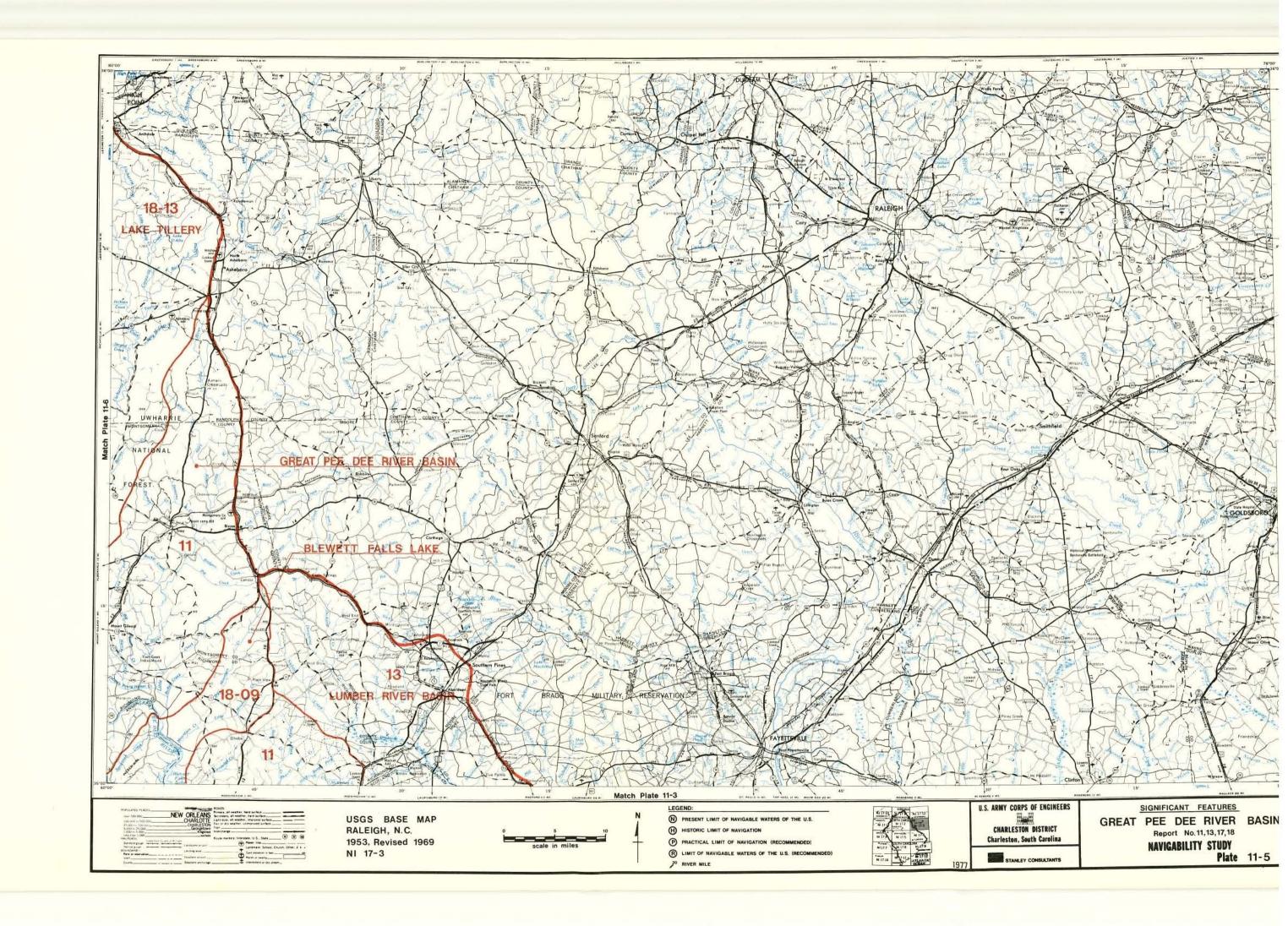
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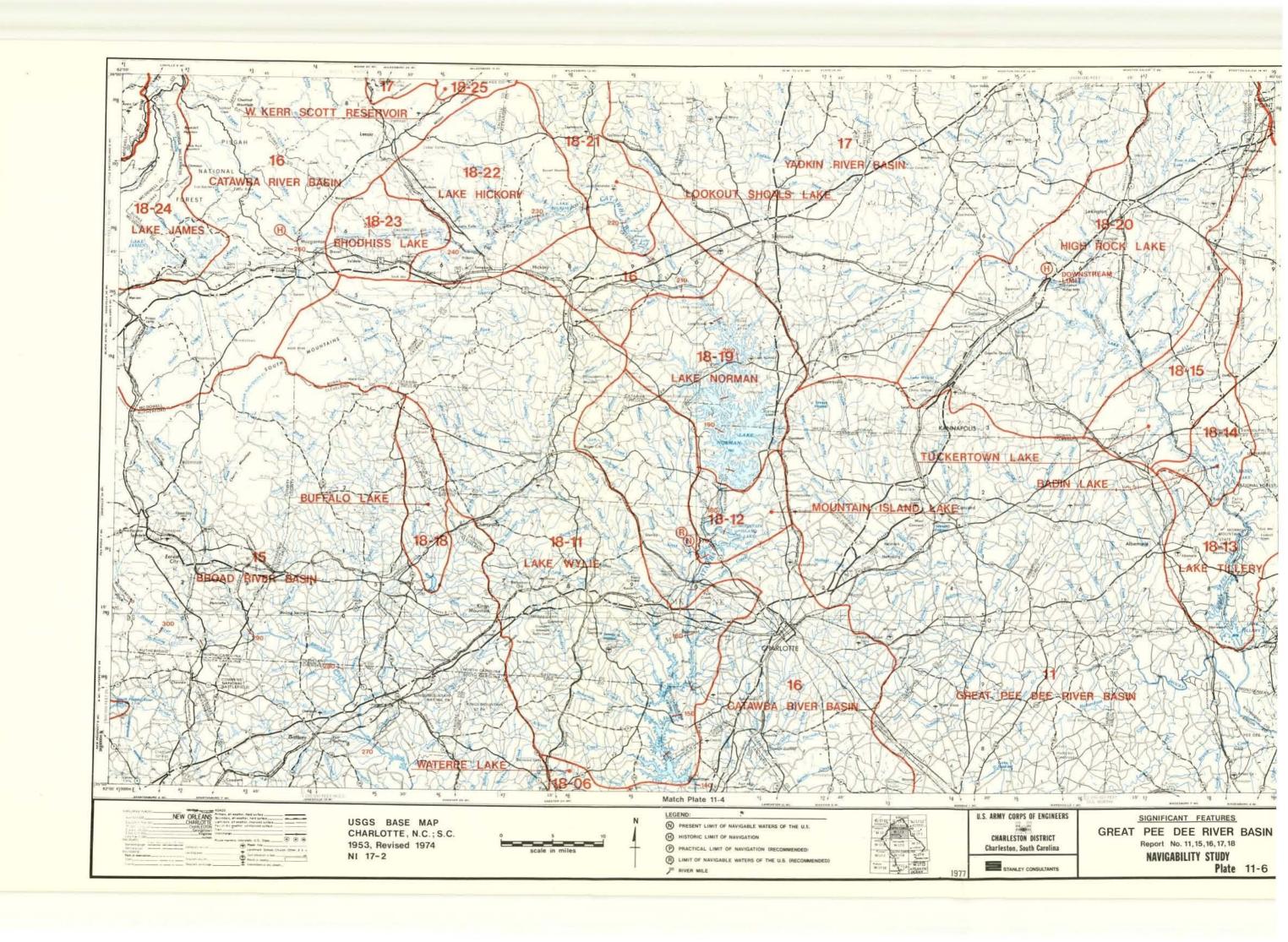
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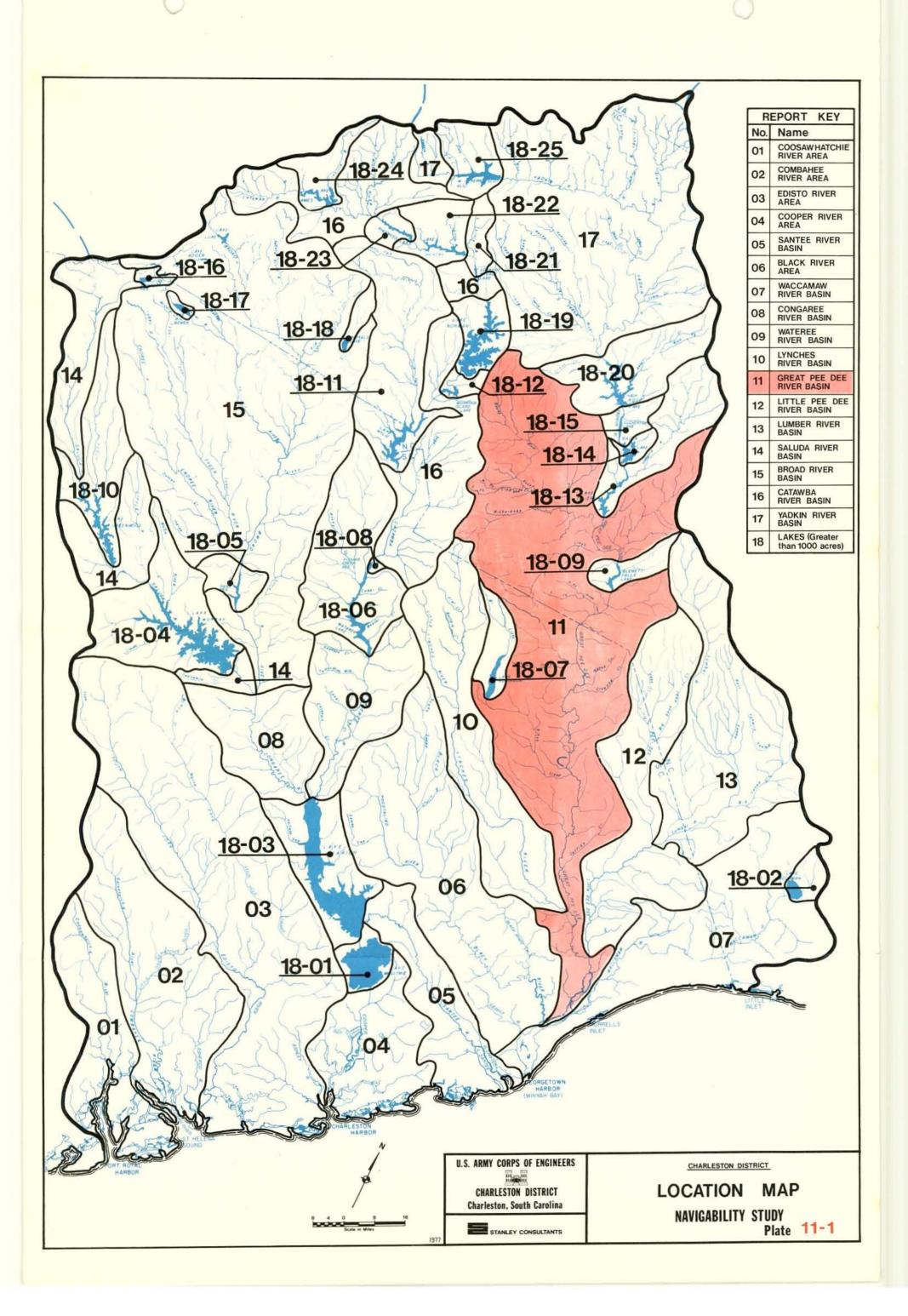


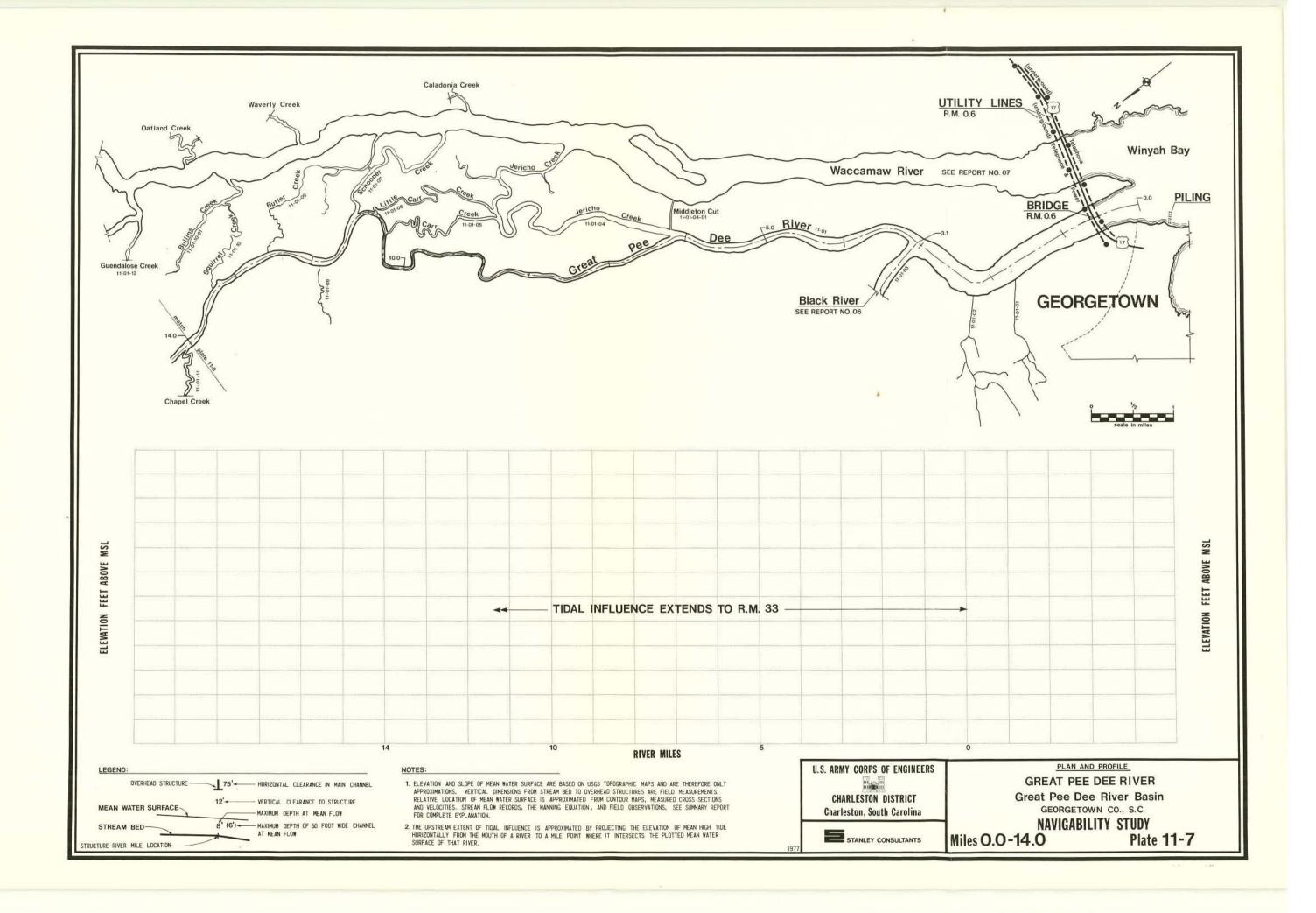


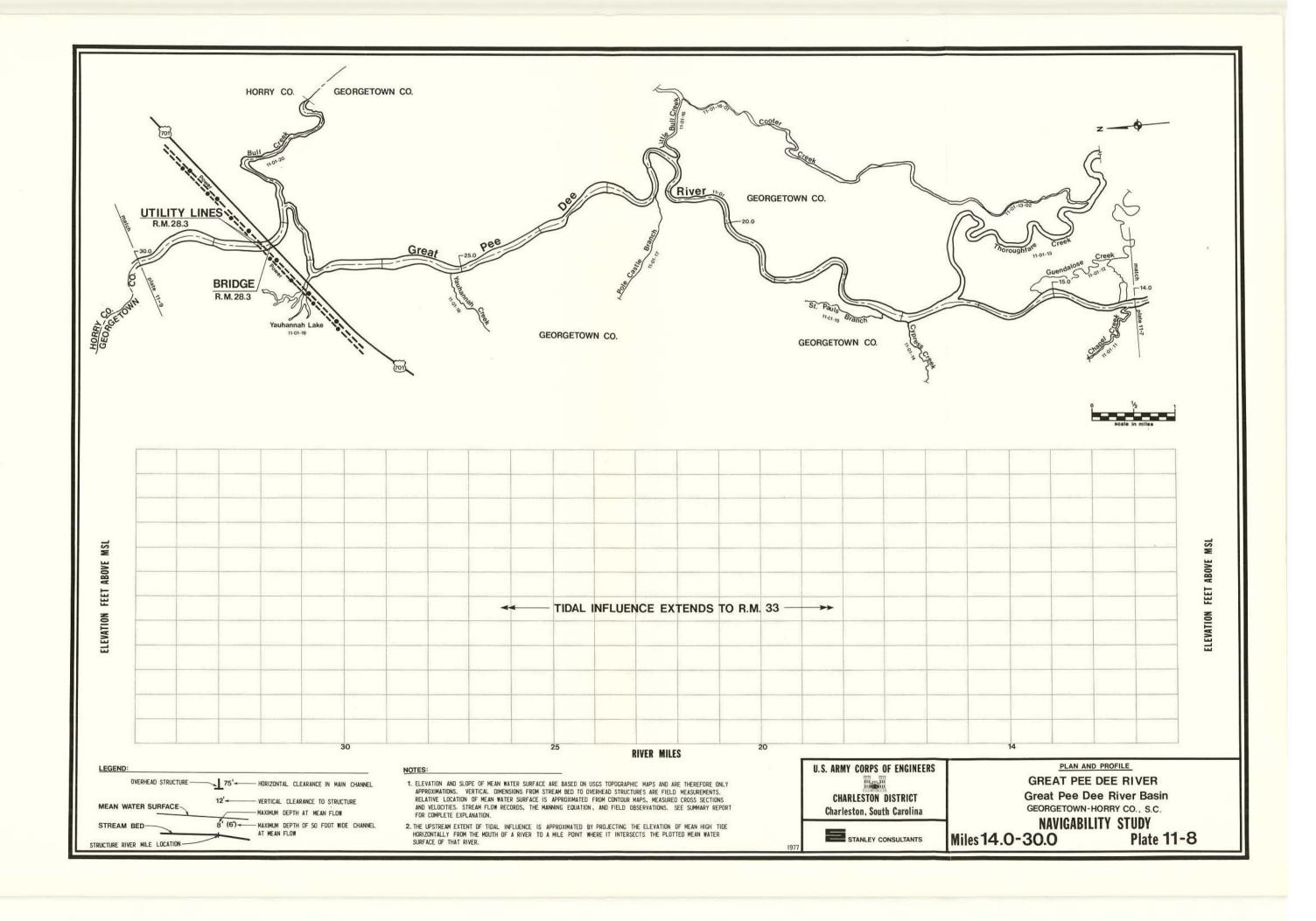


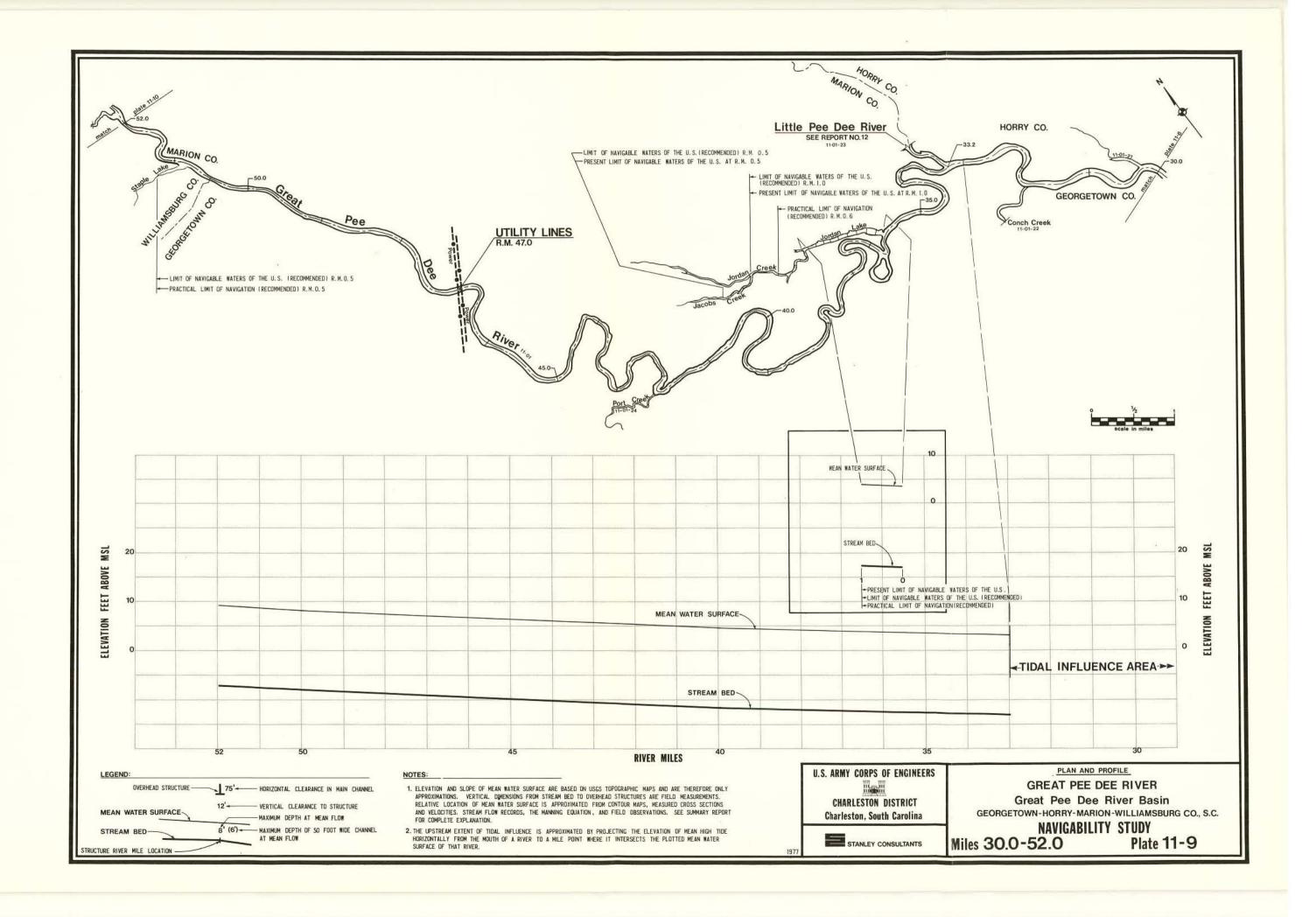


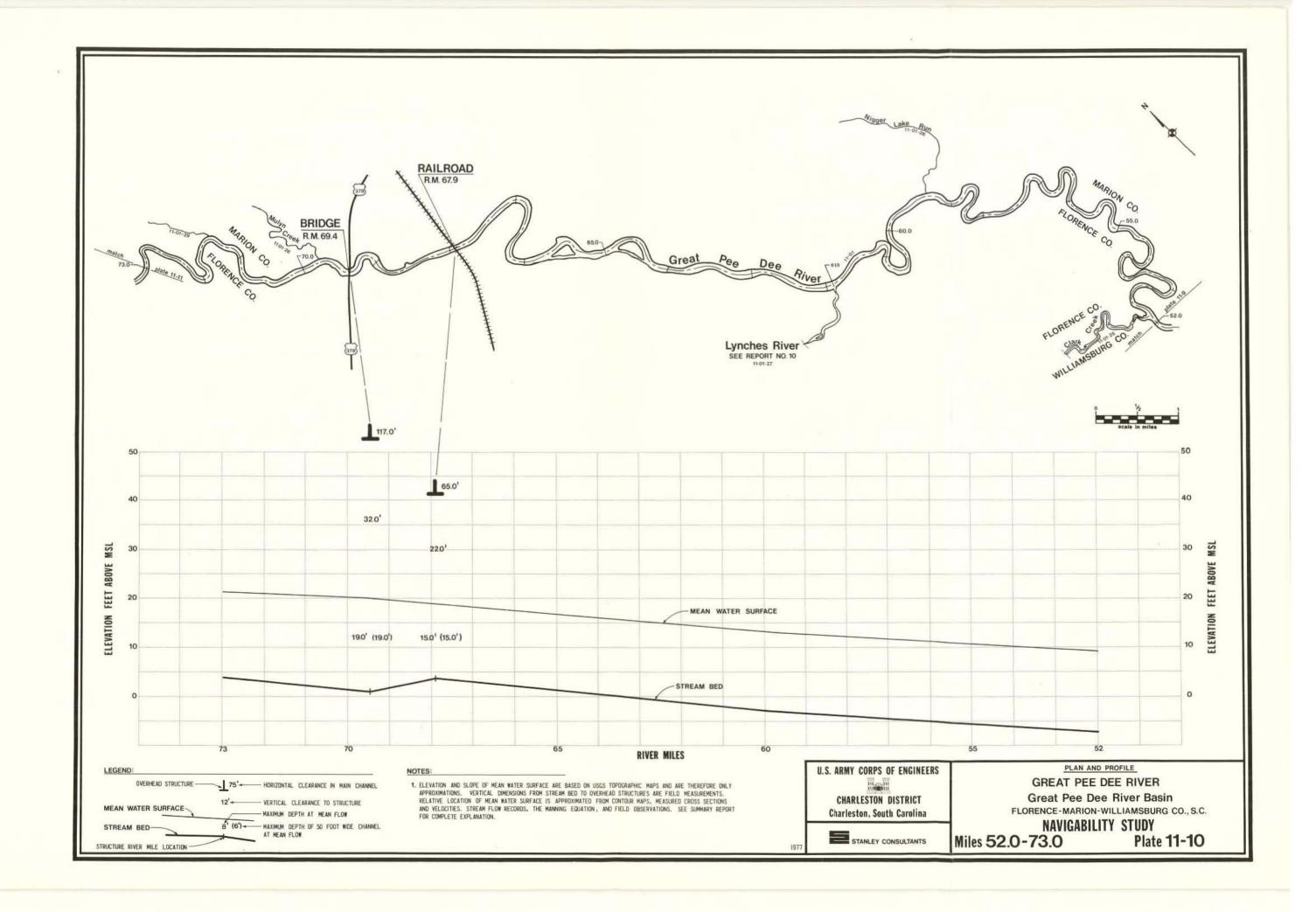


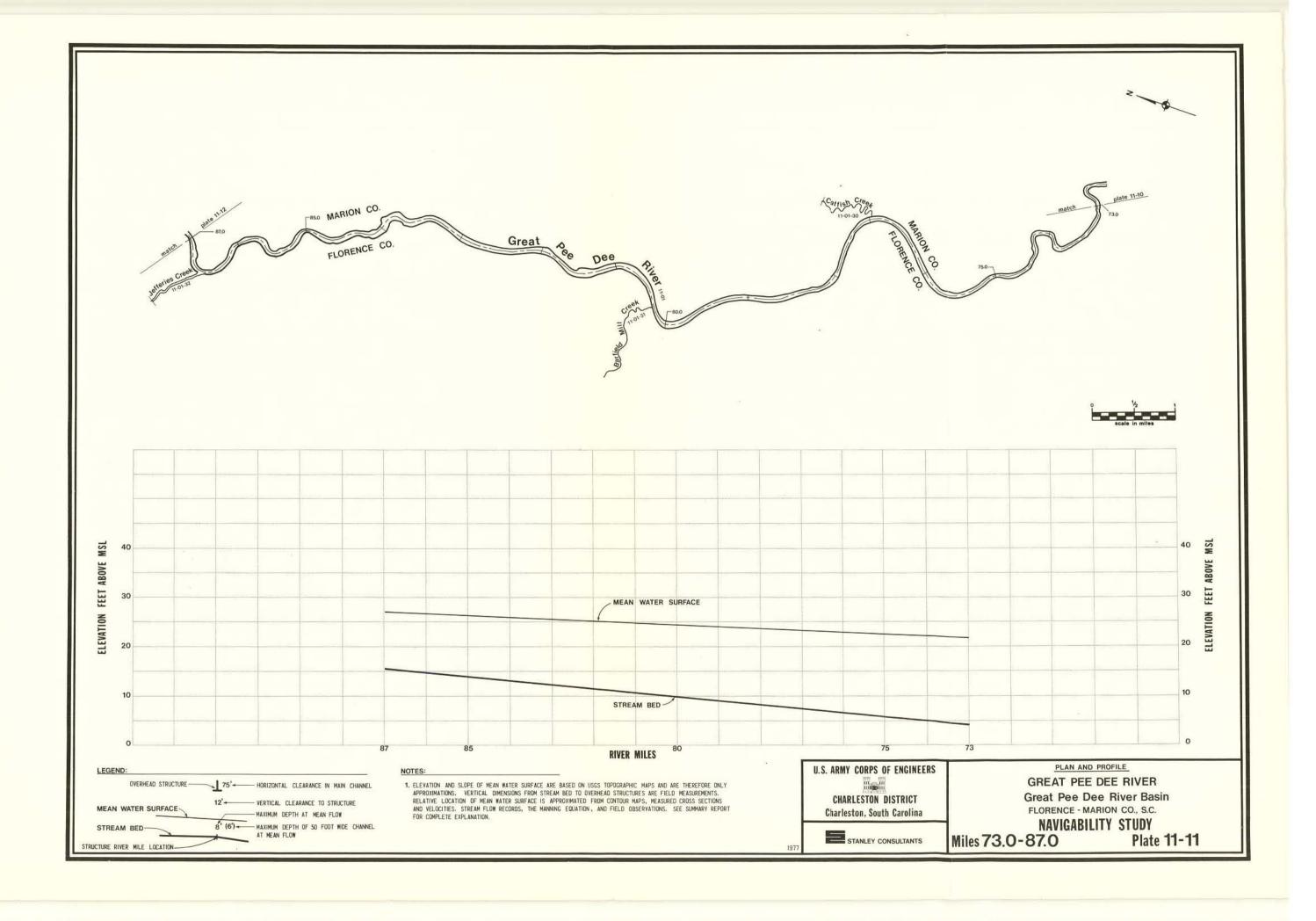


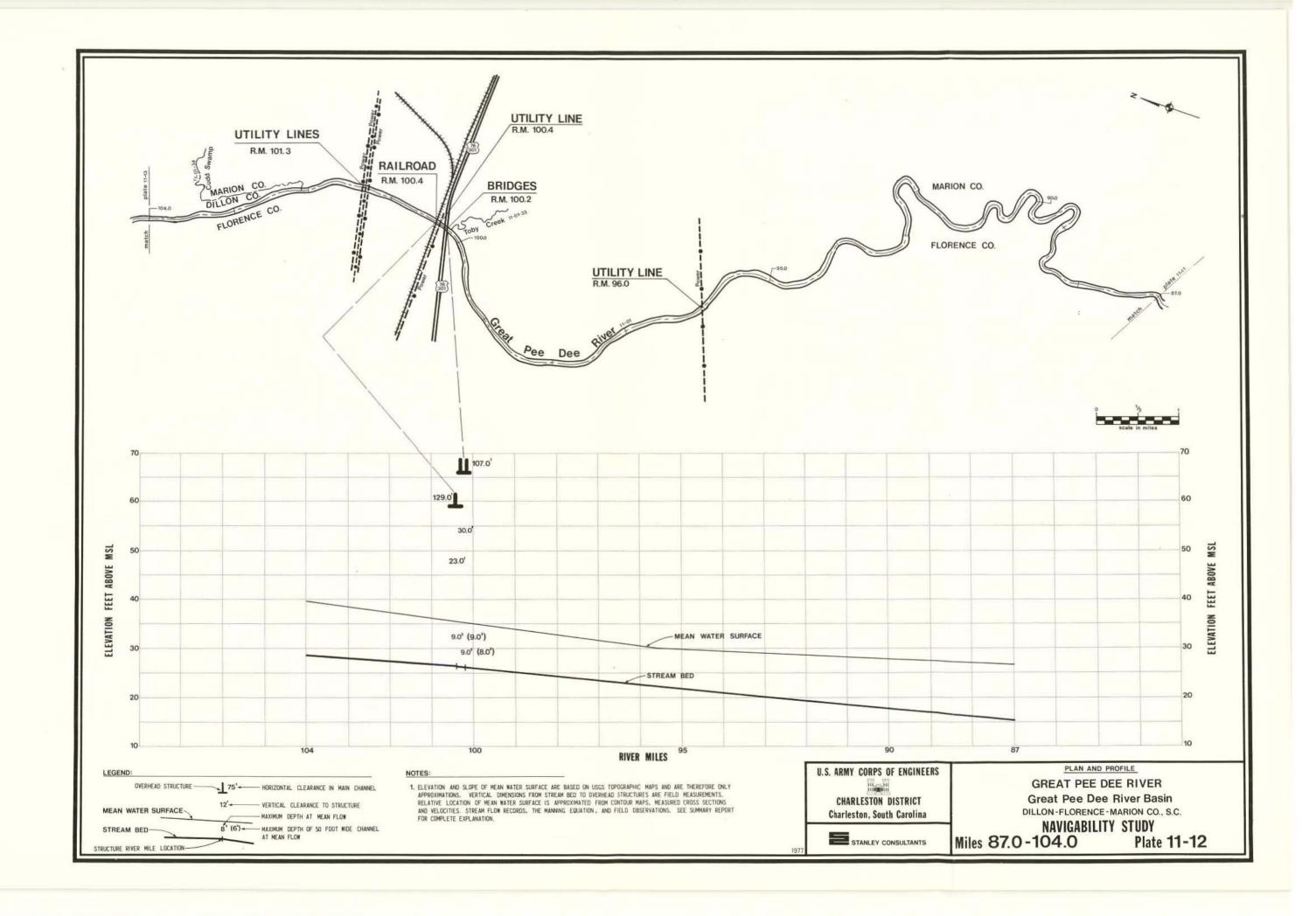


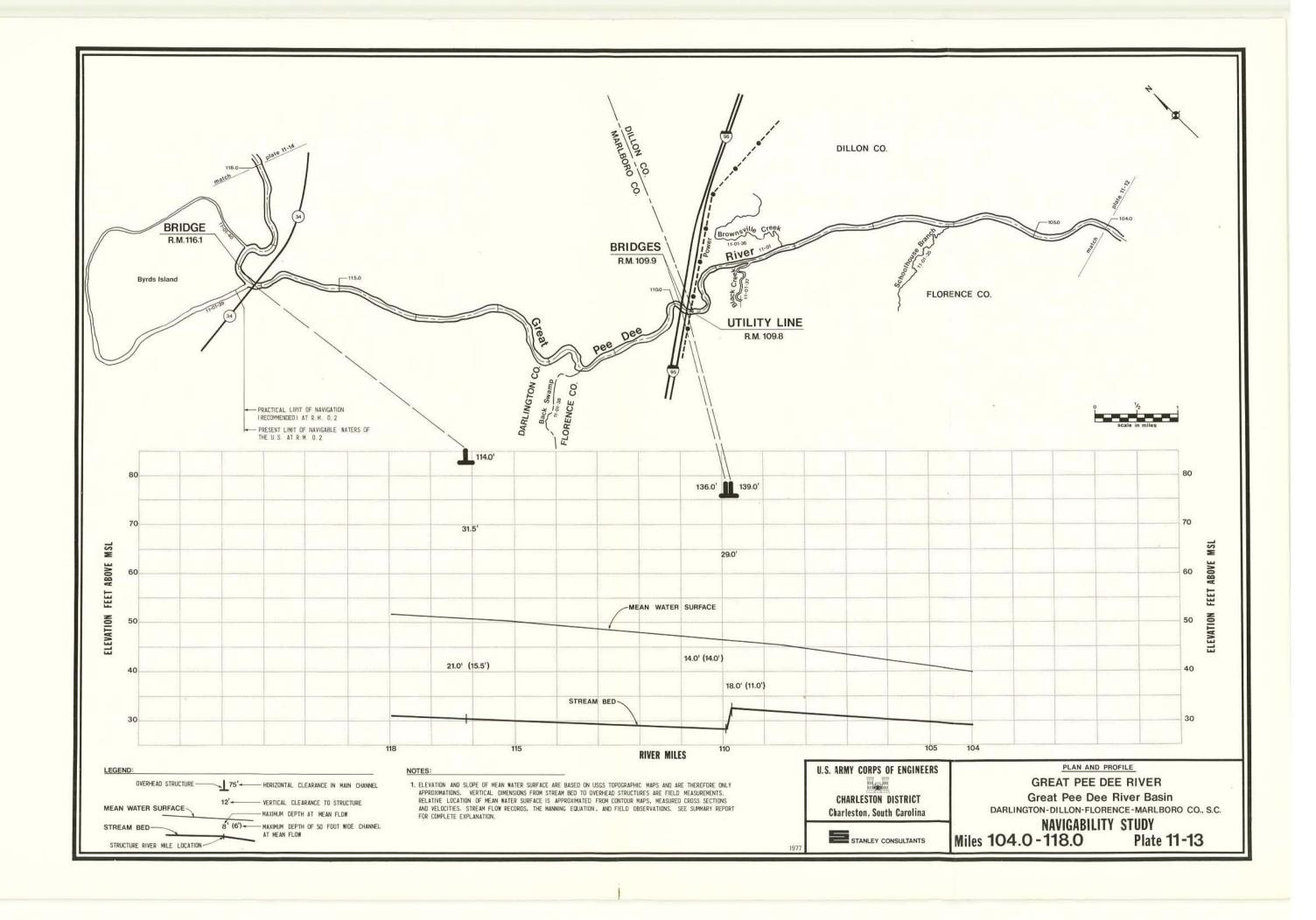


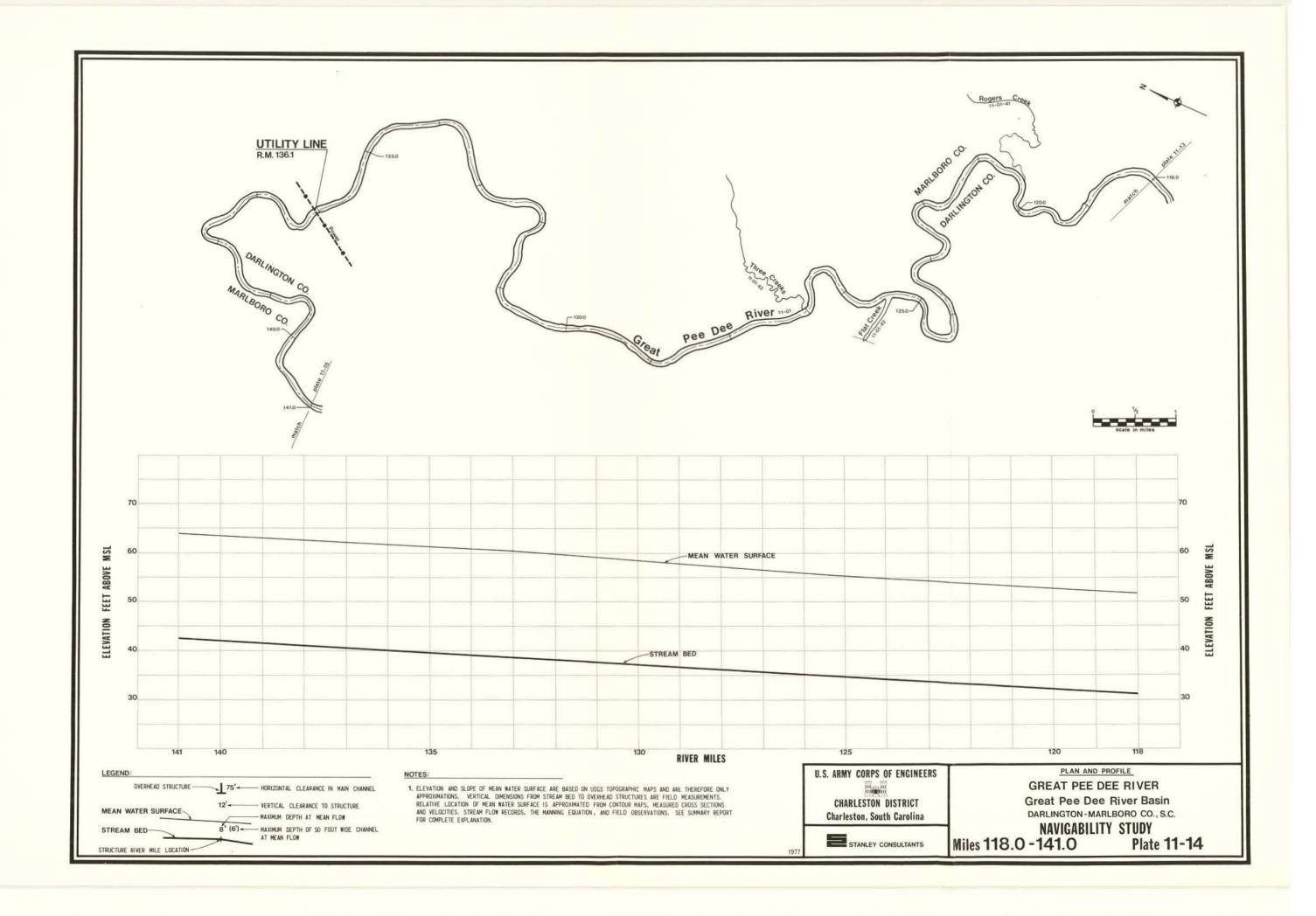


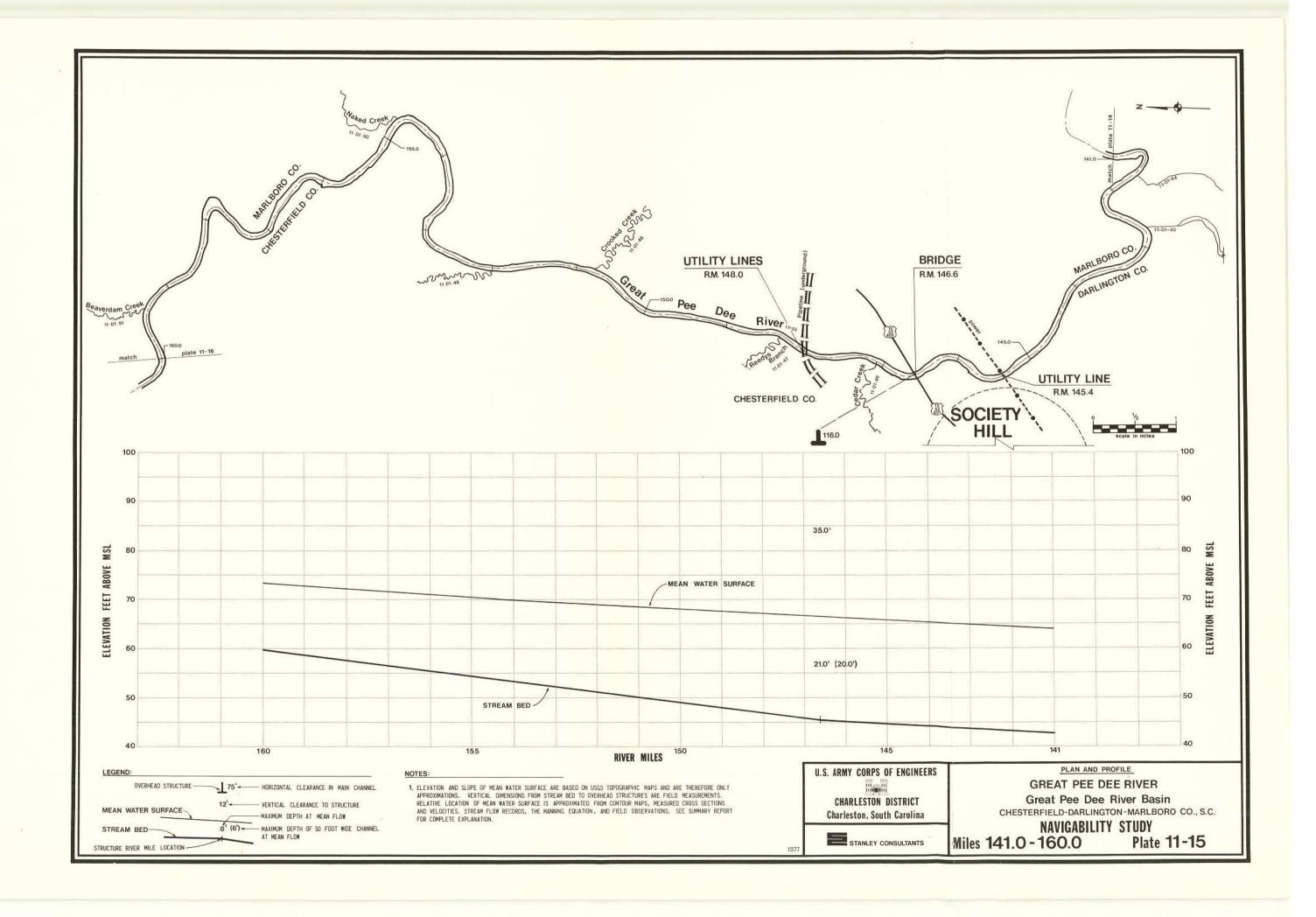


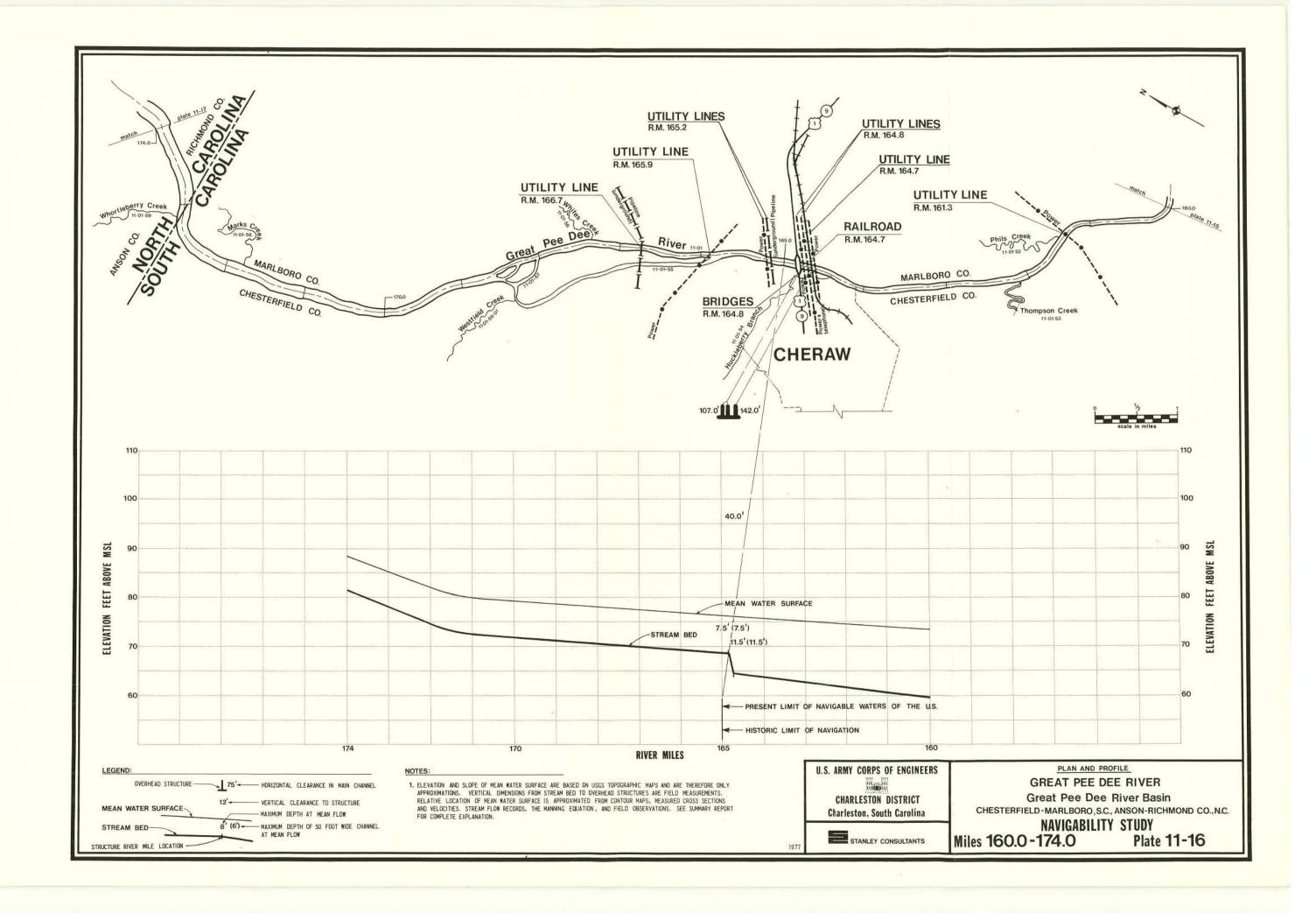


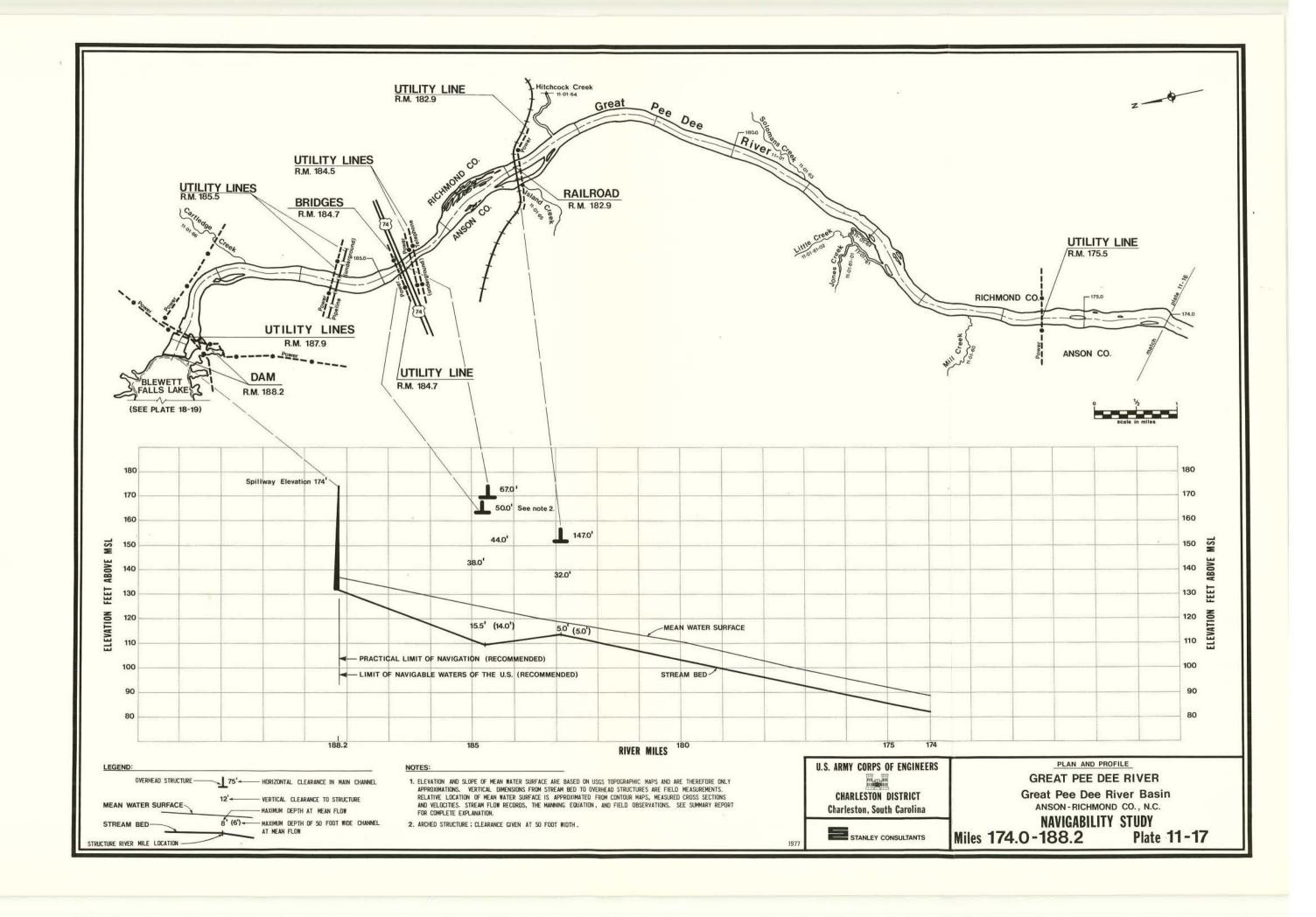












This appendix presents a coded listing of all non-tidal streams located in the Great Pee Dee River basin having a mean annual flow greater than or equal to five cfs. In tidal areas essentially all streams are coded; however, some very small, short streams and drainage tile systems were not coded. This summary does not include secondary streams in the drainage areas for Lake Robinson (18-07), Blewett Falls Lake (18-09), and Lake Tillery (18-13); these stream codes are presented in Report 18.

Streams which are all or partially subject to tidal influence are noted in the listing. These are classified "navigable waters of the U. S." to the tidal limit. Non-tidal reaches of streams classified "navigable waters of the U. S." are covered in Section 6 of this report. All other streams not tidally influenced are classified "waters of the U. S."

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, major 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. Streams are summarized from the mouth of the major river upstream to the report boundary.

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.

|     | ,            |          |       | STREA | M CO      | DE         |                         | HEAL              | DWATER LOC          | ATION | ( Mear              | Flow = 5 cfs ) |
|-----|--------------|----------|-------|-------|-----------|------------|-------------------------|-------------------|---------------------|-------|---------------------|----------------|
| PED | MAJOS NUMBES | PRINCE A | SECOL | 7ERT  | FOIL 14PY | FIFT ORDES | STREAM NAME             | LATITUDE<br>(°'') | LONGITUDE.<br>(°'") |       | REAM<br>LES<br>DOWN | FROM           |
| 11  | 01           |          |       |       |           |            | Great Pee Dee River * # |                   |                     |       |                     |                |
|     |              | 01       |       |       |           |            | Unnamed Tributary *     |                   |                     |       |                     |                |
|     |              | 02       |       |       |           |            | Unnamed Tributary *     |                   |                     |       |                     |                |
|     |              | 03       |       |       |           |            | Black River * ##        |                   |                     |       |                     |                |
|     |              | 04       |       |       |           |            | Jericho Creek * #       |                   |                     |       |                     |                |
|     |              |          | 01    |       |           |            | Middleton Cut * #       |                   |                     |       |                     |                |
|     |              |          | 02    |       |           |            | Carr Creek * # ¢        |                   |                     |       |                     |                |
|     |              |          | 03    |       |           |            | Little Carr Creek * #   |                   |                     |       |                     |                |
|     |              |          | 04    |       |           |            | Unnamed Tributary * #   |                   |                     |       |                     |                |
|     |              | 05       |       |       |           |            | Carr Creek * # ¢        |                   |                     |       |                     | _              |
|     |              | 06       |       |       |           |            | Little Carr Creek * #   |                   |                     |       |                     |                |
|     |              | 07       |       |       |           |            | Schooner Creek * #      |                   |                     |       |                     |                |
|     |              | 08       |       |       |           |            | Unnamed Tributary *     |                   |                     |       |                     |                |
|     |              | 09       |       |       |           |            | Butler Creek * #        |                   |                     |       |                     |                |
|     |              | 10       |       |       |           |            | Squirrel Creek * #      |                   |                     |       |                     |                |
|     |              |          | 01    |       |           |            | Bullins Creek * #       |                   |                     |       |                     |                |
|     |              | 11       |       |       |           |            | Chapel Creek *          |                   |                     |       |                     |                |
|     |              |          |       |       |           |            |                         |                   |                     |       |                     |                |

<sup>\*</sup> All or part tidally influenced. ¢ Dual code in Report 11.

<sup>#</sup> Dual code in Report 07.

<sup>##</sup> Dual code in Report 06.

|       |             | $\overline{}$ |       | STREA | M COD | DE /                   | HEAD | WATER LOC | ATION  | ( Mear              | r Flow = 5 cfs ) |
|-------|-------------|---------------|-------|-------|-------|------------------------|------|-----------|--------|---------------------|------------------|
| Age / | MALIO NUMBE | PRILL PINER   | SECOL | ZERT. | FOURT | STREAM NAME            |      | LONGITUDE | 93,000 | REAM<br>LES<br>DOWN | FROM             |
| 11    | 01          | 12            |       |       |       | Guendalose Creek * # ¢ |      |           |        |                     |                  |
|       |             | 13            |       |       |       | Throughfare Creek * #  |      |           |        |                     |                  |
|       |             |               | 01    |       |       | Unnamed Tributary * #  |      |           |        |                     |                  |
|       |             |               | 02    |       |       | Cooter Creek * # ¢     |      |           |        |                     |                  |
|       |             |               | 03    |       |       | Guendalose Creek * # ¢ |      |           |        |                     |                  |
|       |             | 14            |       |       |       | Cypress Creek *        |      |           |        |                     |                  |
|       |             | 15            |       |       |       | St. Pauls Branch *     |      |           |        |                     |                  |
|       |             | 16            |       |       |       | Little Bull Creek * #  |      |           |        |                     |                  |
|       |             |               | 01    |       |       | Cooter Creek * # ¢     |      |           |        |                     |                  |
|       |             | 17            |       |       |       | Pole Castle Branch *   |      |           |        |                     |                  |
|       |             | 18            |       |       |       | Yauhannah Creek *      |      |           |        |                     |                  |
|       |             | 19            |       |       |       | Yauhannah Lake *       |      |           |        |                     |                  |
|       |             | 20            | 5414  |       |       | Bull Creek * #         |      |           |        |                     |                  |
| 0     |             |               | 01    |       |       | Cowford Swamp * #      |      |           |        |                     |                  |
|       |             |               |       | 01    |       | Horsepen Branch * #    |      |           |        |                     |                  |
|       |             |               | 02    |       |       | Horseshoe Lake * #     |      |           |        |                     |                  |
|       |             |               |       |       |       |                        |      |           |        |                     |                  |
|       |             |               |       |       |       |                        |      |           |        |                     |                  |

<sup>\*</sup> All or part tidally influenced.

<sup>#</sup> Dual code in Report 07.

|       |    | _  |    | STREA | M COD | E /                   | н        | EAD | OWATER LO | CATION | ( Mear              | n Flow = 5 cfs )    |
|-------|----|----|----|-------|-------|-----------------------|----------|-----|-----------|--------|---------------------|---------------------|
| AES / |    |    |    |       |       | STREAM NAME           | LATITUDE |     | LONGITUDE | -2500  | REAM<br>LES<br>DOWN | FROM                |
| 11    | 01 | 20 | 03 |       |       | Little Bull Creek * # |          |     |           |        |                     |                     |
|       |    | 21 |    |       |       | Unnamed Tributary *   |          |     |           |        |                     |                     |
|       |    | 22 |    |       |       | Conch Creek *         |          |     |           |        |                     |                     |
|       |    | 23 |    |       |       | Little Pee Dee R * ## |          |     |           |        |                     |                     |
|       |    | 24 |    |       |       | Port Creek *          |          |     |           |        |                     |                     |
|       |    |    | 01 |       |       | Penny Royal Swamp     | 33 39 45 | 5   | 79 18 45  | 1.9    |                     | Port Creek          |
|       |    |    | 02 |       |       | Boser Swamp           | 33 41 15 | 5   | 79 18 35  | 0.7    |                     | Port Creek          |
|       |    | 25 |    |       |       | Clark Creek           |          |     |           |        |                     |                     |
|       |    |    | 01 |       |       | Soccee Swamp          | 33 45 10 | )   | 79 21 45  | 5.6    |                     | Muddy Creek         |
|       |    |    | 02 |       | - 1   | Muddy Creek           | 33 47 15 | 5   | 79 26 15  | 2.6    |                     | Mill Creek          |
|       |    | 26 |    |       | - 1   | Nigger Lake Run       |          |     |           |        |                     | G.                  |
|       |    |    | 01 |       | - 1   | Maple Swamp           | 33 54 15 | 5   | 79 22 10  | 6.0    |                     | Great Pee Dee River |
|       |    | 27 |    |       |       | Lynches River ###     |          |     |           |        |                     |                     |
|       |    | 28 |    |       |       | Mulyn Creek ¢         |          |     |           |        |                     |                     |
|       |    |    | 01 |       |       | Bull Swamp            | 34 01 30 | )   | 79 27 30  | 5.9    |                     | Mulyn Creek         |
|       |    | 29 |    |       |       | Mulyn Creek ¢         |          |     |           |        |                     |                     |
|       |    |    |    |       |       |                       |          |     |           |        |                     |                     |
|       |    |    |    |       |       |                       |          |     |           |        |                     |                     |

<sup>\*</sup> All or part tidally influenced.

<sup>¢</sup> Dual code in Report 11.

<sup>#</sup> Dual code in Report 07.
## Dual code in Report 12.

|      |   | $\overline{}$ |    | STRE | им со | DE          |                     | Π   |      | HEAD       | DWATE | ER | LOC       | ATION    | ( Mean              | n Flow = 5 cfs )                       |
|------|---|---------------|----|------|-------|-------------|---------------------|-----|------|------------|-------|----|-----------|----------|---------------------|--|
| A.E. |   |               |    |      |       | FIFTH ORDES | STREAM NAME         | LAT | TITU | IDE<br>'') | LONG  |    | DE<br>'') | (Fig. 1) | REAM<br>LES<br>DOWN | FROM                                   |
| 11   | Ī | 30            |    |      |       |             | Catfish Creek       |     |      |            |       |    |           |          |                     |  |
|      |   |               | 01 |      |       |             | Pitch Pot Swamp     | 34  | 07   | 37         | 79    | 28 | 30        | 4.4      |                     | Catfish Creek                          |
|      |   |               | 02 |      |       |             | Collins Creek       |     |      |            |       |    |           |          |                     |  |
|      |   |               |    | 01   |       |             | Flat Swamp          | 34  | 05   | 30         | 79    | 24 | 40        | 1.3      |                     | Collins Creek                          |
|      |   |               |    | 02   |       |             | Smith Swamp         | 34  | 11   | 35         | 79    | 20 | 15        | 0.1      |                     | Atlantic Coast Line<br>Railroad Bridge |
|      | 1 |               | 03 |      |       |             | Catfish Channel     | 34  | 21   | 30         | 79    | 31 | 00        | 0.3      |                     | I-95 Highway Bridge                    |
|      |   |               |    | 01   |       |             | Stackhouse Creek    | 34  | 16   | 10         | 79    | 23 | 30        | 2.6      |                     | Catfish Channel                        |
|      |   | 31            |    |      |       |             | Barfield Mill Creek | 34  | 00   | 02         | 79    | 31 | 45        |          |                     | Confluence-Barfields<br>Old Mill Creek |
|      |   | 32            |    |      |       |             | Jefferies Creek     |     |      |            |       |    |           |          |                     |  |
|      |   |               | 01 |      |       |             | Willow Creek        | 34  | 06   | 05         | 79    | 41 | 05        |          |                     | Confluence-Little<br>Willow Creek      |
|      |   |               |    | 01   |       |             | Cypress Creek       | 34  | 03   | 45         | 79    | 38 | 55        | 1.0      |                     | Willow Creek                           |
|      |   |               | 02 |      |       |             | Long Branch         | 34  | 10   | 35         | 79    | 36 | 05        | 3.3      |                     | Jefferies Creek                        |
| 1    |   |               | 03 |      |       |             | Middle Branch       | 34  | 09   | 55         | 79    | 38 | 05        | 2.2      |                     | Jefferies Creek                        |
|      |   |               | 04 |      |       |             | Polk Swamp Canal    |     |      |            |       |    |           |          |                     |  |
|      |   |               |    | 01   |       |             | Adams Branch Creek  | 34  | 13   | 10         | 79    | 41 | 15        | 0.7      |                     | Polk Swamp Canal                       |

APPENDIX A STREAM CATALOG

|          |             | _         |       | 0.70.5     |             |                    |     | _  | UEA | DWAT |     | 1.00 | ATION  | / W         |  |
|----------|-------------|-----------|-------|------------|-------------|--------------------|-----|----|-----|------|-----|------|--------|-------------|--|
|          | 1           |           |       | STRE       | M CODE      | /                  |     |    | HEA | DWAI | EK  | LOC  | AIION  | ( Mear      | Flow = 5 cfs )                         |
| /        | MALO NUMBEL | PRIMER ST | YOU Y | TED TO ARY | FOURTH OPP. | STREAM NAME        |     |    | UDE |      | GIT |      | 100000 | REAM<br>LES | FROM                                   |
| P. P. P. | MA          | 1         | 18    | 12         | 13/2        | \$/                | ( ° | ,  | ")  | ( °  |     | ")   | UP     | DOWN        |  |
| 11       | 01          | 32        | 05    |            |             | Middle Swamp       | 34  | 11 | 00  | 79   | 54  | 30   | 2.6    |             | Atlantic Coast Line<br>Railroad Bridge |
|          |             |           |       | 01         |             | Alligator Branch   | 34  | 07 | 35  | 79   | 48  | 20   | 1.9    |             | Middle Swamp                           |
|          |             | - 1       | 06    |            |             | Beaverdam Creek    | 34  | 11 | 35  | 79   | 49  | 45   | 0.7    |             | Jefferies Creek                        |
|          |             |           | 07    |            |             | Jefferies Ditch    | 34  | 16 | 15  | 80   | 03  | 10   | 1.3    |             | Jefferies Creek                        |
|          |             | 33        |       |            |             | Toby Creek         | 34  | 13 | 10  | 79   | 31  | 40   |        |             | Confluence-Agnay<br>Swamp              |
|          |             | 34        |       |            |             | Cud Swamp          | 34  | 15 | 35  | 79   | 30  | 30   | 1.1    |             | Poccosin Swamp                         |
|          |             |           | 01    |            |             | Poccosin Swamp     | 34  | 20 | 35  | 79   | 34  | 45   | 1.2    |             | I-95 Highway Bridge                    |
|          |             |           |       | 01         |             | Gum Swamp          | 34  | 18 | 10  | 79   | 31  | 30   | 1.8    |             | Poccosin Swamp                         |
|          |             | 35        |       |            |             | Schoolhouse Branch | 34  | 15 | 05  | 79   | 39  | 35   | 6.8    |             | Great Pee Dee River                    |
|          |             | 36        |       |            |             | Brownsville Creek  | 34  | 21 | 20  | 79   | 36  | 00   | 3.2    |             | I-95 Highway Bridge                    |
|          |             | 37        |       |            |             | Black Creek        |     |    |     |      |     |      |        |             |  |
|          |             |           | 01    |            |             | High Hill Creek    | 34  | 15 | 56  | 79   | 57  | 40   | 1.6    |             | U.S. 401 Highway<br>Bridge             |
|          |             |           | 02    |            |             | Swift Creek        | 34  | 19 | 25  | 80   | 01  | 30   | 3.4    |             | S.C. 13 Highway<br>Bridge              |
|          |             |           |       | 01         |             | Bellyache Creek    | 34  | 02 | 05  | 79   | 56  | 10   | 2.6    |             | U.S. 401 Highway<br>Bridge             |

|        | ,            |            |       | STRE       | Ам со   | DE          |                          |     |     | HEAD | TAWC | ER     | LOC   | ATION | ( Mear              | Flow = 5 cfs )   |
|--------|--------------|------------|-------|------------|---------|-------------|--------------------------|-----|-----|------|------|--------|-------|-------|---------------------|------------------|
| P.E.D. | MAJO: NUMBEL | PRIM PIVER | SECOL | 7Epz MOARY | FO 14RY | FIETH ORDED | STREAM NAME              | LAT | TTU |      | LON  | IG I T | TUDE. |       | REAM<br>LES<br>DOWN | FROM             |
| 11     | 01           | 37         | 02    | 02         |         |             | Indian Creek             | 34  | 17  | 15   | 79   | 56     | 55    | 3.9   |                     | Swift Creek      |
|        |              |            | 03    |            |         |             | Horse Creek              | 34  | 25  | 00   | 79   | 53     | 40    | 3.5   |                     | Black Creek      |
|        |              |            | 04    |            |         |             | Seed Creek               |     |     |      |      |        |       |       |                     |                  |
|        |              |            |       | 01         |         |             | Leavenworth Branch       | 34  | 26  | 25   | 79   | 57     | 29    | 0.8   |                     | Seed Branch      |
|        |              |            | 05    |            |         |             | Everlasting Branch       | 34  | 23  | 25   | 79   | 57     | 30    | 1.5   |                     | Black Creek      |
|        |              |            | 06    |            |         |             | Boggy Swamp              | 34  | 26  | 15   | 80   | 02     | 50    | 1.6   |                     | Boggy Swamp      |
|        |              |            |       | 01         |         |             | Little Boggy Swamp       | 34  | 26  | 20   | 80   | 00     | 55    | 1.4   |                     | Boggy Swamp      |
|        |              |            | 07    |            |         |             | Spring Branch            | 34  | 24  | 35   | 80   | 04     | 15    | 1.7   |                     | Black Creek      |
|        |              |            | 08    |            |         |             | Beaverdam Creek          | 34  | 26  | 35   | 80   | 13     | 50    | 7.4   |                     | Black Creek      |
|        |              |            | 09    |            |         |             | Lower Alligator Creek #  | 34  | 29  | 45   | 80   | 12     | 20    | 2.1   |                     | Lake Robinson    |
|        |              |            | 10    |            |         |             | Little Beaverdam Creek # | 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 Creek#  | 34  | 31  | 10   | 80   | 13     | 15    | 2.5   |                     | Black Creek      |
|        |              |            | 14    |            |         |             | Ham Creek #              | 34  | 34  | 25   | 80   | 14     | 15    | 2.2   |                     | Cow Branch       |
|        |              |            | 15    |            |         |             | Skipper Branch #         | 34  | 37  | 45   | 80   | 13     | 10    |       | 0.2                 | Dead Pine Branch |
|        | -            |            |       |            |         |             |                          |     |     |      |      |        |       |       |                     |                  |
|        |              |            |       |            |         |             |                          |     |     |      |      |        |       |       |                     |                  |

# Dual code in Report 18.

|      | ,             | _           |       | STRE       | AM COD | E /                                |     |      | HEAD       | CAWC | ΓER | LOC        | ATION | ( Mear              | n Flow = 5 cfs )                      |
|------|---------------|-------------|-------|------------|--------|------------------------------------|-----|------|------------|------|-----|------------|-------|---------------------|---------------------------------------|
| 1    | MAJORT NUMBEL | PRILL PINES | SECOL | 7Epz MOARY | FOURT  | STREAM NAME                        | LAT | rit( | JDE<br>'') |      |     | rude<br>") |       | REAM<br>LES<br>DOWN | FROM                                  |
| 11   | 01            | 37          | 16    |            |        | Little Black Creek ##              | 34  | 43   | 35         | 80   | 17  | 05         | 1.1   |                     | Martin Branch                         |
| - 60 |               | 38          |       |            |        | Back Swamp                         | 34  | 18   | 10         | 79   | 46  | 30         | 2.5   |                     | Alligator Swamp                       |
|      |               |             | 01    |            |        | Unnamed Tributary                  | 34  | 19   | 30         | 79   | 43  | 15         | 4.5   |                     | Back Swamp                            |
|      |               |             | 02    |            |        | Alligator Creek                    | 34  | 19   | 15         | 79   | 44  | 30         | 1.2   |                     | Back Swamp                            |
|      |               | 39          |       |            |        | Unnamed Tributary # (Bryds Island) |     |      |            |      |     |            |       |                     |                                       |
|      |               |             | 01    |            |        | Hurricane Branch                   | 34  | 21   | 40         | 79   | 48  | 30         | 0.8   |                     | S. C. Secondary 892<br>Highway Bridge |
|      |               | 40          |       |            |        | Unnamed Tributary # (Byrds Island) |     |      |            |      |     |            |       |                     |                                       |
|      |               | 41          |       |            |        | Rogers Creek                       | 34  | 28   | 05         | 79   | 36  | 55         | 1.7   |                     | S.C. 38 Highway<br>Bridge             |
|      |               |             | 01    |            |        | Unnamed Tributary                  | 34  | 25   | 55         | 79   | 36  | 50         | 2.1   |                     | Rogers Creek                          |
|      |               | 42          |       |            |        | Flat Creek                         | 34  | 25   | 20         | 79   | 48  | 20         | 0.6   |                     | S. C. Secondary 522<br>Highway Bridge |
|      |               | 43          |       |            |        | Three Creeks                       |     |      |            |      |     |            |       |                     |                                       |
|      |               |             | 01    |            |        | Hagins Prong                       | 34  | 35   | 40         | 79   | 33  | 30         | 0.8   |                     | S.C. 9 Highway<br>Bridge              |
|      |               |             |       | 01         |        | Unnamed Tributary                  | 34  | 31   | 10         | 79   | 34  | 30         | 1.7   |                     | Hagins Prong                          |

<sup>#</sup> Dual code in Report 11.

|     |              | $\overline{}$ |     | STREA | M CO | DE /                 | HEA      | DWATER LOC | ATION      | ( Mean      | n Flow = 5 cfs )                       |
|-----|--------------|---------------|-----|-------|------|----------------------|----------|------------|------------|-------------|--|
|     | MAJOS NUMBES | PRIME PINES   | Co. | TERT. | 1464 | STREAM NAME          | LATITUDE | LONGITUDE  | Lingth (C) | REAM<br>LES | FROM                                   |
| 1   | 1 2/2        | 12            | 15  | 12    | 14   | / 4/                 | ,        | ,          | UF         | DOWN        |  |
| 1.1 | 01           | 43            | 02  |       |      | Cottingham Creek     | 34 36 50 | 79 36 35   |            |             | Seaboard Coast Line<br>Railroad Bridge |
|     |              |               |     | 01    |      | Unnamed Tributary    | 34 34 00 | 79 38 40   | 0.4        |             | Cottingham Creek                       |
|     |              | 44            |     |       |      | Unnamed Tributary #  |          |            |            |             |  |
|     |              |               | 01  |       |      | Buckholtz Creek      | 34 27 25 | 79 51 45   | 4.7        |             | Robbings Neck Creek                    |
|     |              | 45            |     |       |      | Unnamed Tributary #  |          |            |            |             |  |
|     |              | 46            |     |       |      | Cedar Creek          | 34 29 35 | 80 02 45   | 1.3        |             | S.C. 102 Highway<br>Bridge             |
|     |              |               | 01  |       |      | Spot Mill Creek      | 34 27 35 | 79 53 30   | 2.8        |             | Cedar Creek                            |
|     |              |               | 02  |       |      | Harris Creek         | 34 32 10 | 79 56 05   | 3.2        |             | Cedar Creek                            |
|     |              |               | 03  |       |      | Little Cedar Creek   | 34 32 00 | 80 01 10   | 1.4        |             | Pool Branch                            |
|     |              |               |     | 01    |      | Unnamed Tributary    | 34 31 20 | 79 59 10   | 0.7        |             | Little Cedar Creek                     |
|     |              | 47            |     |       |      | Reedys Branch        | 34 34 45 | 79 51 40   | 3.6        |             | Great Pee Dee River                    |
|     |              | 48            |     |       |      | Crooked Creek        | 34 47 30 | 79 40 05   | 1.6        |             | Lightwood Knot Creek                   |
|     |              |               | 01  |       |      | Lilly Quick Creek    | 34 40 55 | 79 41 15   | 2.2        |             | Crooked Creek                          |
|     |              |               | 02  |       |      | Beverly Creek        | 34 40 50 | 79 36 55   | 2.9        |             | Crooked Creek                          |
|     |              |               | 03  |       |      | Lightwood Knot Creek | 34 47 45 | 79 42 15   | 3.5        |             | Crooked Creek                          |
|     |              |               |     |       |      |                      |          |            |            |             |  |
|     |              |               |     | 7     |      |                      |          |            |            |             |  |

<sup>#</sup> Dual code in Report 11.

|    |             |             |       | STRE   | AM CO | DE /                 | HEA                   | DWATER LOC             | ATION | ( Mear              | n Flow = 5 cfs )              |
|----|-------------|-------------|-------|--------|-------|----------------------|-----------------------|------------------------|-------|---------------------|-------------------------------|
| 1  | MALLO NUMBE | PRILL PINER | SECOL | 1 Eps. | FOLL  | STREAM NAME          | LATITUDE<br>( ° ' '') | LONGITUDE<br>( ° ' '') |       | REAM<br>LES<br>DOWN | FROM                          |
| 11 | 01          | 49          |       |        |       | Unnamed Tributary    | 34 37 30              | 79 48 30               | 2.5   |                     | Great Pee Dee River           |
|    |             | 50          |       |        |       | Naked Creek          | 34 44 30              | 79 43 15               | 9.6   |                     | Herndon Branch                |
|    |             |             | 01    |        |       | Herndon Branch       | 34 39 40              | 79 44 40               | 2.4   |                     | Naked Creek                   |
|    |             | 51          |       |        |       | Beaverdam Creek      | 34 39 35              | 79 49 00               | 1.6   |                     | Great Pee Dee River           |
|    |             | 52          |       |        |       | Phils Creek          | 34 44 15              | 79 46 35               | 1.9   |                     | Wolf Creek                    |
|    |             |             | 01    |        |       | Wolf Creek           | 34 44 40              | 79 47 50               | 1.5   |                     | Phils Creek                   |
|    |             | 53          |       |        |       | Thompson Creek       | 34 46 50              | 80 17 15               | 0.3   |                     | Stone House Creek             |
|    |             |             | 01    |        |       | Juniper Creek        | 34 33 50              | 80 09 40               | 2.1   |                     | Cow Branch                    |
|    |             |             |       | 01     |       | Little Juniper Creek | 34 36 30              | 80 00 30               | 1.7   |                     | Juniper Creek                 |
|    |             |             | 02    |        |       | Beaver Creek         | 34 39 20              | 79 58 30               | 2.2   |                     | Thompson Creek                |
|    |             |             | 03    |        |       | Bear Creek           |                       |                        |       |                     |                               |
|    |             |             |       | 01     |       | Little Bear Creek    | 34 39 50              | 80 08 10               |       |                     | Confluence-Horsepen<br>Branch |
|    |             |             |       |        | 01    | Twitty Prong         | 34 37 55              | 80 06 20               | 2.5   |                     | Little Bear Creek             |
|    |             |             |       |        | 02    | Bay Branch           | 34 38 55              | 80 06 55               | 1.1   |                     | Little Bear Creek             |
|    | -           |             |       | 02     |       | Big Bear Creek       | 34 41 20              | 80 08 30               | 1.7   |                     | Cow Branch                    |
|    |             | 0           | 04    |        |       | Indian Creek         | 34 43 50              | 80 06 35               | 1.0   |                     | S.C. 145 Highway<br>Bridge    |

|       |             |            |       | STREAM  | CODE        |                     |     |     | HEAL     | DWATE | R LOC  | ATION | ( Mear              | r Flow = 5 cfs )                 |
|-------|-------------|------------|-------|---------|-------------|---------------------|-----|-----|----------|-------|--------|-------|---------------------|----------------------------------|
| REG / | MALIC NUMBE | PRILLER CA | SECOL | TERTILE | FOWRTH ORDE | STREAM NAME         | LAT | ITU | DE<br>") |       | GITUDE | 1000  | REAM<br>LES<br>DOWN | FROM                             |
| 11    | 01          | 53         | 05    |         |             | Abrams Creek        | 34  | 44  | 15       | 80 0  | 2 20   | 1.7   |                     | Thompson Creek                   |
|       |             |            | 06    |         |             | Adams Creek         |     |     |          |       |        |       |                     |                                  |
|       |             |            |       | 01      |             | Jimmies Creek       | 34  | 47  | 40       | 80 0  | 04 50  | 2.2   |                     | Marsh Branch                     |
|       |             |            | 07    |         |             | Deep Creek          | 34  | 45  | 30       | 80 1  | 14 50  |       |                     | Confluence-Mill<br>Branch        |
|       |             |            |       | 01      |             | Crews Branch        | 34  | 44  | 40       | 80 0  | 08 25  | 0.7   |                     | Deep Creek                       |
|       |             |            | 08    |         |             | Cedar Creek         | 34  | 48  | 40       | 80 0  | 7 25   | 2.0   |                     | Thompson Branch                  |
|       |             |            | 09    |         |             | Deadfall Creek      | 34  | 49  | 40       | 80 1  | 14 00  |       |                     | Confluence-Boles<br>Creek        |
|       |             |            |       | 01      |             | Shaw Creek          | 34  | 51  | 55       | 80 1  | 12 10  |       |                     | Confluence-Grind-<br>stone Creek |
|       |             |            | 10    |         |             | Clay Creek          | 34  | 48  | 30       | 80 1  | 13 25  |       |                     | Confluence-Savannah<br>Branch    |
|       |             |            | 11    |         |             | Stone House Creek   | 34  | 48  | 40       | 80 1  | 17 40  |       |                     | Confluence-Betties<br>Branch     |
|       |             | 54         |       |         |             | Huckleberry Branch  | 34  | 42  | 40       | 79 5  | 53 15  | 1.5   |                     | Wilson Branch                    |
|       |             | 55         |       |         |             | Unnamed Tributary # |     |     |          |       |        |       |                     |                                  |
|       |             |            | 01    |         |             | Westfield Creek     | 34  | 48  | 10       | 80 (  | 00 20  | 3.3   |                     | Little Westfield<br>Creek        |
|       |             |            |       |         |             |                     |     |     |          |       |        |       |                     |                                  |

# Dual code in Report 11.

|     | ,  | _                          |    | STREA    | м со | DE |  |                |                | HEAL                       | DWAT           | ER LO                                     | CATION                          | ( Mear              | n Flow = 5 cfs )   |
|-----|----|----------------------------|----|----------|------|----|--|----------------|----------------|----------------------------|----------------|---|---------------------------------|---------------------|--|
| RED |    |                            |    |          |      |    | STREAM NAME  | LAT            | TTU<br>'       |                            | LON            | IGITUDE                                   | 1000000                         | REAM<br>LES<br>DOWN | FROM   |
| 11  | 01 | 55<br>56                   | 01 | 01       |      |    | Little Westfield Creek<br>Whites Creek   | 1 2            |                | 00<br>15                   | 537.53         | 59 35<br>46 15                            | 1.3                             |                     | Westfield Creek<br>Seaboard Coast Line<br>Railroad Bridge  |
|     |    | 57<br>58<br>59<br>60<br>61 | 01 | 01<br>02 |      |    | Unnamed Tributary # Marks Creek Whortleberry Creek Mill Creek Unnamed Tributary # Jones Creek Hale Creek N. Fork Jones Creek | 34<br>34<br>34 | 48<br>50<br>55 | 55<br>50<br>00<br>35<br>50 | 79<br>80<br>79 | 40 20<br>56 00<br>00 00<br>58 50<br>05 50 | 0.4<br>0.6<br>0.7<br>2.0<br>3.3 |                     | Damon Boyds Lake Great Pee Dee River Seaboard Coast Line Railroad Bridge  Jones Creek Lampley Branch |
|     |    | 62                         | 02 |          | 01   |    | Brush Fork<br>Little Creek<br>Unnamed Tributary #  | - 2            |                | 35<br>10                   | l              | 02 25<br>52 55                            | 0.6                             |                     | Bailey Creek<br>Great Pee Dee River  |

<sup>#</sup> Dual code in Report 11.

|    |               | $\overline{}$ |       | STRE | AM CO    | DE          |                        | HEA      | DWATER LOC | ATION | ( Mear      | r Flow = 5 cfs )             |
|----|---------------|---------------|-------|------|----------|-------------|------------------------|----------|------------|-------|-------------|------------------------------|
| /  | MALLORT NUMBE | PRILL RIVER   | SECOL | TEO. | FOUNTARY | FICTH ORDES | STREAM NAME            | LATITUDE | LONGITUDE  | 10000 | REAM<br>LES | FROM                         |
| 1  | MA            | de            | 14    | 12   | 100      | 1/2         | /                      | (        | ( ")       | UP    | DOWN        |                              |
| 11 | 01            | 63            |       |      |          |             | Solomons Creek         | 34 52 55 | 79 48 05   |       |             | Confluence-Black<br>Branch   |
|    |               |               | 01    |      |          |             | Speeds Creek           | 34 52 30 | 79 49 45   | 0.5   |             | Solomans Creek               |
|    |               | 64            |       |      |          |             | Hitchcock Creek        | 35 00 30 | 79 36 05   | 3.0   |             | Bones Big Branch             |
|    |               |               | 01    |      |          |             | Falling Creek          | 34 56 30 | 79 41 45   | 4.8   |             | South Prong Falling<br>Creek |
|    |               |               |       | 01   |          |             | South Prong Falling Cr | 34 53 55 | 79 43 15   | 1.4   |             | Beaverdam Branch             |
|    |               |               | 02    |      |          |             | Unnamed Tributary      | 34 58 20 | 79 44 55   | 0.3   |             | Hitchcock Creek              |
|    |               |               | 03    |      |          |             | Rocky Fork             | 35 05 00 | 79 41 20   | 2.0   |             | Millstone Creek              |
|    |               |               |       | 01   |          |             | Beaver Dam Creek       | 35 01 45 | 79 40 50   | 2.0   |             | Rocky Fork                   |
|    |               |               |       | 02   |          |             | Bells Creek            | 35 04 00 | 79 43 25   | 3.0   |             | Rocky Fork                   |
|    |               |               |       | 03   |          |             | Millstone Creek        | 35 03 45 | 79 40 45   | 0.6   |             | Rocky Fork                   |
|    |               |               | 04    |      |          |             | Chock Creek            | 34 57 55 | 79 38 55   | 2.7   |             | Hitchcock Creek              |
|    |               |               | 05    |      |          |             | Bones Fork             | 35 02 15 | 79 37 00   | 1.7   |             | Big Branch                   |
|    |               | 65            |       |      |          |             | Island Creek           | 34 56 20 | 79 54 30   | 2.8   |             | Great Pee Dee River          |
|    |               | 66            |       |      |          |             | Cartledge Creek        | 35 01 50 | 79 47 40   | 0.7   |             | South Prong                  |
|    |               |               | 01    |      |          |             | South Prong            | 35 01 20 | 79 46 30   | 1.4   |             | Cartledge Creek              |
|    |               |               |       |      |          |             |                        |          |            |       |             |                              |

|     | 2            |             |       | STREAM | 4 CODE      |                             |     |        | HEA        | DWA. | TER            | LOC  | ATION | ( Mear              | n Flow = 5 cfs )                       |
|-----|--------------|-------------|-------|--------|-------------|-----------------------------|-----|--------|------------|------|----------------|------|-------|---------------------|--|
| PED | MAJOS NUMBER | PRIME PINES | SECO. | TERTIL | FOUNTH OPPY | STREAM NAME                 | LAT | 200 50 | UDE<br>'') |      | University and | TUDE |       | REAM<br>LES<br>DOWN | FROM                                   |
| 11  | 01           | 67          |       |        |             | Smith Creek #               | 34  | 59     | 15         | 79   | 56             | 45   | 1.4   |                     | North Fork                             |
|     |              | 68          |       |        |             | Savannah Creek #            | 26  |        | 8          | 79   |                | 75   | 4.1   |                     | Great Pee Dee River                    |
|     |              | 69          |       |        |             | Mountain Creek #            |     |        |            |      |                |      |       |                     |  |
|     |              | 70          |       |        |             | Little River                | 35  | 38     | 10         | 79   | 50             | 20   | 2.6   |                     | South Prong                            |
|     |              |             | 01    |        |             | Buffalo Creek               | 35  | 09     | 20         | 79   | 51             | 10   | 0.5   |                     | N. C. Secondary 1005<br>Highway Bridge |
|     |              |             | 02    |        |             | Hamer Creek                 | 35  | 10     | 25         | 79   | 58             | 30   |       |                     | Confluence-Big Wolf<br>Branch          |
|     |              |             |       | 01     |             | Middle Prong Hamer<br>Creek | 35  | 09     | 10         | 80   | 00             | 04   |       |                     | Confluence-West<br>Prong Hamer Creek   |
|     |              |             | 03    |        |             | Cheek Creek                 | 35  | 14     | 55         | 79   | 47             | 55   | 1.4   |                     | Indian Branch                          |
|     |              |             |       | 01     |             | Townsend Branch             | 35  | 12     | 35         | 79   | 50             | 30   |       |                     | Confluence-Woodard<br>Branch           |
|     |              |             | 04    |        |             | Big Town Creek              | 35  | 10     | 20         | 79   | 56             | 50   | 2.1   |                     | Little River                           |
|     |              |             | 05    |        |             | Disons Creek                | 35  | 14     | 35         | 79   | 56             | 40   | 1.8   |                     | Cedar Branch                           |
|     |              |             | 06    |        |             | Thickety Creek              | 35  | 15     | 05         | 79   | 52             | 50   |       |                     | Confluence-Lick<br>Branch              |
|     |              |             | 07    |        |             | Rocky Creek                 | 35  | 20     | 50         | 79   | 58             | 15   | 4.4   |                     | Warner Creek                           |
|     |              |             |       |        |             |                             |     |        |            |      |                |      |       |                     |  |

<sup>#</sup> Dual code in Report 18.

|    | ,             |             |       | STRE       | M CODE    |                        |     |     | HEAL | TAWC | ER   | LOC        | ATION | ( Mear      | Flow = 5 cfs )             |
|----|---------------|-------------|-------|------------|-----------|------------------------|-----|-----|------|------|------|------------|-------|-------------|----------------------------|
|    | MAJOST NUMBER | PRIM. RIVER | Adya. | TEON ON PL | FOURTH OF | STREAM NAME            | LAT | ITU | IDE  |      | GITU | JDE<br>" \ |       | REAM<br>LES | FROM                       |
| 1  | MA            | 12          | 18    | 12         | 15/       | \$/                    | (   |     | )    | ( "  |      | ")         | UP    | DOWN        |                            |
| 11 | 01            | 70          | 07    | 01         |           | Little Rocky Creek     | 35  | 17  | 05   | 79   | 55 ( | 05         |       |             | Confluence-Hill Br         |
|    |               |             | 08    |            |           | Big Creek              | 35  | 16  | 50   | 79   | 49   | 15         |       |             | Confluence-Little Cr       |
|    |               | 1           | 09    |            |           | Bridgers Creek         | 35  | 18  | 45   | 79   | 50 ( | 00         | 2.3   |             | Little River               |
|    |               |             | 10    |            |           | Cedar Creek            | 35  | 19  | 45   | 79   | 47 ! | 55         |       |             | Confluence-Reedy Fk        |
|    |               |             | 11    |            |           | Densons Creek          | 35  | 25  | 55   | 79   | 54   | 15         | 0.6   |             | Arnett Branch              |
|    |               |             |       | 01         |           | Dumas Creek            | 35  | 23  | 40   | 79   | 55 1 | 45         | 2.8   |             | Bishop Creek               |
|    |               |             | 12    |            |           | West Fork Little River | 35  | 32  | 00   | 79   | 52 ! | 55         | 5.6   |             | Betsy Creek                |
|    |               | 71          |       |            |           | Dry Creek              | 35  | 06  | 35   | 80   | 00 ( | 07         | 0.1   |             | N.C. 109 Highway<br>Bridge |
|    |               | 72          |       |            |           | Cedar Creek            | 35  | 01  | 00   | 80   | 00   | 15         | 6.7   |             | Great Pee Dee River        |
|    |               | 73          |       |            |           | Brown Creek            | 34  | 48  | 35   | 80   | 22 ( | 05         | 2.4   |             | Little Brown Creek         |
|    |               |             | 01    |            |           | Flat Fork              | 35  | 01  | 55   | 80   | 03 2 | 20         | 3.9   |             | Brown Creek                |
|    |               |             | 02    |            |           | Goulds Fork            | 34  | 59  | 50   | 80   | 07 ( | 00         |       | 1.6         | Culpepper Creek            |
|    |               | 1           | 03    |            |           | Pinch Gut Creek        | 35  | 00  | 07   | 80   | 08   | 55         | 0.1   |             | Brown Creek                |
|    |               |             | 04    |            |           | Little Brown Creek     | 34  | 56  | 30   | 80   | 11 ( | 05         | 0.4   |             | Legget Branch              |
|    |               |             | 05    |            |           | Lick Creek             | 34  | 57  | 10   | 80   | 14 2 | 20         | 0.8   |             | Brown Creek                |
|    |               |             | 06    |            |           | Unnamed Tributary      | 34  | 52  | 58   | 80   | 16   | 10         | 1.1   |             | Brown Creek                |
|    |               |             |       |            |           |                        |     |     |      |      |      |            |       |             |                            |

|    | ,           | $\overline{}$ |       | STRE      | M CO          | DE /                       | Γ    | HEAI  | OWATER L | OCATIO | N ( Mea                 | n Flow = 5 cfs )                   |
|----|-------------|---------------|-------|-----------|---------------|----------------------------|------|-------|----------|--------|-------------------------|------------------------------------|
| 60 | MAUO NUMBES | PRIM RIVER    | SECOL | TERY WARY | FOUND 1       | STREAM NAME                |      | TUDE  | LONGITUI | 125    | TREAM<br>41 LES<br>DOWN | FROM                               |
| 11 | 01          | 73            | 07    |           | $\overline{}$ | Little Brown Creek         | 34 5 | 50 55 | 80 21 30 | )      |                         | Confluence-Wallace                 |
|    |             | 7950          |       |           |               | U.S. 1981 - 2000 - 21 - 24 |      |       |          |        |                         | Branch                             |
|    |             | 74            |       |           |               | Dula Thoroughfare          | 1.   |       |          |        |                         |                                    |
|    |             |               | 01    |           |               | Buffalo Creek              | 35 0 | 7 25  | 80 05 0  | 0.5    |                         | Dula Thoroughfare                  |
|    |             | 75            |       |           |               | Rocky River                | 35 3 | 1 15  | 80 46 4  | 5      |                         | Confluence-Dye Cr                  |
|    |             |               | 01    |           |               | Hardy Creek                | 35 1 | 3 35  | 80 10 5  | 5      |                         | Confluence-Ugly Cr                 |
|    |             |               | 02    |           |               | Lanes Creek                | 34 5 | 02    | 80 27 40 | )      |                         | Confluence-Gumlog<br>Branch        |
|    |             |               |       | 01        |               | Blackwell Branch           | 35 0 | 1 15  | 80 16 3  | 5      |                         | Confluence-Miles Br                |
|    |             |               |       | 02        |               | Beaverdam Creek            | 34 5 | 6 45  | 80 23 3  | 5      |                         | Confluence-Maple<br>Springs Branch |
|    |             |               |       | 03        |               | Wicker Branch              | 34 5 | 2 27  | 80 25 3  | 1.0    |                         | Lanes Creek                        |
|    |             |               | 03    |           |               | Cribs Creek                | 35 0 | 5 20  | 80 14 1  | 1.7    |                         | Little Cribs Creek                 |
|    |             |               | 04    |           |               | Richardson Creek           | 34 5 | 55 35 | 80 33 3  | )      |                         | Confluence-Adams Br                |
|    |             |               |       | 01        |               | Water Branch               | 35 0 | 7 00  | 80 17 3  | 5      |                         | Confluence-Little<br>Water Branch  |
|    |             |               |       | 02        |               | Gourdvine Creek            | 35 0 | )4 55 | 80 20 0  | 2.4    |                         | Richardson Creek                   |
|    |             |               |       | 03        |               | Negro Head Creek           | 35 0 | 00 25 | 80 22 4  |        |                         | Confluence-Buck Br                 |
|    |             |               |       |           |               |                            |      |       |          |        |                         |                                    |

|     |              | _           | 10 | STREA | M CO | DF | /                       | Г   |          | HEAD | TAWC | ER | LOC        | ATION | ( Mear              | Flow = 5 cfs )                        |
|-----|--------------|-------------|----|-------|------|----|-------------------------|-----|----------|------|------|----|------------|-------|---------------------|---------------------------------------|
| PED | MALOS NUMBES | PRILL PINES | 7  | /     | 7    | 7  | STREAM NAME             | LAT | TTU<br>' |      | LON  |    | rude<br>") | STF   | REAM<br>LES<br>DOWN | FROM                                  |
| 11  | 01           | 75          |    | 04    |      |    | Watson Creek            | 35  | 04       | 30   | 80   | 25 | 50         |       |                     | Confluence-Haw Br                     |
|     |              |             |    | 05    |      |    | Meadow Branch           | 35  | 00       | 50   | 80   | 26 | 55         | 3.1   |                     | Richardson Creek                      |
|     |              |             |    | 06    |      |    | Mill Creek              | 35  | 03       | 25   | 80   | 27 | 50         | 0.8   |                     | Richardson Creek                      |
|     |              |             |    | 07    |      |    | Stewart Creek           | 35  | 01       | 47   | 80   | 33 | 35         |       |                     | Confluence-East Fk                    |
|     |              |             |    |       | 01   |    | Chinkapin Creek         | 35  | 03       | 45   | 80   | 29 | 57         | 1.6   |                     | Flag Branch                           |
|     |              |             |    |       | 02   |    | Stumplick Branch        | 35  | 01       | 50   | 80   | 31 | 45         | 0.9   |                     | Stewarts Creek                        |
|     |              |             |    | 08    |      |    | Rays Fork               | 34  | 58       | 45   | 80   | 28 | 15         |       |                     | Confluence-Flag Br                    |
|     |              |             |    | 09    |      |    | Bearskin Creek          | 34  | 59       | 35   | 80   | 35 | 00         |       |                     | Confluence-Camp Br                    |
|     |              |             |    | 10    |      |    | Little Richardson Creek | 34  | 55       | 05   | 80   | 31 | 05         | 2.4   |                     | Buck Branch                           |
|     |              |             |    | 11    |      |    | Beaverdam Creek         | 34  | 57       | 05   | 80   | 35 | 40         | 0.8   |                     | N.C. 200 Highway<br>Bridge            |
|     |              |             | 05 |       | ues  |    | Long Creek              | 35  | 26       | 30   | 80   | 13 | 20         | 0.3   |                     | N.C. Secondary 1134<br>Highway Bridge |
|     |              |             |    | 01    |      |    | Big Bear Creek          | 35  | 26       | 00   | 80   | 19 | 25         | 6.4   |                     | Little Bear Creek                     |
|     |              |             |    |       | 01   |    | Stony Run               | 35  | 16       | 15   | 80   | 19 | 20         |       |                     | Confluence-Allison<br>Branch          |
|     |              |             |    |       | 02   |    | Little Bear Creek       | 35  | 23       | 30   | 80   | 22 | 45         | 2.9   |                     | Big Bear Creek                        |
|     |              |             |    | 02    |      |    | Little Long Creek       | 35  | 16       | 35   | 80   | 14 | 00         | 3.0   |                     | Long Creek                            |

|     |              | _           |                            | STRE                 | м со | ine /   |  |  | HEAD   | T A W C                                | TED  | 100  | ATION                           | / Maar              | n Flow = 5 cfs )   |
|-----|--------------|-------------|----------------------------|----------------------|------|---|--|--|--|--|--|--|---------------------------------|---------------------|--|
| RED | MAJOS NUMBER | PRIM. PIVER | 7                          | 7                    | 7    | STREAM NAME   | LAT  | TITU   | JDE  | LON                                    | NG 17  | TUDE.  | STF                             | REAM<br>LES<br>DOWN | FROM   |
| 11  | 01           | 75          | 05<br>06<br>07<br>08<br>09 | 03<br>04<br>01<br>02 | 01   | Little Bear Creek Little Long Creek Town Creek Island Creek Rock Hole Creek Grassy Creek Crooked Creek South Fork Crooked Creek North Fork Crooked Goose Creek Duck Creek | 35<br>35<br>35<br>35<br>35<br>35<br>35<br>35 | 23<br>25<br>13<br>12<br>08<br>03<br>06<br>07<br>10 | 10<br>30<br>00<br>30<br>20<br>25<br>37<br>35<br>58<br>15<br>40 | 80<br>80<br>80<br>80<br>80<br>80<br>80 | 16<br>11<br>14<br>23<br>26<br>25<br>37<br>38<br>37<br>34<br>37 | 00<br>00<br>23<br>00<br>50<br>00<br>40<br>58<br>45 | 3.2<br>1.9<br>4.1<br>1.8<br>2.1 |                     | Long Creek Town Creek Little Long Creek Cucumber Creek Confluence-Rock Hole Branch Rocky River  U.S. 74 Highway Bridge N.C. Secondary 1501 Highway Bridge Stevens Creek Goose Creek Sherman Branch |
|     |              |             | 12<br>13<br>14             |                      |      | Muddy Creek<br>Unnamed Tributary<br>Little Meadow Creek   | 35   | 15   | 55<br>50<br>45   | 80                                     | 30<br>27<br>27   | 30   | 2.5<br>1.0<br>1.5               |                     | Rocky River<br>Rocky River<br>Rocky River  |

|     | 1          |              |         | STRE      | M CODE |                         | HEA      | DWATER LOC | ATION | ( Mea       | n Flow = 5 cfs )     |
|-----|------------|--------------|---------|-----------|--------|-------------------------|----------|------------|-------|-------------|----------------------|
| 66. | MAJO NUMBE | PRILL RIVER  | SECOL   | TERY TERY | FOURTH | STREAM NAME             | LATITUDE | LONGITUDE  |       | REAM<br>LES | FROM                 |
| _   | 1          | $\leftarrow$ | / 3     | -         |        | 4/                      |          |            | 01    | DOMIN       |                      |
| 11  | 01         | 75           | 15      |           |        | Anderson Creek          | 35 16 25 | 80 31 30   |       |             | Confluence-Horton Br |
|     |            |              | 16      |           |        | Dutch Buffalo Creek     | 35 31 25 | 80 30 55   | 3.9   |             | Lick Branch          |
|     |            |              |         | 01        |        | Adams Creek             | 35 23 50 | 80 28 40   | 1.4   |             | McAllister Creek     |
|     |            |              |         | 02        |        | Little Buffalo Creek    | 35 28 20 | 80 22 45   | 2.5   |             | Butcher Branch       |
|     |            |              |         | 03        |        | Black Run Creek         | 35 28 10 | 80 26 25   | 2.6   |             | Dutch Buffalo Creek  |
|     |            |              |         | 04        |        | Jinney Wolf Creek       | 35 28 15 | 80 28 00   | 2.4   |             | Dutch Buffalo Creek  |
|     |            |              | 17      |           |        | Hamby Branch            | 35 20 05 | 80 30 25   | 0.9   |             | Rocky River          |
|     |            |              | 18      |           |        | Cold Water Creek        | 35 32 22 | 80 34 30   | 4.5   |             | 1-85 Highway Bridge  |
|     |            |              |         | 01        |        | Irish Buffalo Creek     | 35 32 15 | 80 38 30   | 1.9   |             | Kannapolis Lake Dam  |
|     |            |              |         | 02        |        | Little Cold Water Creek | 35 25 55 | 80 32 15   | 3.5   |             | Cold Water Creek     |
|     |            |              | 19      |           |        | Reedy Creek             | 35 15 05 | 80 41 40   | 5.9   |             | McKee Creek          |
|     |            |              |         | 01        |        | Caldwell Creek          | 35 16 10 | 80 35 30   | 3.1   |             | Reedy Creek          |
|     |            |              |         | 02        |        | McKee Creek             | 35 16 08 | 80 38 15   | 1.7   |             | Reedy Creek          |
|     |            |              | 20      |           |        | Back Creek              | 35 18 35 | 80 41 00   | 3.9   |             | Fuda Creek           |
|     |            |              | 21      |           |        | Coddle Creek            | 35 32 55 | 80 44 58   | 3.1   |             | East Fork Coddle Cr  |
|     |            |              | 8391D## | 01        |        | Mill Creek              | 35 27 50 | 80 42 05   | 1.7   |             | Coddle Creek         |
|     |            |              |         | 02        |        | East Fork Coddle Creek  | 35 32 20 | 80 44 28   | 2.1   |             | Coddle Creek         |
|     |            |              |         |           |        |                         | 55.5     |            |       |             |                      |

|     | _            |                |             | STREAM               | CODE   | HE   | DWATE  | R LOC  | ATION                                  | ( Mea               | n Flow = 5 cfs )   |
|-----|--------------|----------------|-------------|----------------------|--|--|--|--|--|---------------------|--|
| PED | MALOS NUMBES | PRIM. RIVER    | SECO.       | TERT I ARY           | STREAM NAME  | LATITUDE   | LONG   | GITUDE   |  | REAM<br>LES<br>DOWN | FROM   |
| 11  | 01           | 75<br>76       | 22 23 24 01 | 01<br>02<br>01<br>02 | Mallard Creek Stony Creek Clarks Creek Clarke Creek Ramah Creek South Prong Clarke C West Branch Rocky R Clarks Creek Lick Fork Jacobs Creek # | 35 19 30<br>35 50 12<br>35 20 55<br>35 25 25<br>35 24 20<br>35 31 10<br>35 17 25<br>35 16 25<br>35 17 55 | 80 4<br>80 4<br>80 4<br>80 4<br>80 4<br>80 6<br>79 5 | 7 05<br>3 40<br>7 15<br>5 55<br>8 10<br>8 58<br>01 00<br>59 00 | 0.7<br>1.0<br>2.4<br>0.6<br>0.9<br>3.7 |                     | Clarks Creek Mallard Creek Mallard Creek Clarke Creek Clarke Creek South Prong Confluence-Dumas Cr Clarks Creek Lake Tillery |
|     |              | 77<br>78<br>79 |             |                      | Mountain Creek # Yadkin River ##   | 35 23 15   |  | 9 45   | 4.5                                    |                     | Little Mountain Cr   |

<sup>#</sup> Dual code in Report 18.

### 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 Great Pee Dee River basin.

This inventory was compiled from the following sources:

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

The USGS quadrangle maps are 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

|     |              |             |    |             |   |   | 001111111111111111111111111111111111111 | HONE ENIN                  |                               |                                     |
|-----|--------------|-------------|----|-------------|---|---|---|----------------------------|-------------------------------|-------------------------------------|
| RED | MAJON NUMBEO | PRIME RIVER | 7  | STREA LEAT. | 7 | 7 | LAKE NAME OR OWNER                      | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (SOUTH CAROLINA) |
| 11  | 01           |             |    |             |   |   | Yauhannah Lake                          |                            |                               | Georgetown                          |
| 11  | 01           |             |    |             |   |   | Exchange Plantation Pond                | 20                         | 32                            | Georgetown                          |
| 11  | 01           |             |    |             |   |   | Jordan Lake                             | 40                         |                               | Georgetown                          |
| 11  | 01           |             |    |             |   |   | Unnamed Lake                            |                            |                               | Marion                              |
| 11  | 01           | 30          | 02 |             |   |   | Gaddy Millpond                          | 50                         | 200                           | Marion                              |
| 11  | 01           | 30          | 03 |             |   |   | Lances Lake                             | 25                         | 150                           | Marion                              |
| 11  | 01           | 30          | 01 |             |   |   | Pine Lake                               | 15                         | 60                            | Marion                              |
| 11  | 01           |             |    |             |   |   | Horseshoes Lake                         |                            |                               | Marion                              |
| 11  | 01           |             |    |             |   |   | Staple Lake                             |                            |                               | Marion                              |
| 11  | 01           |             |    |             |   |   | Wildhorse Lake                          |                            |                               | Marion                              |
| 11  | 01           |             |    |             |   |   | Johnson Lake                            |                            |                               | Marion                              |
| 11  | 01           |             |    |             |   |   | Thomas Lake                             |                            |                               | Marion                              |
| 11  | 01           |             |    |             |   |   | Ballon Lake                             |                            |                               | Marion                              |
| 11  | 01           |             |    |             |   |   | Unnamed Lake                            |                            |                               | Marion                              |
| 11  | 01           |             |    |             |   |   | Honey Lake                              |                            |                               | Marion                              |
| 11  | 01           |             |    |             |   |   | Hodge Lake                              |                            |                               | Marion                              |
| 11  | 01           |             |    |             |   |   | Crooked Lake                            |                            |                               | Marion                              |
|     |              |             |    |             |   |   |   |                            |                               |                                     |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|  |              |             | 3     | STRE       | M CO     | DE           |                               |                            |                               |                          |
|--|--------------|-------------|-------|------------|----------|--------------|-------------------------------|----------------------------|-------------------------------|--------------------------|
| P. P | MALO. NUMBEO | PRIME RIVER | SECO. | 78.87 ZERZ | FOULTARY | FIETH ORDES  | LAKE NAME OR OWNER            | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION<br>BY<br>COUNTY |
|  |              | / /         |       |            | <u> </u> | $\leftarrow$ |                               |                            |                               | (SOUTH CAROLINA)         |
| 11                                       | 01           |             |       |            |          |              | Graves Lake                   |                            | 5.5                           | Marion                   |
| 11                                       | 01           |             |       |            |          |              | Unnamed Lake (Dead River)     |                            |                               | Marion                   |
| 11                                       | 01           |             |       |            |          |              | Old River Lake                |                            |                               | Marion                   |
| 11                                       | 01           | 30          |       |            |          |              | Long Lake                     |                            | <del></del>                   | Marion                   |
| 11                                       | 01           | 30          |       |            |          |              | Ten Acre Pond                 |                            |                               | Marion                   |
| 11                                       | 01           |             |       |            |          |              | Unnamed Lake                  |                            |                               | Marion                   |
| 11                                       | 01           |             |       |            |          |              | Unnamed Lake                  |                            |                               | Marion                   |
| 11                                       | 01           |             |       |            |          |              | Unnamed Lake                  |                            |                               | Marion                   |
| 11                                       | 01           | ŀ           |       |            |          |              | Unnamed Lake                  |                            |                               | Marion                   |
| 11                                       | 01           | - 1         |       |            |          |              | J. W. King                    | 30                         | 75                            | Florence                 |
| 11                                       | 01           | 1           |       |            |          |              | C. A. Willoughby & Pete Clark | 28                         | 85                            | Florence                 |
| 11                                       | 01           | 32          | 01    |            |          |              | Palles Pond                   | 20                         | 50                            | Florence                 |
| 11                                       | 01           | 32          | 02    |            |          |              | Pepsi Cola Lake               | 12                         | 45                            | Florence                 |
| 11                                       | 01           | 32          | 03    |            |          |              | Canal Industries              | 12                         | 40                            | Florence                 |
| 11                                       | 01           | 32          | 05    |            |          |              | Muldrows Millpond             | 45                         | 110                           | Florence                 |
| 11                                       | 01           | 30          | 03    |            |          |              | Miss Lacy Jackson Estate      | 22                         | 100                           | Dillon                   |
| 11                                       | 01           | 34          | 01    |            |          |              | Julian H. Berry               | 15                         | 75                            | Dillon                   |
|  |              |             |       |            |          |              |                               |                            |                               |                          |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|     |              | $\overline{}$ |        | STREA | M COI | DE /                   |                            |                               |                                     |
|-----|--------------|---------------|--------|-------|-------|------------------------|----------------------------|-------------------------------|-------------------------------------|
| PED | MA.LO NUMBEC | PRIME RIVER   | SECOLO | TERT, | FOUND | LAKE NAME OR OWNER     | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (SOUTH CAROLINA) |
| 11  | 01           | 34            | 01     |       |       | Sarah F. Dees          | 16                         | 50                            | Dillon                              |
| 11  | 01           | 34            | 01     |       |       | John D. Coleman        | 12                         | 50                            | Dillon                              |
| 11  | 01           |               |        |       |       | Unnamed Lake           |                            |                               | Georgetown                          |
| 11  | 01           |               |        |       |       | New Ham Lake           |                            |                               | Georgetown                          |
| 11  | 01           | 20            |        |       |       | Unnamed Lake           |                            |                               | Horry                               |
| 11  | 01           | 34            | 01     |       |       | Marshden Cox           | 15                         | 75                            | Dillon                              |
| 11  | 01           | 36            |        |       |       | Unnamed Lake           |                            |                               | Dillon                              |
| 11  | 01           | 32            | 05     |       |       | Oakdale Lake           | 120                        | 480                           | Florence                            |
| 11  | 01           | 32            | 05     |       |       | Forrest Lake           | 180                        | 865                           | Florence                            |
| 11  | 01           | 38            |        |       |       | Williams Furniture Co. | 24                         | 150                           | Florence                            |
| 11  | 01           | 38            |        |       |       | Williams Furniture Co. | 18                         | 180                           | Florence                            |
| 11  | 01           | 37            |        |       |       | Ingram Lumber Co.      | 21                         | 300                           | Florence                            |
| 11  | 01           | 37            |        |       |       | John W. Lanford        | 10                         | 40                            | Florence                            |
| 11  | 01           | 37            |        |       |       | Unnamed Lake           |                            |                               | Florence                            |
| 11  | 01           | 32            |        |       |       | Muldrow Millpond       | 25                         | 80                            | Darlington                          |
| 11  | 01           | 37            | 01     |       |       | Canal Wood Corp.       | 150                        | 540                           | Darlington                          |
| 11  | 01           | 37            | 01     |       |       | Bethea Home I          | 25                         | 100                           | Darlington                          |
|     |              |               |        |       |       |                        |                            |                               |                                     |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|      |               | _           | -  |           | _ | ,                                       |                            |                               |                                     |
|------|---------------|-------------|----|-----------|---|---|----------------------------|-------------------------------|-------------------------------------|
| AED. | MA, IO NUMBEL | PRILL RIVER | 7  | STREAM CO | 7 | LAKE NAME OR OWNER                      | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (SOUTH CAROLINA) |
| 11   | 01            | 37          | 02 |           |   | Ramseys Millpond                        | 40                         | 144                           | Darlington                          |
| 11   | 01            | 37          | 02 |           |   | Dr. Byerly Estate (McCowns<br>Millpond) | 15                         | 48                            | Darlington                          |
| 11   | 01            | 37          | 05 |           |   | Auburndale Farms (Gilbert Lake)         | 50                         | 150                           | Darlington                          |
| 11   | 01            | 37          |    |           |   | Unnamed Lake                            |                            |                               | Darlington                          |
| 11   | 01            | 37          | 04 |           |   | Carl Chapman Pond                       | 50                         | 200                           | Darlington                          |
| 11   | 01            | 37          |    |           |   | Unnamed Lake                            |                            |                               | Darlington                          |
| 11   | 01            | 37          |    |           |   | Sid Jordan                              | 20                         | 80                            | Darlington                          |
| 11   | 01            | 37          |    |           |   | Unnamed Lake                            |                            |                               | Darlington                          |
| 11   | 01            | 39          | 01 |           |   | Ed Dennis                               | 20                         | 64                            | Darlington                          |
| 11   | 01            | 42          |    |           |   | T. C. Coxe                              | 400                        | 960                           | Darlington                          |
| 11   | 01            | 42          |    |           |   | Earl Gandy                              | 10                         | 40                            | Darlington                          |
| 11   | 01            | 44          | 01 |           |   | Lake Darpo                              | 15                         | 60                            | Darlington                          |
| 11   | 01            | 44          | 01 |           |   | Wilber Flowers (Spring Lake)            | 25                         | 100                           | Darlington                          |
| 11   | 01            | 44          |    |           |   | Unnamed Lake                            |                            |                               | Darlington                          |
| 11   | 01            |             |    |           |   | Klopmans Millpond                       | 12                         | 60                            | Darlington                          |
| 11   | 01            | 44          |    |           |   | Unnamed Lake                            |                            | 1                             | Darlington                          |
|      |               |             |    |           |   |   |                            |                               |                                     |

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APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|     |              | $\overline{}$ | STREAM               | CODE                                       |                            |                               |                                     |
|-----|--------------|---------------|----------------------|--|----------------------------|-------------------------------|-------------------------------------|
| PED | MA.LO NUMBEL | PRILL RIVER   | SECONDARY<br>TERT LA | LAKE NAME OR OWNER                         | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (SOUTH CAROLINA) |
| 11  | 01           | 46            | 01                   | Boy Scouts Camp Coker                      | 40                         | 192                           | Chesterfield                        |
| 11  | 01           | 53            | 01                   | Cheraw State Park - Eureka Lake            | 260                        | 1,660                         | Chesterfield                        |
| 11  | 01           | 53            | 01                   | Cheraw State Park                          | 10                         | 40                            | Chesterfield                        |
| 11  | 01           | 53            | 01                   | U.S. Fish Hatchery                         | 10                         | 32                            | Chesterfield                        |
| 11  | 01           | 53            | 01                   | Sandhill State Forrest -<br>Chambells Lake | 60                         | 192                           | Chesterfield                        |
| 11  | 01           | 53            | 01                   | Sandhill State Forrest -<br>Griggs Pond    | 10                         | 60                            | Chesterfield                        |
| 11  | 01           | 53            | 01                   | Sandhill State Forrest                     | 20                         | 96                            | Chesterfield                        |
| 11  | 01           | 53            | 01                   | Unnamed Lake                               |                            |                               | Chesterfield                        |
| 11  | 01           | 53            | 03                   | Teals Mill                                 | 112                        | 269                           | Chesterfield                        |
| 11  | 01           | 53            | 03                   | Hunts Millpond                             | 20                         | 96                            | Chesterfield                        |
| 11  | 01           | 53            | 03                   | T. F. Sowell                               | 12                         | 53                            | Chesterfield                        |
| 11  | 01           | 53            | 03                   | Merriman Mill                              | 12                         | 29                            | Chesterfield                        |
| 11  | 01           | 53            | 03                   | McLain (McLean Pond)                       | 16                         | 77                            | Chesterfield                        |
| 11  | 01           | 53            | 03                   | Sandhill State Forrest (Mount Lk)          | 13                         | 62                            | Chesterfield                        |
| 11  | 01           | 53            | 03                   | Laverne Hurst                              | 12                         | 58                            | Chesterfield                        |
| 11  | 01           | 53            | 03                   | Douglas Millpond                           | 10                         | 40                            | Chesterfield                        |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

| P.E.D. | MAJOS NUMBER | PRIM. RIVER | 7   | STREAM ( | / / | LAKE NAME OR OWNER            | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (SOUTH CAROLINA) |
|--------|--------------|-------------|-----|----------|-----|-------------------------------|----------------------------|-------------------------------|-------------------------------------|
| 11     | 01           | 53          |     |          |     | Gaddy Pond                    | 40                         | 128                           | Chesterfield                        |
| 11     | 01           | 53          |     |          |     | C. M. Branch Robeson Millpond | 12                         | 58                            | Chesterfield                        |
| 11     | 01           | 53          | 07  |          |     | Otis Sellers Pond             | 22                         | 106                           | Chesterfield                        |
| 11     | 01           | 53          | 11  |          |     | 01d Rock Quarry               | 10                         | 50                            | Chesterfield                        |
| 11     | 01           | 53          | 11  |          |     | Unnamed Lake                  |                            |                               | Chesterfield                        |
| 11     | 01           | 53          |     |          |     | Hursey Millpond               | 10                         | 50                            | Chesterfield                        |
| 11     | 01           | 49          |     |          |     | Unnamed Lake                  |                            |                               | Chesterfield                        |
| 11     | 01           | 49          |     |          |     | Unnamed Lake                  |                            |                               | Chesterfield                        |
| 11     | 01           | 49          |     |          |     | Unnamed Lake                  |                            |                               | Chesterfield                        |
| 11     | 01           | 49          |     |          |     | Unnamed Lake                  |                            |                               | Chesterfield                        |
| 11     | 01           | 49          |     |          |     | Unnamed Lake                  |                            |                               | Chesterfield                        |
| 11     | 01           | 53          |     |          |     | Ottis Jordan                  | 15                         | 84                            | Chesterfield                        |
| 11     | 01           | 53          | 01  |          |     | Guy Dixon                     | 12                         | 58                            | Chesterfield                        |
| 11     | 01           | 53          | 01  |          |     | W. D. Thomas                  | 12                         | 58                            | Chesterfield                        |
| 11     | 01           | 37          | 06  |          |     | McIntosh Millpond             | 15                         | 48                            | Darlington                          |
| 11     | 01           | 37          | 0.0 |          |     | City of Hartsville            | 37                         | 185                           | Darlington                          |
| 11     | 01           | 37          |     |          |     | McCuen Morrell                | 10                         | 40                            | Darlington                          |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|     |               | _           |        | STRE | W CO | DE          | /  |                               |                                     |              |
|-----|---------------|-------------|--------|------|------|-------------|--|-------------------------------|-------------------------------------|--------------|
| AFO | MALIO, NUMBER | PRIME RIVER | /      | /    | 7    | FIETH ORDES | SURFACE<br>AREA<br>(acres)               | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (SOUTH CAROLINA) |              |
| 11  | 01            | 37          |        |      |      |             | Prestwood Lake                           | 300                           | 1,800                               | Darlington   |
| 11  | 01            | 37          | 03     |      |      |             | Jeffords Mill Pond                       | 100                           | 400                                 | Darlington   |
| 11  | 01            | 37          | 08     |      |      |             | Segars Millpond                          | 18                            | 58                                  | Darlington   |
| 11  | 01            | 37          | 80     |      |      |             | Clyde Millpond (Beaverdam Mill-<br>pond) | 30                            | 96                                  | Darlington   |
| 11  | 01            | 37          | 08     |      |      |             | King Rancho (Kings Millpond)             | 10                            | 32                                  | Darlington   |
| 11  | 01            | 37          | 08     |      |      |             | Unnamed Lake                             |                               |                                     | Darlington   |
| 11  | 01            | 37          | 09     |      |      |             | Ridgeview Farms #                        | 15                            | 72                                  | Chesterfield |
| 11  | 01            | 37          | 10     |      |      |             | Thomas J. Morrison #                     | 10                            | 48                                  | Chesterfield |
| 11  | 01            | 37          | 10     |      |      |             | Sandhill State Forrest #                 | 20                            | 96                                  | Chesterfield |
| 11  | 01            | 37          | 14     |      |      |             | U.S. Wildlife Refuge - Martins<br>Lake # | 60                            | 288                                 | Chesterfield |
| 11  | 01            | 37          | 14     |      |      |             | U.S. Wildlife Refuge - Pool D #          | 20                            | 88                                  | Chesterfield |
| 11  | 01            | 37          | 14     |      |      |             | U.S. Wildlife Refuge - Lake 12 #         | 10                            | 44                                  | Chesterfield |
| 11  | 01            | 37          | 14     |      |      |             | U.S. Wildlife Refuge - Lake 16 #         | 15                            | 66                                  | Chesterfield |
| 11  | 01            | 37          | 14     |      |      |             | U.S. Wildlife Refuge - Lake Bee #        | 25                            | 120                                 | Chesterfield |
| 11  | 01            | 37          | 14     |      |      |             | U.S. Wildlife Refuge - Pool G #          | 15                            | 66                                  | Chesterfield |
| 11  | 01            | 37          | ine në |      |      |             | U.S. Wildlife Refuge - Mays Lake #       | 25                            | 180                                 | Chesterfield |

<sup>#</sup> Dual code in Report 18.

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|     | ,            | _           |       | STREAM CODE              |  |                            |                               | , |
|-----|--------------|-------------|-------|--------------------------|--|----------------------------|-------------------------------|---|
| PED | MALOS NUMBES | PRIME PIVER | SECOL | TERT JARY<br>FOURTH ORDS | LAKE NAME OR OWNER                           | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (SOUTH CAROLINA)     |
| 11  | 01           | 37          | 15    |                          | U.S. Wildlife Refuge - Pool K #              | 30                         | 144                           | Chesterfield                            |
| 11  | 01           | 37          | 15    |                          | U.S. Wildlife Refuge - Pool L #              | 30                         | 144                           | Chesterfield                            |
| 11  | 01           | 37          | 15    |                          | U.S. Wildlife Refuge - Pool K #              | 30                         | 144                           | Chesterfield                            |
| 11  | 01           | 37          | 16    |                          | Woodward Millpond #                          | 30                         | 144                           | Chesterfield                            |
| 11  | 01           | 37          | 16    |                          | Jimmy Sutton #                               | 10                         | 50                            | Chesterfield                            |
| 11  | 01           | 37          | 16    |                          | R. W. Jordan Estate (Graves Millpond) #      | 22                         | 97                            | Chesterfield                            |
| 11  | 01           | 37          |       |                          | Boyd Rogers                                  | 10                         | 24                            | Chesterfield                            |
| 11  | 01           | 37          |       |                          | Town of Pageland                             | 12                         | 58                            | Chesterfield                            |
| 11  | 01           | 38          |       |                          | E. E. Dargan - Pee Dee Experiment<br>Station | 150                        | 540                           | Darlington                              |
| 11  | 01           | 38          |       |                          | Unnamed Lake                                 | 1000                       |                               | Darlington                              |
| 11  | 01           | 38          |       |                          | Lucas Dargan                                 | 18                         | 72                            | Darlington                              |
| 11  | 01           | 38          | 02    |                          | Red Fern                                     | 18                         | 86                            | Darlington                              |
| 1.1 | 01           | 38          | 02    |                          | Lucas Dargan                                 | 14                         | 58                            | Darlington                              |
| 11  | 01           | 39          |       |                          | Unnamed Lake                                 |                            |                               | Darlington                              |
| 11  | 01           | 39          | 01    |                          | Unnamed Lake                                 | ##                         |                               | Darlington                              |
| 11  | 01           | 39          | 01    |                          | Unnamed Lake                                 |                            |                               | Darlington                              |
|     |              |             |       |                          |  |                            |                               |   |

<sup>#</sup> Dual code in Report 18.

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

| AEG. | MA UDE NUMBER | PRIM. RIVER |    | TREAM CODE  AND | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (SOUTH CAROLINA) |
|------|---------------|-------------|----|---|----------------------------|-------------------------------|-------------------------------------|
| 11   | 01            | 54          |    | Becker Sand & Gravel                                | 50                         | 250                           | Chesterfield                        |
| 11   | 01            | 54          | -  | Unnamed Lake  |                            |                               | Chesterfield                        |
| 11   | 01            | 54          | 01 | Buddy Furr  | 10                         | 40                            | Chesterfield                        |
| 11   | 01            | 54          |    | K. S. Laney   | 18                         | 86                            | Chesterfield                        |
| 11   | 01            |             |    | Rogers Lake   | 20                         | 80                            | Marlboro                            |
| 11   | 01            |             |    | Unnamed Lake  |                            |                               | Marlboro                            |
| 11   | 01            |             |    | Brownsville Lake                                    | 30                         | 120                           | Marlboro                            |
| 11   | 01            | 1           |    | Unnamed Lake  |                            |                               | Marlboro                            |
| 11   | 01            | 41          |    | Hugh Driggers Pond                                  | 52                         | 208                           | Marlboro                            |
| 11   | 01            | 41          |    | Unnamed Lake  |                            |                               | Marlboro                            |
| 11   | 01            | 43          |    | Drakes Millpond                                     | 250                        | 7,000                         | Marlboro                            |
| 11   | 01            | 43          |    | Daileys Pond  | 10                         | 72                            | Marlboro                            |
| 11   | 01            | 43          |    | C. P. Polsten                                       | 10                         | 48                            | Marlboro                            |
| 11   | 01            | 43          | 02 | Covingtons Millpond                                 | 50                         | 160                           | Marlboro                            |
| 11   | 01            | 43          | 01 | Smiths Pond   | 10                         | 76                            | Marlboro                            |
| 11   | 01            |             |    | McLaurins Millpond                                  | 62                         | 174                           | Marlboro                            |
| 11   | 01            | 48          |    | Duvalls Millpond                                    | 77                         | 369                           | Marlboro                            |
|      |               |             |    |   |                            |                               |                                     |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|        | /              | _           |        | STREAM CO       | DE /               |                            |                               |                                     |
|--------|----------------|-------------|--------|-----------------|--------------------|----------------------------|-------------------------------|-------------------------------------|
| P.E.D. | MA JOST NUMBEO | PRIMA RIVER | SECOLO | TERTIARY<br>FOU | LAKE NAME OR OWNER | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (SOUTH CAROLINA) |
| 11     | 01             | 48          |        |                 | McCalls Millpond   | 30                         | 84                            | Marlboro                            |
| 11     | 01             | 48          |        |                 | Lake Wallace       | 416                        | 1,664                         | Marlboro                            |
| 11     | 01             | 48          |        |                 | Burnt Factory      | 96                         | 307                           | Marlboro                            |
| 11     | 01             | 48          | 01     |                 | Mabry Searcy       | 20                         | 56                            | Marlboro                            |
| 11     | 01             | 48          |        |                 | Goodwins Millpond  | 58                         | 161                           | Marlboro                            |
| 11     | 01             | 48          |        |                 | Becker Pond        | 15                         | 60                            | Marlboro                            |
| 11     | 01             | 48          |        |                 | L. E. Pence Pond   | 70                         | 280                           | Marlboro                            |
| 11     | 01             | 48          |        |                 | Unnamed Lake       |                            |                               | Marlboro                            |
| 11     | 01             | 48          |        |                 | Unnamed Lake       |                            |                               | Marlboro                            |
| 11     | 01             | 48          |        |                 | Usher Pond         |                            |                               | Marlboro                            |
| 11     | 01             | 48          |        |                 | Davids Millpond    | 50                         | 120                           | Marlboro                            |
| 11     | 01             | 50          |        |                 | McLaurins Millpond | 62                         | 174                           | Marlboro                            |
| 11     | 01             | 50          |        |                 | Bullards Pond      | 50                         | 100                           | Marlboro                            |
| 11     | 01             | 52          |        |                 | Andersons Millpond | 71                         | 284                           | Marlboro                            |
| 11     | 01             | 52          |        |                 | Grants Millpond    | 50                         | 100                           | Marlboro                            |
| 11     | 01             | 52          | 01     |                 | McMeekin Pond      | 20                         | 48                            | Marlboro                            |
| 11     | 01             | 52          | 01     | 5               | Haires Pond        | 15                         | 90                            | Marlboro                            |
|        |                |             |        |                 |                    |                            |                               |                                     |

APPENDIX B
SUMMARY OF 10 TO 1,000 ACRE LAKES

|     | 1            |                    | TREAM CODE           |                            |                               |                                     |
|-----|--------------|--------------------|----------------------|----------------------------|-------------------------------|-------------------------------------|
| RED | MA JO NUMBER | PRIMARY<br>SECONDA | LAKE NAME OR OWNER   | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (SOUTH CAROLINA) |
| 11  | 01           | 52                 | Dr. Mays Pond        | 18                         | 86                            | Marlboro                            |
| 11  | 01           | 52                 | Girl Scout Pond      | 16                         | 128                           | Marlboro                            |
| 11  | 01           | 52                 | Camp Pee Dee I       | 10                         | 40                            | Marlboro                            |
| 11  | 01           | 52                 | Camp Pee Dee II      | 10                         | 32                            | Marlboro                            |
| 11  | 01           |                    | J. P. Stevens Lagoon | 15                         | 90                            | Marlboro                            |
| 11  | 01           |                    | J. P. Stevens Pond   | 11                         | 90                            | Marlboro                            |
| 11  | 01           |                    | J. E. Powe Pond      | . 12                       | 67                            | Marlboro                            |
| 11  | 01           | 56                 | Paul Wallace Pond    | 50                         | 200                           | Marlboro                            |
| 11  | 01           |                    | Industrial Pond      |                            |                               | Marlboro                            |
| 11  | 01           |                    | Industrial Pond      |                            |                               | Marlboro                            |
| 11  | 01           |                    | Unnamed Lake         |                            |                               | Marlboro                            |
| 11  | 01           |                    | Unnamed Lake         | :                          |                               | Marlboro                            |
|     |              |                    |                      |                            |                               |                                     |
|     |              |                    |                      |                            |                               |                                     |
|     |              |                    |                      |                            |                               |                                     |
|     |              |                    |                      |                            |                               |                                     |
|     |              |                    |                      |                            |                               |                                     |
|     |              |                    |                      |                            |                               |                                     |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

| AED | MAJORT NUMBER | PRIME RIVER | 7  | STREAM CO | LAKE NAME OR OWNER              | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (NORTH CAROLINA) |
|-----|---------------|-------------|----|-----------|---------------------------------|----------------------------|-------------------------------|-------------------------------------|
| 11  | 01            | 64          |    |           | Abrams Pond                     | 12                         |                               | Richmond                            |
| 11  | 01            | 75          | 05 |           | Albemarle City Lake (Long Lake) | 84                         |                               | Stanly                              |
| 11  | 01            | 75          | 07 |           | Unnamed Lake                    |                            |                               | Stanly                              |
| 11  | 01            | 75          | 07 |           | Allen Lake                      | 10                         |                               | Stanly                              |
| 11  | 01            | 64          | 05 |           | Bagget Lake                     | 14                         | 40                            | Richmond                            |
| 11  | 01            | 48          | 03 |           | Krinshaw Pond                   |                            |                               | Richmond                            |
| 11  | 01            | 58          |    |           | Battley Pond                    | 11                         |                               | Richmond                            |
| 11  | 01            | 65          |    |           | W. R. Bonsal Co. Pond           | 14                         |                               | Anson                               |
| 11  | 01            |             |    |           | Unnamed Lake                    |                            |                               | Anson                               |
| 11  | 01            |             |    |           | Unnamed Lake                    |                            |                               | Anson                               |
| 11  | 01            | 58          |    |           | Boyd's Lake                     | 75                         |                               | Richmond                            |
| 11  | 01            | 75          | 06 |           | Brattain Lake                   | 10                         |                               | Stanly                              |
| 11  | 01            | 75          | 04 |           | Brewer Pond                     | 14                         | 62                            | Union                               |
| 11  | 01            | 75          | 21 |           | Cabarrus Country Club Lake      | 12                         |                               | Cabarrus                            |
| 11  | 01            | 75          | 22 |           | Griffith Lakes                  |                            |                               | Mecklenburg                         |
| 11  | 01            | 64          | 01 |           | C-C Pond                        | 60                         |                               | Richmond                            |
| 11  | 01            | 64          | 01 |           | Unnamed Lake                    |                            |                               | Richmond                            |
|     |               |             |    |           |                                 |                            |                               |                                     |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|     |             | $\overline{}$ |       | STREAM              | CODE     |   |                            |                               |                                     |
|-----|-------------|---------------|-------|---------------------|----------|---|----------------------------|-------------------------------|-------------------------------------|
| AF. | MA.IO NUMBE | PRIME PIVER   | SECO. | TERTINGY<br>TRAINEY | FIE ORDE | LAKE NAME OR OWNER  | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (NORTH CAROLINA) |
| 11  | 01          | 64            | 03    |                     |          | Camp Millstone Lake (Millstone Lk)                          | 18                         | <b>=</b> -2                   | Richmond                            |
| 11  | 01          | 75            | 18    |                     |          | Cannon Lake (Kannapolis Lake)                               | 375                        | 4,140                         | Rowan                               |
| 11  | 01          | 75            | 18    |                     |          | Cannon's Lake   | 10                         |                               | Cabarrus                            |
| 11  | 01          | 70            | 10    |                     |          | Capelsie Lake   | 35                         |                               | Montgomery                          |
| 11  | 01          | 75            | 02    |                     |          | Cash Pond   | 10                         | 36                            | Union                               |
| 11  | 01          | 75            | 09    |                     |          | Charlotte Pipe Foundry Pond                                 | 10                         | 60                            | Union                               |
| 11  | 01          | 58            |       | -                   |          | City Lake   | 80                         |                               | Richmond                            |
| 11  | 01          | 61            | 01    |                     |          | City Pond - Town of Wadesboro<br>(Wadesboro Municipal Lake) | 100                        | 292                           | Anson                               |
| 11  | 01          | 75            | 07    |                     |          | Collins Pond  | 13                         | 68                            | Union                               |
| 11  | 01          | 75            | 18    |                     |          | Concord Lake (City of Concord)                              | 101                        | 1,201                         | Cabarrus                            |
| 11  | 01          | 58            |       |                     |          | Cordova Lake (Steels Millpond)                              | 40                         |                               | Richmond                            |
| 11  | 01          | 75            | 03    |                     |          | D & J Farms Pond  | 10                         |                               | Anson                               |
| 11  | 01          | 70            | 11    |                     |          | Denson Creek Dam (Troy City<br>Water Supply Lake)           | 10                         |                               | Montgomery                          |
| 11  | 01          | 63            |       |                     |          | Dockery's Pond  | 17                         |                               | Richmond                            |
| 11  | 01          | 71            |       |                     |          | Unnamed Lake  |                            |                               | Richmond                            |
|     |             |               |       |                     |          |   |                            |                               |                                     |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|     |              | _           |    |           |   |   | 1                          |                               |                                     |
|-----|--------------|-------------|----|-----------|---|---|----------------------------|-------------------------------|-------------------------------------|
| 180 | MALLO NUMBES | PRIME PINER | 7  | STREAM CO | 7 | LAKE NAME OR OWNER                                      | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (NORTH CAROLINA) |
| 11  | 01           | 70          |    |           |   | Eury Dam (Montgomery County Hunt<br>Club, Inc.)         | 80                         |                               | Montgomery                          |
| 11  | 01           | 58          |    |           |   | Everetts Millpond                                       | 150                        |                               | Richmond                            |
| 11  | 01           | 64          | 01 |           |   | Falling Creek Dam (City of<br>Rockingham) (Hinson Lake) | 75                         |                               | Richmond                            |
| 11  | 01           | 64          | 01 |           |   | McDonalds Pond  |                            |                               | Richmond                            |
| 11  | 01           | 75          | 18 |           |   | Fisher Lake   | 277                        | 3,377                         | Cabarrus                            |
| 11  | 01           | 75          | 12 |           |   | Foster Pond   | 10                         |                               | Montgomery                          |
| 11- | 01           | 64          | 04 |           |   | Gibson Pond   | 10                         |                               | Richmond                            |
| 11  | 01           | 58          | ٠  |           |   | Hamlet City Lake (Water Lake<br>Dam O2)                 | 85                         |                               | Richmond                            |
| 11  | 01           | 65          |    |           |   | Hedricks Lake   | 25                         |                               | Anson                               |
| 11  | 01           | 70          |    | 1         |   | Hurleys Lake  | 35                         |                               | Montgomery                          |
| 11  | 01           | 75          | 21 |           |   | Jackson Training School Pond                            | 10                         |                               | Cabarrus                            |
|     |              |             |    |           |   |   |                            |                               |                                     |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|     |             | $\overline{}$ |           | STREA    | M CO    | DE /  |                            | T                             |                                     |
|-----|-------------|---------------|-----------|----------|---------|---|----------------------------|-------------------------------|-------------------------------------|
| AF. | MA.L. MUMBE | PRILL RIVER   | Secolabor | TERY ARY | FO 14RY | LAKE NAME OR OWNER                                    | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (NORTH CAROLINA) |
| 11  | 01          | 75            | 04        |          |         | Jones Pond  | 16                         |                               | Anson                               |
| 11  | 01          | 75            | 07        |          |         | Lanes Creek Dam (Marshville City<br>Water Supply Dam) | 15                         | 46                            | Union                               |
| 11  | 01          | 64            |           |          |         | Ledbetter Pond (Ledbetter Lake)                       | 350                        |                               | Richmond                            |
| 11  | 01          | 75            | 04        |          |         | Lee Lake (City of Monroe)                             | 125                        | 1,380                         | Union                               |
| 11  | 01          | 70            | 08        |          |         | Lewis Millpond  | 10                         |                               | Montgomery                          |
| 11  | 01          | 75            | 18        |          |         | Unnamed Lake  |                            |                               | Cabarrus                            |
| 11  | 01          | 75            | 18        |          |         | Lynn Lake   | 16                         |                               | Cabarrus                            |
| 11  | 01          | 75            | 18        |          |         | Unnamed Lake  |                            |                               | Cabarrus                            |
| 11  | 01          | 75            | 04        |          |         | Martin Marietta Aggregate Pond                        | 30                         |                               | Union                               |
| 11  | 01          | 64            |           |          |         | McKinney Lake   | 65                         | 440                           | Richmond                            |
| 11  | 01          | 75            | 10        |          |         | McWhirter Lake  | 18                         |                               | Mecklenburg                         |
| 11  | 01          | 75            | 12        |          |         | Unnamed Lake  |                            |                               | Cabarrus                            |
| 11  | 01          | 64            |           |          |         | Midway Pond   | 150                        |                               | Richmond                            |
| 11  | 01          | 75            | 04        |          |         | Monroe Lake (City of Monroe)                          | 140                        | 1,228                         | Union                               |
|     |             |               |           |          |         |   |                            |                               |                                     |

APPENDIX B SUMMARY OF 10 TO 1,000 ACRE LAKES

|      |             | $\overline{}$ | S     | TREAM CODE |                                   |                            |                               |                                     |
|------|-------------|---------------|-------|------------|-----------------------------------|----------------------------|-------------------------------|-------------------------------------|
| PEG/ | MA.C. MUMBE | PRILL RIVER   | SECOM | FOURTH OF  | LAKE NAME OR OWNER                | SURFACE<br>AREA<br>(acres) | GROSS<br>STORAGE<br>(acre-ft) | LOCATION BY COUNTY (NORTH CAROLINA) |
| 11   | 01          | 75            | 16    |            | Oaks Cliffs Pond                  | 13                         |                               | Cabarrus                            |
| 11   | 01          | 75            | 04    |            | Plyler Lake                       | 25                         | 210                           | Union                               |
| 11   | 01          | 75            | 04    |            | Unnamed Lake                      |                            |                               | Union                               |
| 11   | 01          | 64            |       |            | Roberdel Dam (Pee Dee Mfg. Co.)   | 100                        |                               | Richmond                            |
| 11   | 01          | 70            |       |            | Smitherman Lake                   | 40                         |                               | Montgomery                          |
| 11   | 01          | 75            | 14    |            | Smith's Lake                      | . 22                       |                               | Cabarrus                            |
| 11   | 01          | 75            | 09    |            | Squash Hill Hunting Club Pond     | 10                         |                               | Union                               |
| 11   | 01          | 75            | 07    |            | Stegall Pond                      | 11                         | 66                            | Union                               |
| 11   | 01          | 75            | 04    |            | Steward Lake (Twitty Lake)        | 474                        |                               | Union                               |
| 11   | 01          | 70            | 11    |            | Troy Emergency Water Supply Lake  | 14                         |                               | Montgomery                          |
| 11   | 01          | 63            | 01    |            | Wall Pond                         | 16                         |                               | Richmond                            |
| 11   | 01          | 63            | 01    |            | Unnamed Lake                      |                            |                               | Richmond                            |
| 11   | 01          | 53            | 09    |            | White Store Development Corp. Dam | 25                         |                               | Anson                               |
| 11   | 01          | 75            | 21    |            | Wilkerson Lake                    | . 11                       |                               | Iredell                             |
| 11   | 01          | 73            |       |            | Windmill Fish Hatchery            | 16                         |                               | Anson                               |
| 11   | 01          | 70            | 08    |            | Parson Bros. Pond                 | 11                         |                               | Montgomery                          |
| 11   | 01          |               |       |            | Unnamed Lake                      |                            |                               | Richmond                            |
|      |             |               |       |            |                                   |                            |                               |                                     |

11-817