# J. STROM THURMOND LAKE

US Army Corps of Engineers Savannah District

# MASTER PLAN JUNE 1995

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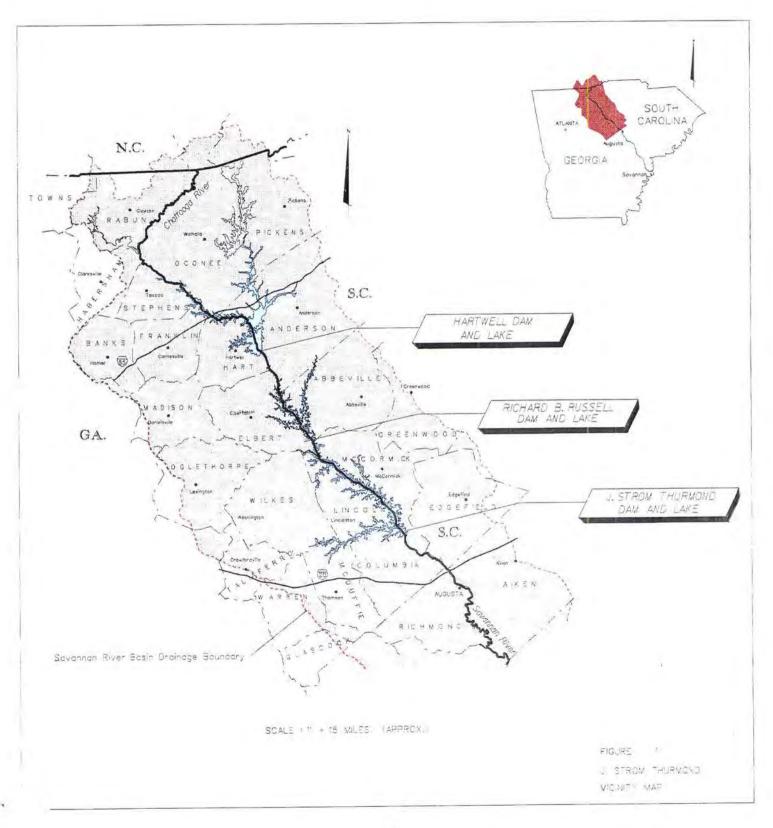
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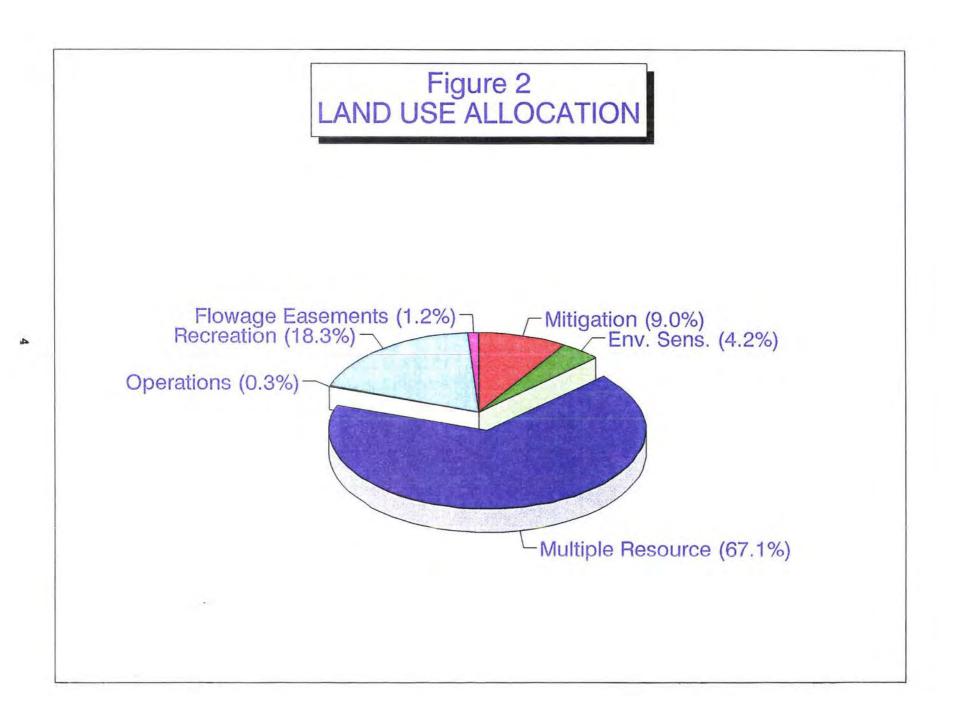
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	TABLE 1 LAND CLASSIFICATIONS	
	CLASSIFICATION	ACRES
	FLOWAGE EASEMENT	883
	ENVIRONMENTAL SENSITIVE AREA	3,188
\$ (e)	MITIGATION	6,858
St. Sale	MULTIPLE RESOURCE MANAGEMENT	51,039
	PROJECT OPERATIONS	193
	RECREATION	12,725
	RECREATION (QUASI PUBLIC PRIVATE CLUB)	1,234
	SUBTOTAL	76,120
- 330	RECREATION POOL ELEVATION 330'	71,100 **
	TOTAL PROJECT	147,220
	** INCLUDES 3,950 ACRES IN RIVERBED	
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#### Preface

In accordance with ER 1130-2-435, Preparation of Project Master Plans, it is the policy of the Corps of Engineers that Master Plans be developed and updated on a regular basis for all Civil Works projects and other fee owned lands for which the Corps has management responsibility. To fulfill this commitment, an interdisciplinary Savannah District team with joint management responsibilities shared by Operations and Planning Divisions prepared this updated Master Plan for J. Strom Thurmond Lake. Due to budget constraints and manpower shortages, a four year delay occurred in completing the plan from its inception in 1989. However, the teams major objective, which was to assure that the final document reflected the most accurate and current as-built data on recreation development and existing land use was accomplished. In addition, this plan addresses South Atlantic Division (SAD) review comments on the first 1989 draft submittal of the update and reflects changes made as a result of the disposal of public property declared excess to public needs over the past decade.

Since completion of the last J. Strom Thurmond Lake Master Plan which was approved in 1980, numerous changes in recreation use and intensity have occurred in the project area. From early 1981 through mid-year 1992, an intensive closure/consolidation/renovation effort was implemented resulting in closure of many small, dispersed areas, and consolidation and renovation of more than 10 major day use and camping areas. These changes are reflected in this updated plan along with resource objectives and land use classifications which will help assure the long range management, development and protection of the resources of J. Strom Thurmond reservoir.

#### 1. INTRODUCTION

1.A. Project Authorization

The Flood Control Act Of 1944 authorized construction of Clarks Hill Lake, for project purposes of <u>flood control</u>, <u>hydropower</u> generation, and improvement of downstream <u>navigation</u>. It was the first of three currently constructed multipurpose projects in the comprehensive plan of development for the Savannah River Basin (Figure 1). Construction began in August 1946 and was completed in July 1954.

On December 22, 1987, President Ronald Reagan signed into law, legislation (P.L. 100-209) which changed the name of Clarks Hill Dam, Lake and Highway to J. Strom Thurmond Dam, Reservoir and Highway in honor of the senior Senator from South Carolina.

#### 1.B. Land Allocation.

The land allocation identifies the lands at Thurmond Lake in accordance with the authorized purposes for which they were or are acquired. There are four primary land allocation categories applicable to Corps projects; (1) operations (i.e., flood control, hydropower, etc.), (2) recreation, (3) fish and wildlife, and (4) mitigation. Initially, all the lands were purchased as operational lands, but the Water Resources Development Act of 1986 identified some of these lands as mitigation (more intensive management) for construction of the Richard B. Russell Project. These two land allocation categories of operations and mitigation are shown in the maps in appendix N. It is recognized that the Water Resources Development Act of 1986 also added recreation and fish and wildlife management as project purposes for all existing lands.

1.C. Land Classification.

The lands are classified (subcategories of the land allocation) as shown in the following table and shown as a percentage of the total land area in Figure 2. More detailed descriptions are contained in Section 3 entitled "Land Classifications."

#### 1.C.1. Project Purposes.

The Flood Control Act of 1944 (Public Law 78-534), authorized construction of the Thurmond Project for the purposes of:

- \* Flood Control
- \* Hydropower
- \* Navigation

Other authorized project purposes include:

- \* Recreation--Subsequent legislation specific to Thurmond Lake
- \* Fish & Wildlife Management -- Subsequent legislation specific to Thurmond Lake
- \* Mitigation--Subsequent legislation specific to Thurmond Lake
- \* Water Supply--General legislation
- \* Water Quality Management--General legislation

Since the project was became operational, more emphasis has been placed on multipurpose uses through Congressional Acts, laws, and directives. This emphasis has caused these uses to become very important factors in the evaluation, utilization, and mission of civil works multipurpose projects.

In response to this multipurpose emphasis, the <u>Water Resources Development Act of</u> <u>1986</u>, Public Law 99-662 dated November 17, 1986, added <u>Recreation and Fish and Wildlife</u> Management to the project purposes for J. Strom Thurmond Reservoir.

Section 864 of the Act reads in part: "Clarks Hill Lake, Savannah River Basin, Georgia. The project for flood control, Clarks Hill Lake, Savannah River Basin, Georgia and South Carolina, authorized by the Flood Control Act approved 22 December 1944, is modified to include Recreation and Fish and Wildlife Management as project purposes. Project lands which are managed or reserved as of the date of the enactment of this section for the conservation, enhancement, or preservation of Fish and Wildlife and for Recreation shall be considered as lands necessary for such purposes."

Additionally, the <u>Water Resources Development Act of 1986</u> stated that "The Secretary and the State of South Carolina in consultation with the United States Fish and Wildlife Service, shall identify those Federal lands at Clarks Hill Lake to be utilized for purposes of fish and wildlife habitat <u>mitigation</u>. Identification of these lands was the result of mitigation plans prepared for offsetting habitat loss in the construction of the Richard B. Russell Project. The <u>Water Supply Act of 1958</u>, as amended, PL 85-500, allows the Corps of Engineers to reallocate <u>water storage</u> from hydropower to water supply if there is no significant impact on authorized project purposes. At Thurmond Lake, up to 50,000-acre feet may be reallocated without additional Congressional authority. Especially over the last 5 years, communities surrounding the lake have either increased their storage allocation or have made their initial request.

The Federal Water Pollution Control Act Amendments of 1972, PL 92-500, established a national goal of eliminating all pollutant discharges into the waters of the U.S. and added water quality as a consideration in general terms.

1.D. Plan Purpose and Scope.

The 1980 Master Plan has been guiding the development of the project for the last 14 years. Changes in recreation demand, as well as recreation policy and management within the Corps of Engineers, necessitates a reevaluation of existing conditions. The purpose of this revision is to ensure project resources will continue to be developed in the public interest for optimum use and enjoyment while protecting and/or enhancing the resource.

The <u>scope</u> of this plan is to provide the general conceptual guidance necessary for use in planning, designing, constructing, and managing land and facilities at the project. The specific detail and management programs for implementation of these general guidelines is provided in the Operational Management Plan which is updated on a 5-year cycle.

Within the context of this Master Plan, certain constraints had to be considered. These include project O&M budget and staffing limitations, immediate and long-range project needs, and projected public uses and needs. Even though use of recreation facilities is expected to continue to increase, limited budgets for staffing and program execution will preclude additional renovation and expansion of recreation facilities in the foreseeable future. However, the land use plans will be used to continue programming for possible closure/consolidation/renovation of existing areas, adding facilities and sites, and managing present areas as funding permits. Work on this plan has primarily been directed toward correcting as-built site plans to meet the existing operational needs of the project.

During early planning meetings with project personnel, the District Operations Division expressed an immediate need for corrected facility site inventory plans and an updated land classification plan to reflect disposal actions and renovation activities which have occurred over the past 14 years. The revised as-built inventories give project rangers, maintenance, and contract personnel an easy reference to existing facilities at each recreation area as well as those in the State Parks and marina sites. All plans and as-built updates are easily accessible for quick reference in Appendix A.

#### 1.E. Project Description

J. Strom Thurmond Reservoir is located on the Savannah River near the southeastern margin of the Piedmont Plateau Region. The project comprises parts of McCormick and

Abbeville Counties in South Carolina; and parts of Columbia, McDuffie, Warren, Wilkes, Lincoln, and Elbert Counties in Georgia. Thurmond Reservoir has a water surface area of approximately 71,100 acres and a land base of 75,237 acres. (From Table 1, 76,120 acres of land minus 883 acres of flowage easement).

#### 1.E.1. Natural History

The Piedmont Plateau, an eroded peneplain on which Thurmond Reservoir is located, is a band about 150 miles wide separating the Appalachian Mountains and the Coastal Plain. Drainage in the reservoir area is highly dendritic with the Savannah River being the ultimate destination of the numerous streams and creeks.

#### 1.E.2. Cultural History

The area has prehistoric and historic archaeological sites. Although few of the sites are of other than local significance, study and examination of cultural and historical sites in the project area has proven invaluable in improving knowledge of early cultures. Indian cultures existed in the area as far back as 8,000-6,000 B.C. A more detailed discussion on investigations into historic and prehistoric cultures and legislation affecting resource management activities is contained on pages 14, 22, and 23.

#### 1.E.3. Project Operations

Early operational activities focused on recreational development and maintenance and protection of the project land and water resources. Recreational development by State and local governmental agencies, in cooperation with the U.S. Army Corps of Engineers, was encouraged. Seven State parks were originally planned. Hamilton Branch, Baker Creek, and Hickory Knob State Parks are under lease to the South Carolina Department of Parks, Recreation and Tourism. Bobby Brown, Elijah Clark, and Mistletoe Parks are leased to the State of Georgia. Hamilton Branch State Park was developed by the U.S. Army Corps of Engineers of Engineers and turned over to South Carolina in 1973 for operation and maintenance. Keg Creek Park, originally a state park, is now maintained by Columbia County as Wildwood Park.

In addition to State-operated areas, local county governments presently operate four multi-facility recreation areas: Wildwood Park, Holiday Park, Soap Creek Park and Parksville Wayside. Numerous ramp access areas are also operated and maintained by local governments.

There are six public marinas at J. Strom Thurmond Reservoir. They are Clarks Hill, Soap Creek Lodge (managed by T&H Enterprises Inc.), Raysville Bridge, Mike's, Savannah Lakes, and Tradewinds marinas. The fifties saw considerable interest in securing leases for club sites along the shoreline by private and quasi-public groups. These leases range in size from 3 to 50 acres. Twentyseven quasi-public and three private club leases are presently active at Thurmond as listed in Appendix J and shown on the land use plan.

Administration of the private and quasi-public areas has become increasingly more complex as regulations change and additional emphasis is being placed on maximizing general public use of the lease facilities. Under the closure and consolidation program, with the emphasis on public recreation rather than private exclusive use, the number of private clubs has decreased to three. Of the three, Gilligan's Island has one year remaining to accept an alternate site location; Pine Point and Shawondassee are under a year-to-year lease agreement until the leased area is needed for public recreation development.

Lands are also outgranted to the U.S. Army for the Ft Gordon Recreation Area, the South Carolina Army National Guard, and the Veterans Administration for training and recreational purposes.

1.E.4. Hydrologic and Pertinent Data

Normally, the pool reaches the normal pool elevation of 330 m.s.l. in April ,and remains within a few feet of this height until September. From September to mid-December, the pool recedes gradually to approximately 326 feet m.s.l. in preparation for winter rains. A rising pool elevation occurs from January through April. For more detailed information on pool fluctuation and the effects of drought on project operations and water related recreation facilities, see the District's Long Range Drought Contingency Plan prepared in November 1988. Table 2 contains additional detailed data on the dam and lake.

TABLE 2

Pertinent Information

<u>Location of Damsite</u> Savannah River, Georgia and South Carolina, 21.7 miles upstream from Fifth Street Bridge, Augusta, Georgia

Drainage Area (sq. mi.) At damsite 6,144

<u>Reservoir Elevations</u>, m.s.l.: Spillway crest 300 Minimum design pool, with Hartwell 312 Static full pool 330 Top of gates (top of flood control pool) 335 Maximum design surcharge 346

Storage capacities, acre-feet: Spillway crest 1,000,000 Spillway crest to top of gates 1,900,000 Power & incidental flood control storage elevation 312 to 330 1,045,000 Flood control storage; elevation 330 to 335 390,000 Total to top of gates 2,900,000 Maximum design surcharge, 11 feet 950,000

<u>Areas</u> (acres) Minimum design pool, elevation 312 45,000 Static full pool, elevation 330 71,100 Top of gates, elevation 335 78,500 Maximum design surcharge, elevation 346 97,500

Equivalent Runoff (inches) (incremental area between Hartwell and Thurmond) Flood storage (330-335) 1.8 Surcharge storage (335-346) 4.4

Dam Concrete gravity type with earth embankments at either end, an gate- controlled spillway: Maximum height, concrete section, foundation to roadway, feet 200 Length, concrete section feet 2,282 Total length, feet 5,680

<u>Elevation</u>, m.s.l.: Roadway, top of dam 351 Top of gates 335 Spillway crest 300 Flood plain, average 200

Freeboard, above maximum surcharge, feet 5

TABLE 2 (Continued) Pertinent Information Approximate Quantities Concrete, cu. yd. 1,050,000 Earth fill, cu. yd. 3,500,000 Spillway Concrete-gravity type, ogee spillway with bucket-type stilling basin and highway bridge: Total length, feet 1,096 Net length, feet 920 Crest gates Number 23 Type Tainter Width, feet 40 Height, feet 35 Head on crest (spillway design flood), feet 46 Outlet Sluices Number 8 Size, feet 4x9 Type of gate, slide, hydraulically operated Total discharge capacity, reservoir at spillway crest (elevation 300), cubic feet per second 18,700 Total discharge capacity, reservoir at top of crest gates (elevation 335), cubic feet per second 21,300 Power Data Penstocks (main units): Number 7 Diameter, feet 20 Spacing, feet 62 Maximum velocity, feet per second 15.5 Gates, type Tractor Penstocks (service units): Number 2 Diameter, feet 4.5 Maximum velocity, feet per second 8.2 Generating units: Gross static head, feet 152 Average head, feet 134 Minimum head, feet 118 Installation, kilowatts each 280,000 7 units, 40,000 kilowatts each 2,000 2 service units, 1,000 kilowatts each 282,000 Total 282,000

#### 1.E.5. Land Use of Project Region

#### 1.E.5.a. Regional Use

Land in the J. Strom Thurmond Reservoir area had been extensively farmed during the 19th and early 20th centuries with little regard for erosion or enrichment. As a result, the poor soil remaining is not extensively used for agricultural activities other than as pasture lands. A great deal of the land was placed into timber management for erosion prevention and soil conservation early in the 20th century. Much of the project area is now in timber production with widely scattered farms generally of less than 100 acres.

#### 1.E.5.b. Adjacent Use

For the purpose of this plan, "adjacent" lands will include non-federally owned property within one mile of the reservoir. The uses to which this land has been placed was considered in the preparation of this plan.

A large portion of the land in the northeastern quadrant of the reservoir is owned by either the U.S. Forest Service or by private forest product firms. The area to the east and southeast of the reservoir is low density residential with a scattering of small farms and some light industry, particularly to the east.

To the south and southwest of the reservoir, land is principally used for forest products with scattered low density housing. Lands to the west of the reservoir contain small farms, some light industry, and low density residences.

Project lands that have been previously declared excess to public needs have generally resulted in subdivision development. Newer disposal tracts in McCormick County, South Carolina, now support a residential golf community.

#### 1.E.6. Project History

A great deal of the 75,237 acres of project land surrounding the reservoir is extensively utilized by the public for recreation purposes.

As shown in Figure 3 and the following Table, the <u>land</u> associated with the project has decreased in size by 21,073 acres due to various disposal actions. These changes are listed in Appendix G. Currently, there is an additional 883 acres of flowage easement where the Federal government has the right to flood the land but does not have fee title. The actual lake surface of 71,100 acres is composed of 67,150 acres purchased in fee and 3,950 acres in the river bed.

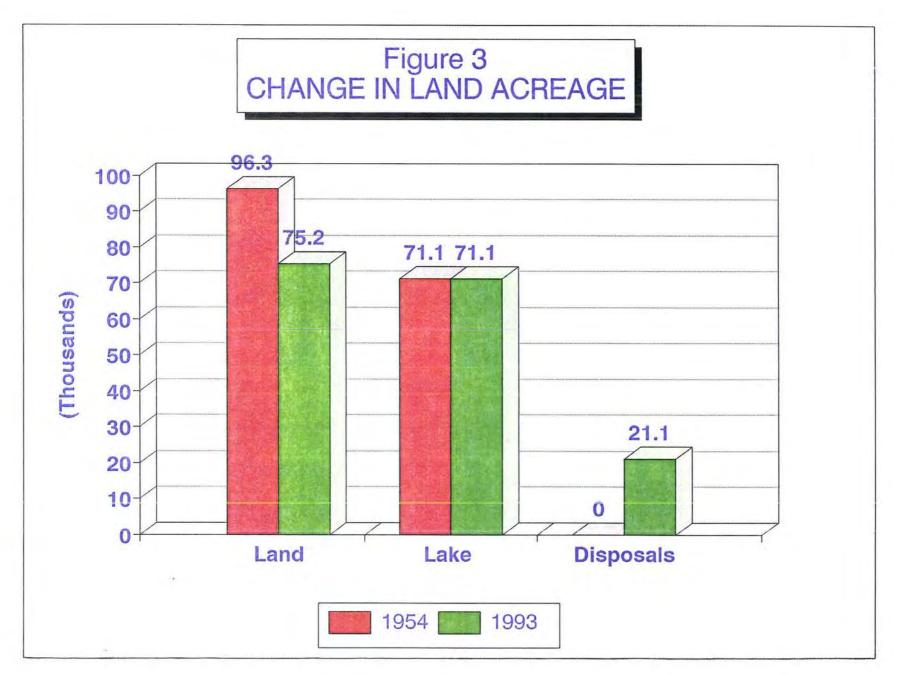


	Table 3 ct Area Changes In Acres)	
Category	At Acquisition	Currently
Land in fee	96,310	75,237
Lake in fee	67,150	67,150
Lake in river bed	3,950	3,950
Flowage easement	883	883
Total land	168,293	147,220

Influenced by the large land base available, J. Strom Thurmond Reservoir has become the nation-wide leader of Corps projects in wildlife management programs. About 32,260 acres are leased to the respective States of Georgia and South Carolina for wildlife management. Approximately 24,287 acres of land are outgranted to Georgia for fish and wildlife management purposes, which are primarily directed toward deer and wild turkey as well as quail and other small game species. Two thousand and seventy-three acres of the 24,287 acres are designated as mitigation lands to offset land losses for the Richard B. Russell Project.

South Carolina manages another 7,973 acres of land included in their Western Piedmont Management Zone. Four thousand and eighty-five acres are mitigation land. The balance of the project land designated as multiple resource, approximately 18,780 acres, is managed by the Corps.

Wildlife Mar	nagement Lands (Acre	Managed By State Agen s)	Cles
	Mitigation	Wildlife Management	Total
Georgia	2,773	21,514	24,287
South Carolina	4,085	3,888	7,973
	6,858	25,402	32,260

Since completion of the J. Strom Thurmond Reservoir Project, the past 3 decades have brought many changes in the public demand for a quality outdoor recreation experience. This ever increasing demand on existing public recreation areas, continues to place a heavy burden on Corps resource management professionals charged with protecting project resources. However, with intensive resource management efforts and wise use of the lands held in public trust, the resources of the J. Strom Thurmond Project can continue to provide an outstanding base for multiple use activities such as recreation, fish and wildlife, and mitigation.

#### 1.F. Special Considerations

#### 1.F.1. Natural Resources

The J. Strom Thurmond Reservoir area contains a variety of unique features which require special attention to insure preservation, including the red-cockaded woodpecker, an endangered species. Other unique features include old abandoned gold mines, quartz outcroppings, uncommonly large trees, rare vegetative species, and the alluvial plains. The area below the dam is a bottom land forest, probably the most inland location of any in South Carolina or Georgia. It is unique in an area dominated by upland forest types.

#### 1.F.2. Cultural Resources

Prior to the impoundment of J. Strom Thurmond Reservoir, the Smithsonian Institution and the National Park Service did separate investigations on archaeological and historic sites, respectively. The Smithsonian Report, entitled "Appraisal of the Archaeological Resources of the Clark Hill Reservoir Area, South Carolina and Georgia," was published in December 1948.

The Smithsonian identified 128 archaeological sites, 70 of which are now inundated by the reservoir. The National Park Service reported that none of the historic sites in the reservoir area were of national significance, although local interest may have been high.

The Georgia and South Carolina Historic Preservation Officers, the respective State archaeologists, and many historically knowledgeable private citizens are aware of potentially significant archaeological and historic sites that exist in the J. Strom Thurmond Reservoir area which are worthy of further investigation. Prior to any development or construction on project lands, a cultural resource investigation of the site is required. Examples of localized site investigations which have occurred over the past decade include the site of the Hickory Knob Golf Course, the Little River - Buffalo Creek land disposal area, and expansion of Cherokee Day Use area.

#### 2. FACTORS AFFECTING DEVELOPMENT

#### 2.A. Natural Resources

#### 2.A.1. Physiographic Location

J. Strom Thurmond Reservoir Dam, located at river mile 239 above the mouth of the Savannah River, was the first of three multi-purpose projects to be completed in the development of the Savannah River Basin. The reservoir is in the lower Piedmont Physiographic Region and has a rolling topography with numerous small streams. The dam is approximately 22 miles upstream from Augusta, Georgia.

#### 2.A.2. Climate

The climatic condition prevailing in the J. Strom Thurmond Reservoir area lends itself well to outdoor recreation during the majority of the year. The most intensive outdoor recreation use occurs from May through October with the months of May, June, July, and August representing the heart of the recreational season. July and August are the hottest months of the year with many days having temperatures over 90 degrees Fahrenheit. January, usually the coldest month, frequently has night temperatures of 20 degrees Fahrenheit or colder. Ice storms, damaging winds, and low temperatures, though rare, do occur, usually in the months of January or February, causing moderate damage to the pine forests in the area.

#### 2.A.3. Rainfall

There are generally two peak periods of rainfall in the Savannah River Basin, in February and March and in July and August. Minimum rainfall usually occurs in October and November with a secondary minimum in April and May. The average annual rainfall in the J. Strom Thurmond Reservoir area is approximately 60 inches.

#### 2.A.4. Geology

J. Strom Thurmond Reservoir is located near the "fall line" on the Piedmont Plateau which is essentially an upland of fairly strong relief, developed through repeated and continued wearing away of the region of disordered crystalline rocks which have been deeply weathered and disintegrated. This section includes some hilly areas and deep valleys, but no lowlands or general highlands.

#### 2.A.5. Slope

Consistent with other areas on the Piedmont Plateau near the "fall line," there is little variation in elevations in the immediate J. Strom Thurmond Reservoir area. The reservoir shoreline, for the most part, slopes from 3 to 20 percent, with an average between 4 and 12 percent.

#### 2.A.6. Soil Characteristics

The J. Strom Thurmond Reservoir area soils consist primarily of sandy clays and sandy silt with an overlying porphyritic granite composed predominantly of quartz and feldspar. This soil is quite erodible and has created serious erosion problems, especially along the exposed South Carolina shore from wind-driven wave action.

#### 2.A.7. Vegetation and Land Cover

Lands acquired for J. Strom Thurmond Reservoir were generally owned by small landowners, forest industries, and power companies. In many cases, the land had been used for agricultural purposes prior to the Depression era but has been allowed to revert to forest growth. At the time of acquisition, most forested areas were supporting second growth pine with an admixture of regional hardwoods. Most river bottom hardwoods were inundated by the reservoir.

Five basic forest types may be identified on project lands: shortleaf pine, shortleaf pinehardwood, loblolly pine-shortleaf pine, loblolly pine, and loblolly pine-hardwood. For practical silviculture, these five types are consolidated into three types: pine, pine-hardwood, and hardwood.

The pine forest type is made up of shortleaf pine (Pinus echinata), loblolly pine (P. taeda), and scattered small stands of longleaf pine (P. palustris), occurring naturally.

The pine-hardwood forest type includes the pine species given above associated with hardwood species such as sweetgum (Liquidambar styraciflua), yellow-poplar (Liriodendron tulipifera), white oak (Quercus alba), post oak (Q. stellata), southern red oak (Q. falcata), other red oaks, white ash (Fraxinus americana), winged elm (Ulmus alata), and other regional hardwoods. Minor constituents of this type include sourwood (Oxydendron arboreum), American holly (Ilex opaca), sycamore (Platanus occidentalis), and red maple (Acer rubrum).

Understory species vary widely and include Viburnum spp., Rhus spp., Sassafras spp., several species of blackberry, greenbriar, dogwood (Cornus florida) and redbud (Cercis canadensis). Japanese honeysuckle (Lonicera japonica) is abundant throughout the area and will overgrow small openings, as will kudzu. Other exotics found around old homesites may include chinaberry (Melia axedarch), princess tree (Pawlonia tomentosa), Catalpa spp., and mimosa (Julibrissin spp.).

Only a small percentage of the total land area is open or unforested. A few of the open areas are maintained in open condition for operational use but most exist under the wildlife management program.

Forest management at J. Strom Thurmond Reservoir has progressed from the preservationist policy to a more intensive management designed to provide increased user benefits by creating and maintaining a healthy, mixed forest. Silvicultural treatments are prescribed for forest management activities each year. Selective tree thinnings are made to

improve wildlife habitat and enhance values for low density recreational use. Special consideration is given to high density recreation areas and other areas with unique or cultural values. Detailed information on management of vegetation and land cover can be found in the Operational Management Plan.

#### 2.A.8. Wildlife

Working in cooperation with the South Carolina Department of Marine and Wildlife Resources and Georgia Department of Natural Resources, the Corps of Engineers at J. Strom Thurmond Reservoir has initiated several wildlife programs designed to provide the basic stewardship of wildlife habitat.

The maintenance of approximately 150 permanent wildlife openings provides a supplemental food source for a wide variety of game and non-game species. The food plots, ranging in size from 1 to 40 acres, are planted in the fall and spring with a variety of quality wildlife foods which include browntop millet, dwarf sorghum, corn, chufas, winter wheat, winter rye, and clover.

Waterfowl habitat represents another important project at J. Strom Thurmond Reservoir. Beaver ponds are drained in the summer and planted with Japanese millet. Once the millet matures, the beavers are allowed to reflood the area, thus providing another food supply for the ducks. Two dewatering areas have also been cooperatively developed by the Corps and the States to provide additional high quality waterfowl habitat for migrating waterfowl. The Corps has also installed 150 nesting boxes for wood ducks which provide interim nesting cavities.

A cooperative management program between the Corps of Engineers, South Carolina, and Georgia wildlife biologists has established a resident flock of Canada geese on J. Strom Thurmond Reservoir. Georgia and South Carolina currently have an open goose hunting season; hunters are selected by computer to participate in the hunts which are limited to the counties surrounding Thurmond Lake.

Non-game species, such as bluebirds, also get special attention. The Corps currently maintains 125 bluebird boxes. Approximately 75 percent of these boxes are utilized by bluebirds each nesting season.

The red-cockaded woodpecker is the only known resident endangered species at J. Strom Thurmond Reservoir. At present there are three known active areas. This woodpecker roosts and nests in live pine trees that are normally diseased with red heart fungus, a characteristic of mature pine trees. Management involves marking the cavity trees, prescribed burning to maintain open understory in their habitat, forest management totally aimed at their perpetuation, high-priority protection, and allowing access for public observation of the species. The presence of people does not seem to bother the species in its everyday activities or in its nesting. Approximately 32,260 acres of land and water are currently under license to the States of Georgia and South Carolina for fish and wildlife management. Continued cooperation between State and Federal wildlife agencies will insure the basic stewardship of some of the finest wildlife habitat in the southeast. The quail, doves, deer, turkey, ducks, squirrels and rabbits are the most popular game species. A list of major game species is shown in the following Table. Additional information on wildlife management can be found in the Operational Management Plan.

Species <u>entific Name</u> ocoileus virginianus) leagris gallopavo) iurus carolinensis) lvilagus floridanus) linus virginanus) ocyon lotor)
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leagris gallopavo) iurus carolinensis) lvilagus floridanus) linus virginanus)
elphis marsupialis) iurus niger) naidura macroura) lpes fulva) ocyon cinereoargenteus) datra zibethicus) stor canadensis) phitis mephitis) as platyrhnchos) as acuta) as carolinensisl) as discors) as strepera) as rubripes) x sponsa) mx rufus) tra canadensis) anta canadensis)
n n i y

Additionally, cooperative agreements among management agencies and organizations are an integral part of the Thurmond Project as listed below:

(1) Memorandum of Agreement with U.S. Fish and Wildlife service on endangered species.

(2) General wildlife management licenses with Georgia Department of Natural Resources (GA DNR) and South Carolina Wildlife and Marine Resources (SCWMRD).

(3) Mitigation licenses with GA DNR and SCWMRD.

(4) Cooperative agreement with Quail Unlimited for establishment and maintenance of food plots and the donation of farm equipment (grain drill) to assist in that goal.

(5) Draft cooperative agreement with the National Wild Turkey Federation for establishment and maintenance of feeding areas and continued support of critical habitat for that species.

(6) Cooperative agreement with Southern Bell to establish osprey nesting platforms on Thurmond Lake.

(7) Informal agreement with local Boy Scout chapters to construct and install bluebird nesting boxes.

#### 2.A.9. Fisheries Management

The J. Strom Thurmond Lake fishery is important to the region providing both recreation and economic benefits. Two to three million anglers fish Thurmond Lake annually. Recent estimates project the value of this recreational experience at approximately \$50 million which impacts the local economy and provides jobs to an estimated 270 households dependent on this fishery for their income.

The Corps fishery management programs fulfill the stewardship responsibilities for the aquatic habitats in J. Strom Thurmond Lake. The goal of these programs is to maintain the quality and value of the overall aquatic resources. To achieve this goal, Corps fishery management programs have become an important component of the multi-purpose resource management program within the Savannah District.

The primary objective of the fisheries management program is to maintain aquatic habitats suitable for abundant sport fish species. A list of major fish species is shown in Table 6. To accomplish this objective, Corps programs include incorporating water quality and fishery program requirements into reservoir operations. One example is the annual maintenance of stable water levels during spring spawning. Also, the shoreline management program aids in protecting shoreline habitat and water quality by protecting vegetation in and near the water. This program also protects adequate shoreline to ensure aesthetic quality for project visitors.

The Corps actively develops fish habitat by felling trees and planting vegetation along some shorelines, and constructing and maintaining fish attractors. Fish habitat has been improved in J. Strom Thurmond Lake downstream from Richard B. Russell Dam by improving water quality through hypolimnetic aeration. This has improved reservoir release dissolved oxygen to levels that are favorable for fish.

The Corps recognizes the importance of public access. There are about 50 public boat ramps located throughout the project providing ample boating access to all parts of the reservoir. Thirty-five of these are provided by the Corps. Additionally, fishing piers have been placed at four recreation areas and one downstream from the dam. These provide increased access to the non-boating angler. These access points, both boating and non-boating, are an important part of utilization of the quality fishery available in Thurmond Lake.

Responsibilities for fisheries management in Corps impoundments goes beyond habitat management. Corps programs are coordinated and often conducted cooperatively with State and Federal agencies with which we share these responsibilities. This includes data gathering concerning fish populations, water quality, contaminant studies, and fishermen surveys. These data are essential for decision-making related to management of our aquatic resources.

Fisheries management in J. Strom Thurmond Lake is an ongoing Corps program that requires flexibility as resource demands change. Some changes that might be expected include:

a. Greater fishing pressure.

b. Loss of habitat due to shoreline development.

c. Changes in water quality resulting from development in the watershed, downstream water demands, and reservoir operation.

The fisheries management program at J. Strom Thurmond Lake will continue to be developed cooperatively with appropriate State and Federal agencies to maintain and protect the valuable resource provided by the fishery. Table 6

Common Fish Species

#### Common Name

gars longnose gar shad and herring gizzard shad threadfin shad blueback herring rainbow trout pike chain pickerel suckers redhorse sucker spotted sucker northern hogsucker carp and minnows carp spottail shiner golden shiner catfish channel catfish white catfish flat bullhead brown bullhead flathead catfish livebearers mosquito fish bass striped bass white bass hybrids sunfish largemouth bass black crappie white crappie bluegill redbreast green sunfish pumpkinseed flier warmouth redear perch walleye sauger yellow perch

#### Scientific Name

(Lepisosteidae) (Lepospsteus osseus) (Clupeidae) (Dorosoma cepedianum) (Dorosoma petenense) (Alosa aestivalis) (Salmonidae) (Salmo gairdnerii) (Esocidae) (Esox niger) (Catostomidae) (Moxostoma spp.) (Minytrema melanops) (Hypentelium nigricans) (Cyprinidae) Cyprinus carpio) (Notropis hudsonius) (Notemigonus chrysoleucas) (Ictaluridae) (Ictalurus punctatus) (Ictalurus catus) (Ictalurus platycephalus) (Ictalurus nebulosus) (Pylodictis olivaris) (Poeciliidae) (Gambusia affinis) (Serranidae) (Morone saxatilis) (Morone chrysops) (Morone saxatillis X Morone chrysops) (Centrarchidae) (Micropterus salmoides) (Pomoxis migromaculatus) (Pomoxis annularis) (Lepomis macrochirus) (Lepomis auritus) (Lepomis cyanellus) (Lepomis gibbosus) (Centrarchus macropterus) (Chaenobryttus coronaris) (Lepomis microlophus) (Percidae) (Stizostedion vitreum) (Stizostedion canadense) (Perca flavescens)

#### 2.A.10. Aesthetic Quality

J. Strom Thurmond Reservoir is one of few civil works projects possessing a large land base consisting largely of woodlands. Boaters on the reservoir can view miles of undisturbed shoreline free of docks, marinas, cabins, and other signs of human habitation. These extensive woodlands surrounding the reservoir provide a pleasant visual experience and serve to minimize conflicting activities.

The natural beauty offered by J. Strom Thurmond Reservoir is a recreational asset which offers almost unlimited opportunities for outdoor oriented activities such as sightseeing and hiking as well as providing a pleasant environment for the camper, hunter, and fisherman. This plan initiates and emphasizes management programs for the enhancement of J. Strom Thurmond Reservoir's visual qualities that can be enjoyed by all.

#### 2.B. Cultural Resources

#### 2.B.1. Prehistoric Era

The Paleo-Indian Period (10,000-8,000 B.C.) was a time when small, nomadic groups of hunters-and-gatherers occupied most of North America. These groups undoubtedly consumed a wide range of plants and animals, but the exploitation of large animal species, many of which are now extinct, may have been particularly important.

Paleo-Indian sites are not as common in the Lower Piedmont as they are in the Coastal Plain. It is possible that during this period the environment of the Piedmont was less conducive to the hunting of large game than it was in the Coastal Plain. However, since the beginning of European settlement, erosion caused by land clearing has deposited sediment in stream valleys to the point that many Paleo-Indian sites may be buried under several meters of alluvium.

The Archaic Period (8,000-1,800 B.C.) saw a transition from large game hunting to a diverse resource base including the introduction of freshwater shellfish into the diet. Some archaeological sites from this period have been discovered in the J. Strom Thurmond Reservoir area.

The changing cultural and social patterns introduced by the Woodland Period (1,800 B.C. - A.D. 900) included elaborate burial rituals, sand-tempered pottery and long distance trade networks between tribes. Agricultural pursuits came into widespread use during this period.

The Mississippian Period (A.D. 900-1,650) is characterized by shell-tempered pottery, platform mounds, plazas, rectangular houses, and extensive agriculture. The reliance upon agriculture usually placed villages of this period near alluvial bottomland. Some villages and mounds of this period have been discovered in the Savannah River Basin, although none have been identified in the immediate J. Strom Thurmond Reservoir area.

#### 2.B.2. Historic Era

Contacts with European colonists beginning in the mid-1600's eventually altered the Indian cultures in the Savannah River Basin. By the late 1700's, the impact of the Indians on the area had been largely replaced by white settlers.

The introduction of cotton plantations into the area with little or no regard to soil conservation resulted in extensive erosion and massive land depletion which is still felt today by those living in the area. Pine plantations and textile manufacturing, which replaced cotton production, are now the primary industrial activities in the area.

#### 2.B.3. Legislation Governing Management of Cultural Resource Activities

The National Historical Preservation Act (NHPA) of 1966 is the main legislation governing the protection of historic and cultural resources. This act, along with subsequent amendments, established the Federal Government and in turn the Corps policy on historic preservation and the national historic preservation program. Passage of NHPA reflected the growing perception throughout the nation that we were losing the character of our communities and our cultural heritage as had been expressed in historic properties and cultural resources. Section 106 of NHPA is of major significance in that it specifically requires Federal agencies to take into account the effects of their programs and activities on historic properties.

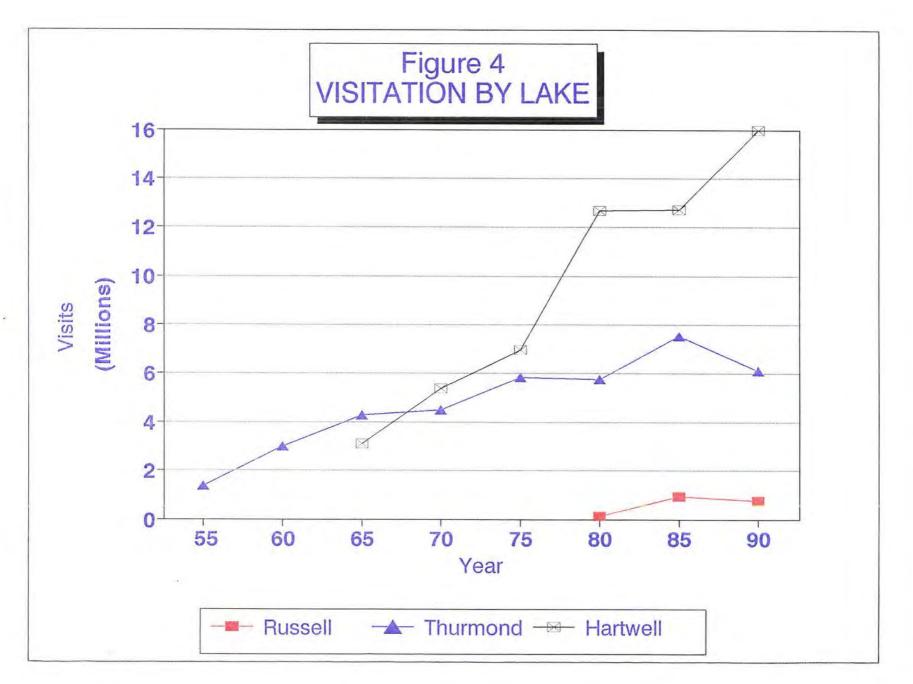
In November 1990, the Native American Graves Protection and Repatriation Act (NAGPRA) was signed by Congress and requires the examination; assessment, and return of certain human remains and other cultural items presently curated by Federal agencies and museums to native American Indian tribes. NAGPRA will necessitate extensive assessment of cultural artifacts previously recovered during archaeological investigations at Thurmond Lake and the provisions of the law have already required appropriation of significant fiscal resources. It is anticipated that significant expenditures will also be required over the next five years to achieve full compliance with NAGPRA.

#### 2.C. Recreation Demand Predictions

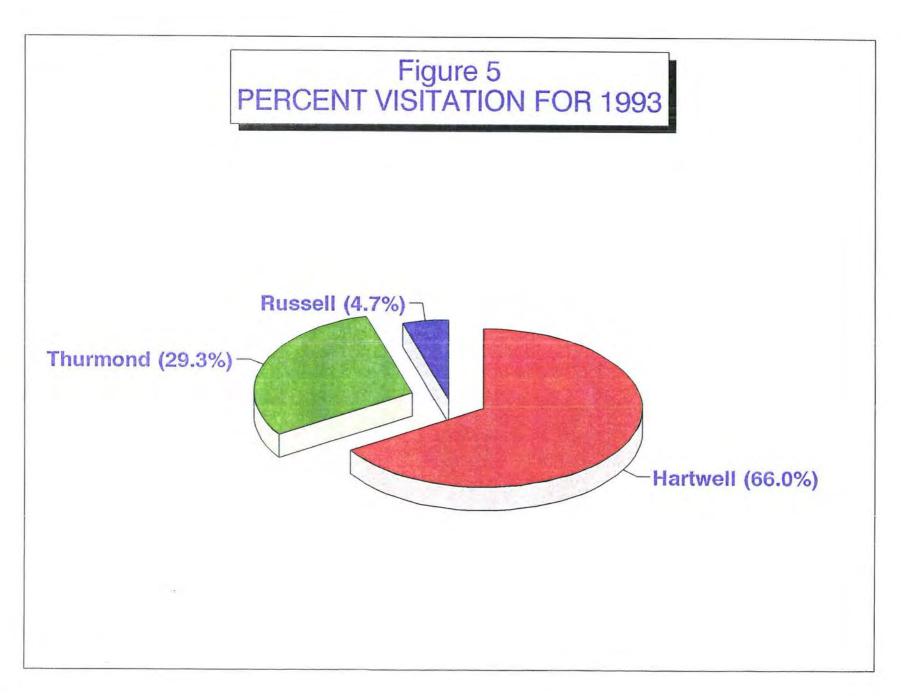
#### 2.C.1. Background

The purpose of this analysis is to determine the demand for recreation. J. Strom Thurmond Reservoir is part of a three-lake system that includes Hartwell and Richard B. Russell lakes. Visitation at these three lakes is interrelated because of their proximity to each other. As shown in Figure 4, since Hartwell Lake's construction, it has generally had the highest annual visitation, followed by Thurmond Lake, and the newer Russell Lake.

Much of Hartwell Lake's visitation is from adjacent private homes while Thurmond Lake has a higher demand for public park facilities. For example, Thurmond Lake has six state parks compared to three at Hartwell Lake. Also, Thurmond Lake collects more revenue from user fees than Hartwell Lake. In 1993, Figure 5 shows Hartwell Lake accounting for 66.0% of the visitation, Thurmond Lake for 29.3%, and Russell Lake 4.7%. The combined area of influence for J. Strom Thurmond, Hartwell, and Richard B. Russell lakes is considered to be all counties and Standard Metropolitan Areas which are within 100 miles of any of the lakes.



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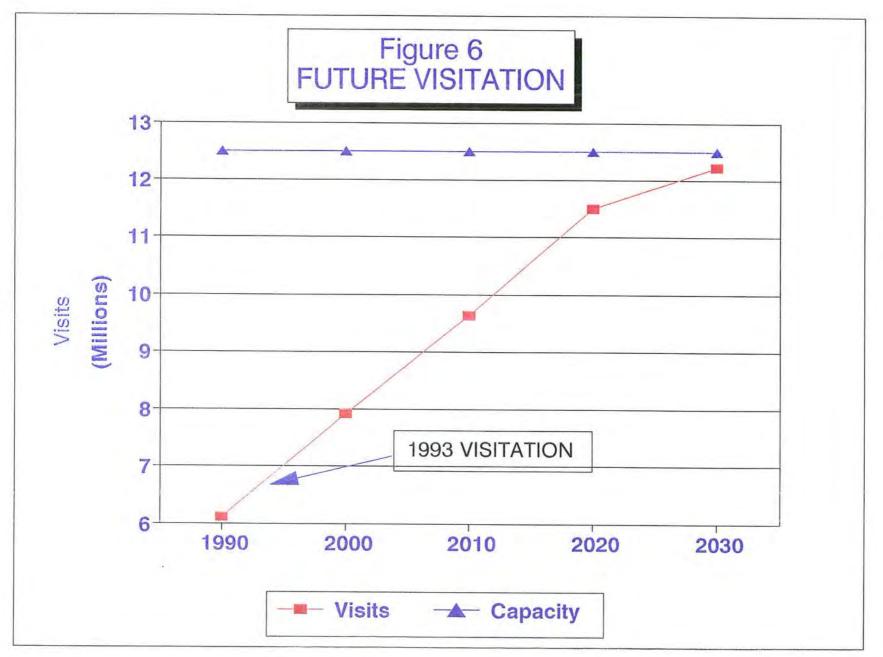
#### 2.C.2. Visitation Projections

Thurmond Lake visitation is based on a share of the three lake expected visitation. First, future visitation at the three lakes is estimated by linear regression techniques using historical population and visitation data. The result is an equation, with a high degree of correlation, relating population of the surrounding area of influence to visitation.

Next, future population estimates are entered into the equation which yields the expected visitation to the three lakes. The combined visitation is apportioned among the three lakes considering carrying capacity, accessibility, and historical trends. Demand for a number of recreation activities such as picnicking, camping, and boating, sightseeing, and fishing are addressed in detail in Appendix C.

Historical and projected visitation at J. Strom Thurmond Reservoir are shown in Figures 4 and 6. Hartwell Lake is expected to continue operating above its estimated capacity of 11.8 million visitor days of use based on the available public facilities. The capacity of Russell Lake is estimated at 4.6 million visitor days. This comprises 16 percent of the total capacity of the three lakes. However, Richard B. Russell will not initially receive 16 percent of the total visitation.

J. Strom Thurmond Reservoir is more easily accessible to the residents of Atlanta and Augusta, Georgia, as well as North Augusta, Aiken, and Columbia, South Carolina. Therefore, it initially had a greater number of visitors from those cities. It is estimated that the carrying capacity of the three lake system will be exceeded by 2002. Thurmond Lake's optimum carrying capacity of 12,469,000 will not be exceeded in the near future (Figure 6). However, this projection assumes the number of picnic and camping sites necessary to support this visitation will be constructed.



#### 2.C.3. Project Carrying Capacity

An optimum recreation carrying capacity is the amount of recreation use of a resource which reflects the use level most appropriate for both the protection of the resource and the satisfaction of the participant.

The method used to arrive at the amount of facilities needed, acreage to be dedicated to various recreational pursuits, and user densities is contained in Appendix C. <u>About 28,317</u> gross acres of recreation lands at J. Strom Thurmond Reservoir is reasonable to sustain a visitation not to exceed 16,000,000 annual visitors (rounded) which is determined to be the maximum practical use of the project.

This is the maximum level at which the project can be used to both protect the resource and to reasonably preserve the people's enjoyment of the resource. Many of the Nation's recreation resources and facilities are experiencing overuse and overcrowding, which deteriorates the resource and diminishes people's recreation experiences.

If the annual visitation could be limited to about 12,400,000 annual visitors (user density of 8.2 persons/acre), it would substantially increase the recreational experience by reducing overcrowding and allowing both the land and water resources better opportunities to survive as renewable resources. Unlike other Corps projects, J. Strom Thurmond Reservoir is now in a unique position to offer a very high quality experience to outdoor recreationists while being maintained as a constant renewable resource.

A great deal of expansion must occur at J. Strom Thurmond Reservoir if the projected visitors are to be accommodated. For example, the actual number of picnic tables and campsites at J. Strom Thurmond Reservoir at the end of 1987 was 706 and 1,447, respectively. The projected units needed by the year 2000 are 1,238 and 2,840, respectively.

#### 3. LAND CLASSIFICATIONS

#### 3.A. Land Classifications

Land classification is necessary to provide for development and resource management consistent with authorized project purposes and the provisions of NEPA and other Federal laws. This classification scheme conforms to the criteria outlined in ER 1130-2-435, Preparation of Project Master Plans, dated 30 Dec 87. Maps reflecting the land classification of the lake are included in Appendix K. Land is classified into one of the following categories:

3.A.1. <u>Project Operations</u>. This classification category includes lands required for the dam structure, operations center, office, maintenance compound, and other areas that are used solely for project operations.

3.A.2. <u>Recreation</u>. Land developed for intensive recreational activities by the visiting public, including developed recreation areas and areas for concession, resort, and quasi-public development.

3.A.3. <u>Mitigation</u>. Lands classified in this category are leased to the States of Georgia and South Carolina for wildlife management. They resulted as a partial offset to habitat loss in the construction of the Richard B. Russell project. Other mitigation measures included purchase of additional lands, stocking of trout, and multi-year creel studies.

3.A.4. <u>Environmental Sensitive Areas</u>. Areas where scientific, ecological, cultural or aesthetic features have been identified. These areas, normally within one of the other classification categories, must be considered by management to insure the unique or unusual features are not adversely impacted. Normally, very limited, or no development for public use is contemplated on land in this classification.

3.A.5. <u>Multiple Resource Management</u>. Lands managed for one or more of, but not limited to, the activities listed below to the extent that they are compatible with the primary allocation(s).

3.A.5.a. <u>Recreation-Low Density</u>. Low density recreation activities such as hiking, primitive camping, wildlife observation, hunting, or similar low density recreational activities.

3.A.5.b. <u>Wildlife Management General</u>. Fish and wildlife management activities. Lands in this sub-category shall be evaluated for consideration for lease or license to the Department of the Interior or the respective State resource agency.

3.A.5.c. <u>Vegetative Management</u>. Management activities for the protection and development of forest and vegetative cover.

3.A.5.d. <u>Inactive and/or Future Recreation Areas</u>. Recreation areas planned for future development or that have been temporarily closed. These lands will be classified as multiple resource management in the interim.

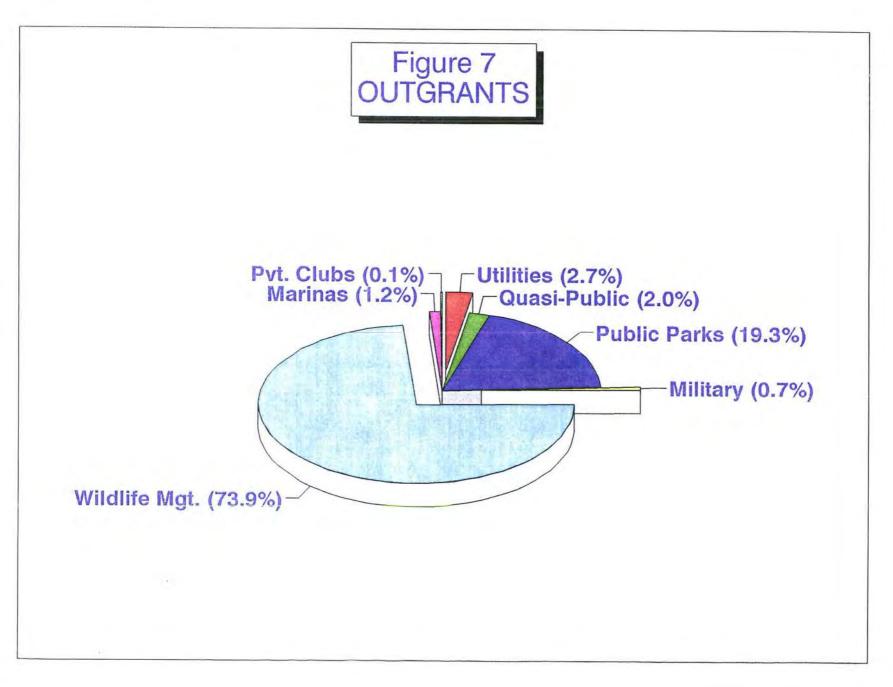
3.A.6. <u>Easement lands</u>. All lands for which the Corps holds an easement interest but not fee title. Planned use and management of easement lands will be in strict accordance with the terms and conditions of the real estate instrument.

#### 3.B. Outgrants

A large amount of land at J. Strom Thurmond Reservoir is outgranted for a variety of purposes. Table 7 gives the acreage and types of outgrants for these lands. This same information is shown in Figure 7. The single largest category is in wildlife management to Georgia and South Carolina (74 percent) followed by lands leased for parks managed by county, State, and Federal agencies at 19 percent of the total outgranted lands.

Appendix J shows the detailed distribution by user as background information. In general, private clubs have decreased substantially due to management efforts in the closure/ consolidation program, while wildlife management has increased, primarily to lands leased for mitigation purposes that resulted from construction of the Richard B. Russell Project.

Table 7	
Outgrants for Recreational Purpos	es
	Acreage
Public agencies, state and county parks	8,436
Commercial concession	544
Special Government use, (National Guard)	307
Quasi-public	889
Private clubs	38
Wildlife purposes	32,260
Roads and Utilities	1,188
Agricultural and grazing	0
Total all outgrants	43,662



#### 4. RESOURCE DEVELOPMENT PLAN

#### 4.A. Resource Objectives

Resource Use Objectives are statements specific to a given project, which specify the attainable options for resource use as determined by study and analysis of resource capabilities and public needs, opportunities, and problems. Objectives are keyed to the land classifications of project operations, recreation, mitigation, environmentally sensitive areas, multiple resource management, and easement lands.

These objectives are based on the needs of the residents of the region and Corps management policy. They are keeping with the capabilities of the natural and manmade resources of the specific project. The purpose of the objectives is to guide the design, development, and management of the resource to obtain the greatest possible benefit through meeting the needs of the public and to protect and enhance environmental quality. The resource objectives developed for this Master Plan update through consultation with resource management personnel follow:

4.A.1. Project Operations. This category covers the resource manager's office, quarry, service area, and water intake sites.

<u>Resource Objective #1</u>. To provide a resource management center to meet staff functions and fulfill interpretive/visitor assistance program needs.

4.A.2. Recreation.

<u>Resource Objective #2</u>. To maintain a high quality recreation experience for the general public through;

The development and application of a recreation area consolidation and renovation program which minimizes adverse impacts on area resources and facilities through consolidation, rotation of use, annual planting and revegetation programs, use of resilient materials, consistent application of design standards, and maintenance of area facilities and infrastructure.

The use of written media and public contact to assure continual public feedback for consideration into the planning, design, development and management of recreation areas.

The separation of conflicting outdoor recreation activities.

The consolidation of compatible activities and support facilities to the extent possible without sacrificing the aesthetic quality or adversely impacting the natural resources of an area.

The protection and enhancement of the natural resources of the project through intensive management programs.

The development of innovative energy conservation techniques in recreation area

planning and design through the study and analysis of micro-climatic elements such as prevailing wind direction, sun angles, and vegetative cover; the planning and design of energy efficient facilities; and the use of low maintenance construction materials.

Resource Objective # 3. To improve security and safety programs through;

Efficient design of circulation patterns to eliminate multiple entrances and exits.

Continued development and use of the campground caretakers and day use gate attendants.

Use of vandal-resistant designs and materials.

Increased visitor awareness of security and safety problems.

Strict enforcement of existing regulations.

Continued use of cooperative law enforcement agreements.

Presentation of education programs and materials to inform the lake users of potential hazards that they might encounter in a lake environment.

Adherence to applicate design and safety standards for all beach areas.

Periodic inspection of public use areas.

<u>Resource Objective # 4</u>. To provide facilities and programs for people with disabilities in accordance with provisions of the Americans with Disabilities Act (ADA) and other applicable regulations.

Planning, renovation and design of all areas and facilities will consider all ADA criteria and regulations for provision of handicapped accessible facilities. Programs will be planned and executed to provide handicapped and otherwise disabled persons access to programs and/or facilities (camping, fishing, hunting, trails) to realize the benefits of the project's recreation and natural resources.

<u>Resource Objective #5</u>. To control boating conflicts through designation and enforcement of no-wake areas, zoning, limiting noise levels for powerboat operation, and improvement of public information programs on boating safety.

Enforcement of boating regulations at Thurmond Reservoir is the joint responsibility of the Corps and the States of Georgia and South Carolina. However, the Corps and the States are limited in manpower, and enforcement is not always available when needed. Additional no-wake buoys and no-wake zones may be necessary to reduce boating conflicts, particularly in the vicinity of marinas, beaches, and boat ramps. Each situation will be evaluated on a case by case basis. The lake has been designated for use by seaplanes by the Corps. While in the air, Federal Aviation Administration rules apply. Once the seaplane contacts the water surface, it must be operated under the same rules applicable to boats. The lake interpretive personnel and the Savannah District Public Affairs Office will continue to inform the public of all aspects of boating safety through news releases, school and campground programs, displays, and demonstrations.

# <u>Resource Objective #6</u>. To assure continued public access to and use of all natural and manmade resources of the Thurmond Project.

Following a recreation facilities closure/consolidation and renovation study completed in 1981, existing interior roadways, traffic circulation patterns, entrances, ramp access roads, and parking areas were closed, modified or redesigned to provide safer and more manageable utilization of project resources by the visiting public. Some lightly used areas were closed with little impact on local use.

Facilities in closed areas were then transferred to larger, more manageable areas to enhance development potential and provide a higher quality experience. Major benefits of the consolidation program include enhance public safety through better facilities design and visitor control, improved public access in launching areas, and reduced adverse impacts on the resource base through consistent application of design standards and development criteria.

<u>Resource Objective #7</u>. To improve public access through the addition of new ramps and/or the modification of existing ramps, redesign of traffic circulation patterns, expanding the amount of parking at existing ramps, and distribution of information on location and amount of use of existing launching areas.

Observation of public use patterns at existing ramp and access areas has indicated in increasing demand for safe well designed multi-lane launching facilities. An increase in organized, competitive fishing events and contests continues to push the use of existing areas beyond capacity limits during prime fishing seasons. Additional parking, construction of courtesy docks, security lighting, comfort stations and tie down areas will be considered in the design of new areas or the expansion of existing areas. Construction of large individual vehicle/boat trailer parking spaces will also be considered to provide access and parking for longer, pontoon the fishing and sport water craft.

#### 4.A.3. Mitigation.

<u>Resource Objective #8</u>. To assist the respective States Fish and Wildlife Departments in management of these licensed lands especially with forest management activities.

Mitigation lands, which offset land losses in construction of the Richard B. Russell Project, are licensed to the States of Georgia and South Carolina for wildlife management. The Corps of Engineers has an oversight management responsibility, pays annual O&M expenses, and is responsible for conducting timber harvesting operations. The silvicultural decisions needed on these lands are a joint decision between the Corps of Engineers and the State.

### 4.A.4. Environmental Sensitive Areas.

<u>Resource Objective #9</u>. To Identify and protect areas of unique vegetative types, endangered species habitat, archaeological and historical resources, and any other outstanding physiographic features.

This objective can be greatly helped through the project interpretive programs with the development and expansion of existing programs. The interpreters should make visitors aware of facility overuses, point out unique features and the need for preservation, expand environmental education programs, and continue flora and fauna identification sessions.

<u>Resource Objective #10</u>. To evaluate and mitigate the shoreline and inland erosion problems through the use of rip-rap, breakwaters, and vegetative methods, and to investigate means of participating in shoreline protection activities with private landowners where erosion conflicts exist.

Erosion at Thurmond is occurring to some degree on more than 200 miles of shoreline with the majority of this being on the South Carolina side. Although there are more than 75,000 acres of land around the lake and an adequate buffer between the shore and private property exists in most places, unique situations occur on some of the General Services Administration disposal tracts.

Other tracts, originally Government land with cottage sites leased for private development, were sold at auction by the Corps in the 1950's or 1960's. These large tracts and individual sites were ideally situated close to the water. However, erosion, which has occurred since disposal, has threatened these now private lands.

The Corps is prohibited by policy and regulation from spending more for erosion protection of private property than the property is worth. The adjacent property owners, however, would rather have some type of erosion prevention measure taken than sell their property back to the Government. Some property owners have offered to cost-share with the Government on erosion prevention but are unable to do so since an individual property owner is not eligible to be a cost-sharing partner.

<u>Resource Objective #11</u>. To protect archaeological and ecological sites. This can be achieved by periodic inspection by lake staff of sites where artifact hunters have excavated certain areas. It can be done by completion of an installation wide archaeologic survey with appropriate documentation of significant sites. As a minimum, lands where soil will be disturbed for future recreation facilities will have an intensive archaeological investigation, wetlands determination, and endangered species survey to identify sensitive areas.

<u>Resource Objective #12</u>. To protect endangered species and enhance their habitat. Management plans will be prepared and targeted toward conservation and recovery of the endangered species population. 4.A.5. Multiple Resource Management.

<u>Resource Objective #13</u>. To provide basic stewardship and further develop fish and wildlife management programs on all publicly-owned lands and waters to insure the continued public enjoyment of both consumptive and nonconsumptive use of the fish and wildlife resources of the project. Special effort would be directed toward:

Continued work and coordination of management programs and activities with the States of Georgia and South Carolina.

Provision of additional opportunities for nonconsumptive enjoyment of wildlife through development of hiking trails, wildlife information programs and public participation activities, and wildlife observation areas.

Improvement of fisheries through protection of existing water quality, provision of additional underwater structures, and use of public information programs emphasizing "catch and release" or "keep only what you need" attitudes, control of lake levels during spawning periods whenever possible, and construction of fish habitats.

Conducting a forest thinning on a maximum of 10 year cycle.

Maintaining an active prescribed burning program.

Ensuring funds generated by timber income are returned to the project.

Resource Objective #14. To continue enhancement and protection of the aesthetic and environmental quality of all the natural resources of the project through;

Increased visitor awareness of problems generated by use impacts through improved public coordination and participation programs, media information programs, and interpretive activities.

Employment of trained professionals in the fields of recreation, biology, forestry, landscape architecture, ecology and related sciences to effectively implement and monitor resource management programs.

4.A.6. Easement.

<u>Resource Objective #15</u>. Periodically inspect flowage easement areas to ensure private development has not encroached on the 346 foot elevation.

4.B. Plan For Development

4.B.1. Environmental Sensitive Areas

Sensitive areas as a resource provide a unique management situation requiring a delicate need for balance and restraint to prevent possible destruction while still permitting certain uses of the sites. Rare flora and fauna may be adversely impacted by large numbers of visitors or vehicle use which might have little or no effect on quartz outcroppings, archaeological sites, or abandoned surface mines. The resource which required the "sensitive area" classification must be carefully considered prior to authorizing any type of activity within these areas.

#### 4.B.2. Intensively Used Recreational Areas

These heavily used sites have evolved over a period of many years as desirable recreation sites. For the most part these are also some of the most suitable sites for development although a few are on steep terrain or in an area of highly erodible soil characteristics. These areas vary from a few acres to several hundred acres in size. They include marinas, special military permits, State and county parks and group use sites such as those operated by the YMCA, churches, and private clubs.

The development plan in Appendix M depicts the recreation areas on the lake. The dark red color reflects land that has current development is expected to be developed over the next five years. The light red color indicates potential development beyond five years.

Areas that are leased to state parks, marinas, quasi-public entities, or military organizations are shown as developed even though a lesser portion of the area may have facilities on it. However, these lands are leased as recreation areas to be various organizations ranging in time from a year (quasi-public) to fifty years (state parks).

#### 4.B.3. Implementation Plan

Appendix A contains maps and descriptions of the various recreation areas at J. Strom Thurmond Reservoir with recommendations for consolidation and/or renovation. A 5-year time frame for implementation of these proposals is suggested. This 5-year schedule is flexible and is reviewed and revised on an annual basis. Implementation will depend heavily upon available funds and manpower constraints.

The only way the Corps of Engineers has to provide additional facilities in it's recreation area is through use of SRUF funds. These Special Recreation User Funds are monies returned to the project from user fees obtained from the general public through camping receipts. The way in which these funds can be spent is very restrictive, but does allow the Corps to increase the numbers of campsites having water and electrical hookups as well as to construct additional campsites in already existing campgrounds. No new campgrounds can be constructed, however.

#### 4.C. Updating And Supplementing The Master Plan

This supplement was prepared under the guidance of ER 1130-2-435, Preparation of Project Master Plans, dated 30 December 1987. Regularly scheduled supplements will keep the J. Strom Thurmond Reservoir Master Plan accurate and current, as well as reduce the amount of time and money necessary to prepare a supplement.

#### 4.D. Public Involvement

Public involvement for a Master Plan Supplement such as this, according to guidance given in ER 1130-2-435, can be limited to public notices posted in local newspapers and mailings to interested groups and individuals. This Master Plan is primarily an update of the Recreational Site Plates to reflect field changes in the areas caused by improvements and additions made by the State, counties, private businesses and the Corps of Engineers. No formal public meetings or workshops were held. However, the Savannah District mailed an extract of the Master Plan which summarizes the goals of the plan along with the land use plan to a wide range of public and private agencies which are known or have potential interest in the management of Thurmond Lake. The mailing list consisted of State and Federal legislative representatives and senators in districts surrounding the lake, chambers of commerce, planning commissions, State agencies in both Georgia and South Carolina, and conservation groups in the area.

From the responses received, several changes were made in the plan, but it was felt by the Master Plan team that the issues raised could be resolved without a series of public meetings or workshops. A copy of the letter sent to each of the groups mentioned in the preceding paragraph, the mailing list, and the responses received are contained in Appendix L.

#### 5. CONCLUSIONS AND RECOMMENDATIONS

#### 5.A. Conclusions

Public recreation at J. Strom Thurmond Reservoir continues to increase. In our search to meet the increasing demand, we must not lose sight of our basic goals in the Natural Resource Management Program:

(1) enhancement of the opportunities for quality recreation experiences,

(2) wise management and stewardship of the projects natural resources, and

(3) operation and management of Corps facilities in an effective and cost efficient manner.

5.B. Recommendations

The following items are recommended for J. Strom Thurmond Reservoir if it is to continue being a quality project visited by millions yearly for recreational opportunities, aesthetic beauty, and personal gratifications.

(1) Although future visitation projections and current use patterns indicate that demands for use of lake resources will continue to grow until the optimum carrying capacity of the project (16,000,000) is exceeded, current and projected budget limitations offer little hope of responding to these demands with adequate number of facilities.

Limitations on additional recreation development established by Public Law 89-72 (which requires a non-Federal cost-sharing partner for new development) place further constraints on the Corps capabilities to satisfy projected public needs.

Experience at Thurmond Lake and other Corps reservoir projects has shown that few State, county, or local governmental organizations have the fiscal resources to cost-share in new recreation development or are capable of providing the required level of maintenance. Therefore, a concerted effort should be directed toward utilizing the following avenues for maintenance, renovation and consolidation of existing facilities to provide a consistently high quality recreation experience to the visiting public:

(2) Work closely with civic organizations, clubs, local governments and the media to keep the visiting public aware of limitations imposed by laws and regulations, budget restraints, and other organizational/management problems which effect the availability and quality of public facilities.

(3) Investigate and pursue the use of volunteers and other ideas for construction/renovation, maintenance/clean-up, and other forms of public assistance. Involve the public as much as possible in recreation development and management programs.

(4) Continue to develop, plan and organize an ongoing closure/consolidation/renovation program through semiannual team meetings with resource management and planning

personnel. Follow existing regulations and guidance closely, document all planning and design activities, and reflect proposed closure and/or consolidation efforts on the annual and five-year work plans developed by the resource management staff.

(5) Continue to pursue the renovation and/or construction of new facilities with (SRUF) revenues in accordance with current regulations and guidance.

(6) Efforts to complete a cultural resource inventory of the project should continue. In 1993, about 25,000 acres were surveyed for purposes of forest management. Mapping results of this effort and previous studies should be added to the Master Plan maps. Studies made in the past have been incomplete or were specifically intended for a small area. The project can be better managed and facilities planned if clearer knowledge of the cultural resource sites exists. More detailed investigations are done when recreation areas are expanded.

(7) An updated forest inventory is needed to assist the project personnel in effective forest management practices.

(8) Aerial photographs in both color and infrared should be taken of the entire project every 5 years. Such photos will assist project and District Office personnel in their work, particularly that involving forest inventory and development.

(9) Employment of professionals will continue to be stressed. Training for professionals already employed by the Corps is available and all employees are encouraged to enroll and participate in professional societies within their field of expertise.

APPENDIX A

RECREATION SITE MAPS

#### 6. APPENDICES

#### 6.A. APPENDIX A--RECREATION SITE MAPS

These site maps and descriptions of the individual recreation areas provide both general and specific information of each area, including design intent and future development where feasible.

The information presented on these base plates is representative of actual facility development that was present on the site as of April 1993. The location of any new facilities will comply to the conceptual plan as depicted in red. As new development or modifications are completed, changes will be noted by the project staff and revised on the base plates.



## US ARMY CORPS OF ENGINEERS Savannah District

# RESERVOIR RECREATION AREAS J. STROM THURMOND PROJECT SAVANNAH RIVER GEORGIA AND SOUTH CAROLINA

CORPS OF ENGINEERS RECREATION AREAS				SOUTH	CAMPING UNITS	C UNITS	PICNIC SHEL TERS	BEACHES	COURTESY DOCKS	STATIONS FISHING PIERS	BOAT/TRAILER PARKING	CAR PARKING ENTRANCE	BALL FIELDS	COURTS	PLAYGROUNDS COMFORT STA	SHOWER WASHHOUSES PIT / VAULT TOILETS	STATION	S all			
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RESERVOR REDREATION AREAS INIDEX SAVANNAH RIVER 2. STRON THARNONS RESERVOR GEORGIA AND SOUTH CAROLINA MASTER PLAN LLS: ARMY ENGINEER DISTRICT, SAVANNAH COMPS OF ENGINEERS, SAVANNAH, GEORGIA

A-3

### 6.A.1. Corps Recreation Areas

Below Dam, South Carolina (Plate 1), (Site 1)

I. General Description

A. This area consists of 21 acres on the east bank of the Savannah River, immediately below J. Strom Thurmond Dam.

B. The site offers an excellent view of J. Strom Thurmond Dam and Powerhouse.

II. Site Analysis

A. A high voltage electrical powerline cuts across the site.

B. Future development will have to consider the effects of maximum discharge from J. Strom Thurmond Dam.

III. Existing Facilities

A. The site is presently developed for bank fishing, boat launching, and day use.

B. The site contains a day use area with 11 picnic units and parking for 9 cars.

C. Existing boat launch area has parking for 11 car/trailer units.

D. A concrete and wood fishing pier extends several hundred feet below J. Strom Thurmond Dam on the South Carolina side and offers excellent fishing opportunities in the tailrace area.

E. The area receives moderate visitation except during the spring months when visitation is heavy.

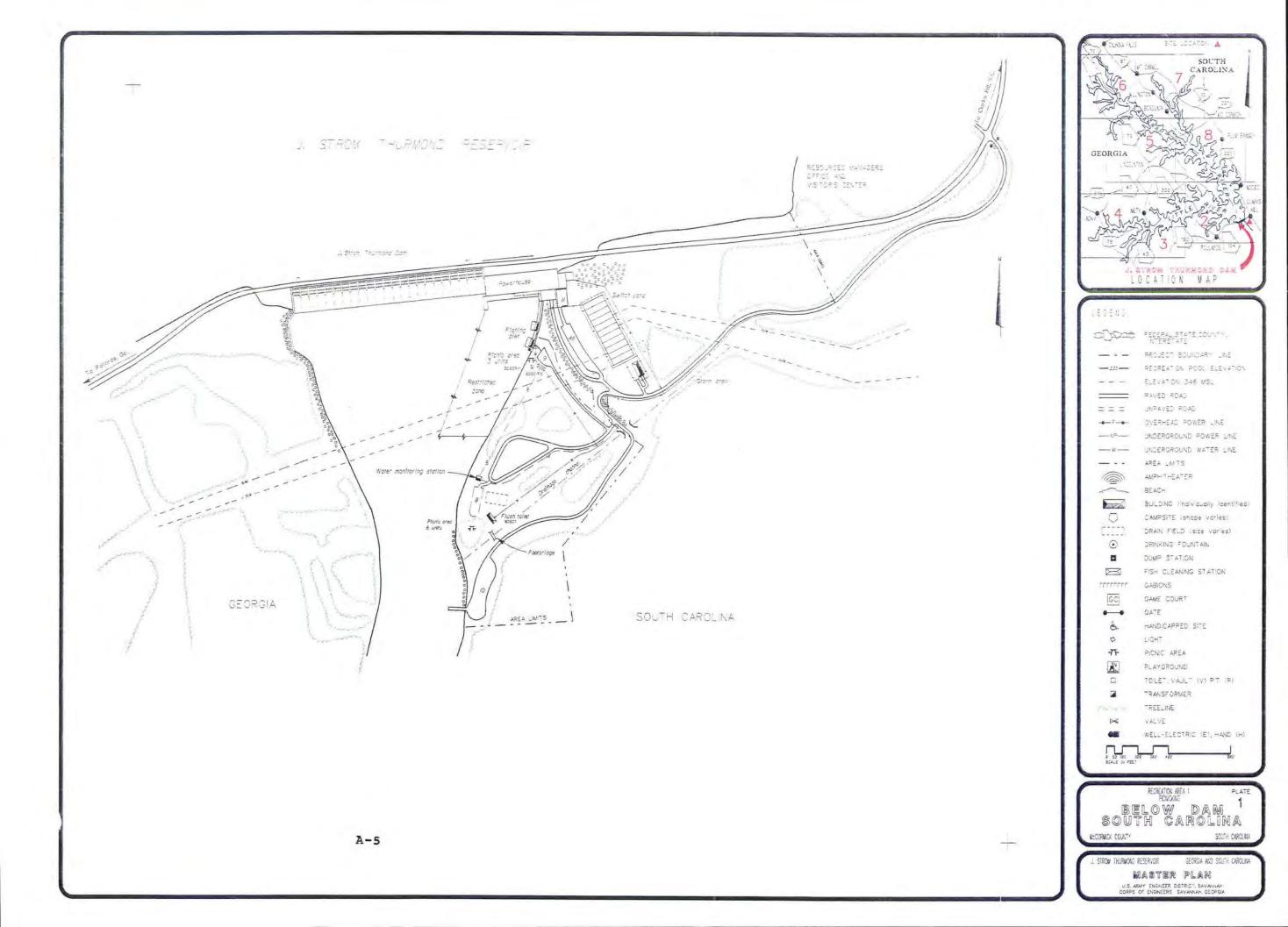
F. The area includes a comfort station, 1 vault toilet, and a fish cleaning station.

IV. Design Intent

The area will continue to provide limited day use facilities, fishing access, and a vantage point from which to observe the discharge from J. Strom Thurmond Dam.

V. Proposed Facilities

No further development is proposed for this area at this time.



Resource Manager's Office/Visitor's Center/Project Operation Area/East Dam Overlook (Plate 2), (Site 2)

I. General Description

A. The Resource Manager's Office/Visitor's Center is located on the eastern edge of J. Strom Thurmond Reservoir and provides an overlook of the dam.

II. Site Analysis

A. Severe shoreline erosion is evident along much of the developed area.

B. Lack of available public lands prohibits expanding this area.

III. Existing Facilities

A. The Resource Manager's Office/Visitor's Center dominates the site (building totals 12,000 sq ft) with parking for 66 vehicles.

B. An east overlook with parking for 20 vehicles and one vault toilet are located on the site.

C. Project Operations Area/Office Area consists of an assembly building; storage for materials, equipment and repair; parking for 51 vehicles; boat ramp; flush toilet; carpenter and woodworking facility; locker facility; boating storage; secure parking; fuel oil storage and fertilizer storage.

IV. Design Intent

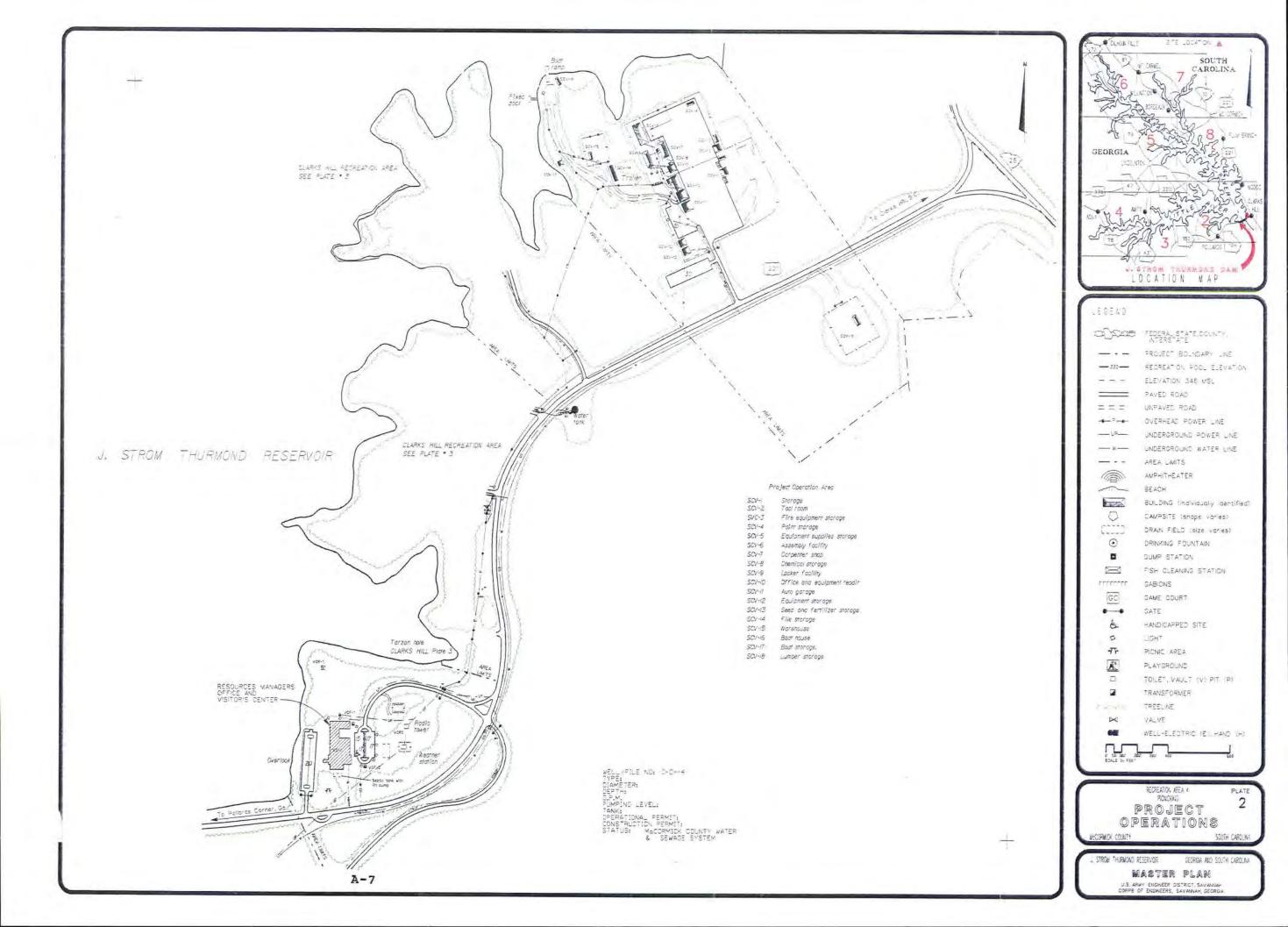
Improve access for bank fishermen.

V. Proposed Facilities

A. A fishing pier and courtesy dock will be constructed in the future below the Resource Manager's Office Visitor's Center.

B. A jetty will be constructed in hopes of curtailing extensive shoreline erosion in the area.

C. Other appropriate shoreline protective measures will be implemented as necessary.



Clarks Hill - SC (Plate 3), (Site 4)

I. General Description

A. Clarks Hill Recreation Area, SC, consists of 41 acres.

B. The site is located on U.S. Highway 221 approximately 1 mile north of J. Strom Thurmond Dam.

C. This site offers a panoramic view of J. Strom Thurmond Reservoir and Dam.

II. Site Analysis

A. This site suffers from severe erosion and excessive slopes.

B. Future development will have to employ sound conservation practices to withstand extensive public use.

III. Existing Facilities

A. The site presently offers day use and boat launching facilities.

B. The site is one of the larger day use areas operated by the Corps of Engineers on the South Carolina side of J. Strom Thurmond Reservoir. It contains 20 picnic units and has 5 parking lots which will accommodate 44 vehicles.

C. A picnic shelter, comfort station, 3 vault toilets, 2 beaches, courtesy dock, fish cleaning station, 35 boat and trailer parking spaces, 44 vehicle parking spaces, and 1 boat launching area are available for public use.

IV. Design Intent

Future use will concentrate on providing day use activities, improved boat launch access, picnic shelters and beaches.

V. Proposed Facilities

A. Several existing picnic units will be relocated and all remaining units rehabilitated.

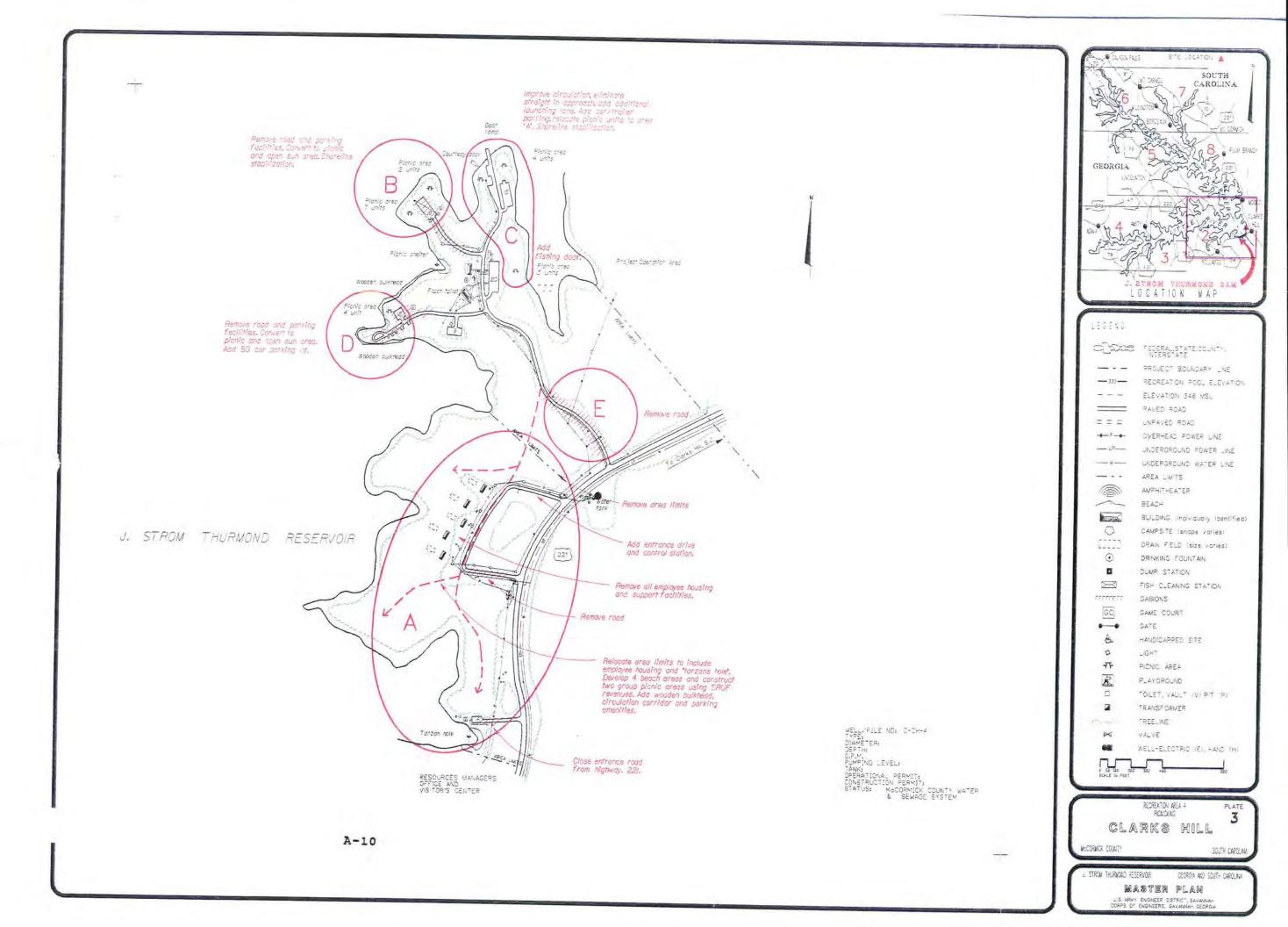
B. Shoreline protective measures will be extensive. Gabions, a seawall, and a jetty will be utilized to correct or curtail existing and future shoreline erosion.

C. The existing picnic shelter and rest station will be extensively rehabilitated. Additional group shelters and comfort stations will be provided.

D. The existing potable water system will be extended.

E. Additional parking, fishing dock, boat ramp, and beaches will be developed, the launching area will be enlarged, and the maneuvering area improved.

F. Renovations and improvements to this site are expected to cost approximately \$450,000.



Scotts Ferry (Plate 4), (Site 5)

I. General Description

A. Scotts Ferry is located on U.S. Highway 221 and SC Highway 28 approximately 3 miles south of Modoe, SC.

B. The site contains approximately 260 acres.

II. Site Analysis

The site suffers from steep, erodible slopes and extensive shoreline erosion making future development difficult. Numerous natural beaches are heavily used by boaters.

III. Existing Facilities

The site contains a small parking area for 16 vehicles, a boat ramp, and 1 pit toilet.

IV. Design Intent

Due to the severe physical limitations of the site, this area will be used only as a lake access point.



Modoc Camp (Plate 5), (Site 6)

I. General Description

This 119-acre area is located on U.S. Highway 221 and SC Highway 28 approximately onehalf mile south of Modoc, SC.

II. Site Analysis

A. The site suffers from excessive shoreline erosion and slopes are too steep for development in some areas. It is heavily wooded with a mix of pines and hardwoods.

B. Future development will be limited.

III. Existing Facilities

A. The site is presently developed for camping and boat launching.

B. Forty-nine individual campsites and one group campsite are located on three peninsulas within the area. Thirty-three of these have been equipped with electric and water hookups.

C. Entrance station contains three shower washhouses, 7 vault toilets, 1 picnic shelter, 1 boat ramp with 16 boat and trailer parking spaces, and 27 vehicle parking spaces.

D. A park caretaker is on duty year round.

E. Two and one-half miles of hiking trail, four playgrounds, and one beach are available in the area for the public.

F. A public pay phone has been installed for the convenience of the campers.

IV. Design Intent

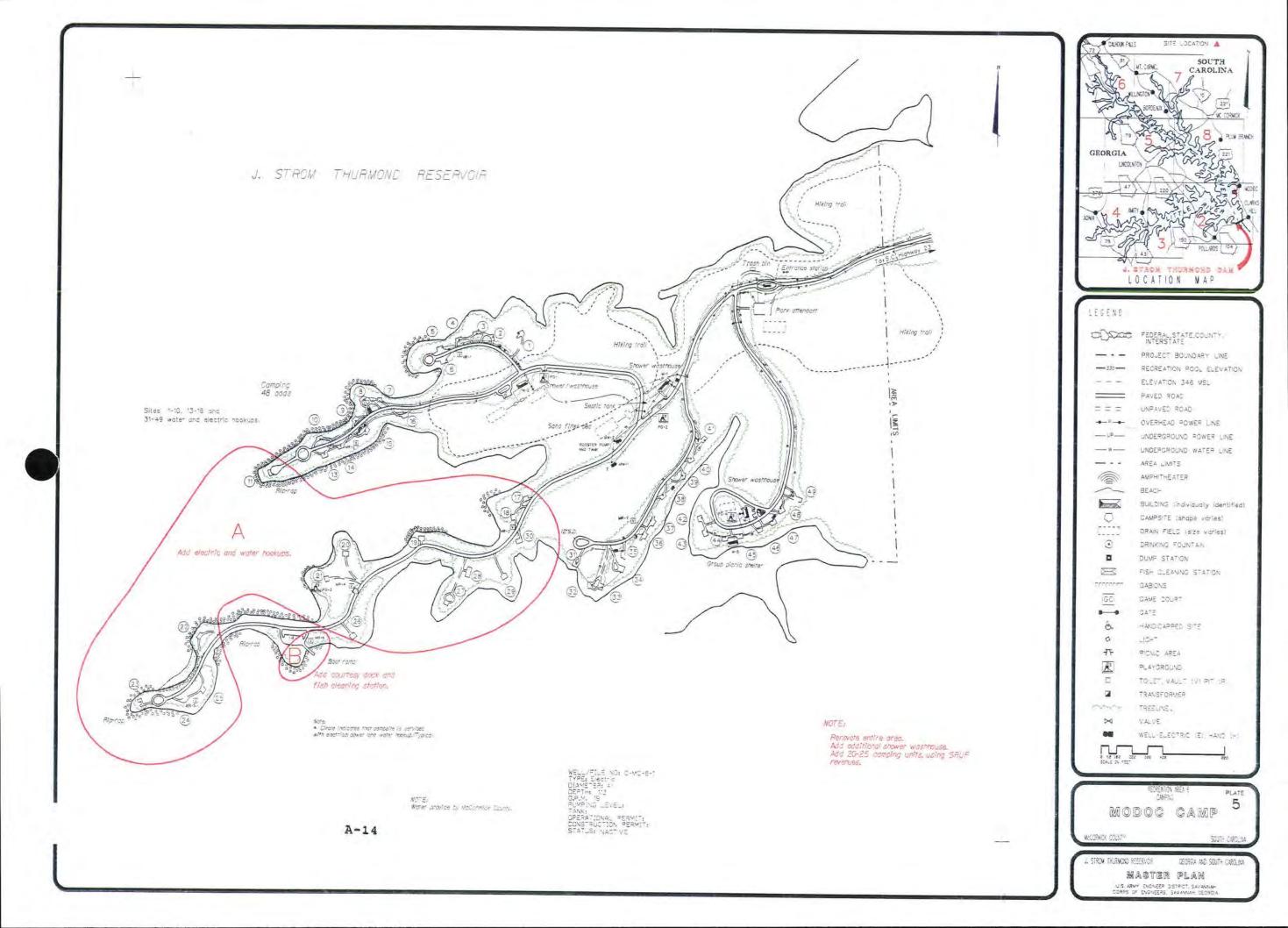
A. This area will continue to be used as a major camping facility.

V. Proposed Facilities

A. The entire area will be renovated and additional shower washhouses added. Approximately 20-25 campsites, fish cleaning station, and courtesy dock will be added using SRUF revenues. Add W/E to sites 11 and 17-30.

B. Additional shoreline protective measures will be implemented as necessary.

C. Renovations are expected to cost approximately \$350,000.



Modoc Ramp (Plate 6), (Site 7)

I. General Description

A. This site is located off U.S. Highway 221 via a paved county secondary road originating in Modoc, SC.

B. The Modoc ramp area encompasses 96 acres.

II. Site Analysis

The area suffers from moderate shoreline erosion and is predominately covered with mixed pine and hardwood forest.

III. Existing Facilities

The site consists of boat ramp with 10 car/trailer parking spaces and a courtesy dock.

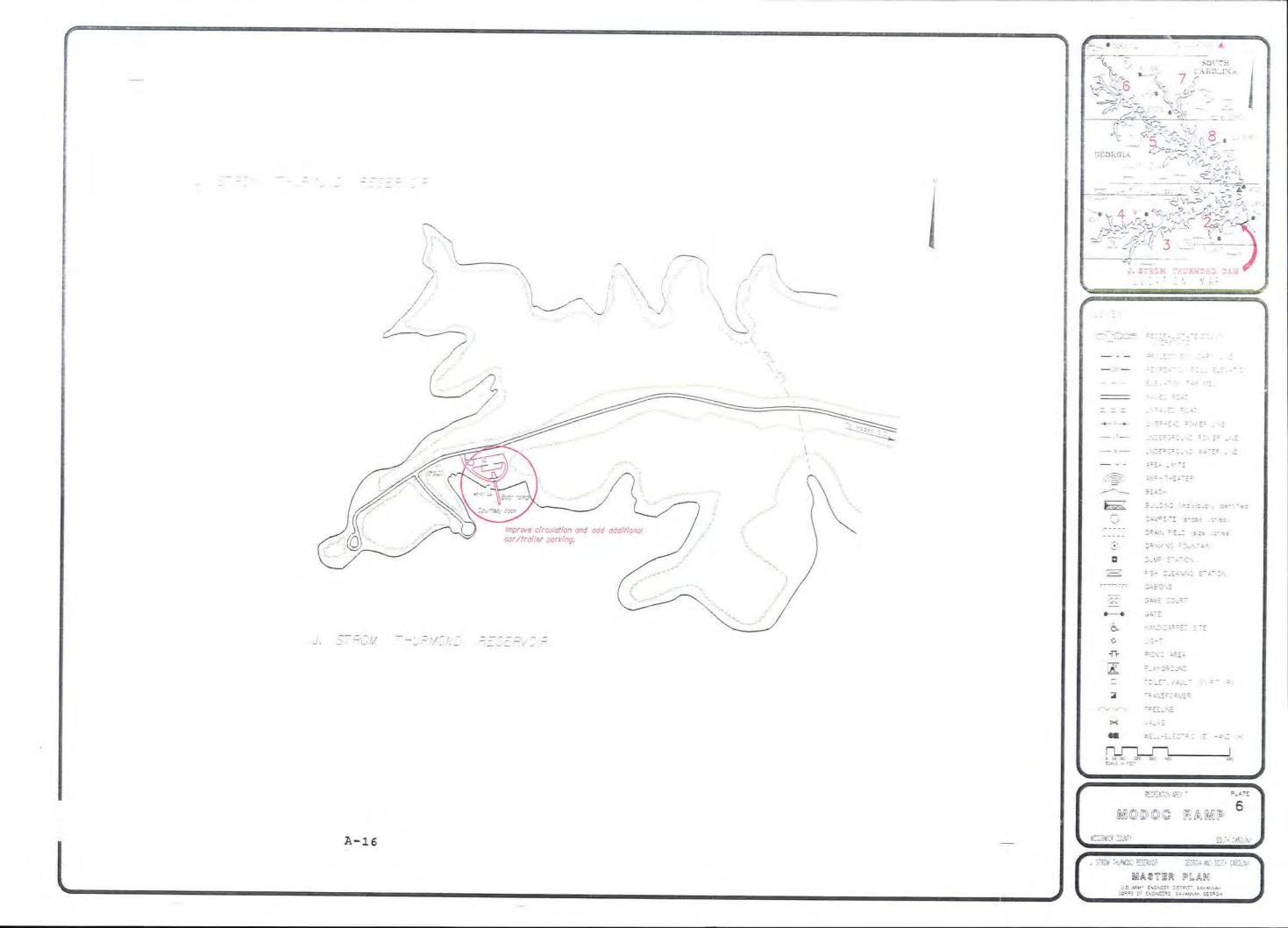
IV. Design Intent

Boating access will continue to be the primary public use of this area.

V. Proposed Facilities

A. Shoreline protective measures will be implemented as necessary.

B. The existing unpaved parking area should be enlarged and paved to expand car/trailer parking and improve traffic circulation. Improvements are estimated to cost approximately \$125,000.



Parksville Wayside (Plate 7), (Site 9)

I. General Description

A. This popular recreation area encompasses of 51 acres.

B. The site is located immediately adjacent to SC Highway 28/US 221 within the town limits of Parksville, SC.

II. Site Analysis

Shoreline erosion is minimal. Slopes are light to moderate throughout the area with excellent potential for shoreline development. Vegetation is mixed pine and hardwood with many large, mature pines interspersed.

III, Existing Facilities

A. The site is presently extensively developed for day use activities.

B. Existing facilities consist of 27 picnic units, 1 ballfield, 1 playground, 2 game courts, a courtesy dock, 2 comfort stations, 3 beaches, 2 picnic shelters, 2 vault toilets, parking for 151 vehicles, a fish cleaning station and double lane boat ramp.

C. The double boat launching ramp area has parking for 27 cars/trailers, a courtesy dock, and a fish cleaning station.

D. A small bank fishing area with seating has been provided adjacent to the causeway entering the park.

E. The area is heavily used.

F. An entrance station is provided on the western end of the site to help control use, enhance visitor safety, and facilitate the collection of day-use user fees.

IV. Design Intent

A. The area will continue to be utilized for picnicking and boat launching. Parksville is considered to be developed to its maximum potential with the exception of possible parking area expansion.

V. Proposed Facilities

A. Shoreline protective measures will be implemented as necessary.

B. The existing water distribution system will be extended. A community water distribution system serves part of this area while the Corps' water system serves the remainder of the area.



Dordon Creek (Plate 8), (Site 11)

I. General Description

A. Dordon Creek is located on 44 acres.

B. This site is approximately 4 miles west of U.S. Highway 221 and SC Highway 28 via paved county secondary road 2 miles south of Plum Branch, SC.

II. Site Analysis

A. Numerous rock outcroppings are in the area.

B. Shoreline erosion is minimal and gentle slopes enhance the area's future development potential. Vegetation is mixed pine and hardwood.

III. Existing Facilities

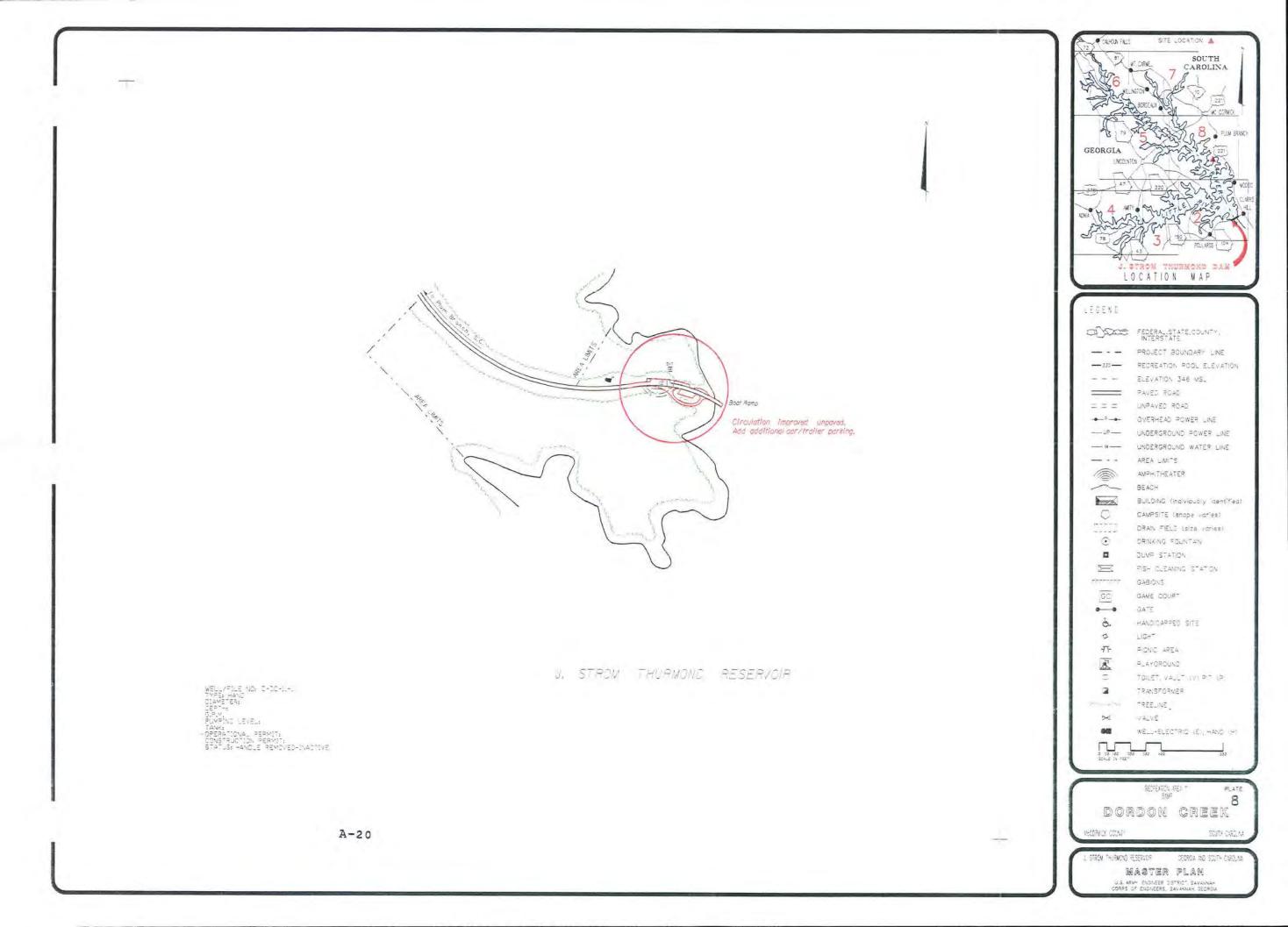
A. This site contains a boat launching area with single lane ramp and with 12 car/trailer spaces. One pit toilet is located adjacent to the ramp parking area.

B. The area receives moderate use during the spring and is very popular with local fishermen as an access point.

IV. Design Intent

V. Proposed Facilities

A. The straight in approach to the ramp has been eliminated and additional car/trailer spaces provided. The area remains unpaved and will be paved as funding permits.



Hawe Creek (Plate 9), (Site 16)

I. General Description

A. Hawe Creek encompasses 86 acres.

B. The site is located on the east bank of J. Strom Thurmond Reservoir approximately 8 miles west of McCormick, SC.

II. Site Analysis

A. Shoreline erosion is significant along some of the developed portions of the site.

B. The area is covered by mature pine and harbors several colonies of the red-cockaded woodpecker, an endangered species.

C. Future development may be somewhat restrictive due to the presence of an endangered species.

III. Existing Facilities

A. Hawe Creek has 28 waterfront campsites and a boat launching ramp with 6 boat and trailer spaces, and 9 car parking spaces. Eleven of the camp sites have water and electric hookups.

B. Two shower washhouses, 4 vault toilets and one sanitary dump station are located within the campground area.

C. Park caretaker is on duty year round.

IV. Design Intent

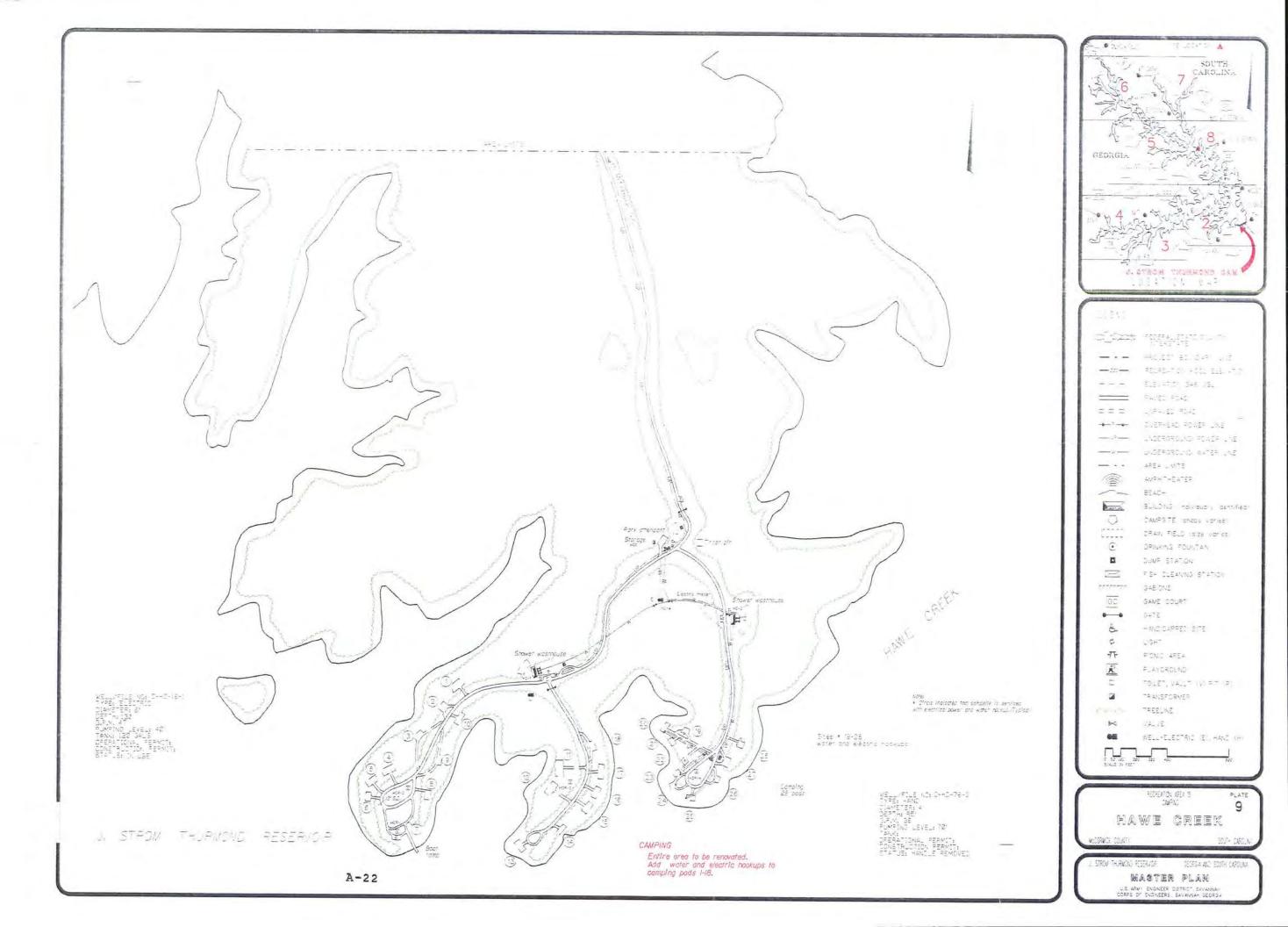
A. The area will continue to be used as a campground; no expansion of facilities is planned.

B. Utilities placement or other facilities renovation will be planned and coordinated so as not to interfere with the red-cockaded woodpecker.

V. Proposed Facilities

A. The existing campsites will be rehabilitated eventually as funding is available Utilities (water and electrical) will be provided for sites 1 through 18 as funding is available.

B. Shoreline protection measures will be implemented where needed.



Leroys Ferry (Plate 10), (Site 22)

I. General Description

A. Leroys Ferry encompasses 186 acres.

B. This area is located approximately 27 miles up the Savannah River from the Dam on the east side of J. Strom Thurmond Reservoir.

C. Access to this area is provided by State secondary roads which intersect with SC Highway 81 at the community of Willington.

II. Site Analysis

A. Significant shoreline erosion is evident on portions of the developed site.

B. There are limitations to development on portions of the undeveloped site due to excessively steep slopes and erosion damage.

III. Existing Facilities

A. This site consists of 10 waterfront camp sites, and a launching ramp. A well with hand pump and three vault toilets are also available.

B. The main access road is paved.

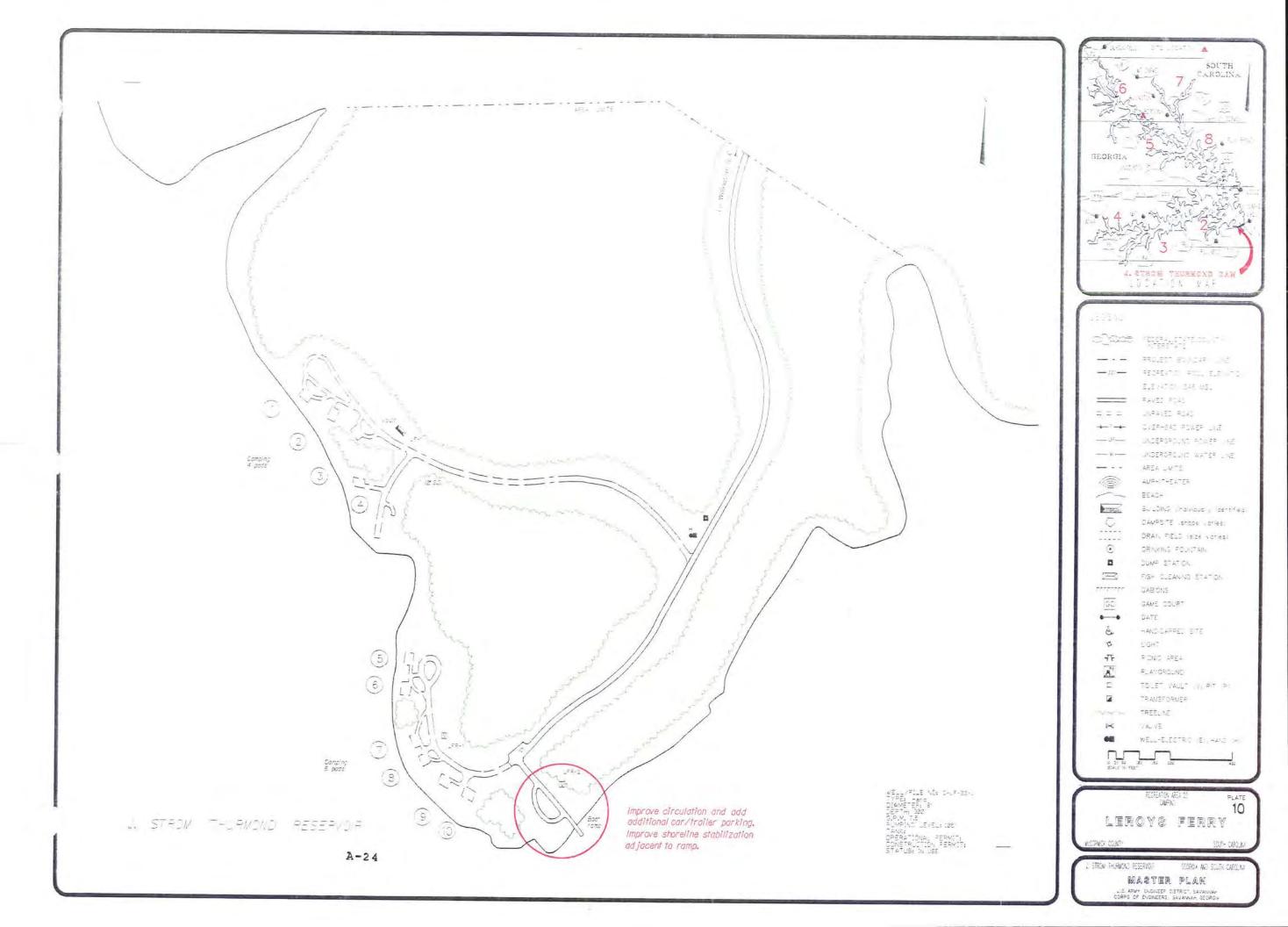
IV. Design Intent

A. Future use of the area will be for boating access and primitive camping.

B. The area will continue to operate as a primitive camping area. Camping fees are collected on an honor/vault system.

V. Proposed Facilities

A. No additional facilities or improvements are proposed for this area.



Mt. Carmel (Plate 11), (Site 32)

I. General Description

A. This site contains 175 acres.

B. Mt. Carmel is located on the east side of J. Strom Thurmond Reservoir at the end of a paved secondary road originating from Mt. Carmel, South Carolina.

C. This area is approximately 4 miles south of Russell Dam and immediately adjacent to the confluence of the Savannah River, Broad River, and Pistol Creek.

II. Site Analysis

A. The area is very popular with fishermen and hunters.

B. Several minor archaeological sites have been noted in the area.

C. Shoreline erosion is evident and severe on about half of the developed sites.

D. Poor soils are evident on portions of the developed area resulting in the residual pine stands being susceptible to attacks by Southern Pine Beetle.

E. Excessive slopes on portions of the developable area will require implementation of sound conservation practices to prevent excessive erosion.

III. Existing Facilities

A. Mt. Carmel presently has 43 campsites and 2 boat launching ramps with 40 car/trailer parking spaces. Water and electrical hookups are provided at 21 campsites. A courtesy dock is also located at one boat ramp.

B. One comfort station, 3 shower washhouses, eight vault toilets and a picnic shelter are located within the area.

C. One dump station is available for use.

IV. Design Intent

A. The area will continue to be used for camping and boating access.

V. Proposed Facilities

A. Shoreline stabilization measures will be implemented as funds are available.

B. Long range plans are to fully renovate Mt. Carmel, increasing the number of campsites

by approximately 30 and adding an entrance station, two fish cleaning stations, and a courtesy dock. Estimated cost for the renovation is expected to be around \$500,000.00. As funding becomes available, the addition of an entrance station will be a priority. Extensive shoreline stabilization work is also needed for severely eroded shoreline areas.

Calhoun Falls Park (Plate 12), (Site 35)

I. General Description

A. This easily accessible site encompasses 60 acres.

B. The Calhoun Falls recreational area is the northernmost recreational area within the J. Strom Thurmond Reservoir located 5 miles from the city of Calhoun Falls, SC. The site is adjacent to the Richard B. Russell overlook.

II. Site Analysis

A. The developed 10 acres of the site exhibit severe slopes of 20 percent or greater. The remainder of the area also has severe slopes and would be very difficult to develop.

B. The existing boat ramp is not useable at certain times of the year due to due to alluvial deposits created by alteration of the Savannah River channel during construction of the Russell Dam immediately upstream.

C. The activities associated with boat launching are clearly the dominant use of the site. A gravel parking area with 10 car/trailer spaces is available. The area has 1 vault toilet.

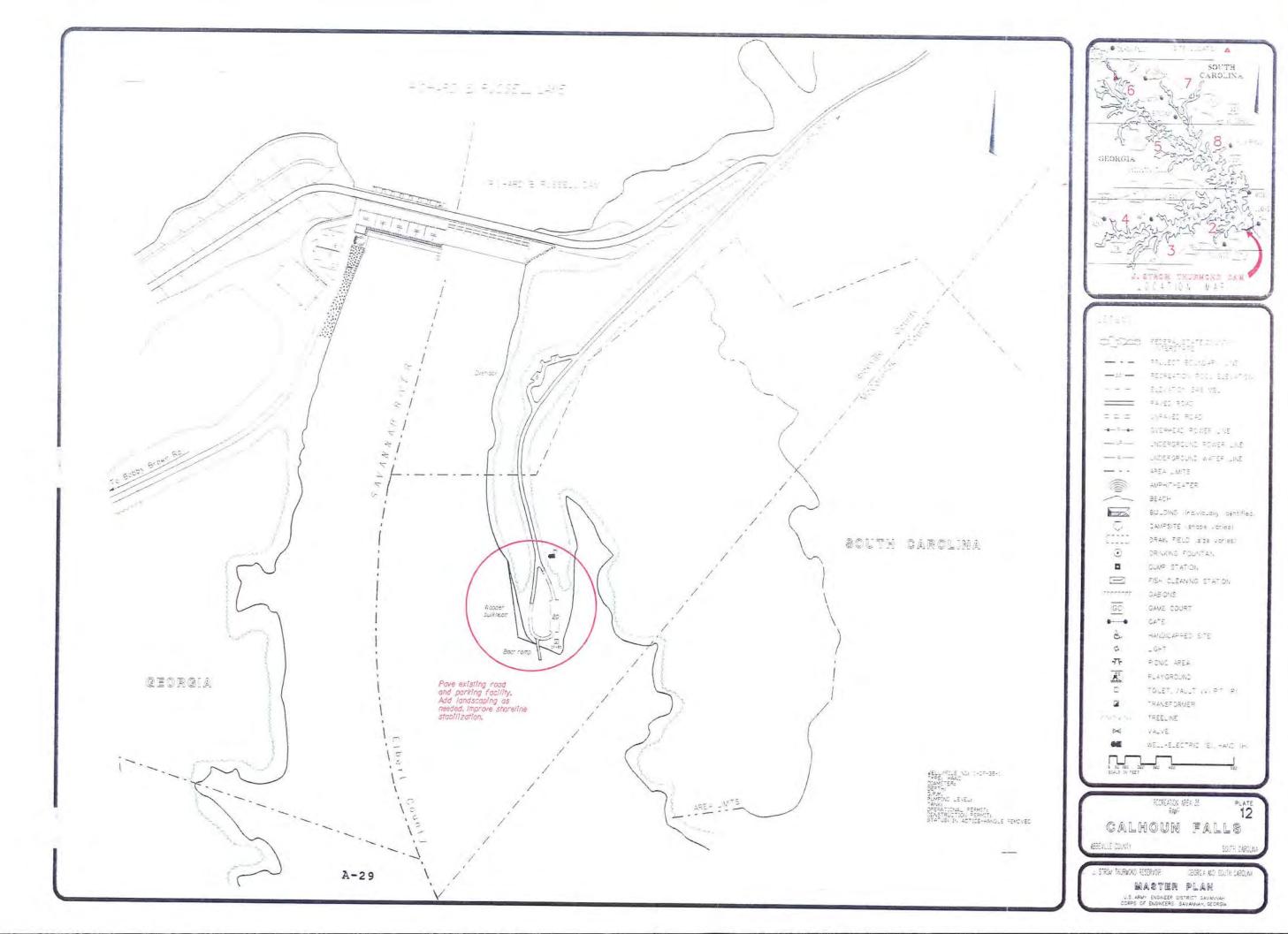
D. The only other activity occurring on this site is bank fishing.

III. Design Intent

A. The area will continue to be used for boating access.

Proposed Facilities

Pave existing parking and roads. Landscape as needed. Bank fishing access has been improved. Shoreline stabilization measures have been implemented adjacent to the launching ramp and bank fishing area.



Morrahs (Plate 13), (Site 36)

I. General Description

A. This area encompasses 35 acres.

B. The area offers a panoramic view of the upper reaches of the Savannah River area of J. Strom Thurmond Reservoir and is approximately 1.5 miles south of Russell Dam.

II. Site Analysis

A. Minimal shoreline erosion is present in the area.

B. Development of the site should be relatively easy due to favorable slopes in the area.

III. Existing Facilities

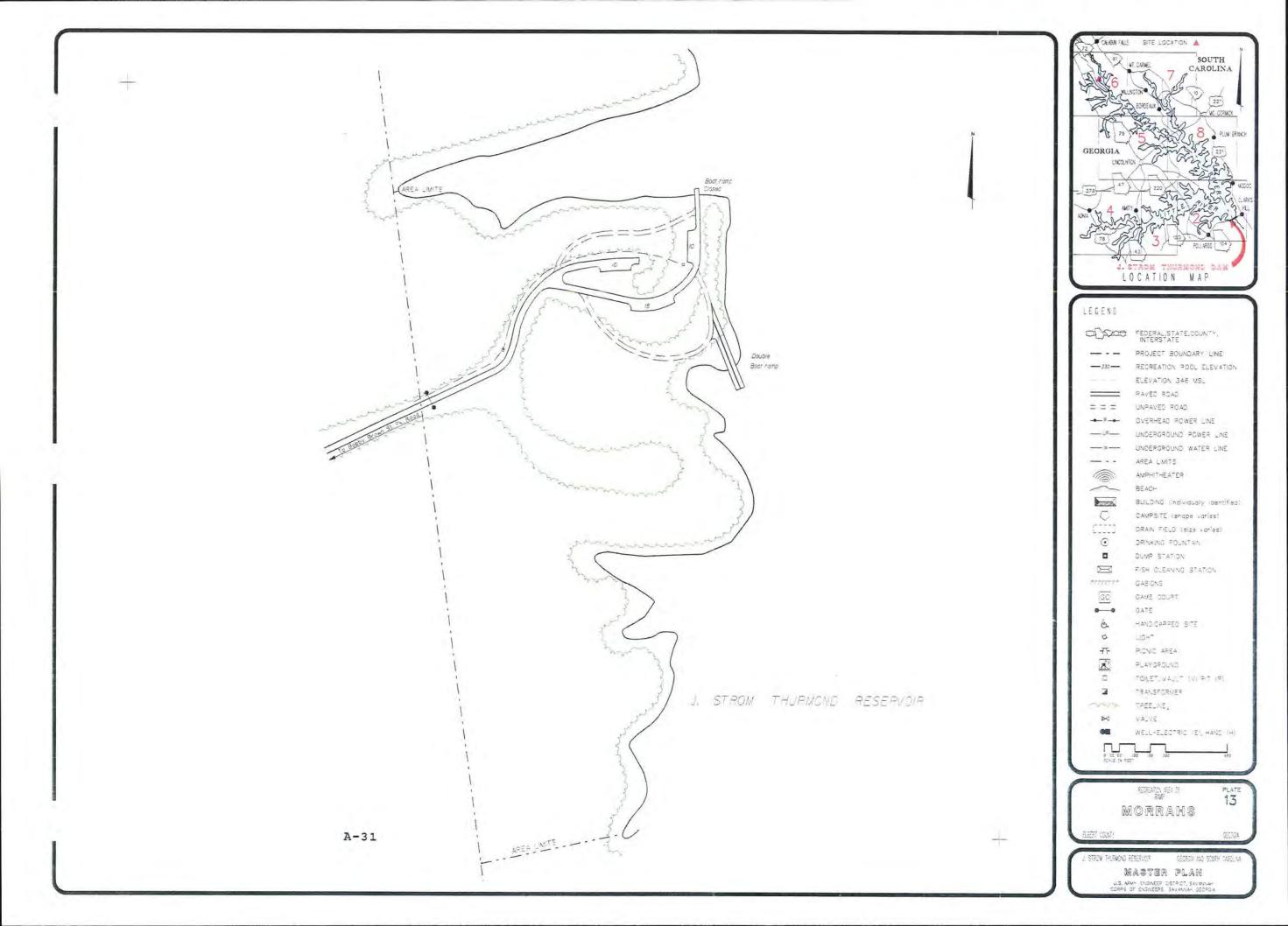
A. A double boat launching ramp is served by a paved two-lane road. There are 10 car/trailer parking spaces.

IV. Design Intent

The area will continue to be operated as a boat access point only.

V. Proposed Facilities

A. No major facilities are planned.



Broad River (Plate 14), (Site 40)

I. General Description

A. Broad River Area encompasses 51 acres.

B. The site is located adjacent to Georgia Highway 79 as it crosses the Broad River. The area is the northernmost camping area operated on J. Strom Thurmond Reservoir by the Corps of Engineers.

II. Site Analysis

A. The area has received extensive rehabilitation.

B. Some shoreline erosion is evident adjacent to the shoreline sites; however, it is not significant and does not limit use of the site.

C. Georgia Highway 79 bisects the area. The eastern portion of the site is slated for development of a public access launching area.

III. Existing Facilities

A. The site is presently developed for camping with boat launching facilities for campers. A shower washhouse and well are also available.

B. Thirty-one camp sites with water and electrical hookups are located in the area with two handicap sites included.

C. The existing boat launch area has a two-lane ramp and parking for 11 cars and 12 car/trailers. A fish cleaning station is also provided within the campground.

D. All roads and parking in the area are paved.

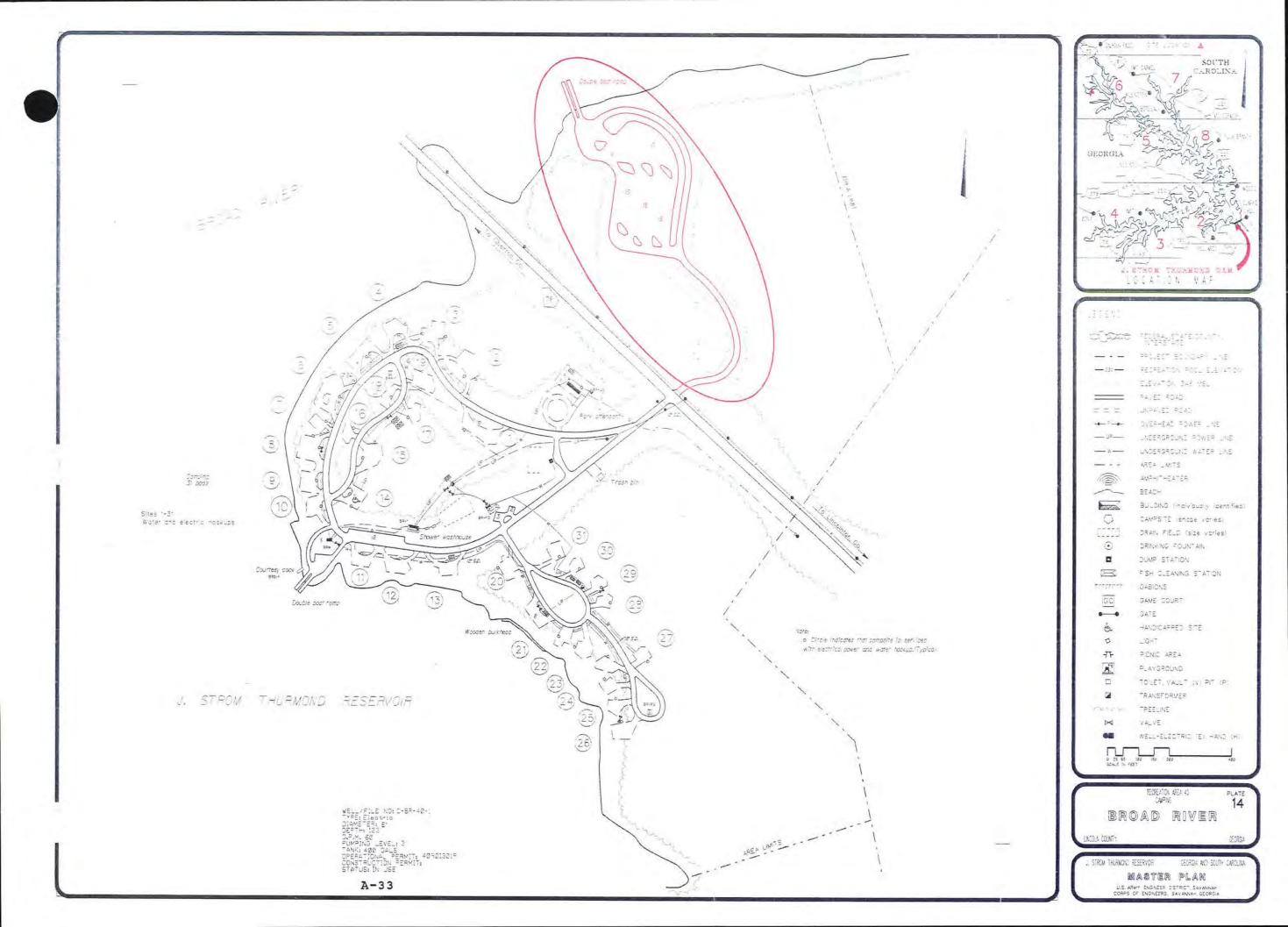
IV. Design Intent

A. The area will continue to be used for camping and boat access.

B. The existing boat ramp is for camper use only.

V. Proposed Facilities

A. A multilane launching ramp with a 40 car/trailer parking area will be constructed on the northeastern portion of the site.



Broad River (Plate 14), (Site 40)

I. General Description

A. Broad River Area encompasses 51 acres.

B. The site is located adjacent to Georgia Highway 79 as it crosses the Broad River. The area is the northernmost camping area operated on J. Strom Thurmond Reservoir by the Corps of Engineers.

II. Site Analysis

A. The area has received extensive rehabilitation.

B. Some shoreline erosion is evident adjacent to the shoreline sites; however, it is not significant and does not limit use of the site.

C. Georgia Highway 79 bisects the area. The eastern portion of the site is slated for development of a public access launching area.

III. Existing Facilities

A. The site is presently developed for camping with boat launching facilities for campers. A shower washhouse and well are also available.

B. Thirty-one camp sites with water and electrical hookups are located in the area with two handicap sites included.

C. The existing boat launch area has a two-lane ramp and parking for 11 cars and 12 car/trailers. A fish cleaning station is also provided within the campground.

D. All roads and parking in the area are paved.

IV. Design Intent

A. The area will continue to be used for camping and boat access.

B. The existing boat ramp is for camper use only.

V. Proposed Facilities

A. A multilane launching ramp with a 40 car/trailer parking area will be constructed on the northeastern portion of the site.

Gill Point (Plate 15), (Site 44)

I. General Description

A. This area encompasses 19 acres.

**B.** The area is accessible via paved county secondary road originating from State road 79 approximately 18 miles north of Lincolnton, GA.

C. The area is immediately adjacent to Pistol Creek Subdivision.

II. Site Analysis

A. The gentle slopes and natural sandy beaches of this area lend themselves to development.

B. Existing adjacent private development visually detracts from visitor recreational enjoyment.

C. The small size of this site prevents any further expansion.

D. A high voltage powerline is visible from the site.

III. Existing Facilities

A. This small but popular area is developed for day use and boat launching.

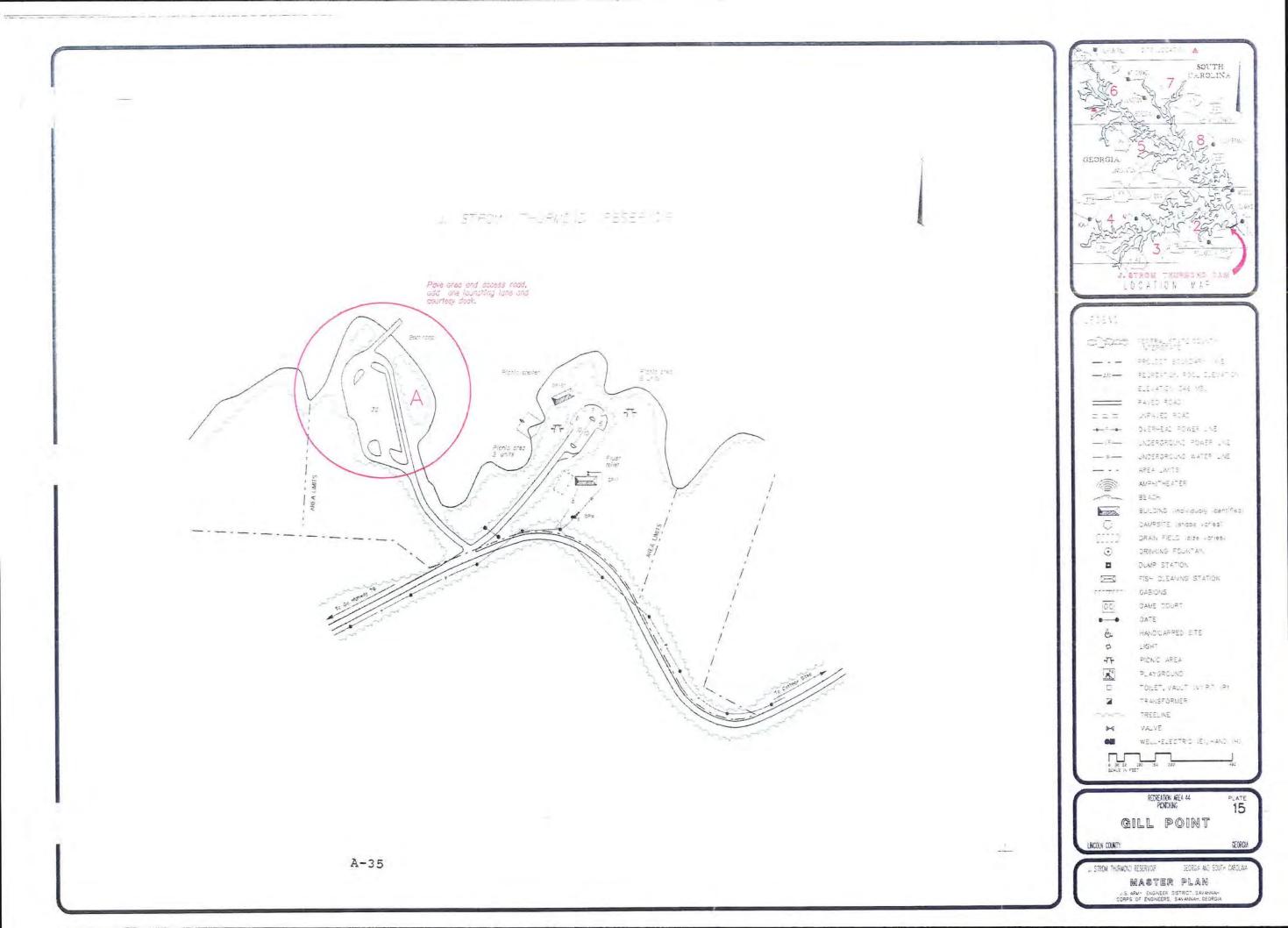
B. The site presently contains 8 picnic units, a comfort station, one shelter, a beach area, and thirty-eight parking spaces. The single lane launching ramp has thirty-two parking spaces.

IV. Design Intent

A. The area will continue to provide for day use and boat access.

V. Proposed Facilities

A courtesy dock will be added to the launching area and one additional lane will be added to the ramp. A playground will be added to the beach area. The launching ramp parking area and roadway will be paved as funding is available.



Hesters Ferry (Plate 16), (Site 48)

I. General Description

A. This area encompasses 213 acres. The area is situated 28 miles up the Savannah River from J. Strom Thurmond Dam.

B. Access is by an unpaved road beginning at the end of Georgia Highway 44.

II. Site Analysis

A. Shoreline erosion and excessive slopes pose a problem in several areas.

B. The area, while extensively forested with pine, has pockets of hardwood.

C. Paving the existing county road serving the area would greatly enhance public use and enjoyment of this area.

III. Existing Facilities

A. The site is presently developed for camping and boat launching.

B. Sixteen campsites which have water and electrical hookups are located on one peninsula and ten sites have been closed and are operated only as an overflow area on the two major summer holidays.

C. A shower washhouse, sanitary dump station and 3 vault toilets are located in the area.

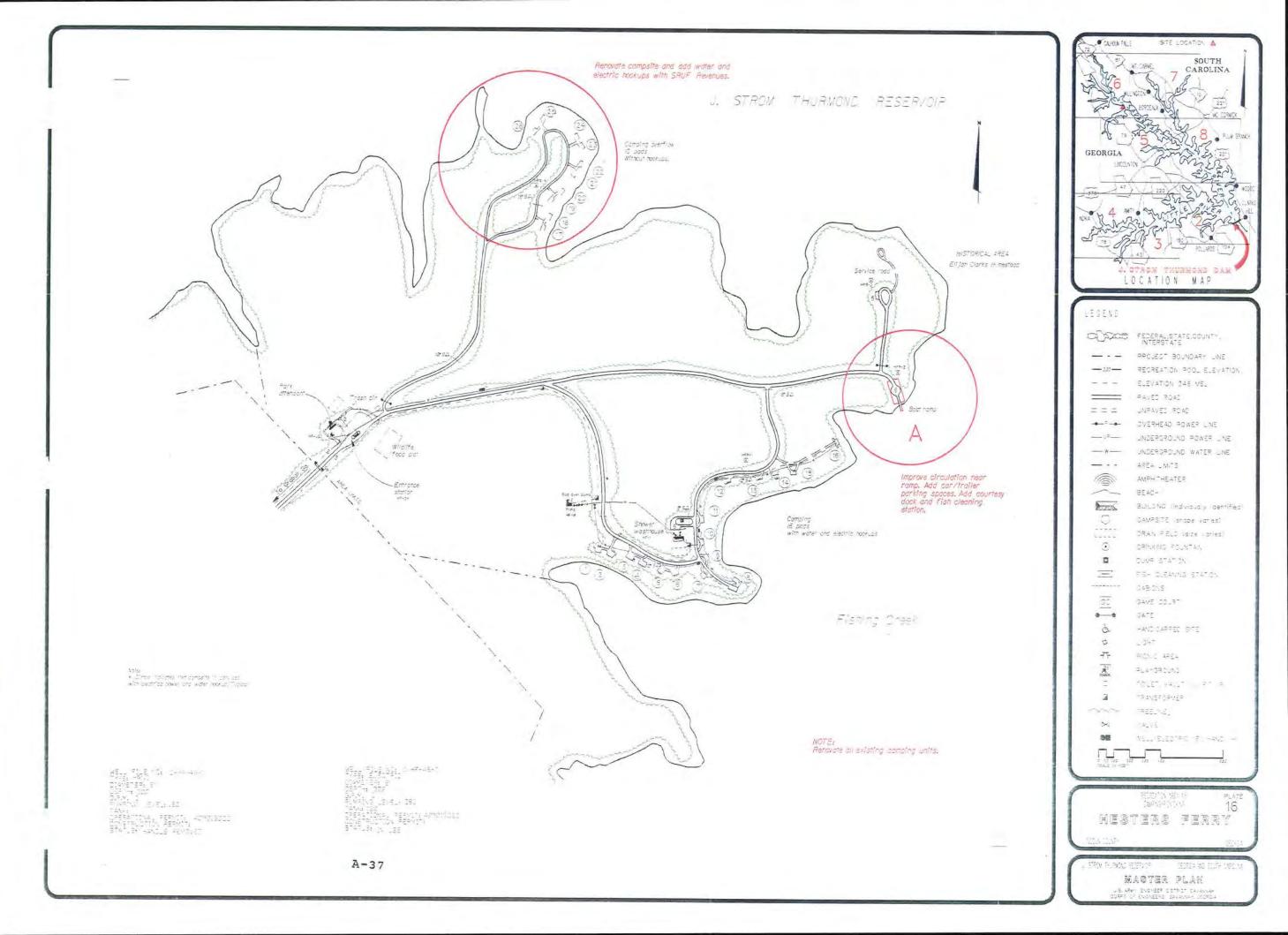
IV. Design Intent

The area may be advertised as a commercial fish camp on a concessionaire basis. The market feasibility study has been completed. The proposed facilities will not be added if the area is leased.

V. Proposed Facilities

A. Circulation near the ramp will be improved and car/trailer parking spaces, a courtesy dock, and a fish cleaning station will be added.

B. Sites 17-26 will be renovated and water and electrical hookups added.



Murry Creek Ramp (Plate 17), (Site 55)

I. General Description

A. This site encompasses 52 acres.

B. The recreation area is immediately adjacent to Ponderosa Subdivision. The area can be reached by heading north on Highway 79 out of Lincolnton, GA, approximately 7 miles.

C. The area contains several unique plants, one of which is being considered for inclusion on the Endangered Species List.

II. Site Analysis

A. Insufficient public lands exist to markedly expand this area.

B. Adjacent private development borders the area limits and has on several occasions conflicted with public use of the area. The main entrance road is under easement to Lincoln County.

C. Steep slopes and severe shoreline erosion will make further development difficult.

**III.** Existing Facilities

A. The site presently offers boat launching and one pit toilet.

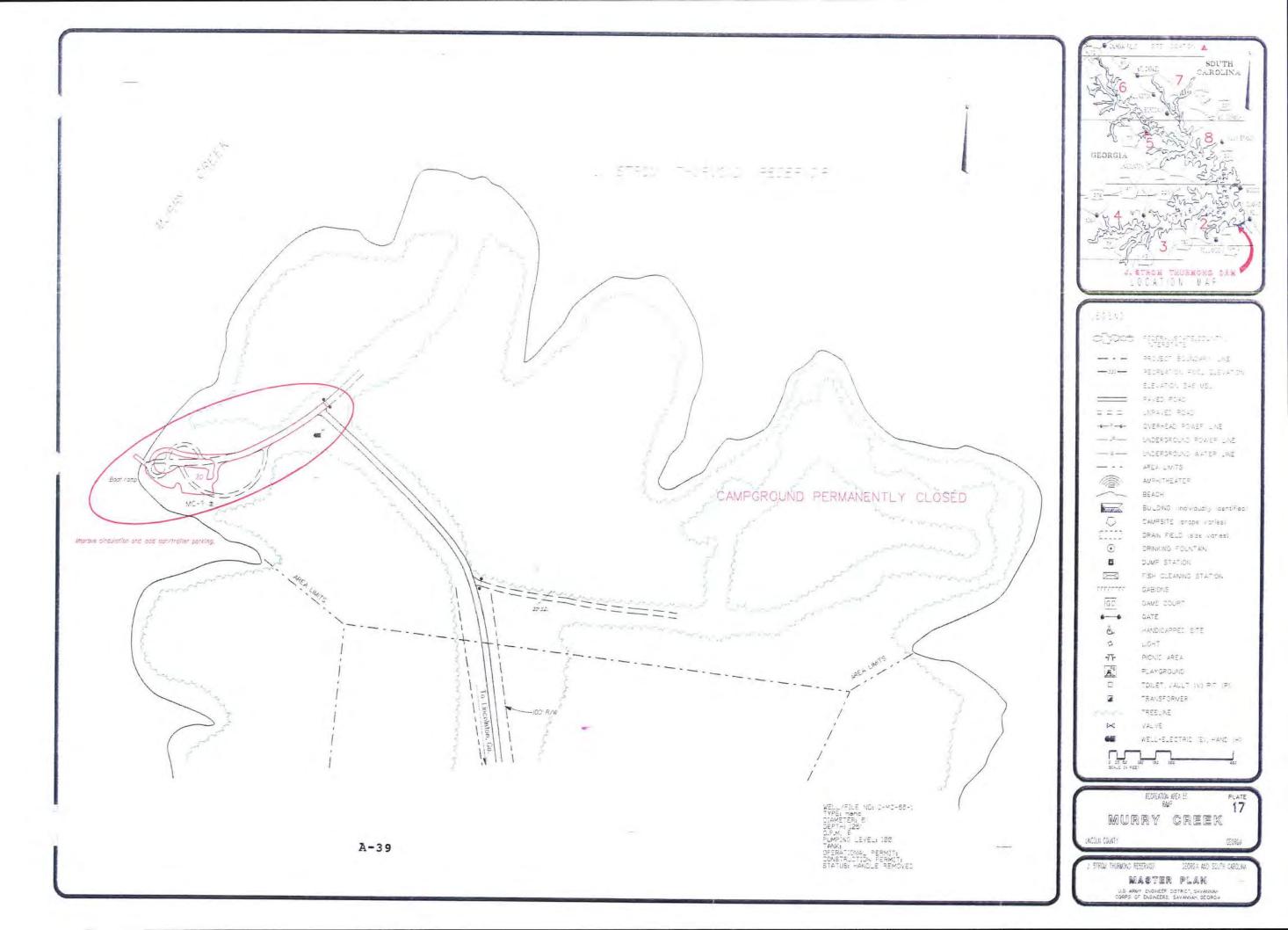
B. The existing launching area has parking for 20 car/trailers.

IV. Design Intent

Boat access facilities will continue to be maintained.

V. Proposed Facilities

None



Parkway (Plate 18), (Site 57)

I. General Description

This 34 acre area is immediately adjacent to U.S. Highway 378 as it crosses the Savannah River near the entrance to Elijah Clark State Park.

II. Site Analysis

In general, the area is conducive to development except for isolated areas suffering from shoreline erosion. Extensive day use facilities are available in the nearby Elijah Clark State Park.

III. Existing Facilities

A. Boat launching facilities are available for the public.

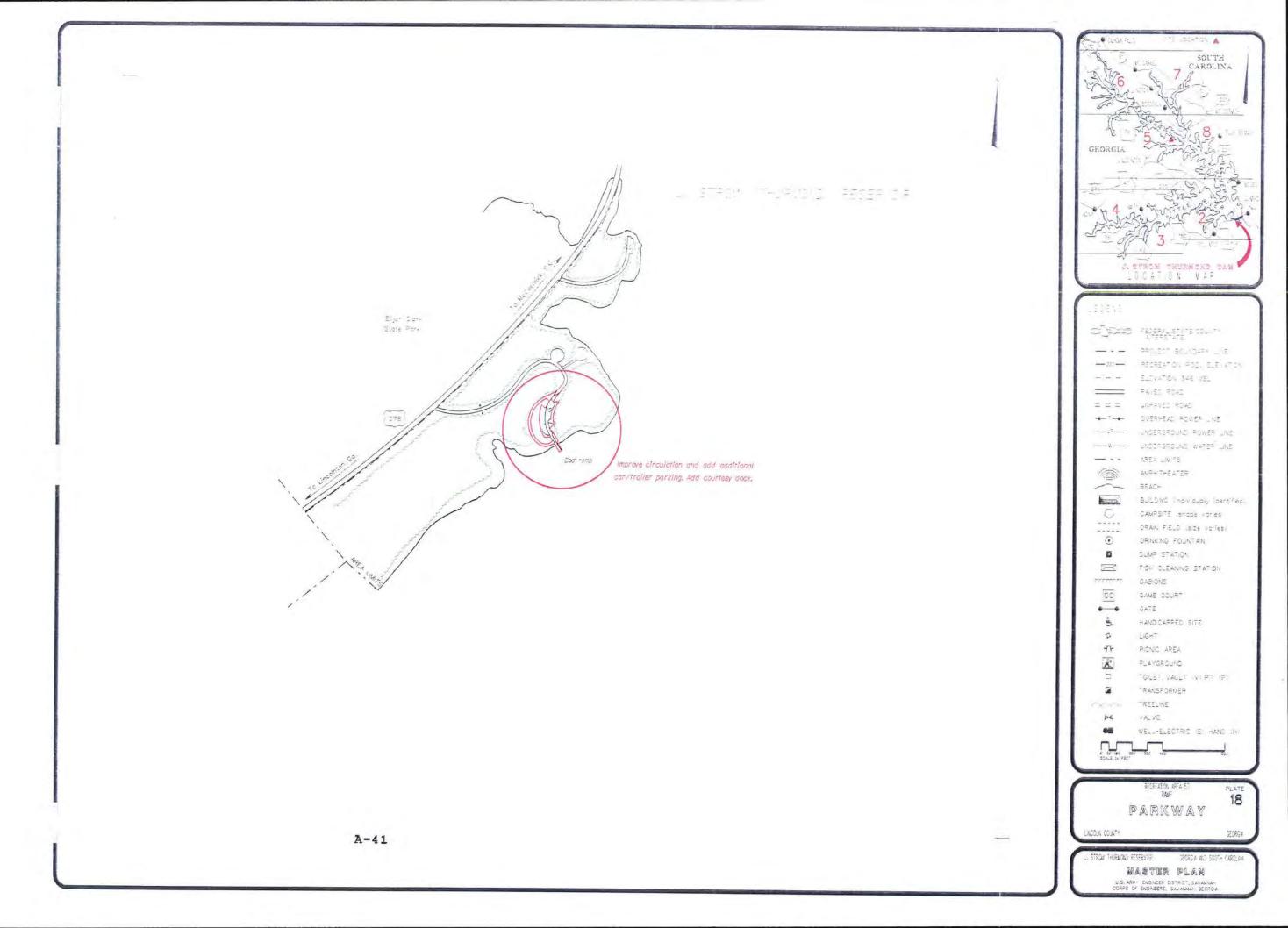
B. The existing boat launch area has 10 car/trailer parking spaces.

IV. Design Intent

A. This area will continue to be used for boating access.

V. Proposed Facilities

A. Improve circulation, expand car/trailer parking and add courtesy dock.



Chamberlain Ferry, GA (Plate 19), (Site 63)

I. General Description

This 15-acre site is located 4 miles north of Kenna, Georgia, on Georgia Highway 220.

II. Site Analysis

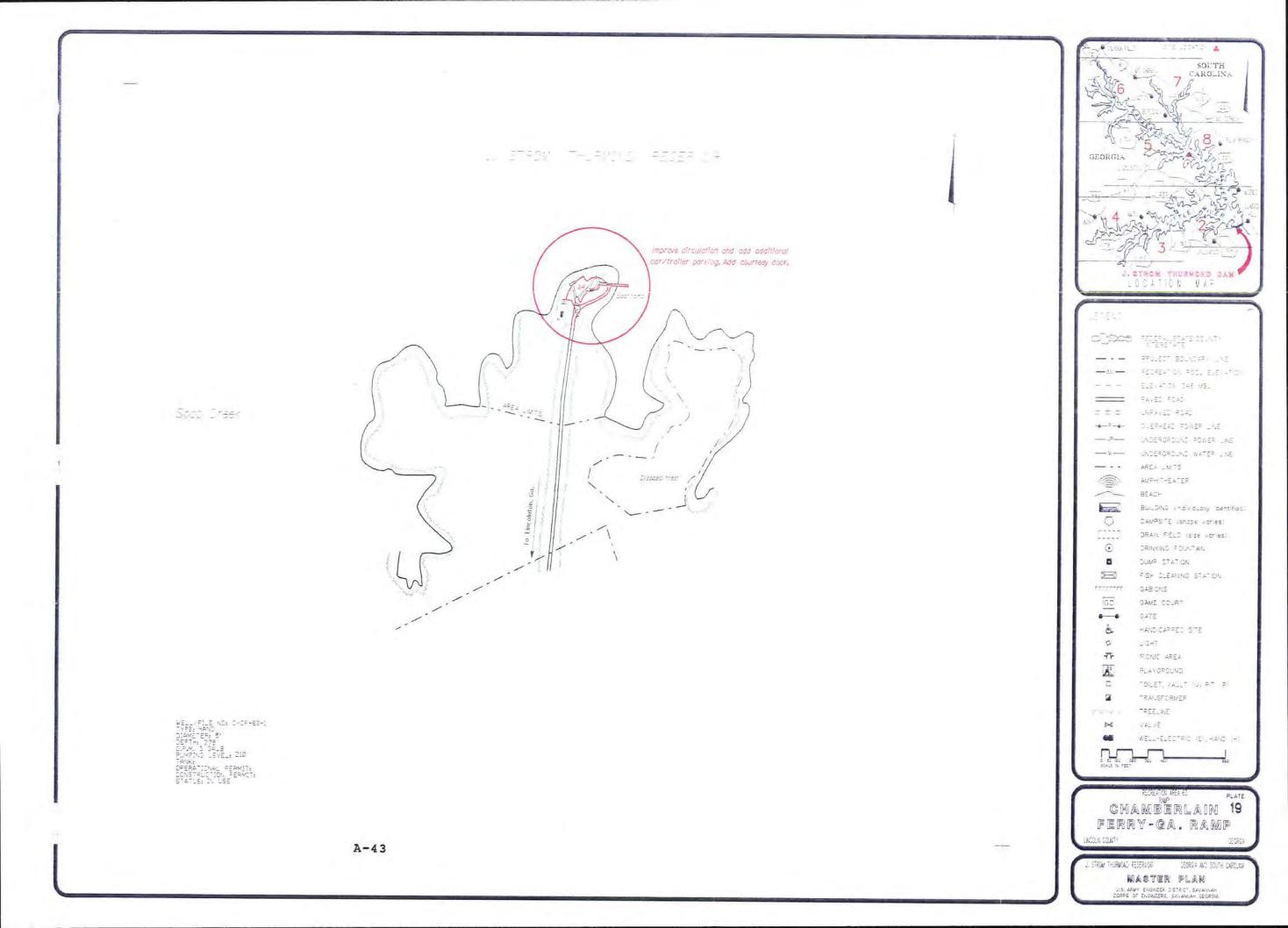
Some shoreline erosion has occurred at the site.

III. Existing Facilities

The site presently has a boat ramp, parking for 6 vehicles, and one pit toilet.

IV. Design Intent

None



Bussey Point (Plate 20), (Site 71)

I. General Description

A. Bussey Point can be reached by Georgia Highway 220 and encompasses approximately 2,700 acres.

B. The site forms a large peninsula jutting out into J. Strom Thurmond Reservoir at the confluence of the Savannah River and Little River, Georgia.

C. Bussey Point is primarily used for wildlife management activities including a wild turkey restoration program and trophy whitetail deer hunting program. Numerous large wildlife food plots are located along trails and old logging roads and a wildlife observation tower is available for public use adjacent to one of the large food plots.

II. Site Analysis

A. Primitive campsites and picnicking area are accessible by boat or pedestrian access only. Access to the primitive campsites requires a 4-1/2 mile hike. The area is also used extensively for horseback riding.

B. A smaller primitive camping area encompassing approximately 8 acres is located at the end of the county road accessing the site and is used extensively by hunters during regularly scheduled managed hunts.

C. The majority of the area is moderately sloped with extensive mature pine forests and hardwood ridges. Shoreline erosion is minimal along most of the site.

III. Existing Facilities, Area 1, Primitive Area

A. The site offers primitive camping, hiking trails, picnic sites, and a wildlife observation area.

B. Ten camp units, one pit toilet and a hand-pump well are located on this peninsula.

C. The site also contains a small day use area with 5 picnic units and an Adirondack style shelter.

D. Ten miles of logging roads and hiking trails are available to the nature enthusiast.

E. No vehicles are permitted in this area.

IV. Existing Facilities, Area 2, Camping Area

A. Ten free campsites, one vault toilet, a hunter check station and a hand well are available at this portion of the site. The area is accessible by vehicle.

B. This portion of the peninsula is located on about 152 acres.

C. A single lane boat ramp adjacent to the camp sites was closed in 1992.

IV. Design Intent

Bussey Point will continue to be operated and managed as a primitive wilderness area with emphasis on ongoing wildlife management and restoration activities. Free camping, picnicking and nature trails will remain and will be upgraded as necessary to provide for safe public use. The ten free campsites in area 2 were rehabilitated in 1993.

## V. Proposed Facilities

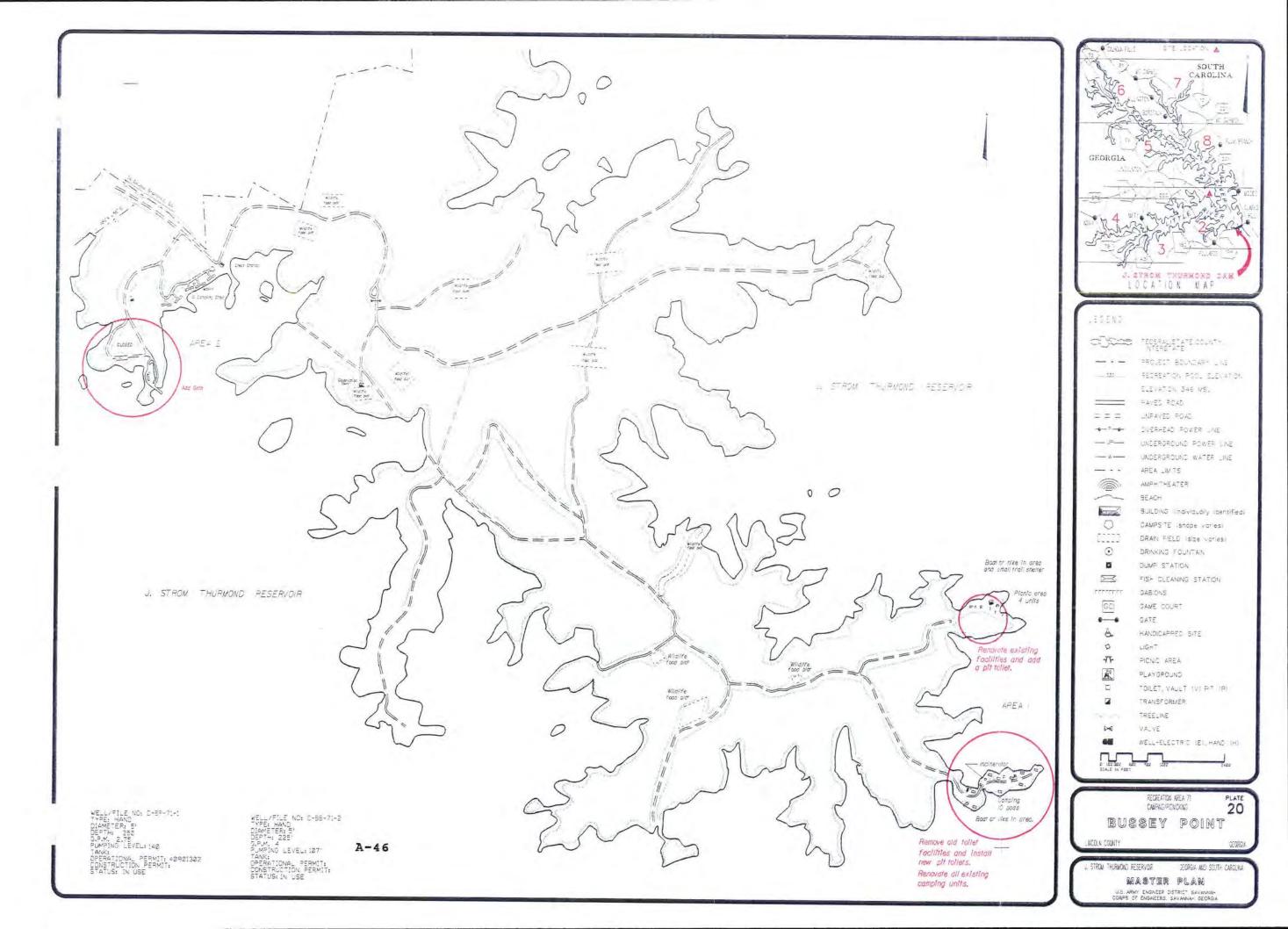
A. No additional facilities are proposed in the near future.

B. A gate will be added to restrict access to the old boat ramp.

C. Existing facilities will be rehabilitated as necessary.

At the inception of the J. Strom Thurmond Reservoir project, the 2,400 acres of peninsula between the Little River, Georgia, and the Savannah River was designated as the "Bussey Point Wilderness Area." The intent of this designation was to set aside this land so that, through natural processes, the fields and forests would develop without the interference of common forest management or development practices.

The unique management plan for Bussey Point is constantly being improved to reflect exceptional wildlife, interpretive, and other low density recreational programs. The present management activities will continue. Information describing the current management practices can be found in the Operational Management plan.



Cherokee (Plate 21), (Site 76)

I. General Description

This 130-acre site is located adjacent to Georgia Highway 47 on the north side of Prices' Bridge over Little River. The original included only 11 acres and was leased to the Georgia Department of Transportation. Several club sites were relocated to expand the area to its present size. Day use and boat launching facilities are available.

II. Site Analysis

A. Shoreline erosion is minimal and the majority of the site has relative mild slopes which are conducive to development. Vegetation is mature mixed pine/hardwood forest.

B. Georgia Highway 47 serves as a major thoroughfare between Lincolnton and the Augusta metropolitan area.

III. Existing Facilities

A. Cherokee is planned to be one of three or four major destination type day use areas on Thurmond Lake. The launching area and day use area are separated to facilitate access and control. The launching area was renovated in 1987 and includes a three lane ramp, courtesy dock, waterborne comfort station, fish cleaning station, and 74 car/trailer parking spaces.

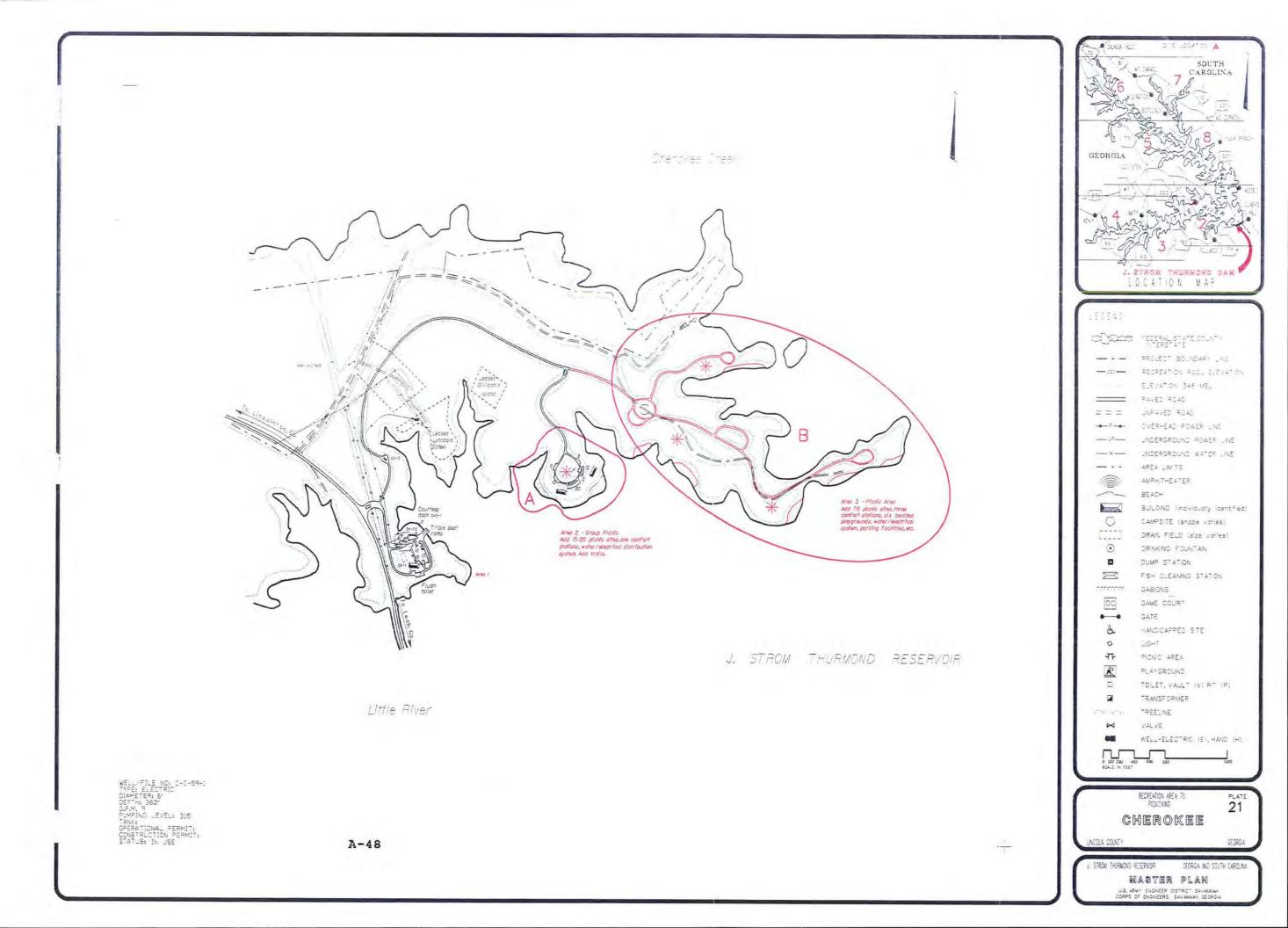
B. Renovation of the Phase II area was initiated in 1992. Road circulation system, the entrance station, parking, two shelters and two beaches were completed in 1993 with the exception of paving the roads and parking. Twenty-five to thirty picnic sites, trails, one comfort station, playgrounds, and paving will be completed as funding becomes available. Cost to complete Phase II is estimated to be \$250,000.

IV. Design Intent

The area will be operated as a major day use site.

V. Proposed Facilities

Phase III is planned to include 6 to 8 beaches, 7 picnic sites, three comfort stations, playgrounds, utilities, and roads and parking. Cost to complete Phase III is estimated to be approximately \$600,000.



Leathersville (Plate 22), (Site 78)

I. General Description

This 53-acre site is located 2 miles south of Georgia Highway 220 as it intersects with Leathersville Road.

II. Site Analysis

A. Extensive white quartz outcroppings appear in the area. Vegetation is mixed pine and hardwood.

B. The entrance road serving the area is subject to periodic flooding.

III. Existing Facilities

A. The site serves as a boat launching area only. There is also 1 pit toilet. The parking area is gravel with 8 car/trailer spaces.

B. The site also contains a well with hand pump.

IV. Design Intent

No major changes are programmed for this area.

V. Proposed Facilities

A. The existing road will be improved.



Clay Hill (Plate 23), (Site 81)

I. General Description

This 125-acre recreation site is reached via a paved road from the community of Amity, GA.

II. Site Analysis

A. One private club lease borders this area on the northeast side; however, action is underway to relocate the club to another site.

B. Shoreline erosion is evident adjacent to several campsites.

C. The area has a good stand of hardwoods which are favored in recreational development.

III. Existing Facilities

A. The site is presently developed for camping and boat launching.

B. Seventeen camp sites are located in the area.

C. A shower washhouse is available as well as 5 vault toilets and a dump station.

D. A new well and water distribution system is being renovated.

E. There are 10 car/trailer parking spaces at the launching area.

IV. Design Intent

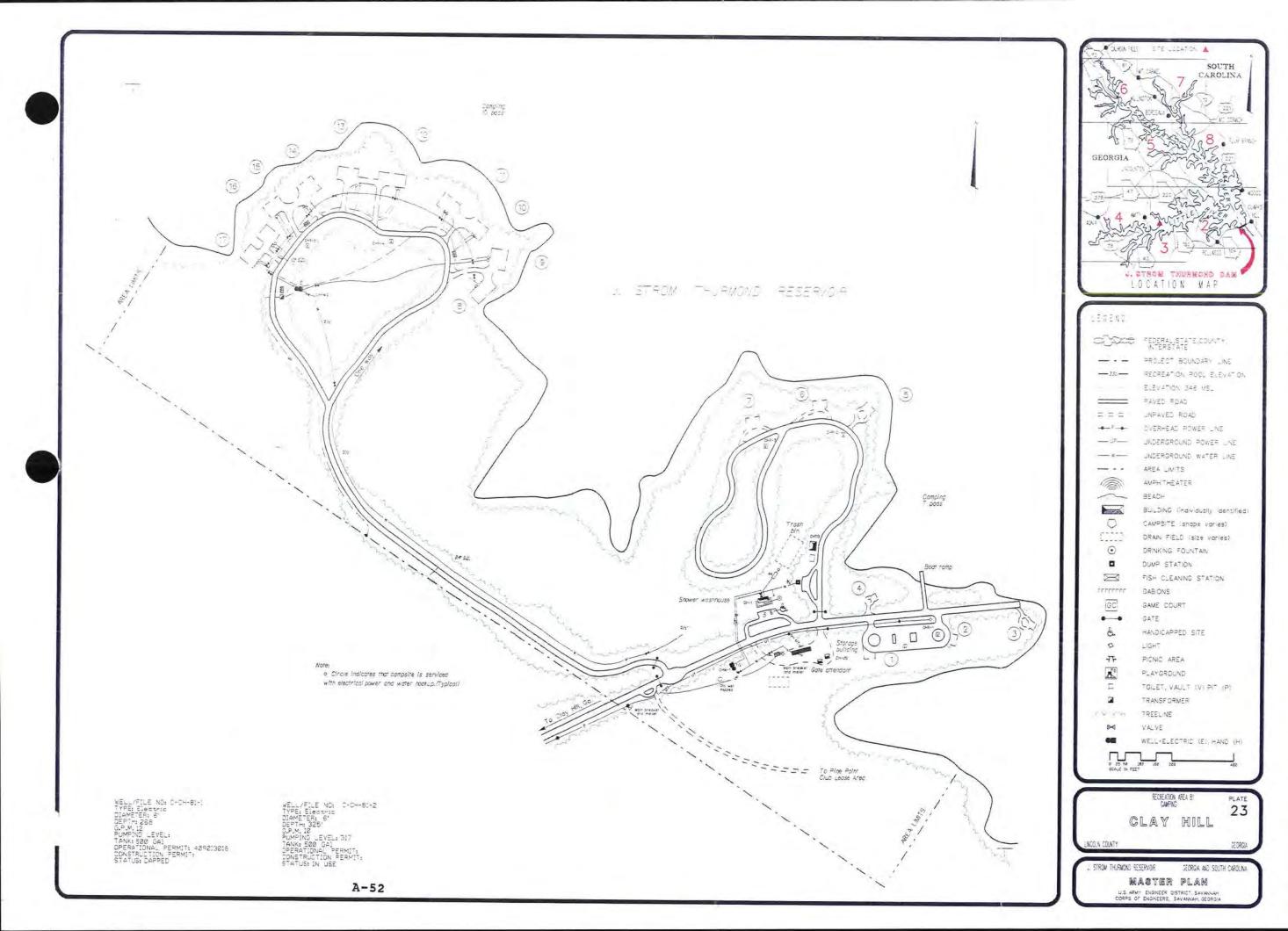
Camping will continue to be emphasized in the area.

V. Proposed Facilities

A. The existing campsites will be rehabilitated as necessary and the campground expanded as public use justifies.

B. Shoreline improvement to curtail erosion will be implemented.

C. Water and electric service will be added to campsites 1-7.



Amity (Plate 24), (Site 84)

I. General Description

This 113-acre area is located 1 mile east of Amity, GA adjacent to Georgia Highway 43.

II. Site Analysis

A. The area is well suited for development with gradual slopes and an extensive forest canopy of mixed pine and hardwood.

B. Shoreline erosion is minimal.

B. Extensive milk quartz outcrops are evident in certain areas.

III. Existing Facilities

A. Amity is a major day use area with both day use and boat launching facilities.

B. The launching area consists of a triple lane boat launching ramp, a courtesy dock (foot bridge), a fish cleaning station, and 68 car/trailer parking spaces.

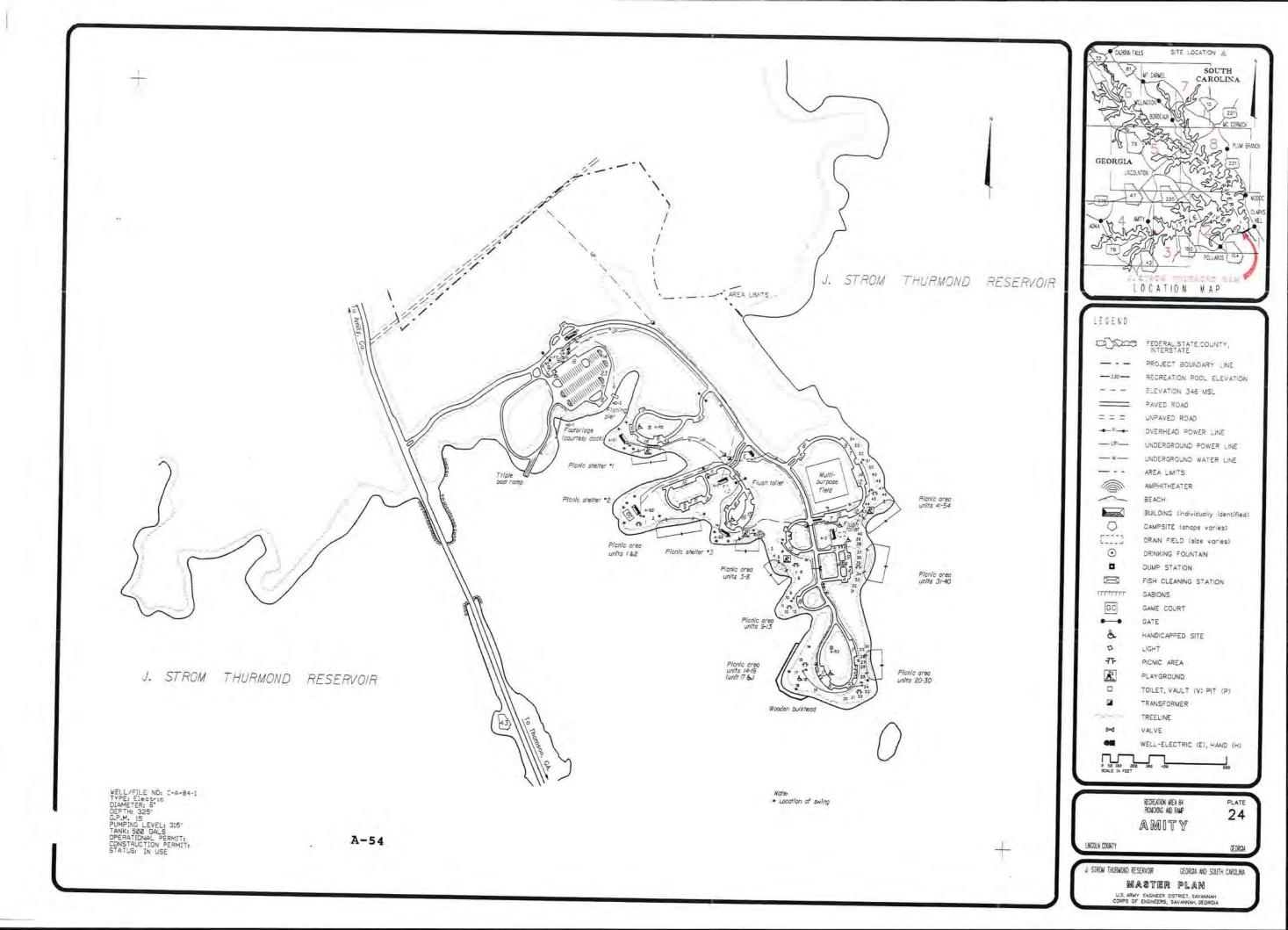
C. Day use facilities include 54 individual picnic sites (handicapped accessible sites available), 3 large picnic shelters, 7 beaches, 4 playgrounds, 1 multi-purpose play field, 2 flush comfort stations, 2 vault toilets, 2 volley ball courts, and entrance station with flush toilet, pay phone, trails, 360 vehicle parking spaces, and a fishing pier.

IV. Design Intent

The area will continue to be operated as a major day use area.

V. Proposed Facilities

No new facilities are proposed in the future.



Big Hart (Plate 25), (Site 87)

I. General Description

This 451-acre site is accessible from U.S. Highway 78, approximately 8 miles north of Thomson, GA.

II. Site Analysis

A. Shoreline erosion is a problem in several areas.

B. The site is heavily forested in mixed pine and hardwood.

III. Existing Facilities

A. The Big Hart area offers day use, boat launching, and group and individual camping.

B. The day use area offers 30 picnic units, 1 playground, 1 picnic shelter and a comfort station. The area is heavily used and also has a beach which is popular during the summer months.

C. The group camp area has a shower washhouse, potable water source, group picnic shelter, and 22 parking spaces. The area can accommodate groups of up to 60 people.

D. The campground has a total of 31 campsites, 24 of which have water and electrical hookups. There are 1 shower washhouse, 3 vault toilets, 1 flush toilet, one playground and a dump station.

E. The launching area has a 2 lane boat ramp, a fish cleaning station, courtesy dock, one vault toilet, and 12 car/trailer parking spaces.

IV. Design Intent

Big Hart will continue to be operated as is. Shoreline stabilization will be implemented as funding allows. The campground and day use area will be expanded utilizing SRUF revenues.

V. Proposed Facilities

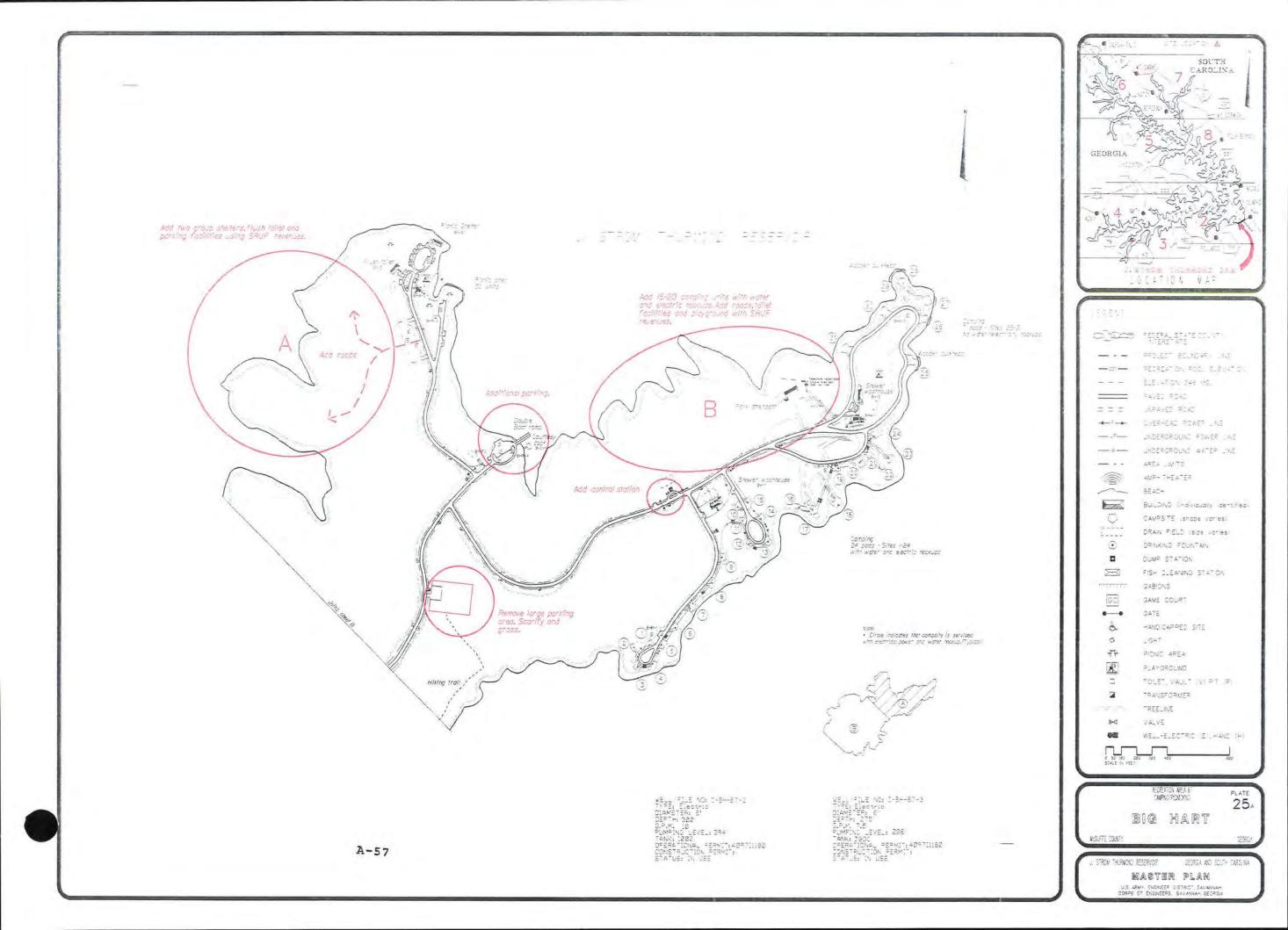
A. Group Camp - Renovate existing camp units and add 4 camping units using SRUF revenues. Stabilize shoreline erosion as necessary.

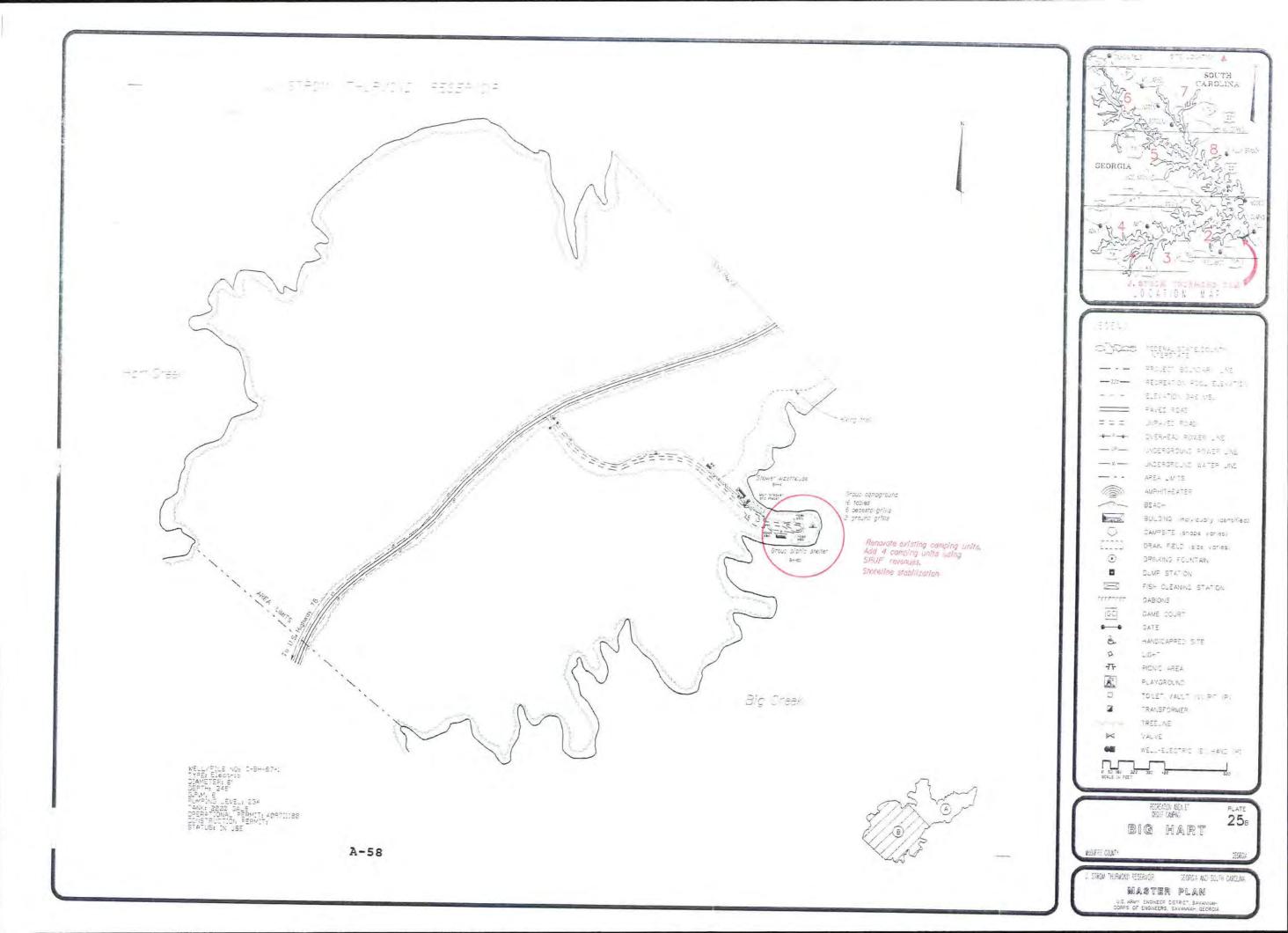
B. Day Use - Add two group shelters, one flush toilet and additional parking using SRUF revenues.

C. Camping - Add 15 to 20 camping units with water and electrical hookups, one

playground, roadway, parking, and one flush toilet using SRUF revenues.

D. Estimated cost for this work is approximately \$330,000.





Raysville (Plate 26), (Site 88)

I. General Description

This 245-acre area is located immediately to the left of the intersection of Georgia Highway 43 and Raysville Bridge. Thomson, Georgia, is 5 miles to the south.

II. Site Analysis

Shoreline erosion is evident. Vegetation is mixed pine and hardwood.

III. Existing Facilities

A. The site is presently developed for camping.

B. Fifty-five camp sites are located in the area; all have water and electrical hookups.

C. The existing one lane boat launching area has parking for 10 car/trailers.

D. Two shower washhouses, a sanitary dump station, 7 vault toilets, and a pay telephone are available for the public.

E. An entrance station was constructed to control access and collect user fees.

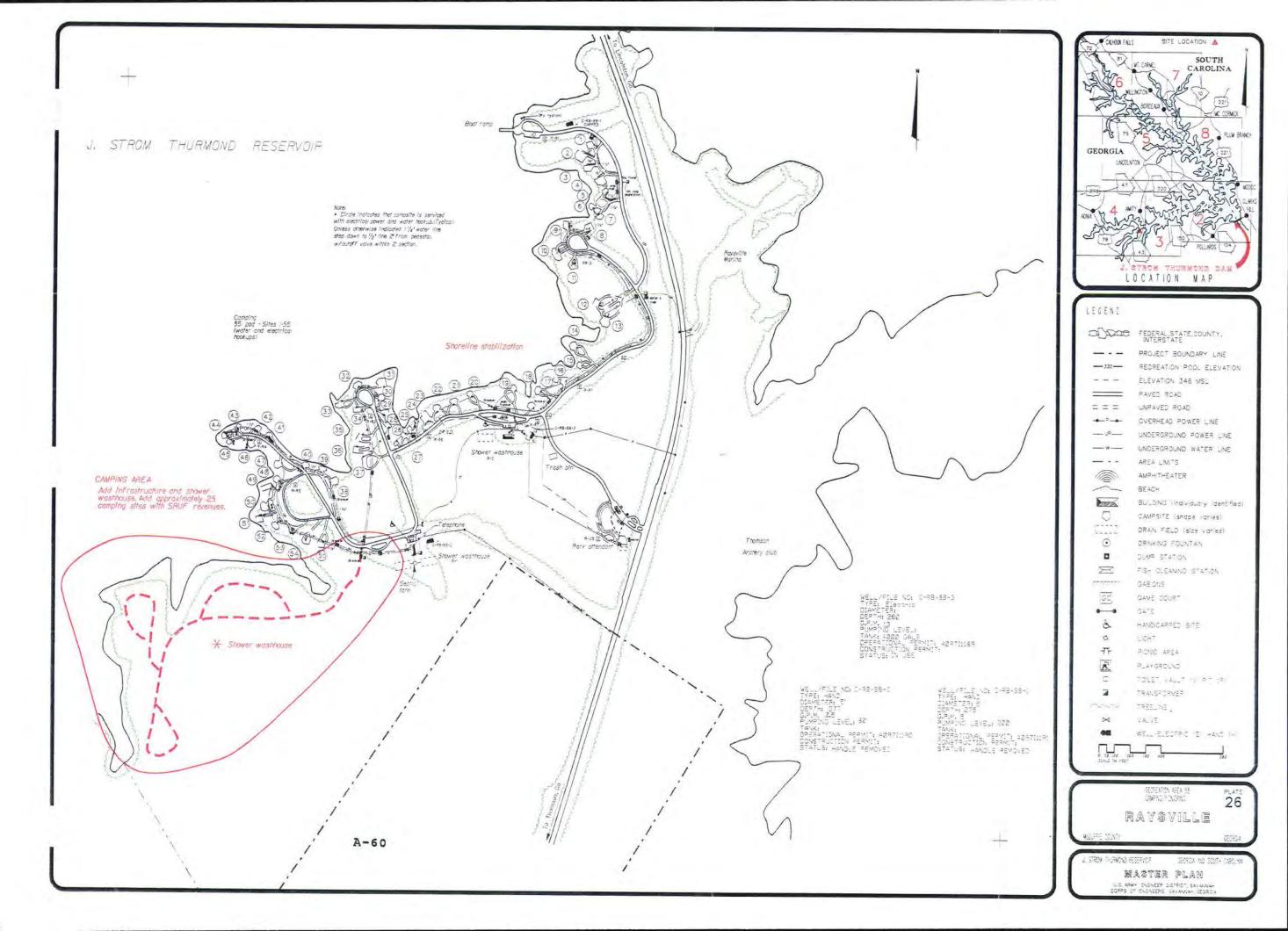
F. The area is heavily used.

IV. Design Intent

V. Proposed Facilities

A. The camping facilities will be expanded using SRUF revenues.

B. Shoreline protection measures will be implemented as needed. Work at this site is expected to cost approximately \$385,000. The camping area will be expanded to include an additional 25 campsites, a shower washhouse and road with SRUF revenues.



Winfield (Plate 27), (Site 93)

I. General Description

A. This 179-acre area can be reached by county road intersecting with Highway 150 near the community of Winfield, Georgia.

B. The site is located in close proximity to Mistletoe State Park.

II. Site Analysis

A. Minimal shoreline erosion is evident.

III. Existing Facilities

A. The site is presently developed with 80 campsites and a boat launching area.

B. Existing boat launch area has parking for 7 car/with trailers.

C. The area is heavily used and 73 sites have been equipped with electrical and water hookups.

D. Two shower washhouses, sanitary dump station, 5 vault toilets, a beach, playground, and pay phone are available.

E. An entrance station was constructed to control access and collect user fees.

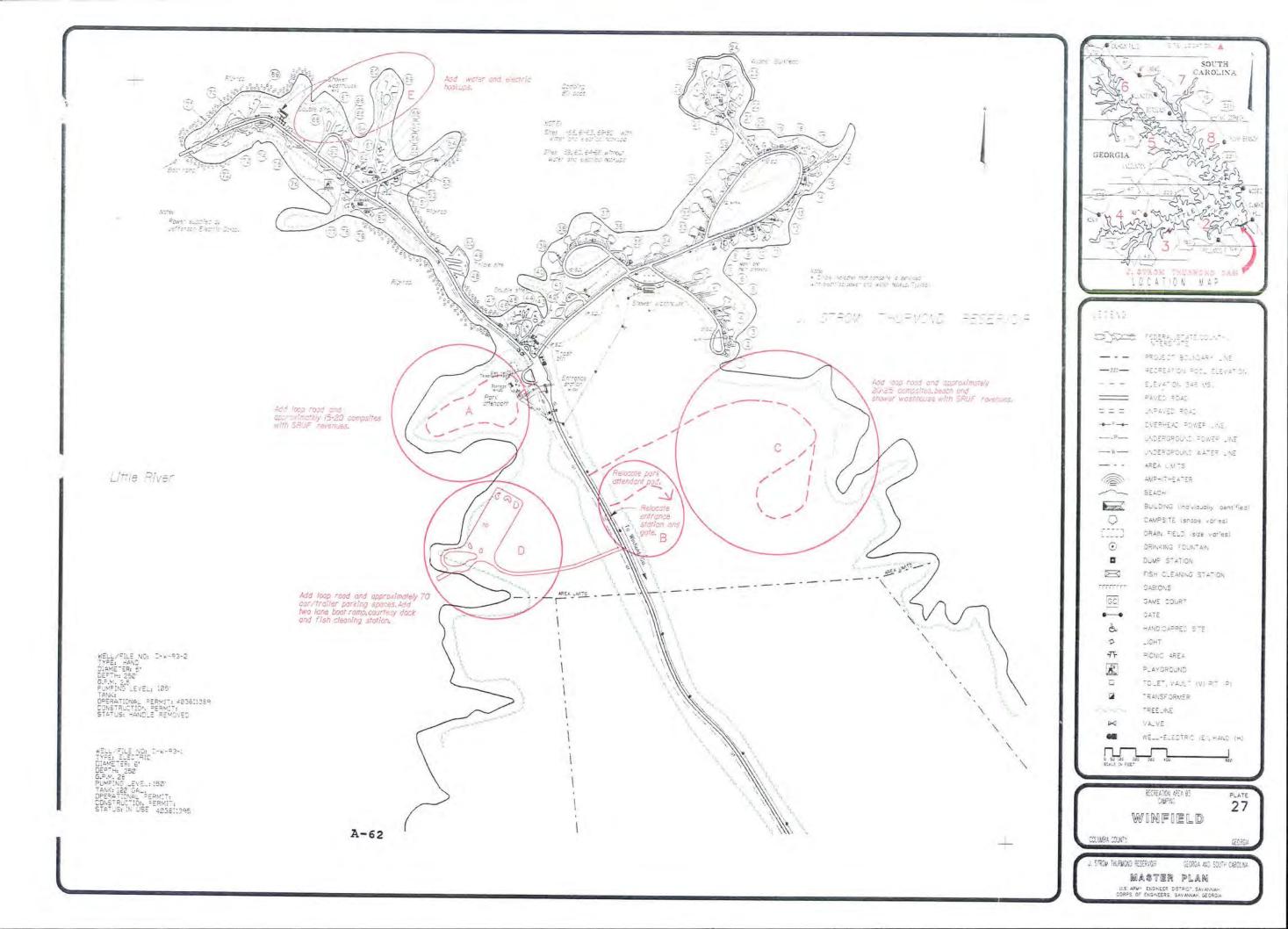
IV. Design Intent

V. Proposed Facilities

A. Camping facilities will be expanded by approximately 45 sites using SRUF revenues.

B. A boat launching area with 70 car/trailer spaces, a fish cleaning station, courtesy dock, and two-lane boat ramp will be added as funds become available.

C. Work at this site is expected to cost approximately \$360,000.



Ridge Road (Plate 28), (Site 97)

I. General Description

A. Ridge Road is located at the end of a county secondary road originating 2 miles south of Leah, GA, on Highways 47 and 104.

B. The site presently consists of 175 acres.

C. The recreation site forms a peninsula and several causeways connect with adjacent islands.

II. Site Analysis

A. The site has excellent recreation potential because of closeness to the water for all sites as well as almost no slopes to overcome.

B. Major expansion of this area may require phaseout of one or more private and quasipublic lease sites.

C. Shoreline erosion is evident on portions of the area.

III. Existing Facilities

A. The site is presently developed for camping and boat launching.

B. Fifty-two camp units, 30 of which have water and electrical hookups are located in the area.

C. The existing boat launching area has parking for 14 cars and 8 cars/trailers, a fish cleaning station, and courtesy dock.

D. The area is well used by the visiting public.

E. An entrance station is installed at the entrance of the area.

F. Two shower washhouses, 2 playgrounds, a sanitary dump station, 7 vault toilets, and one improved beach are available within the area.

G. A pay phone has been installed for the convenience of the public.

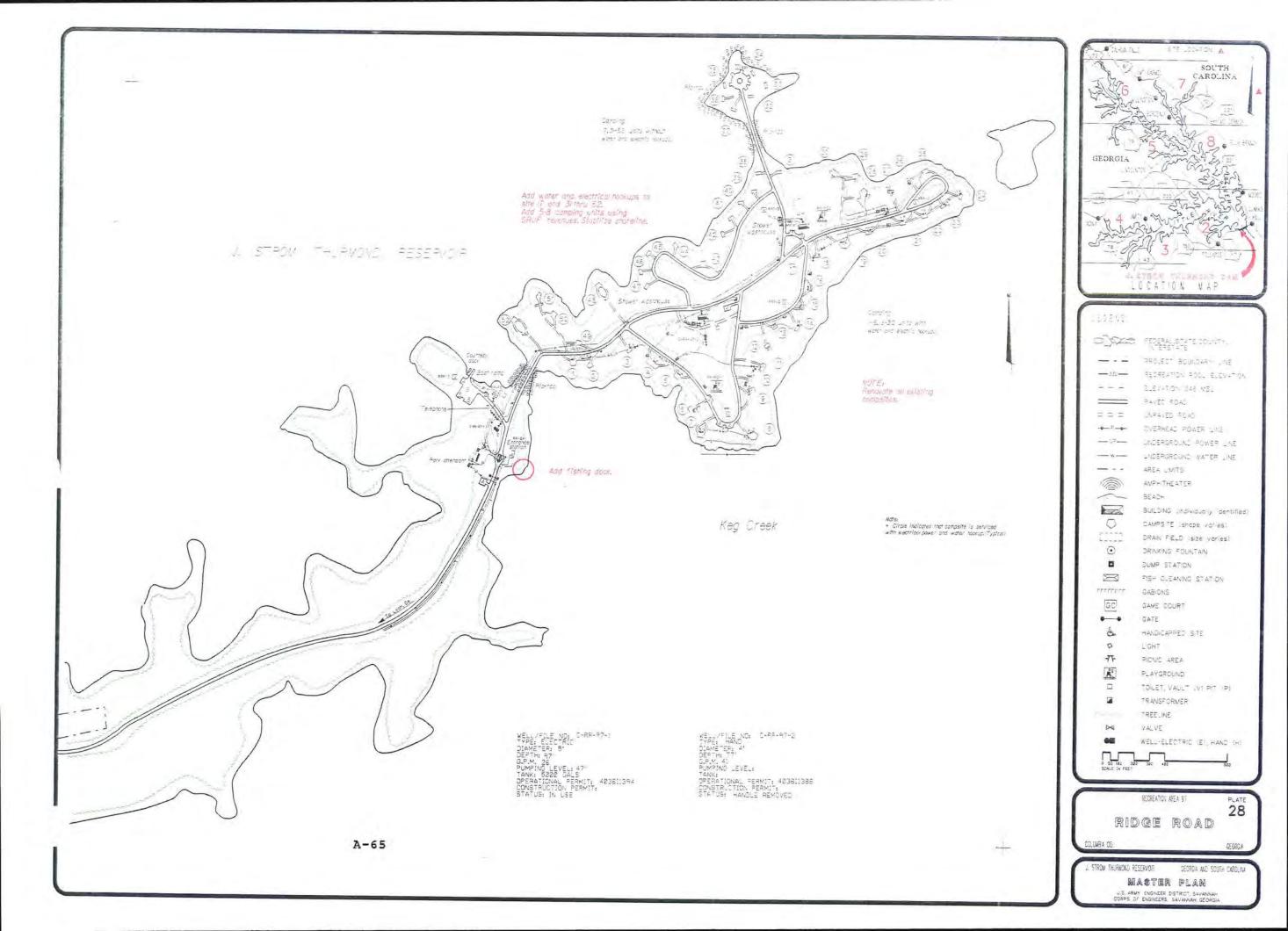
IV. Design Intent

A. The area will continue to provide for campers and boating access.

V. Proposed Facilities

A. Shoreline protective measures will be implemented as necessary.

B. The area will be renovated at an approximate cost of \$400,000. A fishing pier will be added and water and electrical hookup to sites 31-52. Approximately 10 additional camping units will be added with SRUF revenues.



Keg Creek (Plate 29), (Site 100)

I. General Description

Keg Creek is immediately adjacent to U.S. Highway 221 as it crosses Keg Creek Bridge and contains approximately 22 acres.

II. Site Analysis

A. Shoreline erosion is evident throughout the area.

B. Excessive slopes in the area make further development difficult.

C. No additional public land is available for expansion of this recreation area.

D. Keg Creek Subdivision borders the northern area limit.

**III.** Existing Facilities

A. The site is presently used for boating access only.

B. The existing boat ramp has parking for 34 cars with trailers.

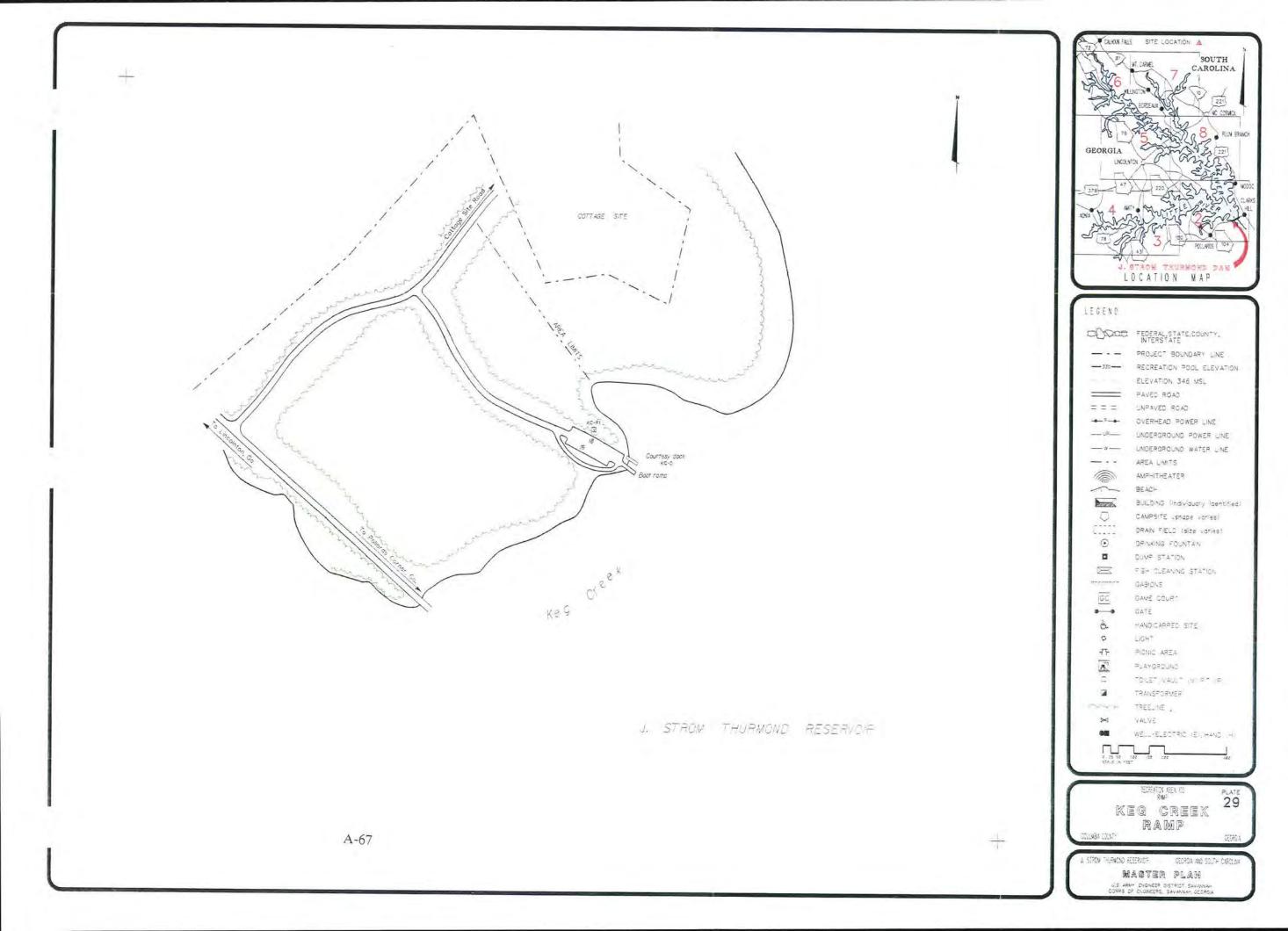
C. One vault toilet and a courtesy dock have been installed.

IV. Design Intent

It is proposed that the area continue to be used for boat access.

V. Proposed Facilities

None.



Petersburg (Plate 30), (Site 103)

I. General Description

This 268-acre area is located 2 miles east of Pollard's Corner off U.S. Highway 221,

II. Site Analysis

A. Shoreline erosion is significant on much of the developed portion of this area. Wooden bulkhead walls have been used extensively to help alleviate the problem adjacent to campsites.

B. Most of the site consists of mixed pine and hardwood with some significant small stands of large, older pines. Slopes are gentle over much of the area except in drainages.

C. Expansion of the area was made possible through a land exchange with an adjacent private land owner.

III. Existing Facilities

A. Petersburg is one of the most heavily used camping areas on Thurmond Lake. A launching ramp with seven car/trailer spaces is available for campers use along with a fishing pier. Several handicapped accessible campsites.

B. A total of 93 camp units are located in the area. All of these sites have water and electrical hookups.

C. Four shower washhouses, a fish cleaning station, 2 beaches, 5 pit toilets, 4 playgrounds, and a sanitary dump station are available for public use.

D. The Bartram Hiking Trail passes through the area.

E. An entrance station has been constructed to facilitate fee collection. A public pay phone is available for campers adjacent to the entrance station.

IV. Design Intent

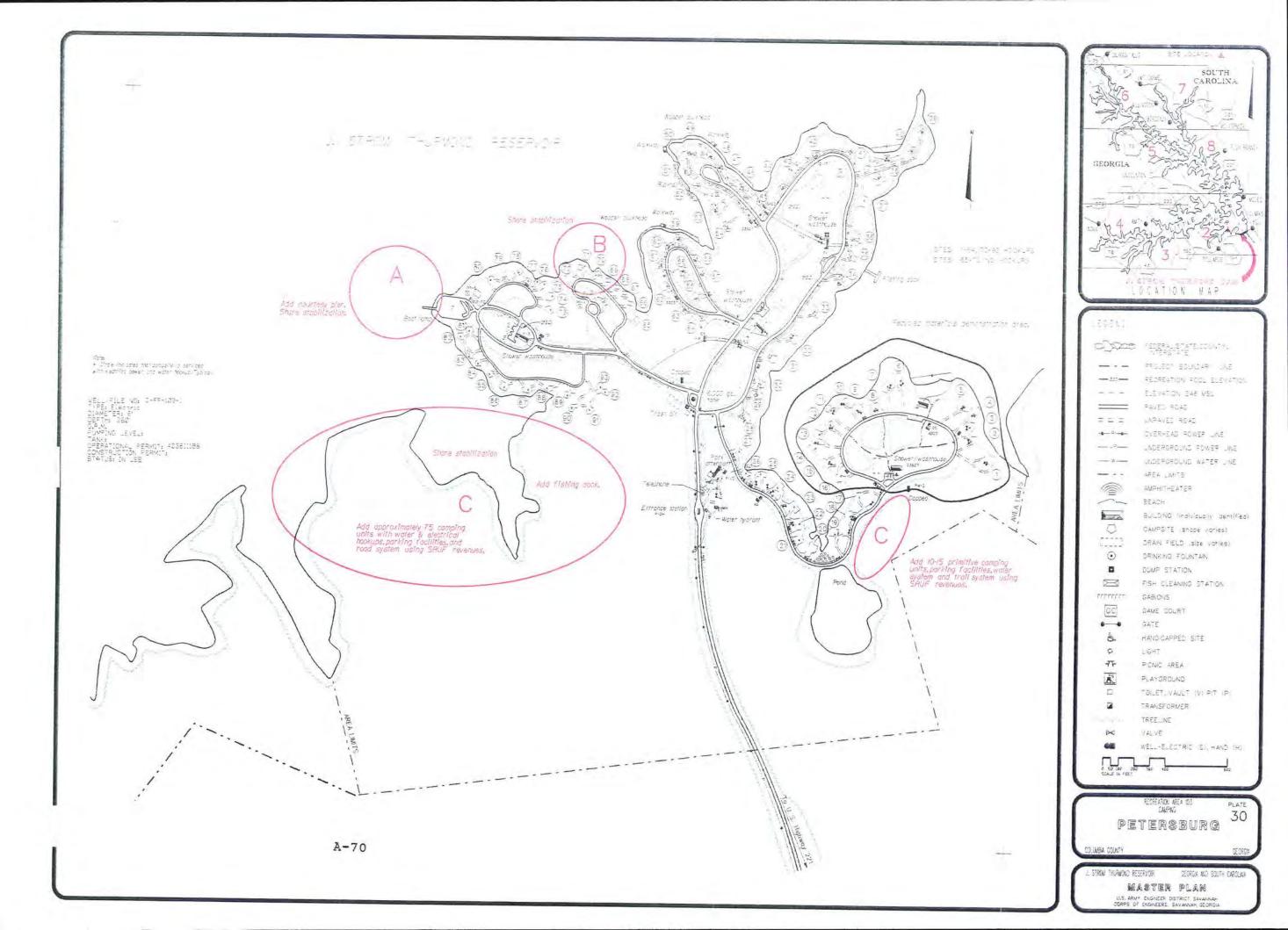
A. Overnight camping will continue to be the primary use of this area.

V. Proposed Facilities

A. Add approximately 75 additional campsites with water and electrical hookups, road system and fishing pier as funding becomes available and with SRUF revenues.

B. Water and sanitary facilities will be expanded and the number of campsites with water

and electrical hookups will be increased. This work is expected to cost approximately \$420,000.



Lake Springs (Plate 31), (Site 105)

I. General Description

A. Lake Springs Recreation Area is situated off U.S. Highway 221 approximately 3 miles west of J. Strom Thurmond Dam.

B. The site is heavily wooded with mixed pine and hardwood forest and encompasses approximately 228 acres.

C. The area is the largest Corps operated day use park on J. Strom Thurmond Reservoir.

II. Site Analysis

This popular recreation area is heavily forested in mixed pine and hardwood with numerous irregular peninsulas jutting into Thurmond Lake.

B. The gentle shoreline slopes and coves have offered excellent potential for beach development.

C. Shoreline erosion has been controlled with the construction of several thousand feet of wooden bulkhead wall throughout the site.

III. Existing Facilities

A. The site is developed for day use activities and boat launching.

B. The park is developed into 7 large areas served by a major paved circulation roadway. Each major area generally encompasses a large peninsula.

C. The entire park has a water distribution system and paved parking for 542 vehicles and 88 car/trailer spaces.

D. Approximately 2 miles of interpretive trail (paved with asphalt) is available within the park and receives heavy pedestrian use.

E. An entrance station has been provided to control access and distribute parking passes. A telephone and three parking spaces are available at the entrance station.

F. A listing of facilities available at each of the seven major areas follows:

(1) Mallard Point - 60 picnic sites, 6 beaches, 1 picnic shelter, 1 playground, 1 game court, 1 comfort station, an observation tower and 190 parking spaces;

(2) and (3) Center Point and Pine Point - 31 picnic sites, 5 beaches, 2 game courts, 2 playgrounds, 1 picnic shelter, 1 pay phone and, 143 parking spaces;

(4) River Birch - 23 picnic sites, 4 beaches, 1 flush toilet, 1 playground, 94 parking spaces;

(5) Squirrels Nest - 1 picnic shelter, 1 flush toilet, and 17 parking spaces;

(6) Deer Run - 43 picnic sites, 1 flush toilet, 2 beaches, 2 playgrounds, 1 vault toilet, and 92 parking spaces;

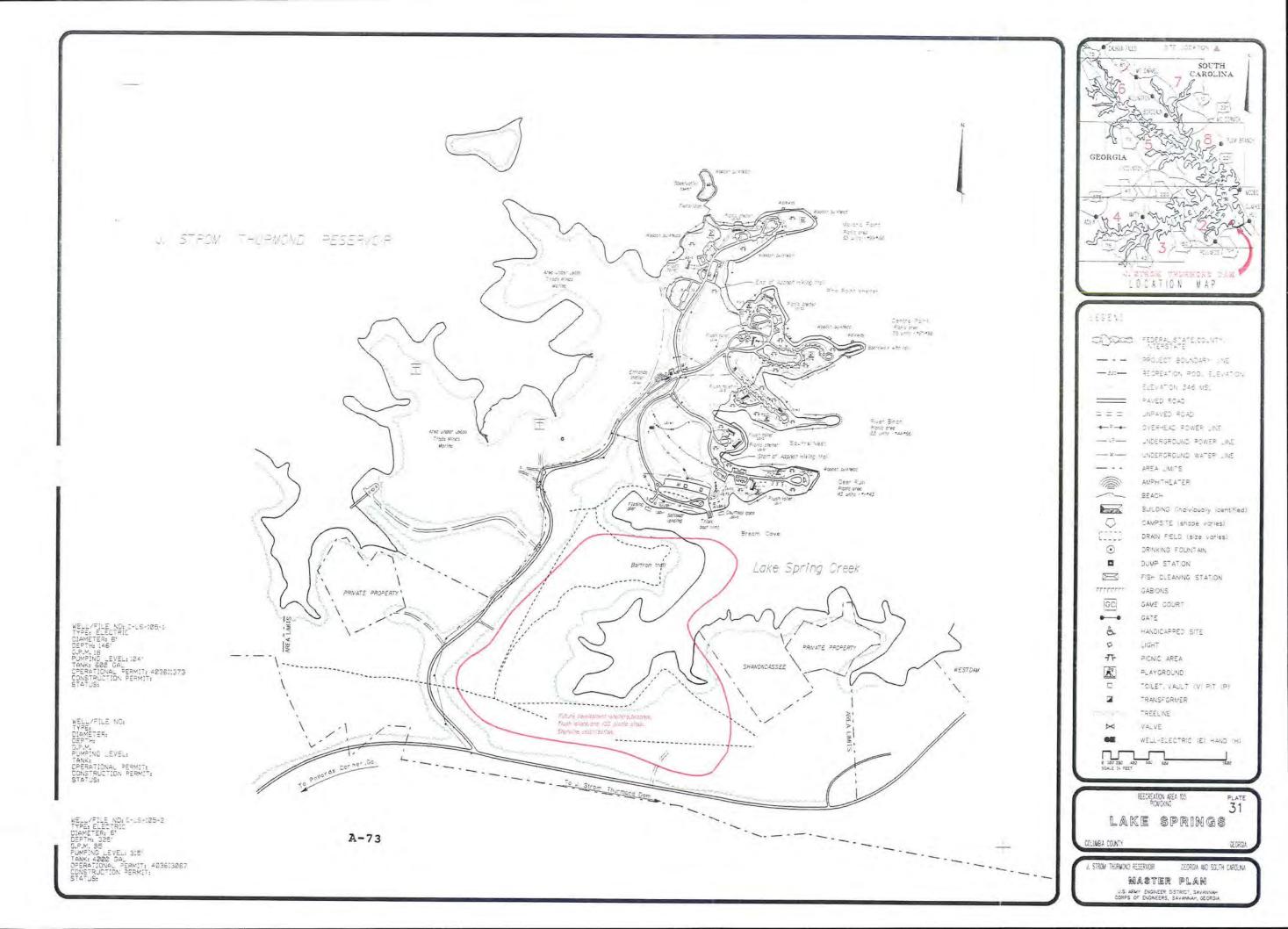
(7) Bream Cove - A three lane boat launching ramp, 88 car/trailer parking spaces, one fishing pier, 5 car parking spaces, 1 fish cleaning station, a courtesy doc, and 2 vault toilets.

IV. Design Intent

This popular area will continue to be operated as a high quality day use site.

V. Proposed Facilities

A. Add 100 additional picnic sites, shelters, beaches, and a flush comfort station as funding permits.



West Dam (Plate 32), (Site 107)

I. General Description

This 22-acre area is located at the west end of J. Strom Thurmond Dam adjacent to U.S. Highway 221.

II. Site Analysis

A. Shoreline erosion measures have helped stabilize several eroded area adjacent to the site.

B. The site is forested with a mixture of pine and hardwood and a large open field to the northern end of the site adjacent to the dam embankment.

C. The head of the Corps Bartram Trail is located within West Dam Park.

III. Existing Facilities

A. This area contains 44 picnic units, 3 playgrounds, an entrance station, 1 picnic shelter, 1 game court, 7 beaches, 5 comfort stations, a fishing pier and numerous wood swings and benches.

B. A large grassed open field provides space for sunbathing, volleyball, and other games.

C. Park attendants are on duty daily May through September.

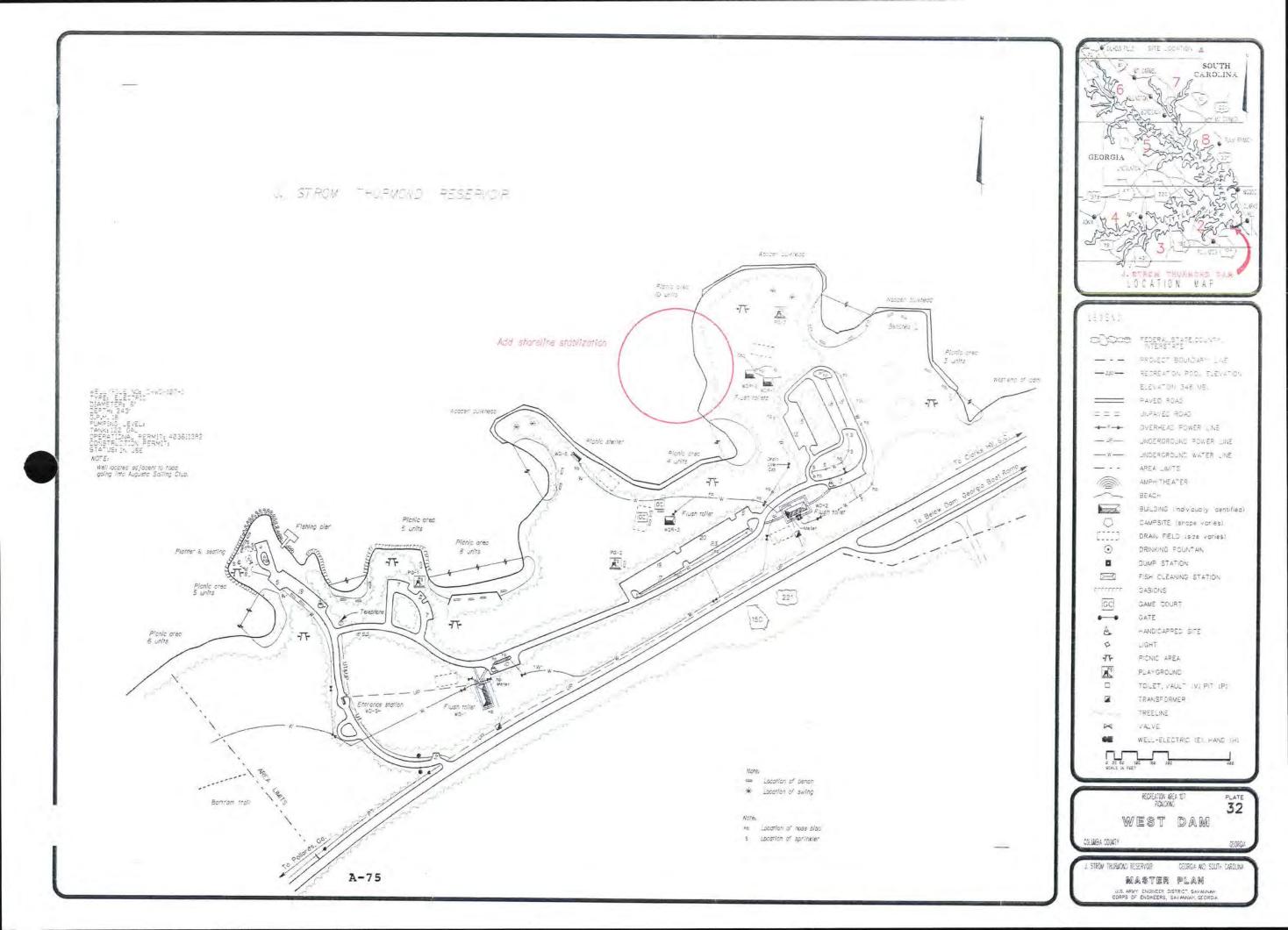
D. A pay phone is available for the public's use.

IV. Design Intent

The area will continue to be used for day use activities.

V. Proposed Facilities

Further development will be limited to shoreline stabilization measures, pedestrian circulation improvement and storm water and erosion control.



Below Dam - Georgia (Plate 33), (Site 108)

I. General Description

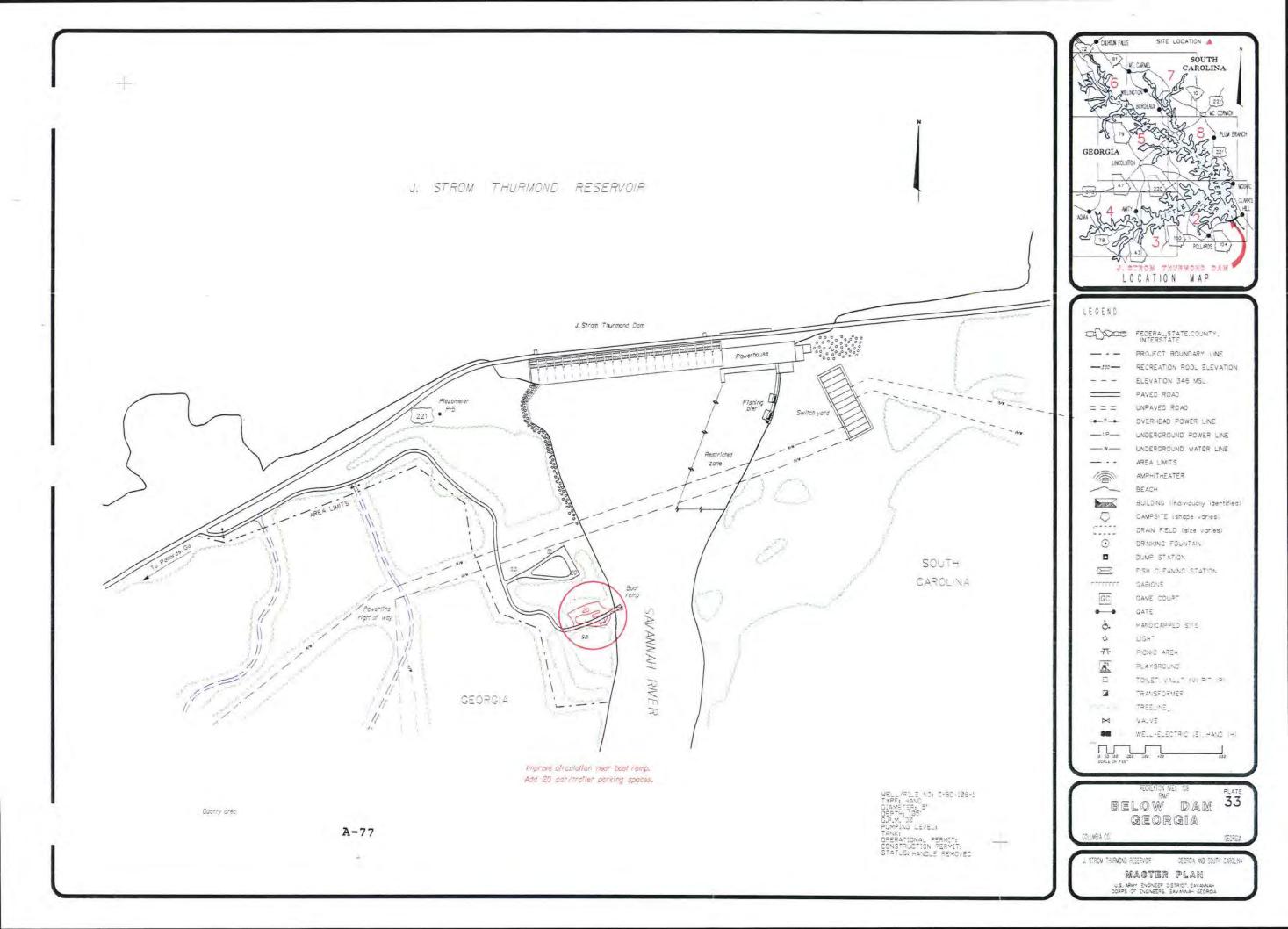
This 25-acre area is located on the west shoulder of J. Strom Thurmond Dam and offers an excellent view of the tailrace area.

II. Site Analysis

- A. An electrical powerline cuts across the site.
- B. Shoreline erosion is evident on much of the site.
- C. Future development will be limited due to excessive slopes.
- **III. Existing Facilities**
- A. The existing boat launching area provides parking for 3 cars with trailers.
- B. The entrance roads and major parking areas are paved.
- C. The area has 2 pit toilets.
- IV. Design Intent
- A. The area will be used as bank fishing access and boat launching only.

V. Proposed Facilities

A. Shoreline protection measures will be implemented as necessary.



## 6.A.2. State Parks

Hamilton Branch (Plate 1), (Site 8)

I. General Description

A. This 731 acre park is just off South Carolina Highway 28, approximately 10 miles north of the dam. The park is on a large peninsula jutting into the lake.

II. Site Analysis

A. Easy access makes this heavily wooded, rolling terrain park a popular attraction for campers.

B. Shoreline erosion is severe in some areas of the park.

III. Existing Facilities

A. The park has 200 campsites (only 50 sites have water) and 45 picnic sites.

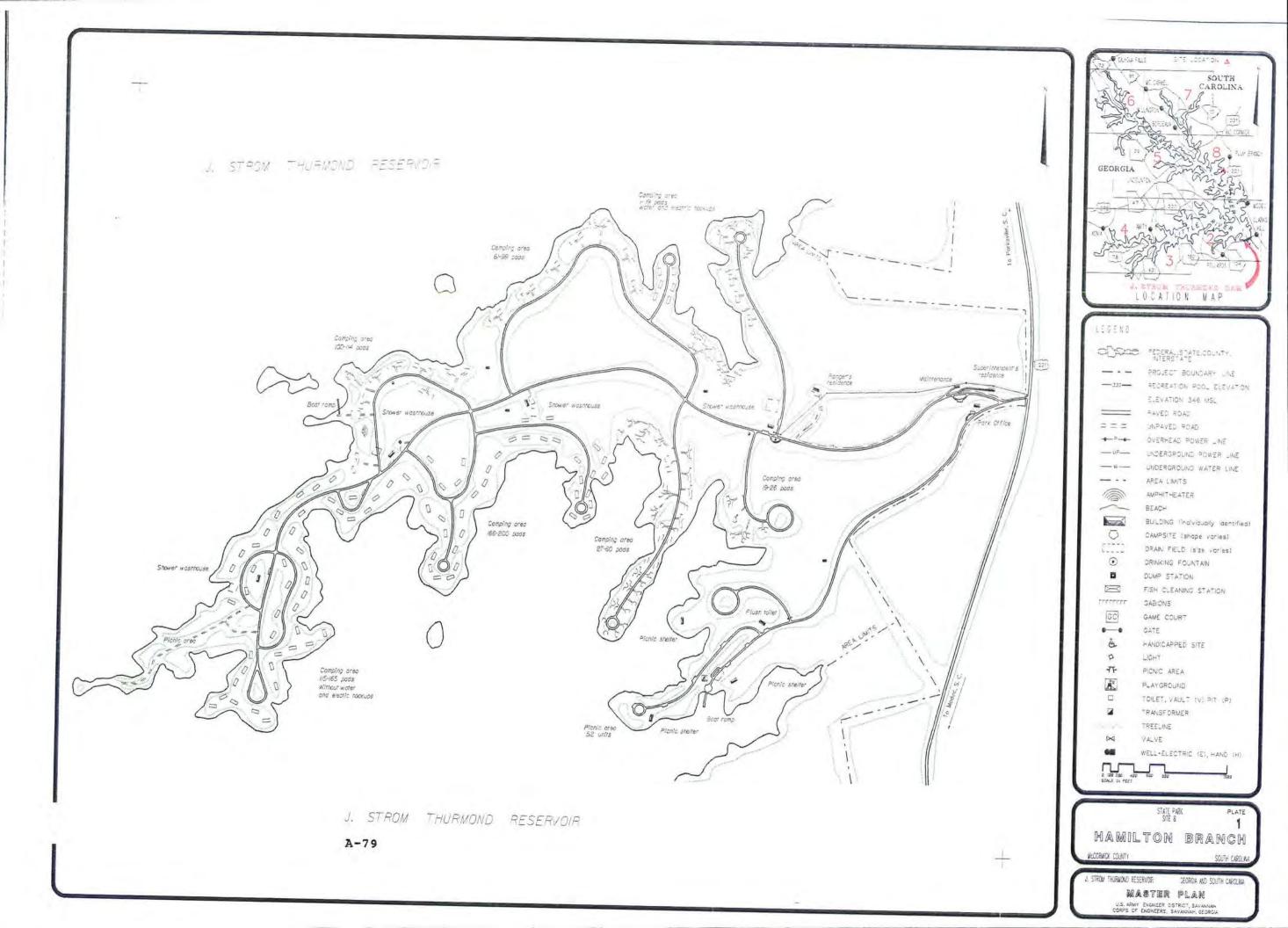
B. Two launching ramps are available for use.

C. Five picnic shelters, 2 flush toilets, 2 dump stations, 2 shower washhouses, 1 amphitheater, and 1 playground are available.

IV. Design Intent

The State will continue to operate the park with no major changes in services.

V. Proposed Facilities



Baker Creek (Plate 2), (Site 18)

I. General Description

This 1,305 acre State Park is reached from Highway 378 west of McCormick, South Carolina. The park is on the Little River, South Carolina, portion of the lake.

II. Site Analysis

A. Erosion is slight in this area because of its protected location.

B. Easy access and a beach area makes this a popular area for picnickers as well as campers.

III. Existing Facilities

A. This park contains 68 picnic and 100 campsites and a group camping area.

B. Boaters have the use of 2 boat launching ramps with car/trailer parking.

C. The area has 1 shower washhouse pavilion, 3 flush toilets, a mini golf course, beach area, fishing dock, two docks, a dump station, and a large playground.

D. The park has a refreshment stand and a nature trail.

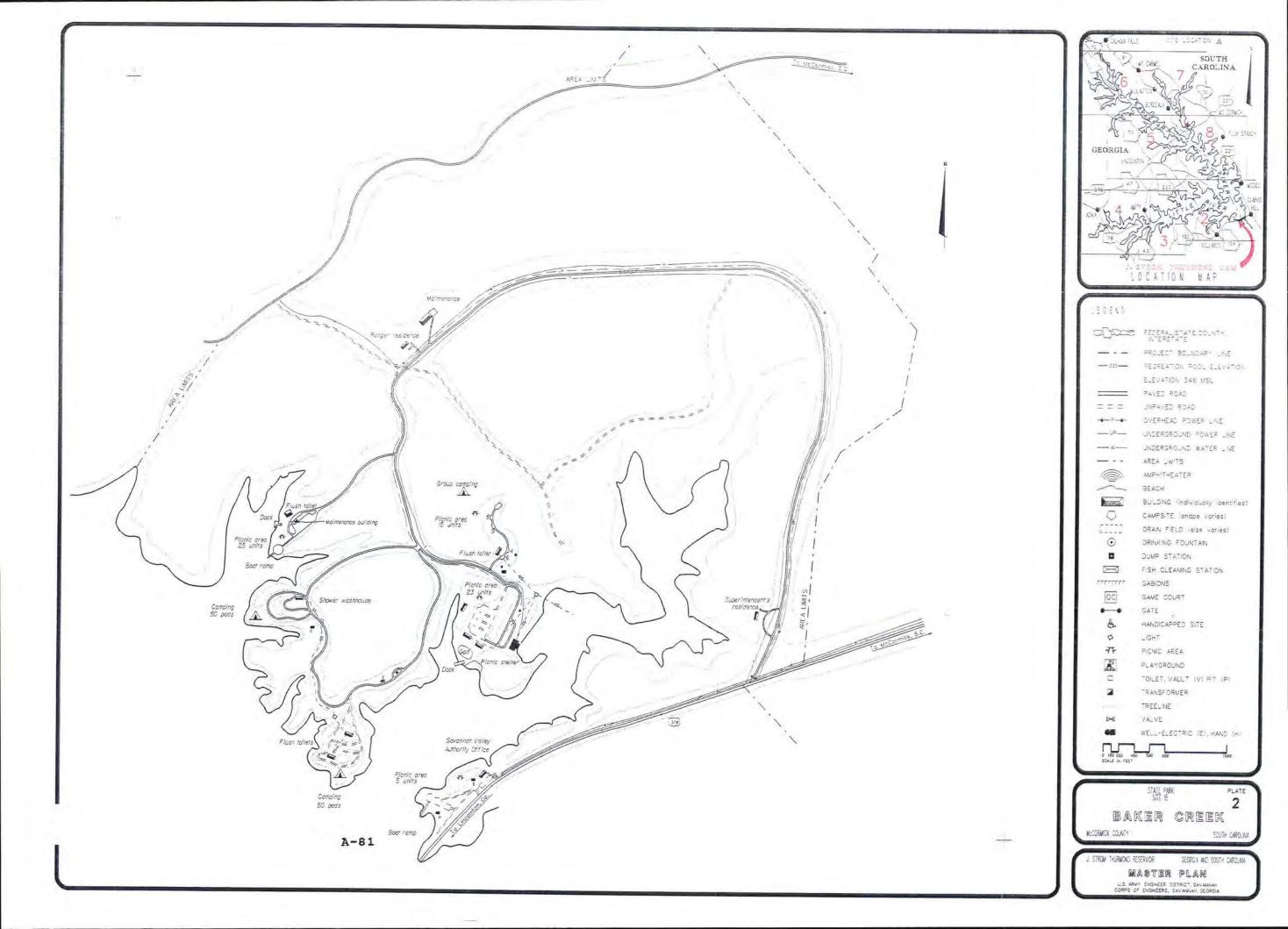
E. There is a ranger/superintendent's resident on site.

IV. Design Intent

The State will continue to operate the park in its present form.

V. Proposed Facilities

A new entrance road is proposed in the future.



Hickory Knob (Plate 3), (Site 30)

I. General Description

A. This 1,036-acre State Park is several miles west of Baker Creek State Park and is accessed from State Road 7 from McCormick, South Carolina.

B. The bulk of the development is on a peninsula of the main body of the lake.

II. Site Analysis

Shoreline erosion is evident but not extensive of this rolling to gently sloping site.

III. Existing Facilities

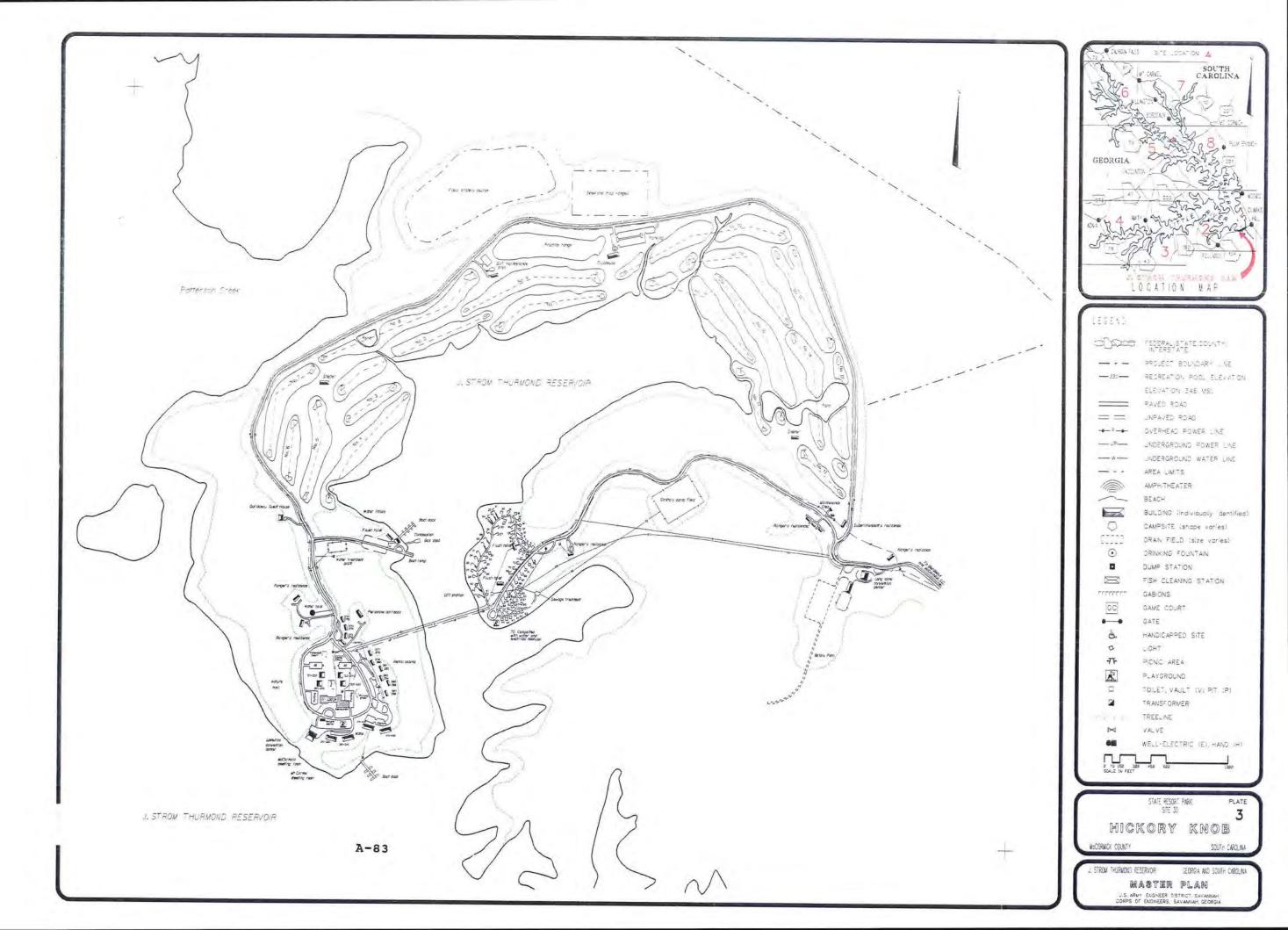
A. This very popular State Park has a cabin/motel complex with convention center for 20 to 200 persons, 75 camp units, tennis courts, volleyball court, playground, putting green, skeet and trap ranges, field archery course, 75 camp units, playground, nature trail, swimming pool, bicycle rentals, restaurant, and a campground.

B. An 18 hole golf course, club house, practice range, rental boats, launching ramps, and fishing supplies are available.

IV. Design Intent

The State will continue to improve the operation of this popular park.

V. Proposed Facilities



Bobby Brown (Plate 4), (Site 7)

I. General Description

This 665 acre park is located 18 miles from Elberton, Georgia of Georgia Highway 72 and is quite close to the Damsite for Richard B. Russell.

II. Site Analysis

This park is on a peninsula at the confluence of Broad River and the Savannah River. Steep topography and shoreline erosion limit waterfront development at this park.

III. Existing Facilities

A. The park has 60 campsites equipped with water and electrical hookups.

B. The park has 50 picnic sites and 5 reserved picnic shelters.

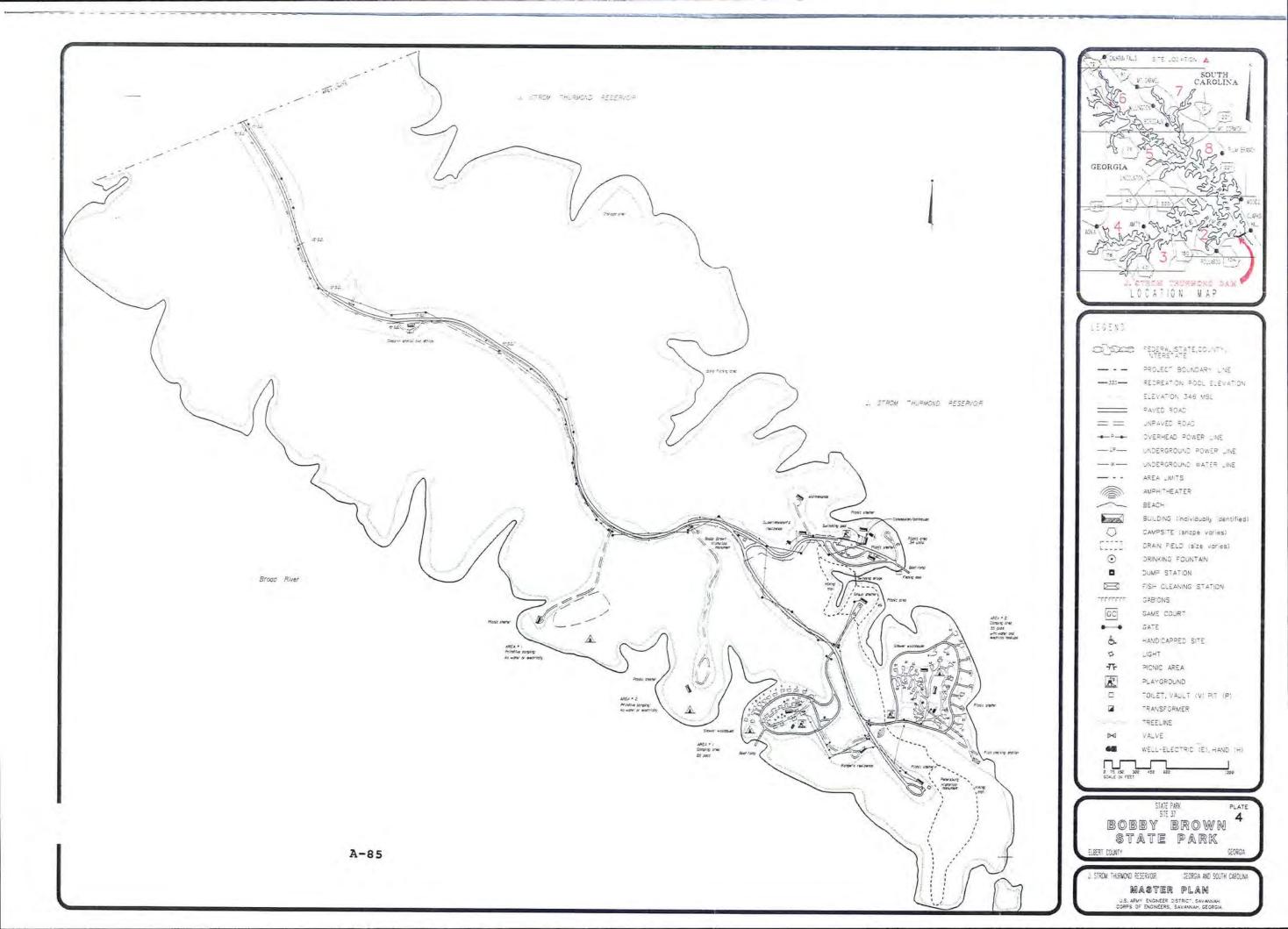
C. The park has a checking station, 2 launching ramps, a pool, concession and bathhouse, hiking trails, a 2 dump stations, 3 playgrounds, swinging bridge, 2 comfort stations, amphitheater, fishing dock, and a fish cleaning station.

D. There are residences for the park superintendent, assistant superintendent, and ranger.

IV. Design Intent

The State will continue to operate this park.

V. Proposed Facilities



Elijah Clark (Plate 5), (Site 56)

I. General Description

This 447 acre park is located 7 miles from Lincolnton, Georgia off U.S. Highway 378. The park is just across the river from two South Carolina State Parks.

II. Site Analysis

This heavily wooded park (190.5 acres are undeveloped) is quite popular, but has been developed to capacity and will need additional land in order to expand.

III. Existing Facilities

A. The park has 20 two-bedroom rental cabins and 165 campsites with water and electrical hookups.

B. There are 135 picnic sites and 7 shelters, 5 of which are reserved picnic shelters, and 1 group family shelter.

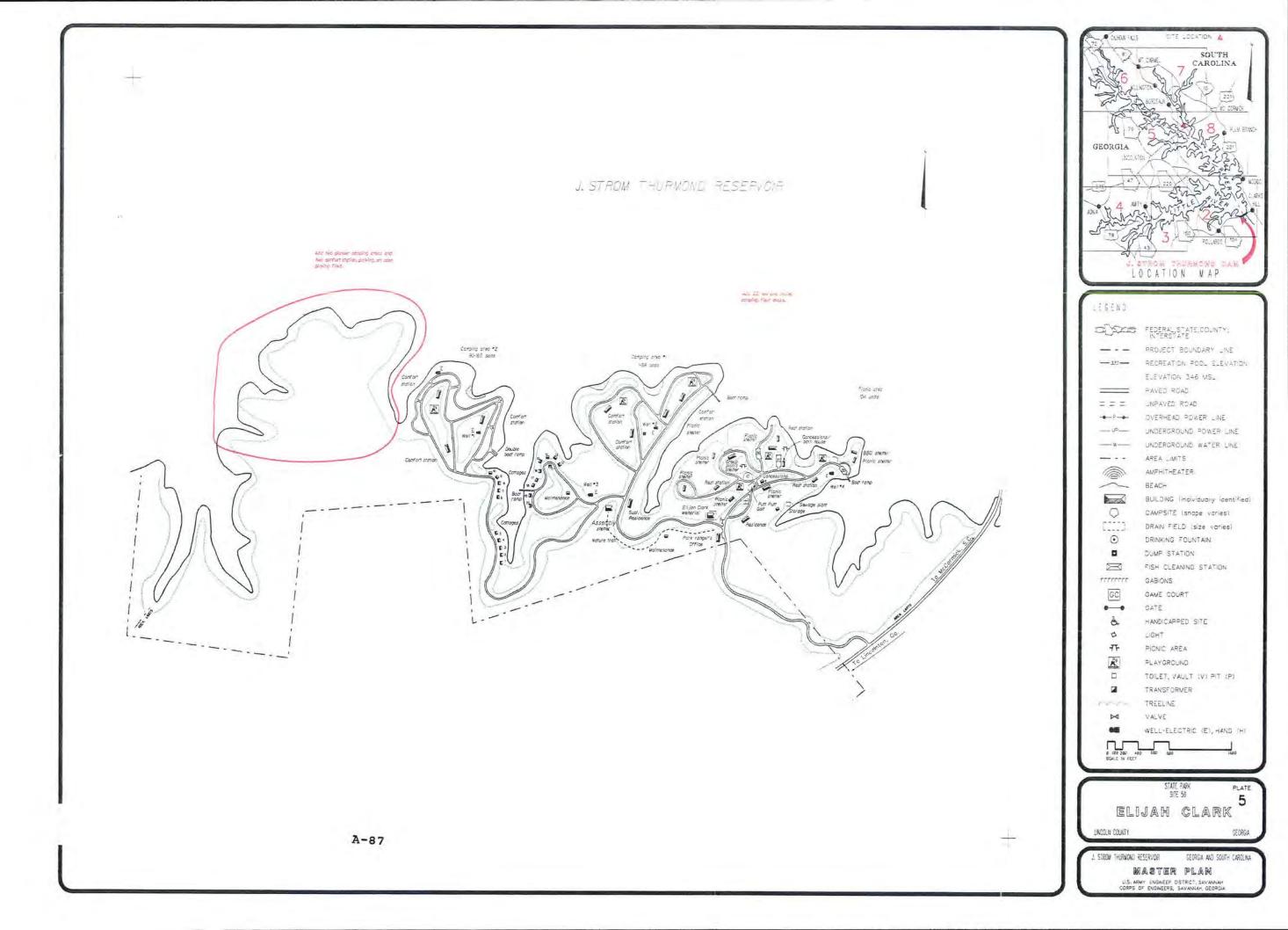
C. Four launching ramps, a trail system, and a 3 beaches, 1 bathhouse are available to users.

IV. Design Intent

The State will continue to operate this park in its present form.

V. Proposed Facilities

Future expansion will include 2 comfort stations, two pioneer camps, parking, open playfield, 25 tent and trailer camping sites, 4 docks, and additional parking.



Mistletoe (Plate 6), (Site 94)

I. General Description

A. This 1,920 acre park has ample room for expansion.

B. This park is 12 miles north of Exit 60 on Interstate 20 and is on the Little River, Georgia, arm of the lake.

II. Site Analysis

Shoreline erosion is minimal on this heavily wooded site.

III. Existing Facilities

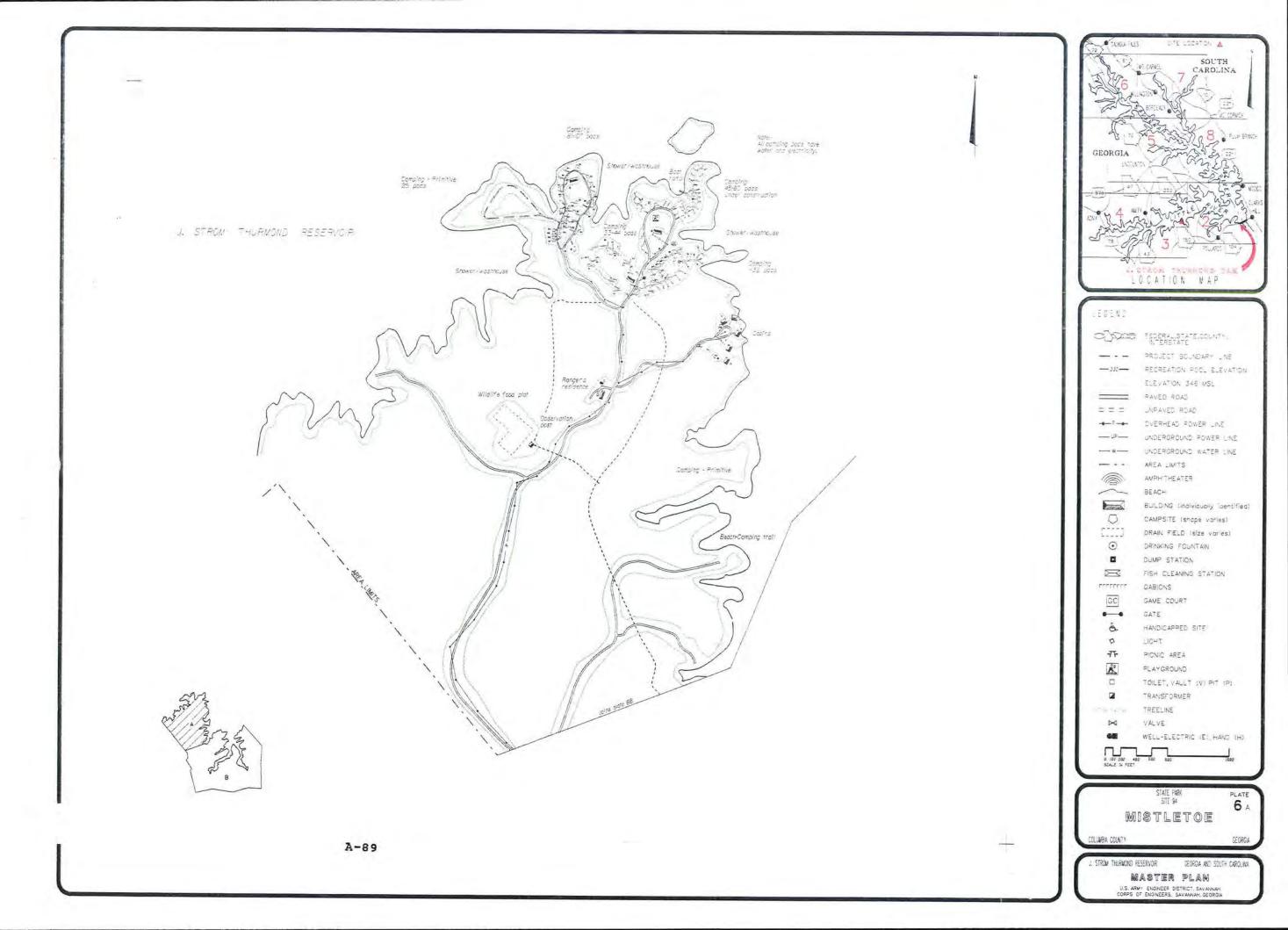
The park has 20 rental cottages, 107 campsites with electricity, 35 primitive campsites, 272 picnic sites, 8 picnic shelters and 1 reserved group picnic shelters. In addition, the park has boat launching ramps, a beach and bathhouse, playgrounds, nature trail, observation tower, telephone, and a small concession area.

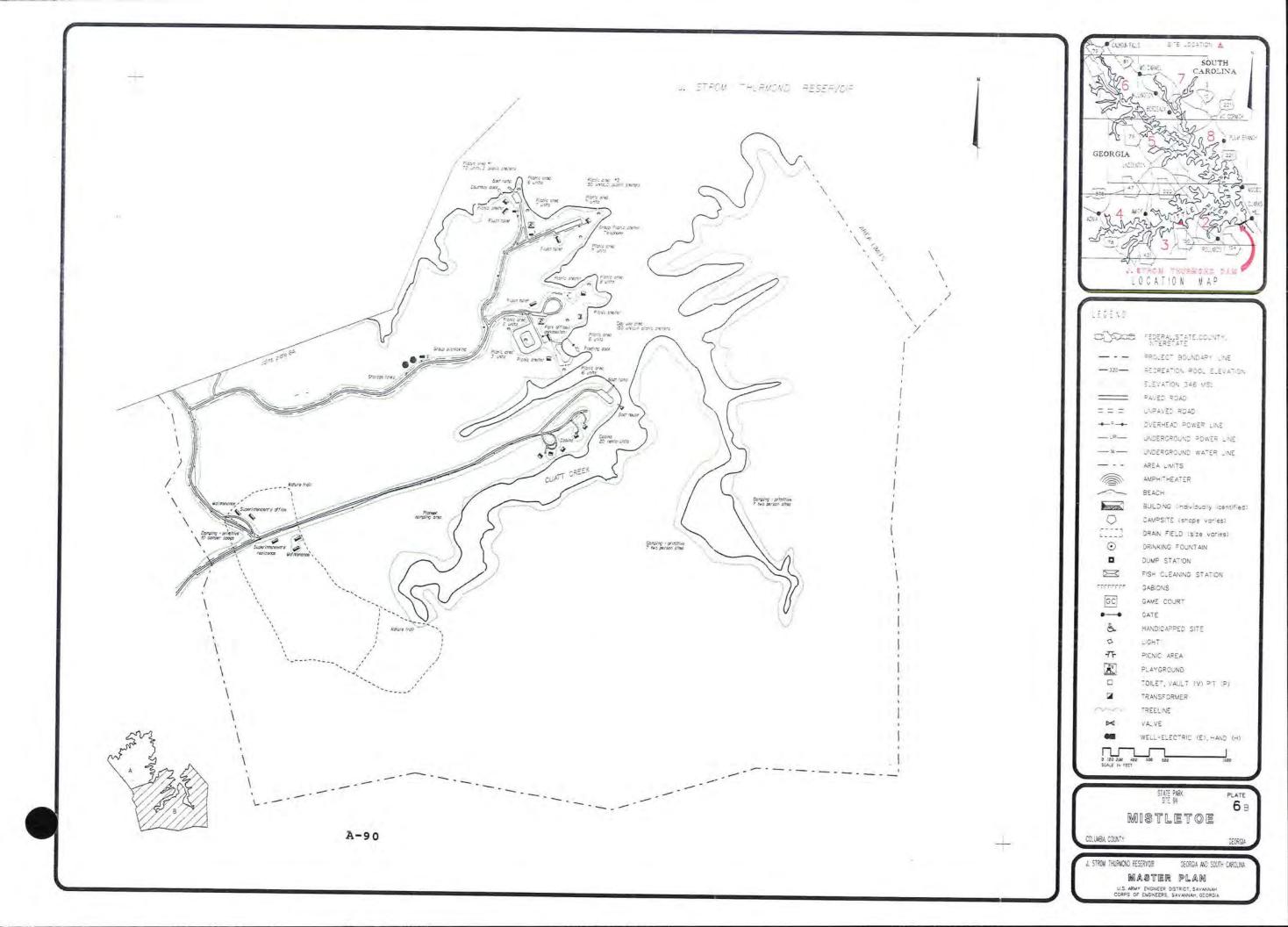
IV. Design intent

The State will continue to operate this park.

V. Proposed Facilities

None.





## 6.A.3. County Parks

Holiday Park (Plate 1), (Site 85)

I. General Description

This 333 acre park is operated by Wilkes County and is located on the Little River, Georgia portion of the lake.

II. Site Analysis

The park has moderate erosion and is heavily wooded.

**III. Existing Facilities** 

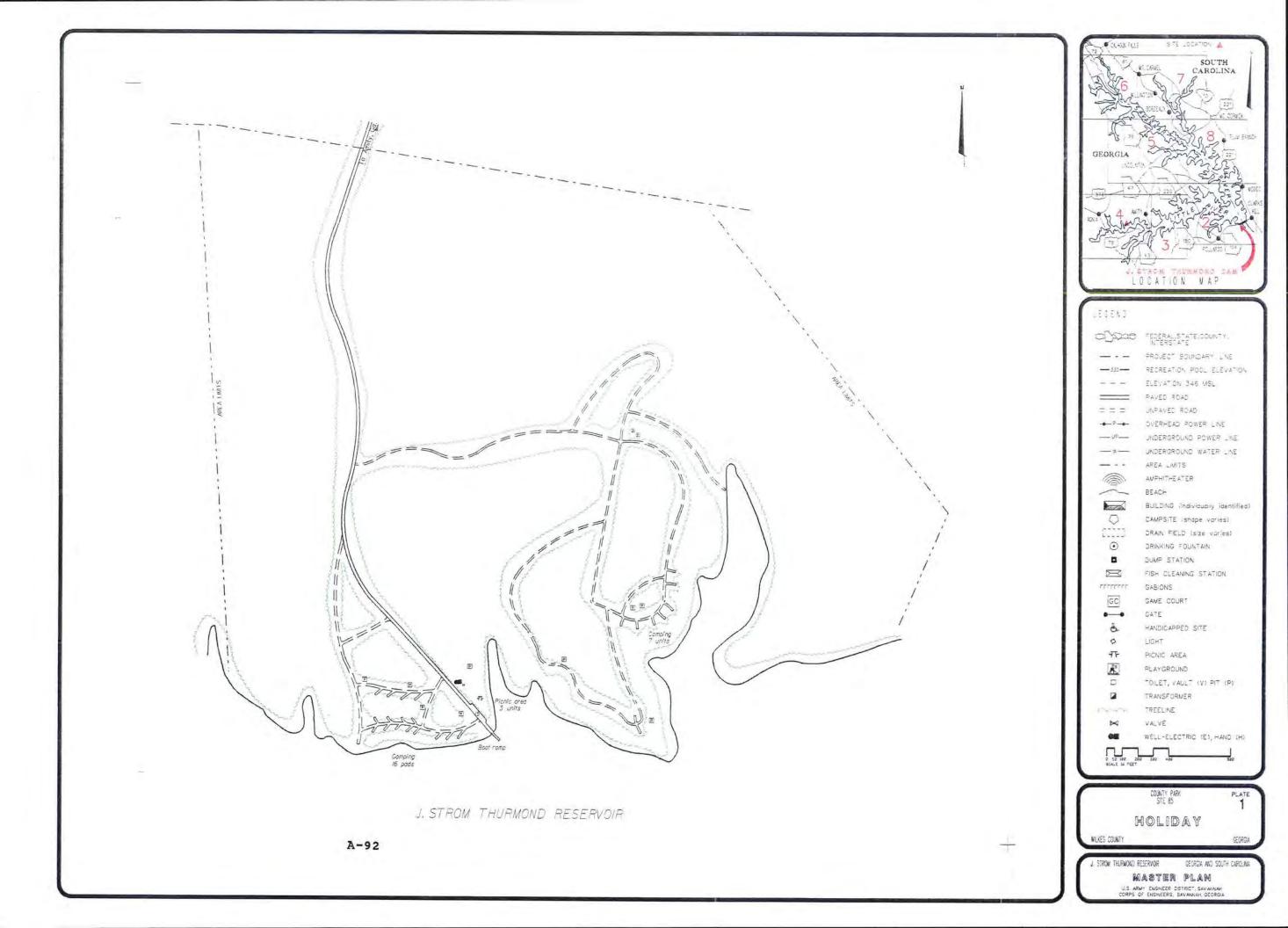
This area has 23 campsites, 10 pit toilets, 3 picnic units, 15 car/trailer parking spaces, and a boat launching ramp.

IV. Design Intent

The county will continue to operate the park in its present form.

V. Proposed Facilities

Lack of funding prohibits expansion of facilities as well as impacts maintenance of existing facilities.



Wildwood Park (Plate 2), (Site 101)

I. General Description

This 991 acre park is subleased form the State by Columbia County. The park is just off Georgia Highway 104 on the Keg Creek portion of the lake.

II. Site Analysis

Erosion is minimal on this heavily wooded site.

**III. Existing Facilities** 

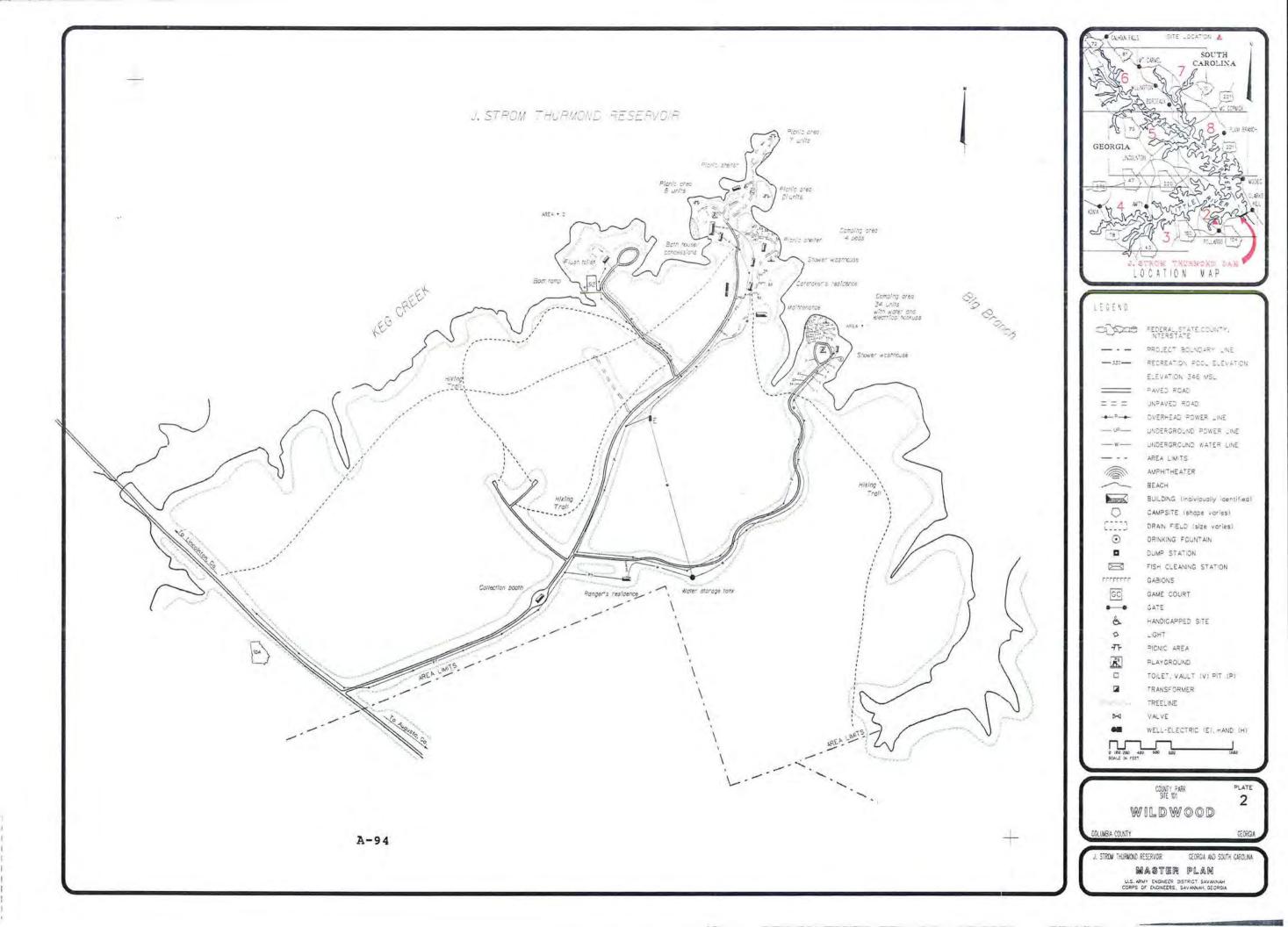
Existing facilities include 60 campsites with water and electrical hookups, 60 picnic sites, 2 ramps with parking for 40 cars with trailers, 2 playgrounds, a beach, 2 shower washhouses, 1 flush toilet, and 2 residences for park personnel.

IV. Design Intent

Columbia county will continue to operate this park.

V. Proposed Facilities

None.



Soap Creek Recreation Area (Plate 3), (Site 59)

I. General Description

This site is located immediately adjacent of U.S. Highway 378 approximately 5 miles east of Lincolnton, GA and contains 91 acres. It is leased to the Lincoln County Board of Commissioners.

II. Site Analysis

Shoreline erosion is extensive on the developed portion of the site.

**III.Existing Facilities** 

A. The site is presently developed for day use and boat launching.

B. The site contains a small day use area with 6 picnic units and a beach.

C. The existing boat launching area has parking for 15 cars and 40 car/trailers.

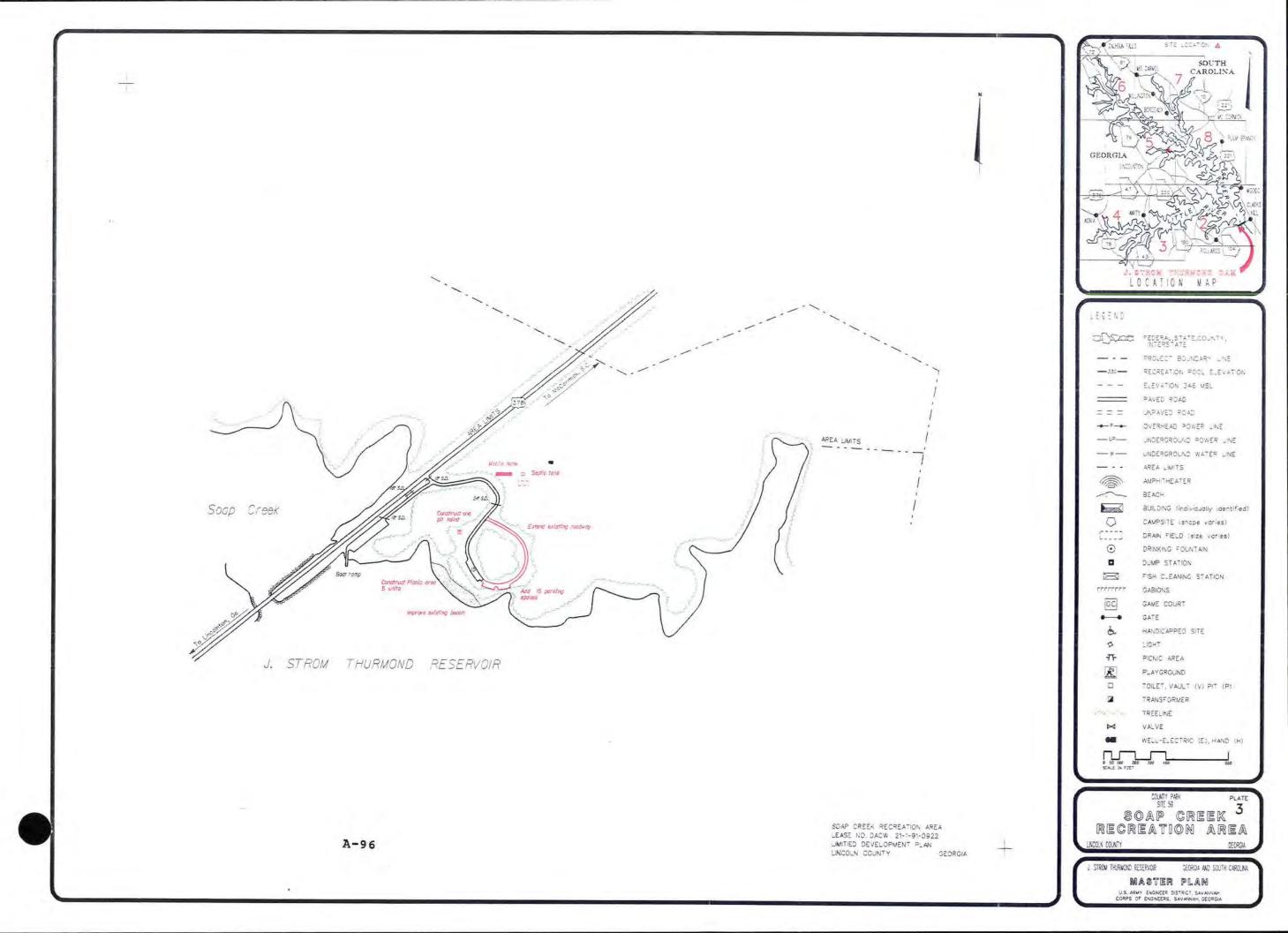
D. Caretaker on site.

IV. Design Intent

The area was closed in 1981 and reopened after being leased to Lincoln County for operation.

V. Proposed Facilities

Future construction to include 5 picnic units, improvement of beach, extend existing roadway, one pit toilet, and 15 additional parking spaces.



Parksville Wayside (Plate 4), (Site 95)

I. General Description

This site consists of 10.1 acres located on Highway 221/28. The area was constructed by the South Carolina Highway Department and is maintained by McCormick County.

II. Site Analysis

A. The area is almost flat and water depths are quite shallow.

B. Limited land base, adjoining private businesses and high visibility from the highway limits potential expansion.

C. The area is used heavily in the spring by bank fishermen. Highway travelers use the area for a rest stop.

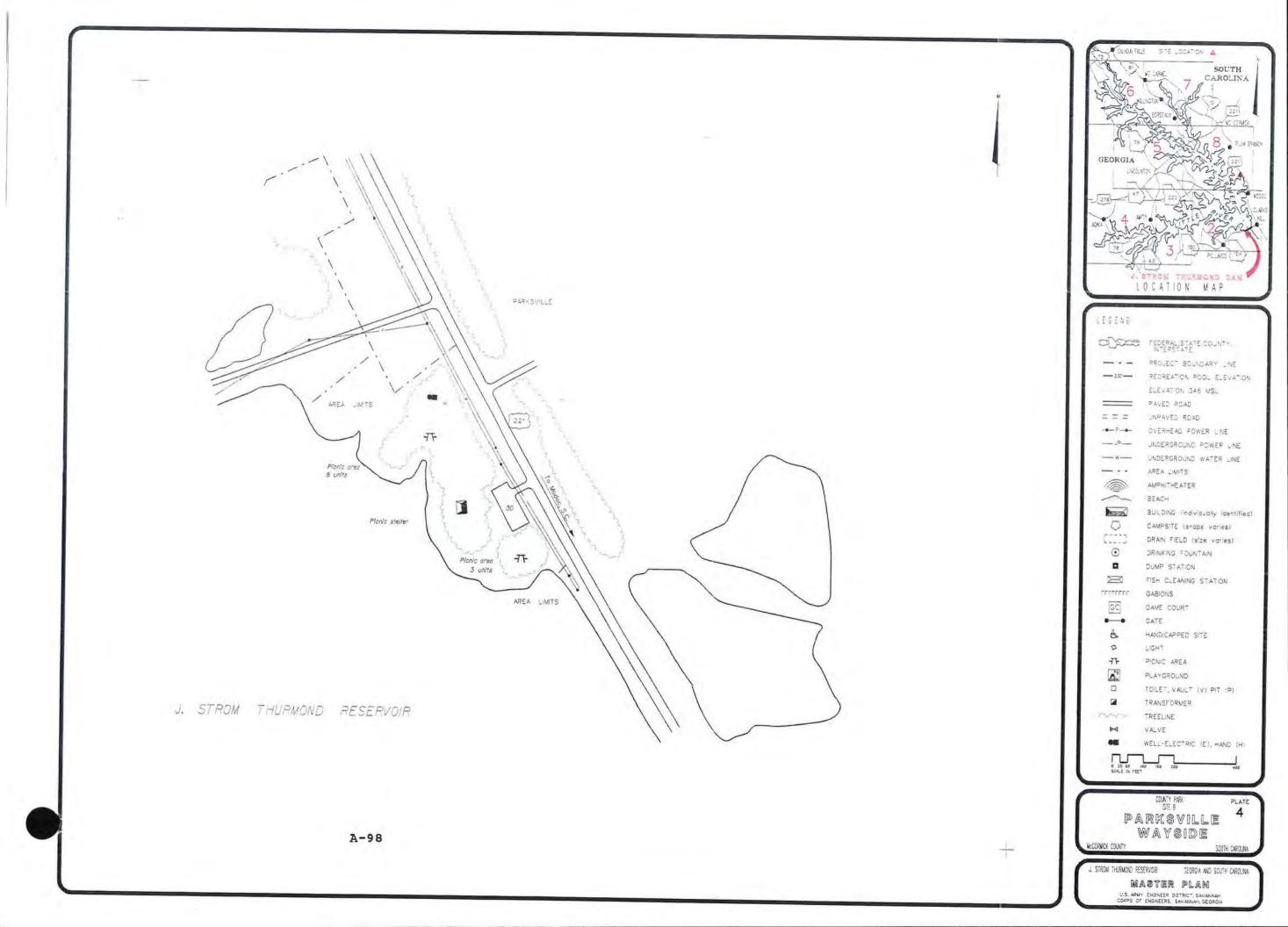
**III.Existing Facilities** 

Parking for approximately 30 cars, a picnic shelter and 12 picnic sites are available for public use.

IV. Design Intent

The area will be maintained by the county for day use activities.

V. Proposed Facilities



# 6.A.4. Marinas

Clarks Hill Marina (Plate 1, Site 13)

I. General Description

This 49-acre marina is about 5 miles west of Plum Branch, South Carolina.

II. Site Analysis

Moderate erosion is evident on this gently rolling site.

**III. Existing Facilities** 

A. This marina has 30 campsites with electrical hookups.

B. This marina offers wet boat storage for 110 boats and 24 dry storage slips, launching, and repair service, gas dock, 2 shower washhouses, concessions, restrooms, and a sanitary dump station.

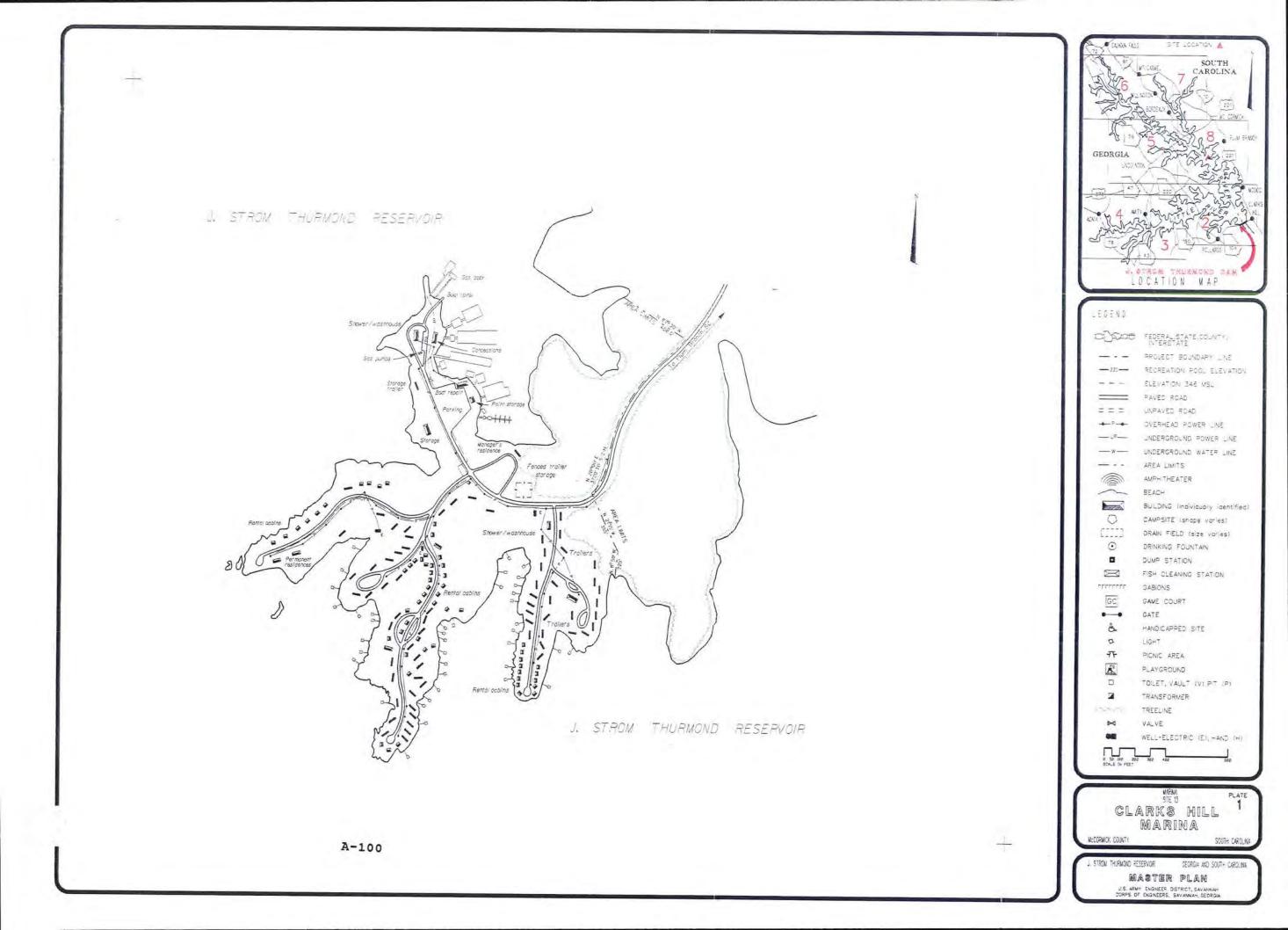
C. Rental cabins, fenced trailer storage, and private mobile home space are available.

IV. Design Intent

This area will continue to be operated for the boating public as a service center.

V. Proposed Facilities

The existing private mobile homes are being phased out and removed or being converted to marina ownership for public rental.



Soap Creek Marina (Plate 2, Site 60)

I. General Description

This 139-acre lease site is located just off U.S. Highway 378 near the midpoint of the lake.

II. Site Analysis

This gently sloping site has minimal erosion. Shallow water and low bridges restrict large boats from the area.

**III. Existing Facilities** 

A. This marina offers picnic and camping facilities in addition to boat launching, wet and dry boat storage, sales and repair of boats, a fishing pier, fuel and bait and tackle.

B. The restaurant at this marina is extremely popular and attracts large crowds during the evening hours.

C. There are 9 rental cabins, 5 rental boats and 56 camping pads available.

IV. Design Intent

The lease site will continue to operate in its present form.

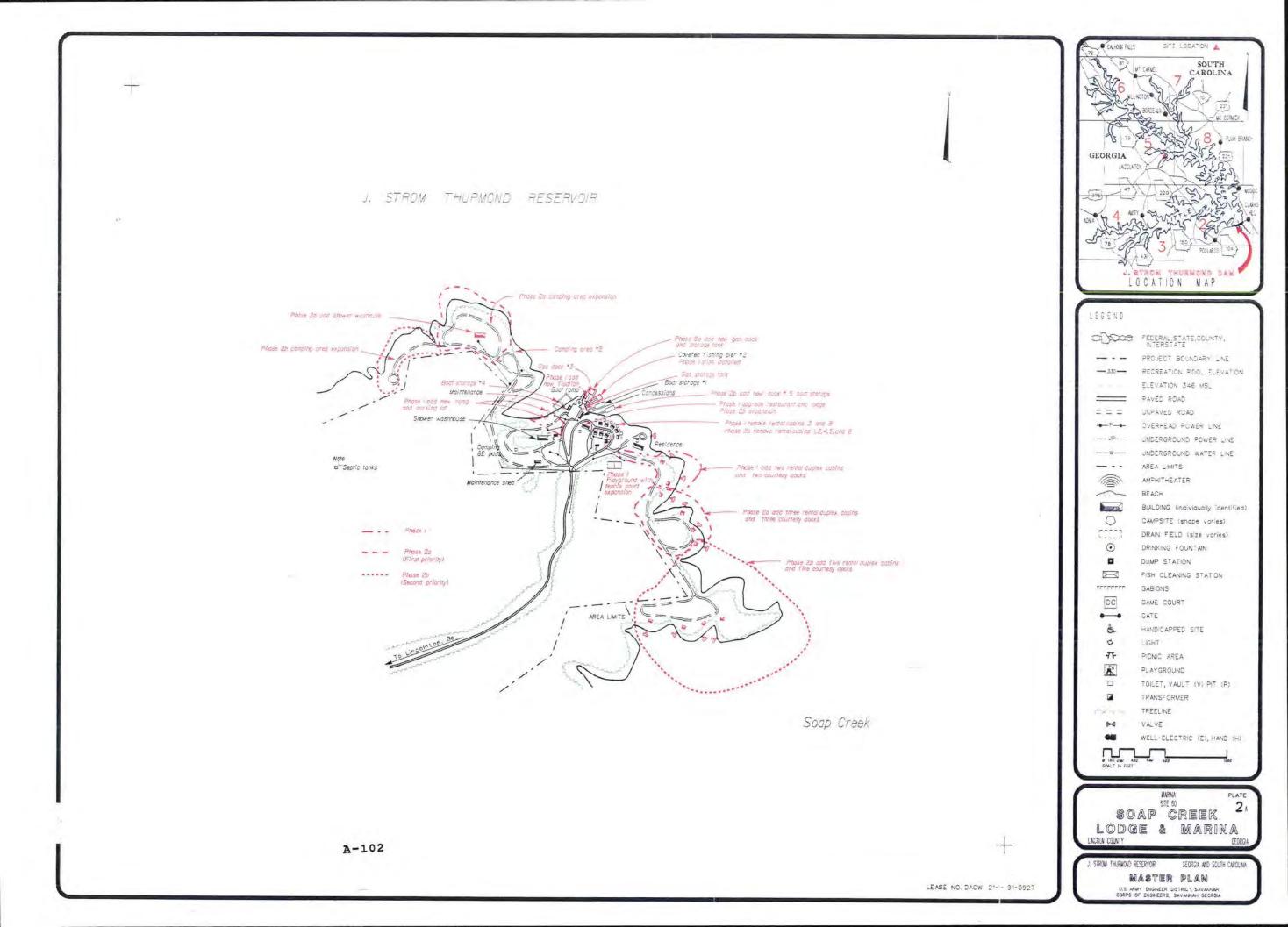
V. Proposed Facilities

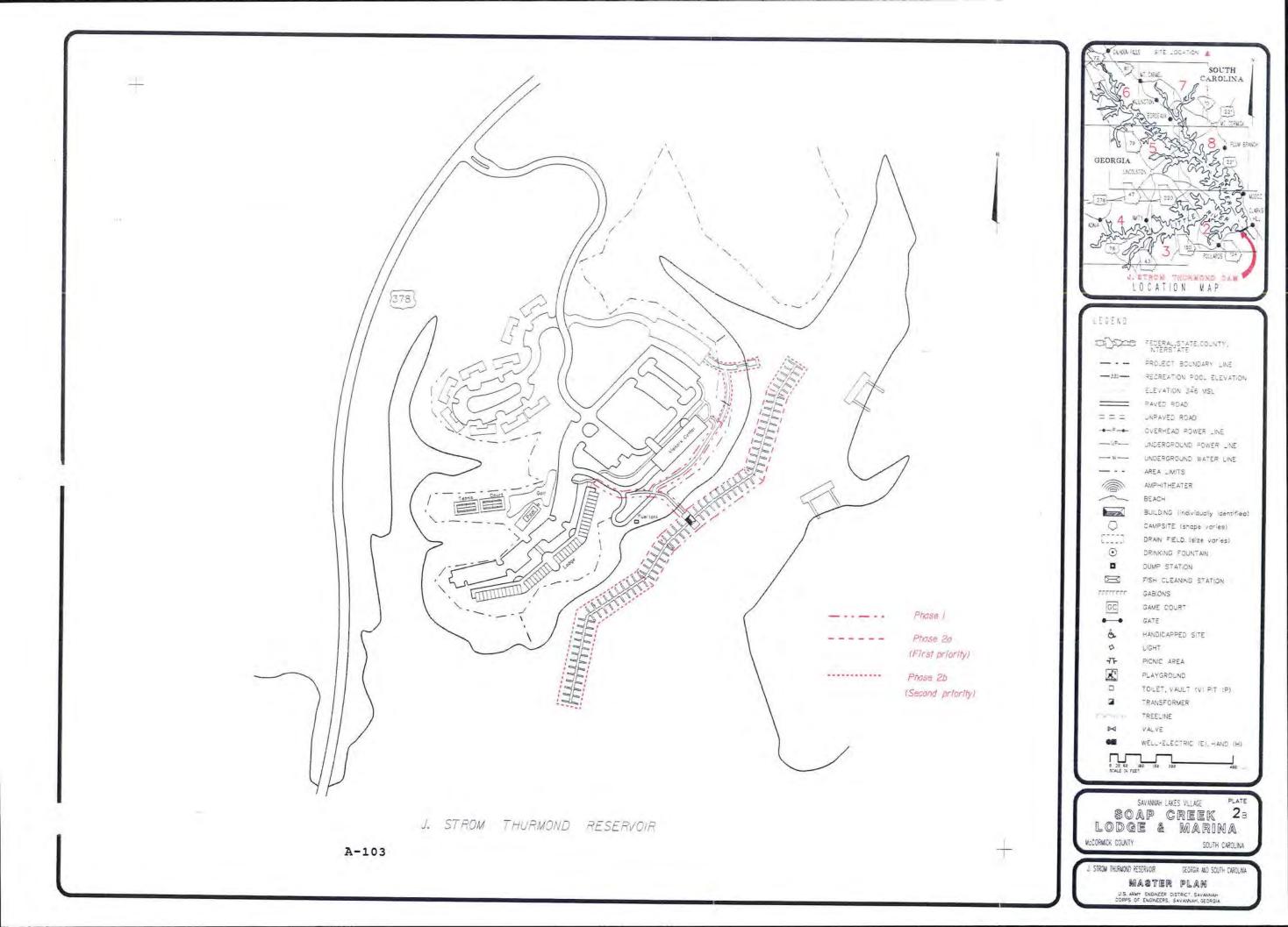
A. The marina operator has proposed a two phase expansion.

Phase 1 - Playground with tennis court expansion; two rental duplex cabins, two courtesy docks, new ramp and parking lot; new flotation dock and an upgrade of the restaurant.

Phase 2a - Camping area expansion, add a shower washhouse, add a new gas dock and storage tank, and additional cabins.

Phase 2b - Additional cabins and expansion of the camping area.





Raysville Bridge Marina (Plate 3), (Site 89)

I. General Description

This 25-acre marina is located on the southeast side of Georgia Highway 43 where it crosses the Little River, Georgia, portion of the lake.

II. Site Analysis

This site is gently sloping and is being adequately developed by the lessee.

**III. Existing Facilities** 

A. The marina has 21 campsites with electrical and water hookups.

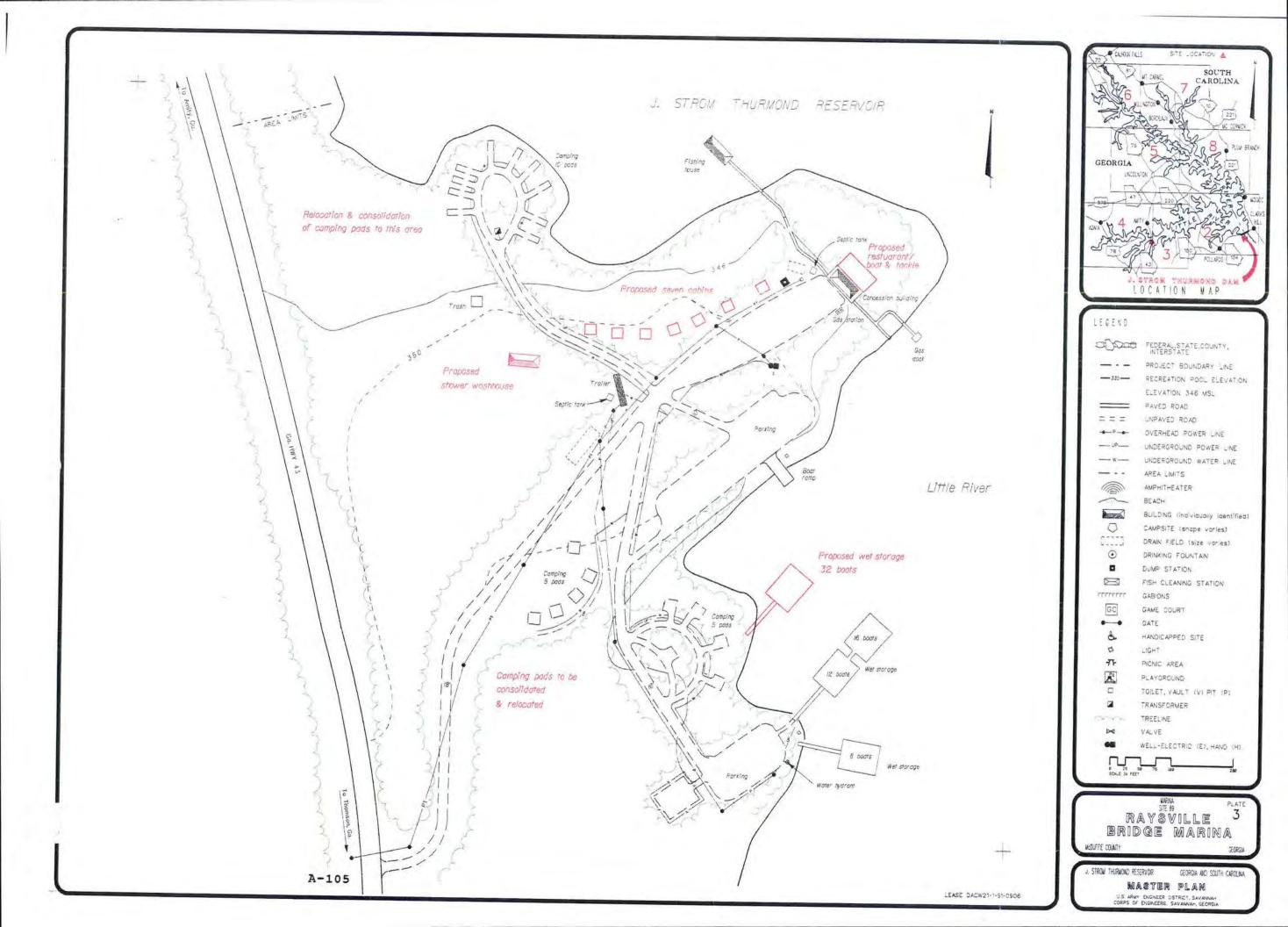
B. Boat repairing, 38 wet storage slips and 40 dry storage spaces and a launching ramp are available.

IV. Design Intent

The area will continue to be operated in its present form.

V. Proposed Facilities

None



Mike's Marina (Plate 4), (Site 95)

I. General Description

This 68-acre marina is located on the southwest side of Georgia Highway 47 where it crosses the Little River, Georgia, portion of the lake.

II. Site Analysis

This area has moderate erosion problems and a rolling terrain. A shallow harbor, prevailing winds and a low bridge limit mooring potential.

**III. Existing Facilities** 

A. The marina has 10 campsites with electric hookups, a restroom, rental cabins, and 5 picnic units.

B. Available facilities include 2 launch ramps, boat rentals, fuel sales, bait and tackle ship with sales and repair, 85 set storage slips, 86 dry storage spaces and 45 shed storage spaces.

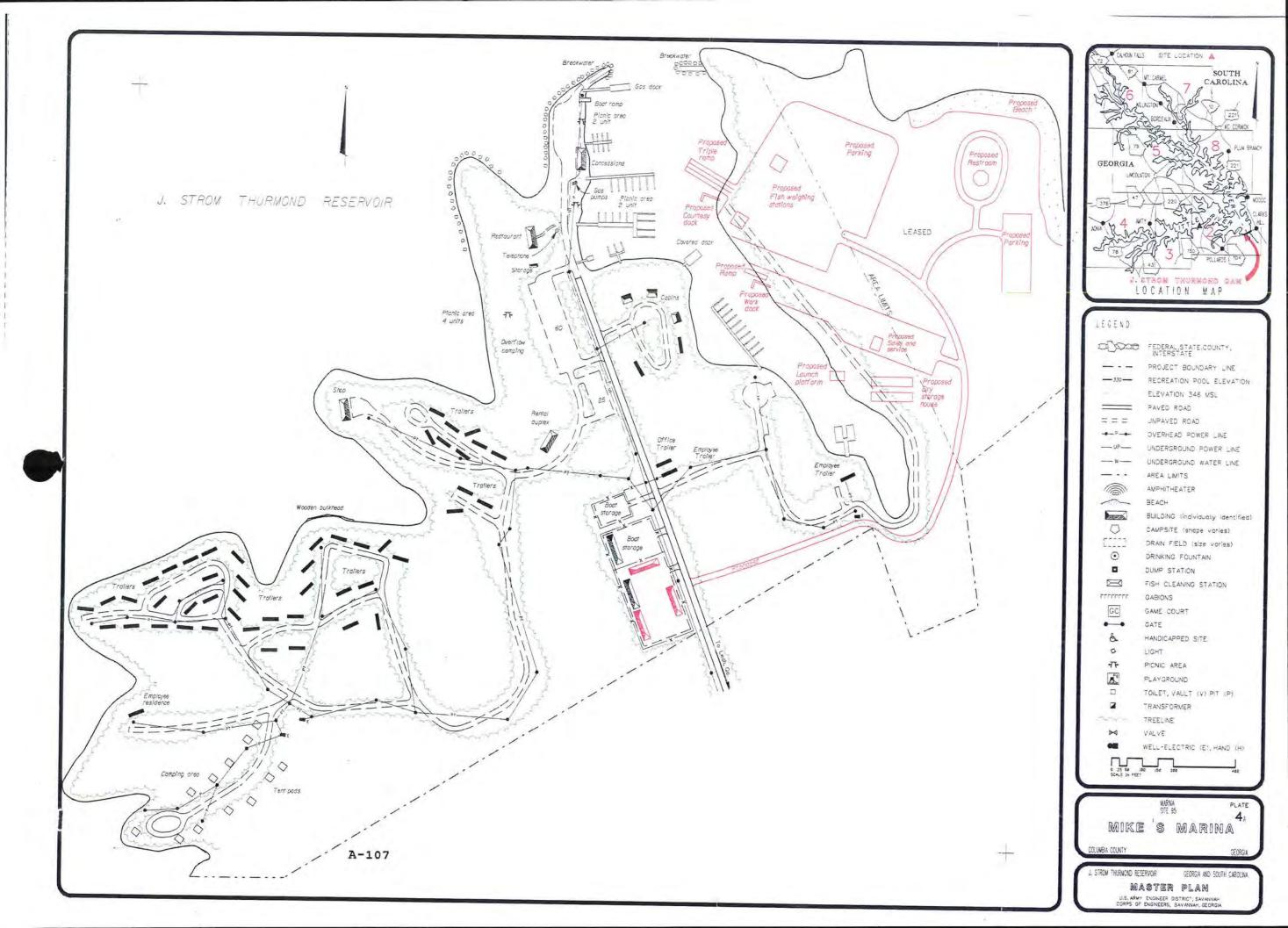
C. Fifty-eight privately owned mobile homes will be phased out by 30 April 1991.

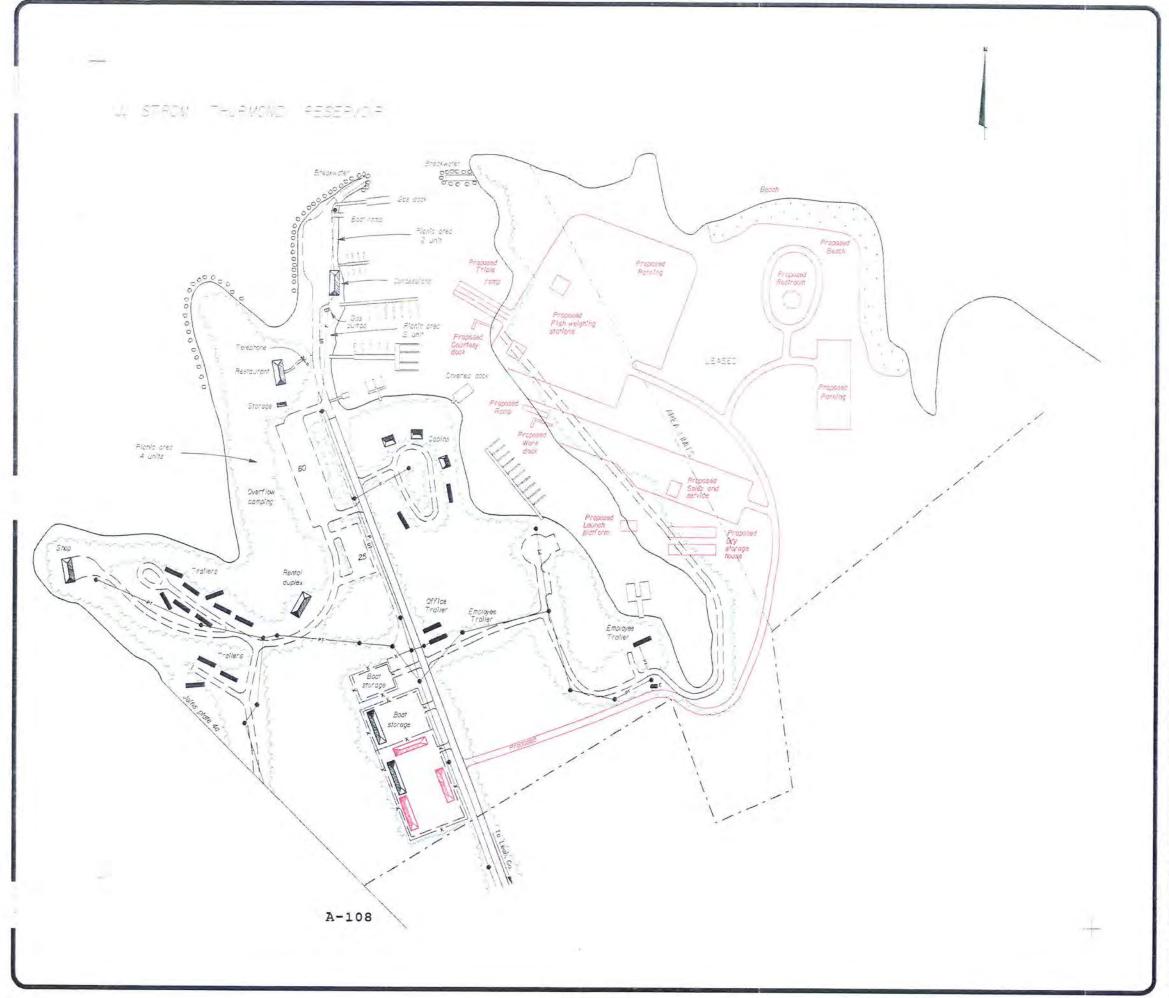
IV. Design Intent

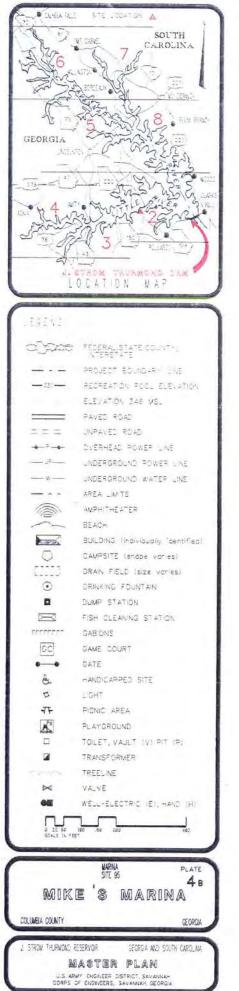
The area will continue to be operated in its present form.

V. Proposed Facilities

The owners have proposed to expand their operation into the area east of the main cove at the marina. Their proposed development includes additional ramps, parking, a day use area, rental cabins, a beach and pavilion, restrooms a playground, and covered wet storage slips.







Tradewind Marina (Plate 5), (Site 104)

I. General Description

This 180-acre marina is near the west side of the dam just off U.S. Highway 221.

II. Site Analysis

This almost flat wooded site is well developed and heavily used.

III. Existing Facilities

A. The marina offers shower washhouse, boat launching, repair, fuel sales, 272 wet storage slips, 78 dry storage berths and 56 land storage spaces. berths and 56 land storage spaces.

B. A sales area for boating and fishing equipment and snacks is available.

C. Seventy privately owned mobile home spaces are approved. Thirty-six units are in place. Non-transient mobile home spaces will be phased out upon expiration of the current lease in 30 April 2008.

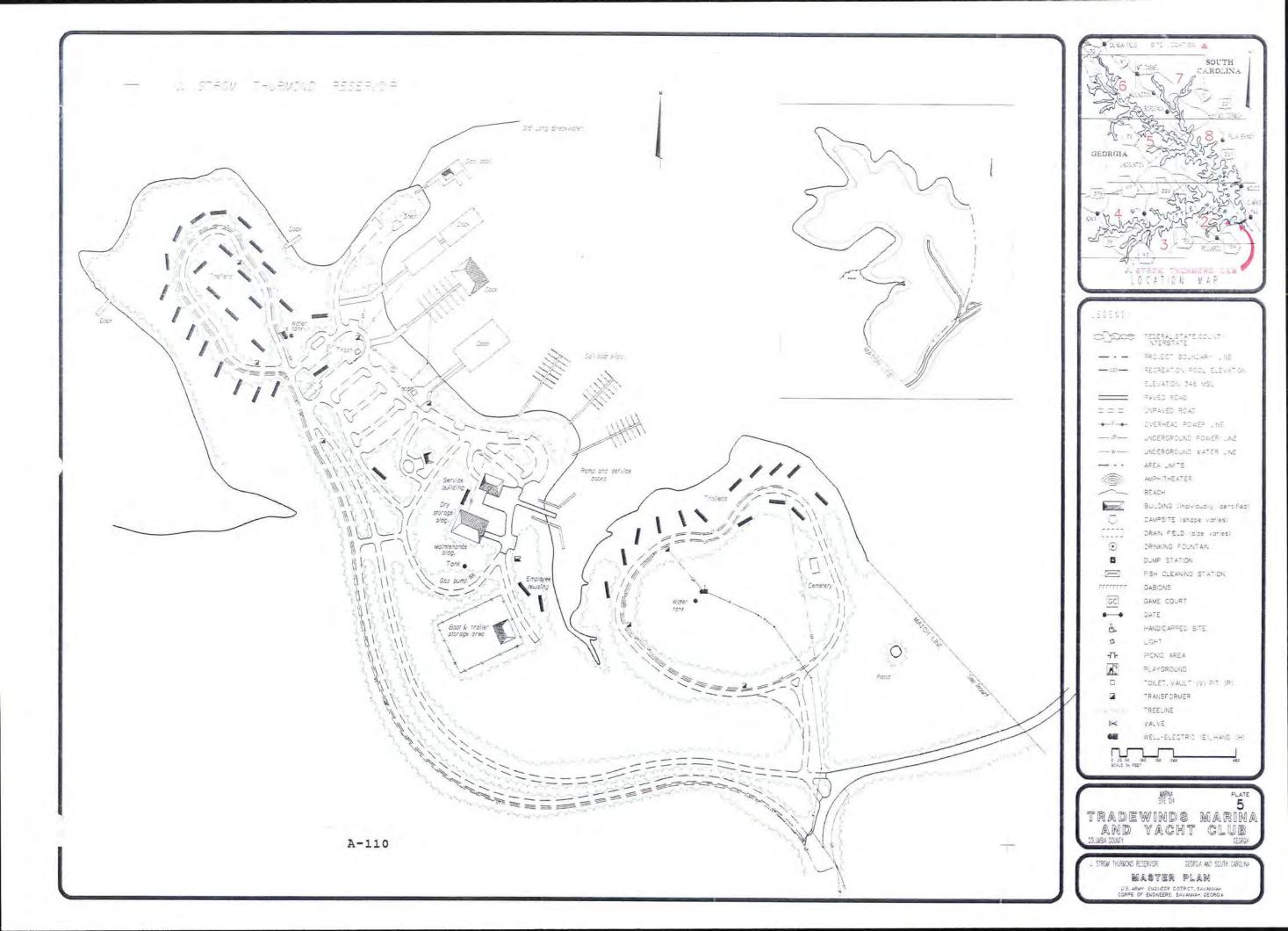
IV. Design Intent

This marina will continue to serve the public in its present capacity.

V. Proposed Facilities

A. Expansion of the marina has been approved.

B. A motel/conference center, yacht club/lodge, beach area, and equestrian facilities have been approved.



Ft Gordon Recreation Area (Plate 1)

I. General Description

A. This 908 acre park has ample room for expansion.

B. This park is 1 mile north of Leah, Georgia on Georgia Highway 47 and is on the Little River, Georgia, arm of the lake.

II. Site Analysis

The site is generally heavily wooded.

III. Existing Facilities

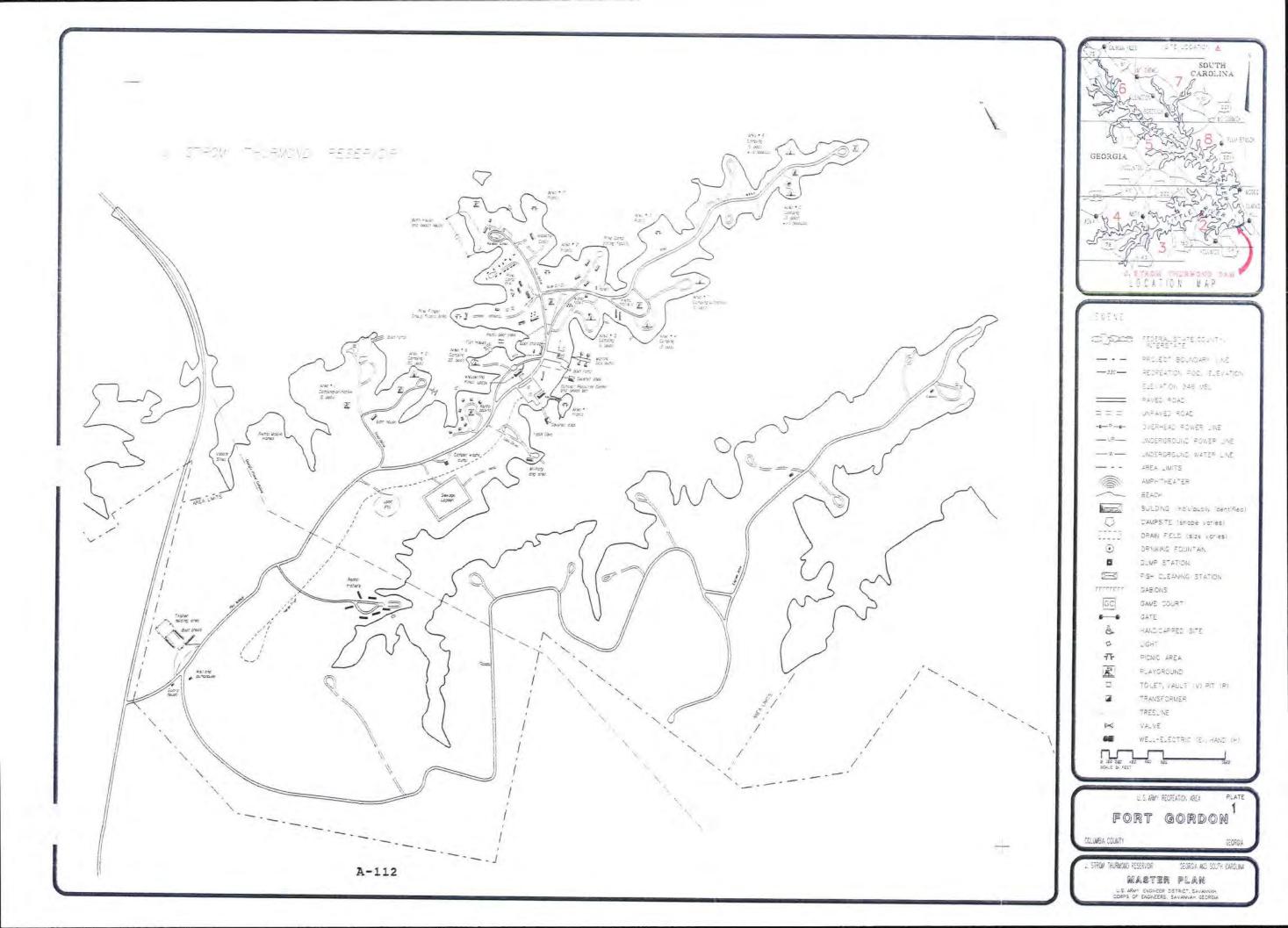
The park has rental cottages and manufactured housing units, primitive campsites, campsites with water and electricity, picnic sites, and picnic shelters. In addition, the park has boat launching ramps, a beach and bathhouse, playgrounds, a concession area, trailer dump station, covered docks, marina, rental boat docks, and a lodge.

IV. Design intent

Ft Gordon will continue to operate this park.

V. Proposed Facilities

Unknown



# APPENDIX B

AGENCY GUIDANCE

# 6.B. APPENDIX B-AGENCY GUIDANCE

## 6.B.1. Public Laws

The following laws pertain to the construction, operation, and management of the project. This list is not meant to be all inclusive and does not identify all statutes relating to the operation and management of civil works projects.

<u>Flood Control Act of 1944 (Public Law 78-534)</u>. This act authorized construction of the Thurmond Project. Included by reference the Senate Document containing the initial <u>project</u> <u>purposes of flood control</u>, <u>navigation</u>, and <u>hydropower</u>.

Water Resources Development Act of 1986, Public Law 99-662, dated November 17, 1986, added Recreation and Fish and Wildlife Management to the project purposes for J. Strom Thurmond Reservoir. It also stated that "The Secretary and the State of South Carolina in consultation with the United States Fish and Wildlife Service, shall identify those Federal lands at Clarks Hill Lake to be utilized for purposes of fish and wildlife habitat mitigation." Identification of these lands was the result of mitigation plans prepared for offsetting habitat loss in the construction of the Richard B. Russell project.

Section 1134 outlines the conditions for termination of leases. Directs that no houseboat, boathouse, floating cabin, sleeping facilities at marinas or docks will be required to be removed from any Federal Resources water project if the permittee is in compliance with the license or permit.

It also states that lessees of leases being terminated on Thurmond Lake will be offered alternate sites at fair market value.

<u>Water Supply Act of 1958, as amended, PL 85-500</u>. This act allows the Corps of Engineers to reallocate water storage from hydropower to <u>water supply</u> if there is no significant impact on authorized project purposes. At Thurmond Lake, up to 50,000-acre feet may be reallocated without additional Congressional authority. Especially over the last five years, communities surrounding the lake have either increased their storage allocation or have made their initial request.

The Federal Water Pollution Control Act Amendments of 1972, PL 92-500, established a national goal of eliminating all pollutant discharges into the waters of the U.S. which added water quality as a consideration in general terms.

<u>Federal Water Project Recreation Act, as amended, (P.L. 89-72)</u> requires that full consideration be given to opportunities for recreation and fish and wildlife enhancement; that recreation planning be based on coordination of use with existing and planned Federal, state, and local recreation; and that non-Federal administration of recreation and enhancement areas be encouraged; requires that, without cost-sharing, no facilities for recreation and fish and wildlife enhancement be provided except those justified to serve other project purposes or as needed for public health and safety. On December 22, 1987, President Ronald Reagan signed into law legislation, <u>P.L. 100-209</u>, which <u>changed the name</u> of Clarks Hill Dam, Lake and Highway to J. Strom Thurmond Dam, Reservoir and Highway, in honor of the senior senator from South Carolina.

<u>Public Law 86-717</u> states a policy to develop and maintain reservoir lands so as to encourage future resources of readily available timber and to increase the value of such areas for conservation.

<u>Public Law 84-999</u>. This law provided for the sale of lands in reservoir areas under the jurisdiction of the Department of the Army for cottage site development and use.

<u>Water Resource Development Act of 1976 (Public Law 94-587)</u>. The greatest impact in the Act for Thurmond was the authorization for law enforcement contracts with local law enforcement agencies.

<u>Flood Control Act of 1970, Section 234</u>, provides that persons designated by the Chief of Engineers shall have authority to issue a citation for violations of regulations and rules of the Secretary of the Army, published in the Code of Federal Regulations.

<u>Water Resources Planning Act, as amended</u>, declares a policy of encouraging the conservation, development, and utilization of water and related land resources.

Fish and Wildlife Coordination Act, as amended, Public Law 85-624, requires that wildlife conservation receive equal consideration with other features of water-resource development programs; that proposals for work affecting any body of water be coordinated with the Fish and Wildlife Service (FWS) and the State wildlife agency; that recommendation of the FWS and the State agency be given full consideration; and that justifiable means and measures for wildlife purposes, including mitigation measures, be adopted, requires that adequate provision be given for the use of project lands and waters for the conservation, maintenance, and management of wildlife resources, including their development and improvement. Provides that the use of project lands for wildlife management be in accordance with general plans approved jointly by the Army, Interior, and the State wildlife agency.

Endangered Species Act, as amended, requires that Federal agencies shall, in consultation with FWS (or the National Marine Fisheries Service), utilize their authorities in furtherance of conserving endangered and threatened species and take such action as necessary to assure that their actions are not likely to jeopardize such species or destroy or modify their critical habitat - sets up a procedure of coordination, assessment, and consultation.

<u>National Environmental Policy Act of 1969, as amended</u>, declares a national environmental policy and requires that all Federal agencies shall, to the fullest extent possible, use a systematic, interdisciplinary approach which integrates natural and social sciences and environmental design arts in planning and decision making; study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources; utilize ecological information in the planning and development of projects, and include an environmental impact statement in every recommendation or report on proposals for major Federal actions significantly affecting the quality of the human environment.

Archeological and Historic Preservation Act. as amended, ("Reservoir Salvage Act"), provides for the preservation of historical and archeological data which might otherwise be lost or destroyed as the result of flooding or any alteration of the terrain caused as a result of any Federal construction projects; for coordination with the Secretary of the Interior whenever activities may cause loss of scientific, prehistorical, historical or archeological data; and for expenditure of funds for recovery, protection and data preservation.

National Historic Preservation Act, as amended, states a policy of preserving, restoring, and maintaining cultural resources and requires that Federal agencies take into account the effect of any undertaking on any site on or eligible for the National Register of Historic Places; afford the Advisory Council on Historic Preservation opportunity to comment on such undertaking; nominate eligible properties to the National Register; exercise caution in disposal and care of Federal property which might quality for the National Register, and provide for the maintenance of federally-owned and registered sites.

<u>Archeological Resources Protection Act of 1979</u>, protects archeological resources and sites which are on public lands and Indian land; fosters increased cooperation and exchange of information between governmental authorities, the professional community and private individuals. It establishes requirements for issuance of permits by Federal land managers to excavate or remove any archeological resource located on public or Indian lands.

<u>Water Resources Development Act of 1992, PL 102-580 dated 31 Oct 1992, Section</u> 305, addressees construction of boat ramps and docks at J. Strom Thurmond Lake. This allows persons who had previously held a lease, and now has replacement property, to have ramps or docks if they had these facilities on the original lease.

Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), Public Law 101-601 addresses the requirement for all museums and federal agencies which currently possess prehistoric or historic human remains and associated or unassociated funerary objects (previously recovered during archaeological site investigations) to prepare inventories and documentation so that individuals or native American tribal representatives can review and/or recover possession of the remains or associated funerary objects which are geographically or culturally associated with that particular tribe.

<u>Americans with Disabilities Act of 1990</u> (ADA), Public Law 101-336, addresses universal accessibility guidelines and sets accessibility standards for disabled individuals which must be applied during the design, construction, or alteration of public buildings and places of business including hotels, restaurants, dry cleaners, grocery stores, schools, museums, theaters and public park and recreation facilities. Commercial facilities undergoing renovation, including public accommodations, must make the renovated area accessible. The law also covers employment provisions, public services, public transportation and telecommunications. In addition, ADA provides for the private right of action for an individual under provisions of the Civil Rights Act of 1964.

6.B.2. Executive Orders

The following Executive Orders impact the operation of the cultural environment.

a. E0-11593. Provides for the protection and enhancement of the cultural environment.

b. EO-12512. Provides for a review of public lands for excessing and retention.

6.B.3. Regulations

The following Corps of Engineers' regulations impact on project operations. This list is not meant to be all inclusive, but does contain a majority of the regulations directly affecting civil works project operations.

ER 200-2-2, Policy and Procedures for Implementing NEPA.

ER 405-1-12, Real Estate Handbook.

ER 1105-2-100, Policy and Planning, Planning Guidance

ER 1110-2-400, Design of Recreation Sites, Areas and Facilities.

ER 1130-2-400, Recreation-Resource Management of Civil Works Water Resource Projects.

ER 1130-2-404, Recreation Use Fees.

ER 1130-2-405, Use of Off Road Vehicles on Civil Works Projects.

ER 1130-2-406, Lakeshore Management at Civil Works Projects.

ER 1130-2-407, Operating and Testing Potable Water Systems in Compliance with the Safe Drinking Water Act.

ER 1130-2-414, Natural Resource Management System.

ER 1130-2-435, Preparation of Project Master Plans.

ER 1165-2-400, Recreation Planning, Development, and Management Policies.

EM 1110-2-410, Design of Recreation Areas and Facilities - Access and Circulation.

EM 1110-1-400, Recreation Planning and Design Criteria.

SADvR 1110-2-10, Recreation-Resources Planning Design and Management.

# APPENDIX C

# CARRYING CAPACITY CALCULATIONS

#### 6.C. APPENDIX C--CARRYING CAPACITY CALCULATIONS

This appendix determines the recreation facilities needed to accommodate the optimum annual visitation, establishes a maximum visitation limit, and estimates the number of acres that should be developed for recreation. The procedures used are contained in "Guidelines for Understanding and Determining Optimum Recreation Carrying Capacity," January 1977, prepared by the Bureau of Outdoor Recreation, now called the Heritage Conservation Recreation Service.

6.C.1. Optimum Recreation Facility Load

The recommended procedure for determining optimum use involved five major steps:

(1) Determining important factors and information needed by consulting the "Primary Factors" list included in the report.

(2) Acquiring the information necessary to evaluate the specific condition or situation.

(3) Determining the effect of observed conditions on optimum capacity.

(4) Establishing a base optimum capacity figure by referring to the "suggested optimum carrying capacity ranges" included in the report for each activity.

(5) Selecting the optimum recreation carrying level for each activity. Design load calculations must be made to accurately determine the facilities of various types which will be needed at J. Strom Thurmond Reservoir by the time the optimum visitation of 12,469,000 is reached.

The design load formula or the total number of visitor activities to be accommodated on a typical summer weekend is based on four assumptions:

 62 percent of all the annual visits occur in the summer months (May -September).

(2) 72 percent of the visits occur on weekends.

(3) 93 percent of activities occur in designated recreation areas. (100 percent of camping and hunting occurs in designated areas.)

(4) 25 percent of visits are eliminated for sightseers.

## DESIGN LOAD COMPUTATIONS AT OPTIMUM VISITATION CAPACITY

Optimum	Summer Visits	Weekend	l Desig	nated Sightseer	P
Visitation	(May-Sep)	Visits	Area	Elimination	
12,469,000	x .62	x .72	x .93	x.75	

This calculation equals 3,882,398 which is the number of visits to designated recreation areas on the average weekend during the recreation season. It is further disaggregated to determine the number of facilities by activity that will be required at the optimum visitation.

#### PICNICKING

Season: late April through early October = 46 weekend days  $\frac{+3}{49}$  holidays

 $\frac{12,469,00 \times .62 \times .72 \times .93 \times .75}{49} = 79,233 \text{ visitors}$ 

% Picnickers: Persons picnicking on average weekend day

 $79,233 \times .15$  (Percent use for picnicking) = 11,885

11,885 / 3 (people/table) = 3,962

(Divided by 1.6 for turnover) x .5 (nontable users)] = 1,238

**Summary of Picnic Facilities Needed** 

1,238 picnic tables and grills

2,476 parking spaces required

3.962 groups = 2,476 parking spaces

1.6 turnover

11,885 picnickers need water and sanitary facilities

619 trash cans needed in picnic areas (1 for every 2 tables)

## PLEASURE BOATING

Season: early May - mid-September = 44 weekend days +3 holidays 47 days

 $\frac{12,469,000 \times .62 \times .72 \times 1 \times .75}{47} = 88,821 \text{ total visitors}$ (excluding sightseers)

 $88,821 \times .20$  (participation rate) = 17,764 pleasure boaters

17,764 / 2.89 (people/boat) = 6,146 pleasure boats

#### CAMPING

Season: late April through early October = 49 weekend days

 $\frac{12,469,000 \text{ x } .62 \text{ x } .72 \text{ x } 1 = 113,595}{49} \text{ total visitors}$ 

113,595 x .10 (percent use for camping) = 11,359 people camping on average weekend day

2,840 campsites at 4 people per campsite needed

## HUNTING

Season: 1 September through 30 February (10 peak days/mo) - 60 days

 $\frac{12,469,000 \times .62 \times .72 \times 1 \times .75 = 69,577}{60}$ 

69,577 x .15 (percent hunting) = 10,437 hunters on average weekend day

#### SIGHTSEEING

Season: late April through early October = 49 days

 $\frac{12,469,000 \text{ x}.62 \text{ x}.72 \text{ x}.93 \text{ x}.75}{49} = 79,233 \text{ excluding sightseers}$ 

 $\frac{12,469,000 \text{ x },62 \text{ x }.72 \text{ x }.93}{49} = 105,643 \text{ including sightseers}$ 

105,643 - 79,233 = 26,410 sightseers on average weekend day

26,410 x .30 (percent of sightseers using facilities)

## 7,923 sightseers requiring water and sanitation facilities

7,923 / 3 (people/car) + 4 (turnovers) = 660 parking spaces needed for sightseers

## FISHING

Season: 15 March through 15 December plus holidays = 80 days

 $\frac{12,469,000 \text{ x }.62 \text{ x }.72 \text{ x }.93 \text{ x }.75}{80} = 48,530$ 

% recreation use Persons fishing on  $\frac{\text{for fishing}}{48,530 \text{ x }.25} = \frac{\text{average weekend day}}{12,132}$ 

60% boat = 7,279 people fishing from boats

40% bank = 4,853 people fishing from the bank

7,279 people fishing from boats= 3640 fishing boats using2 persons per boatthe reservoir on an<br/>average weekend day

# 6.C.2. Maximum Practical Use

Maximum practical use (MPU) is the estimated resource capacity of the project expressed in annual visitor days as it relates to available water and land areas based upon defined carrying capacities or densities. In computing MPU, the following assumptions are made:

a. An upper bound on the number of boaters (includes all boating activities) on the design day exists as a function of boating patterns and total available water surface acres.

b. The attainment of this upper bound, B max, inhibits other activities on the design day proportionally. Accordingly, an upper bound on the facility design day load, L max, for all activities, can be computed. With this information applied to acceptable carrying capacities or densities, the quantity of recreation lands required can be computed for the design day.

c. Data collected on an annual basis has established the past activity usage and annual attendance.

d. MPU is regarded as the amount of use which can exist without detriment to the quality of the recreational experience or the environmental resources.

Likewise, the optimum carrying capacity (recommended density) is defined as the amount of recreational use of a recreation resource which reflects the level of use most appropriate for both the protection of the resource and the satisfaction of the participant. Although the MPU may never be reached at the project, it can nevertheless be determined.

# Maximum Design Day Load for Boating.

Boating includes all boating type activities. An estimate of the upper bound on boaters for the average summer weekend day at J. Strom Thurmond Reservoir is computed as follows:

 $B \max = \frac{(S \times R b) \times W}{W}$ 

Where: S = Average size of boating party (2.89)

R b = The turnover rate for boating (2.26)

W = Total water surface acres available for boating at average recreation pool

(71,100 Ac. x 95 percent) 67,545 Ac.\*

w = Water acres required per boat (5 Ac./boat)

$$B \max = \frac{(2.89 \times 2.26) \times 67,545}{5}$$

B max = 88,232 persons per design day

B max represents the maximum number of people (MPU) that can participate in general boating of all types on an average summer weekend day at J. Strom Thurmond Reservoir without detriment to the quality of the recreational experience or the environmental resources.

\*Note: Water surface available for general boating activities is based upon 5% (3,555 Ac.) reduction for shallow water not suitable for boating of the total water surface (71,100 Ac.).

## Maximum Design Day Load for all activities.

After B max is determined, the maximum design day load for all recreational activities at J. Strom Thurmond Reservoir on an average summer weekend day can be determined as follows:

L max <u>B max</u> gb

Where: B max = maximum design day load for boating (88,232 persons)

gb = percent of total annual general boating (includes pleasure boating, water skiing, boat fishing)

(40 percent)

L max <u>88,232</u> 0.40

L max 220,580 visitor days—Used in conjunction with density to determine the number of acres needed in developed recreation facilities.

The percentage for general boating which includes pleasure boating, boat fishing and water skiing is based upon acceptable data collected at J. Strom Thurmond Reservoir.

#### **Determination of Maximum Practical Use (MPU):**

The maximum practical use or resource capacity of J. Strom Thurmond Reservoir, expressed in annual visits to the project, is calculated as follows:

 $MPU = (\underline{L}_{max} \times \underline{D}) \\ P \times E$ 

Where:  $L \max = \max \max \operatorname{design} \operatorname{day} \operatorname{load} (220,580)$ 

D = number of weeks in recreational season (20)

P = percent of annual attendance during recreational season (75 percent)

E = percent of weekly use during recreational season expected on an average weekend day (37.5 percent)

MPU <u>220,580 x 20</u> 0.75 x 0.375

# MPU 15,755,714 annual visitor days (rounded to 16,000,000)

The percentage of annual attendance during the recreation season and weekly use during the recreation season on an average weekend day is based upon historic visitation data collected at J. Strom Thurmond Reservoir.

6.C.3. Recreation Use Density

The number of persons per acre on a weekend day during the peak season is used in conjunction with the maximum design load to determine an estimate of the number of acres that should be developed for intensive recreation facilities. A summary of the results is included in the following table.

Table 8 Density of Use By Year* (Persons/Acre)					
Year	<u>Status</u>	Annual <u>Visitation</u>	Net Acres Developed <u>Public Use</u>	Density	
Current	Master Plan	6,134,000	12,874	6.7	
	Optimum	12,469,000	21,383	8.2	
	MPU**	15,756,000	22,654	9.8	
	lations shown b um Practical Us				

For each of the years shown, the calculations determining the number of persons per acre for the average weekend day during the primary recreation season. Asterisks refer to notes following the calculations.

## For Current

 $\frac{6.134,000 \times 75\%^* \times 75\%^{***}}{20^{**} \times 2^{****}} = 86,259$  Persons per Day

<u>86,259 Persons Per Day</u> 12,874 Developed Acres = 7.5 Persons per Acre per Day

## For Optimum

 $\frac{12,469,000 \times 75\%}{20^{**} \times 2^{***}} = 175,345$  Persons per Day

<u>175,345 Persons Per Day</u> 21,383 Developed Acres = 8.2 Persons per Acre per Day

## For Maximum Practical Use

 $\frac{15,756,000 \times 75\%^* \times 75\%^{***}}{20^{**} \times 2^{****}} = 221,564$  Persons per Day

221,564 Persons Per Day 22,654 Developed Acres = 9.8 Persons per Acre per Day NOTE: The percentage used to make these calculations are optimum figures:
75 percent of annual visits occur from May - September (recreational period).
20 weeks in the recreational period.
\*\*\* 75 percent of weekly attendance occurs on weekend.
\*\*\*\*2 weekend day (one day).

Many of the Nation's recreation resources and facilities are experiencing overuse and overcrowding, which deteriorates the resource and diminishes people's recreation experiences. If the annual visitation could be limited to about 12,400,000 annual visitors (user density of 8.2 persons/acre), it would substantially increase the recreational experience by reducing overcrowding and allowing both the land and water resources better opportunities to survive as renewable resources. Unlike other Corps projects, J. Strom Thurmond Reservoir is now in a unique position to offer a very high quality experience to outdoor recreationists while being maintained as a constant renewable resource.

6.C.4. Recreation Land Required.

The amount of recreation land required at J. Strom Thurmond Reservoir (28,317 acres) for maximum practical use is dependent upon the maximum design load (220,580 annual visitor days) and the maximum density (9.8 people/acre).

Approximately 20 percent of the total recreation lands are not acceptable for normal high density recreational usage or development by economical or conventional construction methods. Physical restrictions for these lands include steep slopes, wet or swampy areas, eroded areas, ditches and natural drains, safety precautions against inhospitable vegetation such as stands of poison ivy, poison oak and sumac.

Other areas may be just as undesirable for development and could be used as buffer zones against private property and developments, public roads, powerlines, and cemeteries, active and inactive. Also, restricted areas may be needed to protect an undisturbed area and its scenic value, or for the provision and protection of wildlife in the area for the visitors' enjoyment.

Conversely, it is assumed that the balance, or approximately 80 percent (22,608 acres), of the recreation lands at J. Strom Thurmond Reservoir is adaptable to normal recreational activity or development. These lands will provide for future recreation at J. Strom Thurmond Reservoir.

A wide range of values can be applied to density of use dependent upon the recreational activity in question. A density range of 7.5 (persons/acre) on the low, to 12 (persons/acre) on the high scale provides, a maximum quality experience. As the density approaches and/or exceeds 12 persons/acre, the resource deteriorates. The optimum density desired for J. Strom Thurmond Reservoir is 8.2 persons/acre.

The maximum practical density is determined in the following table:

Table 9 Developed Recreation Lands Requi	red	
Total usable recreation land	22,608	acres (net)
Land unsuitable for high density recreation	5,709	acres
Total recreation land	28,317	(gross)
Maximum design day = User Density (persons Net recreation acres	/acre)	
$MPU = \frac{220,580}{22,608} = 9.8 \text{ (persons/acre)}$		Ť

A density of 9.8 persons/acre is the maximum practical utilization. A higher density will result in overcrowding and deterioration of the reservoir. To maintain an optimum density of 8.2 persons/acre, additional recreation land would be needed or it will be necessary to limit the total annual visitation to 12,469,000 and the maximum design day load to 174,320 visitors.

About 28,317 gross acres of recreation lands at J. Strom Thurmond Reservoir is reasonable to sustain a visitation not to exceed 16,000,000 annual visitors (rounded) which is determined to be the maximum practical use of the project. This is the maximum level at which the project can be used to both protect the resource and to reasonably preserve the people's enjoyment of the resource.

APPENDIX D

# **RECREATION DEMAND PREDICTIONS**

### 6.D. APPENDIX D--RECREATION DEMAND PREDICTIONS

# 6.D.1. Background

J. Strom Thurmond Reservoir is part of a three-lake system that includes Hartwell and Richard B. Russell lakes. Visitation at these three lakes is interrelated because of their proximities to each other. As shown in Figure 4, since Hartwell Lake's construction, it has generally had the highest annual visitation, followed by Thurmond Lake, and the newer Russell Lake. In 1993, Figure 5 shows Hartwell Lake accounts for 66.0 percent of the visitation, Thurmond Lake for 29.3 percent, and Russell Lake 4.7 percent.

Future visitation at the three lakes has been projected by linear regression using population and visitation information. The combined projected visitation has been apportioned among the three lakes using the criteria of reservoir capacity, accessibility, and past experience. The purpose of this analysis is to determine the demand for recreation at J. Strom Thurmond Reservoir.

An "activity occasion" is defined as participation by an individual in a specific outdoor recreation activity during any part of a day. A "recreation day" is defined as a visit by one individual to a recreation development or area for recreation purposes during any reasonable portion or all of a 24-hour period. The capacity of a lake is defined, for purposes of this study, as optimum visitation at that lake based upon recreation days of use.

#### 6.D.2. Area of Influence

The combined area of influence for J. Strom Thurmond Reservoir, Hartwell, and Richard B. Russell lakes is considered to be all counties and Standard Metropolitan Areas, which are within 100 miles of any of the three lakes. Table D-1 lists these counties.

	Tal	ole D-1		
UPPER SAVANNAH RIVER BASIN Area of Recreation Influence				
	RTH CAROLINA COUNTIES	SOL	JTH CAROLINA COUNTIES	
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13.	CLAY CLEVELAND GRAHAM HAYWOOD HENDERSON JACKSON	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22.	KERSHAW LAURENS LEXINGTON MCCORMICK NEWBERRY OCONEE ORANGEBURG	
		23. 24. 25.	SPARTANBURG UNION YORK	

Table D-	1Areas of	Influence	(Contin	nued)
GEORGIA	COUNTIES			
1. BALD	WIN		34.	JEFFERSON
2. BANK	S		35.	JENKINS
3. BARR	WO		36.	JOHNSON
4. BIBB			37.	JONES
5. BURK	E		38.	LAURENS
6. BUTT	S		39.	LINCOLN
7. CHER	OKEE		40.	LUMPKIN
8. CLAR	KE		41.	MCDUFFIE
9. CLAY	TON			MADISON
10. COBB			43.	MONROE
11. COLUM	BIA		44.	MORGAN
12. DAWSO	N		45.	NEWTON
13. DEKAL	В		46.	OCONEE
14. DOUGL	AS		47.	OGLETHORPE
15. ELBER	г		48.	PAULDING
16. EMANU	EL		49.	PICKENS
17. FANNI	N		50.	PUTNAM
18. FAYET	TE		51.	RABUN
19. FORSY	гн		52.	ROCKDALE
20. FRANK	LIN		53.	RICHMOND
21. FULTO	N		54.	STEPHENS
22. GILME	R			TALIAFERRO
23. GLASC	OCK		56.	TREUTELEN
24. GREEN	Е		57.	TOWNS
25. GWINN	ETT		58.	TWIGGS
26. HABER	SHAM		59.	UNION
27. HALL			60.	WALTON
28. HANCO	CK			WARREN
29. HART				WASHINGTON
30. HENRY				WHITE
31. HOUST	ON			WILKES
32. JACKS	NC			WILKINSON
33. JASPE	1.1-1.0			

# 6.D.3. Visitation Projections

Visitation at J. Strom Thurmond Reservoir to the year 2035 was projected based on correlating visitation with population of the 104 county area. Bureau of Economic Analysis population projections are used. The historical visitation data is given in Table D-2 and is also shown graphically in Figure 6.

		Table D-2		
	Historical	Visitation At Lak (In Thousands)	kes By Year	
1.1.1	Laurana versa			THREE
YEAR	THURMOND	HARTWELL	RUSSELL	LAKES
1954	1,706			1,706
1955	1,363			1,363
1956	1,869			1,869
1957	2,024			2,024
1958	2,333			2,333
1959	2,908			2,908
1960	3,010			3,010
1961	3,043			3,043
1962	3,047	750		3,797
1963	3,155	1,121		4,276
1964	3,723	1,550		5,273
1965	4,264	3,093		7,357
1966	4,711	4,231		8,942
1967	3,323	3,839		7,162
1968	3,368	4,227		7,595
1969	3,722	4,826		8,548
1970	4,505	5,383		9,888
1971	4,582	5,616		10,198
1972	4,954	6,405		11,359
1973	5,138	6,633		11,771
1974	5,365	7,107		12,472
1975	5,852	6,977		12,829
1976	5,864	7,274		13,138
1977	6,101	12,453		18,554
1978	6,263	11,421		17,684
1979	6,134	11,833	121	18,088
1980	5,756	12,677	138	18,571
1981	5,756	11,372	146	17,274
1982	6,358	11,821	188	18,367
1983	6,896	12,224	328	19,448
1984	7,271	13,175	737	21,183
1985	7,525	12,722	935	
1986	7,640	13,072	795	21,182
1987	8,016			21,507
1988	5,743	14,435	850	23,301
1989	5,776	13,024	747	19,515
1999		14,566	779	19,514
1991	6,112	16,001	779	22,892
1991	5,962	15,235	750	21,947
1992	6,165	15,688	1,028	22,881
1995	5,759	12,966	928	19,653

			Та	ble D-3			
	Summary	Of 104		opulation Thousands)		/isitation	
	<u>1969</u>	<u>19</u>	73	1978	<u>1983</u>	<u>1988</u>	<u>1993</u>
SC	1,5	533	1,665	1,803	1,918	2,028	2,103
GA	2,6	507	2,863	3,105	3,443	3,863	4,192
NC	4	84	513	549	585	618	590
TOTAL	4,6	24	5,041	5,457	5,946	6,509	6,885
3 LAKE	VISIT 8	,548	11,771	17,684	19,448	19,706	23,200
**These visitati	years wer on.	e sele	cted beca	use of con	formance w	ith OBERS	data and

Table D-3 is a summary of the population and visitation used in determining the regression equation relating visitation to population. Table D-4 shows the output obtained.

Table D-4	
Results of Regression For Three Lakes	
Constant (17,781,692	)
Std Err of Y Est 1,9	28,540
R Squared 0.90118	
No. of Observations	6.00000
Degrees of Freedom	4.00000
X Coefficient(s)	6.00802
Std Eff of Coef.	0.99474

This analysis indicates the equation Y=6.00802X-17,781,692 is the model to use for comparing total population in the 104 county area to the visitation at the three lakes. Y=the total three lake visitation, the x is the slope of the line and -17,781,692 is the Y intercept. Graphically the visitation by lake is shown in Figure 5.

The regression had a Coefficient of Determination (R) of .90118, indicating a fairly high degree of correlation between visitation and population. A Coefficient of Determination of one indicates a perfect relationship between the calculated regression curve and the observed values of the dependent and independent variables (visitation and population).

In such a case, 100 percent of the variation in the value of the dependent variable can be explained by variation in population. A Coefficient of Determination of zero would indicate that none of the variation in the value of the dependent variable could be explained by variation in the value of the independent variable.

Once the three lake visitation was estimated based on future population projections, it was distributed to each of the lakes based on previous trends, expected impact of Russell Lake, and nearness to optimum visitation capacity.

The following table indicates the optimum visitation by project based on master plans for the other lakes.

the second se	Table D-5 isitation By Project
Project	Visitation <u>(In Millions)</u>
Russell	4.6
Hartwell	11.8
Thurmond	12.5
TOTAL	28.9

The optimum visitation capacity of Russell Lake is estimated at 4.6 million visitor days which is 16 percent of the total capacity of the three lakes. J. Strom Thurmond Reservoir is more easily accessible to the residents of Atlanta and Augusta, Georgia, and therefore will continue to have a greater number of visitors from those cities. It is estimated that the carrying capacity of nearly thirty million for the three lake system will be exceeded by 2006. APPENDIX E

# PREVIOUS MASTER PLAN EFFORTS

#### 6.E. APPENDIX E--PREVIOUS MASTER PLAN EFFORTS

The Project Report on Savannah River Basin, Georgia, and South Carolina, J. Strom Thurmond Project (then known as the Clarks Hill Project), Appendix XI Recreation, prepared by South Atlantic Division, dated 1 December 1945, was approved by Chief of Engineers on 20 February 1946 and revised 1 May 1946.

The instructions for mapping land for the J. Strom Thurmond Project was to map entire tracts of land to encompass elevation 346 m.s.l. In addition, approximately 906 acres for the Goat Island Damsite and 1,117 acres for the Anthony Shoals Damsite were included in the lands acquired for the J. Strom Thurmond Project. The Goat Island Damsite was relocated downstream, renamed the Trotters Shoals Damsite, and later became the Richard B. Russell Dam and Lake Project.

The acquisition of land began in 1945 and ended in 1952. The original acquisition contained a total of 164,341 acres, not including 3,950 acres of riverbeds which were already in public domain. Included in this acquisition were 7,762 acres in use permits from the United States Forest Service. Since the original acquisition was completed, there have been 21,073 acres removed from the project by excessing, transfer, or other actions. The project now contains 143,270 acres plus 3,950 acres of riverbed.

The initial plan for the development of the Savannah River Basin was submitted to the 74th Congress in January 1935. The J. Strom Thurmond Reservoir was one of a series of projects for the comprehensive development of the Savannah River Basin for flood control, navigation, and hydroelectric power.

Public Law 73-738 (1936) authorized and directed the Secretary of War to conduct preliminary surveys and examinations for flood control in the Savannah River Basin.

A report, Senate Document No. 66, 77th Congress, lst Session, dealt with the advisability of developing the J. Strom Thurmond Reservoir for power and downstream benefits.

House Report, No. 1309, dated 29 March 1944, of the House Committee on Flood Control, emphasized the damage done to structures built in flood plains by natural flooding in numerous river basins throughout the United States including the Savannah River Basin.

The original Master Plan for J. Strom Thurmond Reservoir was published in September 1950 with an update published on 14 December 1966. The 1966 update consisted primarily of a synopsis of available facilities and actions taken to arrive at that point. An update approved 11 June 1981 reflected 15 years of changes made in responses to public demands for recreational opportunities.

APPENDIX F

LIST OF PREPARERS

#### 6.F. APPENDIX F--LIST OF PREPARERS

#### Name

#### Role/Position

Duane Bailey Mitch Overend Kenneth Dial Thomas Lewis Curtis Krosting Allen Dean Frank Huff Jerry Canupp Robin Thomson Beverly Waters Loretta Fountain Joan Moore Planning Div Coordinator Operations Div Coordinator Thurmond Lake Manager Asst. Lake Manager Supvr. Ranger Park Ranger Park Manager, Sav. Off. Division Reviewer, Atlanta CADD Mapping Supvr. Realty Specialist Realty Specialist Report Preparation Telephone

912-652-5803 706-283-8731 706-722-3770 706-722-3770 706-722-3770 706-722-3770 912-652-5053 404-730-3284 912-652-5817 912-652-5013 912-652-5033 912-652-5033

# APPENDIX G

## LIST OF EXCESSED LANDS

### 6.G. APPENDIX G--LIST OF EXCESSED LANDS

Acres	Action
163,460	Total acres acquired for project in fee
10,879	1958 GSA land disposal
1,213	Public Law 84-999 disposal of 1,022 lots, 1958 thru 1968.
585	Federal Property Act (63 Stat. 377), 1962 disposal to McCormick County, SC, to provide lands for industrial development, 1962
241	Public Law 77-663 disposal to the Georgia-Carolina Council of Boy Scouts of America. 1963.
2,053	Public Law 84-804 net disposal of lands above 346 feet m.s.l. in land exchange with U.S. Forest Service
1,830	Transfer of lands to the Richard B. Russell Project, 1979
128	Public Law 84-999 disposal of New Bordeaux Subdivision, 1981
547	Public Law 84-99 disposal of 47 private clubsites, 1982
443	Executive Order 12348 disposal, 1982
3,159	Disposal in accordance with the Federal Property Act (Savannah Valley Authority)
-5	Land exchange with McCormick County, SC resulting in a net gain of 5 acres, 1989
-21,073	TOTAL CHANGE
147,220 -71,100 76,120 883	TOTAL ACRES ON PROJECT FROM TABLE 1 ESTIMATED LAKE ACREAGE AT 330' M.S.L. ACRES OF LAND INCLUDING FLOWAGE EASEMENTS FLOWAGE EASEMENTS
table in the second	<ul> <li>A statistic state, no. 5, article and all statistic constraints and statistical statistical and an electric statistic state.</li> </ul>

75,237 ACRES OF LAND EXCLUDING FLOWAGE EASEMENTS

APPENDIX H

## GENERAL DESIGN CRITERIA

#### 6.H. APPENDIX H--GENERAL DESIGN CRITERIA

As the time comes for implementing the recommendations in this Master Plan, feature facility design may not be available for use in all phases of development or improvement of the Corps' recreational areas. The following general design criteria is presented in order to assist in the planning, construction and maintenance improvements of these area. The intent of this guidance is to establish a prevalent framework for proper development of recreational areas at J. Strom Thurmond Reservoir.

#### Roads

# Roadways within a recreational area should follow logical organization patterns utilizing arterial, collector and loop roadways with emphasis on internal control of recreational use of the site.

# Construction of roadways on ridge crests or in valley bottoms should be avoided whenever possible. Preferred locations are on the interslopes and parallel to existing contours.

# Roadways are to be constructed with definite sensitivity to local physical characteristics of the site. Avoid excessive impact on topography, significant vegetation, natural and stable drainage patterns, geologic features, and visual amenities.

# Ditching of roadways is to be utilized only when absolutely necessary and then only for short distances. Side slopes of park road shoulders resulting from cuts and fills should be finished at a slope of no greater than 2:1 (unmowed bank with cover of vine, ground cover, wildlife grasses, etc.) or 3:1 (mowed bank with grass cover).

# The width of park roads (including shoulders) should be:

One-way - 14 feet maximum, 12 feet minimum Two-way - 24 feet maximum, 20 feet minimum

# Hard surfacing of park roads is desirable when warranted by use and necessary funds are available. Some type of surface improvement is required in all areas (gravel, crusher run, etc.).

#### **Parking Areas**

# Adequate well defined parking should be provided for all activity areas.

# Small groups of individual parking areas are preferred over large massive parking lots. Existing large parking areas can be improved by adding planting islands and berms.

# Angular parking (60 degrees) is preferred over perpendicular (90 degrees) alignment, particularly on one-way roads.

# Screening of parking areas from both the activity areas and other roadways is advised. Raised mounds and/or plant masses can be utilized for this purpose.

# Wheel stops should be provided for the individual parking stall.

# Parking areas should be separated from major collector roads by utilizing small loop or one-way parking access roads.

# Trails should be provided for defined access to and from activity areas such as beaches, picnic units, restrooms, etc.

#### **Boat Launch Ramps**

# All boat ramps should have adequate access roads, maneuvering area, and a minimum of 15 car/trailer parking spaces. At least four additional spaces should be provided for vehicles without boat trailers.

# As a minimum, each boat launch area should have a ramp, courtesy dock, adequate lighting, parking area, trash receptacles, and appropriate signage, pit or vault toilets and a tie-down parking area.

# A well defined turnaround area should be separate from the parking area.

# If user preference warrants it, a canoe or small boat launch area could be provided in conjunction with the regular boat ramp use. A grassed shoreline or sand beach is best for this activity.

# Where the access road into a ramp area is directly in line with the ramp itself, the road alignment should be corrected to avoid a "straight-in" approach to the water.

#### **Camp Areas**

# The preferred layout of the camp areas is that of small groups of individual Corps units served by a common one-way loop road.

# When possible, the camping areas should be located on gently sloping sites (8 percent maximum).

# The camp pad should be constructed without requiring excessive cut and fill on the site.

# Native understory vegetation should be allowed to remain between camp pads and between camp pads and other activity areas.

Individual camp units, including trailer parking spaces, grill, fireplace, utility table, lantern hanger, and picnic table, should all be placed on the individual impact areas.

# When converting picnic units to camping units, existing facilities should be utilized as much as possible to reduce costs.

# Pedestrian access from camp pads to other activity areas should be defined and trailways properly surfaced.

# Within any trailer/auto camp pad unit, adequate space must be provided.

# Complete separation of day use activities from camp area is preferred. If campsites have day use activities for campers within the campground (for example: boat ramp for campers, playground areas, etc.), separation from the impact areas is desirable.

# In major campgrounds, a minimum of 90 percent of the campsites should be provided with water and electrical hookups.

# When possible, impact sites should be large enough to accommodate multiple RV units.

# Individual camp units shall be located in close proximity to the lake shoreline to provide easy visitor access to the water surface. However, care will be exercised to assure that finished pad elevation is at least three feet above normal summer pool elevation of 330 m.s.l.

# Native shade tree species shall be planted between campsites, adjacent to parking areas, and around facilities and activity areas to provide cooling, screening and noise reduction, and visual character and interest. Applicable tree species and maintenance requirements will be identified in the project OMP.

# The use of recycled materials and otherwise resilient, cost effective construction materials will be pursued to provide high quality, low maintenance facilities and amenities.

#### **Picnic Areas**

Individual and well defined impact areas should be created for each picnic unit.

# Picnic units should be clustered in small groups served by a small group of parking spaces.

# Well defined trails and paths should be constructed leading from picnic areas to other activities such as beaches and restrooms. Trails are to be planned rather than let evolve according to previous use.

# Picnic units should be located within easy walking distance from parking areas.

# Picnic units will include grill, table, trash receptacle (one for every two sites) and sitting walls where applicable.

#### Swimming Beaches

# Designated swimming areas should be provided in selected recreational areas. These sites should be physically capable to handle this activity and the necessary support facilities.

# Safe, gradual slopes (maximum of 7%) should be maintained for beach/swimming areas.

# Major day use beaches should be served by an adequate access road, parking area, change house, and potable water supply as well as a flush comfort station.

# At improved beach/swimming areas, sand areas should be provided for sunbathing between the beach and forested areas.

Drinking water should be provided near the beach/swimming areas.

# All swimming areas should be buoyed for designation as safe swimming areas.

# Beach/swimming areas should be located in areas free of intense wave action and insuring adequate water exchange. The preferred solar orientation is toward the south or southwest, by landscape architects.

# Large beach areas may be "broken up" with irregular groups of trees in the small, less desirable areas of the beach such as existing drainage channels, rock outcrops or steep slopes.

#### Playgrounds

# Safety of the children is the greatest concern in planning, design, construction, and maintenance of all playground areas and equipment.

# All playground areas should be located away from immediately adjacent roadways and parking areas as well as potentially hazardous water bodies.

# Suitable "open-play" areas with little or no equipment should be provided in most recreational areas. A well maintained grass surface is the preferred ground cover in these areas.

# Playground areas should be sited so as to permit casual parental supervision from nearby camp or picnic units or other activity areas.

# Small playground units with play equipment should be located in "common" areas centered among clustered groups of picnic or camping units.

In intensive-use play areas, a deciduous tree canopy is preferred for midday shade while direct early morning sun is desirable for "drying off" play areas and equipment.

#### Shoreline Stabilization

# In areas where severe shoreline erosion exists or where problems will eventually occur, intensive stabilization efforts may be required to protect significant features or development. However, if development could be improved by relocation to another area, then the extent of the erosion control efforts should be carefully studied for feasibility.

# The type of erosion control necessary for use on a particular site could range from massive riprap to superficial grading, planting, or gabions and wooden bulkhead walls.

# All finished work associated with landscape modifications at the shoreline should enhance the existing physical features of the site. Since the visual impact of such shoreline treatment is unavoidable, great care should be taken to produce an aesthetically pleasing as well as functional solution to the erosion problem of the site.

## APPENDIX I

# LIST OF PRIVATE/QUASI CLUB SITES

#### 6.I. APPENDIX I--PRIVATE/QUASI CLUB SITES

#### Quasi Public

#### Private

- 1. National Hills Baptist Church
- 2. Grace Methodist Church
- 3. St. John's Methodist

4. Wesley Chapel

5. Holy Trinity

- 6. Trinity on the Hill
- 7. Men's Christian Fellowship
- 8. Fairview Presbyterian
- 9. Seventh Day Adventist
- 10. Aiken Association of Baptist Churches
- 11. Augusta Association of Baptist Churches
- 12. Lynndale School
- 13. Augusta College
- 14. Augusta YMCA
- 15. Gracewood
- 16. First Presbyterian
- 17. First American
- 18. Central Christian
- 19. St James Methodist
- 20. St Pauls Methodist
- 21. McDuffie County Board of Education
- 22. Episcopal Diocese
- 23. St Mary & Aiken Mission
- 24. VA Hospital
- 25. Holy Trinity Lutheran
- 26. Augusta YWCA
- 27. Aldersgate Methodist

Shawondassee Pine Point Gilligan's Is.

### APPENDIX J

### LIST OF OUTGRANTS

### 6.J. APPENDIX J--LIST OF OUTGRANTS

Outgrants. Prepared Mar 93			L
Public Agencies/County & St	ate Parks	Concessions	
	Acres		Acres
Elijah Clarke	447	Clarks Hill Marina	93
Bobby Brown	665	Raysville Marina	25
Wildwood	957	Tradewinds	180
Mistletoe	1,920	Mike's Marina	87
Baker/Hickory	3,126	Soap Creek L.	141
Parksville Wayside	10	Savannah Lake	18
Holiday Park	333		
Soap Creek County Pk.	70		
Ft Gordon Recreation Area	908		
TOTAL	8,436		544
GRAND TOTAL ACRES	43,662		

### Outgrants (Continued)

Roads & Utilities		Quasi Public	
Outgrant List	Acres		Acres
Page 2	380	VA Hospital	25
Page 3	278	Augusta YMCA	90
Page 4	105	National Hills	6
Page 5	65	YWCA of Aug.	164
Page 6	41	Lynndale	10
Page 7	41	Augusta Baptist	64
Page 8	37	Men's Christian	14
Page 9	134	First Presbyterian	51
Page 10	26	St Paul's	18
Page 11	17	Gracewood	78
Page 12	29	Fairview	6
Page 13	33	St Mary & Aik.	15
Page 14	2	Aiken Assoc.	25
		7th Day Adventist	10
		Trinity on Hill	14
		Central Christian	21
		St James Method.	30
		Lutheran Churches	41
		1st Am. Baptist	22
		Aldersgate	9
		Grace United Meth.	24
		Wesley Chapel	11
		Augusta Col.	44
		St John's	20
		McDuffie	14
		Holy Trinity	40
		Episcopal Ch.	23
TOTAL	1,188		889

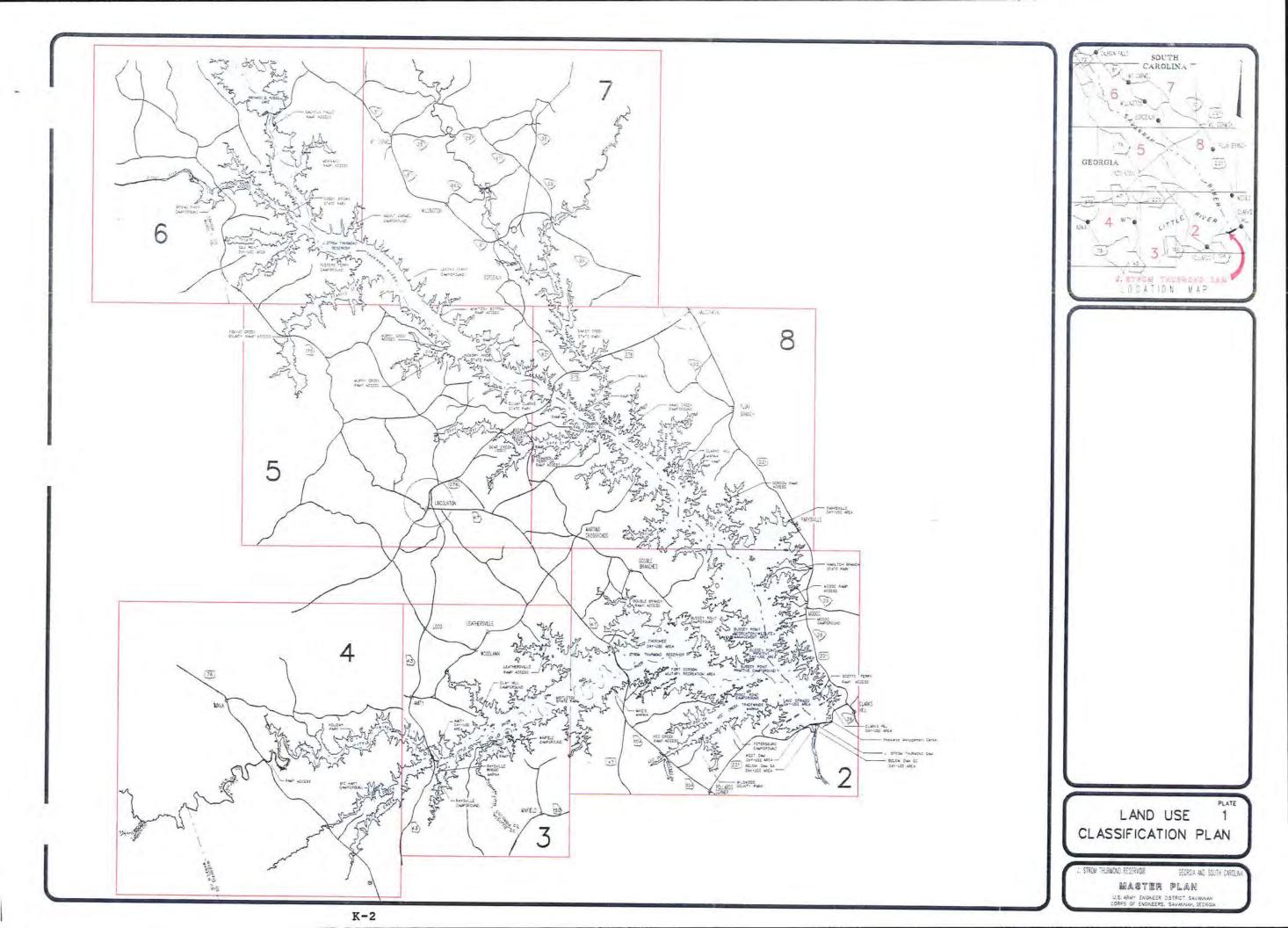
### Outgrants (Continued)

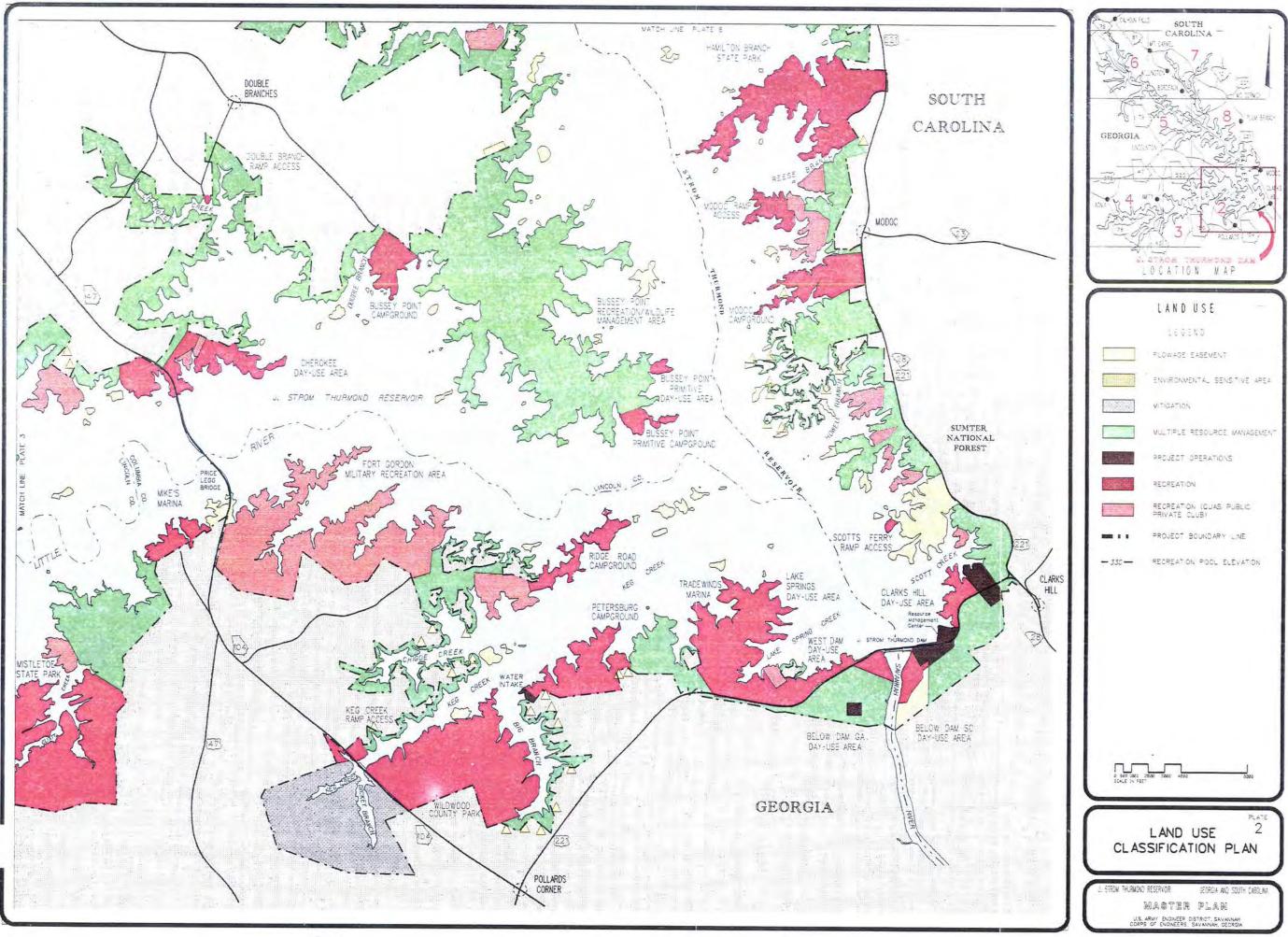
Private Clubs		Wildlife Mgt	
	Acres		Acres
Gilligans	18	GA Wildlife	21,514
Pine Pt.	9	SC Wildlife	3,888
Shawondassee	11	GA Mitigation	2,773
		SC Mitigation	4,085
TOTAL	38		32,260

Military	
	Acres
SC Nat. Guard	307
7	
TOTAL	307

### APPENDIX K

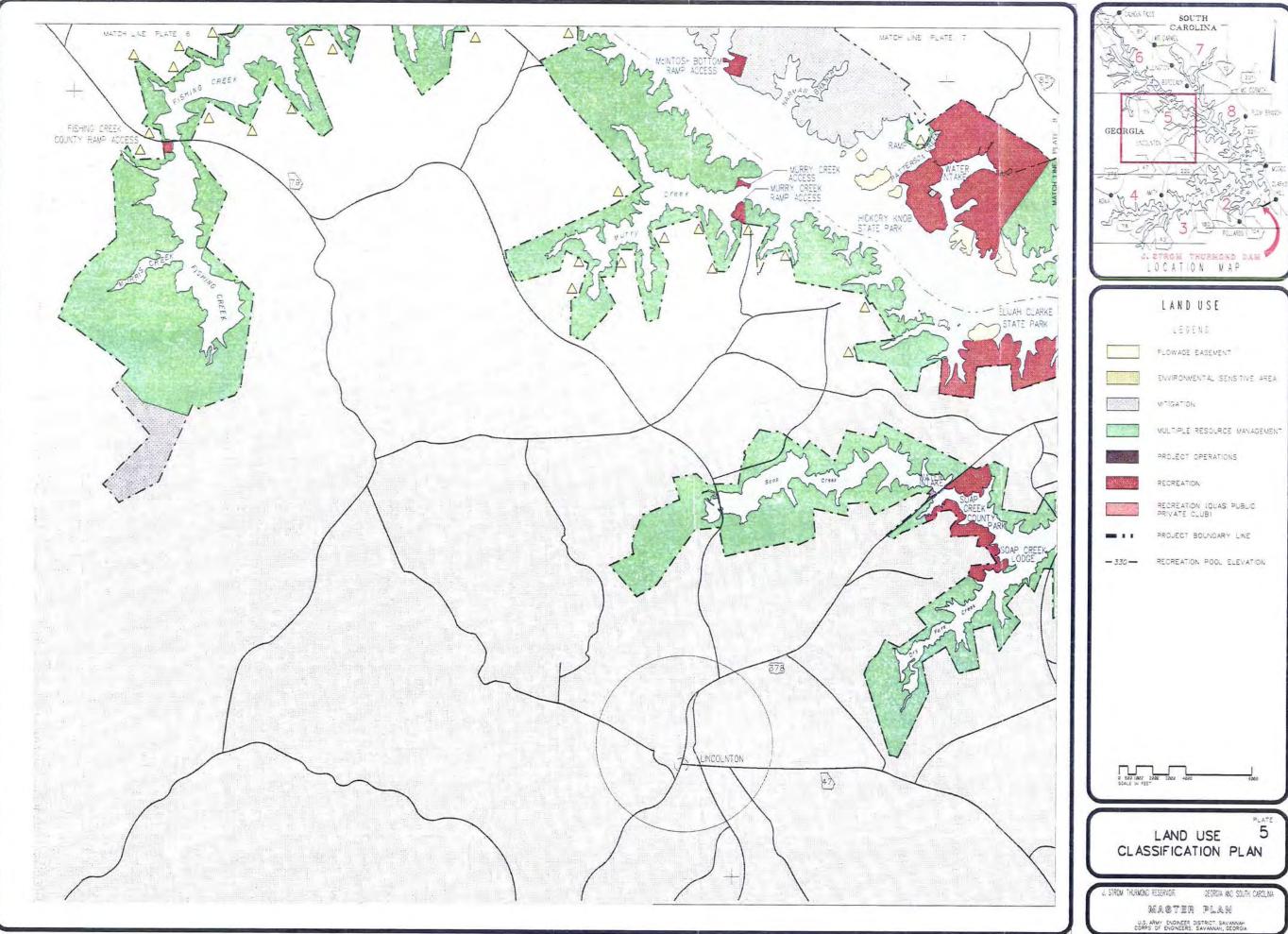
### LAND CLASSIFICATION MAPS

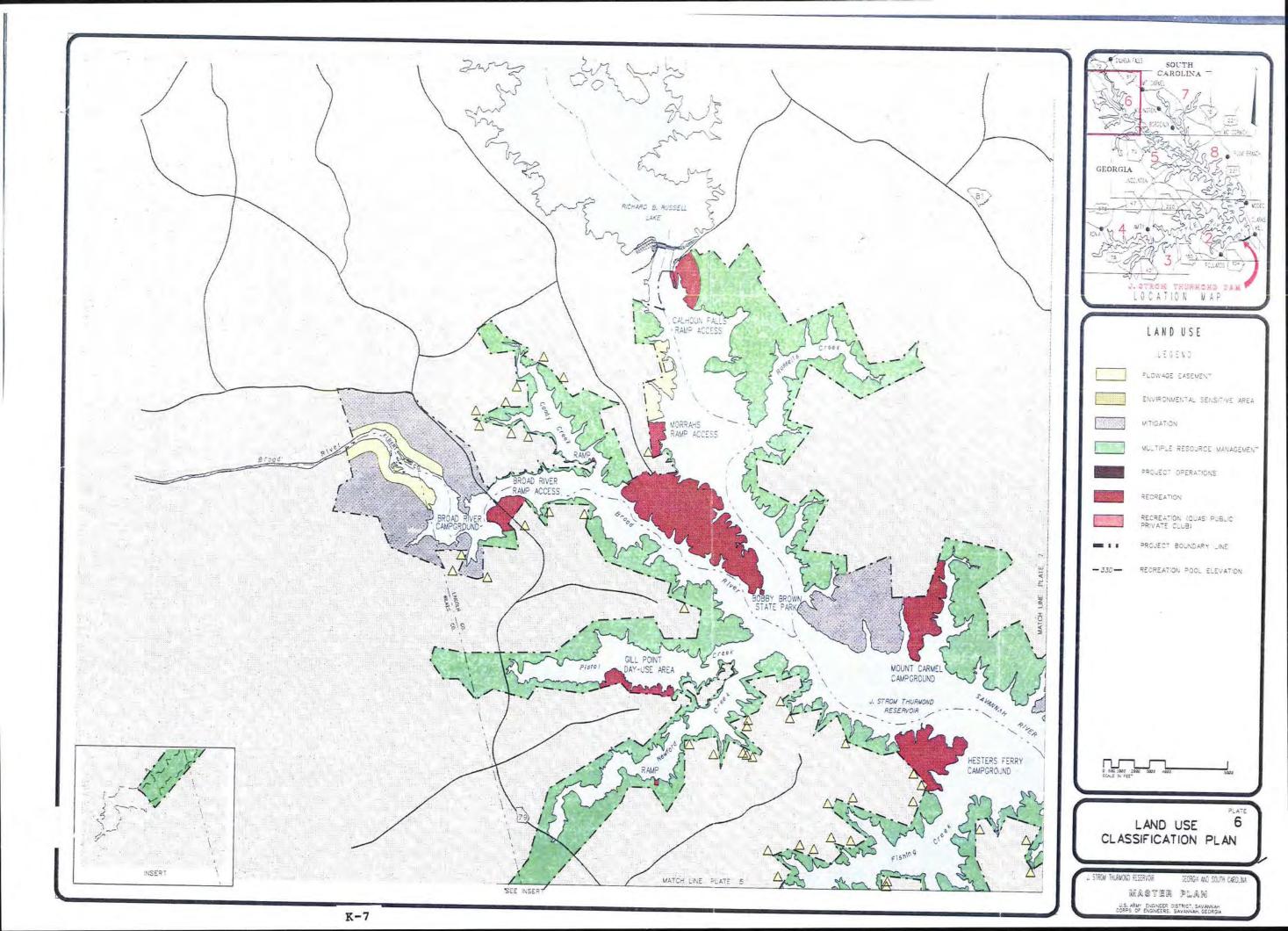


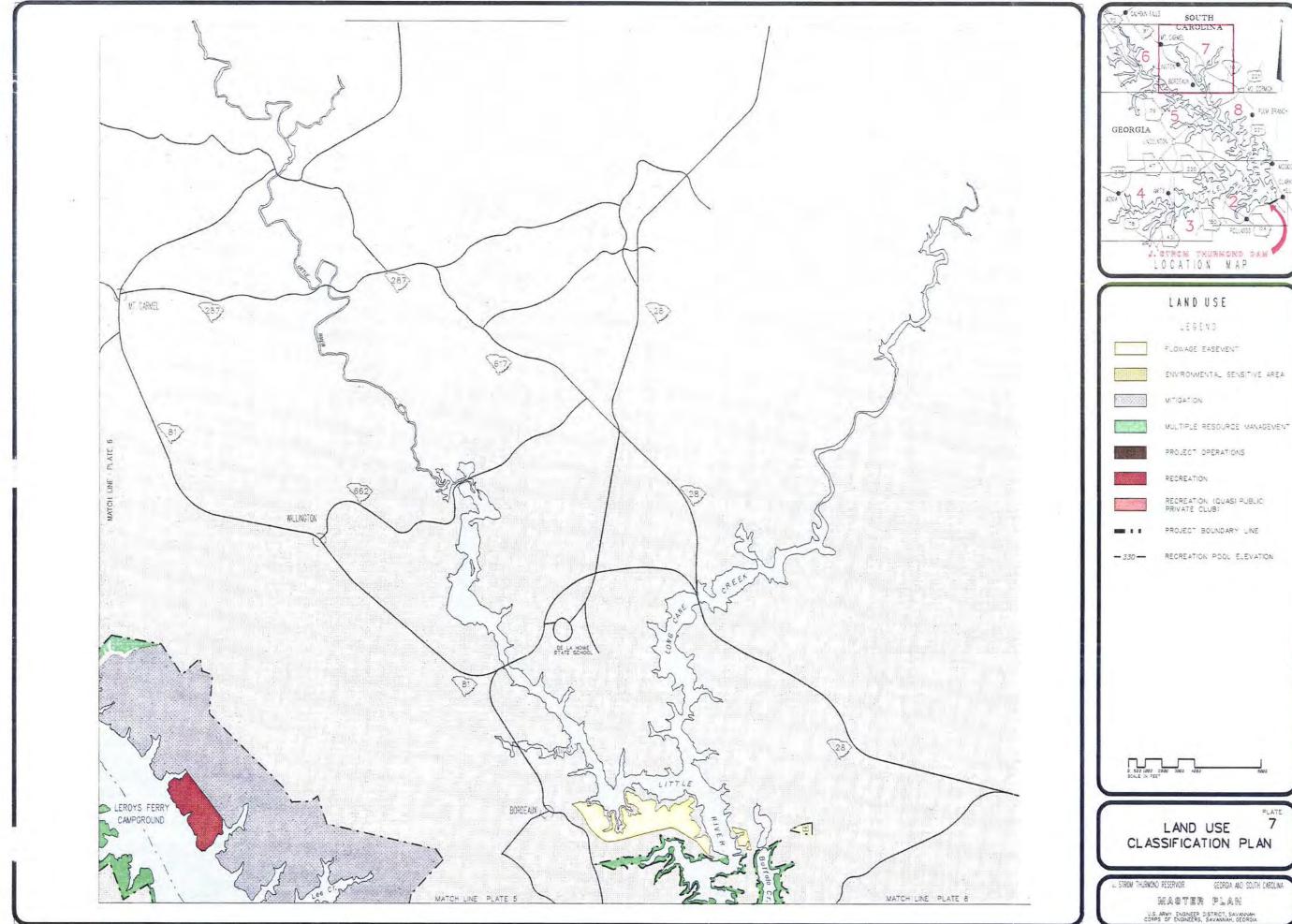




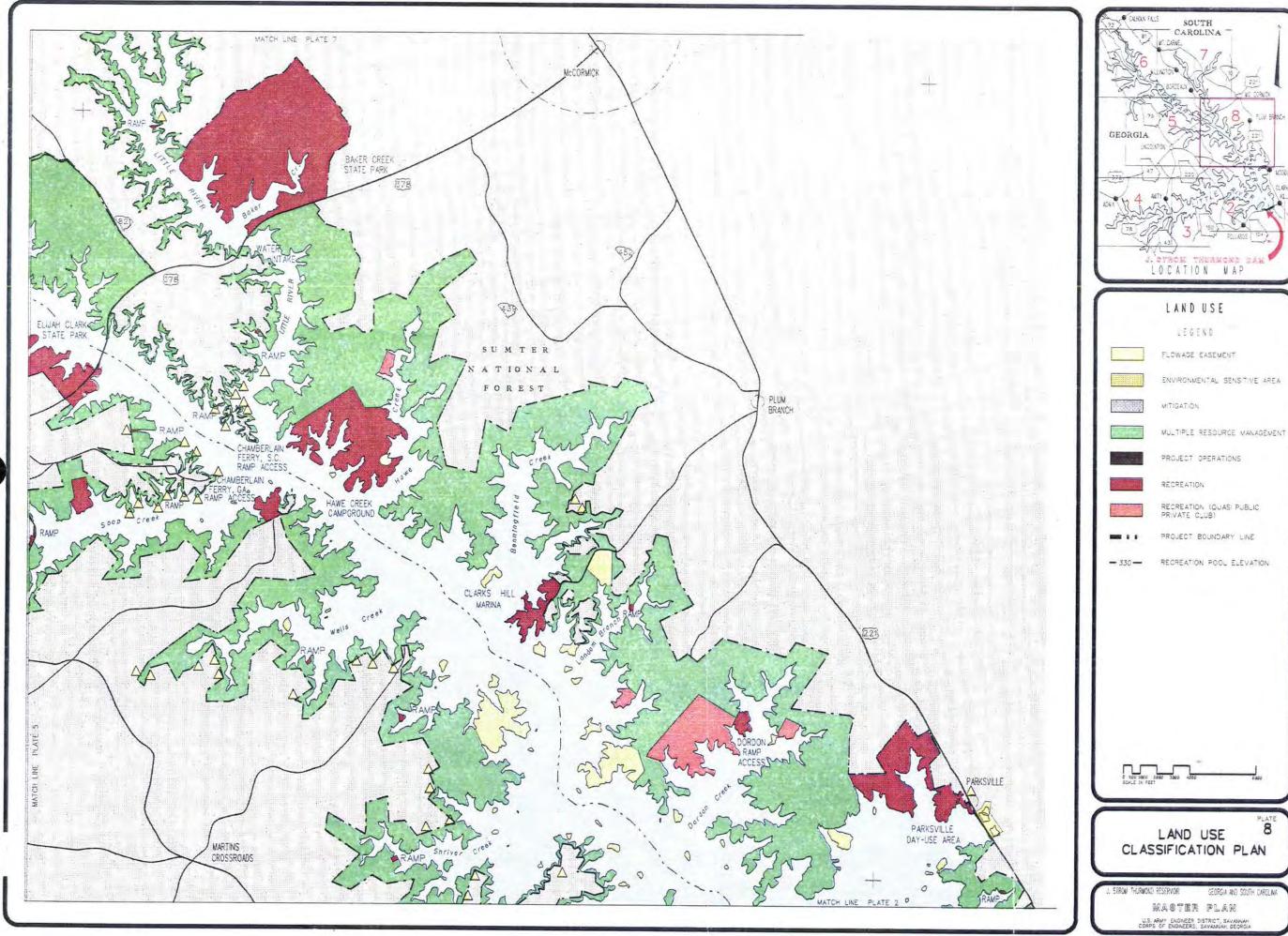








PLATE



APPENDIX L

### PUBLIC INVOLVEMENT LETTERS

COMMITTEES: AGRICULTURE, NUTRITION AND FORESTRY FOREIGN RELATIONS

OP

SMALL BUSINESS

United States Senate WASHINGTON, DC 20510-1004

July 14, 1993

Major Robert F. Unger Acting District Engineer Department of the Army Savannah District Corps of Engineers P.O. Box 889 Savannah, Georgia 31402

Dear Major Unger:

Thank you for the information you provided on the Thurmond Lake Master Plan. I appreciate your forwarding these materials to my office.

If my staff or I may ever be of assistance, please let us know. Again, thank you for your efforts.

Sincerely,

Paul D. Coverdell United States Senator

PDC/ejt



DMMITTEES: FISH. GAME AND FORESTRY GENERAL AULES TRANSPORTATION

SENATE ADDRESS: P. G. BOX 142 GRESSETTE SENATE OFFICE BLDG. 1803) 734-2866 FAX: (803) 734-2941

July 12, 1993

CEG RYBERG ATOR, AIKEN AND LEXINGTON COUNTIES SENATORIAL DISTRICT 24

HOME ADDRESS; P. O. BOX 1077 AIKEN, 5C 29802 (803) 641-4125 FAX: (803) 648-4038

> Major Robert F. Unger Department of the Army Savannah District, Corps of Engineers P.O. Box 889 Savannah, GA 31402-0889

Dear Major Unger:

Thank you for keeping me apprised of your plans to update the Thurmond Lake Master Plan for future recreation development. I do not have any comments to add at this time but would appreciate being kept informed as to your progress.

Sincerely,

W. Greg Ryberg District 24

005.1/5



# COLUMBIA COUNTY CHAMBER OF COMMERCE

July 16, 1993

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20

Mr. Mitchell Overend Master Plan Coordinator Richard B. Russell Lake Route 4. Box 244B Elberton, GA 30635-9271

I am responding to Rousin A. Lanier's letter of June 29th regarding the updating of the Thurmond Lake Master Plan for the future represtion development of Thurmond Lake. I am currently acting as Chairman of the Clarks Hill Sub-Committee for the Columbia County Chamber of Commerce.

We are particularly interested in Wildwood Park and are striving, by means of recommendations to the Columbia Cousty Commissioners, for them to contract for a professionally prepared Haster Plan. Students from Georgia Tech are supposed to have recently started a "cultural study" to help the county determine possible best uses for the park as well as other pros and cons. Our committee has recommended that an overall park development plan be professionally prepared and hopefully be started after the study is completed.

As you are probably aware. Tom Lewis meats with us and is acquainted with the committee's various discussions and knows our thoughts and intentions. Any related information you may want to send to me would be appreciated. We are very enthused over the potential of Wildwood Park and certainly want to see it planned and used in the future to its highest and best use.

A Community Center Building for public use is being considered. Now, and in the past, there have been others who felt there was a need for a public golf course. We feel there may be a multi-use plan showing a number of ways to better use this strategically located property. We need all the input and guidance that we can obtain to assist us in passing on effective

I would like to invite you to attend our next scheduled meeting on September I would like to invite you to attend our next scheduled meeting on september 3rd at 8:00 A.m. at the Chamber office on Bobby Jones Expressway in Martinez. If you will, call me and let me know if you can attend and bring us all up to date. We would like to hear from you and I hope to have the opportunity to talk with you soon.

sincerely,

mallake

Tos Ashe chairman Clarks Hill Sub-Committee

How is Wilkes County? Did you ever build? My office is located in Evans at 4325 Washington Road, Notes phone 706-868-1000.

AN AFFILIATE OF THE METRO AUGUSTA CHAMBER OF COMMERCE 592 BOBBY JONES EXPRESSSWAY \* 46 ANDERSON PLAZA \* MARTINEZ, GEORGIA 30967 \* (404) 863-6771 \* FAX (404) 662-8597



South Carolina Wildlife & Marine Resources Department

James A. Timmerman, Jr., Ph.D. Executive Director

July 22, 1993

Mr. Duane Bailey U.S. Army Crops of Engineers Savannah District ATTN: CESAS-PD-S Post Office Box 889 Savannah, Georgia 31402-0889

RE: Thurmand Lake Master Plan

Dear Mr. Bailey:

Personnel from this Department have reviewed the summary of the Thurmond Lake Master Plan provided by your agency. We feel that the proposed document addresses many aspects of reservoir management. We support your effort to effectively manage this resource.

In reviewing the proposed plan, we noticed that Resource Objective 7 involves improving public access. In your effort to accomplish this objective, we recommend that you reopen the former Mt. Pleasant boat ramp on Russell Creek. Access to the Russell Creek area now requires a boat trip of several miles to reach one of the better fishing and hunting areas on the lake.

Another objective that was of particular interest to us was Resource Objective 10. We fully support your efforts to control shoreline erosion. Erosion has caused the loss of a number of acres of Wildlife Management Area lands along the lake, in addition to the usual problems of siltation and lowering of water quality.

Another concern arose during our review of Plate 5. It showed McIntosh Bottoms Boat Ramp designated as a recreation area. This area was licensed to us (Supplemental Agreement No. 1 to license DACW21-3-78-603) in 1984, which is about the time the Corps turned maintenance of the boat ramp over to us. We do not know if this designation will cause any problems in the future, but we feel that now is the best time to address this issue. Mr. Duane Bailey July 22, 1993 Page 2

We support the Master Plan that you have submitted for review and look forward to working with you to accomplish your objectives.

Sincerely, mest James A. Timmerman, Jr Executive Director

JATjr/mp

cc: Thomas J. Lewis Mitchell Overend Ed Duncan W. Brock Conrad Buford S. Mabry, Jr.



### OFFICE OF PLANNING AND BUDGET

ZELL MILLER

1.4.1

HENRY M. HUCKABY DIRECTOR

GEORGIA STATE CLEARINGHOUSE MEMORANDUM

TO:

FROM:

Mr. Nicholas Ogden, Chief Regulatory Branch Savannah District, Corps of Engineers P.O. Box 889 Savannah, Georgia 31402 Charles H. Badger, Administrator Georgia State Clearinghouse Office of Planning and Budget

DATE: July 28, 1993

SUBJECT: RESULTS OF STATE LEVEL REVIEW

APPLICANT: U.S. DEPARTMENT OF THE ARMY

PROJECT: THURMOND LAKE MASTER PLAN

STATE APPLICATION IDENTIFIER: GA 93 07 06-005

PUBLIC NOTICE REFERENCE NUMBER:

The State level review of the above referenced Public Notice/Permit Request has been completed. This request has been found to be consistent with State goals, policies, plans, objectives, and programs, with which the State is concerned.

Additional Comments:

GEORGIA STATE CLEARINGHOUSE

The concerns reflected in the HPO enclosure require interaction between the HPO and the Corps without the further involvement of the State Clearinghouse.

CHB/mr

Encl: Historic Preservation Office, July 21, 1993 Georgia Forestry Commission, July 27, 1993

> Form SV-4 April 1987

112 3 4

L-7

254 WASHINGTON ST., S.W. • ATLANTA, GEORGIA 30334-8500

#### GEORGIA STATE CLEARINGHOUSE MEMORANDUM

TO: State Clearinghouse Office of Planning and Budget 254 Washington St., S.W. Atlanta, Georgia 30334

FROM: GARLAND NELSON GEORGIA FORESTRY COMMISSION

SUBJECT: RESULTS OF REVIEW

STATE APPLICATION IDENTIFIER: GA 93 07 06-005

DATE:

This notice is considered to be consistent with those State (goals), (policies), (objectives), (plans), (programs), and (fiscal resources) with which this organization is concerned. (Line through inappropriate word or words).

This notice is recommended for further development with the following recommendations for strengthening the project (additional pages may be used for outlining the recommendations).

This notice is not recommended for further development (accompanied by detail comments which explains the organization's rationale for this decision).

This notice does not impact upon the activities of this organization.

Form SC-3 March 1987 Joe D. Tanner, Commissioner

# Georgia Department of Natural Resources

205 Butler Street, S.E., Suite 1462, Atlanta, Georgia 30334

Parks, Recreation, and Historic Sites Division Office of Historic Preservation Elizabeth A, Lyon, State Historic Preservation Officer (404) 656-2840

July 21, 1993

M.J. Yuschishin Chief, Planning Division Department of the Army Savannah District Corps of Engineers Post Office Box 889 Savannah, Georgia 31402-0889

ATTN: Duane Bailey

RE: Thurmond Lake Master Plan McDuffie County, Georgia GA930706-005

Dear Mr. Yuschishin:

The Office of Historic Preservation has reviewed the extract from the Draft Thurmond Lake Master Plan. We strongly recommend that the Corps of Engineers (COE) begin a systematic program to identify and assess the cultural resources as discussed in resource objectives #9 and #11. We also believe that an inventory is essential in managing cultural resources on a large project area such as Strom Thurmond Lake.

We realize that such a survey is a large scale project, but believe that effective management of the COE cultural resource responsibilities is impossible without at least a basic inventory and assessment. Many of the resource objectives outlined in the draft extract will involve potential impacts to cultural resources. Previous experience has shown that a great deal of wasted effort can be avoided if there is a systematic cultural resource survey to work from.

Our office is available to assist the Savannah Corps of Engineers with planning this inventory, or with other aspects of cultural resource management on Strom Thurmond Lake as needed. If we may be of further assistance, please contact Jeffrey L. Durbin, Review and Compliance Coordinator, at (404) 656-2840.

Sincerely,

Elizabeth A. Lyon State Historic Preservation Officer

EAL:rrw

cc: Chuck Badger, OPB Anne Floyd, Central Savannah River RDC Duane Bailey, COE

L-9

Georgia Department of Natural Resources

Joe D. Tanner, Commissioner

2070 U. S. Highway 278, S.E., Social Circle, GA 30279 David Waller, Director, Game and Fish Division 404/918-6401

August 27, 1993

Mr. M. J. Yuschishin Chief, Planning Division Savannah District, Corps of Engineers Post Office Box 889 Savannah, Georgia 31402-0889

Dear Mr. Yuschishin:

Thank you for the opportunity to review and comment on the draft update of the Master Plan for future recreation development of Thurmond (Clarks Hill) Reservoir. We have concerns regarding recreational development on the reservoir and appreciate this opportunity to make you aware of them.

Our major concern is in regard to your Resource Objective #6 which is "To assure continued public access to and use of all natural and manmade resources of the Thurmond Project." We agree this is an important objective. Under this objective, there is some discussion about the closure of recreation facilities (interior roads, entrances, ramp access roads, parking area, etc.) since the completion of 1981 a study on facilities closure/consolidation and renovation. Several benefits such as enhanced safety, better design and visitor control, reduced operational costs, etc., are listed as resulting from these changes. Unfortunately, there are indications that these closures have also adversely affected bank and boat access, with many of the areas remaining open difficult to reach and often overcrowded. Bank fishing access, and to a lesser extent, boat fishing access, have declined. For example, fisheries personnel recently visited nine recreational areas operated by the U.S. Army Corps of Engineers on the Georgia side of the reservoir. Bank fishing access was available to anglers at only two areas. All other sites allowed only campers to have bank access. Also, the gates to these areas were only open from 7:00 a.m. to 10:00 p.m. daily and were closed for the months of December through February. Anglers do not restrict their activities to these hours, and fishing does occur in the winter months.

We are, therefore, asking you to make the improvement of angling opportunities on Thurmond Reservoir an important part of your new plan. Potential improvements could be as easy as designating additional areas for bank fishing, building additional fishing piers, altering gate hours and re-opening or building boat ramps. We would welcome the opportunity to assist in the planning and design of these facilities. Fisheries personnel at our Thomson Mr. M. J. Yuschishin August 27, 1993 Page 2

Office (contact Ed Bettross or Jerry Germann at 706/721-7410) are available to provide technical input and guidance on any angler improvement projects.

Also, under the Environmentally Sensitive Areas section of the report, Resource Objective #9 refers to the need to identify and protect areas of unique vegetative types and endangered species, and Resource Objective #12 refers to the development of management plans to provide this protection. The Wildlife Resources Division's Nongame/Endangered Wildlife Program (contact Terry Johnson at 912/994-1438) and Georgia Natural Heritage Program (contact John Bozeman at 706/557-3032) are available to work with your personnel to develop management plans to enhance/protect known occurrences of all plant and animal protected species, both state and federally listed.

Again, we appreciate the opportunity to provide these comments and look forward to working with you to enhance the natural resources on the Thurmond Reservoir Project. Please contact us if you have questions.

Sincerely,

David Walk

David Waller

DW:scl

cc: John Bozeman Terry Johnson Don Johnson

ght is

PRT (D) John William Lawrence, Executive Director

Division of Engineering & Planning B. Beth McClure, *Director* (803) 734-0173 (803) 734-1042 FAX

August 3, 1993

Mr. M. J. Yuschishin Chief, Planning Division U.S. Army Corps of Engineers Savannah District P.O. Box 889 Savannah, GA 31402-0889

RE: Thurmond Lake Master Plan

Dear Mr. Yuschishin:

The South Carolina Department of Parks, Recreation and Tourism has no concerns or comments pertinent to your project at this time. We do, however, appreciate the opportunity to review and comment on this and any other project that could possibly affect existing and/or planned recreational facilities.

Sincerely,

Toy l. Bell

Tony L. Bebber Planner Division of Engineering and Planning

TB/1m

L-12

#### HEARD, LEVERETT & PHELPS, P. C.

ATTORNEYS AT LAW 25 THOMAS STREET ELBERTON, GEORGIA 30635-0399 (706) 283-2651

ROBERT M. HEARD E. FREEMAN LEVERETT R. CHRIS PHELPS CYNTHIA G. WEAVER (GA & VA.) RICHARD D. CAMPBELL ROBERT F. LEVERETT P. O. DRAWER 399

TELECOPIER: (706) 283-2670

July 7, 1993

Mr. M. J. Yuschishin Chief, Planning Division Department of the Army Savannah District, Corps of Engineers P. O. Box 889 Savannah, Georgia 31402-0889

ATT: Planning Division

Dear Mr. Yuschishin:

This is in reply to the Resource Development Plan of the Thurmond Lake Master Plan submitted to us on June 25, 1993.

While we support the resource options listed in the Resource Development Plan, we note there is no provision for including state, county and city officials of the area effected by the planning.

We believe that local governments must participate in the planning process and be a party to development of the management principles as they effect the use of water and land resources.

Sincerely,

Robert M. Heard, Chairman Elbert County Richard B. Russell Authority

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Sam Booher 4387 Roswell Rd Augusta. Ga 30907 1 July. 1993

Mitchell Overend Master Plan Coord.

Dear Mr Overend,

Thank you for the opportunity to comment on the Extract From Draft Thurmond Lake Master Plan.

Opening Comment:

During the 15 years I have lived in Columbia County, I have watched Commercial developers asphalt more and more of our county. Americans are beginning to recognize their need for public green areas. Thus this ever increasing pressure to develop (asphalt) our land is coming into direct competition for green areas.

As this contest becomes more vocal, it is only through agencies such as the Corp of Engineers and their unique ability to protect the publics interest that the Thurmond Lake green areas will be available and remain green for the future generations to enjoy wildlife in the wild and public swimming, camping, biking and walking recreation.

#### Specific Comments :

Page 4 - I am concerned about efforts to take Public parks and wildlife areas and turn them into Commercial concessions, quasi-public, and private clubs. Developers say this is what the public NEEDS. You are the agency that knows what the public needs because you have NO vested interest but public support. Keep up the good work.

Page 7 - The new ski boats are adding a whole new element of conflict. One person ski boats are NOT obeying water rules and are placing small sail boats and fishing boaters in danger.

Page 10 - parg 4, Resource Obj #12

The lose of the red cockaded woodpecker from the Savannah River Corridor I believe is directly related to your forest thinning and timbering program. I ask that you determine the age of your remaining tree stands for each compartment. Determine those tree stands 0-20, 20-40, 40-80, 80 plus years old. If you would set aside from timbering sufficient stands of old and near old pine you will be starting a program to bring back endangered species to include the RCW.

Page 10 - parg 5, Resource Obj #13 (last sentence on page 10)

Please delete "Conduct a forest thinning ... "

08/02/93

Page 11 - (top of page)

program".

Page 11 - parg 6

RICHARD B. RUSSELL LAKE (OP-RL) 10:31

This policy is the reason you have ONLY managed wildlife. Wildlife need forests left in a natural state. Your policy of thinning our public land like a TREE FARM. Even the Federal Forest Service is beginning to realize that Public forests should not be treated as tree farms. Why is the Corp of Engineers treating the public Corps land like a tree farm. This current policy is in direct opposition to the publics interest and destroying wildlife habitat. I would ask that for the next five years you begin a program for planting trees in the logging roads that you have spent

STOP TIMBERING THE FORESTS IN THE NAME OF THINNING.

Please delete " Maintain an active prescribed burning

I am aware that the Porest Service has found experts

This topic of burning the forest is complicated and not

millions of tax dollars building for the poachers.

that say burning the top soil is good for the forest.

agree with them that it is good for TREE Farms and turkey and deer production. Also I support burning the forest around facilities. Also camping and recreation areas.

all agree it is best to continually be setting it afire. YOUR WILDLIFE BIOLOGIST NEEDS TO COMMENT HERE.

You need an enforcement program to restore natural areas where private people have already cleared and planted grass to the water edge. The current plan of wailing till lesses are renewed is laughed at as more people clear and plant grass. Your current plan is NO PLAN and people know it. THIS ONE AREA THAT YOU PLAN NEEDS HELP.

L-15

T

Sam Booher C (706) 863-2324 **203** 

June 28, 1993

Planning Division

file copy

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Dear 2~:

The Savannah District, U. S. Army Corps of Engineers, is in the process of updating the Thurmond Lake Master Plan for our future recreation development. This effort documents the changes that have taken place over the last 13 years in our program and provides general guidelines for future management.

Some of the areas included in the plan are: (1) future development of recreation areas, (2) land use, (3) environmental considerations, and (4) formulation of resource use objectives. In particular, we would appreciate your comments on the direction of our future management decisions, which are in the Resource Objective section of the attached summary.

We are also contacting development commissions, State agencies, County governments, and environmental groups in the Thurmond Lake area for their review and comments.

I welcome any questions or comments you may have.

Sincerely,

[s] ROBERT F. UNGER

Robert F. Unger Major, U.S. Army Acting District Engineer

Attachment CF CECW-PD (w/attach) CESAD-PD-E (w/attach) CESAS-DE (3) (w/attach) CESAS-PD (w/attach) CESAD-PD-A (w/attach) CESAS-OP-CL (w/attach) CESAS-OP-R (w/attach)

> PD-E PD-X PD DL DP DC DE PD-E

This is a list of U. S. and State Congressmen receiving MAJ Unger's 28 June letter on the Thurmond Master Plan.

Honorable Don Johnson House of Representatives Washington, DC 20515

Honorable Paul D. Coverdell United States Senate Washington, DC 20510

Senator Sam Nunn United States Senate Washington, DC 20510

Honorable Charles W. Yeargin Georgia House of Representatives Route 1 Elberton, Georgia 30635

Honorable Robert Harris Georgia House of Representatives Route 5, Box 593 Thomson, Georgia 30824

Honorable Martha W. Moore Georgia House of Representatives 12 Plantation Hills Drive Evans, Georgia 30809

Honorable Jack Connell Georgia House of Representatives 706 Montrose Court Augusta, Georgia 30904

Honorable Bettieanne Childers Hart Georgia House of Representatives P.O. Box 774 Millen Road Waynesboro, Georgia 30830

Honorable George M. Brown Georgia House of Representatives 3107 Bellemeade Drive Augusta, Georgia 30906

Honorable Michael J. Padgett Georgia House of Representatives 1140 Bennock Mill Road Augusta, Georgia 30906

Honorable Charles W. Walker Georgia Senate P.O. Box 1282 Augusta, Georgia 30903 Honorable Don Cheeks Georgia Senate 3047 Walton Way Augusta, Georgia 30909 Honorable G. B. "Jake" Pollard Jr. Georgia Senate P.O. Box 6 Appling, Georgia 30802 Honorable Eddie Madden Georgia Senate 62 Chestnut Street Elberton, Georgia 30635 Senator William H. O'Dell P.O. Box 142 Columbia, South Carolina 29621 Senator John Drummond P.O. Box 142 Columbia, South Carolina 29202 Senator W. Gregg Ryberg P.O. Box 142 Columbia, South Carolina 29202 Senator Thomas L. Moore P.O. Box 142 Columbia, South Carolina 29202 Honorable Ronald P. Townsend South Carolina House of Representatives Route 5 Anderson, South Carolina 29621 Honorable Cebron Daniel Chamblee South Carolina House of Representatives 1705 Busby Road Anderson, South Carolina 29264 Honorable Harry C. Stille South Carolina House of Representatives 9 Dogwood Drive Due West, South Carolina 29639-0203

Honorable Jennings G. McAbee South Carolina House of Representatives Route 1, Box 121 McCormick, South Carolina 29835

Honorable Irene K. Rudnik South Carolina House of Representatives Box 554 Aiken, South Carolina 29802

Honorable Charles H. Stone South Carolina House of Representatives Route 3, Box 109 Edgefield, South Carolina 29824

Honorable Thomas E. Huff South Carolina House of Representatives 1751 Gregory Lake Road North Augusta, South Carolina 29841

Honorable J. Roland Smith South Carolina House of Representatives Drawer D Langlie, South Carolina 29834

Honorable Charles R. Sharpe South Carolina House of Representatives Box 652 Wagner, South Carolina 29164 File Copy

June 25, 1993

File Thurmono Master Plan

Planning Division

1~

Dear 2~:

The Savannah District, U. S. Army Corps of Engineers, is presently updating the Thurmond Lake Master Plan for the future recreation development of Thurmond Lake. This effort documents the changes that have taken place over the last 13 years in our program and provides general guidelines for future management.

Some of the areas included in the plan are: (1) future development of recreation areas, (2) land use, (3) environment considerations, and (4) formulation of resource use objectives. In particular, we would appreciate your comments on the direction of our future management decisions which are in the Resource Objective section of the attached summary.

If you have suggestions or concerns that you want addressed, please write or call the individuals listed below. The complete Master Plan is also available at these locations.

Thomas J. Lewis J. Strom Thurmond Lake Route 1, Box 6 Clarks Hill, SC 29821-3770 706-722-3770 or 803-333-2476

Mitchell Overend Master Plan Coordinator Richard B. Russell Lake Route 4, Box 244B Elberton, GA 30635-9271

or

Duane Bailey U. S. Army Corps of Engineers, Savannah District, ATTN: CESAS-PD-S P.O. Box 889 Savannah, GA 31402-0889 912-652-5803

We would like to receive comments by July 16,1993.

Sincerely,

Jel M. J. YUSCHINGT

M. J. Yuschishin Chief, Planning Division

Attachment CF CESASOP-CL (w/ attach) CESASOP-RL (Overend)(w/ attach) CESASOP-R (W/ attach)

PD-T

This is a list of agencies and environmental groups that received Planning Division's 25 June, 1993 letter concerning the update of the Thurmond Lake Master Plan Mr. Tim Maund Executive Director Central Savannah Regional Development Center P.O. Box 2800 Augusta, GA 30914-2800 Mr. Robert Gooding S. C. Wildlife and Marine Resources Department 205 Yosemite Drive Greenwood, SC 29649 Mr. Dan Marshall Georgia Dept. of Natural Resources Game Management Division 142 Bob Kirk Road Thomson, GA 30824 U. S. Forest Service P. O. Box 30 Edgefield, SC 29824 U. S. Forest Service, Region 8 **Resources** Department 1720 Peach Tree St., N.W. Atlanta, GA 30303 Mr. O. R. Cothran III Georgia Department of Natural Resources Director Parks, Recreation, and Historic Sites 205 Butler St., SE Suite 1352 Atlanta, GA 30334 Board of County Commissioners Columbia County P. O. Box 498 Martinez, GA 30909 Board of County Commissioners McDuffie County P. O. Box 28 Thomson, GA 30824 Board of County Commissioners Warren County P. O. Box 46 Warrenton, GA 30828 Board of County Commissioners Wilkes County 23 East Court St. Washington, GA 30673-1570 Board of County Commissioners Lincoln County P. O. Box 340 Lincolnton, GA 30817 Board of County Commissioners Elbert County P. O. Box 70 Elberton, GA 30635 Ms. Nancy Lindroth, Director McCormick County Chamber of Commerce P. O. Box 938 McCormick, SC 29835 Mr. Morrison Parrott, Executive Director Savannah Valley Authority P. O. Drawer K

L-21

McCormick, SC 29835

Mr. Charles H. Badger, Administrator Georgia State Clearinghouse Office of Planning and Budget 254 Washington St., S. W. Atlanta, GA 30334-8500 James A. Timmerman, Jr., Executive Director S. C. Wildlife & Marine Resources Dept. P. O. Box 167 Columbia, SC 29202 Mr. John W. Lawrence, Executive Director S. C. Parks, Recreation, and Tourism 1205 Pendleton St. Columbia, SC 29201 Ms Carolyn Brown Georgia Environmental Council P. D. Box 2388 Decatur, GA 30031-2388 Mr. Bill Davis Augusta Cycling Club 4041 Oregon Trail Martinez, GA 30907 Ms Kathryn May Audubon Society 3597 Pebble Beach Drive Martinez, GA 30907 Mr. Bill Baab Augusta Chronicle/Herald P. O. Box 1928 Augusta, GA 30913 Dr. John Graham CSRA Wildflower Club 885 Chase Road Evans, GA 30809 Ms Susan Bloomfield League of Women Voters 400 Norwich Rd., Apt 40 Augusta, GA 30309 Ms Judy Gordon, Conservation Chair Sierra Club, Savannah River Group Department of Biology Augusta College Augusta, GA 30904-2200 Georgia Wildlife Federation 4387 Roswell Road Martinez, GA 30907 Mr. Steve Burch Georgia Outdoor News P. O. Box 2727 Smyrna, GA 30084 Ms Alicia Soriano Georgia Greenways Association Floyd Towers East, Suite 1352 205 Butler St. SE Atlanta, GA 30334 Mr. Rand Wentworth Trust for Public Land 17 Demorest Avenue Atlanta, GA 30305 Dr. Allen Stocks 2709 Downing St. Augusta, GA 30909

Friends of Stevens Creek P. O. Box 54 Plum Branch, SC 29845

Ms Patricia Edmonds, Executive Director Upper Savannah Council of Governments P. O. Box 1366 Greenwood, SC 29648

Calhoun Falls Chamber of Commerce P. O. Box 246 Calhoun Falls, SC 29628

Mr Asberry Haygood Planning and Zoning Commission P. O. Box 246 Calhoun Falls, SC 29628

City Manager P. O. Box 40 Abbeville, SC 29620

Mr. Robert Heard, Chairman Elbert County/Richard B. Russell Development Authority Heard, Leverett, and Phelps P. C. 25 Thomas St. Elberton, GA 30635-0399

Elbert County Board of Commissioners P. O. Box 70 Elberton, GA 30635

Richmond County Board of Commissioners Room 605, Municipal Building Augusta, GA 30911-3201

McDuffie County Board of Commissioners P. O. Box 28 Thomson, GA 30824

Wilkes County Board of Commissioners 23 East Court St., Room 222 Washington, GA 30673-1570

Lincoln County Board of Commissioners P. O. Box 340 Lincolnton, GA 30817

Mr. Alonzo Harrison McCormick County Council of Government Rt 2, Box 84AAA McCormick, SC 29835

Mr. Gerald Milford Abbeville County Council of Government P. O. Box 579 Abbeville, SC 29620

Columbia County, Board of Commissioners P. O. Box 498 Martinez 30909

Richmond County Chamber of Commerce P. O. Box 75 Augusta, Georgia 30913

Wilkes County Chamber of Commerce P. O. Box 661 Washington, Georgia 30673

Wilkes County Planning and Zoning Board City of Washington P. O. Box 9 Washington, Georgia 30673 Lincoln County Chamber of Commerce P. O. Box 810 Lincolnton, Georgia 30817

Lincoln County Planning and Zoning Board P. O. Box 340 Lincolnton, Georgia 30817

Columbia County Chamber of Commerce 111 Railroad Street Thomson, Georgia 30824

Columbia County Planning and Zoning Board 504 Railroad Street Thompson, Georgia 30824

Warren County Chamber of Commerce P. O. Box 27 Warrenton, Georgia 30828

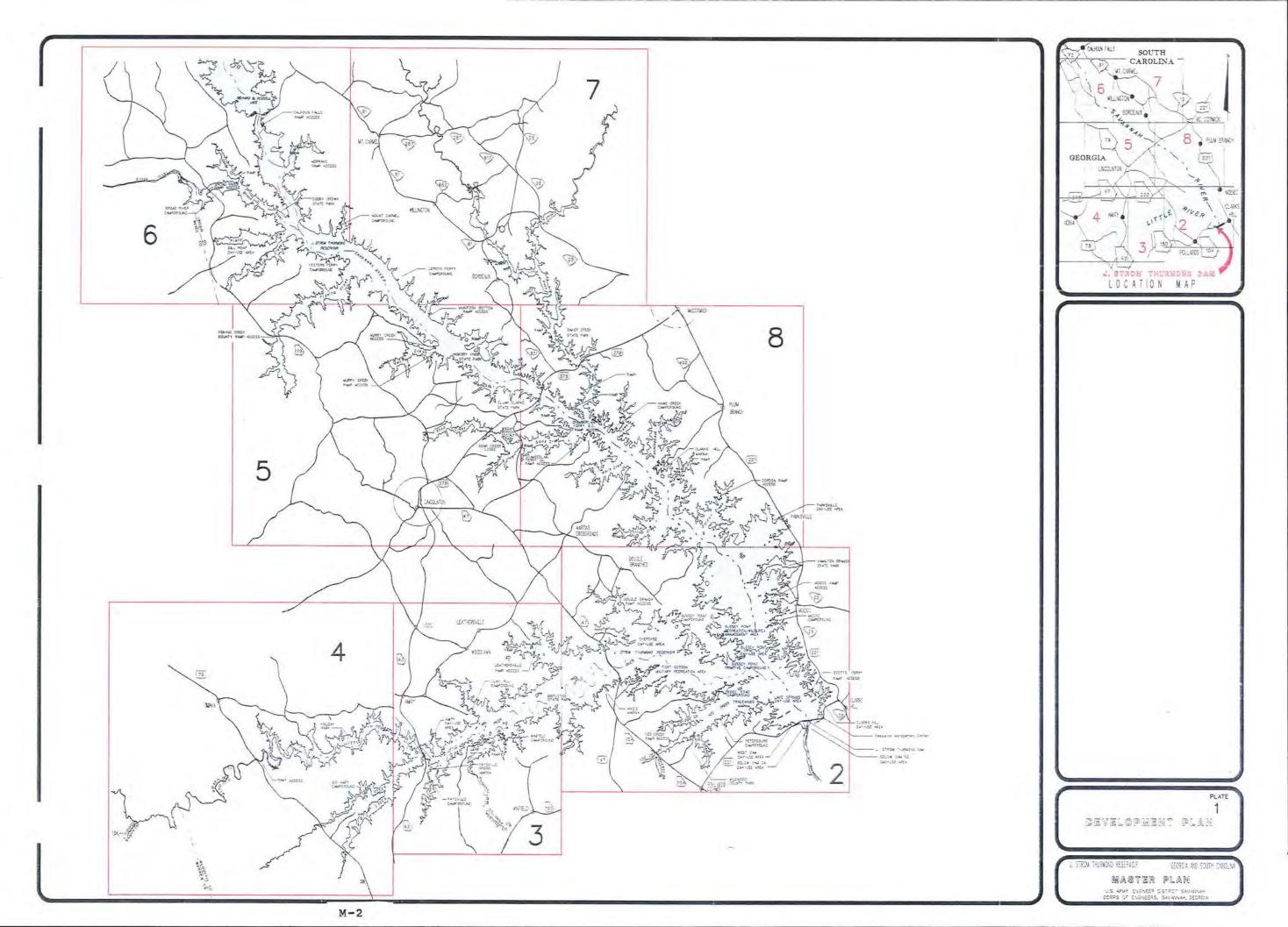
Augusta Chamber of Commerce 600 Broad Plaza Augusta, Georgia 30901

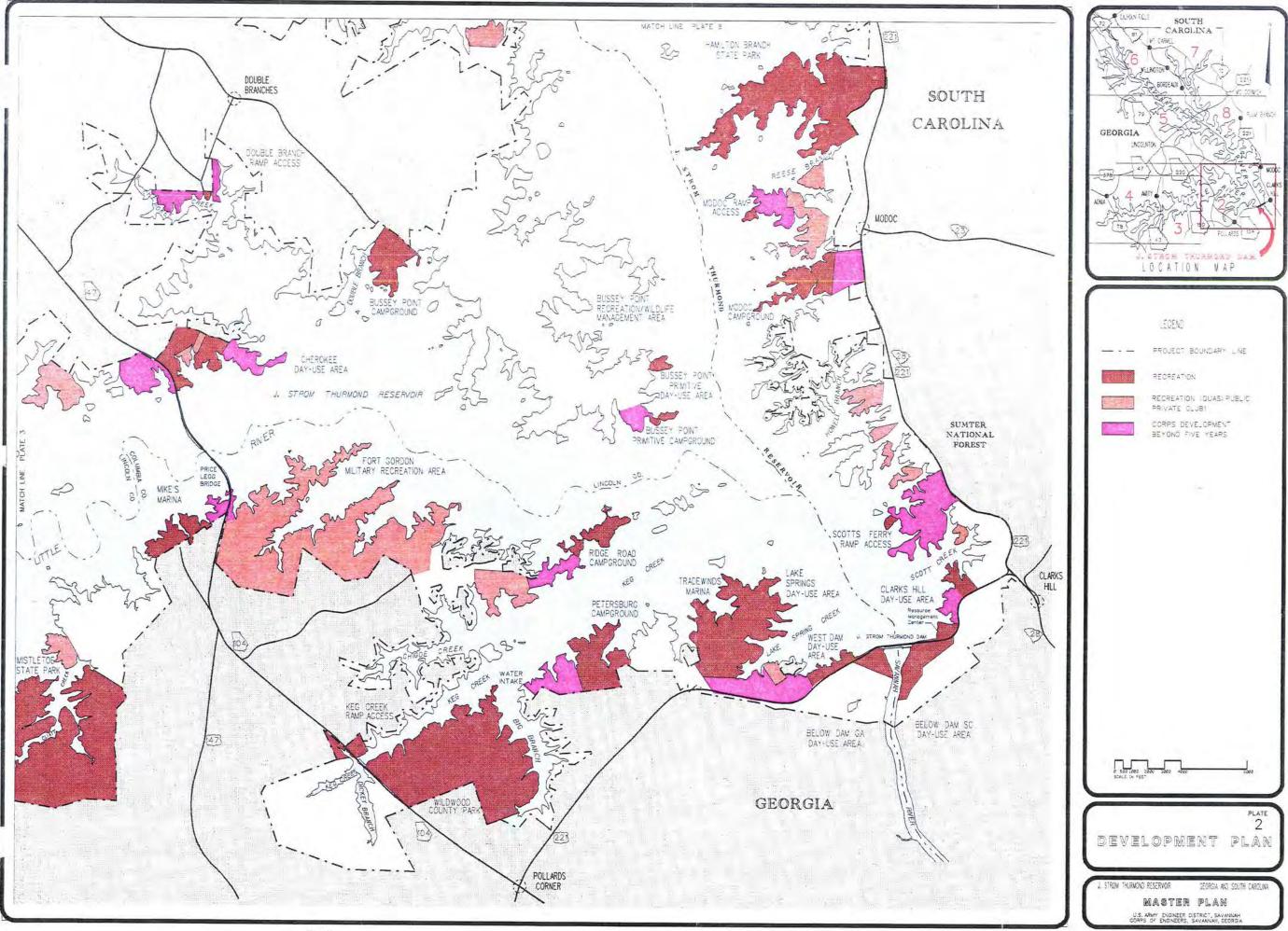
Augusta Planning and Zoning Board 525 Telfair Street Augusta, Georgia 30911 APPENDIX M

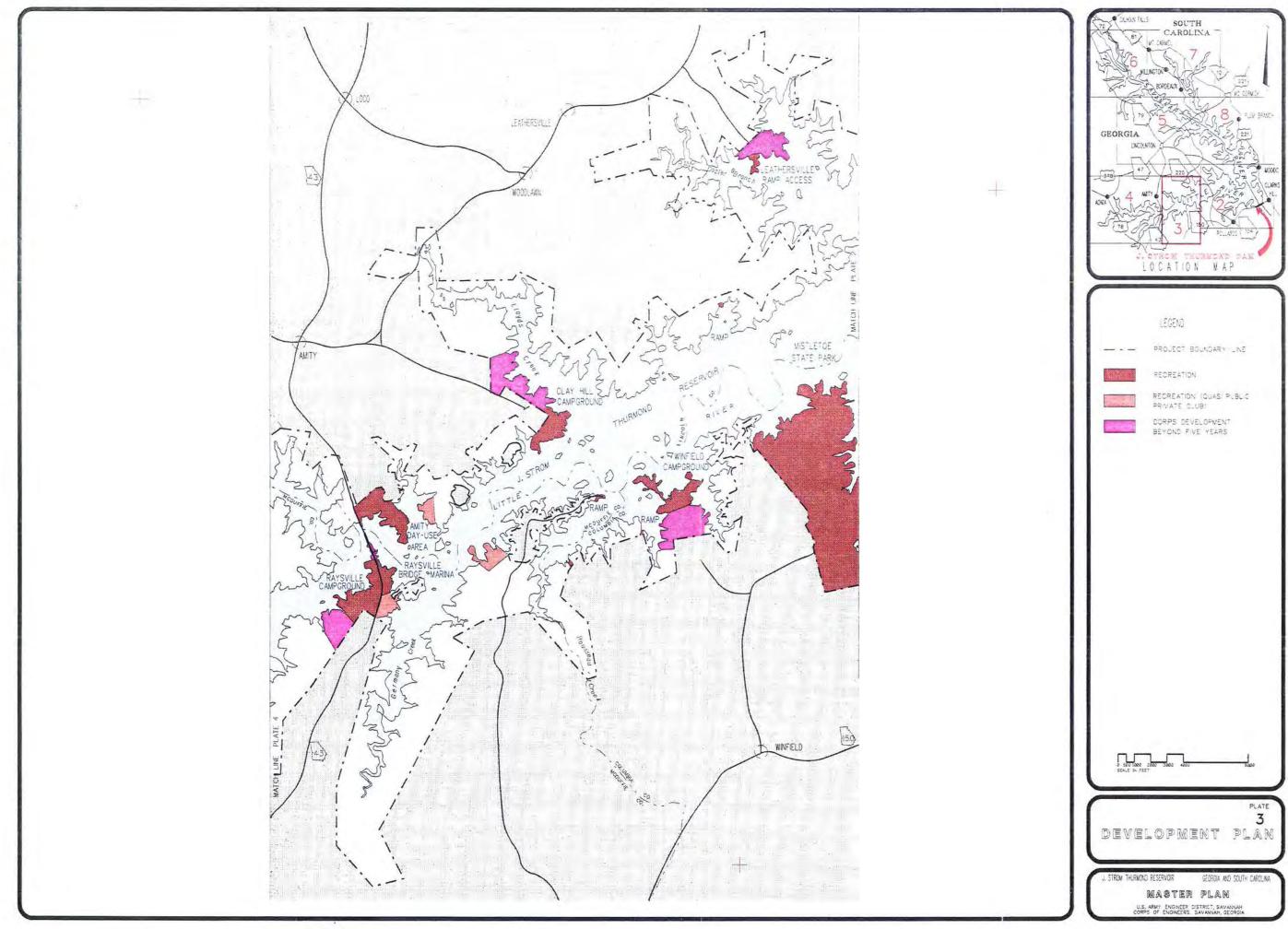
## DEVELOPMENT PLAN

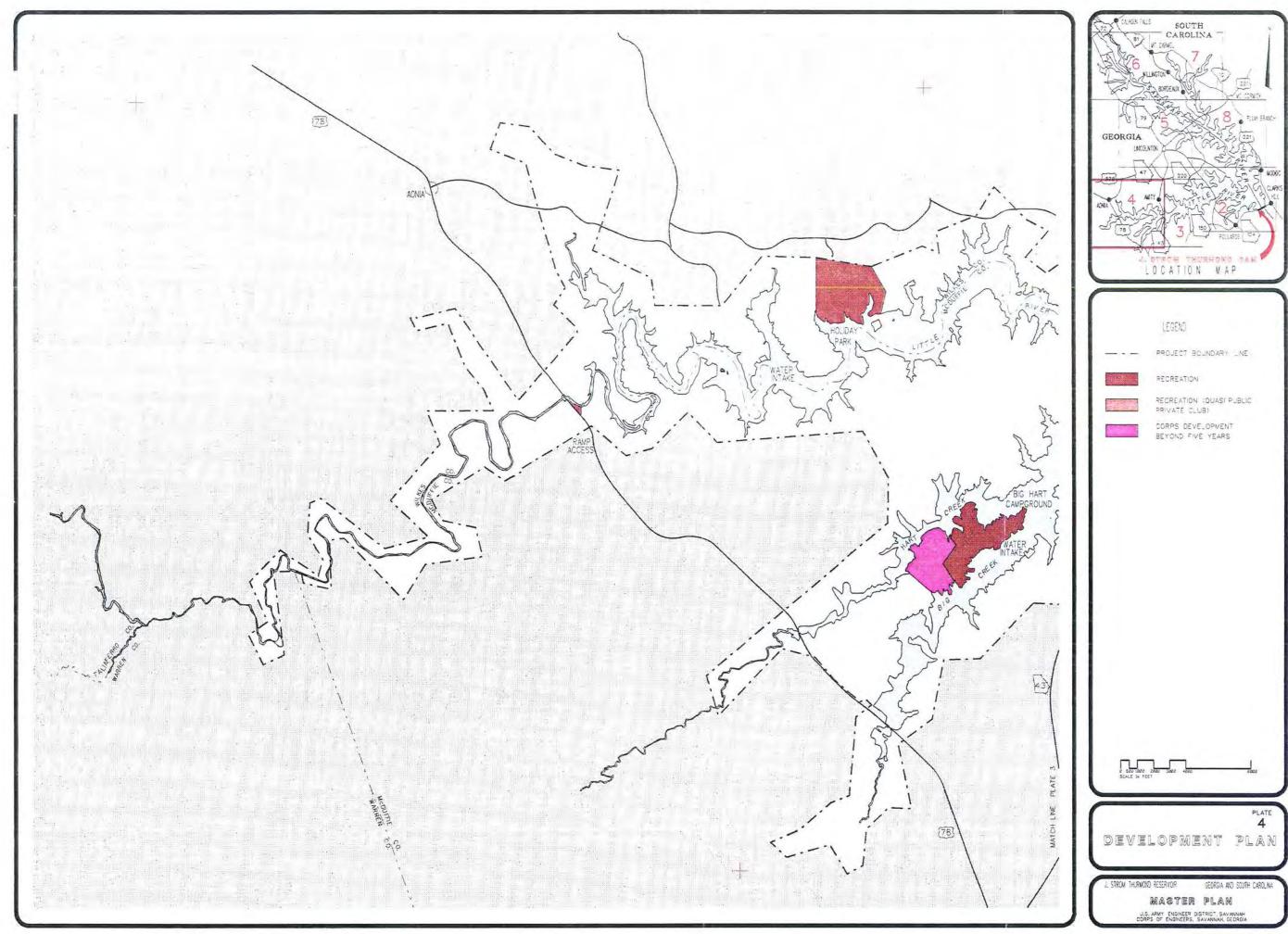


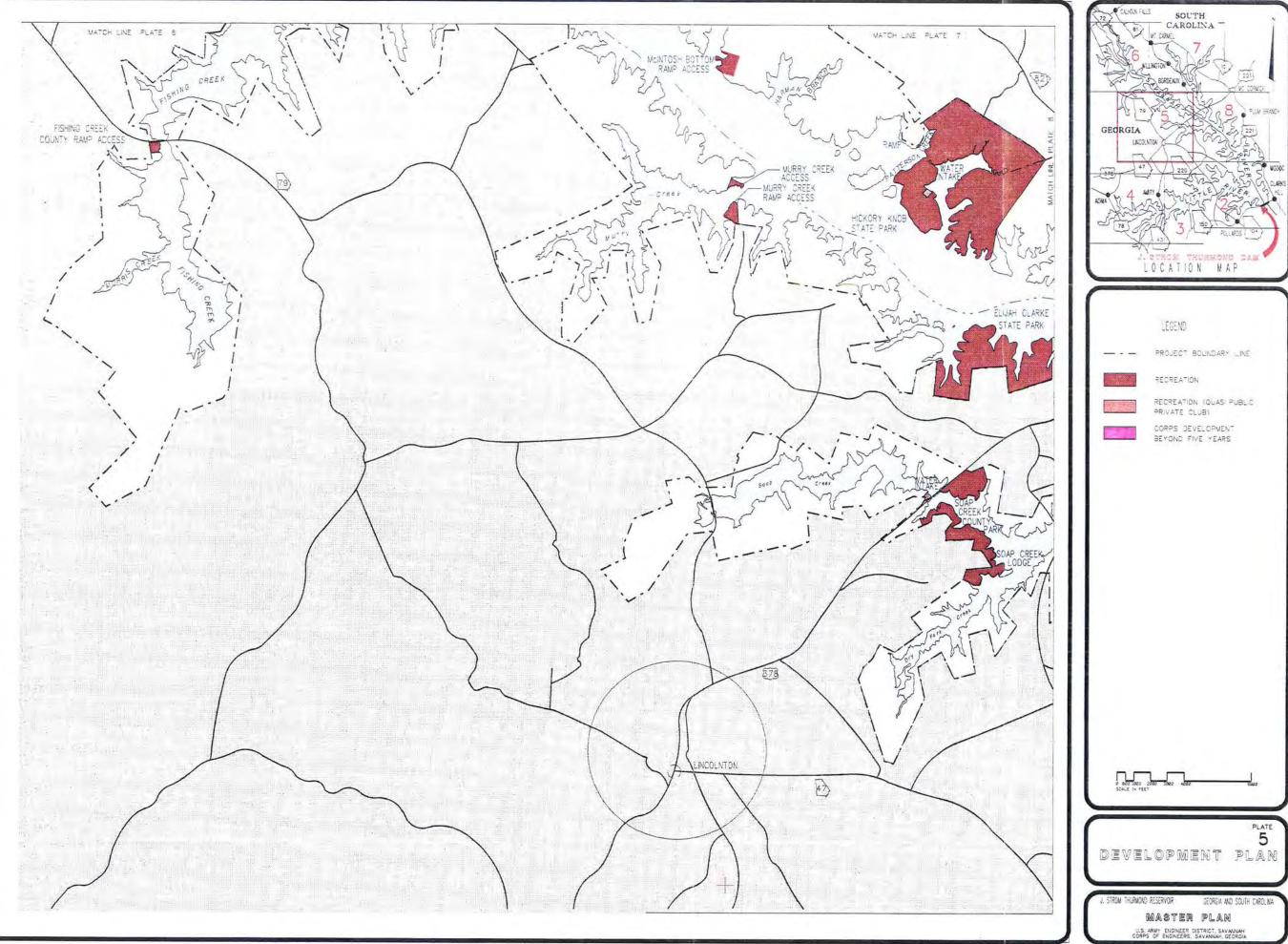




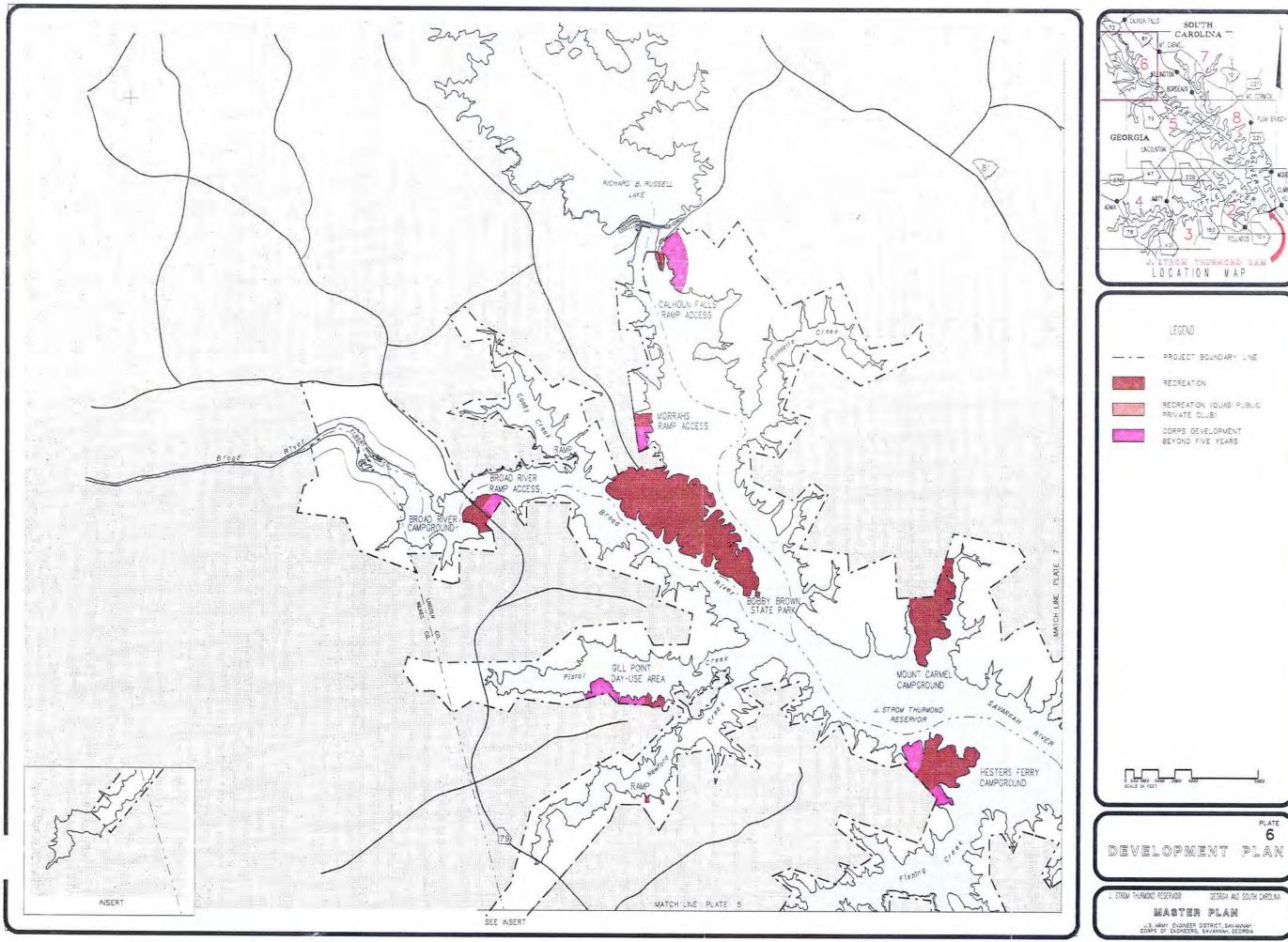


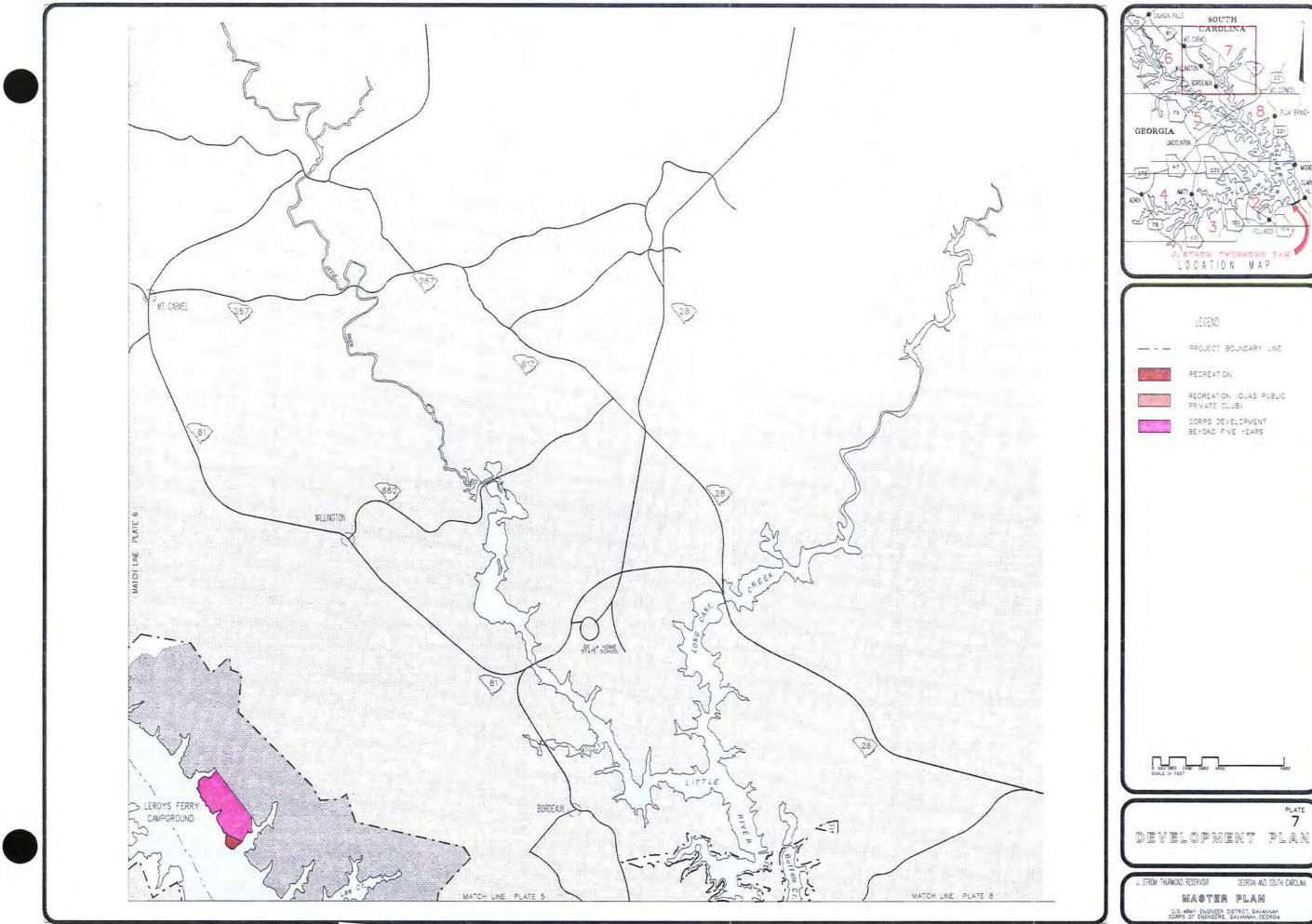






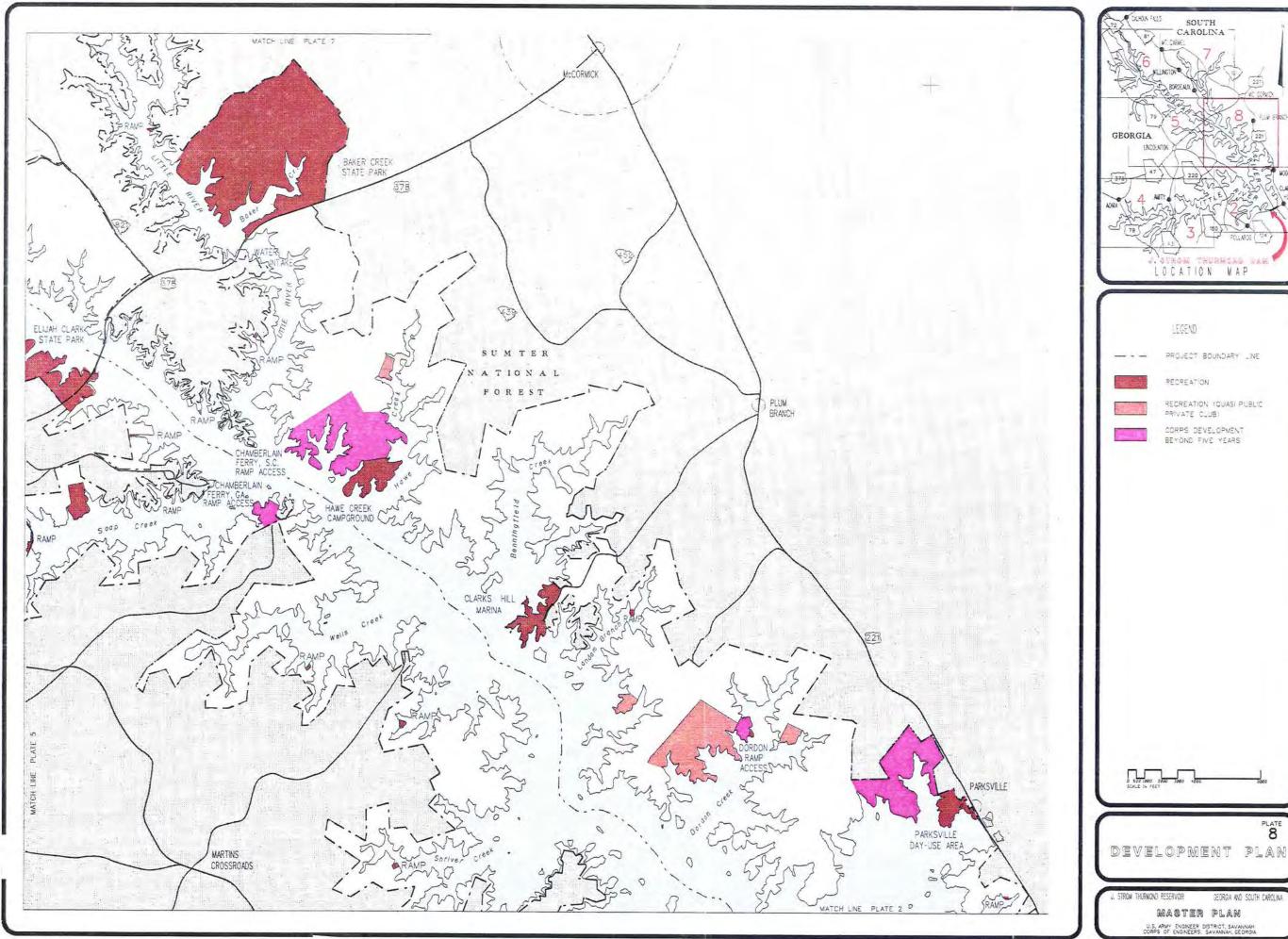
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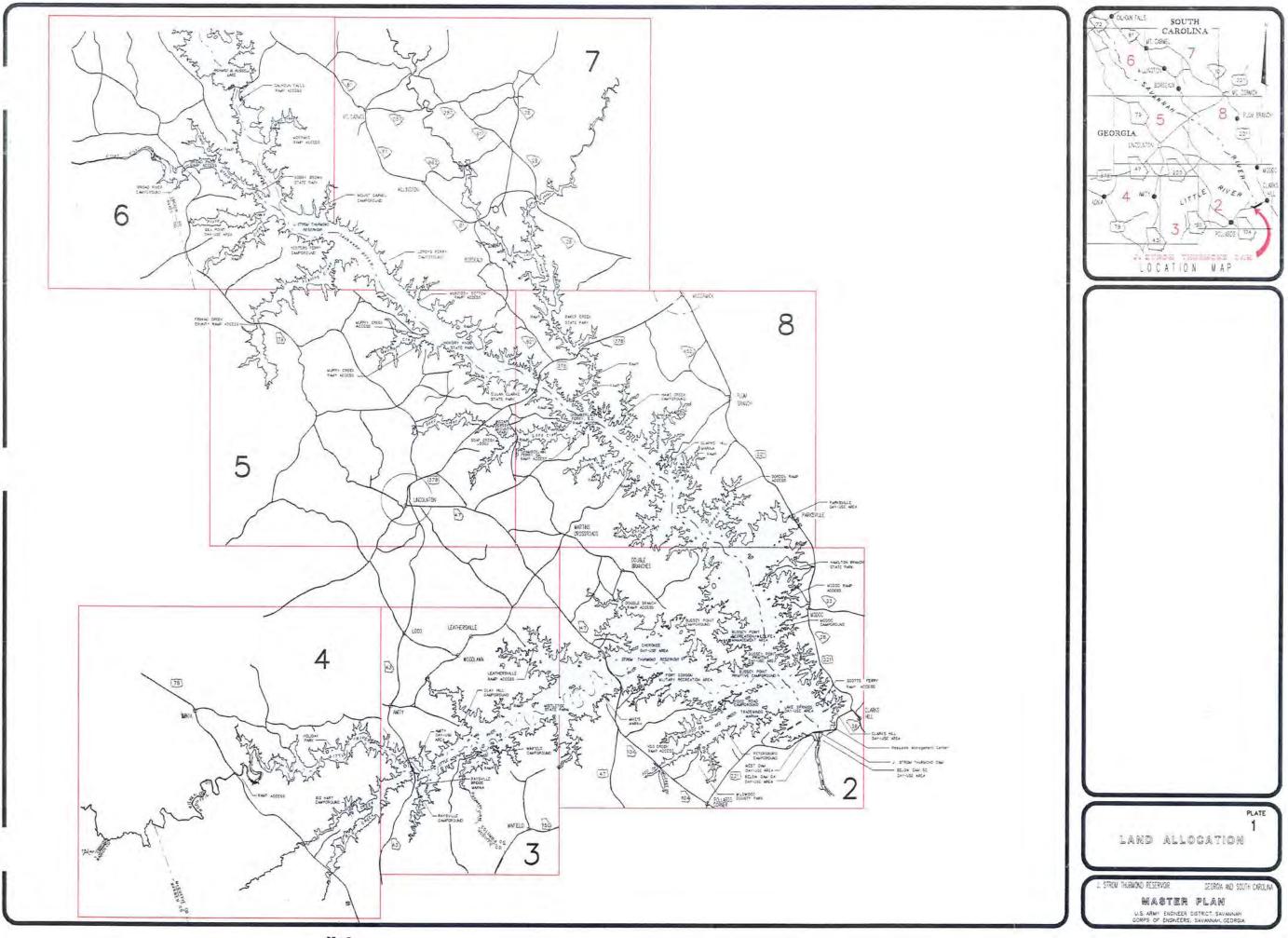
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PLATE 7

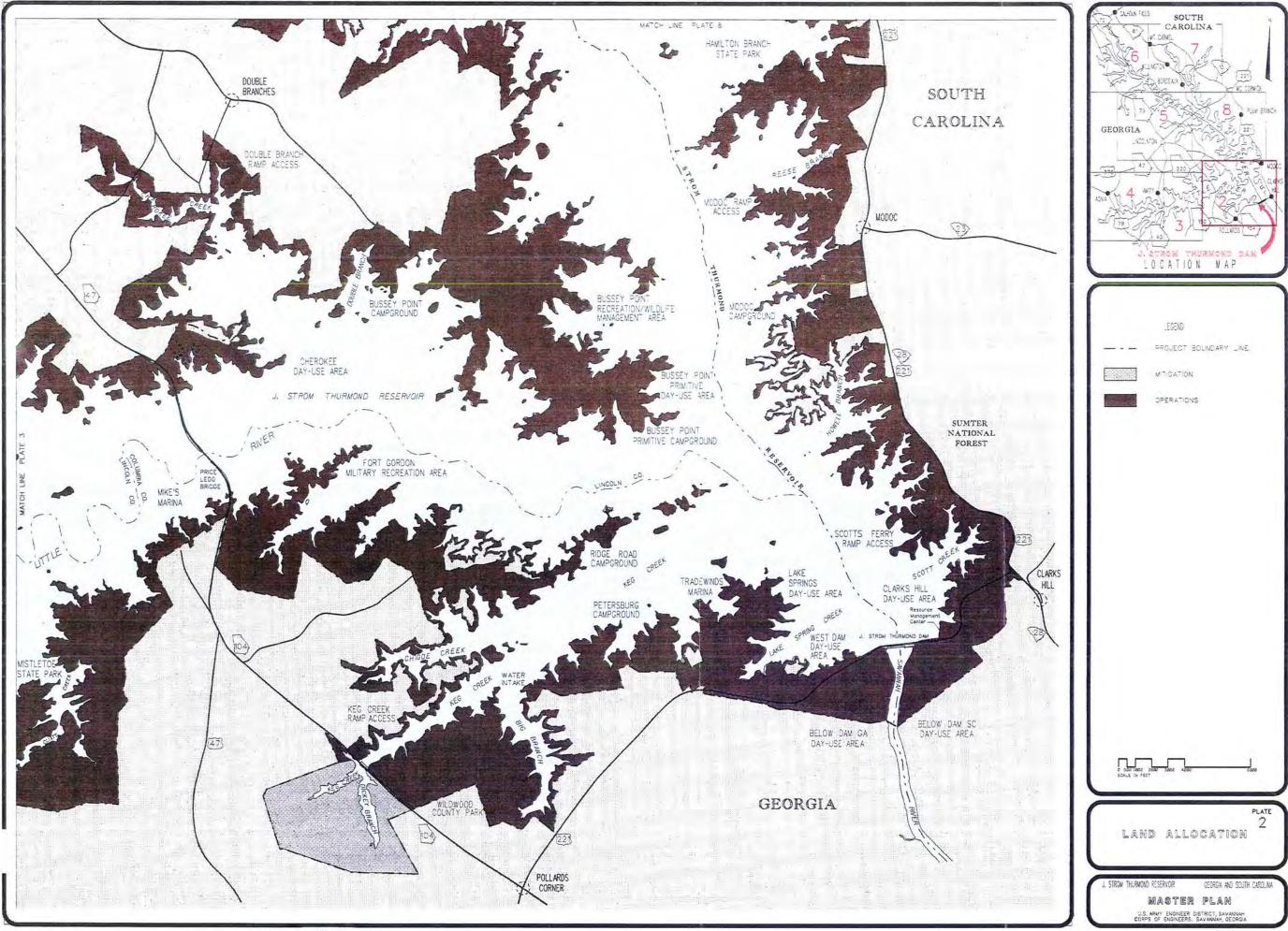


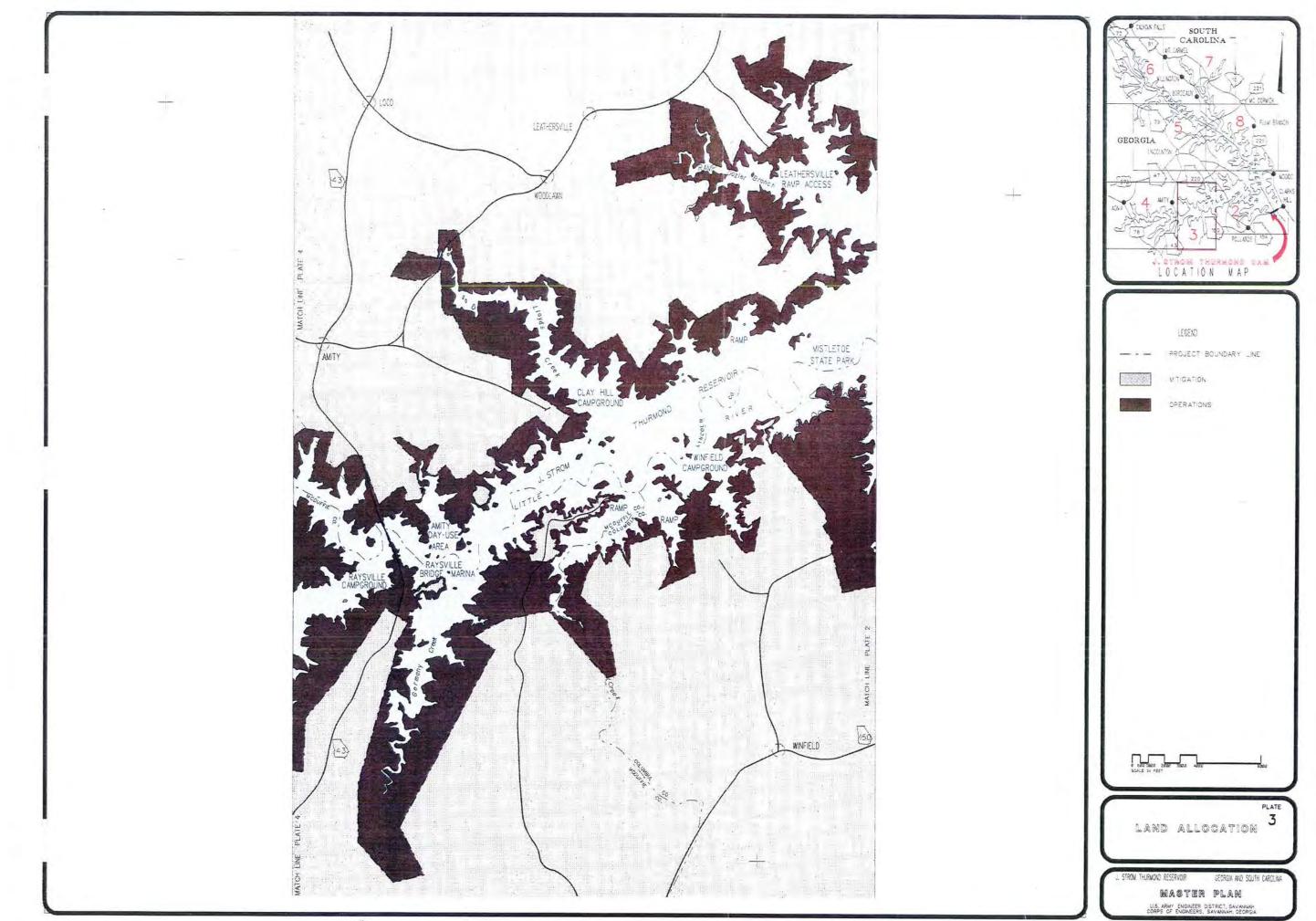
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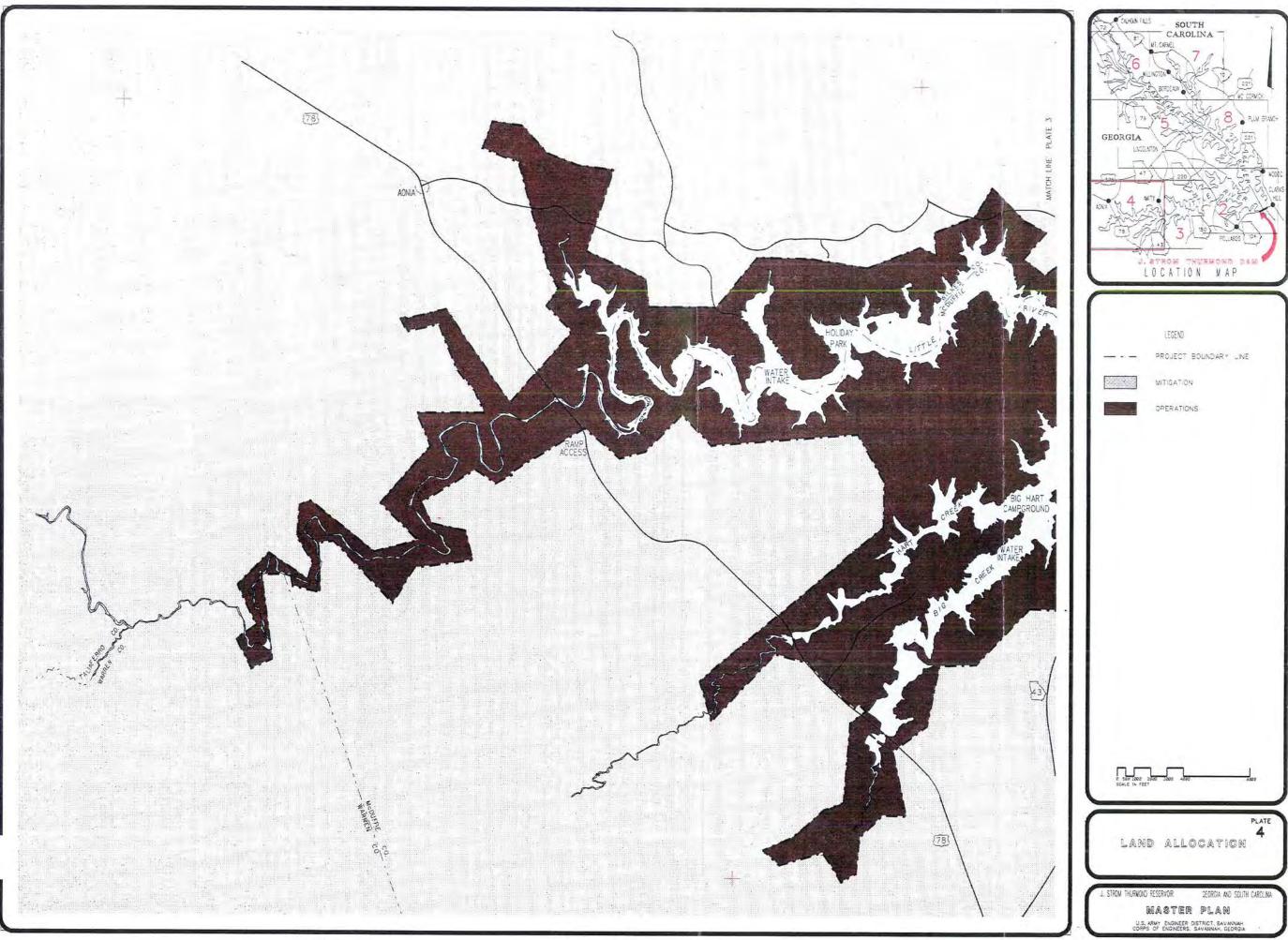
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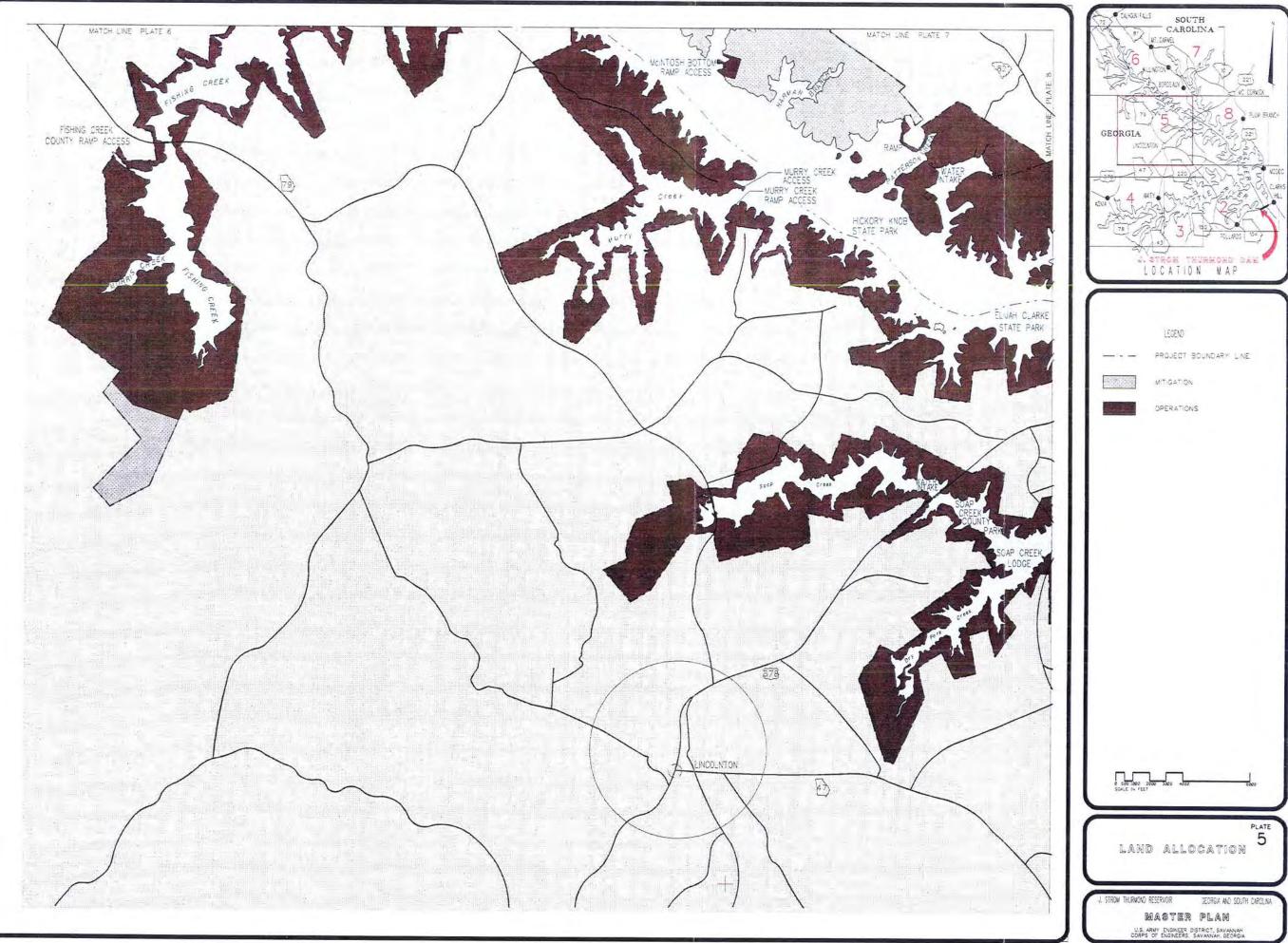


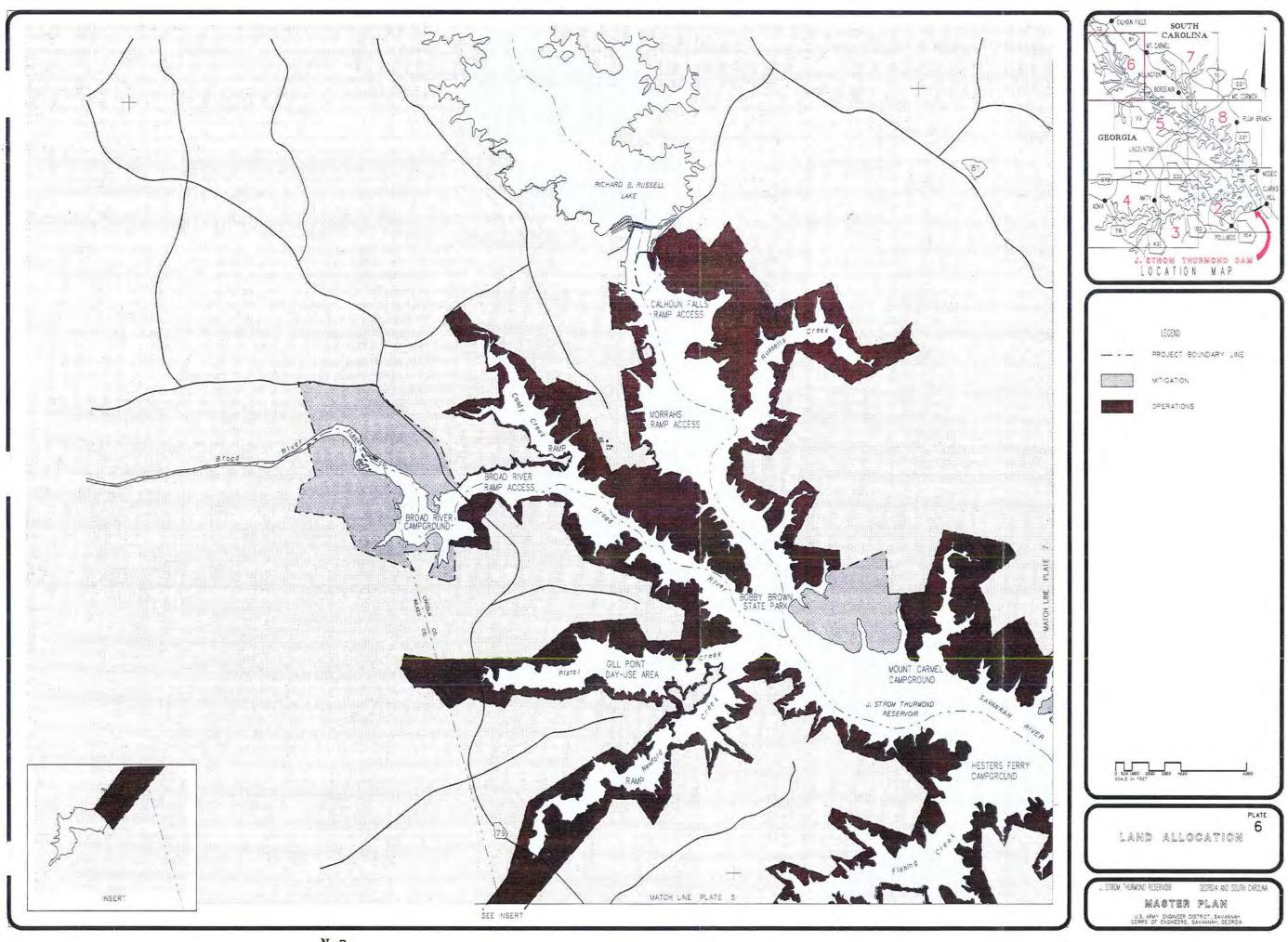
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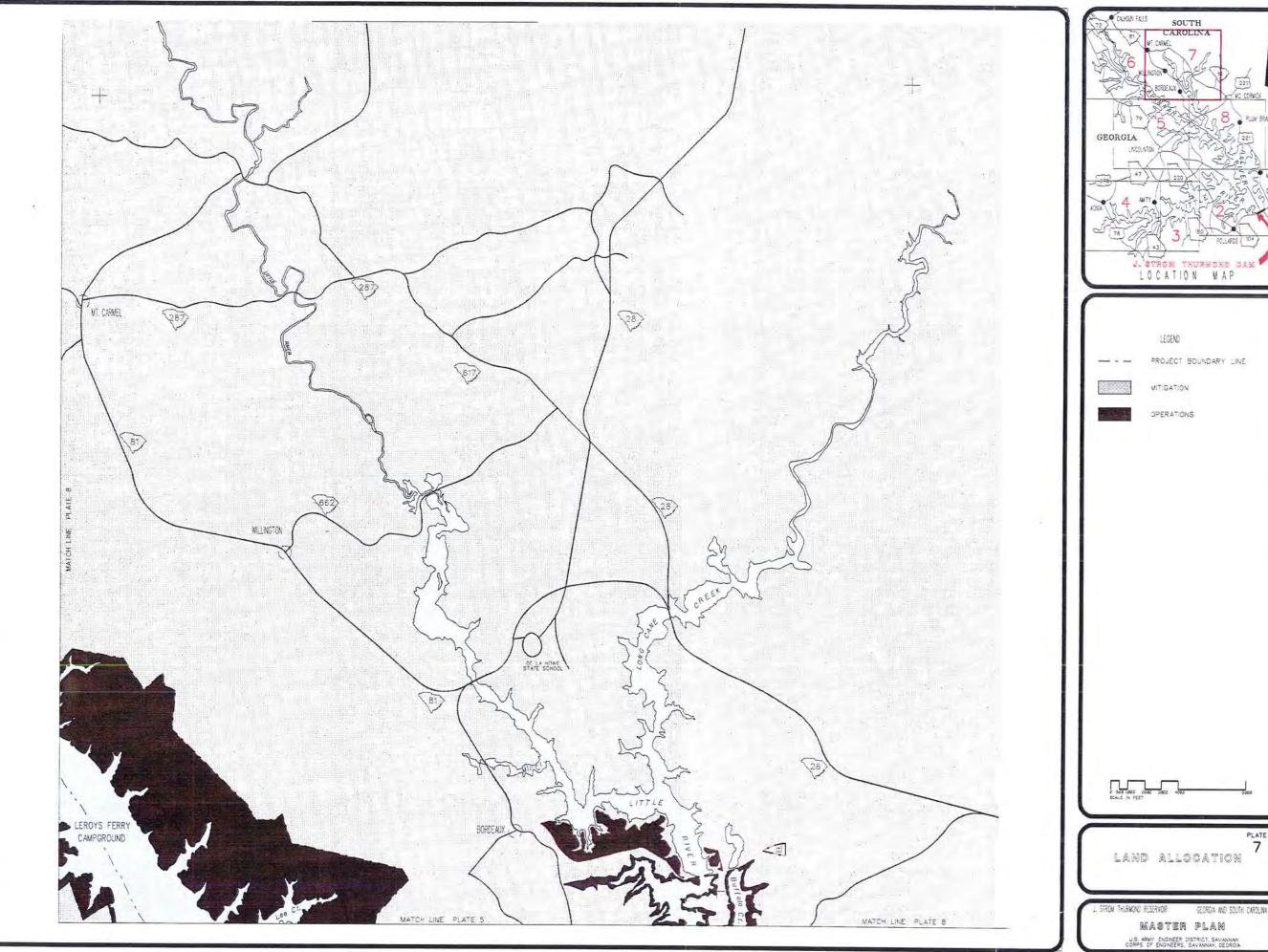












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PLATE 7

