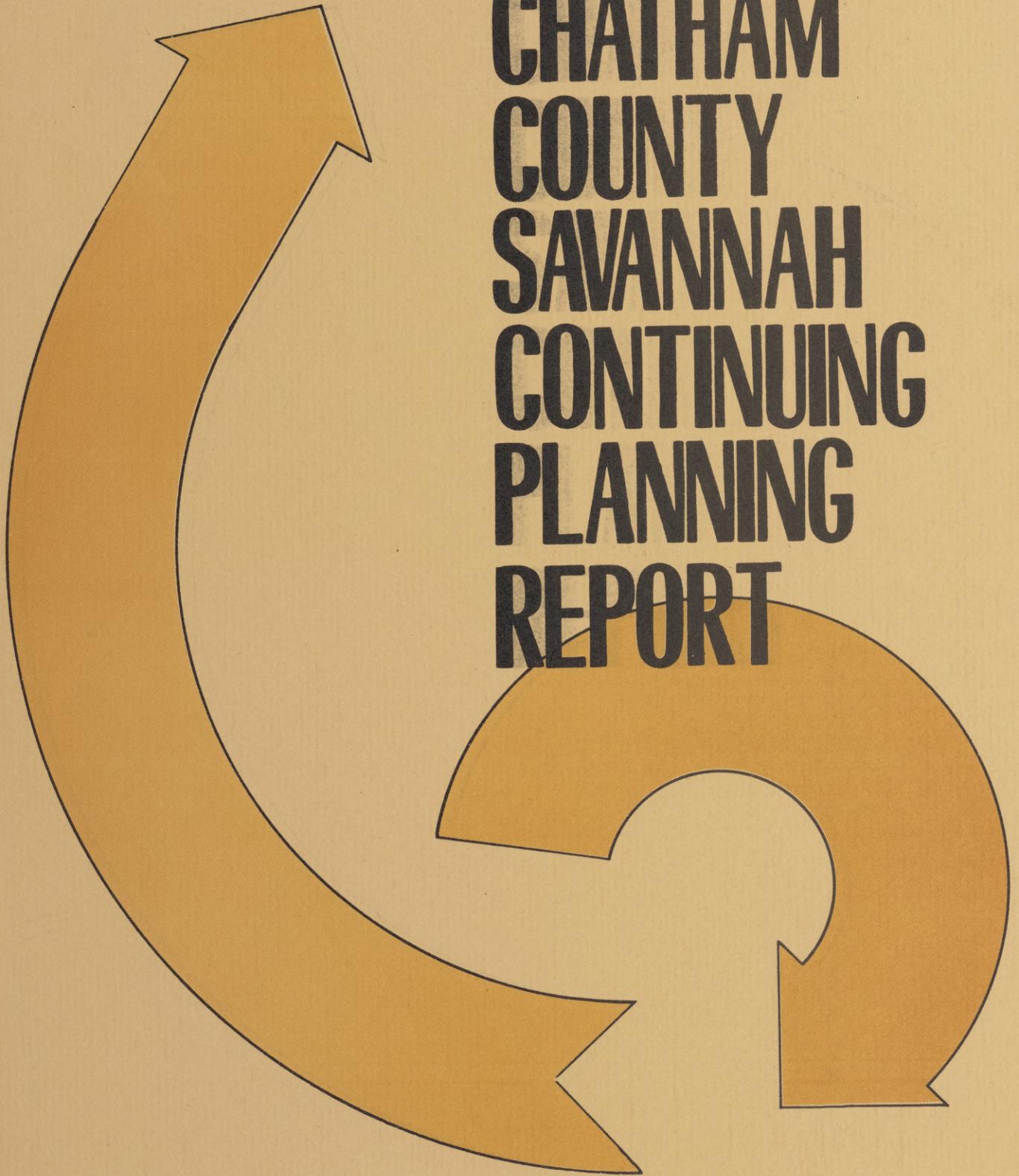


701/08599
CP - Georgia
Chatham County

1973 CHATHAM COUNTY SAVANNAH CONTINUING PLANNING REPORT

CP - GEORGIA - CHATHAM COUNTY



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May 1975

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This report was produced with the assistance of:

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Miss Geraldine LeMay, Director, Savannah Public and Chatham-
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Thomas and Hutton Engineering Company, Savannah, Georgia.

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TABLE OF CONTENTS

	<u>page</u>
INTRODUCTION.	1
CHAPTER I: LAND USE STUDIES.	7
General Review and Update of Land Use Plan for Chatham County	7
Status of <u>Land Use Plan for</u> <u>Chatham County - 1985</u>	7
Purpose of Plan.	8
Physical Land Characteristics.	8
Economic Growth Factors.	11
Population and Land Development Trends	13
Existing Land Use.	19
Zoning and Subdivision Regulations	19
1985 Land Use Plan for Chatham County	19
Design Concept	20
Plan Features.	22
CHAPTER II: TRANSPORTATION STUDIES	27
The Chatham Urban Transportation Study Summary Report	29
General Review and Update of Airport System Plan.	35
Existing Facilities.	35
Airport Improvements	35
Helipad.	37
Airport Activity Summary and Update.	37
Summary of Recommendations	39
1971-1978: Short-Range Plan	40
1978-1983: Intermediate-Range Plan.	41
1983-1993: Long-Range Plan.	41
CHAPTER III: COMMUNITY FACILITIES STUDIES.	49
Libraries Study Update	51
Administration and Finance	51
Objectives	52
Standards and Comparisons.	54
Physical Facilities and Services	54
Main Library	54
Branch Libraries	59
Sub-branches	62
Recommendations.	65
First Priority Branches.	65

Libraries Study Update (continued)

Second Priority Branches 66

Improving Existing Facilities 66

A Plan for Water and Sewer Summary Report 69

Purpose of the Water and Sewer Plan 69

Today's Problems 70

Local Water Supplies 70

Sewage Treatment 71

A Complete System 74

Multi-level Approach
to Pollution Abatement 74

Local Pollution 75

Summary of Recommendations Included
in A Plan for Water and Sewer 75

Major Recommendations 77

APPENDICES

Appendix A: Chatham County-Savannah
Metropolitan Planning
Commission Citizens Survey 83

Appendix B: Chatham County Population
1950-1985 87

Appendix C: Bookmobile Circulation to
Chatham County Schools 1970-1972 89

Appendix D: Circulation - Neighborhood
Bookmobile Routes 91

LIST OF TABLES,
GRAPHS AND MAPS

		<u>page</u>
Table 1:	Soil Use Limitation Rates for Septic Tank Filter Fields	9
Map 1:	Chatham County, Georgia Soil Interpretative Map of Soil Use Limitation Rates for Septic Tank Filter Fields	10
Graph 1:	Total Number of Military and Civilian Personnel at Hunter 1960-1972 and Total Retail Sales in Chatham County 1960-1972	12
Table 2:	Population and Housing Unit Estimates January 1, 1973	14
Graph 2:	Population Totals for Chatham County	16
Table 3:	Net Housing Units Constructed (April 1970-December 1972)	17
Map 2:	1985 County Land Use Plan	25
Map 3:	Adopted Thoroughfare System 107 Insert	32
Map 4:	Street Classifications and C.U.T.S. Proposals	33
Map 5:	Existing Savannah Municipal Airport Facilities	36
Table 4:	Air Carrier Activity: Savannah Municipal Airport	37
Table 5:	Non-Stop Service Savannah Municipal Airport	38
Table 6:	Control Tower Operations	39
Map 6:	Short-Range Plan Proposals	43
Map 7:	Intermediate-Range Plan Proposals	45
Map 8:	Long-Range Plan Proposals	47

LIST OF TABLES,
GRAPHS AND MAPS
(continued)

	<u>page</u>
Table 7: Library Expenditures	53
Table 8: Standards for a Regional Library System	55
Table 9: Basic Statistics Showing Library Use and National Standard	56
Table 10: Per Capita Expenditures for Libraries	57
Map 9: Existing Facilities: Main Library, Branches, Sub-branches	58
Table 11: Library Facilities	60
Map 10: Bookmobile Service to Schools	63
Map 11: Proposed Library Branches and Service Areas	67
Map 12: Sewer Service Areas	78
Map 13: Water Service Areas	80

INTRODUCTION

The principal objective of this working paper is to review selected current planning elements in an effort to maintain their integrity and accuracy. The findings and recommendations of this paper are to be considered as an addendum to the respective previously published plans.

Recommendations are made where necessary to assure that adequate compliance with required federal and state program certification standards are maintained. In addition, the current status of each specific plan was reviewed and updated relative to recent capital improvements, and plan recommendations were re-evaluated to determine if they comply with existing known local objectives, goals and policies.

This report represents only a portion of the Chatham County-Savannah Metropolitan Planning Commission's (MPC) latest efforts in maintaining the integrity of the local planning program. The numerous day-to-day activities of the Commission do not always lend themselves to specific reports, although these activities greatly aid in the administration and implementation of the continuing planning program. Examples of such actions are the coordination and/or review of other planning related projects, such as Model Cities Programs, Downtown Revitalization Plan, urban renewal plans, zoning petitions, recommendations for amendments to zoning and subdivision regulations, and the like. The continuous monitoring and updating of the published plans and documents help to guide these various day-to-day activities. A summary of the findings and recommendations resulting from the continuing planning program is presented below. The specific studies reviewed are listed according to the chapter title under which they are discussed.

Chapter I

Land Use Studies

The MPC is currently involved in two major planning efforts being conducted under the City of Savannah's Community Renewal Program and the Hunter Redevelopment Committee's activities. These projects have diminished the need for a review of the Land Use Plan for Savannah - 1985 during the current planning program. Data gathered from these two programs will be reviewed and incorporated into the City Land Use Plan when these studies are completed.

The 1971 edition of the Land Use Plan for Chatham County - 1985 was reviewed and determined to be in need of moderate updating. A synopsis of this update follows:

- Planning "work shops" are recommended over the next few months to review the present goals and set specific objectives toward developing more detailed plans for areas identified in the Land Use Plan.

- A questionnaire has been developed for use during the coming months to solicit the feelings of county citizens on a number of matters of community interest.
- Ten map overlays have been developed by the Soil Conservation Service that provide for a more detailed analysis of the general soil characteristics in Chatham County. One of these maps reveals that seventy-three percent of the land area in Chatham County is rated as having severe limitations for the use of septic tanks.
- The announced major cut-back of Hunter Army Airfield could have a sizable impact on the local economy if the base is kept in "caretaker" status. The MPC is presently aiding other interested agencies and local governments in a review of previous planning elements related to the use and/or redevelopment of the base's 5,404 acres.
- Further consideration of the possibility of developing a "super-port" on the Savannah River must be deferred until the findings and recommendations of current federal studies are made available. The continued growth of the port toward the sea will raise two major issues:
 - (1) The conflict of port expansion verses the marshlands, and
 - (2) The questions of adequate rail and highway access to potential eastern port locations.
- Preliminary population projections for Chatham County are estimated to be 190,000 persons in 1975; 210,000 in 1980; and between 220,500 and 240,000 in 1985.
- Since April 1, 1970, 2,326 housing units have been built and 22 housing units demolished in the unincorporated area of the county, resulting in a net increase of 2,304 units.
- Skidaway Island, Wilmington Island and the area west of the Forest River are anticipated to receive a larger percentage of the future residential development over the next few years.
- Additional commercial and multi-use developments are anticipated and planned for at a number of existing and future major highway interchanges.
- The recommended amendments to the 1971 edition of the County Land Use Plan include three additional land use classifications. Secondary development areas, rural development areas, and marshland or wetlands areas have been identified on the Land Use Plan in order to help guide the future development patterns in the county (see map 2).

Chapter II

Transportation Studies

Recent activities resulting from the Chatham Urban Transportation Study (CUTS) and the Airport System Plan are reviewed in Chapter II. A summation of these two planning elements follows:

CUTS Summary Report

- The Georgia Department of Transportation (DOT) and local governments adopted the present thoroughfare plan in 1969.
- In 1972, the Georgia DOT and MPC developed and published an Operations Plan for Continuing Planning. A major update of the CUTS is scheduled for the 1973-74 planning years.
- The CUTS area now includes the entire county.
- The MPC is conducting an employment survey to determine the number of employees by traffic zone.
- In 1973, the CUTS Policy Committee adopted a twenty-year project priority list by five year periods. This list is provided in Chapter II.

Airport System Plan

- The scheduled closing of Hunter Army Airfield and the chance of its being declared surplus property have once again raised the issue of whether or not to use this facility for civilian or commercial aviation.
- Approximately \$2.1 million in construction is scheduled at the Savannah Municipal Airport (Travis Field) in 1973 and 1974.
- Two air-taxi mail delivery planes have recently been introduced by the U. S. Postal Service at Travis Field. These services should increase enplaned mail tonnages and reverse the recent trend of declining enplaned mail tonnages.
- A record of 200,980 passengers boarded planes at the Savannah Municipal Airport in 1972. This represents a 14.4 percent increase in passenger enplanements since 1970. The 20,307 passenger enplanements in April 1973, established a new monthly record for the airport.
- Rehabilitation of the north-south runway and the construction of new taxiways have greatly reduced the capacity of the airport during the construction period. A reduction of 29 percent in the total number of operations (take-offs and landings) occurred between 1971 and 1972.
- Aviation forecasts indicate that air passenger traffic may double the 1970 enplanement figure of 175,550 by 1978.
- Long range projections indicate approximately 367,000 aircraft operations, 900,000 enplaned passengers, and 61,000 tons of enplaned cargo and mail for the Chatham-Savannah area by 1993.

- Improvements to the Municipal Airport are to be made in three phases, based on short, intermediate and long-range needs.

Chapter III

Community Facility Studies

Two community facility studies are reviewed and updated in Chapter III. These studies represent two elements that were updated last during the 1971 planning program. A listing and synopsis of each study follows:

Libraries Study

- Approximately 78 percent of the total 1973 budget for public libraries in Chatham County is provided by appropriation from the county general fund. State and Federal funds account for the balance of the budget.
- Since 1970, the library system has increased its per capita volume of books from 1.37 to 1.65 books per person.
- The immediate answer to reaching more people lies in enlarging the library service area through the development of the proposed branch system.
- The Savannah Public and Chatham-Effingham-Liberty Regional Library System is made up of the Main Library, two branches, and seven sub-branches in Chatham County. The service areas for these facilities are limited to the Central City of Savannah and a small section of the unincorporated county.
- Two library sub-branches were opened in the Model Cities Area in November of 1971. Both of these branches have been designed to meet the needs of school age children and adults who might be intimidated by the size of the Main Library.
- Seven bookmobiles serve 80 neighborhood routes and 20 school routes throughout the county. This represents an increase of one bookmobile and 20 neighborhood routes since 1971.
- Three new branch libraries are recommended in the vicinity of the intersection of Abercorn Extension and White Bluff Road, the Carver Village-Cloverdale-Liberty City area, and the Traffic Circle on West U. S. 80. Three second priority branches are also recommended on Skidaway Island, in the Georgetown-Grove Point-Quacco Road area, and in the Wilmington-Talahi Islands area.
- The Ola Wyeth Branch Library is recommended to be expanded to serve as a nucleus for a combined public branch library, county law library and municipal reference library. If the new city-county office building materializes and is located in a place readily accessible to the central business district, the Ola Wyeth Branch should be moved into the complex.
- The Carnegie Branch Library is recommended to become part of the sub-branch library system, and the present services should be expanded.

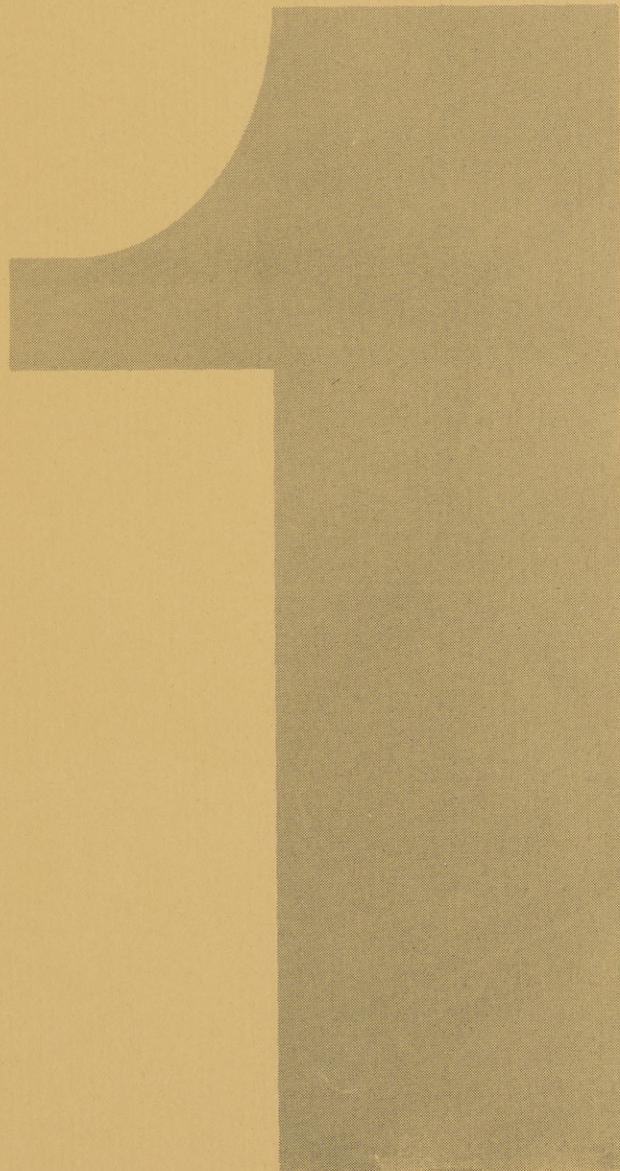
A Plan for Water and Sewer (Summary Report)

- Major efforts have been made in Chatham County-Savannah over the past couple of years to correct the local water pollution problems.

These improvements are generalized in the summary provided in this working paper and discussed in detail in a separate document entitled A Plan for Water and Sewer, 1973.

- This summary report is intended to allow an interested citizen an opportunity to review the overall problems, concepts, and recommendations discussed in A Plan for Water and Sewer without having to be confronted with the details of that report. This section contains a listing of the goals and objectives used as a guideline for the Water and Sewer Plan, as well as a summary of the local water and sewer problems and recommendations.
- A discussion on the various agencies involved in pollution abatement is presented to indicate the multi-level approach being used to eliminate water pollution problems.
- The ultimate 1985 sewerage system will consist of 19 treatment facilities and service areas in addition to Hunter Army Airfield. Including the Hunter facility, 23 water services areas have been recommended for 1985.
- Three major objectives of the long-range plan are:
 - (1) Complete removal of solids and sterilization of any waste discharged into recreational streams;
 - (2) An adequate water system to provide uniform water supply for all domestic use and fire protection; and
 - (3) Establishment of a single agency to administer all water and sewer systems.
- The cost of constructing the water and sewer systems necessary to serve the expected population in Chatham County in 1985 is approximately \$62,000,000.

LAND USE STUDIES



• LAND USE PLAN
FOR CHATHAM COUNTY - 1985

CHAPTER I
LAND USE STUDIES

The MPC's Land Use Studies consist of two major documents. One report is concerned with the incorporated area of the City of Savannah and the second report is concerned with the unincorporated areas of Chatham County.

The current major planning efforts being conducted under the City of Savannah's Community Renewal Program (CRP) have diminished the need for a review of the Land Use Plan for Savannah - 1985 (updated in March 1971) during the current planning program. However, data gathered for this program and recommendations resulting from this study will be reviewed and incorporated into the City Land Use Plan as a part of the future continuing planning efforts when the present study is completed.

Thus this chapter will only review and evaluate the status, findings and recommendations of the latest County Land Use Plan to determine if this document still reflects current goals, policies and/or trends.

General Review and Update of
Land Use Plan for Chatham County

The first land use plan for the unincorporated area of Chatham County was published in 1957, following formation of the Chatham County - Savannah Metropolitan Planning Commission. The Preliminary General Land use Plan was one of the initial reports published by the MPC. The 1971 edition, Land Use Plan for Chatham County - 1985, extends the planning period to the year 1985, expands the elements of the 1957 study, and reflects the various physical, social and economic characteristics documented in the planning studies conducted prior to 1971.

Status of Land Use Plan for Chatham County - 1985

The County's Land Use Plan was two years old in March of this year. This plan is based on observations of the then existing conditions, characteristics and trends which could affect the physical, social and economic development of Chatham County. For the most part, the 1971 conditions, characteristics, trends and projections have followed their anticipated direction. No capital improvements are directly associated with the Land Use Plan, although numerous private and public elements reflected in the plan have experienced capital improvements (i.e. private developments, transportation improvements, water and sewer facilities and the like). These improvements will be discussed under the appropriate specific planning element. References to various planning reports are provided where possible to eliminate duplication with other MPC reports and to keep this publication from being too voluminous.

Purpose of Plan

The Land Use Plan for Chatham County - 1985 is a general guide for achieving an efficient and pleasant environment throughout the unincorporated area. The community's current goals and development policies are reflected in the plan and provide a reasonable basis for making the kinds of day-to-day decisions which are so vital to assuring a desirable community environment. As a result of this review a series of planning "work shops" are recommended over the next few months to review the present goals and set specific objectives toward developing more detailed development and redevelopment plans for areas identified in the Land Use Plan. Economic changes currently developing in Chatham County dictate that a major effort will probably be required during the next planning program to assess the current goals of both the City and the County. As discussed below, national policy decisions affecting two of the community's major economic elements must be decided prior to making certain important local decisions. Answers to these major national economic issues are expected during the summer or fall of 1973. To provide an initial basis for these recommended "work shops" a questionnaire, designed to solicit the feelings of county citizens, was developed during the latter part of this current planning program for use during the coming months. A copy of this questionnaire is included herein as Appendix A.

A. Physical Land Characteristics. Information provided under this section of the Land Use Plan provides the basic data on which to estimate growth areas and development potentials within Chatham County. Obviously, these conditions have not changed in two years, but the MPC has continued its efforts to find ways to eliminate identified physical problems related to land development and to acquire greater knowledge of the physical land characteristics of Chatham County. The following is a brief summary of the Commission's efforts.

In 1972, the MPC published a document, Storm Drainage Study, aimed principally at the purpose of establishing what can be done to eliminate or relieve flooding conditions that have caused property damage in the past. The report describes in detail the needed improvements, estimates the costs of correcting certain deficiencies and establishes a set of priorities. Recommendations on public policies dealing with drainage are also stated and amendments to subdivision regulations were proposed. The MPC also worked with representatives from the U.S. Army Corps of Engineers and County officials in developing a set of regulations to prevent the establishment of inappropriate uses in flood hazard districts. The County officials adopted these regulations in March of 1973. These efforts have corrected some of the related flood hazard problems associated with development restraints in the past. The MPC has also continued its cooperative work program involving the Soil Conservation Service of the U.S. Department of Agriculture and the Coastal (Georgia) Soil and Water Conservation District. As a result of this effort a series of ten map overlays were developed this year by the Soil Conservation Service that provide for a more detailed analysis of the general soil characteristics in Chatham County. These maps describe the general soil characteristics by a series of small "units" or "cells" coded to represent the predominant soil

characteristic in a particular "cell." There are 15,852 such "cells" located wholly or partially in the County, each being 21.333 acres (1,056 feet in length by 880 feet in width). The predominate soil characteristic of each "cell" is key punched for use on a computer program printout. The computer printout is designed to print the coded data in the shape of the County boundaries by "cell strips" on ten Map Information Assembly and Display System overlays which in turn may be placed over a one inch equals one mile county base map for general analysis. The soil interpretative overlays are designed to provide soil information for the following:

- Depth to seasonably high water table
- Shrink - swell potential
- Percolation rate
- Soil use limitation rates for certain uses
 - . residences
 - . septic tank filter fields
 - . sewage lagoons
 - . trafficways
 - . playgrounds
 - . paths and trails

-Woodland interpretations for productivity, limitations and natural drainage

Map one (1) and table one (1) are provided as examples of the data available. Map one (1) gives a generalized pattern for soil use limitations for septic tank filter fields. Table one (1) indicates that three per cent of the study area is rated as having soil characteristics with slight limitations for the use of septic tank filter fields. Twenty per cent and seventy-three per cent of this land area are rated as having moderate or severe limitations respectively for the use of septic tanks. Approximately four per cent of the land area of the County, located within the City of Savannah was not coded (see table 1). Maps and tables depicting each of the ten characteristics are on file with the MPC.

TABLE 1

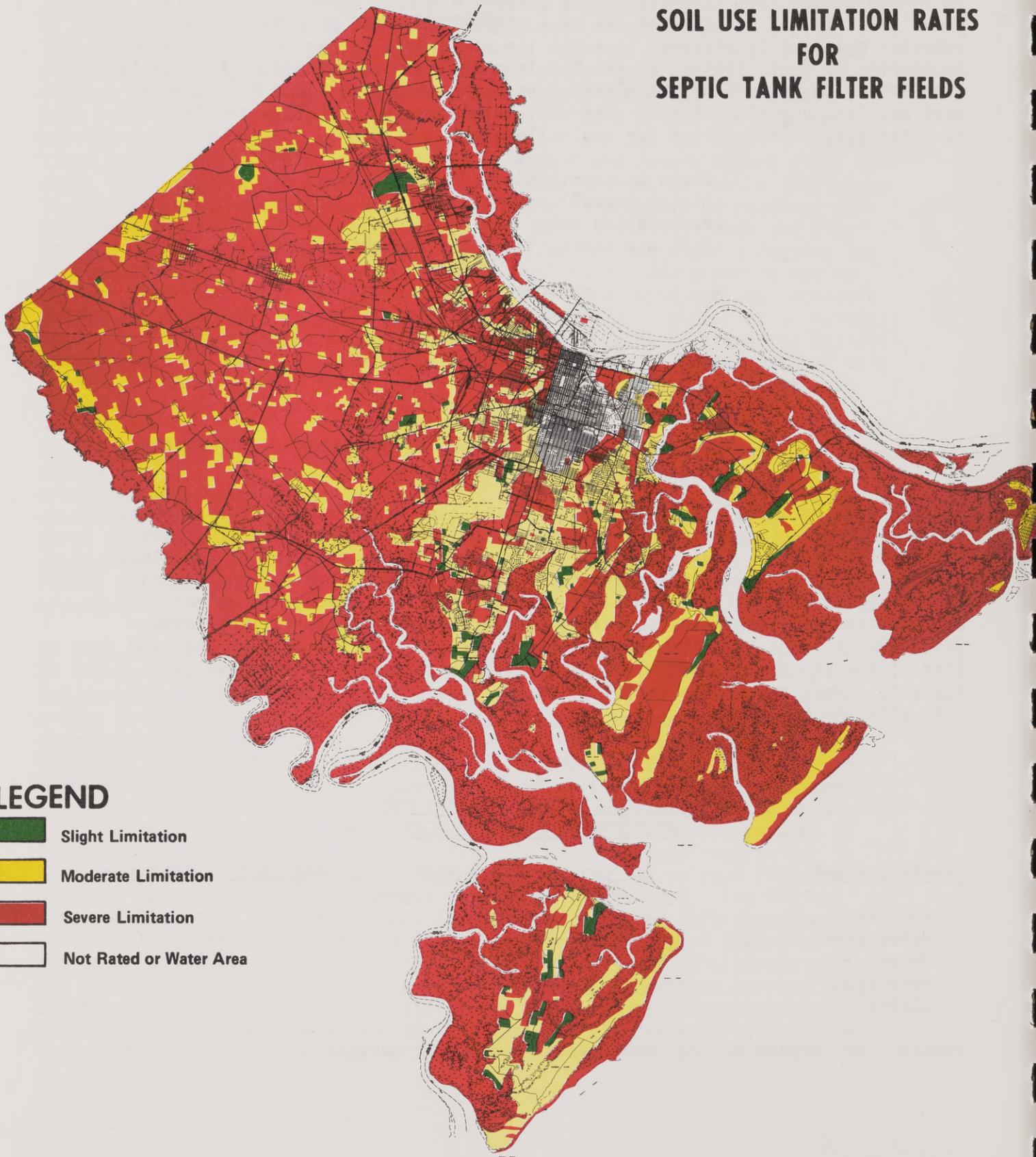
SOIL USE LIMITATION RATES FOR
SEPTIC TANK FILTER FIELDS

<u>Limitation Rating</u>	<u>Per Cent of Total Area</u>	<u>Per Cent of Land Area</u>
Not rated	3%	4%
Water area	15%	---
Severe	63%	73%
Moderate	17%	20%
Slight	2%	3%

Source: Mr. Robert Wilkes, USDA Soil Conservation Service.

MAP NO. 1

CHATHAM COUNTY, GEORGIA
SOIL INTERPRETATIVE MAP
OF
SOIL USE LIMITATION RATES
FOR
SEPTIC TANK FILTER FIELDS



LEGEND

-  Slight Limitation
-  Moderate Limitation
-  Severe Limitation
-  Not Rated or Water Area



*This map represents a generaliz
interpretation of the larger scale m
on file at the M.P.C.

These maps and a forthcoming publication produced by the Soil Conservation Service, entitled Soil Survey of Bryan and Chatham Counties, will provide a more detailed analysis of the County's soils than has been available in the past.

B. Economic Growth Factors. In projecting future growth patterns, it is imperative that a clear picture of the economy be developed. Major changes occurring in two elements of Chatham County's economic base over the past few months have dictated that only minimum effort be undertaken in the present planning program to make extensive long range or detailed projections for future land use needs and population estimates. Until further facts concerning these two elements are available, such projections would only have limited or short term usefulness. Final decisions concerning both elements are expected by mid-summer or the fall of 1973.

The single largest event has been the announced major cut-back of Hunter Army Airfield. The Commission's Military Sector report, published in 1970, indicated that military expenditures and military population figures have a sizable impact on the local economy. Estimates reported in this study indicated that military related personnel comprised approximately ten per cent of the total 1969 population of Chatham County. In 1969, Hunter Army Airfield was also the single largest employer in Chatham County. By the end of this summer, the U.S. Department of Defense will employ a total of thirty (30) persons at Hunter under the announced "caretaker" status assigned to the base. However, efforts are underway to have this status changed to either a full status base or close the base permanently and turn it over to the community for urban development. To help insure that the community is not caught unprepared, the MPC is presently aiding other interested agencies and the local governments in a review of previous planning elements related to the use and/or redevelopment of the base's 5,404 acres. The results of this review will be incorporated into both the City of Savannah and Chatham County Land Use Plans within the next few months. This action is necessary because the decision whether or not to close Hunter has not been finally determined and is a decision which cannot be made locally.

A cursory analysis of the present situation and the present trends - both on the national and local levels - would indicate that Hunter will not be built up in the near future and that the permanence of Savannah's military base cannot be depended upon. Therefore, the preliminary land use plan for the base will insure that the community is ready with a plan if and when the base is finally declared surplus property.

A recent MPC analysis of retail sales in Chatham County indicates that retail sales are increasing in spite of Hunter's population decline (See Graph 1). But it must be noted that this conclusion is not based on a detailed review of the community's economy since such indicators as bank deposits, wholesale trade and other major economic indicators were not considered. However, it does show that the cessation of military activity at Hunter would probably not place a major long-term economic hardship upon the community, provided the base is not kept in "caretaker" status.

GRAPH 1

TOTAL NUMBER OF MILITARY AND CIVILIAN PERSONNEL AT HUNTER

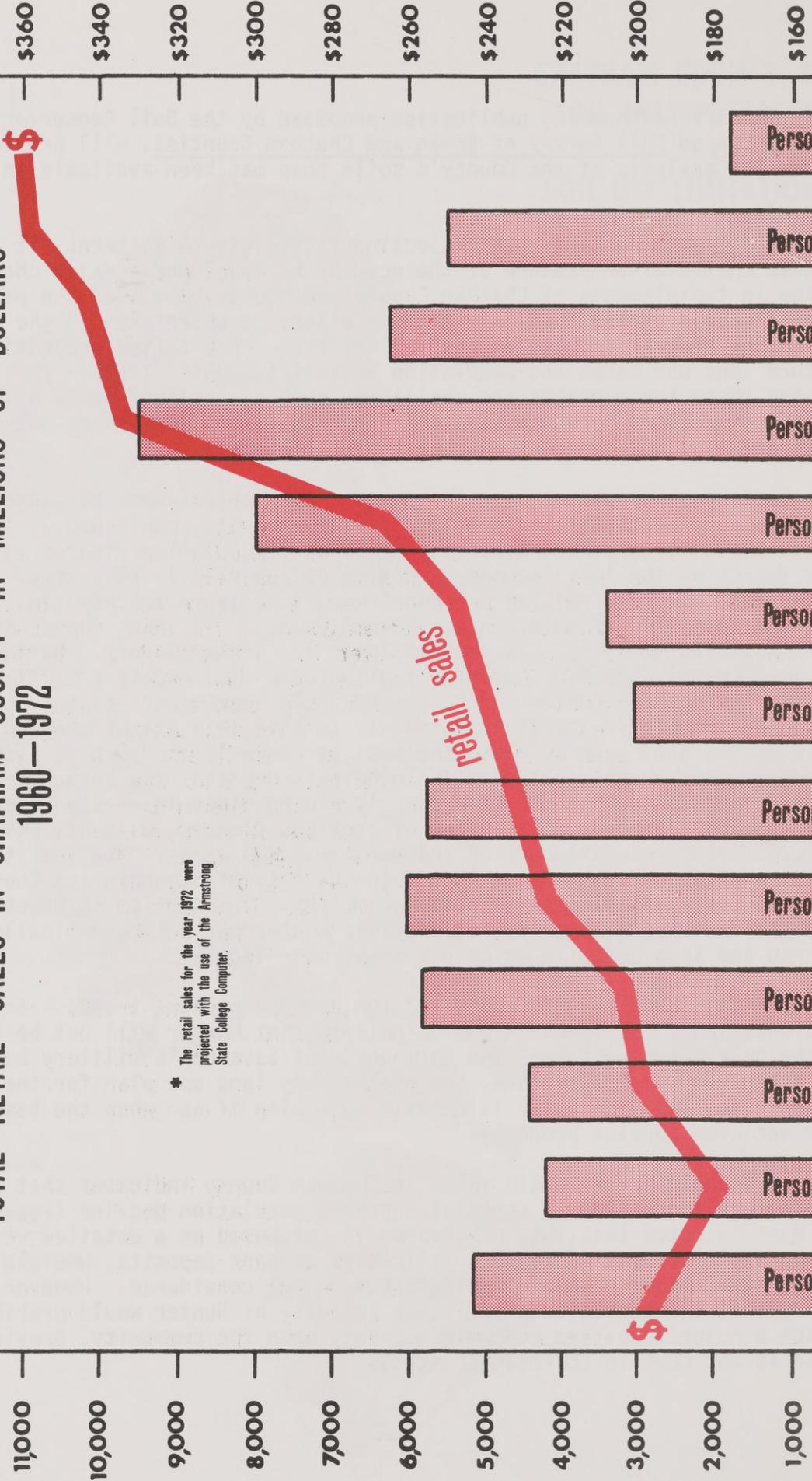
1960-1972

AND

TOTAL RETAIL SALES IN CHATHAM COUNTY IN MILLIONS OF DOLLARS

1960-1972

Military plus
Civilian Personnel



* The retail sales for the year 1972 were projected with the use of the Armstrong State College Computer.

Future studies must consider the economic benefits available to Savannah and Chatham County under federal and state programs designed to ease the resultant impact on the County's economy, especially if the base is kept at its proposed low status.

The second principal element of Chatham's economic base subject to experiencing major changes is the "port sector." A 1972 MPC publication, Savannah Seaport Study, assesses in great detail the potential of developing a "superport," determines the capacity of the port to handle increased traffic, and proposes three overall development plans. The report also indicates that trends in ship construction and the escalating costs of harbor maintenance will dictate that the possible "superport," discussed in the 1971 Land Use Plan, be developed down river from Savannah, in the vicinity of the ocean. Federal studies under contract to the U.S. Army Engineer Institute of Water Resources will determine the need for a "superport" in the Southeastern United States. Further consideration of the possibility of developing a "superport" on the Savannah River must be deferred until the findings and recommendations of the current federal studies are made available to the local community. In the interim, port-related growth in port-related land uses has continued and is expected to continue over the long term. The two latest port expansions are the new Lighter-Aboard Ship (LASR) facility located near the mouth of the Savannah River and the announced construction of a multimillion dollar facility by Southern Natural Gas Company on Elba Island. Both of these facilities are on the seaward side of Savannah and could signal the beginning of a new era in the growth of the port, even if the concept of a "superport" does not materialize as a result of pending national policy decisions. The continuation of port growth toward the sea will raise two major issues:

- (1) The conflict of port expansion versus the marshlands, and
- (2) the question of adequate rail and highway access to the possible additional eastern port locations.

The MPC's 1973 work program includes a Marshlands Study which will, in part, address the first issue. The continuing efforts of the Chatham Urban Transportation Study (CUTS) will provide recommendations and solutions to the second issue. The resulting policies, goals and recommendations from these planning elements and studies will provide guidelines for further refinement of the Land Use Plan over the next few months.

E. Population and Land Development Trends. Population projections are necessary to develop adequate planning estimates for future labor force, educational facilities, housing needs, roads, land use and other purposes. This paper provides preliminary population estimates that are based on the knowledge of the present situation. These projections will be reviewed and, if necessary, revised after pending national policy decisions are made that could have a major effect on the future of Chatham County's economy. In an effort to understand the present situation, the MPC has prepared a series of three Population and Housing Reports that provide for greater understanding of local demographic and socio-economic factors. Information from the U.S. Census Survey Tapes has allowed a thorough analysis of selected population and housing characteristics.

which are graphically displayed in the above referenced reports on County Census tract maps. These reports have also corrected a number of the preliminary census counts used in the 1971 Land Use Plan. Two such corrections are adjustments to the total 1970 U. S. Census county population and housing counts as follows:

- (1) Total Population counts increased from 187,767 to 187,816 persons.
- (2) Total housing units counts increased from 61,941 to 61,958 units.

Preliminary population and housing estimates for January 1, 1973 indicate that there has been a net increase in population of approximately 2,122 persons and a net increase in housing of 4,083 units in the total county. The loss of Hunter Army Airfield personnel and their dependents over the past two years has produced this unique "population to housing units" ratio. The general steps used in determining the January 1, 1973 population and housing estimates were based on 1970 U. S. Census data, housing and demolition permits received from local building officials and information received from Hunter Army Airfield. The results of the preliminary population and housing estimates for 1973 are provided in Table 2. Two additional procedures were used to verify this net population count. Both the U. S. Census Component Method II technique and a second housing unit method produced results within two (2) percent of the total population derived in Table 2.

TABLE 2

POPULATION AND HOUSING UNIT ESTIMATES
JANUARY 1, 1973

1970 year-round housing units	61,577*
Net housing units built between April 1970 - December 1972	<u>4,083**</u>
Estimated units January 1, 1973	65,755
Less 1970 year-round vacancy rate (5.92%)*	<u>-3,885</u>
Estimated occupied units	61,755
Times average person/dwelling unit factor (3.1749)	<u>X 3.1749*</u> 196,066
Less military population & dependents	-5,742***
Less civil service employees & dependents	386***
1973 population estimate	189,938
1970 population	187,816
Net change (April 1970 - December 1972)	+2,122

Source: *1970 Census of Population and Housing [PHC (1)-193]

**Local building and demolition permits

***Derived from information received from the Public Information Office, U.S. Army Flight Training Center, Hunter Army Airfield.

Between January 1, 1973 and the final closing of Hunter, an additional 1,351 Hunter military personnel and 3,479 military dependents and a percentage of the remaining 492 civil service employees (plus their dependents) are sche-

duled to move from Chatham County. Hunter officials indicate that it will be late summer before detailed figures will be available to provide specific population losses attributed to the closing of Hunter. Conservative estimates indicate that over 5,300 additional persons will migrate out of the County because of the scheduled base closing. During this same period a natural growth rate of 700 persons is expected (births less deaths). Thus, excluding any large in-migrations, a total of 185,338 persons are estimated to reside in Chatham County by the end of the summer. This will represent a net loss of 2,478 persons since the U.S. Census counts of April 1, 1970. From July forward, the County is expected to start regaining population. The rate of increase is dependent upon many variables, including the future use of Hunter's facilities. If the base is maintained in a caretakers status with minimum use of the facilities, only moderate population gains above a natural increase are expected to occur within the next couple of years. However, representatives from the Secretary of Defense's Office of Economic Adjustment are currently working with the community in an effort to develop a plan that will allow for the maximum utilization of the Hunter facilities. This could result in an immediate increase in the County's population. Historical data from the U.S. Census of Population reports for the years 1950, 1960 and 1970 are provided in Appendix B. Preliminary future population projections have been made for the County for 1975, 1980 and 1985 and are also shown in Appendix B. Chatham County's population in 1975 is estimated to be 190,000; in 1980, 210,000; and 1985, 230,700 persons. These projections are based on the assumption that the plan being developed by the Office of Economic Adjustment will be approved and provide for a moderate use of the existing Hunter facilities. The 1985 population estimate is the approximate midpoint in the preliminary 1985 population range of 220,500 to 240,000 persons (See graph 2). Continued surveillance must be maintained to help assure that any major developments at Hunter or elsewhere will be accounted for as soon as they are announced.

The land development trends discussed in the 1971 Land Use Plan have maintained similar characteristics over the past two years. The following section relates to recent land development activities by types (residential, commercial, industrial, and public and semi-public).

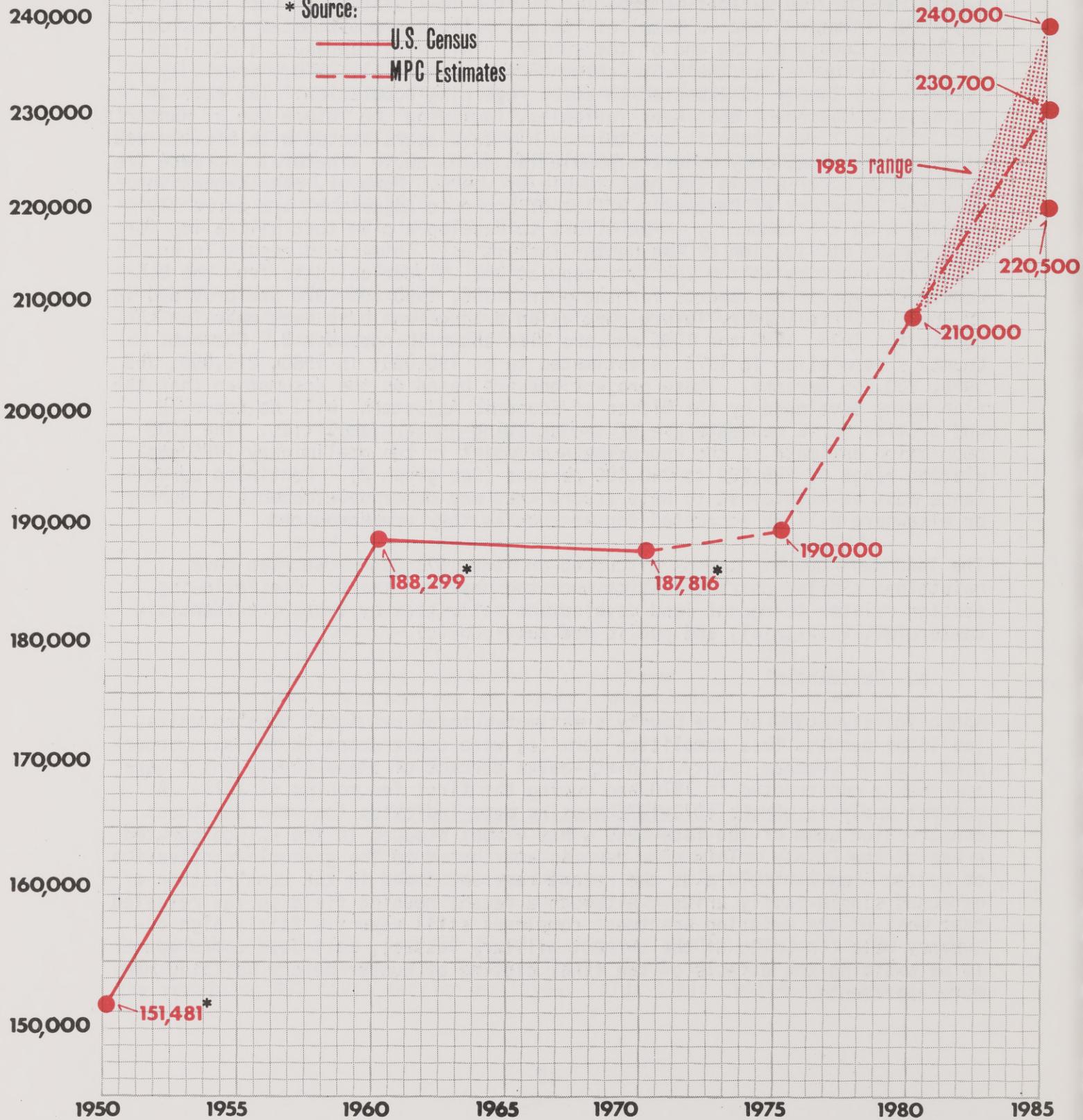
a. Residential

Approximately 2,300 of the County's estimated total net 4,083 housing units, (building permits less demolition permits) were constructed in the unincorporated area of Chatham County. Thirty-seven percent of these County units were apartments constructed in 1970 and during the first few months of 1971. A general analysis of the 1970-1972 housing data indicates that the apartment construction boom of the late 1960's has almost stopped in the unincorporated areas of the County. This slow down is attributed to the gradual deactivation of Hunter Army Airfield plus the recent reversed trend in the construction of detached single-family units. Although a recent housing field survey revealed that most of the existing apartment complexes still report a fairly high occupancy rate (in spite of the current military losses), most developers appear to be awaiting the effects of the final closing of Hunter before building many more apartments.

GRAPH 2 POPULATION TOTALS FOR CHATHAM COUNTY 1950—1985

* Source:

— U.S. Census
- - - MPC Estimates



Specifically, the unincorporated area of the county accounted for construction of 2,326 units and the demolition of only 22 housing units out of the county total of 4,696 new housing units and 631 demolitions reported by the local building officials. Table 3 provides a summary of the estimated net housing units constructed in the unincorporated area between 1970 and 1972.

TABLE 3

NET HOUSING UNITS CONSTRUCTED
(APRIL 1970 - DECEMBER 1972)

<u>UNINCORPORATED AREA</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>TOTALS</u>
Single Family Units	270	598	551	1,419
Apartment Units	<u>555</u>	<u>284</u>	<u>46</u>	<u>885</u>
Total Units (Net)	825*	882	597	2,304

*Portion of year only

Note: These figures represent the difference between the unincorporated area's housing unit building permits and the housing unit demolition permits.

The Housing Market Report, currently being prepared by the MPC, will provide further analysis of the present community-wide housing trends, including a discussion on which areas have received the majority of the new housing units. Generally, the geographic areas generating the most residential activity during the late 1960's have continued to dominate over the past couple of years. However, the areas of Wilmington Island and west of the Forest River (primarily in the vicinity of Pooler) have experienced marked increases in the number of housing units constructed during the past two years. Current and pending subdivisions and planned unit developments on Skidaway Island, Wilmington Island and west of the Forest River, in the vicinity of Abercorn Extension, are anticipated to receive a larger percentage of the future residential development over the next few years. However, the possibility exists that the southern undeveloped portions of Hunter Army Airfield may be available for residential development. If the base is declared surplus property and extensive acreage is designated for residential development, this could retard for a few years all but the most expensive residential developments anticipated in these three referenced growth areas.

b. Commercial

Commercial land use can be divided into three major categories: Wholesale trade, retail trade and service uses. In the SMSA, wholesale trade areas are located for the most part within the City of Savannah; whereas, the retail trade and service uses have decentralized to a much greater degree. A major concentration of these commercial developments is still located in the Savannah Central Business District. However, significant commercial developments also exist in the study area in major and minor shopping centers, and in strip developments along major arterials such as Abercorn Street, U.S. Highway 17 and Montgomery Crossroads. The shopping center has continued as a dominant factor in the expansion of commercial development in the county. Chatham Plaza, a

major shopping center, located on Abercorn Street Extension, represents the largest retail shopping area to be constructed since the 1971 plan was published. The completion of Abercorn Street Extension across the Forest River to I-95, and the opening of I-95 from I-16 southward, has provided direct access to numerous previously isolated areas of the county. The largest service oriented development, "Gateway Savannah", is located at one of these previously isolated areas, namely the I-95 and Abercorn Extension interchange. By the end of 1973, this development will include numerous restaurants, service stations and motels providing over 400 rooms. New and significant commercial and planned multi-use developments are anticipated and planned for at a number of the existing and future interchanges adjacent to the Interstate-Expressway systems as well as the other major roadways. These areas are indicated on the land use map.

c. Industrial

In addition to the port-related industrial expansion along the Savannah River, a number of inland industrial sectors have also indicated an increase in development activity. The recently opened highways in the County provide adequate access for the first time to many areas designated as industrial sites. In addition, future openings of I-95 in the northwestern portion of the County and various planned frontage roads along this arterial and other major roads, will provide access to large tracts of undeveloped land that are suitable for industrial development.

As indicated in the 1971 Land Use Plan, only a small percentage of the existing industrial developments is located in industrial parks. No large industrial development has been built during the past two years, but a number of developers have expressed an interest in constructing planned industrial parks in the western portion of the County. These sites could be served by the interstate highway systems and the other transportation systems.

d. Public and Semi-Public

The Land Use Plan has incorporated the latest recommendations of the Chatham County Community Facilities Plan. These various facilities are discussed in detail in the 1971 Community Facilities Plan and in Chapter III of this working paper.

e. Zoning Pattern

Current zoning patterns indicate a trend toward rezoning to meet current development needs, rather than to implement approved land use planning proposals. During 1972, the MPC acted on a total of seventy-five (75) zoning petitions requesting zoning map amendments and eight petitions requesting zoning text amendments. Forty-six (46) of the zoning map amendments and four (4) of the text amendments were for changes affecting the County's zoning regulations. The majority of these requests were asking for commercial zoning classifications. Final action on the forty-six (46) zoning requests consisted of twenty-nine (29) approvals and seventeen (17) denials by the County Commissioners. Continued refinements of the Land Use Plan should help to assure that future rezoning considerations are made based upon the approved Land Use Plan, rather than

consideration of purely localized circumstances related directly to a particular zoning petition.

D. Existing Land Use. A 1972 county-wide tax re-evaluation program has recently been completed. In addition to the normal information usually recorded for taxing purposes, this program coded each parcel of land in the county according to zoning classifications, and a two-digit Standard Industrial Classification (SIC) Land Use Code. This information will be available for general planning purposes. Efforts have been initiated by the Commission to incorporate this data source into the Commission's computer data program, which presently includes selected U.S. Census programs. The Commission also has on record a 1":4,000' scale base map indicating the current general land uses in the unincorporated areas of Chatham County. This map is periodically brought up-to-date for general planning purposes through the normal daily activities of reviewing building permit records, zoning petition field surveys and subdivision plat recordings. The new tax data file will enable the Commission to (1) more easily maintain up-to-date land use information; (2) reduce the need for time consuming intensive field surveys; and, (3) provide for greater analysis of development trends.

E. Zoning and Subdivision Regulations. The zoning and subdivision regulations for Savannah and Chatham County have recently been revised and updated to encourage more desirable land development. The ordinances provide for modern, flexible land use controls, but still do not incorporate all new development techniques.

The recently adopted Planned Unit Development (PUD) regulations provide for greater variety in local development than previously permitted. However, certain provisions are vague and do not fully cover the needs of all types of development, especially the larger land developments. Efforts have recently been initiated by the Commission to develop a set of regulations more in keeping with "New Town" or "New Community" concepts. This will expand the present PUD concept and provide a guide for larger developments incorporating a mixture of regional commercial, light-industrial and residential activities.

1985 Land Use Plan For Chatham County

The revised 1973 edition of the County Land Use Plan is based on the research data derived from the 1971 edition of the Land Use Plan for Chatham County-1985 and the resultant efforts of the more recent MPC studies. The plan is represented in generalized form on Map 2. The rate and magnitude of future land development will of course be largely dependent on economic activities within the local community, yet additional influences will also affect future development, especially changes within the military and port sectors. The plan does not represent the community's final land development goals. It is a step toward establishing an orderly and systematic environment for the citizens of Chatham County. What may now appear as desirable for the future may not always seem desirable. Therefore, this plan should be considered flexible and subject to change, as unforeseen events occur and new information be-

comes available. In summary, this plan should be considered as reflecting a possible future arrangement of land uses, based on current and foreseeable conditions. Final adoption by the MPC and the County Commissioners will signify that the plan will be used as a guide for future development until such time as conditions dictate additional amendments are needed.

Design Concept

The Land Use Plan is intended to graphically show estimates of the probable direction and amount of land use development in the unincorporated planning areas of Chatham County. However, since the plan is also directed toward assuring that the various land use patterns are compatible, generalized land uses within the various incorporated areas are included in the plan. Adequate land area for the expected needs of the future growth is also strongly considered in the planning area.

The plan shows existing land uses, areas where land use changes and new development will probably occur, and areas of the County where development should be discouraged. This plan essentially combines the existing land use map and the future growth areas map (maps 6 and 7) in the 1971 edition of the County Land Use Plan, and adds three additional land use classifications, in order to provide an overall county development plan. The three additional land use classifications indicate areas that should be considered as secondary development areas, rural development areas, and marshland or wetlands. The plan, therefore, indicates four types of development areas: (1) primary development, (2) secondary development, (3) rural development, and, (4) marshlands. The primary development area is representative of the areas where development is anticipated by 1985, and classified accordingly by generalized land use patterns. The secondary development classification indicates areas where unanticipated urban development could occur. The rural development classification represents areas that should be opened up and serviced only after the present developing areas show signs of reaching full development. Some of these areas, however, should not be allowed to develop in less than one (1) to five (5) acre tracts, due to the character of development, low terrain, and the difficulty of providing sewers and other services necessary to accommodate normal residential densities. In either case, urban-density growth should be discouraged within these areas for the foreseeable future. The marshland classification indicates tidal or wetlands unsuitable for development.

This Land Use Plan is further based upon the following assumptions and restraints:

- a. Urbanization of the metropolitan area will increase at an increasing rate.
- b. As land development increases, and developable land becomes scarcer, developmental pressures will increase and land will be developed more intensely.
- c. Most of the future large-scale residential and commercial development

will take place in the south urban area in the vicinity of Abercorn Street Extension - White Bluff Road; around major interchanges such as U.S. Highway No. 17 and Abercorn Street Extension; along Interstate Highways 95 and 16; on the Islands east of the Wilmington River; and as "new town" developments, such as proposed for Skidaway Island.

- d. Future industrial growth will continue to take place along both sides of the Savannah River. Although the area east of the city may provide a nucleus for development of a possible "super-port", the area west of the city provides existing sites accessible to comprehensive transportation facilities--ship, rail, air and trucking--for immediate planned industrial developments.
- e. The metropolitan area's highway transportation network will become more efficient and convenient, through implementation of the Chatham Urban Transportation Study (CUTS) project proposals; Traffic Operations Projects to Improve Capacity and Safety (TOPICS) will provide interim engineering improvements.
- f. Tourism will increase in importance as an element of Chatham County's economic base.
- g. Public water supply and sewage disposal operations will be improved, possibly through establishment of a county-wide water and sewer agency.
- h. Chatham County will continue to be the regional shopping center for this area; intensive regional shopping facility development will take place in the south urban area along the axis of Abercorn Street Extension.
- i. Existing flood control and drainage facility construction will reduce flooding hazards to developed areas and will open up land for development which is presently marginal or undevelopable. As indicated above, strong emphasis is placed in this Land Use Plan on the need to encourage and require greater compatibility in land use patterns throughout the County. This could be accomplished by the incorporated areas within Chatham County working more closely on matters of public concern, such as public water and sewer services, pollution abatement, and fire and police protection. Conflicts between diverse types of land uses should be resolved in time as rezoning proposals are initiated, and redevelopment opportunities occur.

A major function of this Land Use Plan is to also help implement the recommendations of the Chatham County Neighborhood Analysis' "area treatment plan", which shows areas of the County where existing housing conditions indicate a need for:

- a. Conservation -- preservation of standard housing and good quality living environment.
- b. Rehabilitation -- "fix up, paint up" activities needed to recapture standard housing and environmental conditions which are apparently trending toward decline.

- c. Redevelopment -- areas where "spot clearance" or extensive clearance, changes in street patterns, provision of new or improved public services and facilities, and reconstruction are indicated due to numerous dilapidated structures or poor environmental conditions. While detailed redevelopment plans have not been drafted to guide future land use developments in these areas, these areas should be considered "earmarked" for special planning attention in the near future.

Plan Features

The graphic future land use plan embodies a number of physical planning proposals. Among these are an open space "net", residential, commercial "clusters", transitional uses, and community centers.

1. Use Areas

The Land Use Plan displays an array of "use areas" which are intended to serve as a guide to the type and location of future land uses, as an indicator of land use compatibility, and as standards for the amount of land devoted to each type of use. Of course, space requirements for each type of use will vary with changes in population density and economic activities, and will change as a function of densities that develop in a particular area.

- a. Open Space Net -- Marginal lands along floodways, remnants along major highway rights-of-way, and opportunities for linear neighborhood parks, should be capitalized upon to assure adequate future open spaces.
- b. Commercial "Clusters" -- Commercial uses in redevelopment areas, transitional areas, or new development sectors, should be encouraged to develop in concentrated groupings, or "clusters", preferably at major intersections of interchanges. Such "clusters" would afford maximum locational advantages and optimum land utilization opportunities to the uses locating there, would enhance customer convenience, and would minimize conflicts with adjacent land uses.
- c. Transitional Uses -- As existing land uses age or deteriorate over time and become less competitive or less functional, market forces tend to displace such uses in favor of more competitive or more functional uses. This trend is illustrated by office conversions, new commercial uses in renovated buildings, and conversion of non-residential structures to residential uses.
- d. Residential "Clusters" -- Residential cluster developments are groups of structures or dwellings typically arranged around the circumference of cul-de-sac or loop streets. This development form is intended to encourage innovations in land development techniques to afford better living environments, more open space and other amenities.

- e. Community Centers -- As community redevelopment or regeneration occurs, new public facilities must be conveniently located to serve public needs within various sectors of the County. "Community centers" should be considered as potential groupings of schools, public clinics, branch libraries, public safety facilities and public recreational uses such as parks and playgrounds.

The inter-dependence of land use and the circulation system which serves it is perhaps the most basic relationship of community development. Each exerts a compelling influence on the other; if a major transportation system is built, land use development will usually spring up along it; if a major land use development occurs, ultimately a circulation system will evolve to serve it.

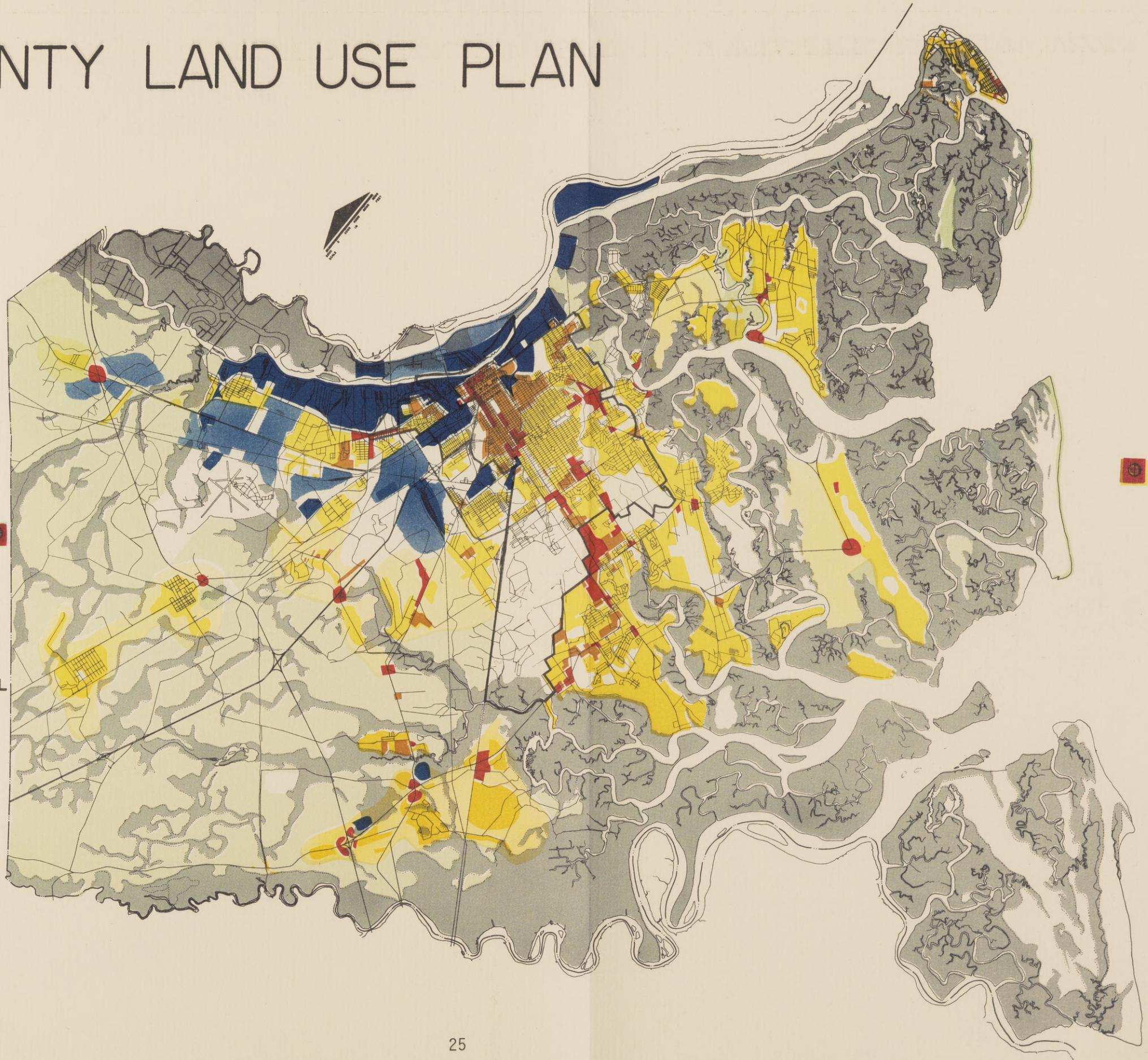
Recognition of this relationship is essential to the planning for any urban area. It is also essential to recognize the multi-faceted and interrelated nature of the circulation system as a whole, including the street and road network, which caters to the automobile, mass transit facilities and air, rail and other long distance transportation facilities. The Chatham County street and highway network consists of both local and major interstate highways. These elements play a vital role in the total circulation network and are discussed in Chapter II of this paper.

1985 COUNTY LAND USE PLAN

MAP NO.2

LEGEND

-  SINGLE FAMILY
-  MUTI-FAMILY
MOBILE HOME PARK
-  PUBLIC-SEMI PUBLIC
-  COMMERCIAL
-  INDUSTRIAL
-  SECONDARY
DEVELOPMENT AREA
-  SECONDARY INDUSTRIAL
-  MARSH & WET LAND
-  RURAL
DEVELOPMENT AREAS



TRANSPORTATION STUDIES



- CUTS SUMMARY REPORT
- AIRPORT SYSTEM PLAN

CHAPTER II

TRANSPORTATION STUDIES

A comprehensive plan for transportation is essential to the formulation of the City and County development plans. Transportation facilities have helped shape the existing land use patterns and will have a great impact upon future development patterns. One of the main objectives of the continuing planning program is to assume that the interdependency of land and transportation facilities is recognized and considered in the community's development programs. The Chatham Urban Transportation Study and the Airport System Plan are evidence of this consideration. Recent activities resulting from these two programs are reviewed in this chapter along with an evaluation of their status and recommendations.

The Chatham Urban Transportation Study

Summary Report

The Chatham Urban Transportation Study (CUTS) was formally initiated in December, 1963. The study was initiated in compliance with the Federal-aid Highway Act of 1962 and is a continuing, cooperative, and comprehensive transportation planning process. Ten basic elements of transportation planning have been inventoried and documented. The socio-economic data was inventoried in 1965 and projected in five year increments to 1985. The transportation plan is based on the 1985 projected socio-economic data; therefore, it is imperative that the socio-economic data be continuously monitored and periodically updated. The State Highway Department and local governments adopted the present thoroughfare plan in 1969 as a result of the transportation planning efforts. Since its adoption, the plan has received one modification.

In 1972, the Georgia Department of Transportation and Metropolitan Planning Commission developed and published an Operations Plan for Continuing Planning, which establishes guidelines for the CUTS continuing planning effort. A major update is scheduled for the 1973-74 planning years. This update will include an evaluation of the socio-economic data and projections of this data in five year increments, to the year 2000. Current land use data is also required so that the socio-economic data can be properly evaluated.

In the first part of 1973 the CUTS participating agencies updated the 1963 Memorandum of Understanding. The updated document outlines the organization, duties and responsibilities of each agency involved in the study. The updated Memorandum of Understanding changed the organization structure and expanded the study area to include all of Chatham County. The change in study area size has required the technicians to evaluate and refine the technology process to be used in the update. The Georgia Department of Transportation and the Metropolitan Planning Commission are currently evaluating sources of data, traffic zones, and new technology that may be used in the update process. The Metropolitan Planning Commission is also conducting an employment survey to determine the number of employees by traffic zone by Standard Industrial Classification (SIC) code. Computerized census programs are being developed to help provide accurate base year socio-economic data.

During fiscal 1973, the CUTS Policy Committee adopted a twenty-year-project priority list by five year periods. The first five year period contains ten projects of which one is under construction, seven are in preliminary engineering and two are not active. The four time periods are as follows:

Time Period 1:

Years 1-5

1. *Extension to Lynes Parkway*
2. *Extension to Dean Forest Road - State Route 21 to State Ports*
3. *Widening of DeRenne Avenue - Montgomery Street to Skidaway Road*
4. *Widening of Augusta Road - Dundee Canal to I-95*

5. Construct Casey Canal Parkway - President Street to Abercorn Street
6. Widening of Skidaway Road and Pennsylvania Avenue - President Street to Norwood Avenue
7. Widening Waters Avenue - 56th Street to Whitfield Avenue
8. Replace Bay Street Viaduct
9. Widening and realignment of Dean Forest Road - State Route 21 to U. S. 17 South
10. Construct a connector between Montgomery Street at DeRenne Avenue to Abercorn Street near White Bluff

Time Period 2:

Years 6-10

11. Construct Southwest Expressway - Lynes Parkway to Abercorn Street
12. Widening of Wheaton Street - East Broad to Gwinnett Street
13. Widening of President Street - East Broad to Capital Street
14. Widening of Waters Avenue - Victory Drive to 56th Street
15. Widening of McAlpin Street - Victory Drive to Skidaway Road and Widening of Skidaway Road - McAlpin to Wheaton Street

Time Period 3:

Years 11-15

16. Widening of West Boundary - Oglethorpe Avenue to I-16
17. Widening Whitfield Avenue - Casey Canal Parkway to Skidaway Road
18. Widening of Montgomery Crossroads - Casey Canal Parkway to Skidaway Road
19. Widening of U. S. 17 North - Traffic Circle to Colerance Avenue

Time Period 4:

Years 16-20

20. Widening of U.S. 80 - Dean Forest to Alfred Street
21. Extension of Habersham Street - Stephenson to Montgomery Crossroads
22. Widening of U. S. 17 South - City limits to Georgia 204
23. Widening of Gwinnett Street - Casey Canal Parkway to U. S. 80
24. Construct Northwest Expressway

Projects numbered one, two, four, eight and nine in time period one will improve the traffic circulation in the western portion of Chatham County. This is an acute problem which must be met to accommodate industrial traffic. Fourlaning U. S. Highway No. 21 is a key element in unlocking the traffic in this district. This facility will connect with Lynes Parkway, near the Traffic Circle, and extend a four-lane facility through the Traffic Circle and out to I-95. Access between the southside areas and downtown Savannah is another important element in the Plan. Items five, six, seven, and ten will help to eliminate the problems in these corridors. However, since the adoption of the plan in 1969, a number of developments have occurred that

require further analysis.

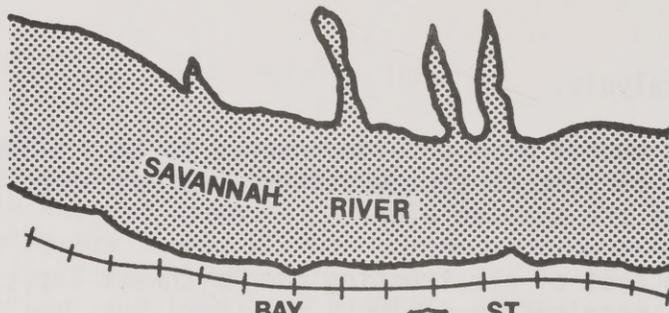
The scheduled CUTS update will provide answers to the following questions, which are examples of some of the questions that have been presented concerning elements of the adopted plan:

- (a) Does the cost of constructing the Northwest Expressway match the benefits received?
- (b) Does the widening and realignment of Dean Forest Road (Ga. 307) provide an adequate alternate to the Northwest Expressway?
- (c) What are the alternatives to widening Waters Avenue between Victory Drive and DeRenne Avenue?

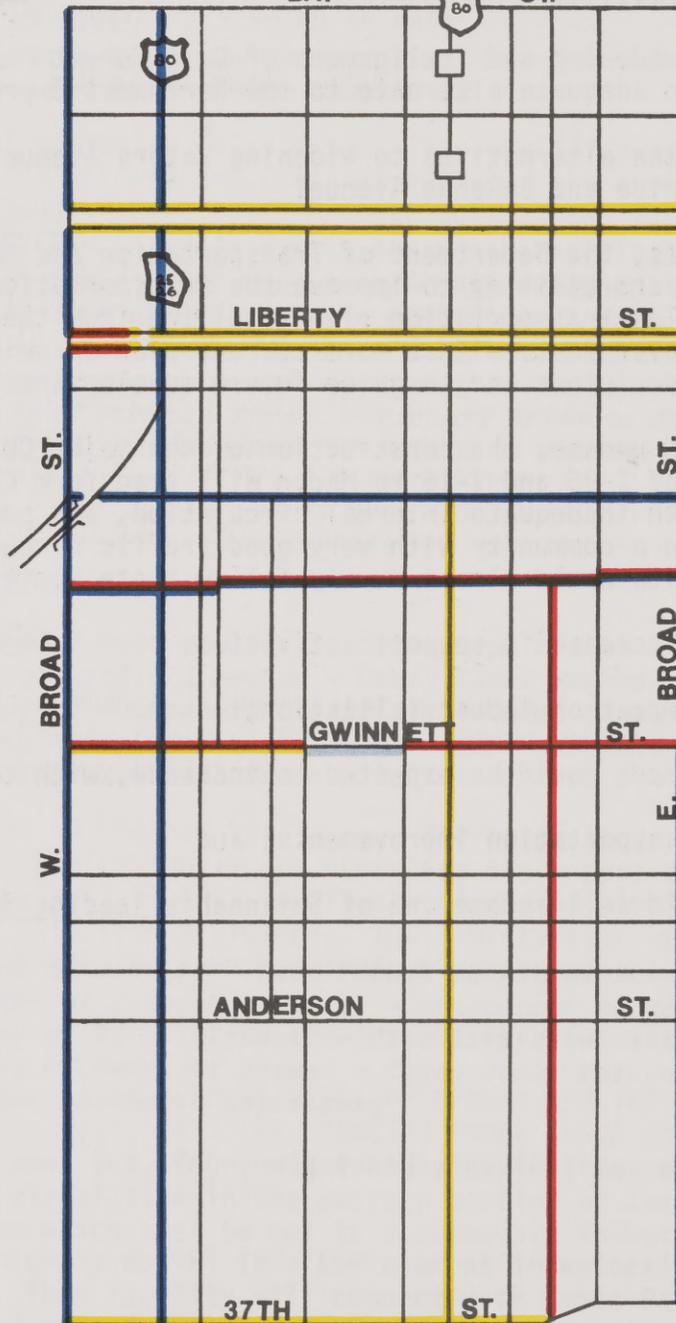
In the update process, the Department of Transportation and Metropolitan Planning Commission are striving to improve the transportation plan and planning process. The transportation plan resulting from the update will provide the local governments with a more current plan on which to base various day-to-day decisions and to guide future development.

In summary, the CUTS update, the construction of the major CUTS improvements, and the completion of I-95 and I-16 to Macon will transform Chatham County from a community with inadequate internal circulation, and poor access to the hinterland, into a community with very good traffic circulation facilities. Several results would almost surely follow these activities:

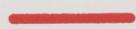
- A dramatic increase in seaport activities;
- A radical impact on industrialization;
- Wholesale trade could be expected to increase, with the completion of major transportation improvements; and
- Tourism could well become one of Savannah's leading industries.



MAP 3



LEGEND

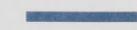
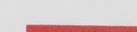
-  PROPOSED WIDENING (REMOVE PARKING AND/OR RESTRIPE)
-  PROPOSED WIDENING (NEW CONSTRUCTION)
-  PROPOSED DIRECTION CHANGE
-  PROPOSED NEW FACILITIES

**SYSTEM 107-ADOPTED THOROUGHFARE PLAN
(INSET)**

MAP 4

STREET CLASSIFICATION
AND C.U.T.S. PROPOSALS

LEGEND

-  MAJOR ARTERIAL
-  SECONDARY ARTERIAL
-  COLLECTOR STREETS
-  C.U.T.S. PROPOSALS



General Review and Update of

Airport System Plan

Aviation development is a dynamic economic motivator. As is the case with all planning, the Airport System Plan is based upon analysis and projection of established trends. However, technological and economic breakthroughs in aviation make the industry particularly subject to rapid changes. It is, therefore, only prudent and proper to make annual reviews of the plan itself as well as the goals established and to make amendments as necessary to reflect these changes. The recent announced closing of Hunter Army Airfield is another example of the type of change that must be incorporated into the plan. The scheduled closing of the base and the chance of its being declared surplus property has once again raised the issue of whether or not to use this facility for civilian or commercial aviation. The Commission is presently working with a number of agencies and interested citizens on the possible use and/or redevelopment of the Hunter facilities. However, the results of this study will not be available until after the publication of this review. Any recommendations resulting from the current study affecting aviation will be incorporated into the Airport System Plan as a part of the continuing planning program next year. A major update to the plan has been scheduled for the 1973-74 work program, which could prove to be very timely if major aviation activities are proposed for the Hunter facility. Because of these activities, this review will be restricted to revising and updating selected data presented in the past editions of the Airport System Plan and summarizing the following:

- a. The civil airport facilities available in Chatham County;
- b. The progress that has been made in implementing the Airport System Plan recommendations; and
- c. The recommendations of the Airport System Plan.

Existing Facilities

The community's existing civilian public airport system is comprised of the Savannah Municipal Airport and a heliport. The municipal airport is located approximately eight miles northwest of downtown Savannah. It serves a multi-county area with two commercial carriers plus general aviation facilities. The airport occupies approximately 2,700 acres of generally flat land, which allows for easy aircraft clearance and construction of future facilities. The operations elements of the airport normally consist of three runways and associated taxiways and building areas. The rehabilitation of the north-south runway during the past few months has temporarily limited operations to one runway. Except for the changes noted below, the existing facilities are fully described in the 1971 edition of the plan and are shown on Map 5.

Airport Improvements

Since the revision of the Airport System Plan in 1971, the following airport system improvements have been initiated or are planned for construction at the Savannah Municipal Airport within the next five (5) years.

1. The rehabilitation of the north-south runway and construction of new taxiways, at a cost of \$1,292,000 are scheduled for completion during the summer of 1973.
2. The expansion of the terminal building to include a larger holding room at a cost of \$380,000 is currently under construction.

MAP 5 EXISTING SAVANNAH MUNICIPAL AIRPORT FACILITIES



3. Improvements to airfreight facilities and executive offices at a cost of \$175,000 are scheduled for later in 1973.
4. An enlargement of the baggage area is planned for the first part of 1974, at an approximate cost of \$50,000.
5. Strengthening of the aircraft parking apron in front of the terminal is also scheduled for the first part of 1974 at an estimated cost of \$250,000.
6. An additional 32-units are planned for the existing 82-unit motel in 1974.
7. The acquisition of land north of the airport for expansion purposes and the disposition of surplus land in the southeastern quadrant of the airport properties has begun (271 acres in the southeastern quadrant have been exchanged for 300 acres north of the Grumman Corporation's properties).
8. Improvements of streets and roads are planned within the airport whereby traffic will be diverted from the terminal area to a proposed new highway from the airport entrance on Travis Field Road northeast to Bourne Avenue.
9. The rehabilitation of the lighting system on the north-south runway is also scheduled.

Helipad

The one civil helipad is located adjacent to the Savannah Memorial Hospital. It is a 30'x 30' turf facility outlined by concrete markers. Currently, it is only used for emergencies connected with the hospital. No aircraft facilities or services are available.

Airport Activity Summary and Update

There are four primary kinds of activities that occur in air carrier operations. These are: (1) passengers; (2) air cargo (freight plus express); (3) mail (air mail and other mail); and (4) aircraft movements. The historic quantities of these operations are discussed in this section and set forth in Tables 4, 5, and 6.

TABLE 4

AIR CARRIER ACTIVITY:
SAVANNAH MUNICIPAL AIRPORT

<u>Year</u>	<u>Enplaned Revenue Passengers</u>	<u>Enplaned Air Cargo Tons</u>	<u>Enplaned Air Mail Tons</u>	<u>Air Carrier Departures</u>
1960	38,894	180	58	4,860
1962	39,881	247	44	3,936
1964	53,173	210	78	3,665
1966	85,180	318	134	4,948
1967	112,869	411	215	5,140
1968	153,733	480	500	6,527
1969	182,146	776	497	6,731
1970	175,550	673	580	6,117
1971	182,489	556	207	6,271
1972	200,980	569	214	6,127

Source: Federal Aviation Administration and Airport Director

The overall decline in the enplaned air cargo tonnages over the past three years could be attributed to unreliable parcel delivery service through the Atlanta Airport. More and more shippers are changing to truck deliveries when shipping to the Atlanta area. The two year decline in enplaned air mail tonnages is also attributed to increased truck deliveries by the U. S. Postal Service because of time delays in Atlanta on commercial carriers.

On February 5, 1973 the U. S. Postal Service also began operating two air-taxi mail deliveries. This should create a reversal of recent trends in mail tonnage figures. Both planes arrive around midnight from their respective origins of Tampa, Florida and Greensboro, North Carolina and depart about an hour later for a return trip via Jacksonville and Orlando, Florida to the south, or Columbia, South Carolina and Charlotte, North Carolina to the northeast. A spokesman for the U. S. Postal Service stated that a third taxi service may be started later this year to a series of three additional cities. The air-taxi planes are now operating at, or exceeding, their 1,500 pound capacities; and there is a possibility that the capacity of the existing air-taxi services will be increased in the near future.

Since the last Airport System Plan update, the two commercial airlines have replaced their two last 707 type aircraft with 727 aircraft and now operate seven 727 flights, and one DC8 flight with their remaining flights making use of DC9 type aircraft. The larger planes have helped account for a slight drop in the number of air carrier departures, but have conversely allowed for a 14.4 percent increase in passenger enplanements since 1970. This growth rate appears to be in line with the enplaned passenger forecasts made in the 1971 plan. Table 5 indicates a schedule change in the non-stop service offered by the two carriers serving the air trade area. This table also reflects a reduction of one daily scheduled flight since 1971.

TABLE 5

NON-STOP SERVICE
SAVANNAH MUNICIPAL AIRPORT

<u>Cities Served</u>	<u>Flights to or From</u>		<u>Percent Total</u>	
	<u>April 1971</u>	<u>May 1973</u>	<u>April 1971</u>	<u>May 1973</u>
Atlanta	12	12	34.2	35.2
Augusta	6	5	17.1	14.7
Brunswick	0	1	0.0	3.0
Charleston	10	11	28.6	32.3
Jacksonville	4	4	11.5	11.8
Macon	3	1	8.6	3.0
Totals	35	34	100.0	100.0

The 20,307 passenger enplanements in April 1973 established a new record for the Savannah Municipal Airport. The previous peak passenger enplanements was during the month of August 1972, when 19,173 passengers were recorded. Both of these records have occurred since the last update.

TABLE 6

CONTROL TOWER OPERATIONS

	<u>1971</u>	<u>1972</u>
Air Carrier	12,541	12,253
Subtotal	<u>12,541</u>	<u>12,253</u>
Itinerant		
Military	13,009	10,388
General Aviation	<u>51,226</u>	<u>39,643</u>
Subtotal	<u>64,235</u>	<u>50,031</u>
Local		
Military	4,562	3,267
General Aviation	44,143	23,220
Subtotal	<u>48,705</u>	<u>26,487</u>
Air Taxi	<u>105*</u>	<u>334</u>
GRAND TOTAL	<u>125,586</u>	<u>89,105</u>

*Air Taxi count from August to December 1971

Source: Airport Director

Table 6 reflects a marked decrease of 29 percent between 1971 and 1972 in the total number of operations take-offs and landings at the Municipal Airport. However, this figure does not represent a true picture. The recent rehabilitation of the north-south runway and the construction of new taxiways have greatly reduced the capacity of the airport due to the closing of two runways while construction was underway. In addition, the reduced military force at Hunter Army Airfield resulted in a large drop in the number of fixed-wing aircraft students making use of the aviation programs at the airport. A third reason for the loss in operations was due to the cut-back in the Air National Guard program. These figures, therefore, must be reviewed again next year when the runway construction has been completed.

Summary of Recommendations

Adequate planning is the key to the achievement of an efficient and economical future airport system. Adequate airport system planning is a continuing process that requires updating of existing system plans as part of that process.

The 1973 "updated" airport system plans are based on:

1. The Metropolitan Planning Commission's 1968 and 1971 editions of the Airport System Plan.
2. System improvements made since 1971.
3. A recognition of changing system needs.
4. State and federal comprehensive airport and planning requirements.

This 1973 Airport System Plan "update" represents efforts to meet these stated purposes on the basis of short, intermediate and long-range airport development objectives. The intervals of each proposed improvement phase have been maintained in light of the next year's planning program and are:

1. Short Range Plan - 1971-1978
2. Intermediate Range Plan - 1978-1983
3. Long-Range Plan - 1983-1993

1971 - 1978: Short Range Plan. A short-range airport system plan for the period 1971-1978 has been established, based on aviation forecasts. These forecasts indicate that air passenger traffic may double that of 1970 and cargo tonnage is expected to quintuple the 1970 figures. These expected increases must be met by extensive improvements to the air carrier facilities at Savannah Municipal Airport. The expected increase in aviation activity should also be matched by development of an adequate general aviation airport to relieve Savannah Municipal of excess traffic. The earlier projections of total flight activity at Savannah Municipal indicate that this facility will reach maximum safe capacity by 1975, unless additional general aviation facility improvements are made at the airport, or a "reliever" or "satellite" general aviation airport is provided elsewhere in the County. The reduction in total Municipal Airport operations in 1972 was caused by a number of factors. The projections should be reevaluated next year after the runway construction is completed.

The following improvements, some of which have already begun, are recommended for completion during the short-range plan period 1971-1978:

Savannah Municipal Airport

- Complete runway and taxiway improvements, including new general aviation runway, 3500 x 75 foot paved surface, 40 foot parallel taxiway and parking apron. (The Airport Commission's current, detailed Master Airport Plan schedules these improvements for 1979; if more rapid development is agreeable to the Commission, then the Master Plan should be revised to reflect the change in priorities.)
- Enlarge terminal facility and strengthen aircraft parking apron.
- Improve airport access and street system.
- Relocate fixed-base operator (FBO) to new general aviation area in south-west quadrant of airport property.
- Acquire 1500 additional acres of property (300 acres have been acquired since 1971).

If Savannah Municipal Airport is not expanded to provide for increased general aviation activity, by addition of a new north-south general aviation runway, then a separate public "satellite" or "reliever" general aviation airport should be constructed by local government. This facility would operate concurrently with other private airports operating at that time. Any public airport established should meet the following minimum standards:

- 200 acre site; 3500 x 75 foot paved runway; 40 foot parallel taxiway and parking apron.
- Adequate basic Fixed-Base (FBO) services.

However, if Savannah Municipal Airport is expanded to accommodate the anticipated demand, then only small private airports need be established. The airport system would then consist of Savannah Municipal Airport and any private general aviation airports which may be established.

In order to provide Savannah with a capability for future utilization of this type aircraft, consideration should be given to sites and areas within which the support facilities may be located. Potential locations for such facilities include the Civic Center area, the President Street Extension area, atop buildings in the downtown area (providing FAA and local regulations allow this), or even atop a dock or floating barge in the Savannah River.

It is recommended that each site be at least one acre in total area, with dimensions no less than 300 feet in length and 150 feet in width. This will allow for a helipad of sufficient size to accommodate the aircraft, and a parking apron for several vehicles. Of course, rooftop locations could be developed with only a landing area, with support facilities at lower levels, or at ground level.

If helipads are initially designated at ground level, each site selected could be used for parks or other purposes, pending a demand for its use as an aviation facility, but its future use should be taken into account in planning to protect it from incompatible uses and/or the construction of facilities that would block its ultimate use.

It is also recommended that helipads be considered for emergency use at St. Joseph's Hospital and the State Patrol Barracks, among other locations. Short range plan proposals are shown on Map 6.

1978-1983: Intermediate Range Plan. Aviation activity forecasts for the five-year period, 1978-1983, indicate continued strong growth in air carrier, air cargo and mail, and general aviation operations in the Chatham-Savannah area. Air carrier operations are expected to double the 1970 figures. With larger aircraft types and increased passenger capacities, enplaned passenger traffic is expected to be over three times the 1970 level.

Larger aircraft capacities should also result in significant economics in air cargo rates, which would result in substantial tonnage increases.

If actual aviation activity during the short-range planning period 1971-1978 follows projections for that period, substantial improvements at Savannah Municipal Airport will be necessary to assure adequate functioning of the airport system.

The following improvements are recommended for completion during the Intermediate Range Plan, five-year development phase:

Savannah Municipal Airport

- Continue expansion of passenger terminal and cargo area
- Complete runway and taxiway improvements
- Expand aviation-industrial and non-aviation commercial development on airport.

Intermediate range plan proposals are shown on Map 7.

1983 - 1993: Long Range Plan. Current aviation activity forecasts for the long-range planning period 1983-1993 indicates substantial growth in total aircraft operations, enplaned passengers, and enplaned cargo and mail. Projections indicate approximately 367,000 aircraft operations, 900,000 enplaned passengers, and 61,000 tons of enplaned cargo and mail for the Chatham-Savannah area through 1993.

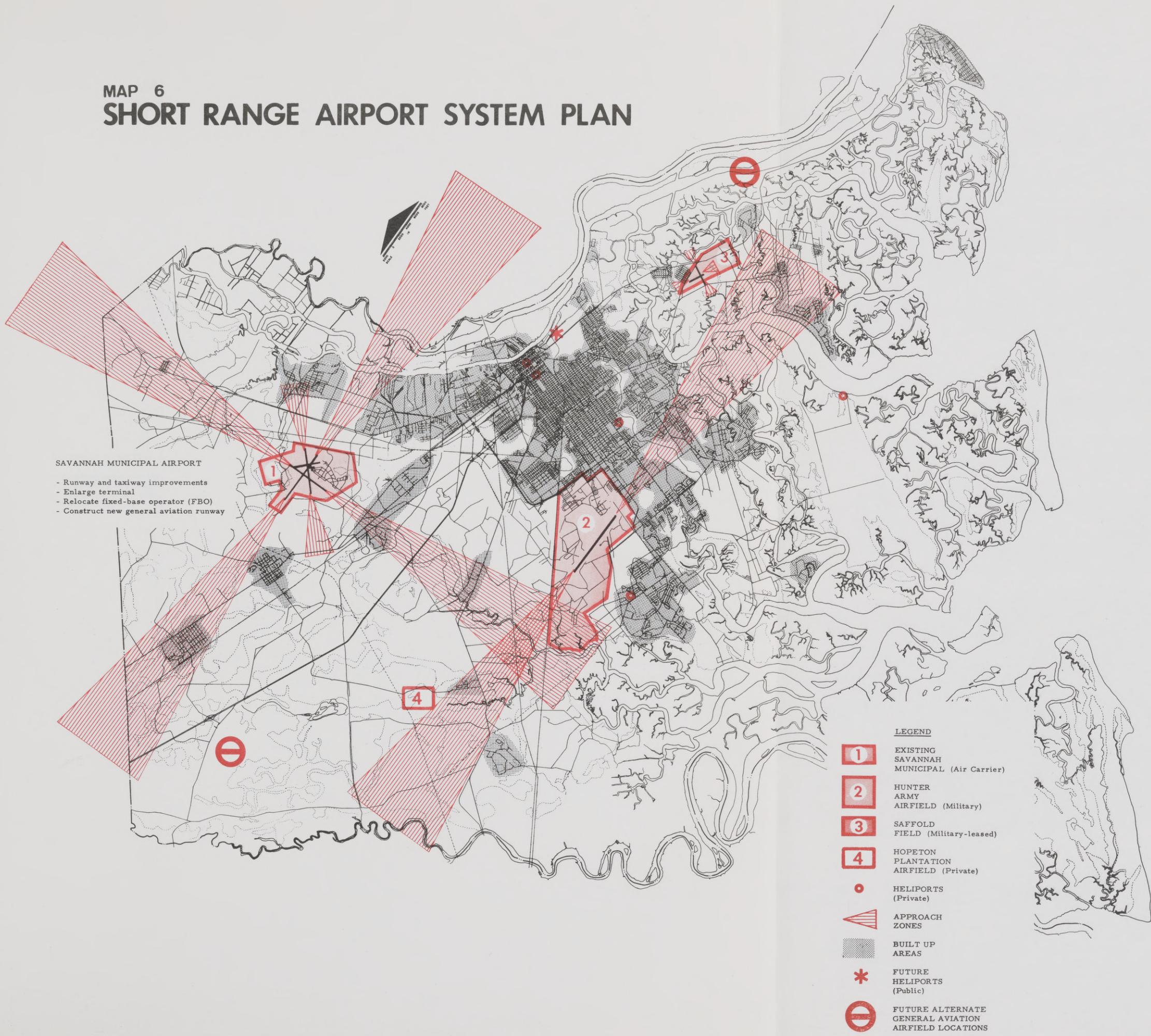
Of course, growth trends through that period are difficult to predict with great accuracy. However, historical trends do provide a basis for potential demand projections which may be refined as time progresses. The following recommendations for airport system improvements are based on demand projections for the development phase 1983-1993.

Savannah Municipal Airport

- Complete new (replacement) terminal facilities; reuse existing terminal as executive terminal with executive lease plots.
- Complete new, parallel main runway and taxiway system.
- Complete new intra-airport access and service roads.

Long-range plan proposals are shown on Map 8.

MAP 6 SHORT RANGE AIRPORT SYSTEM PLAN



SAVANNAH MUNICIPAL AIRPORT

- Runway and taxiway improvements
- Enlarge terminal
- Relocate fixed-base operator (FBO)
- Construct new general aviation runway

- LEGEND**
- 1** EXISTING SAVANNAH MUNICIPAL (Air Carrier)
 - 2** HUNTER ARMY AIRFIELD (Military)
 - 3** SAFFOLD FIELD (Military-leased)
 - 4** HOPETON PLANTATION AIRFIELD (Private)
 - HELIPORTS (Private)
 - ▲ APPROACH ZONES
 - BUILT UP AREAS
 - * FUTURE HELIPORTS (Public)
 - ⊖ FUTURE ALTERNATE GENERAL AVIATION AIRFIELD LOCATIONS

MAP 7 INTERMEDIATE RANGE AIRPORT SYSTEM PLAN

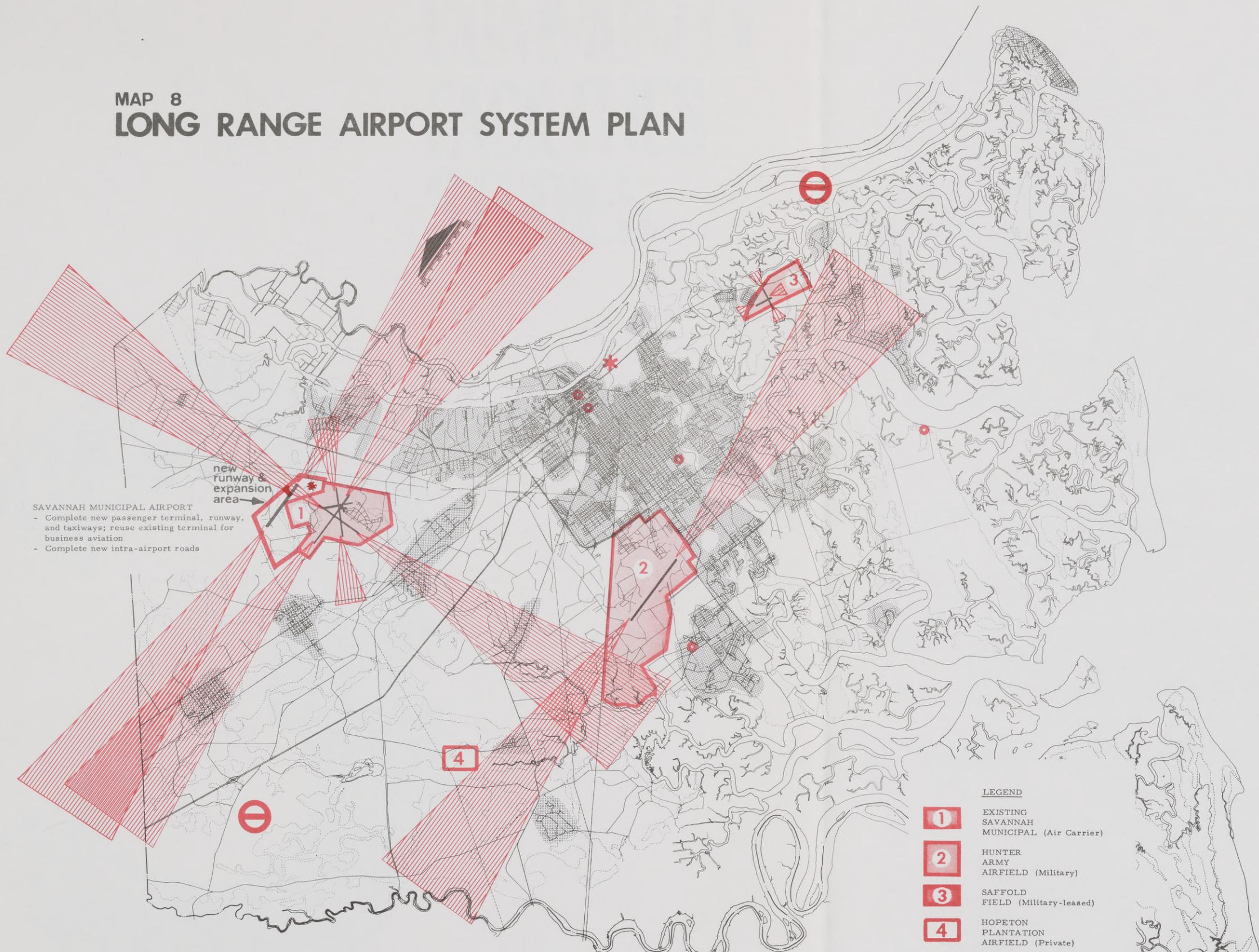
SAVANNAH MUNICIPAL AIRPORT

- Continue passenger terminal, cargo handling and taxiway improvements
- Expand aviation - industrial and non-aviation
- Commercial development

new
runway

- LEGEND**
- 1** EXISTING SAVANNAH MUNICIPAL (Air Carrier)
 - 2** HUNTER ARMY AIRFIELD (Military)
 - 3** SAFFOLD FIELD (Military-leased)
 - 4** HOPETON PLANTATION AIRFIELD (Private)
 - HELIPORTS (Private)
 - ▲ APPROACH ZONES
 - BUILT UP AREAS
 - * FUTURE HELIPORTS (Public)
 - ⊖ FUTURE ALTERNATE GENERAL AVIATION AIRFIELD LOCATIONS

MAP 8 LONG RANGE AIRPORT SYSTEM PLAN



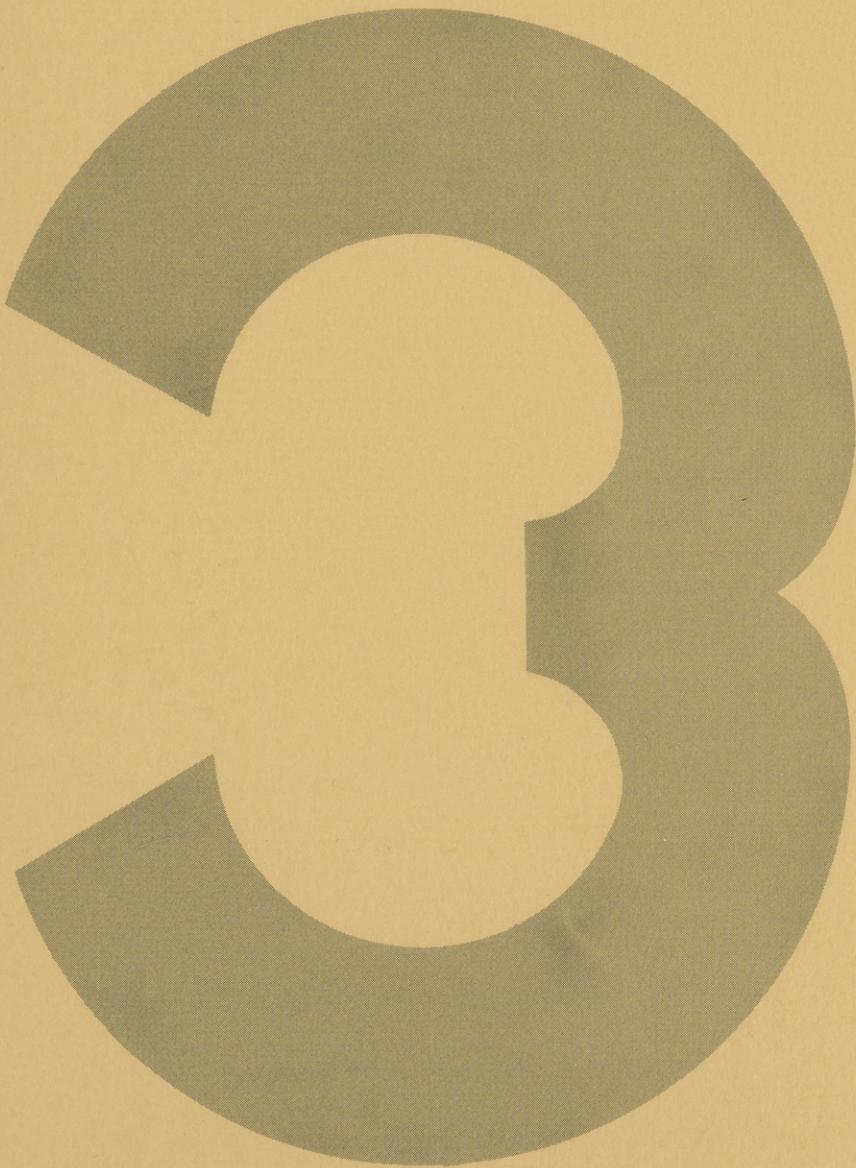
SAVANNAH MUNICIPAL AIRPORT
 - Complete new passenger terminal, runway, and taxiways; reuse existing terminal for business aviation
 - Complete new intra-airport roads

new runway & expansion area

* 300 ACRES ACQUIRED SINCE 1971

- LEGEND**
- 1** EXISTING SAVANNAH MUNICIPAL (Air Carrier)
 - 2** HUNTER ARMY AIRFIELD (Military)
 - 3** SAFFOLD FIELD (Military-leased)
 - 4** HOPETON PLANTATION AIRFIELD (Private)
 - HELIPORTS (Private)
 - ▲ APPROACH ZONES
 - BUILT UP AREAS
 - * FUTURE HELIPORTS (Public)
 - ⊖ FUTURE ALTERNATE GENERAL AVIATION AIRFIELD LOCATIONS

COMMUNITY FACILITIES STUDIES



- LIBRARY STUDY
- A PLAN FOR WATER & SEWER
(SUMMARY REPORT)

CHAPTER III

COMMUNITY FACILITIES STUDIES

The purpose of this chapter is to review previous studies of selected community facilities; to update the plans as necessary; and to reflect any programs implemented to correct identified deficiencies and future demands. Planning for the provision of community facilities is important partly because of increasing levels of service demanded by the public. Also, increased demands now placed upon the public budget require that the economies of capital improvements budgeting be practiced. Planning for the provision of community facilities leads to the practice of an orderly program of land acquisition and sound fiscal management policies.

Planning for community facilities is an integral part of the comprehensive plan for community development. It is closely related to the Land Use Plan and to the Major Thoroughfare Plan. The proposals in the 1971 Community Facilities Plan and in this update should be scheduled for financing in the Capital Improvements Program. Also, the Community Facilities Plan must take into consideration the plans for the several urban renewal areas within the city. The following sections are concerned with two types of community facilities: library facilities and water and sewer facilities.

COMMUNITY FACILITIES PLAN: LIBRARIES

In June 1971, the Commission published Community Facilities, a plan that identified existing deficiencies in the system of community facilities in Chatham County, proposed facilities to meet current needs, and projected future demands. This section will review and update the "Libraries Chapter" included in the 1971 report. The remaining elements of the report will be reviewed later as required to keep them up to date

Libraries Study Update

Libraries are essential community facilities. They are information centers capable of fulfilling educational and cultural needs of the community. This section of the Community Facilities chapter surveys the facilities and services provided by the Savannah Public and Chatham-Effingham-Liberty Regional Libraries. Recommendations for improvements designed to meet both present and future needs more effectively are presented as well as a comparison of net changes in services since the publication of the 1971 Plan.

The recommendations of the section provide for an increased level of library service through the construction of three new branch libraries in the immediate future. Three additional branches are recommended for currently undeveloped or developing areas of the County when the projected residential development of these areas occurs. Recommendations for improving existing facilities are also made.

Administration and Finance

The Savannah Public and Chatham-Effingham-Liberty Regional Library System is administered by a 12 member Board of Managers. Board members are appointed by the Chatham County Commission.

Since 1971, the libraries in Chatham County have increased their full-time staff from 16 to 20 professionals and decreased their part-time professionals from four employees to one. There are 54 senior clerical staff members, 47 of whom are full-time employees. The library also employs 35 pages on a part-time basis and five maintenance personnel.

The following departments of the library provide the services listed:

Adult and Young Adult
Department:

loan service; reference and information service; browsing room; group programs for young adults, adults, and senior citizens.

Children's Department:

loan and reference service; special group services, such as organized class visits, day care services, etc.; story hours; and training programs for story tellers.

- Audio Visual Department: film programs by the library; the loan of films, filmstrips, framed pictures, and records; and a film outreach program taken by staff and volunteers into day care centers, and homes for the elderly. Short courses in music and art appreciation for workers in day care centers and kindergartens.
- Meeting Room Service: provides conference rooms; and an auditorium for use for the library's own programs and by community organizations on a reservation basis.
- Extension Service: supplies and supports the branch libraries and operates the bookmobile service.
- Administrative and Technical Services: administers library functions; catalogs new books and other materials; repairs damaged books; etc.

The Main Library provides all of these services, while the branches provide only some of them.

Approximately 78 percent of the total 1973 budget for public libraries in Chatham County is provided by appropriation from the County general fund. Most of the remaining 22 percent is supplied by the State and Federal governments through the State Board of Education. However, small contributions to the library budget are made by Liberty and Effingham Counties and from an additional federal grant through the Model Cities Program. Table 7 provides a summary of the expenditures for the library system for the years 1959, 1970, and 1972. It also shows the percentage by major category of total funds expended.

Objectives

In the 1972 Annual Report of the Savannah Public and Chatham-Effingham-Liberty Regional Library, several specific goals for 1973 are stated. These short range goals deal with increasing the quality of service. The report also discusses what the library's overall goal should be:

". . . More books and library services in more places for more people - - and more awareness of people as individuals in the service we give . . . (The) library should continue its efforts to reach more of its potential readers by developing its system of library agencies. This would mean establishing the branch library expansion plan proposed by the MPC, finding desirable branch sites in the areas suggested by that plan, and beginning definite planning for the branch library to be built at Oglethorpe Mall . . . Services (must be extended) to users at both ends of the economic and educational scale and those who fall between . . . In a time of instability, confusion, strident factionalism, hostility, the library must try to remain an agency where all are welcomed, where people are treated as individuals, where infor-

TABLE 7

LIBRARY EXPENDITURES

	1959 ²		1970		1972	
	Amount	Percent	Amount	Percent	Amount	Percent
Salaries ¹	\$144,328	70.2	\$454,879	75.5	\$592,050	80.3
Operating and Capital ³	15,163	7.4	60,308	10.0	56,312	7.3
Books	46,098	22.4	86,600	14.4	88,155	12.0
TOTAL	\$205,589		\$601,787		\$736,517	

¹Includes salaries, social security, pension, insurance, and travel.

²Figures from Library Service for Savannah and Chatham County, Georgia by Hoyt R. Galvin, 1961.

³No capital expenditures were recorded for 1959 or 1972; 1970 figure is \$30,155 operating, \$30,153 capital.

mation is presented objectively and fairly, and where those of diverse backgrounds and viewpoints can perhaps find a common meeting ground and a greater understanding of one another through the shared experience of using books and other materials the library offers."

Standards and Comparisons

To achieve this overall goal, the library system must have adequate physical facilities to provide the needed services. Standards have been developed by the American Library Association which can be used as guidelines when planning local library facilities. These standards are summarized in Table 8. Table 9 shows the growth of the library system and how it compares with the standards for a community of comparable size. The expenditures of the library system and their comparison with the national average are shown in Table 10.

Analysis of these tables reveals that Chatham County is spending a little over two-thirds of the national average expenditure per capita for its library system. In 1970 per capita income in Savannah was 86 per cent of the national average. Thus, for public library expenditures in Chatham County to equal the equivalent national average, the local expenditure should reach 86 per cent of the national expenditures. This would be an increase of 15.2 per cent above the current level of expenditures.

Further analysis of Table 9 shows that since 1970 the library system has increased its per capita volumes of books from 1.55 to 1.65. This is still below the national average. The per capita issue to borrowers is 66.8 per cent of the standard; thus, volumes are not reaching the population adequately. The library's 1973 goal is aimed at increasing this service.

The immediate answer to reaching more people lies in enlarging the service area through the development of the proposed branch system. Implementation of this program will involve capital expenditures and increased personnel to staff the new facilities, which will require a higher level of expenditures for the library system.

Physical Facilities and Services

The Savannah Public and Chatham-Effingham-Liberty Regional Library System is made up of the Main Library, two branches, and seven sub-branches in Chatham County including two Model Cities facilities, plus branches in Effingham and Liberty Counties. The two sub-branches recently developed in the inter-city in cooperation with the Model Cities administration are to become permanent parts of the system when the Model Cities program is discontinued in mid-1974. There are also eight bookmobiles covering routes in the three counties. A description of the facilities and bookmobile services for Savannah and Chatham County follows.

Main Library

The Main Library is located at 2002 Bull Street, approximately 20 blocks south of the Central Business District. Access to the library is prima-

TABLE 8

STANDARDS FOR A REGIONAL LIBRARY SYSTEM

Volumes	2 to 4 volumes per capita
Volumes added per year	1 volume for every 6 people
Magazines	1 title for every 250 people
Films	1 title for each 1,000 people; minimum of 1,000 titles
Records and tapes	1 record or tape for every 50 people; minimum of 5,000
Staff	1 member for every 2,000 population
Travel time to reach a library building	15 minutes maximum; 5 minutes optimal
Time Open:	
Main Library	66 hours per week
Community Branch	45-66 hours per week
Original floor space -	
Main Library	.4-.5 sq. ft. per capita
Number of seats	2 for every 1,000 population
Location:	
Central Library	Should be prominent; Site should be large enough for expansion; service vehicles, and bookmobiles; Should be close to parking.
Community Branch	For a major library branch serving a population of 25,000 to 50,000 with a full professional and clerical staff, the site should contain approximately 1 acre of land; The site should be adjacent to a business center and easily accessible via a major thorough- fare. Such a location could also reduce the land area requirement to between 20,000 and 30,000 square feet if adequate parking spaces are available in the shopping center.

TABLE 9
BASIC STATISTICS SHOWING LIBRARY
USE AND NATIONAL STANDARD

	<u>1970</u>	<u>1972</u>	<u>Standard</u>
Population	187,816*	189,938**	200,000
Volumes	291,983	313,019	400,000 to 800,000
Per Capita Volumes	1.55	1.65	2 to 4
Books Issued to Borrowers	899,463	889,619	1,400,000
Per Capita Issue to Borrowers	4.78	4.68	7.00
Book Expenses	\$86,600.99	\$88,155	---
Per Capita Book Expenses	\$0.46	\$0.46	\$1.56*** (National average) (1970-1971)

Sources:

*U.S. Census

**MPC estimate

***The Bowker Annual of Library and Book Trade Information, 1972.
 Ref. No. 020.58B

TABLE 10

PER CAPITA EXPENDITURES FOR LIBRARIES

	<u>1959</u>	<u>National Average</u>
Per capita expenditures*	\$0.97	\$2.42
Chatham % of 1959 Standard		40.0%
	<u>1972</u>	<u>National Average 1970</u>
Per capita expenditures**	\$3.40	\$4.80
Chatham % of 1971 Standard		70.8%

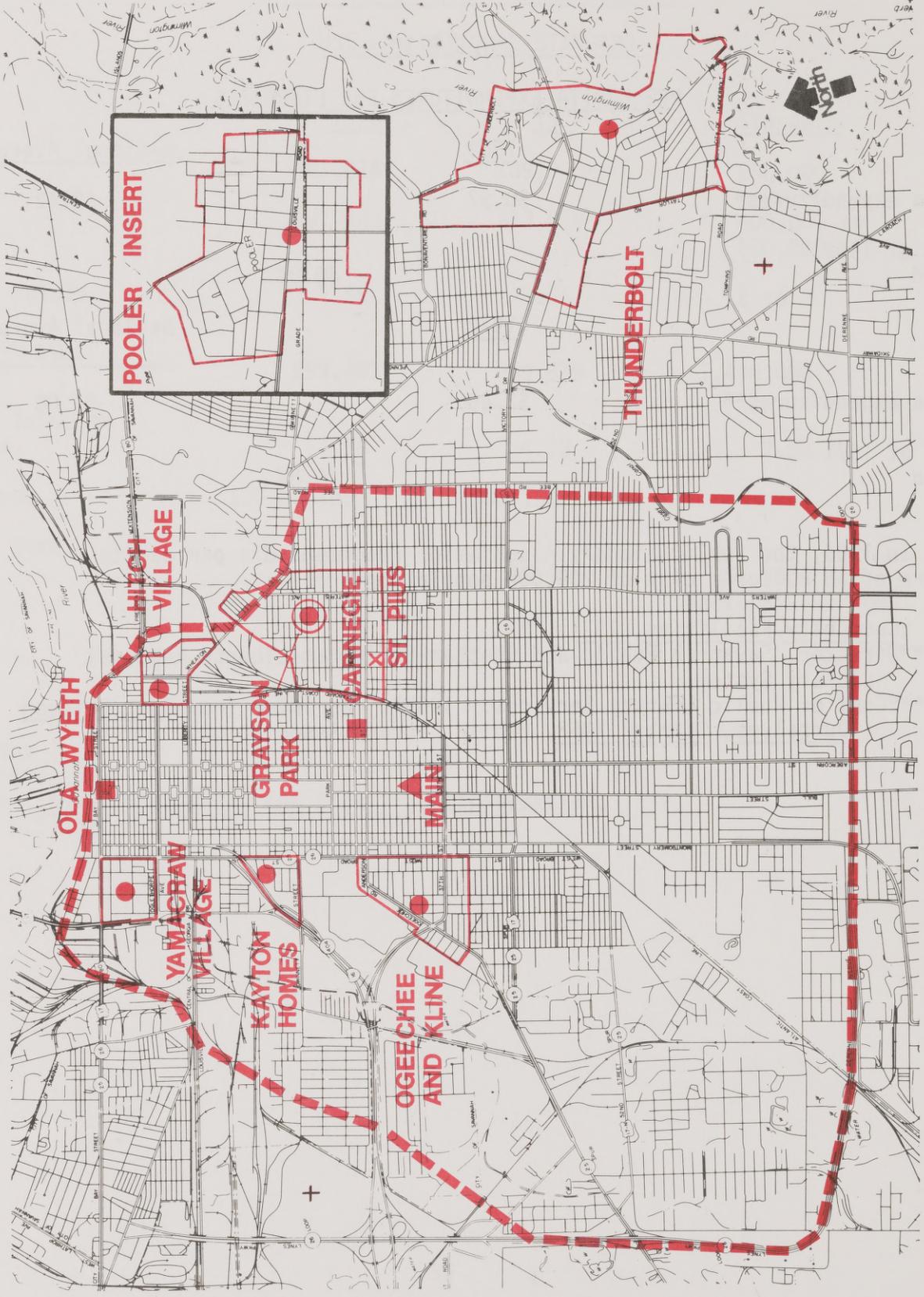
***Note: In 1968, the Public Library Association recommended a per capita expenditure of \$5.80 for a city of 200,000 population.

Sources: *Community Facilities, 1971. MPC

**Director, Savannah Public and Chatham-Effingham-Liberty Regional Library System.

***"Cost of Public Library Services: 1968", reprinted from Just Between Ourselves, October 1968, Public Library Association.

MAP 9 EXISTING FACILITIES MAIN LIBRARY, BRANCHES, SUB-BRANCHES



- ▲ — MAIN LIBRARY
- — SUB BRANCHES
- — BRANCHES
- UNDER CONSTRUCTION
- SERVICE AREA
- X — TEMPORARY SITE
- SERVICE AREA

rily by Drayton and Whitaker Streets, both of which are major north-south collector streets passing near the library site to the east and west, respectively. The library is also accessible via 37th Street, which connects with I-16 to provide access to persons in the western portions of Chatham County. There is adequate on-street parking and off-street parking in the Thomas Park parking areas. The building completely covers the library site. The Main Library was constructed in 1916. Since then, there have been two additions, increasing the total floor area to 38,000 square feet. Using a standard of 0.4 square feet per capita and the 1970 census figure of 187,816 persons in Chatham County, the Main Library should have approximately 75,000 square feet if the recommended standards were met. However, if the branch expansion programs are moved forward the present facility should be adequate. This is possible because as more full service library branches are built, the Main Library's immediate service area will be approximately within a five-minute driving distance from the library. Since this overlaps the service areas of the two existing branch libraries, the service area of the Main Library and its branches will be discussed in more detail after a description of the branch facilities.

Branch Libraries

The Ola Wyeth Branch Library is located at Four East Bay Street in the Gamble Building and serves downtown Savannah during office hours. Due to the lack of parking facilities, service is limited mainly to residents of the downtown area, and people who work or shop there. The library provides the following facilities and services which are compared with the 1970 data to indicate any changes over the last two years:

Floor space: 1,500 square feet (estimate)
Number of volumes (1970): 12,257; (1972): 11,967
Subscriptions to periodicals and newspapers: 45
Number of books checked out (1970): 21,499; (1972): 16,782
Reference service requests (1970): 3,883; (1972): 2,190
Some special programs are also offered.

Circulation and requests for reference information are about average but have declined over the recent years. The reasons given for this decline are associated with a reduction in the number of offices in the vicinity, parking problems, and a reduction in time per lunch hour for a number of area office workers.

The Carnegie Branch Library is located on a 1/6-acre site at 537 East Henry Street. This is approximately one mile from the Main Library. The closeness of these two facilities is the result of two separate library systems existing in Savannah until 1963 when they were combined. Because of the Carnegie Branch Library's location and the fact that inadequate parking space is provided, the service area of this branch is limited.

TABLE 11

LIBRARY FACILITIES (Continued)

LIBRARY SUB-BRANCHES

Item	Hitch Village	Kayton Homes	Pooler	Thunderbolt
Location	Administration building	Administration building	Town Hall	Library building 28 River Drive
Floor area	375 sq. ft. (est) use of adjoining meeting room	400 sq. ft. (est) plus use of adjoining meeting room	144 sq. ft. (est)	900 sq. ft. (est)
Number of volumes	6,856 (1972) 6,367 (1970)	8,251 (1972) 8,001 (1970)	2,730 (1972 est) 2,000 (1970 est)	3,010 (1972 est) 2,500 (1970 est)
Number of periodicals and newspapers subscribed to 1970 & 1972	10	8	0	0
Number of requests for reference information	768 (1972) 476 (1970)	273 (1972) 286 (1970)	0	0
Number of books checked out	7,550 (1972) 6,715 (1970)	10,781 (1972) 9,214 (1970)	3,262 (1972) 4,764 (1970)	5,004 (1972) 3,352 (1970)
Number of hours open per week	18 (1972) 18 (1970)	24 (1972) 29 (1970)	2 (1972) 3 (1970)	4 (1972) 6 (1970)
Service area	Public housing	Public housing	Town of Pooler	Town of Thunderbolt
1970 population in service area	1,524	1,883	1,517	2,750

Note: Except where noted, data represents 1972 information.

The library building has two stories and a usable floor space of 4,500 square feet. The following summary of facilities and services compares the 1970 data with the 1972 figures:

Number of volumes (1970): 32,078; (1972): 29,857
Subscriptions to periodicals and newspapers: 57
Reference service requests (1970): 3,689; (1972): 1,799
Number of books checked out (1970): 36,816; (1972): 31,241

The branch has two collections, one for children and another for adults, but it is used primarily by school-age children.

The location of the two branches close to the Main Library means that their service areas overlap. The primary service areas of the Main Library and the branches are shown on Map 9. These areas include the central portion of Savannah and a small section of Chatham County. In 1970 the population serviced by these facilities was approximately 68,000 people. Since the current service area of the Main Library is countywide, this population figure indicated the number of people in the County who have access to adequate library service as measured by nationally recognized standards.

Sub-Branches. There are seven sub-branch libraries in Savannah and Chatham County. All are open only on a part-time basis. The facilities provide an active loan service, simple reference service, and a variety of group services. Their locations and service areas are shown on Map 9. Table 11 indicates the service level of these facilities. The Model Cities Agencies provide two new sub-branches that opened in November of 1971. These branches are located in the Model Cities Neighborhood. Model Cities initially provided complete funding for the new branches including funds for the rent and renovation of space for facilities, books and other materials, and salaries. Local funds are being put into the project on an escalating basis with the goal of having the program entirely supported by local funds when the Model Cities project is terminated. The two "store-front" libraries opened during 1971 are located at Ogeechee and Kline Streets and in temporary quarters at St. Pius School until the New Grayson Park Neighborhood Facility is completed. The relocation to Grayson Park has eliminated the need of a third facility indicated in the 1971 plan. Both of these Model Cities branches have been designed to meet the needs of school age children and adults who might be intimidated by the size of the Main Library. The Grayson Park facility will have a common meeting room, tutoring room, and an instruction room for arts and crafts. This branch site is located in a multi-purpose facility shared by a number of governmental agencies. Both Model Cities branches will have a minimum of 5,000 volumes.

Bookmobiles. Seven bookmobiles cover more than 80 neighborhood routes and 20 school routes throughout the County. This represents an

MAP 10
BOOKMOBILE SERVICE TO SCHOOLS



- | | | | | | |
|------------------|------------------|----------------|----------------|-------------------|---|
| 1 Bloomingdale | 6 Haynes | 11 Haven | 16 Heard | 20 Windsor Forest | 24 Summer Program for
West Side Schools
(June — August) |
| 2 Pooler | 7 Tompkins | 12 Herty | 17 Tibet Largo | 21 Hesse | |
| 3 Port Wentworth | 8 Sav. Christian | 13 Nativity | 18 St. James | 22 Isle of Hope | |
| 4 Strong | 9 Butler | 14 Johnson | 19 White Bluff | 23 Howard | |
| 5 Sprague | 10 Gould | 15 Thunderbolt | | | |

increase of one bookmobile and 20 neighborhood routes above the 1971 figures. In addition to the stops made at outlying schools and private homes, stops have been added at local industries to allow employees to participate in the library service. The number of books checked out at the schools from bookmobiles in 1970, 1971, and 1972 are shown on Appendix C. School bookmobile service is shown graphically on Map 10. The 1972 neighborhood bookmobile route circulation figures are provided in Appendix D.

Recommendations. The service areas of the Main Library and the two full-time branch libraries overlap. The north-central portion of the City of Savannah has adequate library facilities, but no facilities are conveniently located for people who live at the edges of the City or outside the City limits.

Three new branch libraries are currently planned by the Library Board. Finding suitable buildings or site locations has delayed work on these branches. The proposed locations are in the areas of the City or County which are already developed. The three additional branches will be needed to provide library service in areas of projected residential development. The locations and service areas of future facilities are shown on Map 11.

First Priority Branches. Land has been acquired at Oglethorpe Mall near the intersection of White Bluff Road and Abercorn Extension for one of the library branches. The facility is to be a community branch of 12,000 to 15,000 square feet. The service area (five minutes travel time) for this branch contained over 28,000 people in 1970, and by 1985 is expected to have a population of between 35,000 and 40,000 persons. This area is becoming intensively developed, both residentially and commercially. Abercorn Extension is a heavily traveled major thoroughfare which is connected with Waters Avenue by both Stephenson Avenue and Mall Boulevard. These routes afford easy access to the Mall area.

The new facility should be designed so that future expansion of the building would be possible without any structural changes. With the population growth mentioned above and the high education level of the population in the immediate area, the use of this branch should be high and future expansion would be required. This high level of anticipated use will also require that full services be provided by this community branch. Included would be children's services, adult services, meeting rooms and auditorium, and audio visual department. A second branch library with a floor area of approximately 4,000 square feet should be built in the Carver Village-Cloverdale-Liberty City area. This total area has a population of approximately 8,500 people and currently is within the service area of the Main Library. This branch is needed, however, because of the poor transportation facilities in the area which make access to the Main Library difficult. This area is bisected by several major roads and canals, therefore, care must be taken in selecting a site that will be convenient to all

potential users in the area. In 1970, Census Tract 33, within the city of Savannah represented 4,980 persons or about 59 percent of the population in this area. A third branch should be opened in the vicinity of the Traffic Circle on West U. S. 80. There are several heavily traveled thoroughfares and a neighborhood shopping center in this vicinity. The service area for this proposed branch had over 22,000 people in 1970. The population is expected to increase to more than 31,000 persons by 1985.

Second Priority Branches. Three additional branches should be constructed when projected future development creates the need. These branches should be on Skidaway Island, in the Georgetown-Grove Point-Quacco Road area and in the Wilmington-Talahi Island areas. The completion of the bridge to Skidaway Island has opened this area for development. A population of over 30,000 people is expected on the Island by 1990. Library service should be provided when the population on the Island reaches 5,000 to 8,000 people. The Georgetown-Grove Point-Quacco Road area is also expected to become heavily developed due to the completion of Abercorn Extension to I-95. The Wilmington-Talahi Island area is also experiencing a rapid development rate. Over 14,000 persons are expected on these islands by 1985.

Improving Existing Facilities. The Ola Wyeth Branch could be expanded to serve as a nucleus for a combined public branch library, county law library and municipal reference library. If the new city-county office building materializes and if it is located in a place readily accessible to the central business district, the Ola Wyeth Branch should be moved into the ground floor to serve this multi-purpose function. About 4,000-5,000 square feet of floor space will be needed, some of the area could be in the basement or another location which would serve for stack areas.

The Carnegie Branch should become part of the sub-branch library system, but the services that are currently being provided there should not be curtailed. If possible, its special collection on Negro history and culture should be expanded and remain in the Carnegie Branch.

The Main Library is short of space, but otherwise is adequate. With the pressing need to expand the library system through branches, the expansion of the Main Library does not seem necessary at this time.

MAP 11
 PROPOSED LIBRARY BRANCHES
 AND SERVICE AREAS



- ▲ — Existing
- — Proposed (First Priority)
- — Proposed (Second Priority)

SCALE IN MILES
 0 1 2 3 4

COMMUNITY FACILITIES PLAN: WATER & SEWER

Major efforts have been made over the past couple of years to correct the local water pollution problems. These efforts have produced a number of physical, as well as, financial changes related to the water and sewer program. These changes have dictated that A Plan for Water and Sewer, published in June 1971, be updated. This section presents a summary of the latest amendments to this plan. In addition to this summary, the water and sewer report has been reproduced as a separate document because of the length and detail of the report. The reprinted report consists of detailed inventory and analysis of the existing systems and the improvements needed for 1985; a discussion of the financing of the construction needed; and the construction and financing needed to provide for the population expected in 1979. It also includes a proposal for the ultimate disposal of waste that would be undertaken after 1985 as part of a complete clean up of estuaries and canals. The plan is intended to provide the community with a sound guide for developing these needed facilities. The 1973 study is the latest in a series of reports published by the MPC that are concerned with this subject. The four previous planning documents are: A Plan for Water and Sewer, (Ga. P-56) published in October 1968; Water and Sewer Financial Plan, (Ga. P-128) published in December 1969; Water and Sewerage Improvements Needed in 1975 in Chatham County (Ga. P-128) published in March 1970; and A Plan for Water and Sewer (Ga. P-154) published in June 1971.

A Plan for Water and Sewer (Summary Report)

This summary is intended to allow an interested citizen an opportunity to review the overall problems, concepts, and recommendations discussed in A Plan for Water and Sewer without having to be confronted with the details of that report.

Purpose of the Water and Sewer Plan

Savannah and Chatham County's potential development is almost unlimited, provided that deterrents to development such as water pollution do not stagnate the future. As the population increases, the demand for water and sewage services and facilities will also increase. Plans made now will help provide for these services and facilities and insure their correct development. As a guideline for the Water and Sewer Plan, various community goals have been used. These goals are basic in their nature but do indicate the problems that exist today and provide a start toward a future free of the major problems related to water distribution and sewage treatment.

The goals are:

- Correct existing problems such as: low water pressures, contamination from septic tank failures, raw sewage discharges into the rivers and streams, frequent breakdowns in water services, individual wells and disposal systems in developed areas;
- Prevent future pollution of rivers and streams in Chatham County;
- Provide all residents with an equal quality of water and sewer services;
- Insure that adequate water supply will be available for fire protection;

- Make water and sewer services available to industrial areas;
- Eliminate the blight that occurs when developments are served by substandard or no water and sewer facilities;
- Prevent the problems of sub-standard systems because adequate provisions are not made in a water and sewer system to accommodate growth and development;
- Provide a basis for scheduling and financing water and sewer projects;
- Take advantage of funds available from federal and state agencies for sewage treatment and basic water and sewer facilities;
- Protect the present and future sources of water supply; and
- Use the Water and Sewer Plan as a guide to land use planning and development controls.

Today's Problems

As our population increases and becomes more urbanized, and as technological demands increase, the demand for water increases at a faster rate.

While the supply of water is fixed by nature, the increase in demand has been startling. From 1900 to 1950 while U. S. population doubled, total water use, other than for power, increased four hundred percent. By 1960 it was up another 59 percent from 1950. Water needs are expected to more than double again by 1980 while population increases 45 percent. Average daily use for all purposes increased from 600 gallons per capita in 1900 to 1,100 gallons in 1950 and 1,500 in 1960. At this rate by 1980 we will be using 2,300 gallons per day for every man, woman and child.

Today in the humid climate of Chatham County, the problem is not one of a lack of water, as it is in the arid or semi-arid areas of the world, but a problem of taking water for granted and wasting it with impurities.

Municipalities and industries want clean water in large quantities for survival and growth, yet the water sources are continually polluted with the discharge from their liquid wastes.

Local Water Supplies. The Savannah area obtains most of its water supply from the Ocala Limestone aquifer. This aquifer has been reported as one of the world's most productive, yet, water levels in the wells have declined more than 160 feet at the center of the cone of depression, since pumping from the aquifer began in 1885. The cone of depression, formed by a large withdrawal from a small concentrated area, is centered just west of Savannah in the industrial section. Before pumping from the aquifer began, the water level or artesian pressure was about 40 feet above sea level at Savannah. By 1963, it was slightly more than 120 feet below sea level.

A 1963 United States Geological Survey Water Supply Paper indicates that salt water is encroaching into the aquifer from two sources. Sea water is entering the aquifer in the vicinity of Port Royal Sound in the upper zones and unflushed salty water in the lower zones. The Geological Survey Report estimates that it will take 75 years for the salty waters of the lower zones to reach the center of the cone, and about 400 years before salt water in upper zones reach the cone of depression, based on the 1963

pumping rate of 62 million gallons per day. Both types of contamination are caused by the lowering of water levels in the Savannah area and a subsequent reversal of the hydraulic gradient east and northeast of Savannah. This is a direct result of the large ground-water withdrawal from the cone of depression. The Geological Survey Paper suggested the relocation of the present cone of depression to a point 15 to 20 miles west of Savannah and control of areawide withdrawals to cause a broadening of the cone to the west and a rise in the water table in the present cone. Since ground-water is the major source of Savannah's water supply, attention in the future will be required toward saving and controlling ground-water use, rather than the continued expansion of this resource. Total water resources, however, are adequate to meet present and future water requirements. The major local distribution problem today is one of providing all the citizens of Chatham County with adequate water services. Some parts of the county still lack water services and other areas, presently served by some of the smaller water systems, are not supplied with adequate water services.

A water system has two functions. It must provide sufficient, safe water at adequate pressure to supply its customers with water for cooking, bathing, lawn care, and other domestic uses. This is a relatively modest amount--usually considered 100 gallons per day per capita. A more demanding function is to provide sufficient water to suppress a serious fire. A minimum of 500 gallons per minute is regarded as necessary for this fire protection, and fire insurance companies recognize this by adjusting the insurance rates where such flows are available.

A total of 52 municipal or community water systems exists in Chatham County. This figure in itself indicates a lack of coordination between the water systems and the problem of supplying the citizens with adequate water facilities. These 52 water systems were built to serve areas where early development started and were later expanded to match the growth of the original settlements. These systems are owned by various municipalities, corporations and individuals. Each owner has been understandably interested in the area served by his system, with the result that there are many fringe areas where adequate water service is not available. Indeed, many of the existing systems are not adequate when the water systems are measured by the requirements for fire protection and domestic supply. Thus, the estimated 1973 population of 189,938 is not adequately served, so major revisions of the water and sewer systems will be necessary to serve the 220,500-240,000 people expected in 1985.

To maintain the independence of the 52 existing systems while providing adequate service to all citizens would be hopelessly complicated.

A program for adequate service can be properly developed only by a single constituted authority or agency following detailed engineering studies and careful consideration of the physical, economic, legal and public policy merits and disadvantages. A summary of the Water and Sewer Study recommendations to initiate such a program are provided later in this review (see map 13 for the recommended 1985 Water Service Areas).

Sewage Treatment. The installation of sewers to serve residents in deve-

Toped areas is only the beginning of the sanitation cycle. The whole problem of water pollution--the despoliation of streams and coastal waters by discharges of wastes--stems from the water carriage system of sewage disposal. The function of a sewer system is to remove from man's habitat the physiological wastes of his existence. Unfortunately, the great benefits which sewers offer sewage producers may become a serious sanitation hazard to their neighbors. Wastes cannot be destroyed by the simple expedient of transporting them away from their point of origin. They retain their "power for evil" regardless of where they are finally discharged.

The answer to the pollution problem must include sewage treatment--the removal or modification of contaminating substances in the sewage flow in man-made facilities which utilize natural, mechanical and biological process. The percentages of wastes or pollutants in the vast amounts of clean water which make up sewage are extremely small; yet, the potency of these wastes is so great that the disposal of these used liquids into water courses adversely affects the usefulness of the streams for the purposes for which they are intended. Thus, pollution control is a practical, realistic matter of community survival and prosperity, not an academic effort merely to preserve beauty, aesthetics, and pride, important as these ideals may be.

In broad terms, sewage contains four types of contaminants:

Coarse solids and debris--which are removed by screens and grit removal facilities.

Finer suspended solids--which are removed by clarification in settling tanks.

Dissolved organic matter and colloidal matter--which can be removed or modified by the oxidation process, either biological such as in trickling filters or by introducing air mechanically.

Bacteria, many of fecal origin--which are partially removed by standard treatment processes, and then disinfected by chlorination.

There are many types of treatment processes, each one having characteristics that make the selection of the best type for the specific conditions one of the designer's most important functions. In rural areas, cesspools, a simple type of treatment, is sometimes used. These are holes in the ground with porous sides. The solids are retained in the pits and the liquid is absorbed into the surrounding soil. A more sophisticated arrangement of the cesspool is the septic tank in which the liquid is carried through porous pipes to an adjacent tile field where it is absorbed by the soil. These methods are used in rural areas where the ratio of sewage to the capacity of the soil to absorb it is very low. As the density of development increases the amount of sewage increases while the absorbing capacity of the soil decreases due to the construction of impervious surfaces like paving and buildings. The capacity of the soil to accept sewage is limited in low areas where the ground water is within a few feet of the surface. The sewage mixes with the ground water and drains under the surface to the nearby ditches and canals. Obviously, high concentrations of sewage that are the result of people living close together produce intolerable amounts of pollution in the receiving water courses. In many cases the results of this concentration do not show up on the contributor's

property, but on the lower land to which his property drains.

Community treatment facilities are frequently classified as giving primary, secondary or tertiary treatment. Primary treatment generally consists of a clarifier in which the sewage flows at a low velocity so that many of the solids settle and are placed in a digester compartment to break down into sludge. This type of plant removes about 50 percent of the contaminants. Secondary treatment takes the clarified effluent from the primary portion and adds oxygen by biological oxidation in a filter, or by aerators to remove the dissolved organic matter. The effluent then flows through a final clarifier. This type of plant removes about 80 to 90 percent of the contaminants. Tertiary treatment provides additional treatment to the effluent from the second clarifier either by filtering or by stabilizing in a polishing pond. This type of treatment removes practically 100 percent of the carbonaceous (consisting of or containing carbon) organic material and solids. In addition to the solids and carbonaceous organic matter in waste, there are viruses, bacteria and nutrients that are soluble and not removed by ordinary treatment. By disinfecting the effluent with chlorine, the pathogenic viruses and bacteria can be suppressed. Nitrogen and phosphate remain in various compounds and strengths in effluents from conventional treatment facilities. These are nutrients that contribute to the growth of plant life. Thus the effluent from a treatment facility causes an increase in the growth of algae when it is discharged into an estuary or slow moving stream. When this algae dies it consumes oxygen and degrades the receiving water even though the treatment facility has removed all solids and oxygen consuming carbonaceous organics. Thus, at locations where the effluent will be discharged into a relatively small estuary, the nitrogen and phosphate should be removed by chemical precipitation.

Waste stabilization ponds provide oxygenation (the process of treating with oxygen) without the use of mechanical equipment. These ponds provide storage periods of approximately 100 days in which algae and sunlight produce sufficient oxygen to stabilize the waste. The land requirements of 1 acre per 200 persons make these facilities impractical for large populations.

In Chatham County, the classification of the local streams determines the degree of treatment the effluent must receive before it may be discharged into the waterways. The State Department of Natural Resources has classified the major streams such as the Ogeechee, Little Ogeechee and Savannah Rivers and has left the small or minor streams unclassified until the necessary field work can be accomplished. The local governments have the power to make any stream more restrictive but not less restrictive than the classification given it by the State. The recommendation is that all the local, small or minor streams be classified as "recreational streams" because of their usage or potential use for recreational purposes. Therefore, the majority of the local streams are classified as recreational streams and require tertiary or completed treatment of all sewage effluents entering them. None of the existing sewage systems in Chatham County conform to this requirement at the present time, but as improvements are made to existing facilities or new ones are built, they will be required

to meet this requirement in the future.

A Complete System. A water and sewerage system when operated in a desired manner is in reality "one" system, since liquid sewage is produced only where water is available and in direct proportion to the availability of water. A complete system is not limited to the pipe line carrying the water to the consumer. Each half of the system is connected indirectly to the plumbing and other facilities within the consumer's establishments.

Although both water and sewer services consist of pipe laid underground, sewers are generally more expensive than water lines. They must be larger to carry the equivalent amounts of liquid and depend mainly upon the force of gravity to give them their capacity usually without benefit of added pressure from pumps. In addition, sewer lines frequently require deeper excavation to lay the pipes in order to provide the desired velocity or they must resort to the use of force mains and lift stations. Also, the overall planning of treatment plants requires that a few large plants rather than many smaller plants be constructed because of the problems in operating treatment plants and the economics involved. Chatham County's relatively flat terrain, low elevation, numerous waterways, marsh areas, fragmentation of buildable areas and age of development presents problems in this aspect of water and sewer planning.

The Water and Sewer Plan has been designed for the ultimate development of the entire service area even though it sometimes is separated by these existing barriers. This policy has sometimes justified the oversizing of the initial facilities in order to provide for the capacity of future development and prevent the recurrence of the present pollution problems.

Multi-Level Approach to Pollution Abatement. Pollution does not respect state boundaries any more than it does municipal boundaries. Recently the interstate approach has been increased because of the limited results that local or state governments have been able to produce. Federal level interest in water pollution is stimulated by many factors. Some of these are: (1) the nation's water supply is relatively limited, (2) the water supply is distributed unevenly both geographically and seasonally, (3) most of the surface and ground water sources are multistate in character, (4) much water used in the United States has actually been used before in other states, and (5) water pollution interferes with many interstate activities.

The Water Pollution Control Act gives the Federal Government authority to enforce water pollution abatement of interstate or navigable waters. This enforcement action can be instigated by a state government, a water pollution control agency, or a municipality. The Environmental Protection Agency administers the Water Pollution Control activities of the Federal Government. The Federal Water Pollution Control Act amendments of 1972 provide rules and regulations for the awarding of grants to assist with the construction of waste treatment works. These amendments and the Act provide for grants of 75 percent of the construction cost of treatment works and collector sewers in developed areas. It also provides that any sewerage construction participating in federal grants must conform to an overall Regional sewer plan. The amendments provide for the operation, user charges, and other conditions

upon which grants will be made. As stated above, all the streams in Chatham County are subject to the requirements of the State Department of Natural Resources. In addition, the United States Public Health Service, because of its responsibility for the sanitary quality of raw oysters shipped in interstate commerce, has an interest in Chatham County streams and estuaries. In fact, the harvest of oysters, clams and other foods taken from local polluted areas has been forbidden by this agency. Therefore, these agencies have a voice in the quality and location of sewage discharge into the streams. The citizens of the community have an even more relevant interest in the conditions of the streams as scenic, recreational and resource potentials and must take steps to stop the pollution of these streams. As a portion of the community's efforts and as a base for further community planning, the comprehensive Water and Sewer Plan contemplated and recommends the eventual cessation of discharging any partially treated or untreated sanitary waste into recreational streams.

Local Pollution. Raw waste was formerly discharged directly into the Savannah River by the City of Savannah, Garden City, Port Wentworth and most of the industries along the river. Savannah Beach discharged an inadequately treated primary effluent. As a result of the Federal and State governments' actions and an order from the Superior Court, all the municipalities and most of the industries are now constructing waste treatment facilities that will provide at least secondary treatment to any waste discharged to the river.

The discharge from storm sewers is still a source of pollution, especially in the City of Savannah where historically storm and sanitary flows are carried in a single pipe. The City now has projects underway that will separate all known sources of combined flows but it is considered impossible to discover and correct every case. The storm water itself even without sanitary waste contains a significant amount of pollutants from animal feces, rotting organic material, and the debris of urban development. At some future time, the storm water will require screening or some type of treatment to remove the contaminants carried by the early stages of storm water discharge.

The principal industrial area is located along the Savannah River from Port Wentworth to the Wilmington River. The State Department of Natural Resources, Environmental Protection Division ordered industries to desist discharging industrial and sanitary waste into the river. Major industries except American Cyanamid have complied by constructing treatment facilities for their industrial waste. At others, the sanitary waste is discharged to the City of Savannah or Garden City treatment plant. The Continental Can Company has built a treatment facility that treats the City of Port Wentworth's, Savannah Food and Industries', as well as their own waste.

Summary of Recommendations Included in "A Plan for Water and Sewer"

The community has made significant progress in protecting the surrounding waters during the past two years. Therefore, the comprehensive Water and Sewer Plan addressed itself to the work that must be done to provide for disposal from developed areas not having adequate treatment facilities, and for areas expected to be developed by 1985.

The ultimate 1985 sewerage system will consist of 19 **treatment** facilities and service areas in addition to Hunter Army Airfield (see map 12). Wherever possible, existing facilities should be incorporated into the proposed systems to utilize the existing portions of the collection systems. The proposed improvements are sized to serve the ultimate development so the work could be done in phases to match the development of the area. Construction necessary to up-grade the quality of treatment given by the existing facilities should be done as quickly as possible even though the expansion cannot, and should not, be done until necessary.

The proposed Sanitary Sewer Service Areas are:

1. Port Wentworth
2. Garden City
3. Travis Field - Woodlawn - Sharon Park - Central Junction
4. Pine Forest
5. Pooler and Bloomingdale
6. Georgetown - Ogeechee Farms - Larchmont
7. Silk Hope - Pine Hill
8. Cloverdale
9. President Street - Bacon Park - Thunderbolt - Causton Bluff
10. Wilshire Estates
11. Windsor Forest
12. Montgomery
13. Isle of Hope - Harrock Hall - Lakeside - Wymberly
14. Oatland Island - Whitmarsh Island - Bradley Point
15. Talahi
16. Wilmington Island
17. Skidaway Island - Green Island
18. Savannah Beach
19. Gateway Savannah
20. Hunter Army Airfield

Major Recommendations. The major recommendations of the comprehensive Water and Sewer Plan include:

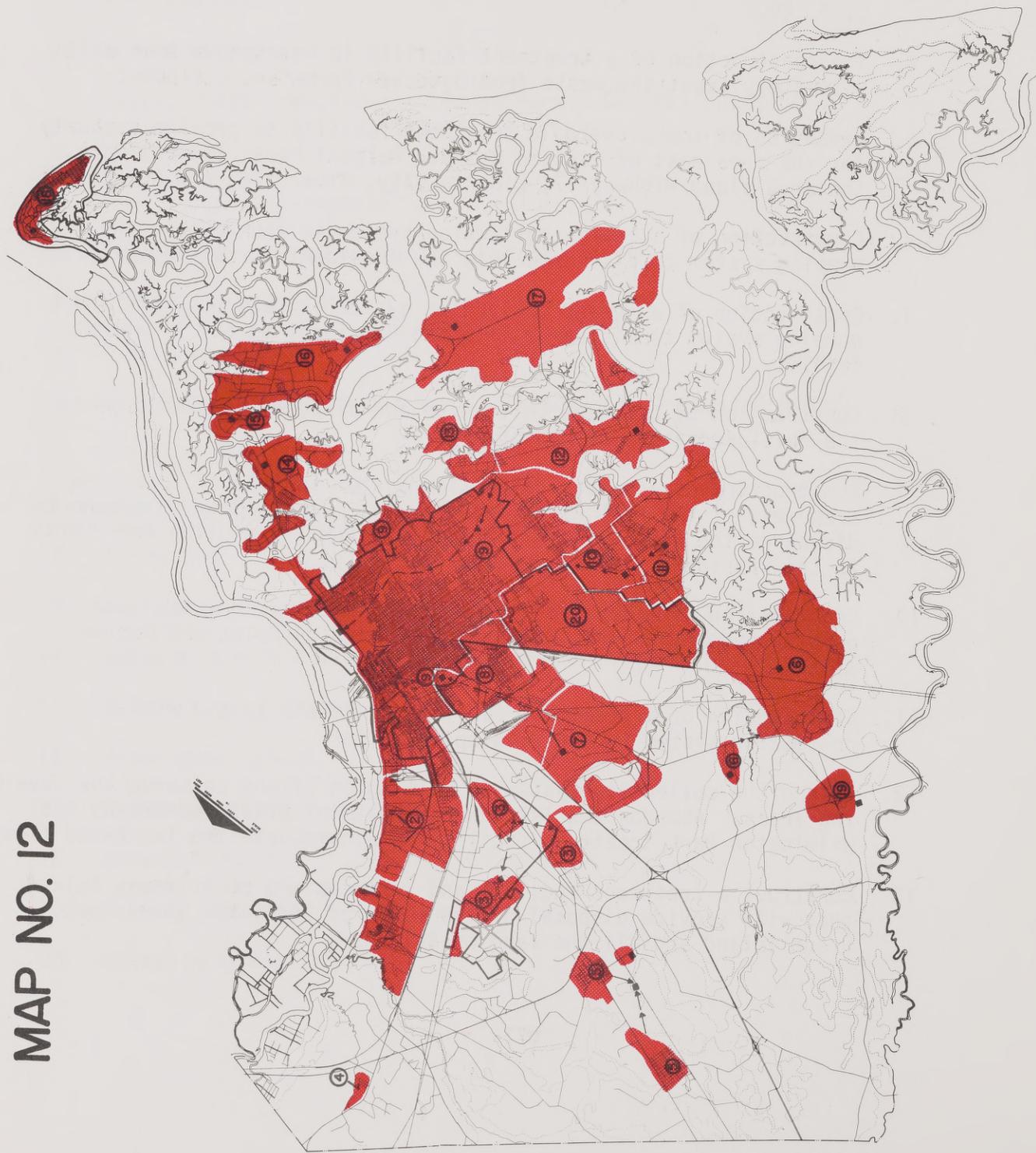
Sewerage:

1. The construction of a sewage collection system in Woodlawn, Sharon Park, and Central Junction and pumping the waste to the Travis Field treatment facility.
2. The construction of a sewage collection system in Bloomingdale and pumping the waste to the Pooler treatment facility.
3. Expansion of the Pooler treatment facility to accommodate Bloomingdale and the expected development at Interstate 95 and U. S. 80.
4. The construction of a treatment facility in Georgetown that will ultimately treat the waste from Ogeechee Farms and Larchmont.
5. Expansion of the Cloverdale treatment facility to provide capacity for the area east of Garrard Avenue, Pulaski Park, Tremont Park, the area along Highway 17, Liberty City, Riverdale, and Summerside.
6. Construction of a sewage collection system in Thunderbolt and a pumping system to discharge into the President Street facility.
7. Construction of a sewage collection system in Causton Bluff and a pumping system to discharge into the President Street treatment facility.
8. Construction of a sewage collection and disposal system to serve the developed areas of Montgomery.
9. Construction of a sewage collection system in Isle of Hope, the area west of the Herb River, and Sandfly, and a pumping system to discharge the waste into the Bacon Park Pumping Station and thence to the President Street treatment facility.
10. Construction of a treatment facility on Whitemarsh Island and pumping systems to this facility from Bradley Point and Oatland Island.
11. Construction of a treatment facility on Talahi Island with a collection system to the developing areas.
12. Extend the collection system on Wilmington Island to serve the developing areas. Abandon the Islandwood treatment plant and expand the Wilmington Park treatment facility to accommodate the increased flows.
13. Construct a treatment facility and interceptors on Skidaway Island that will provide disposal of the waste of OSCA, the State Park, Green Island and all the land on Skidaway.

MAP NO. 12

SEWER SERVICE AREAS

1. PORT WENTWORTH
2. GARDEN CITY
3. TRAVIS FIELD, WOODLAWN
SHARON PARK, CENTRAL JUNCTION
4. PINE FOREST
5. POOLER - BLOOMINGDALE
6. GEORGETOWN - OGEECHEE FARMS -
LARCHMONT
7. SILK HOPE - PINE HILL
8. CLOVERDALE
9. PRESIDENT STREET - BACON PARK -
THUNDERBOLT - CAUSTON
10. WILSHIRE ESTATES
11. WINDSOR FOREST
12. MONTGOMERY
13. ISLE OF HOPE - HARROCK HALL
14. OATLAND - WHITMARSH - BRADLEY PT.
TALAH
15. WILMINGTON ISLAND
16. SKIDAWAY - GREEN ISLANDS
17. SAVANNAH BEACH
18. GATEWAY SAVANNAH
19. HUNTER ARMY AIRFIELD
- 20.



14. Replace defective portions of the collection system at Savannah Beach.
15. Complete the four interceptor systems leading to the President Street plant, and Hopkins-Victory Drive Separation Systems in the City of Savannah.
16. The ultimate goal is to eliminate the discharge of any waste, raw or treated, into estuaries or to canals flowing through inhabited areas. This goal is unlikely to be reached by 1985 because of the costs involved and the fact that it will also be necessary to reduce pollution reaching the canals from surface runoff of storm drainage. The solution, insofar as sanitary waste is concerned is to pump all treated effluent to the Savannah River or to spray it on turfed areas where the microorganisms in the soil can utilize it.

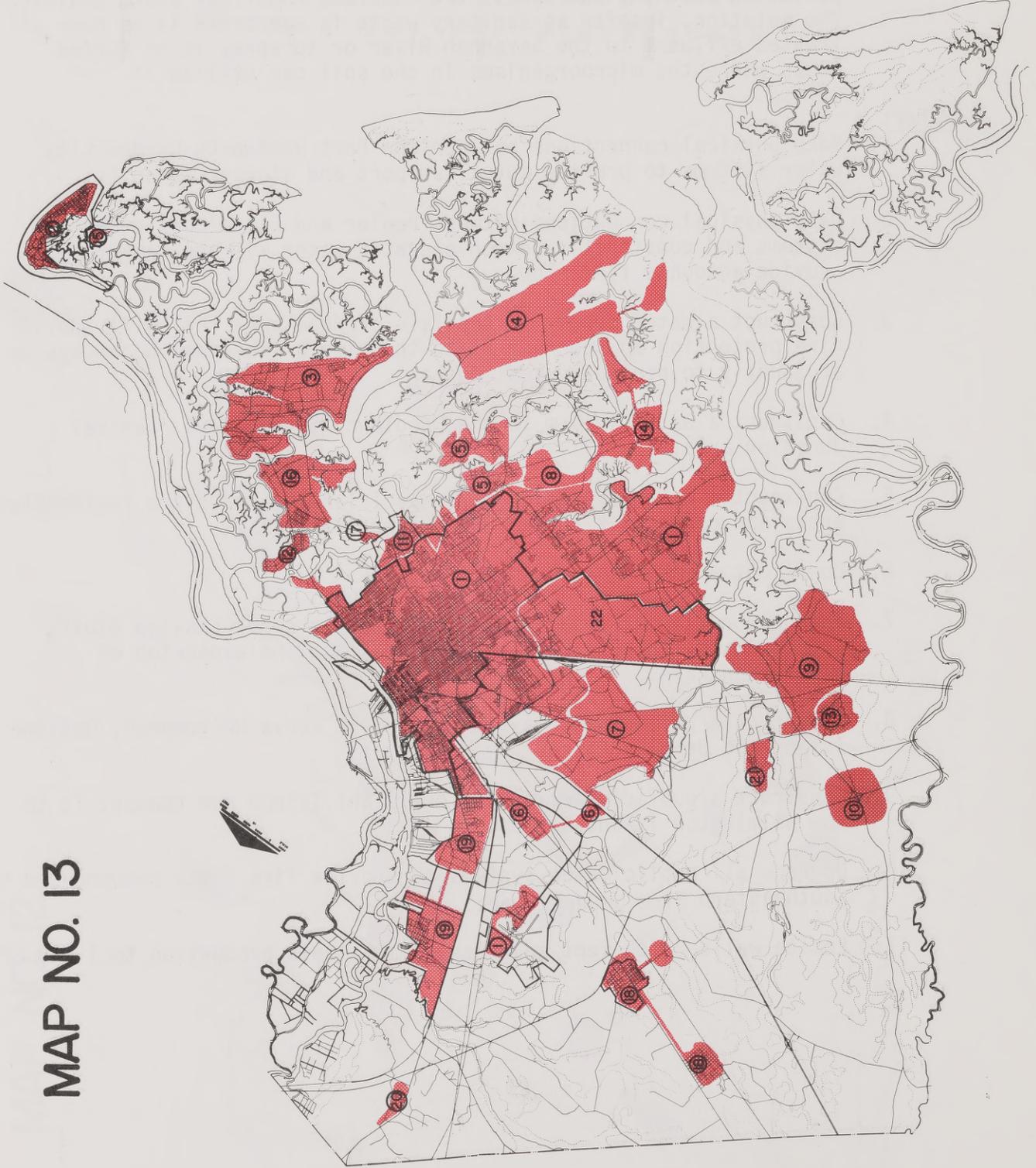
Water:

1. Make physical connections between the Port Wentworth-Garden City water systems to provide mutual support and storage capacity.
2. Make physical connections between Pooler and Bloomingdale water systems and construct a common elevated water storage tank to provide adequate fire flow.
3. Construct a water system in the Isle of Hope area that will provide fire protection and connect it to the City of Savannah water system at Sandfly to provide mutual support.
4. Construct a water system in the Woodlawn, Sharon Park, Central Junction area.
5. Construct a water system on Skidaway Island to serve the residential areas and connect it to the OSCA water system.
6. Construct a water system in Georgetown.
7. Extend the City of Savannah Water System to serve Causton Bluff, Tremont Park, Pulaski Park, Summerside, and the expansion of Wilmington Park.
8. Construct a public water system that will serve Whitemarsh, Oatland Island and Bradley Point.
9. Construct a public water system on Talahi Island and connect it to the Wilmington Island system.
10. Upgrade all public water systems to provide fire flows recommended by Southeastern Fire Underwriters.
11. Locate wells 2,000 feet apart and limit their production to 1,000 GPM.

MAP NO. 13

WATER SERVICE AREAS

1. CITY OF SAVANNAH
2. SAVANNAH BEACH
3. WILMINGTON ISLAND
4. SKIDAWAY ISLAND
5. ISLE OF HOPE
6. WOODLAWN
7. SILK HOPE
8. MONTGOMERY
9. GEORGETOWN
10. GATEWAY SAVANNAH
11. THUNDERBOLT
12. OATLAND
13. OGEECHEE FARMS
14. BURNSIDE ISLAND
15. RIO VISTA
16. VERNON VIEW
17. SPANISH HAMMOCK
18. WHITEMARSH-BRADLEY POINT
19. ISLE OF HOPE
20. POOLER-BLOOMINGDALE
21. GARDEN CITY-PORT WENTWORTH
22. PINE FOREST
23. LARCHMONT
24. HUNTER ARMY AIRFIELD



General:

1. The establishment of a single operating agency to assume the responsibility for operating all the water and sewer systems in the County under one set of standards. This agency could hire the necessary personnel to operate the complicated facilities and provide laboratory and maintenance supervision to maintain the systems at their maximum quality and efficiency. The agency should have the authority to issue revenue bonds, levy water and sewer charges, and acquire existing systems and facilities for incorporation into an overall County system.
2. The development of the community should be on a long-range programmed basis. The Water and Sewer Plan is an integral part of such a planning program to provide some guidelines for the growth of the County for a population of 246,000 by the year 1985.
3. The projected population and economic data used in this study gives some idea of the dimension of the problem and provides a base which can be used to start the necessary corrective steps to prevent future problems related to the community's water and sewer program.
4. The Plan will also serve the community as a foundation to build upon in reviewing local applications for Federal grants for assistance in the construction of water and sewer lines and treatment facilities.
5. Three major objectives of the long-range plan are:
 1. Complete removal of solids and sterilization of any waste discharged into recreational streams;
 2. An adequate water system to provide uniform water supply for all domestic use and fire protection; and
 3. Establishment of a single agency to administer all water and sewer systems.

The proposed Water and Sewer Plan is based upon the expectation that development will take place in areas that will have a good access to other parts of the community, and that schools and other necessary public facilities will be part of the development of the area. The cost of constructing the water and sewer systems necessary to serve the expected population in Chatham County in 1985 is estimated to be approximately \$62,000,000.

The estimated cost of construction is based upon 1973 costs. Construction costs have been rising in recent years and they are likely to continue. The rate of escalation cannot be predicted so these estimated costs should be adjusted as the work is undertaken to reflect the cost index current at the time.

APPENDICES

A
B
C
D

CHATHAM COUNTY-SAVANNAH METROPOLITAN PLANNING COMMISSION
CITIZENS SURVEY

The Chatham County-Savannah Metropolitan Planning Commission has developed this questionnaire in order to receive your comments and views on a number of important matters of community interest. Answers to these questions will also provide the commission with certain basic data needed to make a number of determinations in planning for the community's future.

1. From the following list of governmental services, rate the level of service you feel is provided for Chatham County Citizens by Local City or County governments.

<u>RATING</u>						<u>SERVICE</u>
Excellent (a)	Good (b)	Fair (c)	Poor (d)	Very Poor (e)	Don't Know (f)	
						<u>Transportation</u>
a.	_____	_____	_____	_____	_____	New street construction
b.	_____	_____	_____	_____	_____	Traffic regulation
c.	_____	_____	_____	_____	_____	Street cleaning and repair
d.	_____	_____	_____	_____	_____	Public buses
						<u>Judicial System</u>
e.	_____	_____	_____	_____	_____	Law enforcement
f.	_____	_____	_____	_____	_____	Criminal and civil court system.
						<u>Public Welfare</u>
g.	_____	_____	_____	_____	_____	Aid to needy children
h.	_____	_____	_____	_____	_____	Aid to the temporarily disabled
						<u>Health Services</u>
i.	_____	_____	_____	_____	_____	Public hospitals and nursing homes
j.	_____	_____	_____	_____	_____	Mental health program
k.	_____	_____	_____	_____	_____	Inspection and control of water pollution
l.	_____	_____	_____	_____	_____	Inspection and control of air pollution
m.	_____	_____	_____	_____	_____	Health and safety inspection of buildings

	<u>RATING</u>						<u>SERVICE</u>
	Excellent (a)	Good (b)	Fair (c)	Poor (d)	Very Poor (e)	Don't Know (f)	
n.	_____	_____	_____	_____	_____	_____	General health services (health education, pre- ventive medicine, and detection and control of communicable diseases)
							<u>General Services</u>
o.	_____	_____	_____	_____	_____	_____	Education system
p.	_____	_____	_____	_____	_____	_____	Public library system
q.	_____	_____	_____	_____	_____	_____	Park land acquisition and park construction
r.	_____	_____	_____	_____	_____	_____	Recreational programs
s.	_____	_____	_____	_____	_____	_____	Park and community house maintenance
t.	_____	_____	_____	_____	_____	_____	Garbage collection
u.	_____	_____	_____	_____	_____	_____	Fire protection
							<u>Planning and Development</u>
							<u>Controls</u>
v.	_____	_____	_____	_____	_____	_____	Planning county-wide growth and development
w.	_____	_____	_____	_____	_____	_____	Planning and control of the following: 1. industrial development 2. commercial development 3. apartment development
x.	_____	_____	_____	_____	_____	_____	Enforcement of the following: 1. zoning regulations 2. building codes
y.	_____	_____	_____	_____	_____	_____	<u>Other Services</u> Please specify _____

2. What amount of influence do you feel the citizens of your neighborhood have on important decisions of your local government?
a. ___ very much b. ___ some c. ___ little d. ___ none e. ___ don't know

3. What is your occupation? (banker, sales clerk, retired, etc.) _____

4. Name nearest intersection from where you are employed _____

5. Name nearest intersection from where you normally purchase the following:
 a. groceries _____
 b. clothing _____
 c. furniture, appliances, etc. _____
6. Sex:
 A. Male
 B. Female
7. Marital Status:
 A. Married
 B. Single
 C. Other
8. Age:
 A. Under 18
 B. 18-35
 C. 36-50
 D. 51-65
 E. over 65
9. A. Number of Children: _____
 B. Ages of Children in Household
 ____, ____, ____, ____, ____, ____.
10. What is your household's approximate yearly income?
 A. Under \$3,000
 B. \$3,000-\$5,000
 C. \$5,000-\$8,000
 D. \$8,000-\$10,000
 E. \$10,000-\$15,000
 F. \$15,000-\$25,000
 G. Over \$25,000
11. Type of residence:
 A. Single family
 B. Apartment
 C. Mobile home
 D. Other
12. Do you rent or own this residence?
 A. Rent
 B. Own (or buying)
13. Do you own other real estate in Chatham County?
 A. Yes
 B. No
14. Where do you now live?
 A. City of _____
 B. Unincorporated area of Chatham County (check one) Yes No
 C. Nearest street intersection from where you live:

15. How long have you lived in Chatham County? _____
16. Where did you previously live? County _____
 (If not in Georgia) State: _____
 (If in Chatham) Nearest street intersection: _____
- Is there anything you care to add to the information you have already given us in the way of suggestions for improving governmental services?

Thank you for your assistance and your time in completing this Questionnaire!

CHATHAM COUNTY POPULATION
1950 - 1985

AGE GROUP	1950	1960	1970	1975	1980	1985
0-4	18,025	24,170	16,680	17,050	18,900	20,765
5-9	14,247	21,004	19,018	18,700	20,160	22,150
10-14	11,252	18,461	19,732	17,765	17,220	18,920
15-19	10,320	14,237	17,758	17,955	19,740	21,685
20-24	12,468	13,330	18,412	18,905	21,210	23,300
25-34	27,165	25,567	22,473	25,175	30,450	33,450
35-44	23,301	25,657	20,254	19,950	21,420	23,530
45-54	16,148	20,148	21,309	20,235	21,000	23,070
55-59	5,680	7,610	8,936	9,310	10,500	11,535
60-64	4,311	5,782	7,591	7,980	9,240	10,150
65-74	6,263	8,595	10,148	10,735	12,390	13,610
75+	2,301	3,738	5,456	6,240	7,770	8,535
Totals	151,481	188,299	187,767*	190,000	210,000	230,700**

Appendix B

**Total represents approximate mid-point in estimated 1985 population range (see graph 2)

*Total population corrected to 187,816
Revised figures by age group not available

Source: U. S. Census for 1950, 1960 and 1970 figures
MPC for 1975, 1980 and 1985 figures

BOOKMOBILE CIRCULATION TO CHATHAM COUNTY SCHOOLS

1970-1972

Juvenile

	<u>1972</u>	<u>1971</u>	<u>1970</u>
Bartow	7,628	1,812	-
Bloomingtondale	(No service this year)	3,283	6,044
Butler	5,081	3,091	9,437
Gould	14,285	15,573	11,840
Haven	6,093	4,112	4,289
Haynes	4,863	5,258	3,127
Heard	(No service this year)	5,732	9,233
Herty	6,924	3,262	9,061
Hesse	11,685	18,152	17,240
Howard	4,003	4,342	6,926
Isle of Hope	9,499	7,982	8,603
Johnson	(No service this year)	1,130	2,314
Largo Tibet	13,320	12,881	9,946
Nativity	33,988	2,030	3,138
Pooler	(No service this year)	3,077	1,190
Port Wentworth	3,451	4,486	7,917
Savannah Christian	8,959	7,161	2,405
Sprague	7,307	9,029	8,946
St. James	8,316	5,303	7,756
Strong	5,982	4,212	5,024
Thunderbolt	6,113	5,982	7,077
Tompkins	4,884	4,301	3,594
White Bluff	11,774	13,712	11,293
Windsor Forest	11,392	13,400	12,221
Total	<u>155,517</u>	<u>159,303</u>	<u>168,621</u>
Wilmington Island Kindergarten	691	-	-
	<u>156,208</u>	<u>159,303</u>	<u>168,621</u>
Outside count included in above totals	96,957	106,395	110,400

CIRCULATION - NEIGHBORHOOD BOOKMOBILE ROUTES

<u>Route</u>	<u>Adult</u>	<u>Juvenile</u>	<u>Total</u>
Augusta Highway	1,432	2,059	3,491
Bamboo	1,830	1,651	3,481
Barton Day Care	16	615	631
Bloomingtondale	1,681	1,066	2,747
Blueberry Hill	1,853	1,757	3,610
Bluff Road	1,061	1,238	2,299
Bona Bella	(New route)		
Brookview	1,720	2,199	3,919
Capitol Street	139	56	
Carver Village	500	622	1,122
Cherry Street	1,836	1,080	2,506
Cloverdale	227	2,934	3,161
Colonial Oaks	1,570	1,630	3,200
County Prison	2,074	118	2,192
Cresthill	1,635	2,660	4,295
Dean Forest	1,551	1,479	3,030
Dutchtown	2,238	1,872	4,110
East Savannah	5,574	5,664	11,238
East Windsor	955	1,550	2,505
Eisenhower Drive	1,863	1,339	3,202
Fellwood	190	4,314	4,504
Ferguson	1,645	1,982	3,627
Fort Argyle	950	1,154	2,104
Garden City I	1,320	1,421	2,741
Garden City II	1,303	2,092	3,395
Grimble Park	1,352	901	2,253
Grove Park	1,924	1,856	3,780
Halcyon Bluff	1,800	1,845	3,645
Highway 80	1,512	1,512	3,024
Idlewood	1,500	1,765	3,265
Islandwood	1,628	3,597	5,225
Isle of Hope	1,340	1,140	2,480
Kingsway	1,188	1,604	2,792
Lakeside Rt.	28	16	44
Larchmont	2,087	1,698	3,785
LaRoche	1,641	1,491	3,132
Liberty City	175	1,191	1,366
Lorwood	1,138	1,845	2,983
Mayfair	967	1,417	2,384
Millward Road	1,430	1,820	3,250
Montclair	1,292	2,142	3,434
Montgomery	1,300	1,413	2,713
Nelson Avenue	1,319	1,556	2,875

CIRCULATION - NEIGHBORHOOD BOOKMOBILE ROUTES
(Cont'd)

<u>Route</u>	<u>Adult</u>	<u>Juvenile</u>	<u>Total</u>
Oakhurst	1,888	1,728	3,616
Ogeechee	1,841	812	2,653
Oxford Hall	1,050	2,139	3,189
Paradise Park	1,810	1,875	3,685
Parkersburg	1,252	1,742	2,994
Pine Forest	1,533	1,361	2,894
Port Wentworth	2,112	1,773	3,885
Rio Vista	1,879	2,069	3,948
Shadow Oaks	2,143	3,400	5,543
Sharon Highway 80	1,636	1,581	3,217
Silk Hope	963	957	1,920
Skidaway	2,268	2,402	4,670
South Cromwell	1,595	1,951	3,546
St. Anthony Day Care	7	518	525
Stillwood Drive	35	124	159
Tibet Avenue	1,042	2,025	3,067
Tranquilla	1,792	1,923	3,715
Tybee Road	1,516	1,125	2,641
Union Camp	7,179	1,167	8,346
Walthour Road	179	251	430
Waters Road	1,021	329	1,350
Waters Road II	225	13	238
West Windsor	1,169	965	2,134
White Bluff	1,293	996	2,289
Whitfield Avenue	1,269	1,528	2,797
Whitmarsh	1,065	1,426	2,491
Wilmington Island	1,892	1,855	3,747
Wilmington Park N.	1,107	2,213	3,320
Wilmington Park S.	2,046	2,218	4,264
Wilshire I	2,228	1,928	4,156
Wilshire II	1,484	2,726	4,210
Winchester Drive	1,077	1,511	2,588
Windsor Road	1,538	2,750	4,288
Windsor II	1,477	1,693	3,170
Windsor Wellwood	1,350	2,144	3,494
Woodlawn	1,050	1,536	2,586
Wymberly	2,506	2,500	5,006
Total	<u>115,891</u>	<u>130,615</u>	<u>246,506</u>

CIRCULATION - NEIGHBORHOOD BOOKMOBILE ROUTES
(Cont'd)

<u>Route</u>	<u>Adult</u>	<u>Juvenile</u>	<u>Total</u>
C.E.L.	1,376	1,329	2,705
Lathrop Fire Dept. (Discontinued)	13	-	13
Pooler Library	1,417	1,845	3,262
Schools	932	156,208	157,140
Summer Program	155	10,142	10,297
Thunderbolt Library	<u>2,286</u>	<u>2,718</u>	<u>5,004</u>
Total	<u>6,179</u>	<u>172,242</u>	<u>178,421</u>
Periodicals	2	-	2
Total	<u>6,181</u>	<u>172,242</u>	<u>178,423</u>
 Grand Totals	 122,072	 302,857	 424,929
 Number of Bookmobile Stops		 1,164	

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